

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – First Semester  
**INTRODUCTION TO LIFE SCIENCE (BN&D-101)**

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define the following with example:

- a) Boiling Point.
- b) Nucleoid.
- c) SI unit of weight.
- d) Evaporation.
- e) Displacement reaction.
- f) Prokaryotes.
- g) Mitochondria.
- g) Osmosis.
- h) Unit of length.
- i) Molds. ``

**2x10**

**PART-A**

- Q.2 a) Draw and explain the structure of Eukaryotic cell. **10**  
b) Define 'fungi'. Give physiological Characteristics of fungi. **10**

Q.3 a) Give SI units of following:

- i) Volume.
- ii) Area.
- iii) Mass.
- iv) Temperature.
- v) Density.

**10**

- b) What are various thermal properties of water? Explain in detail. **10**

Q.4 Give nutritional and physiological characteristics of the following:

- a) Bacteria.
- b) Molds.

**10x2**

**PART-B**

- Q.5 a) What are different characteristics of chemical reactions? Explain in detail. **10**  
b) Give characteristics of any two types of chemical reactions. **10**

- Q.6 a) Differentiate between plant cell and animal cell. **10**  
b) Write down any two examples of decomposition reaction and Redox reactions. **10**

Q.7 Write short notes on:

- a) Buffer.
- b) Algae.
- c) Nucleus.
- d) Cell.

**5x4**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – First Semester  
**FUNDAMENTALS OF FOOD AND NUTRITION (BN&D-102)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 "Food is also used to satisfy social and psychological needs". Explain this statement by giving examples. **20**

**PART-A**

Q.2 Define any five terms used in the study of nutrition. Explain the physiological functions of foods. **20**

Q.3 Give the nutritional classification of carbohydrates. Discuss about functions, R.D.A., dietary sources and deficiency symptoms of carbohydrates. **20**

Q.4 Classify vitamins. Explain the function R.D.A., dietary sources and deficiency symptoms of Vitamin A and Vitamin C. **20**

**PART-B**

Q.5 What do you understand by food groups? Discuss the role of food pyramid in planning a balance diet. **20**

Q.6 What are the basic objectives of cooking? Write the different methods of cooking with suitable examples. **20**

Q.7 What do you mean by Novel foods? Write brief note on any three novel foods. **20**

# End Semester Examination, Dec. 2018

B.Sc. (Nutrition and Dietetics) – First Semester

## BIOCHEMISTRY-I (BN&D-103)

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 a) Write the structure of the following:
- i) Tyrosine
  - ii) Oleic Acid
  - iii) Maltose
  - iv) Amylopectin
  - v) Serine
  - vi) Stearic Acid
  - vii) Lactose
  - viii) Galactose. **2x8**
- b) Define essential fatty acids. Give their significance. **4**

### **PART-A**

- Q.2 a) Write a note on different tests used to determine purity of fats/oil. **10**  
b) Give the classification of lipids in detail. **10**
- Q.3 a) Write a note on reducing properties of sugar what are the different tests used to detect the presence of reducing sugars. Explain them. **12**  
b) Give the classification of polysaccharides. Give examples along with the structure. **8**
- Q.4 a) What are essential and non-essential amino acids? Draw the structure of any two essential and two nonessential amino acids. **10**  
b) Give the different levels of protein structure. **10**

### **PART-B**

- Q.5 a) What is the biochemical role of vitamins and minerals in the body? Give examples. **10**  
b) Draw the structure of any two water soluble and fat soluble vitamins. **10**
- Q.6 a) How is electrolyte balance regulated in the body? **12**  
b) Why water is considered as a universal solvent? Explain the properties of water which makes it an excellent solvent. **8**
- Q.7 a) Differentiate between a prokaryotic and eukaryotic cell. Give detailed structure of the prokaryote and eukaryote cell **10**  
b) What are Macro and Micro Minerals? Give the functions and deficiency disorders associated with any three Macro and Micro Minerals. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - First Semester  
**ANATOMY AND PHYSIOLOGY-I (BN&D-104)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Describe the scope of anatomy and physiology in Nutrition and Dietetics. **20**

**PART-A**

Q.2 Describe the blood composition and its function in detail. **20**

Q.3 Write short notes on:

- a) Anatomy of stomach with diagrammatic representation.
- b) Mechanism of HCL secretion.

**10x2**

Q.4 Describe the anatomy of heart with the diagrammatic presentation and cardiac cycle in detail. **20**

**PART-B**

Q.5 Describe the respiratory organs and their function along with the physiology of respiration. **20**

Q.6 Describe the type of muscle, muscle structure and muscular contraction. **20**

Q.7 Write short notes on:

- a) Cardiac output, their pathological and physiological variations and factors affecting it.
- b) Appendicular Skeleton.

**10x2**

**End Semester Examination, Dec. 2018**  
B. Sc. (Nutrition and Dietetics) – First Semester  
**FOOD HYGIENE AND SANITATION (BN&D-105)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 What are the steps involved in certification of HACCP? **10**

**PART-A**

Q.2 Explain the principles of Food Hygiene in detail. **10**

Q.3 What are the factors responsible in personal hygiene? **10**

Q.4 Write difference in Hygiene Practices followed by in urban and rural areas. **10**

**PART-B**

Q.5 Give principles of Insect and Pest Control. **10**

Q.6 Write classification and formulation of sanitizers. **10**

Q.7 Explain the importance of micro organisms in food sanitation. **10**

# End Semester Examination, Dec. 2018

B.Sc. (Nutrition and Dietetics) - First Semester

## HUMAN DEVELOPMENT (BN&D-106)

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are the six milestones of motor development given by WHO? **10**

### **PART-A**

Q.2 a) What is the difference between growth and development? **5**  
b) Discuss about different stages of child development. **5**

Q.3 Discuss the following:  
a) Evolutionary Theory.  
b) Psychosexual Theory. **5x2**

Q.4 What are the different cultural practices in Indian community during pregnancy? **10**

### **PART-B**

Q.5 What are the factors that affect physical and motor development during infancy and childhood? Also, discuss the common causes of delayed motor and physical development. **10**

Q.6 Explain the social development during infancy and childhood. **10**

Q.7 Explain the characteristics of emotional development during different stages of development. **10**

# End Semester Examination, Dec. 2018

## B. Sc. (N & D) – Second Semester BIOCHEMISTRY-II (BN&D-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Explain the following:

- a) Anaerobic glycolysis helps RBCs.
- b) Oxidative decarboxylation.

**10×2**

### **PART-A**

Q.2 Give the equation and enzyme for releasing ammonia from glutamate. How is this ammonia carried in blood to the liver and then converted to urea. **20**

Q.3 What role does carnitine play in  $\beta$ -oxidation of long chain fatty acids? Give the equations and enzymes of the various steps of  $\beta$ -oxidation of palmitate. **20**

Q.4 With the help of equations, enzymes and coenzymes, explain aerobic glycolysis. Calculate the total number of ATPs formed when glucose is completely oxidized. **20**

### **PART-B**

Q.5 Explain the different types of inhibitors of enzyme action. With the help of the double reciprocal plot differentiate between them. **20**

Q.6 What is the normal level of blood glucose in humans? When blood glucose levels fall, explain how glucagon works to regulate blood sugar levels? **20**

Q.7 Write short notes on the following:

- a) Importance of  $k_m$  in the physiological utilization of glucose.
- b) Difference between structures of DNA and RNA.

**10×2**

**End Semester Examination, Dec. 2018**  
B. Sc. (N & D) – Second Semester  
**NUTRITION THROUGH LIFE CYCLE (BN&D-204)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Explain in detail the requirement of good nutrition through all the life stages. **20**

**PART-A**

Q.2 Discuss the following:  
a) Weaning foods  
b) Baby friendly hospital initiative. **10×2**

Q.3 Write a note on growth and development pattern and nutritional requirements in childhood. **20**

Q.4 Explain in detail the concept of food security. **20**

**PART-B**

Q.5 What are the physiological changes that occur in pregnancy? Explain the nutritional requirements of a pregnant female. **20**

Q.6 Why is exclusive breast feeding important till 6 months of age? Explain in relation with human milk composition. **20**

Q.7 What are the nutritional related problems of old age? Also, explain the food pattern and nutritional requirements of old age. **20**



**End Semester Examination, Dec. 2018**  
B. Sc. (Nutrition and Dietetics) – Second Semester  
**ANATOMY AND PHYSIOLOGY-II (BN&D-205)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Explain the anatomy and physiology of male reproductive system with diagram. **20**

**PART-A**

Q.2 Write short notes on the following:

- a) Peripheral nervous system.
- b) Seminal vesicle.
- c) Physiological effect of physical training.
- d) Role of urinary system in maintaining blood pressure.

**5×4**

Q.3 a) Explain the formation and maturation of urine. **10**  
b) Discuss in detail the structure of eye with diagram. **10**

Q.4 a) Define respiration rate. Discuss the effect on respiration during exercise. **10**  
b) Define reproductive system. Explain the primary female reproductive organs. **10**

**PART-B**

Q.5 Write notes on the following:

- a) Ovarian changes during menstrual cycle. **10**
- b) Glomerulonephritis. **10**

Q.6 Define nervous system. Write its classification. Explain the central nervous system with the help of diagram. **20**

Q.7 Write short notes on **(any four)**:

- a) Physiology of thyroid gland.
- b) Neuromuscular function.
- c) Maintenance of acid base balance.
- d) Reflex Arc
- e) Fertilization.

**5×4**

# End Semester Examination, Dec. 2018

B. Sc. (N & D) – Second Semester

## PSYCHOLOGY (BN&D-206)

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Define psychology. Explain in detail the work of Psychologist by giving suitable examples. **10**

### **PART-A**

Q.2 Define emotion. Explain any 3 theories of emotions. **10**

Q.3 Discuss in detail the various methods of studying behaviour. **10**

Q.4 Write short notes on:  
a) Ethical and legal consideration for counsellor.  
b) Psychodynamic psychotherapy. **5×2**

### **PART-B**

Q.5 What is counseling? Enlist and explain any 3 techniques of counseling. **10**

Q.6 Define personality. Write its type. Discuss methods of personality assessment in detail. **10**

Q.7 Write short notes on:  
a) Anxiety disorders.  
b) Contribution of psychology in Nutrition and Dietetics. **5×2**

# End Semester Examination, Dec. 2018

B.Sc. (N&D) - Third Semester

## **PATHOLOGY (BN&D-301)**

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and any two from **PART-B**. Marks are indicated against each question.

Q.1 Define 'pathology'. What are the guiding principles and how do we clarify the branch? **10**

### **PART-A**

Q.2 Differentiate between hyperplasia and hypertrophy. **10**

Q.3 Write short notes on:

a) Necrosis.

b) Apoptosis.

**10**

Q.4 Explain the intracellular compartments of cell in terms of glycogen and pigments. **10**

### **PART-B**

Q.5 Discuss acute inflammation and its morphological patterns. **10**

Q.6 Differentiate between regeneration and repair. **10**

Q.7 Write short notes on healing in specialized tissues. Discuss. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Third Semester  
**THERAPEUTIC NUTRITION AND DIETETICS (BN&D-302)**

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 What do you understand by Therapeutic Nutrition and role of Dietitians in hospital and community? **20**

**PART-A**

Q.2 Explain different methods of feeding patients in detail. **20**

Q.3 Discuss Etiology, Manifestation and Dietary Management in Atherosclerosis. **20**

Q.4 Write in detail about Etiology, Manifestation and Dietary Management for constipation. **20**

**PART-B**

Q.5 Discuss pathology metabolic changes, diagnosis and complications of diabetes mellitus in detail. **20**

Q.6 Explain etiology, symptoms and diet management for anorexia nervosa and bulimia nervosa. **20**

Q.7 Discuss nutrition support for:  
a) Fevers.  
b) Burns.

**10x2**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Third Semester  
**PROBLEMS IN HUMAN NUTRITION (BN&D-303)**

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 What is Nutritional Assessment? Explain in detail Anthropometric and Biochemical Assessment methods. **20**

**PART-A**

Q.2 a) Differentiate between Kwashiorkor and Marasmus. **10**  
b) Suggest the treatment for the child suffering from PEM. **10**

Q.3 a) Give the signs and symptoms of vitamin A deficiency in detail. **10**  
b) What are the rich sources of vitamin A precursors with focus on the programme national prophylaxis programme against nutritional blindness due to vitamin A deficiency? **10**

Q.4 Explain the symptoms, treatment and prevention of sunshine vitamin. **20**

**PART-B**

Q.5 Explain the prevalence, etiology and classification of Iodine deficiency. **20**

Q.6 Discuss the manifestations of:  
a) Fluorosis.  
b) Lathyrism. **5x2**

Q.7 Fill in the blanks:  
a) Low weight for height is called \_\_\_\_\_ .  
b) Mottled teeth with chalky white and brownish areas with or without erosion of enamel are symptoms of \_\_\_\_\_.  
c) Neurotoxin responsible for Lathyrism is \_\_\_\_\_.  
d) Koilonychia is a clinical sign of \_\_\_\_\_.  
e) \_\_\_\_\_ is the daily requirement of Iodine.  
f) Retinol equivalent = \_\_\_\_\_ + \_\_\_\_\_.  
g) Vitamin B12 and folic acid deficiency leads to \_\_\_\_\_.  
h) \_\_\_\_\_ is the biochemical assessment done for PEM. **2x8**  
h) Give the BMI classification. **4**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION FOR HEALTH, FITNESS AND SPORTS (BN&D-304)**

Time: 3 hrs

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Explain Inter-relationship between Nutrition, Physical fitness and Health. **20**

**PART-A**

Q.2 Discuss how specific nutrient effect the physical fitness of an athlete. **20**

Q.3 Explain the method for estimation of fat among athletic groups. **20**

Q.4 Explain the following:

a) Thirst Respond.

b) Carbohydrate Load.

**10x2**

**PART-B**

Q.5 Write short note on the following:

a) Types of sports drink and its importance.

b) Satvik food, Tamsic food and Rajsic food.

**10x2**

Q.6 Give the Metabolism of the following:

a) Carbohydrates.

b) Fats and Protein.

**10x2**

Q.7 Explain location of chakras and consciousness. **20**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Third Semester  
**DYNAMICS OF COMMUNICATION AND EXTENSION EDUCATION**  
**(BN&D-305)**

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Explain in detail how the study of communication and extension helps students in planning extension programme in rural community. **10**

**PART-A**

Q.2 Explain barriers to communication giving suitable examples. **10**

Q.3 Define 'audio visual aids'. Differentiate between projected and non-projected AV aids. **10**

Q.4 Write short notes on:  
a) Group approach.  
b) Communicator–Receiver relationship. **5x2**

**PART-B**

Q.5 Explain principles of extension education citing suitable examples. **10**

Q.6 Explain in detail objectives behind extension education programme. **10**

Q.7 Write short notes on:  
a) Role of extension worker.  
b) Application of extension education in nutrition and dietetics. **5x2**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - Third Semester  
**DIET AND NUTRITIONAL COUNSELING (BN&D-306)**

Time: 2hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Enumerate the importance of teaching aids. **10**

**PART-A**

Q.2 Mention the effect of individual food choices on planning the diet of the patient. **10**

Q.3 Discuss the importance of ABCD analysis for nutrition counseling. **10**

Q.4 "While planning a diet, communication of dietary advice plays a pivotal role". Explain. **10**

**PART-B**

Q.5 Prepare a teaching aid for patient suffering from Diabetes. **10**

Q.6 a) Explain the do's and don't for atherosclerosis patient. **5**

b) Draw a leaflet to impart information on Hepatitis. **5**

Q.7 a) Prepare a visual aid to educate the society regarding personal hygiene. **5**

b) Prepare a checklist to educate the audience about hypertension. **5**



## End Semester Examination, Dec. 2018

B.Sc. (Nutrition Dietetics) – Fourth Semester

### COMMUNITY NUTRITION (BN&D-402)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Describe the concept of health care and the three different levels in the community. **20**

#### **PART-A**

Q.2 Describe the steps involved in programme planning process. Write down one programme plan on Adolescent Anemia among girls. **20**

Q.3 Define Extension Education. List the principles of Extension Education. As a community Nutritionist how will you organize a mass nutritional health education programme. **20**

Q.4 Explain National Health Policy. Define any one health programme in detail. **20**

#### **PART-B**

Q.5 What do you understand by National Food Security. **20**

Q.6 What are the different methods of nutritional assessment? Mention various methods of direct assessment of nutritional status. **20**

Q.7 Write short notes on:

- a) Function of FAO
- b) WHO
- c) Role of ICAR
- d) What do you mean by NGO?

**5x4**

# End Semester Examination, Dec. 2018

B.Sc. (Nutrition and Dietetics) – Fourth Semester

## FOOD MICROBIOLOGY (BN&D-403)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Discuss the morphology and structure of bacteria and yeast. **20**

### **PART-A**

Q.2 Give the effect of following on microbial growth:  
a) Temperature      b) pH      c) Rh      d) *Eh*+ **5x4**

Q.3 Give the sources of contamination and microbes involved in the spoilage of following foods:  
a) Egg  
b) Milk  
c) Vegetables  
d) Bread  
e) Fruits **4x5**

Q.4 Explain the growth curve of bacteria in detail. **20**

### **PART-B**

Q.5 Give the detailed method of processing of cheese and fermented milk. **20**

Q.6 Write short notes on the following:  
a) Probiotics. **10**  
b) GMO. **10**

Q.7 Explain the following:  
a) Radiation preservation.  
b) Chemical preservation.  
c) Freezing.  
d) Drying. **5x4**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition & Dietetics) – Fourth Semester  
**INSTITUTIONAL FOOD ADMINISTRATION (BN&D-404)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: *Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.*

Q.1 Explain how food service institutions develop throughout out India till 21<sup>st</sup> century. Discuss the approaches of management. **20**

**PART-A**

Q.2 Explain the following:  
a) Types of kitchen. **10**  
b) Types of storage. **10**

Q.3 Explain the various methods of purchasing. Discuss the benefits of inventory management. **20**

Q.4 Discuss the functions of a menu and the types of menus. **20**

**PART-B**

Q.5 What do you mean by Recipe Standardization? Explain in detail. **10**

Q.6 Write short notes on the following:  
a) Form of service. **10**  
b) Table setting. **10**

Q.7 Discuss the various steps involved in staff employment. **20**

# End Semester Examination, Dec. 2018

B.Sc. (Nutrition and Dietetics) – Fourth Semester

## CULINARY SCIENCE (BN&D-406)

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Give a tabular presentation of cooking methods and describe any two methods. **10**

### **PART-A**

Q.2 Define the following culinary terms:

- a) Entrée
- b) Fillets
- c) Bechamel
- d) Appetiser
- e) Blanching

**2x5**

Q.3 Mention the hygiene guidelines while working in an industrial kitchen. Briefly describe the objectives of cooking. **10**

Q.4 Explain (**any two**) of the following cooking method:

- a) Solar cooking.
- b) Microwave cooking.
- c) Infrared cooking.

**5x2**

### **PART-B**

Q.5 a) Convert the following:

- i) 4 cups = \_\_\_\_\_ qt
- ii) 1 gallon = \_\_\_\_\_ qt
- iii) 1 inch = \_\_\_\_\_ cm
- iv) 1 cup = \_\_\_\_\_ tsp
- v) 10 z = \_\_\_\_\_ gm

**1x5**

b) Enumerate the benefits of standardized recipe. **5**

Q.6 Describe the phases of recipe standardization. **10**

Q.7 Recipe of cream of chicken soup:

Ingredient	Amount
a) Butter	120g
b) Refined flour	2½ cups
c) Chicken Stock	2 qt + 2 cups
d) Milk	2 gallon + 2 qt
e) Cooked chicken	3 Lb.20g

The current yield of cream of chicken soup is 50. With the help of standardisation convert the yield to 175. **10**

# End Semester Examination, Dec. 2018

B.Sc. (Nutrition and Dietetics) – Fifth Semester

## FOOD SCIENCE (BN&D-501)

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 How does various cooking methods affect the quality of food? Explain in detail with examples. **20**

### **PART-A**

- Q.2 Draw the structure of wheat grain and name the components. Explain the functions of each component. **20**

- Q.3 Write short notes on:

- Factors affecting gluten formation.
- Gelatinization.
- Dextrinization.
- Cereal starch.

**5x4**

- Q.4 a) Discuss the nutritional composition of pulses to the diet. **10**  
b) What are the factors affecting cooking of pulses? **10**

- Q.5 What is pasteurization? What effect does it have on nutritive value, flavor, micro organisms and on enzyme present in milk? **20**

### **PART-B**

- Q.6 Write short notes on:

- Caramelization.
- Crystalization.
- Artificial Sweetners.
- Role of sugar in cooking.

**5x4**

- Q.7 a) What is the importance of sensory evaluation in the food industries? **10**  
b) Explain any two evaluation procedure in detail. **10**

- Q.8 Bring out the theme of the search for spiritual enlightenment in Siddhartha. **20**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Fifth Semester  
**FOOD PROCESSING AND TECHNOLOGY (BN&D-502)**

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Explain the following briefly:
- a) Germination in pulses
  - b) Pasteurization
  - c) Decortications
  - d) Sterilization
  - e) Endosperm
  - f) Lathyrogens
  - g) Parboiling
  - h) Climacteric fruits
  - i) Deodorization
  - j) Parching. **2x10**

**PART-A**

- Q.2 a) Explain in detail the milling process of wheat. **10**  
b) Explain various steps of commercial refining process of oils. **10**
- Q.3 Justify following statements:
- a) Pulses contain chemical constituents having toxic properties.
  - b) Milk is a complex product containing 100,000 chemicals.
  - c) Packaging affect nutritive value of foods.
  - d) Fruits become / turn brown in the presence of O<sub>2</sub>. **5x4**
- Q.4 a) Write a short note on 'types of packaging'. **8**  
b) Discuss the steps involved in processing of raw milk. **12**

**PART-B**

- Q.5 a) "Legumes contain toxic factors which have adverse effect on health". Comment. **10**  
b) Draw and explain the wheat grain structure. **10**
- Q.6 a) Explain fruit juice powder production. **5**  
b) Write short notes on the following:  
i) Modified Packaging.  
ii) Browning reactions.  
iii) Soyabean processing. **5x3**
- Q.7 Differentiate between the following:
- a) LTLT and HTST
  - b) LDPE and HDPE
  - c) Bran and Endosperm
  - d) Lathyrogens and Goitrogens. **5x4**

**End Semester Examination, Dec. 2018**  
B.Sc. (N&D) - Fifth Semester  
**FOOD PRESERVATION AND BAKERY (BN&D-503)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are the principles of Food Preservation? **10**

**PART-A**

Q.2 What are the various methods of preservation of food? **10**

Q.3 Write short notes on:  
a) Fermentation.  
b) Osmosis in preservation. **5x2**

Q.4 Describe the various types of leavening agents. **10**

**PART-B**

Q.5 Write short notes on:  
a) Biscuits.  
b) Cookies. **5x2**

Q.6 What are the various types of cakes? Explain. **10**

Q.7 With the help of suitable example, explain the precautions needed in bakery. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - Fifth Semester  
**FOOD HANDLING AND PACKAGING (BN&D-504)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Define Food Packaging. Also, comment on the functions of food packaging. **10**

**PART-A**

Q.2 Differentiate between:

- a) Rigid containers and flexible containers.
- b) HDPE and LDPE.

