

End Semester Examination, May 2017

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

HEALTH PSYCHOLOGY (BN&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**. Each question carries equal marks.

Q.1 Define 'Health Psychology'. What is the future of Health Psychology? **10**

PART-A

Q.2 Explain the principles of medical ethics followed by health professionals. **10**

Q.3 Explain the psychosocial model of health in detail. **10**

Q.4 Define the following:

- a) Illness.
- b) Health.
- c) Wellness.
- d) Culture.
- e) Pain.

2×5

PART-B

Q.5 What is stress? How can one cope up with stress? **10**

Q.6 What is disease? Explain the self-healing as a method. **10**

Q.7 Explain the following:

- a) Addiction.
- b) Exercise for health.
- c) Quality of life.
- d) Eating disorders.

2½×4

End Semester Examination, May 2017

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

WEIGHT MANAGEMENT(BN&D-002)

Time: 2 hrs

Max Marks: **50**

No. of pages: 2

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
- Hyperthyroidism and Cushing's syndrome have obesity as one of their characteristic features. (True / False)
 - The resting metabolic rate is regulated by which gene in human beings?
 - A BMI of value more than _____ denotes obesity in case of Asian Indians.
 - Define 'syndrome X'.
 - The energy expended in physical activity is _____ % of total energy expenditure.
 - Define 'DIT'.
 - Define 'Yo – Yo effect'.
 - What does total energy expenditure comprise of?
 - Define the method used for clarifying obesity. Give another name for it.
 - A WHR of greater than _____ for men and greater than _____ for women is an indicator of abdominal obesity. **1x10**

PART-A

- Q.2 Give reasons for the following:
- An increase in weight gain is not directly proportional to an increase in calorie intake.
 - People lose weight rapidly in the beginning when they start following weight reducing diets.
 - A deficiency of Leptin is conducive to obesity. **10**
- Q.3 Briefly Discuss:
- The various etiological factors for obesity.
 - The metabolic aberrations & consequences of obesity. **10**
- Q.4 Discuss the following:
- Plateau effect during weight reduction.
 - Insulin resistance.
 - Ganoid and android obesity.
 - Theories related to weight management.
 - Differentiate overweight and obesity. **10**

PART-B

- Q.5 "Treatment of obesity today has shifted from mere "weight loss" to "weight management". Justify the statement, highlighting the three – pronged approach to obesity management. **10**
- Q.6 Mrs. Renu, mother of two children is employed as a school teacher in a public school. She is conscious of her appearance and desire to lose weight. She relishes non-vegetarian food. Plan an appropriate diet for her to lose weight and also tell her IBW and BMI. (No calculation for Diet Plan) Discuss in brief the calories, protein, fat, carbohydrates required for the day and ways of dietary modification in managing her obesity. **10**

Q.7 Discuss the following:

- a) Solutions for overcoming obesity.
- b) Fad diets and different types of fad diets commonly used.
- c) Explain importance and use of food dairy for an obese person.
- d) Types of exercises that help to reduce weight.
- e) Importance of teaching portion control in weight management.

2x5

End Semester Examination, May 2017
B.Sc. (N&D) –First Semester
INTRODUCTION TO LIFE SCIENCES(BN&D-101)

Time: 3 hrs

Max Marks: **100**

No. of pages: 2

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 following with their examples/SI units wherever applicable:

- a) Combination reactions.
- b) Gram staining.
- c) Mycorrhiza.
- d) Mycoplasma.
- e) pH.
- f) Ribosomes.
- g) Smoke point.
- h) Surface tension.
- i) Pili.
- j) Cell theory.

2x10

PART-A

- Q.2 a) Discuss the types, structure and functions of endoplasmic reticulum (ER) in detail with the help of a diagram. Write major points of differences (at least five) between smooth and rough ER. **10**
- b) Discuss various methods of reproduction in bacterial cell in detail. **10**
- Q.3 a) Discuss the structure and functions of nucleus in detail with the help of suitable diagrams. **10**
- b) What are the functions of cytoplasm in cell? List out major differences (at least five) between prokaryotic and eukaryotic cells. **10**
- Q.4 a) Discuss various methods of reproduction in algae in detail. **10**
- b) How staining of bacterial cell is done? Differentiate (at least five differences) between Gram-positive and Gram-negative bacteria. **10**