**5x2**

Q.3 How is Aseptic Packaging overpowering normal food packaging? **10**

Q.4 'Polyethylene is mostly used in food packaging'. Explain. **10**

**PART-B**

Q.5 Explain any five types of packaging materials used in food packaging. **10**

Q.6 Briefly discuss about Retortable containers and their utility in food packaging. **10**

Q.7 List down some of the requirements for an effective food packaging. **10**



**End Semester Examination, Dec. 2018**  
B. Sc. (N & D) – Sixth Semester  
**HEALTHCARE AND HOSPITAL MANAGEMENT (BN&D-604)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Why is management education important in the field of health service industry? **20**

**PART-A**

Q.2 What are the principles and practices of management? **20**

Q.3 Write short notes on:

- a) Personality and Attitudes.
- b) Motivation.

**10×2**

Q.4 Write an essay on hospital planning and organization. **20**

**PART-B**

Q.5 Discuss the healthcare delivery system in India. **20**

Q.6 Write short notes on:

- a) Epidemiological Triad.
- b) Training of staff.

**10×2**

Q.7 What do you understand by Performance Appraisal? Explain with the help of a suitable example. **20**

**End Semester Examination, Dec. 2018**  
B.Sc. (N&D) - First Semester  
**HERBS AND HOME REMEDIES (BN&D-GE-01)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Briefly explain the role of herbs in day-to-day life. **10**

**PART-A**

Q.2 'Herbs are also used as food supplements'. Discuss. **10**

Q.3 Write some home remedies for each of the following:  
a) Throat infection.  
b) Fever. **10**

Q.4 List down some uses of Curcuma Longa. **10**

**PART-B**

Q.5 Discuss some herbal remedies for hair care with some examples of herbal products available. **10**

Q.6 Explain the medicinal uses of ocimum sanctum. **10**

Q.7 Explain the usage of herbs according to different classification. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - First Semester  
**FOODS IN INDIAN TRADITION (BN&D-GE-02)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Briefly describe about the history of Indian foods. **10**

**PART-A**

Q.2 Comment on some commonly used spices in Indian Kitchen. **10**

Q.3 Why is India considered as the 'Spice Route'? **10**

Q.4 Write a short note on 'grain based health foods'. **10**

**PART-B**

Q.5 How has the lifestyle of Maharaja's influenced Rajasthani Cuisine? **10**

Q.6 State difference between Satvik and Tamsic foods. **10**

Q.7 Comment upon India's perception about health foods. **10**

**End Semester Examination, Dec. 2018**  
B. Sc. (Nutrition and Dietetics) - Second Semester  
**FAMILY MEAL MANAGEMENT (BN&D-GE-03)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are the fundamental aspect of meal planning for the family? **10**

**PART-A**

Q.2 Describe various food groups. Also, mention the major nutrients supplied by each food group. **10**

Q.3 Discuss the importance of meal planning for the family. Explain the food faddism and faulty food habits with suitable examples. **10**

Q.4 Discuss Indian meal pattern. **10**

**PART-B**

Q.5 What is the importance of nutrition for growing infants? Write down the steps for successful weaning. **10**

Q.6 What points will you keep in mind while planning a meal for pregnant woman. **10**

Q.7 Explain the importance of nutrition during elderly stage. Advise an elderly person for his nutritional management. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - Second Semester  
**COMPUTER APPLICATIONS (BN&D-GE-04)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What do you understand by an Operating System? Also, elaborate on the types of Operating Systems. **10**

**PART-A**

Q.2 a) Briefly describe the parts found on the main screen of Microsoft Windows. **5**  
b) What is a computer network? Discuss various types of computer networks in brief. **5**

Q.3 a) Discuss the various types of internet connections. **6**  
b) Explain the following in MS Word: Mail Merge and Tables. **4**

Q.4 a) What are Search Engines? Explain any two in detail. **6**  
b) Enumerate various applications of internet. **4**

**PART-B**

Q.5 a) What is client server technology? How is it useful in a network? **5**  
b) Define the term topology. Explain any three in brief. **5**

Q.6 Explain the following in MS-Excel:  
a) Use of functions. **3**  
b) Text wrapping and data sorting. **3**  
c) Creating hyperlink to a word document. **4**

Q.7 a) Differentiate between LAN and WAN. **6**  
b) Explain the following in MS-PowerPoint: Animation and Word Art Gallery. **4**

**End Semester Examination, Dec. 2018**  
B. Sc. (Nutrition and Dietetics) – Third Semester  
**MATERNAL AND CHILD NUTRITION (BN&D-GE-05)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Discuss the current scenario of the nutritional status of mother and child in India. Why maternal care is important for a healthy child. **10**

**PART-A**

Q.2 Enumerate the physiological changes in body composition and mental development in relation to prenatal and postnatal nutrition. **10**

Q.3 Write short notes on:  
a) Recent guidelines in infant feeding.  
b) Complimentary feeding. **10**

Q.4 Discuss the effect of nutritional status of mother on quantity and quality of breast milk. **10**

**PART-B**

Q.5 Throw light on physiological and psychological changes take place in lactation. **10**

Q.6 Discuss the strategies to improve maternal and child health in India. **10**

Q.7 Write a note on 'World breast feeding day'. **10**

## End Semester Examination, Dec. 2018

B. Sc. (Nutrition and Dietetics) – Third Semester

### FOOD LABELING (BN&D-GE-06)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 As per FSSAI, mention some of the points to remember for food labeling of pre-packaged foods. **10**

#### **PART-A**

Q.2 State the guidelines for labeling of imported foods in India. **10**

Q.3 Design a food label for any food product. **10**

Q.4 Define Food labeling. Also mention some of the related glossary terms. **10**

#### **PART-B**

Q.5 What are the principles followed for making nutritional and health claims on a pre-packaged food? **10**

Q.6 How are the symbols on a label interpreted? Briefly explain. **10**

Q.7 Highlight some of the general claims mentioned on a food label of a pre-packaged food. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) – Fourth Semester  
**ENTREPRENEURSHIP MANAGEMENT (BN&D-GE-08)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Explain how the study of Entrepreneurship Management will help an individual to recognize business opportunity. **10**

**PART-A**

Q.2 Write the advantages and disadvantages of entrepreneurship. **10**

Q.3 Explain Environment Scanning. Briefly discuss the importance of environment scanning. **10**

Q.4 Write short notes on:

a) Need of Entrepreneurship.

b) Spotting trends.

**5x2**

**PART-B**

Q.5 Explain Marketing Plan giving suitable example. **10**

Q.6 Write short notes on:

a) Angel investors.

b) Vendor management.

**5x2**

Q.7 Explain in detail the importance and method of negotiation. **10**



**End Semester Examination, Dec. 2018**  
B. Sc. (N & D) – Fifth Semester  
**FERMENTATION TECHNOLOGY (BN&D-GE-09)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part A** and **TWO** questions from **Part B**. Marks are indicated against each question.

- Q.1 Answer briefly:
- a) Batch and continuous fermentation processes. **4**
  - b) Bio catalysis. **2**
  - c) Example of primary and secondary metabolites. **2**
  - d) Write the name of micro organism for Lysine-rich SCP production. **2**

**PART-A**

- Q.2 Explain various principle of fermentation process. **10**
- Q.3 Discuss the carbon sources derived from waste matters it's characteristics and usage. **10**
- Q.4 Write a short note on corn steep liquor. What are the reasons to maintain a steady state condition in a continuous reactor? **10**

**PART-B**

- Q.5 Discuss the purpose of agitation and aeration in fermentation process. **10**
- Q.6 Write the important criteria to choice a microbe for fermentation process. **10**
- Q.7 Explain the common techniques used for preserving microbes. **10**

**End Semester Examination, Dec. 2018**  
B.Sc. (Nutrition and Dietetics) - Fifth Semester  
**BASICS OF FOOD INSTRUMENTATION (BN&D-GE-10)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What is Beer-Lambert's Law? Explain. **10**

**PART-A**

Q.2 Explain the various methods of sensory evaluation. Give suitable examples. **10**

Q.3 Write short notes on:

a) Analysis of toxins.

b) Analysis of preservatives. **5x2**

Q.4 What is proximate analysis of foods? Explain. **10**

**PART-B**

Q.5 What is electrophoresis? Explain in detail. **10**

Q.6 Write short notes on:

a) Colorimeter.

b) Spectrophotometer. **10**

Q.7 Write a note on various types of assays commonly used in laboratory procedures. **10**

**End Semester Examination, Dec. 2018**  
B. Sc. (Nutrition and Dietetics) – Sixth Semester  
**FUNDAMENTALS OF STATISTICS (BN&D-GE-11)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 a) What do you mean by statistical data?  
b) Find the median of marks:  
4, 12, 7, 9, 14, 17, 16, 21  
c) What are the features of good research design?  
d) How data collection helps dieticians in the promotion of health? **2½×4**

**PART-A**

- Q.2 Explain the various functions of statistics? **10**

- Q.3 The expenditure of 1000 families is given below:

Exp. (₹)	40–59	60–79	80–99	100–119	120–139
No. of families	50	250	500	150	50

- Find the median of the distribution. **10**

- Q.4 Find the regression equation of the following data:

x:	6	2	10	4	8
y:	9	11	5	8	7

**10**

**PART-B**

- Q.5 Explain the characteristics of a good sample design. **10**

- Q.6 Explain different types of sample design. **10**

- Q.7 Explain the methods of collecting primary and secondary data. **10**

**End Semester Examination, Dec. 2018**  
B.A. / B. Sc. (Hons.) Applied Psychology — First Semester  
**UNDERSTANDING HUMAN COGNITION (BPSY-C-103)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short answers on the following questions:

- a) What do you mean by confirmation bias?
- b) Explain gate control theory of pain perception.
- c) Define "Learning".
- d) What do you mean by semantic memory?
- e) Define "Intelligence".

**2×5**

**PART-A**

Q.2 Explain the process of observational learning. With relevant research examples, elucidate how aggression is learnt via observation. **5**

Q.3 Explain the basic nature of experimental method. Using examples, justify in which situations is the experimental method the best research method. **5**

Q.4 What do you mean by perception? Explain, with diagrams, the gestalt laws of perceptual organization. **5**

Q.5 Explain in detail the Atkinson-Shiffrin Model of memory. **5**

Q.6 How will you define intelligence? Briefly explain the theories of intelligence. **5**

**PART-B**

Q.7 How did modern psychology develop? Elaborate on the grand issues of psychology and key perspectives of psychology. **10**

Q.8 Determine the role of genetic and environmental factors in group differences in intelligence. **10**

Q.9 Explain the ways in which forgetting occurs from the long term memory. **10**

Q.10 "Heredity and environment both play a role in determining one's intelligence". Using relevant research evidence, elucidate. **10**

**End Semester Examination, Dec. 2018**  
BA / B. Sc. (Hons.) Applied Psychology – First Semester  
**BRAIN AND BEHAVIOUR (BPSY-C-104)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the questions in not more than two lines.

- a) Define 'neurotransmitters'.
- b) Define 'circadian rhythm'.
- c) Define 'retrograde amnesia'.
- d) Name the subparts of telencephalon.
- e) Name the subparts of limbic system.

**2×5**

**PART-A**

Q.2 Explain the functions of hippocampus.

**5**

Q.3 What is somesthetic sense?

**5**

Q.4 What is altered state of consciousness?

**5**

Q.5 Explain neuroimaging techniques.

**5**

Q.6 Explain biological basis of hunger.

**5**

**PART-B**

Q.7 Explain the central nervous system in detail.

**10**

Q.8 What are neurons? How do they work?

**10**

Q.9 Explain different stages of sleep.

**10**

Q.10 How do we see explain with the help of a diagram?

**10**

**End Semester Examination, Dec. 2018**  
B. Sc. /B.A. (Applied Psychology) – First Semester  
**BASIC STATISTICS (BPSY-C-105)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **2**

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What are the measures of central tendency?
- b) What is the relationship between SD and Variance?
- c) While conducting T test we refer to \_\_\_\_\_ for standard critical ratio.
- d) Chi square is being conducted to measure \_\_\_\_\_.
- e) Product Moment correlation coefficient was provided by \_\_\_\_\_ .

**2x5**

**PART-A**

Q.2 Describe different types of statistics.

**4**

Q.3 Calculate the mean from the following data:

Sr. No	Class Interval	Frequencies
1	11-15	6
2	16-20	8
3	21-25	10
4	26-30	6
5	31-35	5

**4**

Q.4 Calculate the SD from the following data :

Sr. No	Class Interval	Frequencies
1	11-15	6
2	16-20	8
3	21-25	10
4	26-30	6
5	31-35	5

**4**

Q.5 Calculate the rank order correlation from the following data:

Sr. No	R <sub>1</sub>	R <sub>2</sub>
1	2	3
2	4	2
3	5	1
4	3	5
5	1	4

**4**

Q.6 Solve the following by applying appropriate method:

Group	Male
Population Mean	120
Sample Mean	100
SD	13
CR	At 0.05-2.36 At 0.01-1.66

4

Q.7 What is Normal Distribution and what are its characteristics?

4

**PART-B**

Q.8 Describe the nature and meaning of statistics. Explain the different usages of statistics in detail. **10**

Q.9 Calculate the product moment correlation from the following:

	Obs_1	Obs_2	Obs_3	Obs_4	Obs_5	Obs_6	Obs_7
x	16	23	20	21	29	42	32
y	8	10	11	3	12	24	19

10

Q.10 Describe the measures of central tendency from with the help of following data:

55	70	57	73	55	59	64	72
60	48	58	54	69	51	63	78
75	64	65	57	71	78	76	62
49	66	62	76	61	63	63	76
52	76	71	61	53	56	67	71

10

**End Semester Examination, Dec. 2018**  
BA / B.Sc. (Hons.) Applied Psychology – Third Semester  
**PERSONALITY (BPSY-C-301)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: *1*

Note: *Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.*

- Q.1 Answer the questions in not more than two lines.
- a) Who was the pioneer of functionalism?
  - b) What is propium?
  - c) Who gave object relation theory?
  - d) Who was the father of individual psychology?
  - e) Name two neo-freudians.

**2×5**

**PART-A**

Write short notes on:

- Q.2 Virtual research method. **5**
- Q.3 Ernest Kretchmer's classification. **5**
- Q.4 Birth order. **5**
- Q.5 Neurotic trends and behavior associated with it. **5**
- Q.6 Allport's trait theory. **5**

**PART-B**

- Q.7 Discuss the contributions and criticism of psychoanalysis. **10**
- Q.8 Discuss the contribution of analytical psychology. **10**
- Q.9 Compare Cattell's concept of personality with Allport's Trait Theory. **10**
- Q.10 On the basis of Eysenck's theory of Personality, analyze a celebrity. **10**



**End Semester Examination, Dec. 2018**  
**BA / B. Sc. (Applied Psychology) – Third Semester**  
**PSYCHOLOGICAL TESTING AND PSYCHOMETRIC ASSESSMENT**  
**(BPSY-C-302)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **EIGHT** questions in all; **Q.1 is compulsory**. Attempt any **FIVE** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Answer the following:  
 a) State relationship between 'test length' and 'reliability'.  
 b) Define 'measurement'.  
 c) Define 'validity'.  
 d) Name three types of validity.  
 e) Full name of MBTI. **2×5**

**PART-A**

- Q.2 What are the steps of test construction? **4**
- Q.3 What are the different measurements of scales? **4**
- Q.4 Calculate the pure score of guessing from the following:  
 Right response- 60                  Wrong response-20                  Total number of response-80 **4**
- Q.5 Describe three types of calculating item difficulty. **4**
- Q.6 Calculate the correction of attenuation from the following test data:

Index	Test Characteristics
.60	Validity
.70	Reliability of predictor
.50	Reliability of criterion

**4**

- Q.7 Describe the types of errors in measurement. **4**

**PART-B**

- Q.8 What are the different types of validity in psychology? **10**
- Q.9 Calculate the reliability coefficient from the following data:
- |        |    |    |    |    |    |    |    |    |    |    |
|--------|----|----|----|----|----|----|----|----|----|----|
| Test-1 | 36 | 72 | 37 | 36 | 51 | 50 | 47 | 50 | 37 | 41 |
| Test-2 | 35 | 67 | 33 | 35 | 50 | 46 | 47 | 42 | 35 | 40 |
- 10**
- Q.10 Describe the different types of intelligence tests with examples. **10**

## End Semester Examination, Dec. 2018

B.A. / B. Sc. (Hons.) (Applied Psychology) — Third Semester

### COMMUNITY PSYCHOLOGY (BPSY-C-303)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SIX** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **ONE** question from **PART-B**. Marks are indicated against each question

Q.1 Write short answers on the following questions:

- a) Why is community psychology important?
- b) List a community psychologist's role.
- c) List the background of the 8 sane people in the Rosenhan study.
- d) In which year was the Rosenhan study conducted?
- e) Differentiate between community psychology and clinical psychology.

**2×5**

#### **PART-A**

Elaborate in briefly:

Q.2 Elaborate "Kurt Lewin's Equation".

**5**

Q.3 List the 7 principles of community psychology.

**5**

Q.4 What is advance directive?

**5**

Q.5 What is the criteria for defining a community problem.

**5**

Q.6 Explain "Mental Healthcare Act 2017"

**5**

#### **PART-B**

Q.7 Application based long answer type question:

You are an advisor to a newly set up refugee camp which has people of families who have overnight escaped the advance of ISIS across their country. Keeping in mind that "Community psychology is a field with a unique new perspective for understanding the individuals within their environment which includes the larger social systems that affect their lives". Design as per you, a detailed action plan for the first 100 days and explain each step of your action plan with examples.

**20**

Q.8 Application based long answer type question:

You are required to understand and compare on two contrasting communities. Design and create a road map of how you would go about doing it.

**20**

**End Semester Examination, Dec. 2018**  
B.A. / B. Sc. (Hons.) Applied Psychology — Fifth Semester  
**INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY (BPSY-C-501)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SIX** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **ONE** question from **PART-B**. Marks are indicated against each question.

Q.1 Write short answers on the following questions:

- a) What is organizational structure?
- b) List the characteristics of the organic model.
- c) In the context of culture, list the stages in the socialization process.
- d) List Mintzberg's managerial roles.
- e) List Maslow's hierarchy of needs.

**2×5**

**PART-A**

Write short notes on:

- Q.2 Define "Attitudes". **5**
- Q.3 Explain "Job Satisfaction". **5**
- Q.4 Define "Diversity". **5**
- Q.5 Explain the behavioral theories of leadership. **5**
- Q.6 What is span of control? **5**

**PART-B**

Q.7 Application based long answer type question:

You are an advisor to a startup company in the field of mobile handsets. The field is extremely competitive and requires quick responses to both the competitors as well as the customers. Keeping in mind that "Structure impacts both the attitudes and behaviors of the people within it", Design as per you, a good organizational structure for the company and explain its advantages. **20**

Q.8 Application based long answer type question:

Ram argues, "For every worker, there is one best motivational application to drive performance". Amrita responds, "Nonsense-there is no single best way to motivate anyone". Who is correct? Explain in detail with examples. **20**

**End Semester Examination, Dec. 2018**  
B. Sc./B.A. (Applied Psychology) — Fifth Semester  
**COUNSELING PSYCHOLOGY (BPSY-C-502)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **PART-B is compulsory**. Attempt any **FOUR** questions from **PART-A**. Marks are indicated against each question.

**PART-A**

- Q.1 Short answer types questions:
- a) What are the qualities of an effective counselor?
  - b) Mention issues in closing the counseling sessions.
  - c) Define psychodrama and group marathons.
  - d) Define reliability and validity of a test.
  - e) What is the difference between transference and counter transference? **2×5**
- Q.2 Define "Counseling Psychology". What are the professional aspects of counseling? **4**
- Q.3 Is technology in counseling a boon or bane? **4**
- Q.4 What is crises intervention? **4**
- Q.5 Discuss "Family counseling". **8**

**PART-B**

- Q.7 Answer (**any two**) of the following long answer type questions:
- a) Describe the techniques of person-centered counseling. Compare and contrast it with the behavioral techniques.
  - b) Explain how you will counsel a client coming to you for enhancing his wellbeing and happiness?
  - c) Describe step by step the cognitive behavioral therapy for the treatment of depression **10×2**

**End Semester Examination, Dec. 2018**  
B. Sc./B.A. (Applied Psychology) — Fifth Semester  
**COUNSELING PSYCHOLOGY (BPSY-C-502)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **PART-B is compulsory**. Attempt **ANY FOUR** questions from **PART-A**. Marks are indicated against each question.

**PART-A**

- Q.1 Short answer types questions:
- a) What are the qualities of an effective counselor?
  - b) Mention issues in closing the counseling sessions.
  - c) Define psychodrama and group marathons.
  - d) Define reliability and validity of a test.
  - e) What is the difference between transference and counter transference? **2×5**
- Q.2 Define "Counseling Psychology". What are the professional aspects of counseling? **4**
- Q.3 Is technology in counseling a boon and bane? **4**
- Q.4 What is crises intervention? **4**
- Q.5 Discuss "Family counseling" and explain yoga and meditation as form of counseling? **8**

**PART-B**

- Q.7 Answer **any two** of the following long answer type questions:
- a) Describe the techniques of person-centered counseling. Compare and contrast it with the behavioral techniques.
  - b) Explain how you will counsel a client coming to you for enhancing his wellbeing and happiness?
  - c) Describe step by step the cognitive behavioral therapy for the treatment of depression **10×2**

# End Semester Examination, Dec. 2018

BA (Applied Psychology) — Fifth Semester

## HEALTH PSYCHOLOGY (BPSY-C-503)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short answers on the following questions:

- a) What is health?
- b) Mention the research methods used in health psychology.
- c) Define "Stress".
- d) What is health management?
- e) What is a placebo effect?

**2×5**

### **PART-A**

Q.2 Using examples explain the bio-psychosocial model of health. **5**

Q.3 Using examples discuss the goals of health psychology. **5**

Q.4 What is health behaviour? Explain its influence on an individual. **5**

Q.5 Validate the gender differences in stress perception and management. **5**

Q.6 Explain the different pain management methods / techniques. **5**

### **PART-B**

Q.7 Explain the motivational theories of health behaviour. **10**

Q.8 Using suitable examples, explain the sources of stress in an individual. **10**

Q.9 Expand on some health enhancing behaviours. **10**

Q.10 Comment on the emergence of health psychology. **10**

**End Semester Examination, Dec. 2018**  
BA/B. Sc Applied Psychology – Third Semester  
**DEVELOPING LEADERSHIP SKILLS (BPSY-D-306)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Answer the following:
- a) Leadership behavior identified by the Michigan studies were \_\_\_\_\_ and \_\_\_\_\_.
  - b) A person who influences the behavior of individuals or groups is called a \_\_\_\_\_.
  - c) Name the two traits given by Gardner.
  - d) Who gave the concept of situational leadership?
  - e) When is autocratic leadership efficient? **2x5**

**PART-A**

- Q.2 Who is a leader? Explain using examples. **5**
- Q.3 Briefly discuss the Ohio state study. **5**
- Q.4 What is transformational leadership? **5**
- Q.5 Explain Fielder's Contingency Model **5**
- Q.6 Critically discuss the limitations of the Great man theory of leadership **5**

**PART-B**

- Q.7 Discuss the different leadership styles. **10**
- Q.8 Using the reference of any great leader you admire, discuss their leadership profile. **10**
- Q.9 With the help of examples, discuss the traits of a good leader **10**
- Q.10 Explain in detail the leadership styles given by Kurt Lewin. **10**

**End Semester Examination, Dec. 2018**  
B.A. / B. Sc. (Hons.) (Applied Psychology) — Fifth Semester  
**PSYCHOLOGICAL ASSESSMENT AT THE WORKPLACE**  
**(BPSY-D-504)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SIX** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **ONE** question from **PART-B**. Marks are indicated against each question

Q.1 Write 0short answers on the following questions:

- a) The most popular screening method is \_\_\_\_\_.
- b) Would you work at a company that did not interview you first? Explain
- c) What do interviewees say that they are looking for?
- d) What is validity in testing?
- e) List the types of rating errors.

**2×5**

**PART-A**

Briefly elaborate of the following:

Q.2 Define "Person Specification".

**5**

Q.3 Define "Selection Process".

**5**

Q.4 Define "Group Discussion".

**5**

Q.5 Define "Assessment and Development Centres".

**5**

Q.6 What are the challenges to performance evaluation

**5**

**PART-B**

Q.7 Application based long answer type question:

You are an advisor to a startup company in the highly competitive field of "Online marketplace for food delivery" (like Swiggy and Food Panda). The company needs to hire their head of sales (All India). Keeping in mind that the different predictors that can be used, design and create a detailed process for the above and justify each step of your process with examples.

**20**

Q.8 Application based long answer type question:

You are an advisor to a print media company which has been in existence for over 75 years. Your job is to modernize their performance management system keeping in mind the fact that till date they have not had formal performance evaluation in place. Design and create a detailed road map for introducing and implementing performance evaluation for this company.

**20**



**End Semester Examination, Dec. 2018**  
B.A. (Applied Psychology) — First Semester  
**PIONEER WORK IN PSYCHOLOGY (BPSY-O-106)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **SEVEN** questions in all; **Q.1 is compulsory**. Attempt any **FOUR** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Write short answers on the following questions:
- a) Mention the stages of psychosexual development.
  - b) Using an example explain the Gestalt law of continuity.
  - c) What are safety and esteem needs according to Maslow?
  - d) What are the two inherent instincts given by Freud?
  - e) What is positive psychology? **2×5**

**PART-A**

- Q.2 Explain the need hierarchy theory of motivation. **5**
- Q.3 Using examples explain Gestalt psychology. **5**
- Q.4 What is the difference between classical and operant conditioning? **5**
- Q.5 Elucidate the contributions of Carl Jung. **5**
- Q.6 Explain the structure of personality according to Freud. **5**
- Q.7 Discuss the contributions of the cognitive movement in psychology. **5**

**PART-B**

- Q.8 Explain the psychosocial stages of development given by Erikson. **10**
- Q.9 Elucidate the different schools of thought in psychology. **10**
- Q.10 Discuss Freud's concepts of anxiety and defense mechanisms in detail. **10**
- Q.11 Discuss Titchener's contribution to structuralism. Mention the limitations of structuralism. **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – First Semester

## ANATOMY-I (BPT-101)

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Describe the origin, insertion, nerve supply and action of following muscle:

- a) Subclavius.
- b) Pectoralis Minor.
- c) Pectoralis Major.
- d) Serratus anterior.

**5x4**

### **PART-A**

Q.2 Describe axillary artery under following heading:

- a) Parts and its relation.
- b) Branches.

**10**

**10**

Q.3 Explain the anatomy and lymphatic drainage of breast.

**20**

Q.4 Draw a labeled diagram of heart. Also discuss the coronary circulation.

**20**

### **PART-B**

Q.5 Explain following:

- a) Difference between artery and vein.
- b) Difference between smooth, skeletal and cardiac muscles.

**10**

**10**

Q.6 Explain following:

- a) Brachial Plexus.
- b) Klumpke's Paralysis.

**10**

**10**

Q.7 Describe clavicle under following heading:

- a) Characteristic feature and ossification.
- b) Attachment and clinical anatomy.

**10**

**10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – First Semester

## PHYSIOLOGY-I (BPT-102)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Write briefly about the following:

- a) Threshold stimulus.
- b) Apoptosis.
- c) Blood clotting factors.
- d) Immunoglobulins.
- e) Heart sounds.
- f) Functions of spleen.
- g) Sarcotubular system.
- h) Law of Laplace.
- i) Crypts of Lieberkuhn.
- j) Role of calcium ions ( $\text{Ca}^{2+}$ ) in muscle contraction.

**2x10**

### **PART-A**

- Q.2 a) Tabulate characteristics properties of skeletal, smooth and cardiac muscles. Highlight their Morphological, Electrical, Mechanical, Metabolic differences. **15**
- b) Write briefly about Motor unit and Myasthenia Gravis. **5**
- Q.3 a) Define ECG. Describe the waves associated with a normal ECG with help of graphical representation. **10**
- b) Describe following:
- i) Determinants of Arterial Blood Pressure. **3**
  - ii) Neural Regulation of Arterial Blood Pressure. **7**
- Q.4 a) Describe briefly Peristalsis, Polarity of Intestine and Physiological significance of Dietary Fibre. **10**
- b) Write short notes on:
- i) Functions of Bile.
  - ii) Functions of HCL.
  - iii) Compositions of Pancreatic Juice.
  - iv) Absorption of Glucose in small intestine. **2½x4**

### **PART-B**

- Q.5 a) Explain Leucocyte with types and normal values. Mention briefly the functions of different types of leucocytes. **5**
- b) Physiological Mechanism of Neutrophilic Phagocytosis. **5**
- c) Factors controlling Hemoglobin formation. **5**
- d) Role of Plasma Proteins. **5**
- Q.6 What is Action Potential? Describe in detail about its Phases, Mechanism of Development and Properties. **20**
- Q.7 Write short notes on following:
- a) Sino-Atrial Node (SAN) and conduction system of Heart.
  - b) Peripheral Resistance and its major site of action.

- c) Hear sounds.
- d) Phases of Cardiac Cycle.

**5x4**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – First Semester

## BIOCHEMISTRY (BPT-103)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. All questions carry equal marks.

- Q.1 Explain the following:
- Identify the cell organelle which helps in DNA replication and transcription. Explain its structure and role.
  - Epimers with examples.
  - Reducing and Non reducing sugars.
  - Role of Pyruvate Dehydrogenate.
  - Structure of Glycine.
- 4x5**

### **PART-A**

- Q.2 Which biomolecule is called building block of a cell? Explain its role, classification with examples of each class. **20**
- Q.3 Calcium, Iron, Phosphate and Magnesium plays key role in maintaining our bodily processes and functioning normal. Justify the statement by mentioning all of their roles and deficiency diseases. **20**
- Q.4 How DNA and RNA are different from each other? Explain the watson and Crick model of DNA and all types of RNA's. **20**

### **PART-B**

- Q.5 Skipping Fats from our diet affects our system. How? Explain all its importance with its various types and examples. Support your answer with suitable structures. **20**
- Q.6 Which Metabolic pathway is called metabolic hub and why? Explain all its steps with Enzymes, Coenzymes and reactions in detail. **20**
- Q.7 Draw following structures:
- Glucuronic Acid (Open chain)
  - Galactonic Acid (Open chain)
  - Lactose
  - Glycogen
  - Linoleic Acid.
- 4x5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - First Semester

## **SOCIOLOGY (BPT-104A)**

Time: 2hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1 Write short notes on:
- a) Anticipatory Socialization.
  - b) Population Explosion.
  - c) Any two features of family.
  - d) Purpose of social security.
  - e) Social change and deviance. **2x5**

### **PART-A**

- Q.2 Explain the relationship of sociology with different types of sciences. **10**
- Q.3 What is the role of primary and secondary groups in hospital and rehabilitation settings? **10**
- Q.4 Describe different Agencies of socialization in detail. **10**

### **PART-B**

- Q.5 Discuss Poverty and Unemployment. Write about its causes effects on health and its remedies in detail. **10**
- Q.6 Explain the role of social factors affecting health and illness. **10**
- Q.7 Discuss the types and functions of family in detail. **10**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — First Semester  
**FUNDAMENTAL AND PHILOSOPHY (BPT-105)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) Define movement and also write its classification.
- b) Enumerate movements at wrist joint.
- c) What are planes and axes?
- d) Define "Hooke's Law".
- e) Define "Fuse".
- f) Define "Electro-magnetic induction".
- g) Define "Pulley along with its types".
- h) Define "Buoyancy".
- i) Define "Line of gravity".
- j) Define "Third law of motion".

**2×10**

**PART-A**

- Q.2 a) What are axes and planes? Classify movements according various axes and planes **10**  
b) Classify muscles according to different group actions. **10**
- Q.3 a) Define "Hydrotherapy and Buoyancy". What are factors that determine up thrust? **10**  
b) State the effect of buoyancy on weight and movements performed in water. **10**
- Q.4 a) What are levers? Write their types with examples in human body and their application in physiotherapy. **5**  
b) State Newton's laws of motion. **5**

**PART-B**

- Q.5 What are transformers? Write its types construction, working and uses. **20**
- Q.6 What are dangers related to current electricity? Write about first aid and management and prevention of electric shock. **20**
- Q.7 a) What is electromagnetic spectrum? Describe the use and application of each radiation. **15**  
b) Draw circuit diagram for short wave diathermy (SWD). **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — First Semester  
**FUNDAMENTALS AND PHILOSOPHY OF YOGA (BPT-106)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Answer the following in brief:
- a) Concept of bhakti yoga.
  - b) What are bandhas and mudras?
  - c) Write a short note on praty hava.
  - d) List widely practiced yoga sadhnas.
  - e) Define "Raja yoga".
- 2×5**

**PART-A**

- Q.2 a) What is hatha yoga? State its aim and objective. **5**  
b) Explain in brief the ashtanga yoga. **5**
- Q.3 What are various misconception related to yoga? **10**
- Q.4 Write in brief about history and development of yoga. **10**

**PART-B**

- Q.5 List the various benefits of yoga. **10**
- Q.6 a) Give the definition of yoga according to patanjali yoga sansthan, bhagawat gita and yoga vasisthan. **5**  
b) What are prerequisites for yoga? **5**
- Q.7 Write short note on fundamentals of yoga sadhana. **10**



# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Second Semester

## ANATOMY-II (BPT-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Fill in the blanks:

- Life saving muscle of tongue is \_\_\_\_\_.
- \_\_\_\_\_ and \_\_\_\_\_ are present along transpyloric plane.
- The white fibers of cerebrum include \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ fibers.
- Structures passing through foramen spinosum are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
- Medial squint is observed with paralysis of muscle which is supplied by \_\_\_\_\_ nerve.
- \_\_\_\_\_ is a primary lymphoid organ.
- \_\_\_\_\_ is the only sensation (fibers of which) does not pass through thalamus.
- Thoraco-lumbar outflow extends from \_\_\_\_\_ to \_\_\_\_\_ segments of spinal cord.
- Brain is covered with \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ Cover from outside inwards.
- Collection of neuronal cell bodies inside the CNS is known as \_\_\_\_\_. **2×10**

### **PART-A**

Q.2 Write short notes on the following:

- Broca's area and motor aphasia
- Lymphatic drainage of head and neck
- Blood supply of cerebrum
- Optic pathway

**5×4**

Q.3 Describe cerebellum as under:

- Parts of hemisphere and vermis
- Functional subdivision
- Connections
- Applied anatomy

**5×4**

Q.4 a) Describe the nuclei of origin, course and distribution of nerves supplying extra-ocular muscles. **10**

b) Classify white fibers of cerebrum. Describe corpus callosum. **10**

### **PART-B**

Q.5 Write short notes on the following:

- Lymphatic nodule
- Klinefelter's syndrome
- Production, circulation and reabsorption of CSF
- Spermatogenesis

**5×4**

Q.6 Write short notes on the following:

- Cavity of Larynx
- Floor of fourth ventricle

**10×2**

Q.7 Describe gross anatomy, blood supply and nerve supply of lungs. Add a note on bronchopulmonary segments. **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Second Semester

## PHYSIOLOGY-II (BPT-202)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Attempt the following questions:

- a) Define two types of periodic breathing.
- b) Subject's initial volume of air in respirometer is 4.5 lit. The initial cone, of helium and final cone, of helium are 16% and 9% respectively. Calculate the FRC.
- c) What is fetoplacental unit?
- d) Discuss the functions of sertoli cell.
- e) Name two organs other than endocrine gland plays as endocrine function.
- f) What is Cushing's and simmond's disease?
- g) What is cystometrogram?
- h) What is the difference between eccrine and apocrine glands?
- i) What is syringomyelia?
- j) What is Wilson disease?

**2×10**

### **PART-A**

Q.2 What is GATE control theory of pain? Discuss about referred pain. Describe the important properties of receptors. **20**

Q.3 Discuss about the theories of colour vision and applied physiology of colour vision. Discuss different types of lesions of optic pathway. **20**

Q.4 Discuss about the applied physiology part of acid-base disturbances. Discuss the functions of J-G apparatus. **20**

### **PART-B**

Q.5 Discuss about regulation of respiration and mechanics of breathing. **20**

Q.6 Discuss in detail about different changes of menstrual cycle. **20**

Q.7 Write about the physiology of bone. Discuss the functions of glucocorticoids. **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Second Semester

## ELECTROTHERAPY-I (BPT-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define resting membrane potential.
- b) What is Rheobase and Chronaxie?
- c) Classify "Nerve".
- d) What is iontophoresis?
- e) What is intrapulse and interpulse?
- f) What is low frequency current with example?
- g) What is absolute and relative refractory period?
- h) What is SD curve?
- i) What is TENS?
- j) What is Beat frequency?

**2×10**

### **PART-A**

- Q.2 a) Explain Pain Gate theory in detail. **10**  
b) What is TENS? Explain indications and contraindications for TENS. **10**

Q.3 Classify Currents. Explain the physiological effects and contraindication of faradic current. **20**

- Q.4 a) What are Galvanic Currents? Explain the technique of application. Explain indications of currents. **10**  
b) What is resting nerve potential? How does it travel in nerve? **10**

### **PART-B**

- Q.5 a) Explain SD curves? Explain curves for different lesions. **10**  
b) What is IFT? Explain the therapeutic effects of IFT. **10**

- Q.6 a) Explain Sunderland's classification for nerve Lesion. **10**  
b) What is iontophoresis? Write down the indications for it. **10**

- Q.7 a) Explain the technique and method of preparation for faradism under pressure. **10**  
b) Describe the technique for stimulating pelvic floor muscles. **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Second Semester

## EXERCISE THERAPY-I (BPT-204)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Answer the following briefly:
- a) Force passive movement.
  - b) Describe Maximal resistance.
  - c) Describe Stretch Reflex.
  - d) Give two examples of Back Extension Exercises.
  - e) Describe benefits of Continuous Passive Movement (CPM).
  - f) Describe muscle work in Reach standing position.
  - g) Effects of Relax Passive Movement.
  - h) Plyometric training.
  - i) What is the Clinical significance of Progressive Resisted Exercise?
  - j) Balance Board. **2×10**

### **PART-A**

- Q.2 Classify active movement. Write the technique, effect and uses of each of them. **20**
- Q.3
- a) Describe the modes of stretching with examples. **10**
  - b) Explain proper positioning, hand placement and stabilization used during manual stretching of hamstring muscles. **10**
- Q.4
- a) Describe the techniques of resisted exercise. Write its benefit and contraindication. **15**
  - b) Explain the application of elastic resistance in therapeutic exercises. **5**

### **PART-B**

- Q.5
- a) Explain the techniques of re-education of muscles. **10**
  - b) Describe the protocol for strengthening of weak quadriceps muscles from grade II to grade IV. **10**
- Q.6
- a) Write the factors responsible for joint limitation. **10**
  - b) How will you mobilize a stiff shoulder joint? **10**
- Q.7
- a) What are the types of muscles contraction/muscle work? **10**
  - b) Describe muscle work during making a fist. **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy — Third Semester

## PHARMACOLOGY (BPT-301)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define "Pharmacology".
- b) What is sublingual route of drug administration?
- c) Name intravenous anesthetics.
- d) What is pharmacokinetics?
- e) What is an analgesic?
- f) What is the difference between "Drug and medicine"?
- g) Name few antiepileptic drugs.
- h) What is drug toxicity?
- i) What is advantageous drug effect?
- j) What is action potential?

**10×2**

### **PART-A**

Q.2 Write a note on principles of drug action. Write mechanism of drug action.

**20**

Q.3 Write short notes on the following:

- a) Skeletal muscle relaxants.
- b) General anesthetic agents.

**10×2**

Q.4 Write a note on methyl and ethyl alcohol.

**20**

### **PART-B**

Q.5 Write short notes on the following:

- a) Antihypertensive drugs.
- b) Write notes on bronchodilators.

**10×2**

Q.6 Write short notes on the following:

- a) Oral hypoglycemic drugs.
- b) Write note on nonsteroidal anti inflammatory drugs

**10×2**

Q.7 Write short notes on the following:

- a) Anti-tubercular drugs.
- b) Anti-histamines.
- c) Nitrates.

**7**

**7**

**6**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy–Third Semester  
**PATHOLOGY AND MICROBIOLOGY (BPT-302)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 **Write short notes on the following:**

- a) Wound Healing.
- b) Apoptosis.
- c) Edema.
- d) Carcinogen.
- e) Embolism.

**Answer the following:**

- f) What are Koch's postulates and why are they important?
- g) Write a short note on the different shapes of bacteria.
- h) What is causative organism of Diphtheria? Mention the symptoms of disease also.
- i) What is Hypersensitivity?
- j) Differentiate between sterilization and disinfectant. **2x10**

**PART-A**

Q.2 Explain the pathology in detail of myocardial infarction in detail. **20**

Q.3 Write a note on 'pathology of tuberculosis'. **20**

Q.4 Explain the pathology of Osteoporosis and Osteoarthritis in detail. **20**

**PART-B**

Q.5 a) What is the causative organism of typhoid? How does the bacteria cause the disease? **8**

b) Differentiate between exotoxins and endotoxins. **2**

c) Explain with structure and functions of different types of antibodies in detail. **10**

Q.6 a) What is AIDS? Discuss the structure of virus and window period of the infection. **10**

b) What is Rabies? Discuss in brief about the transmission vehicles of the disease. **10**

Q.7 What is Candidiasis? Explain the morphology and tools for detection and diagnosis of disease. **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy–Third Semester

## ELECTROTHERAPY-II (BPT-303)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1 Answer in brief the following questions:
- a) Write the testing of ultrasound machine.
  - b) Enumerate the laws governing the effects of Electromagnetic Radiations.
  - c) What is Phonophoresis?
  - d) Enumerate properties of LASER.
  - e) What are uses of cryotherapy?
  - f) Classify UVR according to wavelength.
  - g) What is Psoriasis?
  - h) Short note on hydrocollator packs.
  - i) Enumerate the techniques of application of paraffin wax bath.
  - j) Enumerate types of LASER. **2x10**

### **PART-A**

- Q.2 a) What is Biofeedback? **10**  
b) Explain its limitations and uses. **10**
- Q.3 a) Write short note on UVR. Explain its physiological effects. **10**  
b) Write down the indications and contra indications of UVR. **10**
- Q.4 a) What is SWD? **10**  
b) Explain the construction of SWD and types of electrode placement. **10**

### **PART-B**

- Q.5 a) Explain types of generators of IRR. **10**  
b) State the dangers and contra-indication of IRR. **10**
- Q.6 a) Explain the Mechanical, Biological and Therapeutic Effects of ultrasound. **10**  
b) What is combination therapy? **10**
- Q.7 a) Explain the physiological effects and therapeutic uses of cryotherapy. **10**  
b) What are various techniques of application of cold therapy? **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy–Third Semester

## EXERCISE THERAPY-II (BPT-304)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Write short notes on:

- a) Contrast Relaxation.
- b) Antalgic Gait.
- c) Measurement of gutter crutch.
- d) Pursed hip Breathing.
- e) Lordosis.
- f) Genu Varum.
- g) D<sub>1</sub> pattern of upper limb.
- h) D<sub>2</sub> pattern of lower limb.
- i) Trendelenburg Gait.
- j) Backward Lurching Gait.

**2x10**

### **PART-A**

Q.2 What are the indications for crutch walking? Write in detail about crutch walking patterns. **20**

Q.3 Define fatigue. What are the symptoms and causes of fatigue? Write in detail techniques of local relaxation. **20**

Q.4 What is gait cycle? Explain RLA classification of gait cycle. **20**

### **PART-B**

Q.5 What is static balance? Write down the mechanisms of neuromuscular co-ordination. Explain the physiotherapy management for in co-ordination. **20**

Q.6 What are the various equipments used in therapeutic gymnasium? Write down their effects and uses. **20**

Q.7 a) Explain the physiological changes that occur with training. **10**  
b) Explain various breathing exercises in detail. **10**



# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fourth Semester

## MEDICINE (BPT-401)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Acid-Base disturbance.
- b) Serum Bilirubin.
- c) Fungus
- d) Blood Transfusion.
- e) Malena.

**4×5**

### **PART-A**

Q.2 Define "Measles". Mention causative organism, clinical features and the treatment of measles. **20**

Q.3 Write a short note on "Respiratory Acidosis." Mention the clinical symptom and treatment of Respiratory Acidosis. **20**

Q.4 Write in detail about "Jaundice". **20**

### **PART-B**

Q.5 Mention in detail about AIDS. Explain the four stages of HIV. **20**

Q.6 Write in detail about "Hyperthyroidism". Mention its clinical features and treatment. **20**

Q.7 Explain "Venous Thrombosis" in detail. **20**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Fourth Semester  
**SURGERY WITH OBSTETRICS AND GYNECOLOGY (BPT-402)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Write short notes on the following:
- a) Incisions and complications of hysterectomy.
  - b) Determination on duration in weeks of pregnancy by Fundal height.
  - c) Define Multigravida and Nullipara.
  - d) Define Preterm Baby and Abruptio Placentae.
  - e) Define Placenta Previa.
  - f) Causes of burns?
  - g) Intra uterine devices.
  - h) Flap and Graft.
  - i) Define Puerperium.
  - j) What is a Keloid? **2×10**

**PART-A**

- Q.2 Explain the process of complete history taking a gyne patient. **20**
- Q.3 Write notes on indications, incisions and complications of:
- a) nephrectomy b) herniorrhaphy. **20**
- Q.4 Write notes on:
- a) Calculation of fluids administration in burn patients.
  - b) Principles of skin grafting in plastic surgery and precautions. **10×2**

**PART-B**

- Q.5 Write a note on Antenatal Care. **20**
- Q.6 Write short notes on the complications of:
- a) Previous cesarean section.
  - b) Pelvic inflammatory disease. **10×2**
- Q.7 Write short notes on the following:
- a) Carcinoma Cervix.
  - b) Carcinoma Uterus. **10×2**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Fourth Semester  
**BIOMECHANICS AND KINESIOLOGY (BPT-403)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) Name any two anatomical pulley examples from human body.
- b) Define Vector.
- c) Define Equilibrium.
- d) Define Kinetics.
- e) Define Kinematics.
- f) Mechanical advantages in levers.
- g) General motion.
- h) Joints of shoulder complex.
- i) Range of motion of supination and pronation in forearm.
- j) Give two examples of synovial joint.