PART-B

- Q.5 a) Balance the following redox equation (all steps should be shown):
$$Cr(OH)_3 + IO_3^- \rightarrow I^- + CrO_4^{2-}$$
 (alkaline medium) **10**
- b) Calculate the oxidation state of highlighted atoms in the following compounds/ions:
- i) $\underline{B}H_3$
 - ii) $\underline{Cr} O_4^{2-}$
 - iii) \underline{H}_2
 - iv) \underline{H}_2S
 - v) $N_a\underline{H}SO_4$
- 2x5**

- Q.6 a) Name various types of chemical reactions. Discuss displacement and disproportionate reactions with suitable examples. **10**
- b) What do you mean by following terms, explain them with suitable examples and discuss their significance in biology?
- i) Buffers.
 - ii) Osmosis. **5x2**

Q.7 Write short notes on the following:

- a) Relative density.
- b) Humidity.
- c) Evaporation.
- d) Melting point. **5x4**

End Semester Examination, May 2017
B.Sc. (N&D) –First Semester
FUNDAMENGALS 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 What do you understand by adequate nutrition? Explain the signs and symptoms of good nutrition. **20**

PART-A

Q.2 Classify proteins. Explain the functions RDA dietary sources and deficiency problems related to proteins. **20**

Q.3 What are the functions of foods? Explain each function with suitable examples. **20**

Q.4 Write short notes on:

- a) Functions, RDA, dietary sources and deficiency problems related to Iron. **10**
- b) Explain the water balance in the body. **10**

PART-B

Q.5 What are the different methods of cooking? Explain in detail about dry and moist heat methods of cooking. **20**

Q.6 Write short notes on:

- a) Functional foods. **10**
- b) Microwave and solar cooking. **10**

Q.7 What do you mean by organic foods? Explain the advantages and disadvantages of vegetarianism. **20**

End Semester Examination, May 2017

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

BIOCHEMISTRY-I (BN&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 Briefly explain the following terms:

- Saturated fatty acids.
- Good and bad cholesterol.
- Digestion of carbohydrates.
- Anomers.
- Mitochondria.

4x5

PART-A

Q.2 a) Define Lipids. Classify them on the basis of their composition with proper examples of each class.

10

b) Write the biochemical role of proteins, lipids and carbohydrates.

10

Q.3 a) Draw the structures of the following:

i) Linoleic acid ii) Arachidonic acid iii) Glucose iv) Maltose iv) Oleic acid **10**

b) Which fatty acids are called saturated, unsaturated and why? Explain in tabular form their names, abbreviation and structures. **10**

Q.4 a) Which biomolecules is called building block of a cell and why? Explain its functional classification with proper examples. **10**

b) What are amino acids? Write general formula of amino acid. Also classify them on the basis of their R groups. Give proper examples and structure of any five amino acids. **10**

PART-B

Q.5 a) How proteins are synthesized lay a cell? Write the role of each cell organelle in the process of its formation. Support your answer with suitable diagrams. **10**

b) Write a detailed note on four level organizations of proteins. Support your answer with suitable diagrams. **10**

Q.6 How are vitamins important for our body? Write their classification on the basis of solubility. Explain the RDA, deficiency symptoms of vitamins A, E and D with their biochemical function. **20**

Q.7 a) Draw a well labeled diagram of Prokaryotic cell. Also write a detailed note on it with its morphology, features and examples. **10**

b) Draw the structure of the following:

i) Glycine.

ii) Phosphatidyl choline.

iii) Stearic acid.

iv) β -D-Galactose.

v) Sucrose.

10

End Semester Examination, May. 2017

B.Sc. (N&D) - 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 a) Describe factors affecting foot and nutrition
b) Describe causes and prevention of obesity.

10x2

PART-A

- Q.2 Write short notes on the following:

- a) Sesamoid bone
b) Aponeurosis
c) Adduction – Abduction
d) Anastomosis
e) Two functions of haemoglobin
f) Referred pain
g) Function of spleen
h) Osmosis
i) Function of mitochondria
j) Type of epiphysis

2x10

- Q.3 a) Define the cardiac cycle in detail.
b) Describe the structure of lungs and its function.

10
10

- Q.4 Describe the joint under following headings:

- a) Definition.
b) Classification.
c) Synovial joint.
d) Factors Maintaing the stability of joint.

20

PART-B

- Q.5 Write short notes on:

- a) Types and structure of muscles.
b) Difference between artery and vein.

10
10

- Q.6 a) Describe the mechanism of clotting.
b) Describe the mechanism and regulation of respiration.

10
10

- Q.7 Write short notes on:

- a) Passive transport.
b) Draw a structure of cell and label it.
c) Blood supply of long bones.
d) White blood cells.