**2×10**

**PART-A**

Q.2 Define Levers. Give its classification and examples from human body. Add a note on mechanical advantage. **20**

Q.3 Discuss the classification of joints in detail with examples. **20**

Q.4 Write in detail minimum 10 factors affecting stability in human beings. **20**

**PART-B**

Q.5 Define Biomechanics. Write down with application of biomechanics in the field of physiotherapy with proper examples. **20**

Q.6 a) Write down the functions and properties of skeletal muscles. **10**  
b) Differentiate between Type I, Type II a & Type II b muscle fibers **10**

Q.7 Discuss the biomechanics of shoulder joint in detail. **20**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Fourth Semester  
**PSYCHOLOGY AND PSYCHIATRY (BPT-404)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Answer the following questions:
- a) Define Intelligence Quotient.
  - b) Explain fear.
  - c) Write a short note on alcohol dependence.
  - d) Define Autism.
  - e) Draw a labelled diagram of ear.
  - f) Define Learning.
  - g) Draw a diagrammatic representation of three stages process of memory.
  - h) What is Amnesia?
  - i) Define Synapse.
  - j) What is instrumental learning? **2×10**

**PART-A**

- Q.2 What is cognitive learning theory? Explain in detail. **20**
- Q.3 What is schizophrenia? Explain in detail the features and management. **20**
- Q.4 a) Write about Pain Gate Theory in detail. **10**  
b) Write the difference between Bipolar-I and Bipolar-II disorder. **10**

**PART-B**

- Q.5 Define OCD. What are the features and treatment of OCD? **20**
- Q.6 a) Explain Erikson Psychosocial Theory for development. **10**  
b) Explain various types of social motives. **10**
- Q.7 a) What are the various types of conflict? **10**  
b) Write a note on "Neuron and Nerve transmission". **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fourth Semester

## ETHICS AND ADMINISTRATION (BPT-405)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Explain the following briefly:
- a) Types of correspondence.
  - b) Methods of filing.
  - c) Types of referral.
  - d) Workman's Compensation Act.
  - e) List various electrical and non-electrical equipments in a PT clinic.
  - f) Expand CPA.
  - g) Expand IAP and WCPT.
  - h) Define Confidentiality.
  - i) Define Principle of purchase.
  - j) Importance of record keeping in physiotherapy. **2×10**

### **PART-A**

- Q.2 Define planning. Explain about different types of planning. **20**
- Q.3 a) Discuss the importance of time management. **10**  
b) How will you plan for first interview? **10**
- Q.4 Discuss codes of ethics given by WCPT. **10**

### **PART-B**

- Q.5 Define Organization. Explain in detail different structures of an organization. **20**
- Q.6 Describe the pre-requisites to set up an independent physiotherapy clinic. Add a note on financial management. **20**
- Q.7 Describe Maintenance and the type of maintenance. How to maintain furniture and equipment of physiotherapy department? **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fifth Semester

## ORTHOPEDICS (BPT-501)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Write short notes on:

- a) Mallet's fracture.
- b) Colle's fracture.
- c) March fracture.
- d) Volkmann's Ischemic fracture.
- e) Golfer's Elbow.
- f) Torticollis.
- g) Carpal tunnel syndrome.
- h) Discectomy
- i) Painful heel.
- j) Klumpke's paralysis.

**2×10**

### **PART-A**

Q.2 Write in detail classification of different types of fractures.

**20**

Q.3 Write a note on principles of management and complications of fracture femur.

**20**

Q.4 Explain the following:

- a) CTEV
- b) Rotator cuff injury.

**10×2**

### **PART-B**

Q.5 Write notes on various aspects of tuberculosis of bones.

**20**

Q.6 Explain the following:

- a) Avascular necrosis.
- b) Dupuytren's contracture.

**10×2**

Q.7 Write notes on:

- a) Osteotomy.
- b) Radial nerve injury.
- c) Septic Arthritis.
- d) Spina bifida.

**5×4**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — Fifth Semester  
**ORTHOPAEDICS PHYSIOTHERAPY (BPT-502)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.*

Q.1 Answer the following briefly:

- a) Explain Adson Test. What for this clinical test being used?
- b) Which muscle is affected in Torticollis? How do you stretch the muscle involved?
- c) Write the difference between Coxa Vara and Coxa Valga.
- d) Explain Cobb's angle.
- e) What are the clinical tests for Tennis Elbow?
- f) What are the causes of anterior knee pain?
- g) ULTT-3 is for which nerve?
- h) What are the deformities present in Rheumatoid hand?
- i) What is Whiplash associate disorder?
- j) What are the possible causes of painful heel? **2x10**

**PART-A**

Q.2 Explain Ankylosing Spondylitis in detail. Write in detail about its clinical manifestation and physiotherapy management. **20**

Q.3 Explain brachial plexus injuries in detail. Explain Erb's palsy and Klumpke's palsy. **20**

Q.4 Explain Pre and Post Prosthetic Management of above knee amputation. Explain Management and Treatment Goals of this Amputation. **20**

**PART-B**

Q.5 Explain in detail about Post Polio Residual paralysis. Write all the therapeutic measures for PPRS. **20**

Q.6 Write down Pre and postoperative assessment and Physiotherapeutic management of Arthroplasty. **20**

Q.7 Explain Lumbar Canal stenosis in detail. What are the causes of Lumbar canal stenosis? What are the clinical manifestation and physiotherapeutic measures for the same? **20**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — Fifth Semester  
**APPLIED BIOMECHANICS, KINESIOLOGY AND ERGONOMICS**  
**(BPT-503)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) Define "Phase of double support".
- b) Name any four ligaments of HIP joint.
- c) Define "Angle of torsion".
- d) Define "Coxa Vara".
- e) Define "Fatigue".
- f) Name any four Biomechanical risk factors for a School teacher
- g) Define "Scoliosis".
- h) Define "Functional spinal unit".
- i) Define "Concave convex rule".
- j) Define "Enumerate ankle ligaments".

**2×10**

**PART-A**

Q.2 Discuss the biomechanics of knee joint in detail. Add a short note on screw home mechanism. **20**

Q.3 Define "One stride" and discuss the different phases of GAIT with diagram. **20**

Q.4 Enumerate the various deformities of spine (any four). Discuss the factors for maintain a good posture. **20**

**PART-B**

Q.5 What do you mean by WRMSD's.? Describe any two of them with remedial exercises. **20**

Q.6 Write down the ergonomic consideration while designing a kitchen. **20**

Q.7 Enumerate the common problems faced by the driver and rehabilitation exercises for him with back pain. **20**



**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Fifth Semester  
**CONSULTATION AND SCREENING (BPT-504)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Write short notes on the following:

- a) Grades of tenderness.
- b) Yellow flags.
- c) Grades of pitting oedema.
- d) Tools for Neurological examination.
- e) Documentation.

**2x5**

**PART-A**

- Q.2 Describe in detail WCPT's code of conduct guidelines for healthcare practitioners. **10**
- Q.3 Define 'red flags'. Write down the signs and symptoms for referring patient in cancer. **10**
- Q.4 Define 'Pain'. Distinguish between systemic and musculoskeletal pain. **10**

**PART-B**

- Q.5 Explain in detail the standards of practice guidelines for physiotherapist given by WCPT. **10**
- Q.6 Write down the grade of MMT. Describe MMT procedure for abductors and adductors of hip joint. **10**
- Q.7 Define Consultation and screening. Write down the importance of communication for physiotherapists. **10**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Sixth Semester  
**NEUROLOGY AND NEUROLOGY SURGERY (BPT-601)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Write notes on the following:
- a) Early warning signs of stroke.
  - b) Features of Medical medullary syndrome.
  - c) Classify the types of Ataxia.
  - d) Classify intracranial space occupying lesions.
  - e) Types of meningitis.
  - f) Features of Duchenne's Muscular Dystrophy.
  - g) Hochem and Yahr classification of Parkinson;s disease.
  - h) Signs and symptoms of subdural hematoma.
  - i) Classification of Motor Neuron disease.
  - j) What is Subarachnoid Hemorrhage? **2×10**

**PART-A**

- Q.2 Explain in detail the features of Motor Nerve Disorders (MND). **20**
- Q.3 Explain the types and mechanism of spinal cord injuries and their management. **20**
- Q.4 Write a note on peripheral nerve injuries. **20**

**PART-B**

- Q.5 Write a note on the diagnosis, complications and treatment of Sympathetic Nervous Disorders. **20**
- Q.6 Write short notes on the following:
- a) Surgical treatment of spasticity.
  - b) Electric stimulation of the brain. **10x2**
- Q.7 Explain the following:
- a) Examination of cranial nerves – VII to XII.
  - b) Superficial tendon reflexes. **10x2**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Sixth Semester

## NEUROLOGY PHYSIOTHERAPY (BPT-602)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question. Draw the diagram(s), wherever required.

Q.1 Write short answer on the following:

- a) Kernig's Sign.
- b) Clinical features of Right MCA Stroke.
- c) Principle of Bobath approach.
- d) Gower's Sign.
- e) Clinical features of Ataxia
- f) Cardinal features of Parkinson's disease.
- g) Difference between UMN & LMN lesion.
- h) Clinical features of Carpal Tunnel Syndrome.
- i) Types of Multiple Sclerosis.
- j) Indications for the use of PNF patterns.

**2×10**

### **PART-A**

Q.2 Write short notes on the following:

- a) Blood supply of brain.
- b) Assessment of VIII cranial nerve.

**10×2**

Q.3 A 65 years old male experienced sudden weakness in right side of the body with deviation of mouth to one side 2 months ago. Currently he is unable to use right upper limb and difficulty in walking. Write down the detailed management of the same. **20**

Q.4 Explain the management of acute case of spinal cord injury at C5-C6 level. **20**

### **PART-B**

Q.5 a) Assess and manage an acute case of GBS. **10**  
b) Management of an acute case of Multiple Sclerosis. **10**

Q.6 a) Explain the management of a 7 year old boy having DMD. **10**  
b) Gait training of a Parkinson's patient. **10**

Q.7 Discuss the application of various principles and techniques of NDT for treating an acute case of stroke. **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Sixth Semester

## NEUROLOGY PHYSIOTHERAPY (BPT-602)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Explain the following:

- a) Kernig's sign.
- b) Clinical features of right MCA stroke.
- c) Principle of Bobath approach.
- d) Gower's sign.
- e) Clinical features of ataxia
- f) Cardinal features of Parkinson's disease.
- g) Difference between UMN & LMN lesion.
- h) Clinical features of carpal tunnel syndrome.
- i) Types of multiple sclerosis.
- j) Indications for the use of PNF patterns.

**2×10**

### **PART-A**

Q.2 Write short notes on the following:

- a) Blood supply of brain.
- b) Assessment of VIII cranial nerve.

**10×2**

Q.3 A 65 year old male experienced sudden weakness in right side of the body with deviation of mouth to one side 2 months ago. Currently he is unable to use right upper limb and difficulty in walking. Write down detailed management of the same. **20**

Q.4 Explain the management of acute case of spinal cord injury at C5-C6 level. **20**

### **PART-B**

Q.5 a) Assess and manage an acute case of GBS. **10**

b) Management of an acute case of multiple sclerosis. **10**

Q.6 a) Explain the management of a 7 year old boy having DMD. **10**

b) Gait training of a Parkinson's patient. **10**

Q.7 Discuss the application of various principles and techniques of NDT for treating an acute case of stroke. **20**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Sixth Semester

## MANUAL THERAPY (BPT-603)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; Attempt any **THREE** questions from **PART-A** and **FIVE** questions from **PART-B**. Marks are indicated against each question.

### **PART-A**

- Q.1 Explain in detail about Mckenzie protocol for lower back pain. Give an example of PIVD at unit level. **10**
- Q.2 What are the indications and contraindications of joint mobilization? What are the effects of joint mobilization after fracture (post # stiffness)? **10**
- Q.3 What are Upper Limb Tension tests? Explain all three upper limb tension tests along with their sensitizing components. **10**
- Q.4 Write in brief about the principles of Mulligan mobilization. Give an example of cervical pain at C<sub>5</sub> – C<sub>6</sub> level. **10**

### **PART-B**

- Q.5 Write the difference between mobilization and manipulations. **4**
- Q.6 Explain "Centralization Phenomenon". **4**
- Q.7 Explain the indications and contraindications of massage therapy? **4**
- Q.8 Explain Grades of Maitland Mobilization. **4**
- Q.9 Explain Percussion Technique of massage. **4**
- Q.10 Explain SLR and its components. **4**
- Q.11 Give the types of dysfunctions given by Mekenzie. **4**

**End Semester Examination, Dec. 2018**  
 Bachelor of Physiotherapy – Sixth Semester  
**RESEARCH METHODOLOGY AND BIOSTATISTICS (BPT-604)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define the measures of central tendency.
- b) When are the parametric and non-parametric tests used?
- c) Differentiate between type I and II errors.
- d) Define "Hypothesis".
- e) Enlist the sources of primary and secondary data.
- f) Define "Plagiarism".
- g) Highlight the difference between incidence and prevalence.
- h) Draw a skewed (positive & negative) normal distribution curve.
- i) Give the types of reliability with examples.
- j) Define "Face Validity".

**2×10**

**PART-A**

Q.2 Discuss the different types of correlation. Calculate and comment on the type of correlation for the following data:

X	65	68	62	70	65	72	67	66	68	70
Y	128	140	120	152	138	160	135	130	125	165

**20**

Q.3 Differentiate between qualitative and quantitative research design? Describe their types with examples and discuss their advantages and disadvantages. **20**

Q.4 Describe the various ethical principles and guidelines for a clinical research. **20**

**PART-B**

Q.5 What do you understand by measures of dispersion? Calculate standard deviation in the following data:

X	55-60	50-55	40-45	45-50	35-40	30-35	25-30	25-20
Y	7	13	15	20	30	33	28	14

**20**

Q.6 Define Sampling. Classify and explain the different types of sampling. **20**

Q.7 An analysis of monthly wages paid to the workers in a firm A and B belonging to the same industry gives following result:

	Firm A	Firm B
No. of workers	550	650
Average monthly wages	₹1450	₹1400
Standard Deviation	100	140

a) Which firm A or B has larger wage bill? **5**

b) In which, A or B, is there greater variability in individual wages? **15**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Sixth Semester  
**WOMEN HEALTH AND EXERCISE (BPT-605)**

Time: 2 hrs.

Max Marks: **25**

No. of pages: *1*

Note: Attempt **THREE** questions in all; **Q.1 is compulsory**. Attempt any **ONE** question from **Part-A** and any **ONE** question from **Part-B**. Each question carries equal marks.

Q.1 Answer briefly the following questions:

- a) Discuss the causes of Hypertension.
- b) Different musculoskeletal disorders in a female.
- c) Effect of exercises on cardiovascular system.
- d) Absolute contra indications for prescription of exercises in a pregnant female.
- e) Causes of Anemia.

**1×5**

**PART-A**

Q.2 What is Urinary incontinence? Give the classification of incontinence. Also discuss the clinical features and management of its various types. **10**

Q.3 Discuss the impact of Anemia on women health. **10**

**PART-B**

Q.4 Discuss the various exercises and the guidelines to be followed while prescribing exercises to an elderly female. **10**

Q.5 Discuss the impact of exercises on various systems in a female. **10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Seventh Semester

## CARDIOPULMONARY AND CARDIOPULMONARY SURGERY (BPT-701)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Write short notes on:
- a) Unstable angina.
  - b) BUERGER'S disease.
  - c) Bronchiectasis.
  - d) Lung abscess.
  - e) Pneumothorax
  - f) Cardiac bypass surgery.
  - g) Types of respiratory FAILURE.
  - h) Types of thoracic incisions.
  - i) Hemothorax.
  - j) Coal workers pneumoconiosis. **2×10**

### **PART-A**

- Q.2 Explain all features of myocardial infarction in detail. **20**
- Q.3 Write a note on bronchial asthma. **20**
- Q.4 Describe various diseases and surgery of pericardium. **20**

### **PART-B**

- Q.5 Write a note on infective endocarditis. **20**
- Q.6 Explain:
- a) Chest wall deformities.
  - b) Atherosclerosis. **10×2**
- Q.7 Explain:
- a) Lobectomy.
  - b) Thoracoplasty. **10×2**



**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — Seventh Semester  
**CARDIOPULMONARY PHYSIOTHERAPY (BPT-702)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Enumerate Orthopnea and Platypnea
- b) Explain the term thoracentesis.
- c) What is pursed lip breathing?
- d) Define "Thrombophlebitis".
- e) Enumerate Bronchial and Vesicular sound.
- f) Differentiate Pleuritic pain and Anginal pain.
- g) What is claudication?
- h) What is ACBT?
- i) Discuss "Rib Springing".
- j) What is bronchiectasis and its types?

**2×10**

**PART-A**

Q.2 What are bronchopulmonary segments of both right and left lung? Explain postural drainage position for lower lobe of both lungs. **20**

Q.3 Patient aged 50 year having cough and sputum for consequent three month and successive two years, Diagnose the disease and explain its pathophysiology clinical features and physiotherapy management **20**

Q.4 A middle aged man having high low density lipoprotein and having history of acute MI. Plan a tailored cardiac rehabilitation protocol for the patient. **20**

**PART-B**

Q.5 What is heart transplantation, explaining types and write day wise protocol for patient? **20**

Q.6 Explain autogenic drainage technique for bronchiectasis, emphasize on all the phases along with indication and technique of usage. **20**

Q.7 a) Explain manual hyperinflation techniques along with equipment and indication. **10**  
b) What is pneumothorax types and clinical features along with physiotherapy management? **10**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy — Seventh Semester  
**PEDIATRICS AND PEDIATRICS PHYSIOTHERAPY (BPT-703)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What is Scurvy?
- b) Give clinical presentation of rickets.
- c) Give clinical presentation of congenital dislocation of hip.
- d) Give the symptoms of pneumonia.
- e) Differentiate between growth and development.
- f) Explain "Moro's Reflex".
- g) Give stages of polio.
- h) Name the types of spina bifida.
- i) Give stimulus, response, integration and clinical significance of ATNR.
- j) Explain "Babinski Sign". **2×10**

**PART-A**

- Q.2 a) Explain the laws of growth. Discuss briefly the factors affecting growth and development. **10**  
b) What is immunization? Explain the WHO schedule, different vaccinations. **10**
- Q.3 a) Discuss the etiology, type and management of anemia. **10**  
b) Throw light on the etiology, clinical picture and treatment of chicken pox. **10**
- Q.4 A 6 year old boy complains of frequent falls. He has to take support of his body to get up from the ground. He is also facing difficulty in stair climbing and running and doing overhead activities. Write down a detailed assessment of the case. Design a treatment protocol along with goal planning **20**

**PART-B**

- Q.5 What is scoliosis? Discuss its etiology and clinical features. Write down various methods of evaluation along with goal planning. Devise a treatment plan for thoracolumbar scoliosis. **20**
- Q.6 A 5 year old boy has scissoring gait and exhibits difficulty in doing activities of daily living. Mother gives the history of delayed birth cry with milestone delay. Write down the detailed assessment and management of the case. **20**
- Q.7 a) Differentiate between impairment disability and handicap. Discuss their inter relationship and impact on one another. **10**  
b) Discuss the etiology, type and management of tuberculosis. **10**

**End Semester Examination, Dec. 2018**  
 Bachelor of Physiotherapy – Second Semester  
**FOREIGN LANGUAGE (FRENCH) (BPT-GE-01)**

Time: 3 hrs.

Max Marks: **50**  
 No. of pages: 2

Note: *Attempt all questions. Marks are indicated against each question.*

Q.1 Conjuguez les verbes suivants:  
 (Conjugate the following verbs)

- a) Je \_\_\_\_\_ la télévision. (regarder)
- b) Il \_\_\_\_\_ dans le parc (marcher)
- c) Vous \_\_\_\_\_ anglais (parler)
- d) Elles \_\_\_\_\_ avec ses amis (danser)
- e) Nous \_\_\_\_\_ une chanson (chanter)

**1×5**

Q.2 Posez des questions:  
 (Make questions)

- a) \_\_\_\_\_?  
 Ça va bien, merci.
- b) \_\_\_\_\_?  
 J'ai vingt ans.
- c) \_\_\_\_\_?  
 Je m'appelle Carol.

**1×3**

Q.3 Remplissez avec les pronoms sujets (je, tu, il, elle, nous, vous, ils, elles)  
 (Fill in the blanks with subject pronouns)

- a) \_\_\_\_\_ joues au cricket.
- b) \_\_\_\_\_ écoute de la musique.
- c) \_\_\_\_\_ portent une chemise rouge.
- d) \_\_\_\_\_ mange un gâteau.
- e) \_\_\_\_\_ aimons le chocolat.
- f) Discutez- \_\_\_\_\_ dans la classe?
- g) \_\_\_\_\_ travaillons dans une école.

**1×7**

Q.4 Écrivez les nombres cardinaux et ordinaux:  
 (Write the ordinal and cardinal numbers in words)

Le nombre	Cardinal	Ordinal
13		
15		
8		
17		
6		

**1×10**

Q.5 Cochez la bonne réponse:  
 (Tick the correct option)

- a) At night we say:
  - Bonne nuit
  - Bon matin
  - Bon soir
- b) Another way of saying **allô** is:
  - Coucou
  - Au revoir
  - de rien
- c) Which of the following number is **quinze**:

- 5<sup>th</sup>
  - 15
  - 15<sup>th</sup>
- d) Which one of the following is formal?
- Tu
  - Vous
  - Ils
- e) "**Please**" in French is:
- S'il vous plait
  - Por favor
  - à demain
- f) Which of the following is a French brand?
- Nivea
  - Zara
  - Chanel
- g) Which of the following museum is in France:
- Musée du Louvre
  - Musée d'histoire
  - Musée du Prado
- h) Which of the following are correct spellings of 1<sup>st</sup>:
- Unième
  - Premier
  - Un
- i) How do you say "**thanks a lot**" in French:
- Muchas gracias
  - Vraiment merci
  - Merci beaucoup
- j) "**chanter**" means to:
- To chant
  - To sing
  - To pray **1×10**

- Q.6 Remplissez les blancs avec les jours:  
(Fill in the blanks with the name of the days)
- a) Le deuxième jour de la semaine est \_\_\_\_\_.
- b) Le weekend est \_\_\_\_\_ et \_\_\_\_\_.
- c) \_\_\_\_\_ est le troisième jour de la semaine.
- d) \_\_\_\_\_ est le cinquième jour de la semaine. **1×5**

- Q.7 Présentez-vous en cinq phrases: (Introduce yourself in five sentences)
- 
- 
- 
- 
- 
- 1×5**

- Q.8 Décrivez votre ami(e) en cinq phrases: (Describe your friend in five sentences)
- 
- 
- 
- 
- 
- 1×5**

**End Semester Examination, Dec. 2018**  
 Bachelor of Physiotherapy – Second Semester  
**FOREIGN LANGUAGE (SPANISH) (BPT-GE-01)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 2

**Note: Attempt to all questions is compulsory.**

Q.1 Llene los espacios con el verbo adecuado (Fill in the blanks with appropriate form of verbs).

- a) Vosotros \_\_\_\_\_ muy bien. (Cantar)
- b) ¿Dónde (tú) \_\_\_\_\_ tu cumpleaños? (Celebrar)
- c) Nosotros \_\_\_\_\_ por la calle. (Andar)
- d) Yo no \_\_\_\_\_. (Fumar)
- e) Ustedes \_\_\_\_\_ en Delhi. (Vivir)
- f) Elena \_\_\_\_\_ la comida. (Preparar)
- g) Mis amigos \_\_\_\_\_ un regalo para mí. (Comparar)
- h) Nosotras \_\_\_\_\_ un libro. (Leer)
- i) Monica \_\_\_\_\_ la boda. (Asistir)
- j) Yo \_\_\_\_\_ en un restaurante italiano. (Comer)

**1x10**

Q.2 Escribe los numeros en espanol (Write the nos. in Spanish)

- a) 5
- b) 4
- c) 9
- d) 11
- e) 3
- f) 14
- g) 2
- h) 8
- i) 10
- j) 13

**1x10**

Q.3 Traduzca las siguientes palabras en español. (Translate the following words in Spanish.)

- a) See you later - \_\_\_\_\_
- b) Hello - \_\_\_\_\_
- c) Good morning- \_\_\_\_\_
- d) Good night- \_\_\_\_\_
- e) How are you? - \_\_\_\_\_

**2x5**

Q.4 Relaciona (Match the following):

1. Noviembre	a. Green
2. Enero	b. Sunday
3. Amarillo	c. August
4. Abril	d. January
5. Domingo	e. Blue
6. Septiembre	f. March
7. Agosto	g. Yellow.
8. Marzo	h. November
9. Verde	i. September
10. Azul	j. April

**10**

Q.5 Responda a las siguientes preguntas. (Answer the following questions)

a) ¿Cuántos años tienes?

\_\_\_\_\_.

b) ¿Cómo te llamas?

\_\_\_\_\_.

c) ¿De dónde es?

\_\_\_\_\_.

d) ¿Qué tal?

\_\_\_\_\_.

e) ¿Dónde vives?

\_\_\_\_\_.

**1x5**

Q.6 Coincidir con las siguientes palabras. (Match the following words)

a) Grandparents

i) Enero

b) January

ii) Jueves

c) Médico

iii) Abuelos

d) Thursday

iv) Doctor

e) Brother

v) Hermano

a\_\_\_ / b\_\_\_ / c\_\_\_ / d\_\_\_ / e\_\_\_

**1x5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Second Semester  
**PERSONALITY DEVELOPMENT PROGRAM (BPT-GE-02)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Write short notes on **(any two)** of the following:

- a) Developing positive attitude.
- b) 5 ways for improving personality.
- c) Difference between efficiency and effectiveness.

**5×2**

**PART-A**

Q.2 What is a psychometric assessment? Why are psychometric tests conducted? What do psychometric tests measure? **10**

Q.3 What is a rapport? What activities should one engage to increase one's ability to build rapport quickly? **10**

Q.4 What is negotiation? Explain the different ways of negotiating? Elaborate on negotiation model? **10**

**PART-B**

Q.5 Explain "Time Management". What is time scheduling and what are the scheduling tools? Explain barriers of time management. **10**

Q.6 Explain Empathy. Elaborate on empathy blockers. Differentiate between empathy and sympathy. **10**

Q.7 Write a goodbye letter to your teacher since you have completed your graduation from your college and you are leaving for pursuing post-graduation. **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**HEALTH PROMOTION (MN&D-001)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Study of health promotion helps in applying health promotion strategic planning and evaluation. Elaborate. **10**

**PART-A**

Q.2 Explain three basic prerequisites in improving health according to the Ottawa Charter for Health Promotion. **10**

Q.3 Define "Attitude". Explain the process of attitude formation with suitable examples. **10**

Q.4 Write short notes on the following:

a) Concept of Health Promotion.

b) Social and Individual Values.

**5×2**

**PART-B**

Q.5 Explain the various steps of program planning. **10**

Q.6 Write short notes on the following:

a) Health Protection.

b) Health Educators.

**5×2**

Q.7 Explain the steps of evaluating intervention program of oral health. **10**



# End Semester Examination, Dec. 2018

M.Sc. (Nutrition and Dietetics) – First Semester

## BIOCHEMISTRY (MN&D-101)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

*Note: Attempt **FIVE** questions in all; **Q.1** is **compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.*

- Q.1 a) Give the structure of the following:
- i) Methionine.
  - ii) Threonine.
  - iii) Lecithin.
  - iv) Lactose.
  - v) Linolenic Acid. **2x5**
- b) Explain how glutathione maintains the integrity of blood cells. **10**

### **PART-A**

- Q.2 What do you understand by the term inhibition of enzymes. Discuss competitive, noncompetitive and incompetitive inhibition with the help of a graph show how they can be identified. **20**
- Q.3 a) What are retinoids? Explain their function. **10**  
b) Give the synthesis of Calcitriol. **10**
- Q.4 When serum levels of calcium fall, how does vitamin D help do maintain homeostasis of calcium? **20**

### **PART-B**

- Q.5 What are ketone bodies? How are they synthesized and where are they utilized for fuel? **20**
- Q.6 a) Explain how Inosine mono phosphate can be converted to adenosine mono phosphate and guanosine mono phosphate? **10**  
b) Give the synthesis of triacyl glycerol in detail. **10**
- Q.7 Explain how epinephrine carries out its function within the cell in detail. **20**

# End Semester Examination, Dec. 2018

M.Sc. (Nutrition and Dietetics) – First Semester

## PHYSIOLOGY (MN&D-102)

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define the following:

- a) Landsteiner law.
- b) Cardiac output.
- c) Chronotropic and Inotropic effect.
- d) Purkinje fibres.
- e) Hypertension.
- f) Tidal volume.
- g) GFR.
- h) Chloride shift.
- i) Vital capacity.
- J) Loop of Henle.

**2x10**

### **PART-A**

Q.2 Define cardiac output? What are the different methods of measurement of cardiac output? Discuss the control of cardiac output. **20**

Q.3 a) Give a detailed description on absorption and digestion of proteins in human body. **14**  
b) Differentiate between active transport and passive transport. **6**

Q.4 a) Discuss blood coagulation mechanism in detail. **12**  
b) Discuss the composition of blood with its properties. **8**

### **PART-B**

Q.5 Explain the mechanism of respiration. How the respiratory gases are transported in the body? **20**

Q.6 a) Discuss the role of kidneys in maintaining water and electrolyte balance. **10**  
b) What is Glomerular filtration? Explain the mechanism. Also, discuss the factors affecting Glomerular filtration rate. **10**

Q.7 a) Discuss the composition, circulation and significance of cerebrospinal fluid. **10**  
b) Differentiate between the two divisions of autonomic nervous system. **10**

# End Semester Examination, Dec. 2018

M.Sc. (N&D) - First Semester

## FOOD AND NUTRITION (MN&D-103)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What do you understand by relationship between food, nutrition and health? **20**

### **PART-A**

Q.2 Classify different methods of cooking and explain any five methods in detail. **20**

Q.3 Draw and describe the structure of cereal. Discuss its composition and role in cookery. **20**

Q.4 Describe the different type of milk. Why is pasteurization carried out on milk? What effect does it have on nutritive value, flavor, microorganisations and on enzyme present in milk. **20**

### **PART-B**

Q.5 Define proteins quality. Discuss the factors related to protein quality and methods of improving it. **20**

Q.6 Discuss the causes of food spoilage and different methods of food preservations in detail. **20**

Q.7 Describe the concept of energy balance. Also, discuss the components of energy expenditure in detail. **20**

# End Semester Examination, Dec. 2018

M. Sc. (N & D) – First Semester

## NUTRITION FOR VULNERABLE AND SPECIAL GROUPS (MN&D-104)

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Discuss the scope of nutrition and dietetics in present context. Explain with examples how this knowledge is helpful in our day to day life. **20**

### **PART-A**

Q.2 Give a complete classification of nutrients with emphasis on sources, functions and deficiency disorders related with them. **20**

Q.3 Discuss the importance of RDA in terms of reference man, woman, uses, limitation, general principles of deriving RDA. **20**

Q.4 Write a note on psychological condition, Nutrient needs, Dietary needs and socio cultural aspects of adolescents. **20**

### **PART-B**

Q.5 Discuss giving reasons of various nutrition related problems common among elderly people. What steps do you advocate to overcome the same? **20**

Q.6 Discuss the physiological changes that occur in pregnancy. Also, highlight the nutritional needs during the last trimester. **20**

Q.7 Write a note on dietary alterations and requirements of industrial worker in detail. **20**

# End Semester Examination, Dec. 2018

M. Sc. (Nutrition and Dietetics) – First Semester

## FOOD MICROBIOLOGY (MN&D-105)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 Define Microbiology. Briefly describe the origin and scope of Food Microbiology. **10**

### **PART-A**

Q.2 What are the intrinsic and extrinsic parameters that affect a growth curve? Explain. **10**

Q.3 Briefly explain some of the commonly used food preservation techniques with respect to microbial contamination. **10**

Q.4 Write a short note on 'viruses'. **10**

### **PART-B**

Q.5 Graphically depict various phases of growth of a unicellular microorganism contained in a batch culture. **10**

Q.6 Comment on SCPs and their possible health benefits. **10**

Q.7 Describe various cell structures found in a typical bacterial cell. **10**

**End Semester Examination, Dec., 2018**  
M.Sc.(Nutrition & Dietetics) – First Semester  
**NUTRACEUTICALS AND HEALTH FOODS (MN&D-106)**

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.No.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Discuss the health benefits of functional foods with suitable examples. **10**

**PART-A**

Q.2 Write short notes on:

- a) Phytochemicals
- b) Probiotics

**5x2**

Q.3 Enlist various categories of nutraceuticals. Explain any two with suitable examples. **10**

Q.4 Write down the mechanism of action of the following:

- a) Fibres
- b) Probiotics

**5x2**

**PART-B**

Q.5 Explain the health benefits of the following:

- a) Curd
- b) Fruits

**5x2**

Q.6 Give functional components and its action for the following:

- a) Onions
- b) Berries

**5x2**

Q.7 How various regulatory and marketing issues affect the selling of nutraceuticals? **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**STATISTICS AND RESEARCH METHODOLOGY (MN&D-201)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

- Q.1 a) If  $x_1 = 3.1kg$ ,  $x_2 = 3.4kg$ ,  $x_3 = 3.6kg$ ,  $x_4 = 3.7kg$  and  $x_5 = 4.0kg$  calculate the mean of five weights.  
b) What are the limitation of statistics?  
c) Distinguish between qualitative data and quantitative data.  
d) Importance of sampling for nutrition and dietetics. **2½x4**

**PART-A**

- Q.2 Calculate the standard deviation, which are a sample of amino acid concentration (mg/100ml) in arthropod hemolymph:  
240.6, 238.2, 236.4, 244.8, 240.7, 241.3, 230.7 **10**

- Q.3 In a laboratory experiment, two samplex gave the following results:

Sample	Size	Sample mean	Sum of square of deviation from the mean
1	10	15	90
2	12	14	108

Test the equality of sample variance at 5% level of significance. ( $F_{table}$  at 5% for 9 and 11 degree of freedom is 2.90.) **10**

- Q.4 a) Find the correlation co-efficient between X and Y term the following data:

$x:$	2	4	5	6	8	11
$y:$	18	12	10	8	7	2

- b) find the median of 10, 6, 15, 2, 3. **8**

**PART-B**

- Q.5 Discuss the various components involve in research process with examples. **10**
- Q.6 Form a questionnaires to calculate the body mass index (BMI) of a person. **10**
- Q.7 Write notes on the following:  
a) Types of hypothesis.  
b) Components of technical report. **5x2**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**STATISTICS AND RESEARCH METHODOLOGY (MN&D-201)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Explain the role of mean and standard deviation in a research interpretation and analysis of a study. **10**

**PART-A**

Q.2 From the data given below find out the standard deviation of the following:

Variables	Series A
10-20	10
20-30	18
30-40	32
40-50	40
50-60	22
60-70	18

**10**

Q.3 Define 'hypothesis'. What are the different ways in which the hypothesis can be stated? **10**

Q.4 What do you mean by sampling? Discuss the various types of probability sampling. **10**

**PART-B**

Q.5 To compare the prices of a certain commodity in two towns, ten shops were selected at random in each town. The following figures give the prices found:

Town A	Town B
61	55
63	54
56	47
63	59
56	51
63	61
59	57
56	54
44	64
61	58

Test whether the average prices of town A and town B differ significantly or not. **10**

Q.6 Explain the level of significance critical region, one tail and two tail tests. **10**

Q.7 What are the requirement of sample size calculation for a research? **10**



**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition and Dietetics) - Second Semester  
**INSTRUMENTATION FOR FOOD ANALYSIS (MN&D-203)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are electrolytes? Discuss the role of sodium and potassium in the body. **20**

**PART-A**

Q.2 Discuss the principle and working of atomic absorption spectrophotometer. **20**

Q.3 Write short notes on:  
a) Weighing techniques.  
b) Photometry.

**10x2**

Q.4 What is chromatography? What are the advantages and disadvantages of various types of chromatography? **20**

**PART-B**

Q.5 Write short notes on:  
a) ELISA.  
b) NMR.

**10x2**

Q.6 What do you understand by electrophoresis? What is the difference between paper electrophoresis and gel electrophoresis? **20**

Q.7 What is BMR? Draw a well labeled diagram of Bomb Calorimeter and explain its working. **20**

**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition and Dietetics) – Second Semester  
**NUTRITION IN DISEASE (MN&D-204)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Plan a Nutrition Care Process (NCP) for a 42 years old female who is suffering with hypertension. Her weight is 59 kg and height is 151 cm. **20**

**PART-A**

Q.2 What do you understand by parenteral feeding? Describe the access route and formula preparation for parenteral feeding. **20**

Q.3 Write short notes on:

- a) Factors influencing counseling.
- b) Dietary Management of lactose intolerance.
- c) Functions of liver.
- d) Role of dietician in health care.

**5x4**

Q.4 Discuss the pathophysiology, etiology, symptoms and dietary management of peptic ulcer in detail. **20**

**PART-B**

Q.5 Discuss the pathophysiology, etiology, and dietary management of atherosclerosis in detail. **20**

Q.6 a) Describe the metabolic changes during fever and its dietary management. **10**  
b) Discuss some of the extreme approaches used to lose weight. **10**

Q.7 Discuss the two major types of diabetes commonly present in people. Also, discuss major complications of uncontrolled diabetes and the nutritional therapy involved. **20**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**INSTITUTIONAL FOOD ADMINISTRATION (MN&D-207)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 How the food service institutions have been developed with changing time? **10**

**PART-A**

Q.2 Explain the tools of management in detail. **10**

Q.3 Write short notes on the following:

a) Storage spaces.

b) Selection of equipment.

**5×2**

Q.4 Discuss in detail the classification of catering equipment. **10**

**PART-B**

Q.5 What measures of safety and security are important to be considered in a catering establishment? **10**

Q.6 Write short notes on the following:

a) Menu planning.

b) Food service.

**5×2**

Q.7 Discuss any two employee benefits and the factors affecting pricing in detail. **10**

**End Semester Examination, Dec. 2018**  
M.Sc. (N&D) – Third Semester  
**DOPING AND SUPPLEMENT USE (MN&D-307)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are the nutritional implications in age and sex of a sports person? **10**

**PART-A**

Q.2 How drug toxicity can affect the performance of a sports person? **10**

Q.3 Simple of complex carbohydrates in the diet of sports person can affect her stamina. Comment. **10**

Q.4 What do you mean by drug abuse? What are the side effects of drug use in sports person? **10**

**PART-B**

Q.5 What are the methods to identify doping in a sports person? **10**

Q.6 Discuss in detail about the prospects of doping and testing. **10**

Q.7 What are the laws that control the use of doping substances in the field of sports? **10**

**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition & Dietetics) – Third Semester  
**CRITICAL ISSUE IN PUBLIC HEALTH NUTRITION (MN&D-308)**

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Critically evaluate the public health implications and metabolic changes for coronary heart disease. **10**

**PART-A**

Q.2 a) Discuss the demographic trend in India.  
b) Write a short note on population policy. **5x2**

Q.3 Explain the economic evaluation of malnutrition. **10**

Q.4 a) Explain the definition of nutritional assessment.  
b) What are the methods of nutritional assessment? **5x2**

**PART-B**

Q.5 Discuss the etiology, public health implications, prevention and community based management of severe acute malnutrition. **10**

Q.6 Write short note on (**any two**):  
a) Health economics.  
b) Population structure.  
c) Medical management and preventive strategies for cancer. **5x2**

Q.7 Describe the etiology and prevention of:  
a) IDD.  
b) ZINC. **5x2**

**End Semester Examination, Dec., 2018**  
M.Sc. (Nutrition and Dietetics) – First Semester  
**TEACHING IN NUTRITION SCIENCE (MN&D-GE-01)**

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Describe the current scenario of education system in India. **10**

**PART-A**

Q.2 Discuss the relationship between Teaching and Learning in nutrition science. **10**

Q.3 a) Explain the aim and function of education.  
b) Describe privatization of education. **5x2**

Q.4 a) What is the meaning of lesson plan?  
b) Discuss the procedure adopted to make lesson plan. **5x2**

**PART-B**

Q.5 What are the audio-visual aids? Discuss the preparation and use of audio-visual aids. **10**

Q.6 a) What is the need and importance of evaluation?  
b) Describe the objectives of evaluation. **5x2**

Q.7 Discuss the following (**any two**):  
a) Problem solving.  
b) Lecture method.  
c) Evaluation devices. **5x2**

**End Semester Examination, Dec. 2018**  
M.Sc. (N&D) – First Semester  
**FOOD LAWS AND FOOD SAFETY (MN&D-GE-02)**

Time: 2hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 'HACCP is an important component to ensure food safety'. Comment. **10**

**PART-A**

Q.2 What do you mean by food adulteration? Explain using suitable examples. **10**

Q.3 Discuss the regulations laid down for food labeling as per FSSAI. **10**

Q.4 Throw some light on the provisions regarding consumer dispute resolution under Consumer Protection Act. **10**

**PART-B**

Q.5 Explain the possible hazards imposed to foods during supply chain. **10**

Q.6 Explain ISO. Also, write about its structure and governance. **10**

Q.7 Write short notes on:

a) FSSAI.

b) Codex alimentarius commission.

**5x2**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**HOSPITAL ADMINISTRATION (MN&D-GE-04)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define "Organization". Explain the need of organizational hierarchy in large organization. **10**

**PART-A**

Q.2 Explain the contributions of MC. Gregor and Peter F. Prucker in the field of management. **10**

Q.3 What is planning? Write the objectives, types and strategic considerations in planning. **10**

Q.4 Write short notes on the following:

a) Types of managerial skills.

b) Role of perception.

**5×2**

**PART-B**

Q.5 Define "Communication". Discuss its type, importance and barrier to effective communication in detail. **10**

Q.6 Define "Management". Explain the principles of directing by giving suitable example. **10**

Q.7 Write short notes on the following:

a) Positive and negative motivation.

b) Qualities of a Manager.

**5×2**



**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**SPORTS NUTRITION FOR THE DISABLED (MN&D-GE-07)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Define the following in detail:

- a) IPC.
- b) Para biathlon.
- c) Para alpine skiing.
- d) Muscular Strength.
- e) Aerobic fitness.

**2x5**

**PART-A**

Q.2 Discuss in detail about the responsibilities of IPC.

**10**

Q.3 Discuss the history of Paralympics games in world.

**10**

Q.4 What are different standing committee of IPC? How they are managing the Paralympics sports?

**10**

**PART-B**

Q.5 As a sport nutritionist give recommendation to a Paraathletes regarding fluid and electrolytes during and after exercise.

**10**

Q.6 How Physiological elements of exercise affect the energy requirement of physically disabled athletes?

**10**

Q.7 What are the several technique which can be used to assess body composition in Para-athletes?

**10**

**End Semester Examination, Dec. 2018**  
M. Sc. (N & D) – Second Semester  
**NUTRITION RELATED DISORDERS (MNDC-206)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Discuss various nutritional recommendations for general adverse effect in AIDS patients. **20**

**PART-A**

Q.2 Discuss the following:  
a) Process of conversion of HIV to AIDS.  
b) Transmittal route and signs and symptoms of AIDS. **10x2**

Q.3 Explain the various dietary components associated with cancer prevention. **20**

Q.4 Explain the following in detail:  
a) Phenylketonuria.  
b) Homocystinuria. **10x2**

**PART-B**

Q.5 Give the pathophysiology and dietary methods for detecting food allergy. **20**

Q.6 Describe dying process. Give the nutritional care during dying process. **20**

Q.7 Give the pathophysiology and dietary management of the following:  
a) Gout.  
b) Lactose intolerance. **10x2**

# End Semester Examination, Dec. 2018

M. Sc. (Nutrition and Dietetics) – Third Semester

## CLINICAL NUTRITION (MNDC-301)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 Explain Diet, Nutrient and drug interaction and its effects on Nutritional Status. **20**

### **PART-A**

Q.2 Explain the difference in the symptoms of Crohn's disease and ulcerative Colitis. Discuss the Nutritional Management for IBD's in detail. **20**

Q.3 Explain the pathophysiology of the following:  
a) Glomerulonephritis.  
b) Myocardial Infarction. **10x2**

Q.4 Write the etiology and dietary management of the following:  
a) Chronic Kidney Disease.  
b) Cholecystitis. **10x2**

### **PART-B**

Q.5 Discuss the symptoms and pathophysiology of the following:  
a) COPD.  
b) Cystic fibrosis. **10x2**

Q.6 Give the dietary management of the following:  
a) Stroke.  
b) Pernicious Anemia. **10x2**

Q.7 Give symptoms, pathophysiology, etiology and dietary management of Multiple Sclerosis. **20**

**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION IN CRITICAL CARE (MNDC-302)**

Time: 3 Hours

Max Marks: **50**

No. of pages: **1**

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 a) How can you assess the nutritional status of critically ill patients? **5**  
b) Write a note on Harris-Benedict Equation (BEE) and its significance. **5**

**PART-A**

- Q.2 a) What do you understand by enteral nutrition? **3**  
b) Explain various methods of enteral feeding. **7**
- Q.3 Write a note on fluid / electrolyte abnormalities. **10**
- Q.4 Explain the patho-physiology and dietary management of gastric cancer. **10**

**PART-B**

- Q.5 Write notes on the following:  
a) Blood Cancer.  
b) Sepsis. **10**
- Q.6 Give Patho-physiology and dietary management of the following:  
a) Burns.  
b) Trauma. **5x2**
- Q.7 Give signs symptoms and patho-physiology of the following:  
a) nasocomal pneumonia.  
b) Base abnormalities. **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**DIETETIC TECHNIQUE AND COUNSELING (MNDC-303)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Discuss the technique of counseling used to motivate patients to improve lifestyle and achieve good health and overall wellbeing. **10**

**PART-A**

Q.2 "Dietetics the Science and art of Human Nutrition Care" discuss. **10**

Q.3 What is NCP (Nutrition Care Process)? Discuss the role of dietitian in nutrition care. **10**

Q.4 Give detailed information regarding general and clinical profile of OPD patients. **10**

**PART-B**

Q.5 What are the counseling theories and approaches? Explain the key concepts and techniques of each theory. **10**

Q.6 Briefly describe the correlating relevant information and identifying area of needs in three stages. **10**

Q.7 Describe role of teaching aids for patient education and counseling. Develop any one effective aid of counseling. **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Fourth Semester  
**NUTRITION IN EMERGENCIES AND DISASTERS (MNDC-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Write an essay on strategies for nutritional rehabilitation management in various emergencies and disasters. **20**

**PART-A**

Q.2 Classify emergencies and disaster. Explain any one situation as a case study from Indian subcontinent. **20**

Q.3 What are the main nutritional problems arising in emergency situation? Explain the management and treatment of these problems. **20**

Q.4 What are the strategies for prevention treatment and control of communicable diseases in emergencies? Explain in detail. **20**

**PART-B**

Q.5 Explain the methods of assessment of food need in emergency situation. How do we organize mass feeding at feeding centres? **20**

Q.6 Briefly describe the scope of assessment of malnutrition in emergencies. How do we organize nutritional surveillance and individual screening? **20**

Q.7 Describe the public nutrition approach to tackle nutritional problems in emergencies. **20**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**FOOD SCIENCE AND PROCESSING (MNDF-206)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Food Industry comprises of many components. Also, describe some allied industries related to food industries. **20**

**PART-A**

Q.2 a) Explain the processing of milk, using a flowchart. **10**  
b) Comment on the nutritive value and structure of wheat. **10**

Q.3 Describe the milling of wheat and rice in detail. **10**

Q.4 a) Explain the following:  
i) Ageing of meat.  
ii) Tenderizing agents. **5×2**  
b) What are the parameters kept in mind for checking egg quality? Discuss. **10**

**PART-B**

Q.5 Discuss the following:  
a) Artificial sweeteners.                      b) Food Labeling.  
c) Esterification.                              d) Role of sugar in cookery. **5×4**

Q.6 a) Using suitable examples, throw some light on food hazards. **10**  
b) Differentiate between enzymatic and non-enzymatic browning. **10**

Q.7 a) "Packaging is a boon to food industries". Comment. **10**  
b) Explain the effect of processing on the different fruits and vegetables. **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Fourth Semester  
**MICROBIOLOGY OF FOOD PROCESSING (MNDF-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 What is the significance of microbiology in food processing industry? **20**

**PART-A**

Q.2 Write short notes on the following:

a) Molds.

b) Bacteria.