5x4

End Semester Examination, May. 2017
B.Sc. (N&D) - First Semester
FOOD HYGIENE AND SANITATION (BN&D-105)

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 steps taken by the government in involving hygiene and sanitation practice in the life of people.

10

PART-A

Q.2 What are the personal hygiene and food handling habits followed in a food service establishment?

10

Q.3 How can one follow the hygiene principles in rural and urban areas in relation to food preparation.

10

Q.4 What is the quality of water and water supply uses in food industries?

10

PART-B

Q.5 Why is HACCP certification important for a food service organization? Justify with an example.

10

Q.6 What is the importance of cleaning technology?

10

Q.7 What are the methods for effective control of microorganisms.

10

End Semester Examination, May 2017

B.Sc. (N&D) - 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 risk factors involve during prenatal period? Discuss in detail. **10**

PART-A

Q.2 Explain APGAR scale. How it is used to analyze the condition of a new born? **10**

Q.3 Discuss any one theory that emphasis on the role of environment factors in development. **10**

Q.4 Enlist the principles of growth and development. Explain in detail. **10**

PART-B

Q.5 Discuss the alternate forms of parenthood during infancy. **10**

Q.6 Explain cognitive development during early and middle childhood period of development. **10**

Q.7 Explain the differences in the physical development of adolescent girl and adolescent boy. **10**

End Semester Examination, May 2017

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**. Each question carries equal marks.

- Q.1 a) What is Glycolysis? Explain all its steps.
b) How Gluconeogenesis is converting Pyruvate to Glucose? Explain. **10x2**

PART-A

- Q.2 How Glycogen is synthesized? Explain the whole mechanism in detail. Also mention what is Glycogen with its functions. **20**
- Q.3 Which cycle is called Hub of Metabolism and why? Explain all its steps. **20**
- Q.4 a) How proteins are transaminated and deaminated? Explain with suitable example. **10**
b) Which cycle detoxifies toxic ammonia and how? **10**

PART-B

- Q.5 How lipids are oxidized? Explain the activation, transportation and β -oxidation process in detail. **20**
- Q.6 a) What are Nucleic Acids? Explain why they are called brain of cell. Also draw the structures of Adenine and Cytosine. **10**
b) Draw the structures of:
i) Guanine
ii) Uracil. **5x2**
- Q.7 a) What are enzymes? Classify them on the basis of their functions. Give proper examples. **10**
b) What are various methods of enzyme action? Explain with a diagrams. **10**

End Semester Examination, May 2017
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**. Each question carries equal marks.

Q.1 What is the importance of dietary guideline? List the dietary goals and guideline throughout the life cycle. **20**

PART-A

Q.2 Write short notes on:

- a) Significance of growth monitoring. **10**
- b) Considerations while preparing complementary feeding. **10**

Q.3 Discuss the growth and development during:

- a) Childhood.
- b) Adolescence. **10x2**

Q.4 Discuss the importance of adequate nutrition during adulthood. Describe in detail, the energy and protein need of man and woman. **20**

PART-B

Q.5 Discuss the following terms:

- a) Lactational Amenorrhoea.
- b) Gestational Diabetes.
- c) FETAL Alcoholic syndrome.
- d) Osteoporosis.
- e) Placenta. **5x4**

Q.6 Describe the physiological changes which occur during pregnancy and highlight the complications which may arise during this period. **20**

Q.7 a) What are the physiological changes that accompany the aging process? **10**
b) Describe the physiology of Lactation in detail. **10**

End Semester Examination, May 2017
B.Sc. (N&D) –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**. Each question carries equal marks.

Q.1 Define Puberty. What controls its onset? **20**

PART-A

Q.2 Write short notes on following:
a) Structure and function of ovary.
b) Reflex arc.
c) Synapse.
d) Name and functions of hormones secreted from pituitary gland. **5x4**

Q.3 a) Structure of Nephrons and its type and function. **10**
b) Define light and accommodation reflex. **10**

Q.4 a) Explain the phases of menstruation cycle in detail. **10**
b) Define hypoxia; give characteristic features of different types of hypoxia. **10**

PART-B

Q.5 Write notes on following:
a) Describe the endocrine functions of testis; add a note on control testicular activity. **10**
b) Implantation and role of hormone involved. **10**

Q.6 a) Explain the sulci and gyri of frontal and temporal lobe of cerebrum. **10**
b) Define the motor and sensory aphasia. **10**

Q.7 Write short notes on **(any four)**:
a) Turner's syndrome.
b) Diabetes insipidus.
c) Effect of exercise on body fluids.
d) Renin – angiotensin system.
e) Sex difference. **5x4**

End Semester Examination, May 2017

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

PSYCHOLOGY(BN&D-206)

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 how the study of psychology will provide systematic knowledge of the foundations of human behavior. **10**

PART-A

Q.2 Define 'psychology'. Explain the various methods of studying behavior. **10**

Q.3 Explain in detail giving suitable examples for various eating disorders. **10**

Q.4 Write short notes on:
a) Work of psychologists.
b) Concepts of stress. **5x2**

PART-B

Q.5 Differentiate between 'directive' and 'non-directive counseling'. **10**

Q.6 Define 'personality'. Explain various methods of personality assessment. **10**

Q.7 Write short notes on:
a) Clinical interviewing.
b) Cognitive behavior theory. **5x2**

End Semester Examination, May 2017

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

FIRST AID AND NURSING(BN&D-207)

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 What is the first aid? Explain general principles of first aid. **10**

PART-A

Q.2 Define 'nursing'. Explain basic principles of nursing. **10**

Q.3 Explain in brief about bleeding and its control. **10**

Q.4 Explain the methods of giving nourishment. **10**

PART-B

Q.5 Write down the medico-legal aspects of emergency medical care. **10**

Q.6 Explain in detail about the first aid kit. **10**

Q.7 Write in detail about vital signs. **10**

End Semester Examination, May 2017

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

PATHOLOGY(BN&D-301)

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 'healing'. Explain healing of fracture in detail. **10**

PART-A

Q.2 Define 'disease'. Explain etiological factors of disease in detail. **10**

Q.3 Define 'chronic inflammation'. Explain the chronic inflammation in detail with predominance of cells at tissue injury. **10**

Q.4 Define 'necrosis'. Explain types of necrosis in detail. **10**

PART-B

Q.5 Explain the fate of the abscess in detail. **10**

Q.6 Explain hyperplasia in detail. **10**

Q.7 Define 'pathology'. Classify pathology in various types with their typical examples. Who is called "Father of modern pathology"? **10**

End Semester Examination, May 2017
B.Sc. (N&D) - Third Semester
THERAPEUTIC NUTRITION AND DIETETICS(BN&D-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 Explain the importance of therapeutic nutrition for hospitalized patients daily requirements. **20**

PART-A

Q.2 Discuss the therapeutic adaptation of the normal diet in detail. **20**

Q.3 Explain etiology and dietary treatment for acute hepatitis and gallstone in detail. **20**

Q.4 Discuss etiology and dietary treatment for hypertension and myocardial infarction. **20**

PART-B

Q.5 Discuss dietary symptoms and management for diabetes mellitus in detail. **20**

Q.6 Write down in detail the etiology and symptoms and management for eating disorders. **20**

Q.7 Explain nutrition in surgical condition pre and post-operative diet. **20**

End Semester Examination, May 2017
B.Sc. (N&D) - Third Semester
PROBLEMS IN HUMAN NUTRITION(BN&D-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 Explain the significance of assessment of nutritional status for different nutritional deficiencies. **20**

PART-A

Q.2 Discuss:

- a) Role of vitamin D in human body. **10**
- b) Symptoms, prevention and plan of action for vitamin A deficiency. **10**

Q.3 Explain the etiology, classification and complication of Protein Energy Malnutrition in detail. **20**

Q.4 What do you understand by dietary survey? Explain in detail. **20**

PART-B

Q.5 Explain the role of Iron, Vitamin B6 and Vitamin B12 in Anemia. Also discuss the dietary sources for the same. **20**

Q.6 Write short notes on:

- a) Etiology and dietary sources for iodine deficiency disorders. **10**
- b) Toxicity of excess iodine. **10**

Q.7 Discuss fluorosis in detail. **20**

End Semester Examination, May 2017
B. Sc. (Nutrition and Dietetics) – Third Semester
NUTRITION FOR HEALTH, FITNESS AND SPORTS (BN&D-304)

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 role of nutrition in health and fitness. **10**

PART-A

Q.2 Explain the components of specific fitness giving suitable examples. **10**

Q.3 Discuss the specific characteristics of ectomorph, mesomorph and endomorph. **10**