**10x2**

Q.3 Draw a well labeled diagram of growth curve. What are the factors affecting growth of microbes? **20**

Q.4 What are the principles and methods of food preservation? Write a note on the following two methods of preservation:

a) Pasteurization

b) Canning

**10x2**

**PART-B**

Q.5 Write short notes on the following:

a) HACCP.

b) Beneficial uses of microbes.

**10x2**

Q.6 What are food borne diseases? Explain with the help of suitable examples. **20**

Q.7 What is the significance of control and inspection of hygiene and sanitation in food industry? Give appropriate examples. **20**



**End Semester Examination, Dec. 2018**  
M. Sc. (N & D) – Second Semester  
**NUTRITION AND PUBLIC HEALTH (MNDP-206)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.*

Q.1 Describe the science of public health since its evolution. **20**

**PART-A**

Q.2 Discuss the determinants of health and millennium development goals in detail. **20**

Q.3 Explain definition, aim and uses of Descriptive epidemiology in detail. **20**

Q.4 Describe national health care delivery system in detail. **20**

**PART-B**

Q.5 Explain direct methods for assessment of nutritional status of individual or community in detail. **20**

Q.6 Explain the etiology and preventive strategies for vitamin A deficiency and vitamin D deficiency in detail. **20**

Q.7 Discuss public health implications and preventive strategies for diabetes mellitus and cancer in detail. **20**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**PROGRAMMES AND POLICIES FOR FOOD AND NUTRITION SECURITY**  
**(MNDP-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Describe the role of food and nutrition security in the development of Nation. **20**

**PART-A**

Q.2 How the food production, distribution, access, availability and consumption can affect the nutrition security? **20**

Q.3 Discuss the role of national public policies in improving food and nutrition security. **20**

Q.4 Critically review the ongoing programme – National Iodine Deficiency Disorders Control Programme (NIDDCP) **20**

**PART-B**

Q.5 Discuss the impact of Iron deficiency on nutritional status of vulnerable group **20**

Q.6 Write short notes on:

- a) Supplementation to offer food security and suitable vehicles for it.
- b) Fortification techniques to ensure nutritional security.

**10×2**

Q.7 Discuss the possible improvements in policy making and implementation of the programmes. **20**

**End Semester Examination, Dec. 2018**  
M. Sc. (N & D) – Third Semester  
**PROGRAMME PLANNING IN PUBLIC HEALTH (MNDP-302)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Discuss the health economics framework in detail and its importance in health planning. **10**

**PART-A**

Q.2 Discuss the various steps/stages of Sussman's Model in detail. **10**

Q.3 Write short notes on:

a) Defining the problems.

b) Program Planning Principles. **5x2**

Q.4 Briefly describe the various steps of program planning. **10**

**PART-B**

Q.5 Describe the steps of "Critical Path Method" in detail. **10**

Q.6 Discuss the role of "Niti Aayog" in health sector. **10**

Q.7 Write about the various health committees of government of India. Explain the objectives and recommendations of BHORE Committee. **10**

# End Semester Examination, Dec., 2018

M.Sc. (Nutrition and Dietetics) – Third Semester

## NUTRITION COMMUNICATION FOR HEALTH PROMOTION (MNDP-303)

Time: 3 Hours

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 What is health brief model? Explain with the help of suitable example. **10**

### **PART-A**

Q.2 What is the significance of health behavior in nutrition communication? **10**

Q.3 Write short notes on the following:

a) Social cognitive theory.

b) Behavior change communication.

**5x2**

Q.4 Explain the role of international guidelines in nutrition promotion. **10**

### **PART-B**

Q.5 What are the various types of IEC materials used in health education? **10**

Q.6 Explain citing suitable examples, role of nutrition advocacy in policy formulation and execution. **10**

Q.7 Write short notes on:

a) Health Promotion.

b) National nutrition programme in health education.

**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition and Dietetics) – Fourth Semester  
**PUBLIC HEALTH ASPECTS OF MALNUTRITION (MNDP-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Discuss the effect of malnutrition on the development of the Nation. **20**

**PART-A**

Q.2 What are the basic measurements and applications used in epidemiology? **20**

Q.3 Write short notes on:  
a) Effects of nutrition transition and chronic disease.  
b) Micronutrient malnutrition. **10x2**

Q.4 Discuss public health implications, prevention and community based management of PEM. **20**

**PART-B**

Q.5 Discuss in detail the public health implications and preventive strategies for obesity, diabetes and cancer. **20**

Q.6 Write short notes on:  
a) Food supply and demand.  
b) Technology and food supply. **10x2**

Q.7 Explain income redistribution, pricing policy and food distribution in detail. **20**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Second Semester  
**NUTRITION ESSENTIALS OF SPORTS (MNDS-206)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 What general considerations should be kept in mind for a physically active individual? **20**

**PART-A**

Q.2 Explain the biological functions of vitamins and minerals. **20**

Q.3 What is the role of hydration for a sportsperson? Explain the recommended guidelines for oral rehydration therapy solutions. **20**

Q.4 What is Bulimia Nervosa? Discuss its symptoms and pathophysiology in detail. **20**

**PART-B**

Q.5 Explain the effect of diet and exercise on body composition during weight loss. **20**

Q.6 Write short notes on the following Ergogenic aids:

a) Caffeine.

b) Anabolic Steroids.

c) Carbonate Loading.

d) Human Growth Hormone.

**5×4**

Q.7 Discuss in detail about any four supplements and sports foods. **20**

**End Semester Examination, Dec. 2018**  
M.Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION FOR VARIOUS GAMES AND SPORTS (MNDS-301)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What is the role of Nutrition in sports fitness and performance? **20**

**PART-A**

Q.2 Write in detail about the dietary management of an endurance athlete. **20**

Q.3 Give a detailed view on seasonal weight Management by a weight lifter. **20**

Q.4 Why hydration is important for a wrestler? What are the guidelines for electrolyte replenishment for a boxer. **20**

**PART-B**

Q.5 What are the factors related to Nutrition that could produce fatigue in team sports. **20**

Q.6 What are the banned substance in the field of sports? How their practice effect the health of sports person? **20**

Q.7 How gynecological disorder affect the performance of a female sports person? What is the impact of diet on menarche and menstrual functions? **20**

## End Semester Examination, Dec. 2018

M. Sc. (Nutrition and Dietetics) – Third Semester

### EXERCISE PHYSIOLOGY (MNDS-302)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Explain the importance of exercise physiology in games and sports. **10**

#### **PART-A**

Q.2 Write a note on cardiovascular function, responses and adaptation to exercise. **10**

Q.3 Enumerate the mechanism of thermal regulation. **10**

Q.4 What is lactate threshold? Discuss the metabolic processes during immediate and short term intense exercise. **10**

#### **PART-B**

Q.5 What do you understand by the term recovery process and the occurrence of fatigue in physical work? **10**

Q.6 Write a note on 'periodization and load. **10**

Q.7 Discuss the important immune and bone function changes that take place during adaption of exercise alongwith their importance. **10**



# End Semester Examination, Dec. 2018

M.Sc. (N&D) - Third Semester

## SPORTS BIOCHEMISTRY (MNDS-303)

Time: 2 hrs

Max Marks: **50**

*No. of pages: 1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Give the reactions to indicate where in anaerobic glycolysis ATP is formed. **10**

### **PART-A**

Q.2 What are the nutritional effects on strength training and performance? **10**

Q.3 Explain the action of peptide hormones with respect to energy production. **10**

Q.4 Discuss the role of phosphocreatine in high intensity exercise. **10**

### **PART-B**

Q.5 Define fatigue and discuss the causes of fatigue in sprinting. **10**

Q.6 What do you understand by post-exercise recovery and how is it achieved? **10**

Q.7 Discuss the effect of dehydration on exercise performance. **10**

**End Semester Examination, Dec. 2018**  
M. Sc. (Nutrition and Dietetics) – Fourth Semester  
**CURRENT TRENDS IN SPORTS NUTRITION (MNDS-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.*

Q.1 Discuss the current trends in sports nutrition with reference to:

- a) New product development.
- b) Supplements

**10x2**

**PART-A**

Q.2 Discuss in detail about the myths and truths in sports nutrition. **20**

Q.3 Explain the role of Ministry of HRD in the development of Sports and Physical Education. **20**

Q.4 Explain the roles and function of SAI in promotion of sports. **20**

**PART-B**

Q.5 Give an account of the role of sports in society. **20**

Q.6 Explain about the drug abuse and gratuitous violence in sports. **20**

Q.7 What is New Product Development? Explain the stages of product life cycle giving suitable examples. **20**

**End Semester Examination, Dec. 2018**  
MBA – Third Semester  
**CUSTOMER RELATIONSHIP MANAGEMENT (MOOC)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Part-B is compulsory**. Attempt any **FOUR** questions from **Part-A**. Marks are indicated against each question.*

**PART-A**

- Q.1 What is customer relationship management? Distinguish between transactional and relationship approach of customer relationship management. **10**
- Q.2 Discuss the significance of customer relationship management to its stakeholders in detail. **10**
- Q.3 Write short notes on:  
a) Lifetime value of customers.  
b) Customer equity. **5×2**
- Q.4 What are different applications of customer relationship management to business and consumers? **10**
- Q.5 Discuss the strategies of customer acquisition, retention and prevention of defection. **10**

**PART-B**

- Q.6 As a customer, have you come across any customer relationship management initiative? List a few initiatives based on personal experience. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – First Semester  
**BUSINESS DEVELOPMENT IN HEALTH CARE (MPT-001)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define quality in healthcare.
- b) What is safety net system?
- c) Give a brief idea about PHC.
- d) Discuss the levels of care.
- e) What is quality assurance?

**2×5**

**PART-A**

Q.2 Discuss about Alma Alta conference.

**10**

Q.3 What are the challenges of Indian healthcare system?

**10**

Q.4 Write down the difference between Indian and US healthcare system.

**10**

**PART-B**

Q.5 What are the sectors of healthcare? Enumerate their inter relationships.

**10**

Q.6 Discuss in detail about measures to be taken at different levels of healthcare for safety of patient.

**10**

Q.7 Discuss in detail about the relationship between payment and quality cost and access of the patient.

**10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – First Semester  
**KINESIOLOGY AND BIOMECHANICS (MPT-M/N/S-103)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 Write short notes on the following:

- a) Newton's Second Law.
- b) Classification of Equilibrium.
- c) Name any four ligaments of HIP joint.
- d) Angle of Torsion.
- e) Torque.
- f) Define Fatigue.
- g) Name any four Biomechanical risk factor for a School teacher.
- h) Define Scoliosis.
- i) Functional Spinal Unit.
- j) Concave Convex rule.

**2x10**

**PART-A**

Q.2 Discuss the biomechanics of Shoulder Joint. Add a note on importance of Scapulo Humeral Rhythm. **20**

Q.3 Define 'Lever'. Write down its classification with examples from Human Body. Discuss the mechanical advantage of each of them. **20**

Q.4 Discuss the Properties of skeletal muscles. Write down the classification according to type of fibres. **20**

**PART-B**

Q.5 Discuss the various WRMSD's faced by a computer operator. What will be the signs and Symptoms and precautions for Carpal tunnel syndrome. **20**

Q.6 Define GAIT cycle. Discuss its phases with diagram. **20**

Q.7 Discuss the biomechanics of Running. Write down the difference between running and walking.

OR

- a) Discuss the theories of motor control.
- b) Factors affecting learning.

OR

- a) Discuss physiological effects of manual therapy.
- b) Principles of manual therapy.

**20**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy - First Semester  
**PHYSIOTHERAPEUTICS – I (MPT-M/N/S-104)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1
- a) What are the principles of MMT?
  - b) Enumerate the indication and contraindication of stretching.
  - c) How will you assess the pain in ICU patient? Which is non-comprehensive?
  - d) Explain Ober's test.
  - e) What is MMST?
  - f) Write down the definition of balance. Also, tell the various factors responsible for maintaining the balance.
  - g) Explain Maitland's grade of mobilization.
  - h) Write indication of hydrotherapy.
  - i) Enumerate the difference between closed kinetic and open kinetic exercises.
  - j) Enumerate the various factors responsible for opening and closing of pain gate. **2x10**

**PART-A**

- Q.2 Define Posture. Describe various factor influencing normal posture. Also, discuss various types of faulty posture. **20**
- Q.3 Describe pain theories. Elaborate the pain gate control theory in detail. **20**
- Q.4 Explain following:  
a) Principle and technique of relaxation.  
b) Principle of PNF. **10x2**

**PART-B**

- Q.5 Explain following:  
a) Grades of mobilization. Also discuss the principles and techniques of mobilization.  
b) Role of biofeedback in strengthening and relaxation. **10x2**
- Q.6 Discuss various factors influencing flexibility. Also discuss the types and determinants of stretching. **20**
- Q.7 Explain in detail about SWD. Also discuss the physiological and therapeutic effect of SWD. **20**

# End Semester Examination, Dec. 2018

Master of Physiotherapy – Third Semester

## WOMEN HEALTH (MPT-M/N/S-303)

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1
- a) Discuss the importance of educating a women with disability.
  - b) What the physiological changes associated with pregnancy?
  - c) Write down the risk factors for post natal depression.
  - d) Write down the strategies for fall prevention in elderly female.
  - e) Discuss the management of DVT in working woman. **2x5**

### **PART-A**

- Q.2 What are the various occupational hazards women face at work? **10**
- Q.3 What is pelvic inflammatory disease? Discuss its pathophysiology. Write in detail the physiotherapeutic management for PID. **10**
- Q.4 Write short notes on:
- a) Endometriosis.
  - b) Eating disorders. **5x2**

### **PART-B**

- Q.5 Discuss the various types of incontinence along with the physiotherapeutic management. **10**
- Q.6 Write down in detail the treatment of pain in perinatal period. What is the main goal of physiotherapist in this period? **10**
- Q.7 Explain in detail the stages of breast cancer. Also discuss the treatment post mastectomy following carcinoma breast. **10**

# End Semester Examination, Dec. 2018

Master of Physiotherapy – Second Semester

## EXERCISE PHYSIOLOGY (MPTM/N-201)

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Write short notes on the following:

- a) What is oxidative phosphorylation?
- b) What is OBLA?
- c) How to measure walk in treadmill exercise?
- d) What is Stroke Volume?
- e) What is Heat Rigor?
- f) Write on isometric training.
- g) What is periodization?
- h) What is immediate acclimatization?
- i) How to assess heat quality?
- j) What is SCUBA?

**2×10**

### **PART-A**

- Q.2 a) Explain the role of hormone on resistance training exercise. **10**  
b) Explain how electrolyte and fluid balance affected with hormone during resistance exercise training? **10**
- Q.3 Write how functional capacity (parameters) of cardiovascular system is affected by different form of exercise? **20**
- Q.4 Discuss about Thermoregulation, Clo value and Go physiology. **20**

### **PART-B**

- Q.5 a) Write about ultrastructure of muscle. **10**  
b) Write about sliding filament theory. **10**
- Q.6 Discuss in detail immediate short and long term energy utilization during exercises. **20**
- Q.7 a) Explain in detail about the regulation of respiration during rest and exercises. **10**  
b) Explain the role of exercise on carbohydrate and fat metabolism. **10**



## End Semester Examination, Dec. 2018

### Master of Physiotherapy (Musculoskeletal and Neurology) – Second Semester **APPLIED PSYCHOLOGY (MPTM/N-204)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Define 'Consciousness'.
- b) Name the types of conduct disorders.
- c) Define 'Wellness'
- d) What do you mean by learning disability?
- e) Name the types of Attention?

**2×5**

#### **PART-A**

Q.2 Define 'Perception'. Write about the deficits in perception in detail.

**10**

Q.3 Discuss the features and management of ADHD.

**10**

Q.4 Write about the practical applications of cognitive psychology in improving memory processes in detail.

**10**

#### **PART-B**

Q.5 a) Discuss Gestalt Psychology in detail.

**5**

b) Discuss the approach to perception given by Wilhelm Wundt.

**5**

Q.6 Define 'Memory'. Discuss the models and stages of memory in detail.

**10**

Q.7 What are the common defence reactions to disability?

**10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy Musculoskeletal – First Semester  
**APPLIED BASIC MEDICAL SCIENCE IN MUSCULOSKELETAL (MPTM-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) Discuss the difference between metaplasia and dysplasia.
- b) What are the contents of cubital fossa?
- c) Discuss the pathology of Osteitis fibrosa cystica.
- d) What is vascular supply of back of neck?
- e) Name the characteristics of muscle tissue.
- f) Define "Varicosities".
- g) Difference between corticosteroid and anabolic steroids.
- h) Name the joints of skull.
- i) What is amyloidosis?
- j) Discuss the stages of scar formation.

**2×10**

**PART-A**

Q.2 Discuss in detail about the training for muscular strength and endurance. **20**

Q.3 Write down the general anatomy of the largest organ of human body. **20**

Q.4 a) Discuss the metabolism of corticosteroid and its clinical use. **10**

b) Discuss the pathology of fatty liver. **10**

**PART-B**

Q.5 Discuss in detail about the pathology of osteomyelitis. **20**

Q.6 Enumerate the types of blood vessels and discuss the general anatomy and characteristics of all of them. **20**

Q.7 a) Write a short note on drugs acting on musculoskeletal system. **10**

b) Discuss in detail about the nerve injury. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Second Semester  
**EVALUATION AND DIAGNOSIS IN MUSCULOSKELETAL (MPTM-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.*

Q.1 Answer the following in brief:

- a) Differentiate between apparent and true limb length measurement.
- b) List various deformities in rheumatoid arthritis.
- c) What do you understand by NPRS?
- d) Explain tendinitis of biceps muscle.
- e) Define MUAP.
- f) Explain Coxa vara.
- g) Explain Ape thumb deformity.
- h) Explain burn estimation.
- i) Explain one method of dynamic balance assessment.
- j) Explain the clinical features of AS.

**2×10**

**PART-A**

Q.2 Write in detail about the physical disability evaluation. **20**

Q.3 Enlist the common disorders of knee joint that you see in physiotherapy OPD. Explain any one with their assessment and physiotherapeutic management. **20**

Q.4 What are the different stages of PIVD? Write about patient presentation and treatment of PIVD. **20**

**PART-B**

Q.5 a) What is the significance of radiography in physiotherapy? Explain the radiographic findings you will get in bilateral osteoarthritic knee (grade-3). **10**

b) What is the difference between CT scan and MRI? **10**

Q.6 Explain assessment, diagnosis and management for median nerve injury. **20**

Q.7 What is amputation? Describe the parts of a patellar tendon bearing prosthesis. **20**

# End Semester Examination, Dec. 2018

Master of Physiotherapy – Second Semester

## PHYSIOTHERAPEUTICS-II (MPTM-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Explain grades of Maitland Mobilization.
- b) Write down the differences between active and passive wheelchairs.
- c) Explain physiological laws of spinal motion.
- d) Explain convex-concave rule of mobilization.
- e) Explain SNAGLM and SNAGAM.
- f) Explain K tape.
- g) Explain eight stages of yoga.
- h) Explain centralization phenomenon.
- i) What are the advantage of active wheelchair in rehabilitation?
- j)

**2×10**

### **PART-A**

Q.2 Write in detail about the principles of taping technique. Explain the taping for ankle sprain. **20**

Q.3 Explain in detail Mckenzie extension mobilization techniques for derangement syndrome. **20**

Q.4 Write about combined movement therapy. Write its importance during assessment and treatment of spinal dysfunctions? **20**

### **PART-B**

Q.5 Explain in detail about the basic wheelchair skills used in rehabilitation. Explain with examples. **20**

Q.6 Write about the therapeutic usage of Yoga and its therapeutic benefits. Explain Pranayam in detail. **20**

Q.7 Explain Body composition analysis? Write in detail about its importance and uses in rehabilitation. **20**

# End Semester Examination, Dec. 2018

Master of Physiotherapy – Third Semester

## EVALUATION, DIAGNOSIS AND MANAGEMENT IN MUSCLED SKELETAL-II (MPTM-301)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following in brief:

- a) What is AVN?
- b) Classify falls in elderly.
- c) Differentiate between impairment, disability and handicap.
- d) Describe any one clinical test for ulnar nerve injury.
- e) What is klumpke's paralysis?
- f) Define "Pauwels Osteotomy".
- g) What is tinel's sign?
- h) List various walking aids.
- i) Define "Ilizarov technique".
- j) What is Arthrodesis?

**2×10**

### **PART-A**

Q.2 Describe the physiological changes taking place in elderly in various systems of body. **20**

Q.3 a) Classify "Assistive Device". Discuss each one in detail. **10**

b) Discuss "Measurements of walking aids". **10**

Q.4 Describe the pre and post-operative assessment and rehabilitation of total hip replacement. Also describe the precautions. **20**

### **PART-B**

Q.5 Describe the components of physical disability and discuss about permanent physical impairment of lower limb. **20**

Q.6 Explain in detail the various complications of fractures. **20**

Q.7 Describe radial nerve injury along with clinical features, investigations and rehabilitation. **20**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy (Musculoskeletal) Third Semester  
**CURRENT CONCEPT AND SCIENTIFIC RATIONALE IN**  
**MUSCULOSKELETAL**  
**(MPTM-302)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

*Note: Attempt **FIVE** questions in all; **Q.1** is **compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.*

Q.1 Answer the following in brief:

- a) Explain T.A.R.T for muscle dysfunction.
- b) Explain the circulation of Cerebrospinal Fluid Pathways.
- c) Write about Isolytic MET.
- d) Explain Capsular Stretching.
- e) Who discovered Pilates and when?
- f) Explain Strain-Counterstrain technique.
- g) ULTT-3 is for which nerve?
- h) Describe Well leg raising Test.
- i) Describe Parietal Lift.
- j) Describe Segmental stabilization.

**2x10**

**PART-A**

Q.2 What are the principles of PRT? Write all the hypothesis of positional release technique? **20**

Q.3 Explain in detail about the Cyriax principle of diagnosis and treatment? Write in detail for Bicipital tendinitis. **20**

Q.4 Write the patterns of dysfunction in Lower crossed syndrome? Explain the Muscle energy technique to assess and treat the dysfunction. **20**

**PART-B**

Q.5 Explain in detail about the principles of Neuro-mobilization given by Butler. **20**

Q.6 a) Write down the indications and contraindication of CST.  
b) Discuss the principle of CST. **10x2**

Q.7 a) Explain the types of Pilates-training.  
b) Explain Knee drop exercises. **10x2**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Fourth Semester  
**ASSISTIVE TECHNOLOGY IN PHYSIOTHERAPY (MPTM-404)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **EIGHT** questions in all; Attempt any **TWO** questions from **PART-A** and **SIX** questions from **PART-B**. Marks are indicated against each question.

**PART-A**

- Q.1 Define "Orthosis". Describe the classification of orthosis, its indication and contraindication and the biomechanical principles of orthosis. **10**
- Q.2 Discuss the parts and different types of prosthetic feet. **10**
- Q.3 What is the measurement for axillary crutch? Describe the types of gait pattern with axillary crutch. **10**

**PART-B**

- Q.4 What are the principles for Taping Technique? **5**
- Q.5 What is Energy Conservation Strategy and Activity Pacing? **5**
- Q.6 Discuss different parts/components of prosthesis. **5**
- Q.7 Briefly describe the two types of prosthesis. **5**
- Q.8 Name the orthosis used for the following conditions:  
a) De Quervain's Syndrome.  
b) Knee Osteoarthritis.  
c) Scoliosis.  
d) Radical Nerve Palsy.  
e) Calcaneal Spur. **1×5**
- Q.9 Discuss the seat height and seat depth measurement of wheel chair prescription. **5**
- Q.10 Briefly describe the technique of taping for De Quervain's problem at wrist. **5**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Fourth Semester  
**INTERDISCIPLINARY LEARNING (MPTS/MPTN/MPTM-402)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Give short answer of the following:

- a) Roles and responsibilities of a physiotherapist.
- b) Performance Appraisal.
- c) Confidentiality.
- d) Difference between projected and non-projected AV aids.
- e) Principle of selection of AV aids.
- f) Enumerate agencies of education.
- g) What are different types of Utilization Review?
- h) Problem based method of learning.
- i) Types of teaching aids.
- j) Formal and informal education.

**2x10**

**PART-A**

Q.2 What is the role of third party administrator in health care system?

**20**

Q.3 Write the different principles of standards of professional practice.

**20**

Q.4 Discuss the different principles of code of conduct.

**20**

**PART-B**

Q.5 Define Management. Briefly explain giving suitable examples of human and non-human resources.

**20**

Q.6 Define Curriculum. Explain in detail with suitable examples of process of curriculum development.

**20**

Q.7 Describe Bloom's Taxonomy. Discuss in brief about the function and the role of IAP in Physiotherapy.

**20**



# End Semester Examination, Dec. 2018

Master of Physiotherapy – First Semester

## RESEARCH METHODOLOGY AND BIOSTATISTICS (MPTM/MPTN/MPTS-102)

Time: 2 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- Define the measures of central tendency.
- When are the Parametric and non-parametric tests used?
- Differentiate between type I and II errors.
- Define "Hypothesis".
- Enlist the sources of primary and secondary data.
- Define "Plagiarism."
- Highlight the difference between incidence and prevalence.
- Draw a skewed (positive & negative) normal distribution curve.
- Give types of reliability with examples.
- Define "Face validity".

**2×10**

### **PART-A**

Q.2 Discuss the different type of correlation. Calculate and comment on the type of correlation for the following data:

X	65	68	62	70	65	72	67	66	68	70
Y	128	140	120	152	138	160	135	130	125	165

**20**

Q.3 Differentiate between qualitative and quantitative research design? Describe their types with examples and discuss their advantages and disadvantages.

**20**

Q.4 Describe the various ethical principles and guidelines for a clinical research.

**20**

### **PART-B**

Q.5 What do you understand by measures of dispersion? Calculate Standard deviation in the following data:

X	55-60	50-55	40-45	45-50	35-40	30-35	25-30	25-20
Y	7	13	15	20	30	33	28	14

**20**

Q.6 Define "Sampling". Classify and explain different type of sampling.

**20**

Q.7 An analysis of monthly wages paid to the workers in a firm A and B belonging to same industry gives following result.

	Firm A	Firm B
No. of workers	550	650
Average monthly wages	₹1450	₹1400
Standard Deviation	100	140

- Which firm A or B has larger wage bill?
- In which A or B is there greater variability in individual wages?

**5**

**15**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy (Neurology) — First Semester  
**APPLIED BASIC MEDICAL SCIENCE IN NEUROLOGY (MPTN-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Discuss the difference between metaplasia and dysplasia.
- b) What are the contents of cubital fossa?
- c) Discuss the pathology of Osteitis fibrosa cystica.
- d) What is vascular supply of back of neck?
- e) Name the characteristics of muscle tissue.
- f) Define "Varicosities".
- g) Difference between corticosteroid and anabolic steroids.
- h) Name the joints of skull.
- i) What is amyloidosis?
- j) Discuss the stages of scar formation.

**2×10**

**PART-A**

Q.2 Discuss in detail about the training for muscular strength and endurance. **20**

Q.3 Write down the general anatomy of the largest organ of human body. **20**

Q.4 a) Discuss the metabolism of corticosteroid and its clinical use. **10**

b) Discuss the pathology of fatty liver. **10**

**PART-B**

Q.5 Discuss in detail about the pathology of osteomyelitis. **20**

Q.6 Enumerate the types of blood vessels and discuss the general anatomy and characteristics of all of them. **20**

Q.7 a) Write a short note on drugs acting on musculoskeletal system. **10**

b) Discuss in detail about the nerve injury. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Second Semester  
**EVALUATION DIAGNOSIS AND MANAGEMENT IN NEUROLOGY**  
**(MPTN-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Write short notes on the following:
- a) Sensory function examination.
  - b) Cranial nerve examination.
  - c) Modified Ashworth Scale.
  - d) Name the orthosis used for the following conditions:
    - i) Claw hand
    - ii) Wrist drop
    - iii) Inferior shoulder dislocation
    - iv) Scoliosis

**5×4**

**PART-A**

- Q.2 a) Define Neuro-ergonomics. What are the principles of Neuro-ergonomics? **10**  
b) Discuss the assessment of memory and mental workload in Neuro-ergonomics. **10**
- Q.3 a) What is EMG Biofeedback? Describe its uses in neurology. **10**  
b) Describe the techniques and types of electrodes used in EMG Biofeedback. **10**
- Q.4 a) Discuss the use of application of investigations and radiology in Neuro-Physiotherapy. **10**  
b) Compare the use of MRI and CT scan in neurological conditions. **10**

**PART-B**

- Q.5 Discuss the biomechanical principles of orthosis. Describe the application of three point pressure principle on any orthosis used in spinal correction. **20**
- Q.6 a) Define cerebrovascular accident. Discuss the synergistic pattern of upper and lower limb in stroke patients. **10**  
b) Describe the assessment and physiotherapy management of chronic stroke patients. **10**
- Q.7 a) What is Coup contra coup type of brain injury? What are the two types of Motor positioning of limbs seen in TBI? **10**  
b) Describe the assessment of spinal cord injury according to ASIA scale. **10**

# End Semester Examination, Dec. 2018

Master of Physiotherapy – Second Semester

## PHYSIOTHERAPEUTICS-II (MPTN-203)

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer briefly the following questions:

- a) Define augmented feedback.
- b) Sensory processing disorder.
- c) Define key points of control according to NDT.
- d) Indications for the use of Hyperbaric Therapy.
- e) Indications for the use of Mirror Therapy.
- f) Explain semi-active wheelchairs.
- g) Write down the uses of force platform in rehabilitation.
- h) Name the Brunnstom's sequential recovery stages of stroke.
- i) What do you understand by Kinanthropometry?
- j) Name the parts of wheelchair.

**2×10**

### **PART-A**

- Q.2
- a) Discuss the recovery of function in the light of neurological lesion. **5**
  - b) Explain the application of sensory motor integration therapy for the treatment of sensory processing disorder. **10**
  - c) Voluntary control assessment and therapeutic approaches, based on motor learning. **5**
- Q.3
- a) Explain the principles and techniques of Rood's approach for retraining upper limb function in a spastic stroke patient. **10**
  - b) Explain the various inhibitory and facilitation techniques used for retraining of motor function in acute stroke patient. **10**
- Q.4
- a) What do you understand by PNF? Explain the Treatment Design in the light of evidence for clinical application of various principles of Proprioceptive Neuromuscular Facilitation in treating circumductory gait. **15**
  - b) Critically analyse the usage of Mental Imagery Technique in rehabilitation. **5**

### **PART-B**

- Q.5
- a) Explain in detail the various basic wheelchair skills used in rehabilitation. **15**
  - b) Briefly explain the basic requirement from the patient in order to self-transfer from bed to wheelchair **5**
- Q.6 Write about the history of Yoga. Explain the therapeutic benefits of Yoga? Explain Pranayam in detail. **20**
- Q.7
- a) Explain Isokinetic Dynamometry? How is it different from other assessment technique? Also, discuss its indications for use in neurological patient. **10**
  - b) In the light of evidence, discuss the role of functional electrical stimulation for gait training in stroke population. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy — Third Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN NEUROLOGY-II**  
**(MPTN-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) What is Charcot's triad?
- b) Clinical features of cerebellar ataxia.
- c) What is PPRP?
- d) Write clinical features of carpal tunnel syndrome.
- e) Differentiate between spasticity and rigidity.
- f) Differential diagnosis of sub-acute combined degeneration of cord.
- g) Explain the posture in older adult.
- h) What are stereotactic surgeries?
- i) Give the classification of cerebral palsy.
- j) Precautions to be taken while prescribing exercises to a multiple sclerosis patient. **2×10**

**PART-A**

- Q.2 A 43 year old male complain of loss of balance on doing sudden movement/change of position. He also experiences nausea and vomiting and abnormal sensation in the ears. Write the detailed assessment and management of the case. **20**
- Q.3 Write in detail the classification, differential diagnosis and prognosis, evaluation, rehabilitation of spina bifida at T12 Level. **20**
- Q.4 A 6 year old boy complains of frequent falls. He has to take support of his body to get up from the ground. He is also facing difficulty in stair climbing and running and doing overhead activities. Write down a detailed assessment of the case. Design a treatment protocol along with goal planning. **20**

**PART-B**

- Q.5 Discuss the clinical features of a patient having incomplete spinal cord injury at T6 level. Also discuss primary and secondary impairments and strategies for its prevention. In the light of evidence based practice, discuss functional approaches for its treatment. **20**
- Q.6 Explain the physiological changes, sensory motor changes and adaptation in older adult due to ageing. **20**
- Q.7 Explain the indications for surgery to be undertaken for reduction of spasticity. Explain the acute respiratory care in ICU. Also discuss the prognostic outcome and physiotherapy management of secondary impairments. **20**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy — Third Semester  
**CURRENT CONCEPT AND SCIENTIFIC RATIONALE IN NEUROLOGY**  
**(MPTN-302)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) Explain T.A.R.T for muscle dysfunction.
- b) Explain capsular stretching.
- c) Who discovered Pilates and when?
- d) Describe well Leg raising test.
- e) Explain strain counter strain technique.
- f) ULTT3 is for which nerve?
- g) Describe "Parietal-Lift".
- h) Describe "Segmental Stabilization".
- i) Explain the circulation of cerebrospinal fluid pathways.
- j) Write about Isolytic MET.

**2×10**

**PART-A**

Q.2 Explain in detail about the cyriax principle of diagnosis and treatment? Write in detail for tendinitis of ECRB tendon? **20**

Q.3 What are the principles of PRT? Write all the hypothesis of positional release technique. **20**

Q.4 Explain integrated neuromuscular inhibition techniques? What are the beneficial effects of the same? **20**

**PART-B**

Q.5 a) Explain the types of Pilates-training. **10**  
b) Explain knee drop exercises. **10**

Q.6 Explain in detail about the principles of neuro-mobilization given by butler. **20**

Q.7 a) Write down the indications and contraindication of CST. **10**  
b) Discuss the principle of CST. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy Sports – First Semester  
**APPLIED BASIC MEDICAL SCIENCE IN SPORTS (MPTS-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Discuss the difference between metaplasia and dysplasia.
- b) What are the contents of cubital fossa?
- c) Discuss the pathology of Osteitis fibrosa cystica.
- d) What is vascular supply of back of neck?
- e) Name the characteristics of muscle tissue.
- f) Define "Varicosities".
- g) Difference between corticosteroid and anabolic steroids.
- h) Name the joints of skull.
- i) What is amyloidosis?
- j) Discuss the stages of scar formation.

**2×10**

**PART-A**

Q.2 Discuss in detail about the training for muscular strength and endurance. **20**

Q.3 Write down the general anatomy of the largest organ of human body. **20**

Q.4 a) Discuss the metabolism of corticosteroid and its clinical use. **10**

b) Discuss the pathology of fatty liver. **10**

**PART-B**

Q.5 Discuss in detail about the pathology of osteomyelitis. **20**

Q.6 Enumerate the types of blood vessels and discuss the general anatomy and characteristics of all of them. **20**

Q.7 a) Write a short note on drugs acting on musculoskeletal system. **10**

b) Discuss in detail about the nerve injury. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy (Sports) – Second Semester  
**PHYSIOTHERAPEUTICS-II (MPTS-203)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Explain grades of Maitland Mobilization.
- b) Write down the differences between active and passive wheelchairs.
- c) Explain physiological laws of spinal motion.
- d) Explain convex-concave rule of mobilization.
- e) Explain SNAGLM and SNAGAM.
- f) Explain K tape.
- g) Define Anthropometry.
- h) Explain the formula for calculating the BMI.
- i) What are the advantages of active wheelchair in rehabilitation?
- j)

**2×10**

**PART-A**

Q.2 Write in detail about the principles of taping technique? Explain the taping for ankle sprain. **20**

Q.3 Define Somatotyping. What are the uses in sports for calculating the somatotype? What all measurements are required for calculating it with their SI units? Write a short note on Sheldon's method of somatotyping. **20**

Q.4 Write about the combined movement therapy. Write its importance during assessment and treatment of spinal dysfunctions. **20**

**PART-B**

Q.5 Explain in detail about the basic wheelchair skills used in rehabilitation. Explain with examples. **20**

Q.6 Write about the therapeutic usage of Yoga and its therapeutic benefits. Explain Pranayam in detail. **20**

Q.7 Explain Body composition analysis? Write in detail about its importance and its uses in rehabilitation. **20**



**End Semester Examination, Dec. 2018**  
Master of Physiotherapy (Sports) – Second Semester  
**SPORTS PSYCHOLOGY (MPTS-204)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.*

- Q.1 Write short notes on the following:
- a) Define Perception.
  - b) Name four theories of aggression.
  - c) Name any four benefits of meditation.
  - d) Qualities of a leader.
  - e) Define doping.

**2×5**

**PART-A**

- Q.2 Write down the importance of studying Sports Psychology as a Sports Physiotherapist. **10**
- Q.3 Define Attention. How is Imagery technique helpful in improving Attention? **10**
- Q.4 What is pre-competitive anxiety? What effect does it have on players? Write down the strategies to cope with pre-competitive anxiety. **10**

**PART-B**

- Q.5 What are the different methods of giving biofeedback? How does biofeedback training helps in improving performance? **10**
- Q.6 Describe in detail the eating disorders. **10**
- Q.7 Enumerate the different techniques of stress management. Discuss any one in detail. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Third Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN SPORTS**  
**(MPTS-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt **ANY TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) Explain the use of mineral bath.
- b) Write the use of contrast bath.
- c) Enumerate 4 forms of sports massage techniques.
- d) Write 4 contraindications of sports massage.
- e) Explain the fartlek training methods.
- f) Define "Doping".
- g) Enumerate the protective equipment used in basketball.
- h) Differentiate between contact and non-contact sports.
- i) Write the special test for knee meniscal injury.
- j) Explain the FITT principle.

**2×10**

**PART-A**

Q.2 Write the common injuries occurring in the basket ball game. Explain in detail about the rehabilitation protocol for rotator cuff injury. **20**

Q.3 Discuss the principle of protective equipment. Write the importance of protective equipment in prevention of injuries. Enumerate the type of protective equipment used in cricket **20**

Q.4 Discuss the physiological effects of massage Write the indication, contraindication and precaution for message therapy. Explain any one special sports massage techniques. **20**

**PART-B**

Q.5 a) Explain about the use of whirlpool bath in rehabilitation process. **10**  
b) Explain the different principle of training used in rehabilitation. **10**

Q.6 Enumerate the training method. Explain circuit method with examples. **10**

Q.7 a) Classify "Dope Agents". Explain the role of anabolic steroids as doping agent. **10**  
b) Write a note on therapeutic use of banned drug. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Third Semester  
**CURRENT CONCEPT AND SCIENTIFIC RATIONALE IN SPORTS**  
**(MPTS-302)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 Answer the following in brief:

- a) Explain T.A.R.T for muscle dysfunction.
- b) Explain the circulation of Cerebrospinal Fluid Pathways.
- c) Write about Isolytic MET.
- d) Explain Capsular Stretching.
- e) Who discovered Pilates and when?
- f) What factors do you monitor during exercise training of an athlete?
- g) ULTT-3 is for which nerve?
- h) Describe Well leg raising Test.
- i) Describe Parietal Lift.
- j) Describe Segmental stabilization. **2x10**

**PART-A**

Q.2 Write the principles of precision training. What is the benefit of the training in heart rate zone? **20**

Q.3 Explain in detail about the Cyriax principle of diagnosis and treatment? Write in detail for Bicipital tendinitis. **20**

Q.4 Write the patterns of dysfunction in Lower crossed syndrome? Explain the Muscle energy technique to assess and treat the dysfunction. **20**

**PART-B**

Q.5 Explain in detail about the principles of Neuro-mobilization given by Butler. **20**

Q.6 a) Write down the indications and contraindication of CST. **10x2**  
b) Discuss the principle of CST.

Q.7 a) Explain the types of Pilates-training. **10x2**  
b) Explain Knee drop exercises.

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy Sports – First Semester  
**APPLIED BASIC MEDICAL SCIENCE IN**  
**SPORTS/MUSCULOSKELETAL/NEUROLOGY**  
**(MPTS/MPTM/MPTN-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Answer the following questions:
- a) Discuss the difference between metaplasia and dysplasia.
  - b) What are the contents of cubital fossa?
  - c) Discuss the pathology of Osteitis fibrosa cystica.
  - d) What is vascular supply of back of neck?
  - e) Name the characteristics of muscle tissue.
  - f) Define "Varicosities".
  - g) Difference between corticosteroid and anabolic steroids.
  - h) Name the joints of skull.
  - i) What is amyloidosis?
  - j) Discuss the stages of scar formation. **2×10**

**PART-A**

- Q.2 Discuss in detail about the training for muscular strength and endurance. **20**
- Q.3 Write down the general anatomy of the largest organ of human body. **20**
- Q.4 a) Discuss the metabolism of corticosteroid and its clinical use. **10**  
b) Discuss the pathology of fatty liver. **10**

**PART-B**

- Q.5 Discuss in detail about the pathology of osteomyelitis. **20**
- Q.6 Enumerate the types of blood vessels and discuss the general anatomy and characteristics of all of them. **20**
- Q.7 a) Write a short note on drugs acting on musculoskeletal system. **10**  
b) Discuss in detail about the nerve injury. **10**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Fourth Semester  
**APPLIED CLINICAL NUTRITION (MPTS/MPTN/MPTM-403)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What are the methods of Nutritional Status? Explain any two in detail. **10**

**PART-A**

Q.2 What do you mean by therapeutic diet? Explain the various modifications done to make a normal diet into a therapeutic diet. **10**

Q.3 Discuss the various types of feeding. Explain the nutritional content of any one feeding in detail. **10**

Q.4 Write short notes on the following:

a) Food groups.

b) Food pyramids.

**5x2**

**PART-B**

Q.5 Discuss the various types of diabetes. Explain metabolism of diabetes in detail. **10**

Q.6 Explain the sign and symptoms of gout. What all dietary management will be considered for gout patient? **10**

Q.7 Explain the following in detail:

a) Lactose intolerance.

b) Homocystineuria.

**5x2**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fifth Semester

## MARKETING MANAGEMENT (PT-002)

Time: 2 hrs

Max Marks: **50**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1 a) Define Management.  
b) What is consumer decision making?  
c) Name any five products that use age as basis of segmentation.  
d) Name any two functions of Human Resource Management.  
e) Name the elements of marketing mix. **2x5**

### **PART-A**

- Q.2 What are the essential skills of a manager? Briefly explain the various functions of management. **10**
- Q.3 What is human resource management? Describe the detailed process of recruitment and selection. **10**
- Q.4 Write short notes on:  
a) Performance Appraisal.  
b) Collective Bargaining. **5x2**

### **PART-B**

- Q.5 What do you understand by market segmentation? Explain the various basis of market segmentation. **10**
- Q.6 What is consumer behavior? Name and explain the factors that affect consumer behavior. **10**
- Q.7 Write short notes on:  
a) Quality Management.  
b) Medical Audit. **5x2**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Seventh Semester

## HEALTH MANAGEMENT (PT-003)

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What is importance of good posture?
- b) Name the drugs used for doping.
- c) Define the balanced diet and its elements.
- d) What is method of prevention for T.B?
- e) Discuss the remedial exercises for scoliosis.

**2×5**

### **PART-A**

Q.2 What are the effects of tobacco on health?

**10**

Q.3 Discuss the dimensions and concept of health.

**10**

Q.4 What is the importance of exercise in maintaining a good posture?

**10**

### **PART-B**

Q.5 What is mode of transmission and method of prevention for hepatitis A?

**10**

Q.6 Describe in detail about the first aid treatment for shoulder subluxation.

**10**

Q.7 What are the principles of health education?

**10**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - First Semester

## ANATOMY-I (PT-101)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Explain in detail shoulder joint with special emphasis on abduction with a labeled diagram. **10**
- Q.2 Describe branches of axillary artery and its relation in detail. **10**
- Q.3 Describe bronchopulmonary segments of lungs with their importance and clinical anatomy with labeled diagrams. **10**
- Q.4 Describe blood supply of long bone. **10**

### **PART-B**

Write short notes on the following:

- Q.5 Cubital fossa. **5**
- Q.6 Arches of foot. **5**
- Q.7 Deltoid muscle. **5**
- Q.8 Inguinal canal and hernia. **5**
- Q.9 Enumerate the ligaments and bursae around the knee joint. **5**
- Q.10 Venous drainage of lower limb. **5**
- Q.11 Erb's paralysis. **5**
- Q.12 Lymphatic drainage of mammary gland. **5**



# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – First Semester

## PHYSIOLOGY-I (PT-102)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Describe various processes by which substances are transported across cell membrane. **10**
- Q.2 Describe the mechanism of impulse transmission through neuro-muscular function. **10**
- Q.3 Describe structure of synapse and mechanism of synaptic transmission. **10**
- Q.4 Describe the mechanism of bile reaction and its functions in detail. **10**

### **PART-B**

- Q.5 Describe functions of liver. **5**
- Q.6 Describe the ABO Blood group. **5**
- Q.7 Describe functions of stomach. **5**
- Q.8 Write a short note on 'saltatory conduction'. **5**
- Q.9 Describe intrinsic mechanism of blood coagulation. **5**
- Q.10 Write about functions of LYSOSOME and mitochondria. **5**
- Q.11 Explain conduction of action potential in myelinated and non-myelinated nerves. **5**
- Q.12 Write a short note on: 'excitation-contraction coupling'. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - First Semester

## BIOCHEMISTRY (PT-103)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Briefly explain the sources, requirement, biochemical functions and deficiency manifestations of vitamin C. **10**
- Q.2 Describe the chemistry and functions of various plasma proteins. Add a note on the separation of plasma proteins. **10**
- Q.3 What are lipids? Classify them with suitable examples. Write a note on the functions of lipids. **10**
- Q.4 Describe the formation and fate of pyruvate in the body. **10**

### **PART-B**

- Q.5 Explain the biochemical functions of calcium in the body. **5**
- Q.6 Explain the fluid mosaic model of cell membrane. **5**
- Q.7 What is diabetes mellitus? Discuss metabolic dearrangement in DM. **5**
- Q.8 Explain the functions and deficiency of vit D. **5**
- Q.9 Enumerate liner function tests. **5**
- Q.10 Explain glycogen metabolism. **5**
- Q.11 Enumerate kidney function tests. **5**
- Q.12 Explain the structure and functions of RNA. **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – First Semester  
**FUNDAMENTALS OF PHYSIOTHERAPY (PT-104)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 What is equilibrium? Give types of equilibrium and factors affecting equilibrium. **10**
- Q.2 What is lever? Classify and give examples of lever in human body and in daily use. **10**
- Q.3 What is joints? Classify different joints with diagrams and examples. **10**
- Q.4 a) What is transformer? Discuss the types of transformers in brief. **5**  
b) Explain different pulley systems and uses of 'pulley systems' in physiotherapy department. **5**

**PART-B**

- Q.5 Briefly describe the types of muscle contractions. **5**
- Q.6 What are anatomic pulleys? Give an example of anatomic pulley. **5**
- Q.7 Define 'electromagnetic spectrum'. **5**
- Q.8 What are different muscle groups? Give examples. **5**
- Q.9 Explain Ohm's Law. Discuss the resistance in series in brief. **5**
- Q.10 What are the precautions need to be taken in the department to prevent electric shock and management of electric shock. **5**
- Q.11 Describe circuit diagram of microwave diathermy. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - Second Semester

## ANATOMY-II (PT-201)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Describe the anatomy of pancreas under following headings:  
a) Parts, surfaces and borders. **5x2**  
b) Blood supply and applied.
- Q.2 Describe in brief:  
a) Vertebral artery. **5x2**  
b) Coronary sinus.
- Q.3 Describe gross features of cerebellum. **10**
- Q.4 a) Enumerate tracts passing through internal capsule. **5**  
b) Write a short note on Klinefelter's syndrome. **5**

### **PART-B**

- Q.5 Write short notes on:  
a) Urogenital Diaphragm. **3**  
b) Innervation of Bladder. **2**
- Q.6 Describe effect of lesions of optic nerve in short. **5**
- Q.7 Describe thyroid gland in short. **5**
- Q.8 Enumerate:  
a) Branches of mandibular nerve. **3**  
b) Nerve supply of extraocular muscles of eye. **2**
- Q.9 Write short notes on:  
a) Bronchopulmonary segments. **3**  
b) Implantation. **2**
- Q.10 Write short notes on:  
a) Dural venous sinuses. **3**  
b) Fourth ventricle. **2**
- Q.11 Write short notes on:  
a) Meninges **3**  
b) Fourth ventricle **2**
- Q.12 Describe ascending tracts of spinal cord (with suitable diagrams) with clinical tests done to test them. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - Second Semester

## PHYSIOLOGY-II (PT-202)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Describe the functions of hypothalamus. State at least six differences between 'sympathetic' and 'parasympathetic nervous system'. **10**
- Q.2 Explain how CO<sub>2</sub> is transported in the body. **10**
- Q.3 What is hypoxia? Explain the different types of it. **10**
- Q.4 Describe various methods of contraception in males and females. **10**

### **PART-B**

- Q.5 What are the functions of basal ganglia? Write a note on Parkinson's disease. **5**
- Q.6 Explain CSF and its functions in brief. **5**
- Q.7 Differentiate between 'lung volumes' and 'capacities'. **5**
- Q.8 Describe myopia and its correction with the help of a diagram. **5**
- Q.9 Discuss vestibular apparatus in brief. **5**
- Q.10 State about role of hypothalamus in thermoregulation. **5**
- Q.11 Explain conduction in myelinated and unmyelinated neurons. **5**
- Q.12 Describe structure of a sperm. Write about the composition of seminal fluid. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Second Semester

## **ELECTROTHERAPY-I (PT-203)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Classify and write the parameters for T.E.N.S. and enumerate the contraindications for use of T.E.N.S. **10**
- Q.2 Explain indications, contraindications of faradic type current in detail. **10**
- Q.3 Explain in detail physiology of nerve membrane potential. **10**
- Q.4 Define iontophoresis with its indications and contraindications. **10**

### **PART-B**

- Q.5 Explain in brief Faradism under pressure. **5**
- Q.6 Explain briefly diadynamic current. **5**
- Q.7 Write a note on types of surging. **5**
- Q.8 Write briefly various types of nerve injuries. **5**
- Q.9 Write a note on SD curve. **5**
- Q.10 Write a note on chronaxie and rheobase. **5**
- Q.11 Write a short note on motor point. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - Second Semester

## EXERCISE THERAPY-I (PT-204)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Define and classify passive movement. Explain the principles of passive movement. **10**
- Q.2 Define 'stretching'. Discuss the determinants of stretching and enumerate the indications for stretching in detail. **10**
- Q.3 What is PRE? Explain the DAPRE technique in detail. **10**
- Q.4 What are passive movements? Explain the principles, indications and precautions of passive movements. **10**

### **PART-B**

- Q.5 Explain the indication, contraindication and technique of application of Continuous Passive Movement (CPM). **5**
- Q.6 Write the fundamental positions of standing in brief. **5**
- Q.7 Explain the types of Goniometer. **5**
- Q.8 Enumerate five derived positions of lying stating their two uses in brief. **5**
- Q.9 Explain the grades of MMT. **5**
- Q.10 Write the indication for a joint mobilization. **5**
- Q.11 Explain the role of active assisted exercise in rehabilitation in brief. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fourth Semester

## BIOMECHANICS (PT-403)

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

Note: Attempt **NINE** questions in all; any **THREE** questions from **PART-A** and **SIX** questions from **PART-B**. Marks are indicated against each question.

### **PART-A**

- Q.1 Write down in detail the importance of biomechanics in physiotherapy field. **10**
- Q.2 Define Equilibrium and its classification. Discuss the factors affecting stability. **10**
- Q.3 Discuss the structure of joint with diagram. **10**
- Q.4 Discuss the biomechanics of shoulder joint in detail. Add a short note on Scapulo humeral rhythm. **10**

### **PART-B**

- Q.5 Write a note on carrying angle. **5**
- Q.6 Write down the functions of skeletal muscles. **5**
- Q.7 State Newton's First and Third Law. **5**
- Q.8 Define motion and give its classification. **5**
- Q.9 Differentiate between Active v/s Passive insufficiency. **5**
- Q.10 Define Concave-Convex rule with diagram. **5**
- Q.11 Differentiate between open chain and closed kinematic chain. **5**



**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy - Fourth Semester  
**PSYCHOLOGY AND PSYCHIATRY (PT-404)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Explain in detail about theories of attribution with suitable example of each. **10**
- Q.2 What is attitude? Explain various theories related to attitude and how attitude effects behavior of a person. **10**
- Q.3 Explain in detail the mental health examination. Discuss the role of history taking in psychiatric patients along with the treatment plan. **10**
- Q.4 What is anxiety disorder? Explain different types of anxiety disorders. Also mention in detail the management of anxiety disorders. **10**

**PART-B**

- Q.5 Explain physiology of emotion. **5**
- Q.6 Explain piaget stages of cognitive development. **5**
- Q.7 What is memory? Discuss in brief about its various types. **5**
- Q.8 Explain obsessive compulsive disorder (OCD) in brief. **5**
- Q.9 Discuss about alcohol and substance misuse. **5**
- Q.10 Write short note on symptoms of mental illness. **5**
- Q.11 Add a note on: "Somatisation disorders". **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy - Fourth Semester  
**ADMINISTRATION AND ETHICS (PT-405)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**. Marks are indicated against each question.

**PART-A**

- |     |  |           |
|-----|--|-----------|
| Q.1 | Explain the principles of APTA.  | <b>10</b> |
| Q.2 | Explain the legal issues in physiotherapy practice.                      | <b>10</b> |
| Q.3 | Write down the various pre-requisites while appearing for the first job. | <b>10</b> |
| Q.4 | Define planning. Why is planning important in any organization?          | <b>10</b> |

**PART-B**

- |      |   |          |
|------|---|----------|
| Q.5  | Define time management. Briefly describe the importance of time management. | <b>5</b> |
| Q.6  | Explain hierarchy in organization.  | <b>5</b> |
| Q.7  | Define communication. What are the different functions of communication?    | <b>5</b> |
| Q.8  | Discuss the accreditation and evaluation standards in physiotherapy.        | <b>5</b> |
| Q.9  | Enlist the various principles of recruitment.                               | <b>5</b> |
| Q.10 | Write a short note on Indian Healthcare System.                             | <b>5</b> |
| Q.11 | Write a short note on the history of physiotherapy.                         | <b>5</b> |

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fifth Semester

## ORTHOPEDIC PHYSIOTHERAPY (PT-502)

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

Note: Attempt **NINE** questions in all; Attempt any **THREE** questions from **PART-A** and **SIX** questions from **PART-B**. Marks are indicated against each question.

### **PART-A**

- Q.1 Describe disc prolapse. What are the clinical manifestations, pathophysiology and management for the same? **10**
- Q.2 Describe impingement syndrome. Explain the possible causes and treatment options for the same. **10**
- Q.3 Describe the part of above knee prosthesis. **10**
- Q.4 Explain scoliosis including assessment and conservative management. **10**

### **PART-B**

- Q.5 Write a short note on control of stump edema. **5**
- Q.6 What are the clinical diagnostic tests of bicipital tendinitis? **5**
- Q.7 Explain the patho physiology of "bamboo spine" along with its clinical features. **5**
- Q.8 What are the precautions to be followed after total hip replacement? **5**
- Q.9 Describe that how will you differentiate between ligament tear and meniscal tear. **5**
- Q.10 How will you manage a case of 50 years old male suffering from cervical radiculopathy? **5**
- Q.11 What are the clinical diagnostic features of CDH? **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Fifth Semester

## BIOMECHANICS-II (PT-503)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Define 'ergonomics'. What are the uses of studying ergonomics in the field of physiotherapy of activities of daily living? **10**
- Q.2 Describe the osteokinematics, stabilizing structures and neuro-musculature of hip joint in detail. **10**
- Q.3 Discuss the biomechanics of hip joint in detail. **10**
- Q.4 What are the physiological and biomechanical risk factors responsible for WRMSO? **10**

### **PART-B**

- Q.5 What do you understand by screw home mechanism? Name the muscles also for locking and unlocking. **5**
- Q.6 Discuss concave-convex rule with an example. **5**
- Q.7 Name the ligaments, bones, and ROM of an ankle joint. **5**
- Q.8 Differentiate between active and passive insufficiency. **5**
- Q.9 Mention briefly about kitchen ergonomics. **5**
- Q.10 Write a short note on work rest scheduling. **5**
- Q.11 Diagrammatically design the ideal computer work-station. **5**
- Q.12 Define one FSU. Why do we need to study it? **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Sixth Semester

## **NEUROLOGICAL PHYSIOTHERAPY (PT-602)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

### **PART-A**

- Q.1 Write in detail physiotherapy management of a patient with Guillain Barre Syndrome. **10**
- Q.2 Write in detail about the physiotherapy assessment diagnosis and management for a 65 years old male with Parkinson's disease. **10**
- Q.3 Enlist the higher mental functions. Write the examination of higher mental function in detail. **10**
- Q.4 Discuss the physiology of micturition. What do you understand by neurogenic bladder? Give the types of neurogenic bladder and its management in detail. **10**

### **PART-B**

- Q.5 Describe briefly hold relax technique of PNF. **5**
- Q.6 What are the motor and sensory symptoms in multiple sclerosis? **5**
- Q.7 Describe briefly gait training in Parkinson's disease. **5**
- Q.8 Explain the role of sensory system on motor performance in brief. **5**
- Q.9 Explain briefly two point and four point gait. **5**
- Q.10 Write a short note on: 'residual poliomyelitis'. **5**
- Q.11 Describe briefly structure of neuron. **5**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy – Sixth Semester

## MANUAL THERAPY (PT-603)

Time: 3 hrs.

Max Marks: **60**

No. of pages: *1*

Note: Attempt **NINE** questions in all. Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**. Marks are indicated against each question.

### **PART-A**

- Q.1 Write down about Mckenzie flexion exercises protocol in detail? **10**
- Q.2 Write in detail the about principles of Mulligan mobilization. How it is different from other manual mobilization? **10**
- Q.3 Describe in detail about the massage therapy. What are the types of therapeutic massage? Explain effleurage technique. **10**
- Q.4 Draw a diagram of different grades of Maitland mobilization. Explain the difference between mobilization and manipulation. **10**

### **PART-B**

- Q.5 Explain the Grades of Maitland in detail with examples of knee joint. **5**
- Q.6 Explain in detail about the upper limb tension tests. **5**
- Q.7 Explain percussion manipulation technique. **5**
- Q.8 Write down the types of dysfunction given by Mckenzie. **5**
- Q.9 Differentiate between NAG and SNAG. **5**
- Q.10 Explain Maitland mobilization for elbow joint. **5**
- Q.11 Write down the physiological effects of massage. **5**
- Q.12 Explain Tapotement technique. **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Sixth Semester  
**RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

Note: Attempt **NINE** questions in all. Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**. Marks are indicated against each question.

**PART-A**

Q.1 Find Karl Pearsons coefficient of correlation from the following series of marks secured by 10 students in a class test in English and Hindi.  
English 45, 70, 65, 30, 90, 40, 50, 75, 85, 60  
Hindi 35, 90, 70, 40, 95, 40, 60, 80, 80, 50 **10**

Q.2 What do you understand by the term research design? Write down the types of research designs. **10**

Q.3 Explain sampling. Enumerate various sampling methods. **10**

Q.4 The grades of 36 students in an auditing test are:

Grades	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No. of students	3	4	6	10	6	4	3

Find Mean, Median and Mode.

**10**

**PART-B**

Q.5 Define and classify hypothesis in research. **5**

Q.6 What is the difference between a validity and reliability? **5**

Q.7 Write a short note on report writing in research. **5**

Q.8 Write a short note on normal distribution curve. **5**

Q.9 Calculate mean and standard deviation of following series:

Daily wages	0-10	10-20	20-30	30-40	40-50
No. of workers	27	10	5	3	

**5**

Q.10 Write down any two merits and demerits of median. **5**

Q.11 Explain various types of data representation. **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Eighth Semester  
**COMMUNITY BASED REHABILITATION (PT-801)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

Note: Attempt **NINE** questions in all; Attempt any **THREE** questions from **PART-A** and **SIX** questions from **PART-B**. Marks are indicated against each question.

**PART-A**

- Q.1 Describe the different strategies/approaches in CBR. **10**
- Q.2 Define "CBR". Describe the roles of the members of CBR Team. **10**
- Q.3 Discuss the different factors that support CBR program. **10**
- Q.4 Describe the management cycle of CBR. Write in detail about the evaluation process in CBR. **10**

**PART-B**

- Q.5 What are the objectives of Family Planning and the different methods of Family Planning?  
**5**
- Q.6 Briefly describe Health Care System/Services in India. **5**
- Q.7 Define "Health". What is pre-pathogenic and pathogenic phase of disease? **5**
- Q.8 What are the aims of CBR program? **5**
- Q.9 Briefly describe the matrix of CBR. **5**
- Q.10 What are the psychological and physical goals of exercise? **5**
- Q.11 What do you understand by "Bottom Up" and "Top Down" approaches in CBR? **5**



**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy – Eighth Semester  
**SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

Note: Attempt **NINE** questions in all; Attempt any **THREE** questions from **PART-A** and **SIX** questions from **PART-B**. Marks are indicated against each question.

**PART-A**

- Q.1 Write down the assessment and management of tennis elbow. **10**
- Q.2 Describe in detail the role of Sports Physiotherapist in a team. **10**
- Q.3 Write down the complete assessment, provisional diagnosis and management of ACL injury. **10**
- Q.4 Describe in detail the effects of exercise in diabetic athlete and precautions to be taken while exercising. Add a short note on late onset hypoglycemia. **10**

**PART-B**

- Q.5 Write a short note on hydration in athlete. **5**
- Q.6 What is CTS? Write down its management. **5**
- Q.7 Write down the causes, clinical features and management of heat stroke. **5**
- Q.8 Write a short note on meniscal injury. **5**
- Q.9 Explain the following special tests:  
a) Mc Murray's Test.  
b) Empty Can Test. **2½ × 2**
- Q.10 What is doping? Mention the side effects of anabolic steroids. **5**
- Q.11 What is female athlete triad? Explain in detail. **5**
- Q.12 Write short notes on:  
a) Specificity principle.  
b) Overload principle. **2½ × 2**

# End Semester Examination, Dec. 2018

Bachelor of Physiotherapy - Eighth Semester

## GENERAL PHYSIOTHERAPY (PT-803)

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**. Marks are indicated against each question.

### **PART-A**

- Q.1 Explain the physiological changes associated with pregnancy. Describe screening and antenatal exercises. **10**
- Q.2 Describe various types of burns. What will be the assessment and management in burns? **10**
- Q.3 Describe Leprosy. Explain the physiotherapy management in Leprosy. **10**
- Q.4 What do you understand by shoulder impingement? Write the physiotherapy management for the same. **10**

### **PART-B**

- Q.5 Explain the role of PUVA therapy in management of Psoriasis. **5**
- Q.6 Briefly explain Lymphedema. **5**
- Q.7 Define Gerontology. **5**
- Q.8 Explain the treatment of congenital hip dislocation. **5**
- Q.9 What is tennis elbow? Write down its special test and the physiotherapy management. **5**
- Q.10 Explain the patho-physiology and management of otitis media. **5**
- Q.11 Explain the types of Cerebral Palsy. **5**

**End Semester Examination, Dec. 2018**  
Bachelor of Physiotherapy- Eighth Semester  
**DISABILITY PREVENTION AND REHABILITATION (PT-804)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**. Marks are indicated against each question.

**PART-A**

- Q.1 Write down the different modes of delivery of Rehabilitation Care with their advantages and disadvantages. **10**
- Q.2 Define Orthosis. Describe the classification and biomechanical principles of orthosis. **10**
- Q.3 Discuss the guidelines for evaluation of permanent physical impairment of upper limb. **10**
- Q.4 Define Rehabilitation. Describe the roles of any five members of Medical Rehabilitation team. **10**

**PART-B**

- Q.5 What are the different components of prosthesis? **5**
- Q.6 Write a short note on different methods of rehabilitation for spasticity reduction. **5**
- Q.7 Enumerate different types of employment for a person with disability. **5**
- Q.8 Write a short note on Brown Sequard Syndrome. **5**
- Q.9 What is the role of physiatrist in rehabilitation team? **5**
- Q.10 What are the types of spinal cord injury, according to ASIA Scale? **5**
- Q.11 Briefly describe the primary and secondary disability. **5**

# End Semester Examination, Dec. 2018

Master of Physiotherapy - Second Semester

## FOREIGN LANGUAGE (FRENCH) (PT-GE-02)

Time: 2hrs

Max Marks: 50

No. of pages: 2

**Note: Attempt all questions. Write the answers in the space provided in the question paper.**

### Q.1 Écrivez en anglais (Write in English)

- a) S'il vous plaît \_\_\_\_\_
- b) Bon soir \_\_\_\_\_
- c) À demain \_\_\_\_\_
- d) Bonne nuit \_\_\_\_\_
- e) Madame \_\_\_\_\_
- f) Excusez-moi \_\_\_\_\_
- g) Au revoir \_\_\_\_\_
- h) Ça va bien, merci \_\_\_\_\_
- i) Bonne nuit \_\_\_\_\_
- j) À bientôt \_\_\_\_\_

1x10

### Q.2 Remplissez avec les pronoms sujets: (Fill in the blanks with subject pronouns)

- a) \_\_\_\_\_ aimons le chocolat.
- b) \_\_\_\_\_ dansez ensemble.
- c) \_\_\_\_\_ parles bien.
- d) \_\_\_\_\_ mangent du sandwich.
- e) \_\_\_\_\_ regarde la télé.

1x5

### Q.3 Remplissez les blancs suivants: (Fill in the table below)

	Aimer	Chanter
Je	_____	_____
Tu	_____	_____
Il/elle	_____	_____

1x6

### Q.4 Formulez les questions: (Answer the following questions)

- a) ça va bien, merci  
\_\_\_\_\_
- b) Je suis indien.  
\_\_\_\_\_
- c) J'habite à Faridabad?  
\_\_\_\_\_
- d) J'ai vingt ans.  
\_\_\_\_\_
- e) Je suis étudiante  
\_\_\_\_\_

1x5

### Q.5 Remplissez les blancs avec les jours:

**(Fill in the blanks with the name of the days)**

- a) Le deuxième jour de la semaine est \_\_\_\_\_.
- b) Le weekend est \_\_\_\_\_ et \_\_\_\_\_.
- c) \_\_\_\_\_ est le troisième jour de la semaine.
- d) \_\_\_\_\_ est le cinquième jour de la semaine.

**1x5**

**Q.6 Présentez-vous en cinq phrases:  
(Introduce yourself in five phrases)**

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**1x5**

**Q.7. Décrivez votre ami(e) en cinq phrases:  
(Describe your friend in five phrases)**

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**1x5**

**Q.8. Cochez la bonne réponse:  
(Tick the correct option)**

- a) Another way of saying *allô* is:
  - Coucou
  - au revoir
  - de
- b) Which one of the following is formal?
  - Tu
  - vous
  - ils
- c) Which of the following is a French brand?
  - Nivea
  - zara
  - chanel
- d) Which of the following museum is in France:
  - Musée du Louvre
  - Musée d'histoire
  - Musée du Prado
- e) How do you say *"thanks a lot"* in French:
  - muchas gracias
  - vraiment merci
  - merci beaucoup

**1x5**

**Q.9. Écrivez en chiffres:  
(Write in digits – cardinal / ordinal numbers)**

Onzième	_____
Premier	_____
quatre-vingt-quatre	_____
soixante-deux	_____

**1x4**

**End Semester Examination, Dec. 2018**  
Master of Physiotherapy – Third Semester  
**LOGICAL AND QUANTITATIVE REASONING SKILLS (PT-GE-03)**

Time: 3 Hours

Max Marks: **50**

No. of pages: *1*

Note: *Attempt any **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1 Answer the following in brief:
- a) Define 'impact factor'.
  - b) Name any two databases for physiotherapy.
  - c) Define 'indexing'.
  - d) Differentiate between 'citation' and 'referencing'.
  - e) Differentiate between 'systemic review' and 'meta-analysis'. **2x5**

**PART-A**

- Q.2 Discuss the ethical issues that need to be considered while conducting a research. **10**
- Q.3 Describe how to critically evaluate the different sections of an article. **10**
- Q.4 Define 'Plagiarism'. Write different types of plagiarism and methods to prevent it. **10**

**PART-B**

- Q.5 Discuss various qualities of evidence. **10**
- Q.6 Describe the different steps that are involved in writing and formulation of projects. **10**
- Q.7 What are the criteria for formulating a clinical question? What is best format format to facilitate searching for a precise answer? **10**