Q.4 Explain the importance of carbohydrate loading. **10**

PART-B

Q.5 Write a detail note on dietary supplements. **10**

Q.6 Discuss 'Meditation' as an alternative system for health and fitness. **10**

Q.7 Explain the three 'gunas' of food with suitable examples. **10**

End Semester Examination, May 2017
B. Sc. (Nutrition and Dietetics) – Third Semester
DYNAMICS OF COMMUNICATION AND EXTENSION EDUCATION
(BN&D-305)

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 "Study of communication and extension education helps the students to understand the concept of nutrition and dietetics in community development". Justify the statement. **10**

PART-A

Q.2 Define 'Communication'. Explain in detail elements of communication process and their characteristics. **10**

Q.3 Write short notes on:
a) Communicator-receiver relationship.
b) Phases of demonstration. **2×5**

Q.4 Explain with suitable examples various communication and extension approaches. **10**

PART-B

Q.5 What is extension education? Explain the principles of extension education. **10**

Q.6 Explain citing suitable examples various objectives behind extension education programme. **10**

Q.7 Write short notes on:
a) Application of extension education in nutrition and dietetics.
b) Qualities of an extension worker. **5×2**

End Semester Examination, May 2017
B. Sc. (Nutrition and Dietetics) – Third Semester
DIET AND NUTRITIONAL COUNSELLING (BN&D-306)

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 Nutrition counselling is important for the patient. How it can help to patients. **10**

PART-A

Q.2 Define the role of nutrition counsellor with example. **10**

Q.3 What are the steps required for behavior modification? **10**

Q.4 Define the steps required for nutrition counselling. **10**

PART-B

Q.5 Describe the role of computers in the field of nutrition and dietetics. **10**

Q.6 Explain the different application used by dietitian. Describe any one in detail. **10**

Q.7 What is teaching aids? Explain different types of teaching aids. **10**

End Semester Examination, May 2017

B.Sc. (N&D) –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 How does health system in India works? How does it influence the quality of life of the individual in the community? **20**

PART-A

Q.2 Explain the programme planning process with suitable examples. **20**

Q.3 What do you understand by extension education and how the community organizations help in the extension education. **20**

Q.4 What do you understand by national health policy and explain how effective is 20-point programme in health policy making? **20**

PART-B

Q.5 Explain the national food security in detail. **20**

Q.6 Explain the role of national and international organization in the field of community nutrition. Explain any two organizations in detail. **20**

Q.7 What are the factors related to diet related behavior? **20**

End Semester Examination, May 2017

B.Sc. (N&D)–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 What are the factors that affect the growth of micro-organisms in food? Explain in detail. **20**

PART-A

Q.2 Explain the growth cycle (curve) of bacteria. **20**

Q.3 Write short notes on:
a) Single cell protein.
b) Genetically engineered organisms. **10×2**

Q.4 Discuss the health benefits and processing on the following:
a) Cheese.
b) Fermented milk. **10×2**

PART-B

Q.5 Discuss the various food preservation methods in detail. **20**

Q.6 Explain the following:
a) Spoilage of milk.
b) Spoilage of fruits and vegetables. **10×2**

Q.7 Differentiate between:
a) Prokaryotic cell and Eukaryotic cell.
b) Intrinsic and Extrinsic factors. **10x2**

End Semester Examination, May 2017
B.Sc. (N&D)–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 the development of food service institutions in India. **20**

PART-A

Q.2 Explain functions and tools of management. **20**

Q.3 Discuss kitchen spaces and storage spaces, in brief. **20**

Q.4 Write short notes on:

- a) Purchasing functions.
- b) Benefits of Inventory.
- c) Planning Menus.
- d) Vending systems.

5×4

PART-B

Q.5 Discuss table appointment, table setting, forms of service and table decoration, in brief. **20**

Q.6 Discuss principles of employee benefits, in brief. **20**

Q.7 Explain the selection of equipment used in an institutional kitchen. **20**

End Semester Examination, May 2017
B.Sc. (N&D)–Fourth Semester
ENZYMES IN FOOD PROCESSING(BN&D-405)

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 role of the following:
a) Pectinases in the fruit juice industry.
b) Non-starch polysaccharides in flour for bread making. **5×2**

PART-A

- Q.2 Give details of the industrial production of starch. **10**
- Q.3 What do you understand by enzymatic browning of fruits and vegetables? Mention one method to arrest this process. **10**
- Q.4 What is HFCS? How is it industrially prepared? **10**

PART-B

- Q.5 How does malt flour and malt extract improve quality of flour for baking bread? **10**
- Q.6 Discuss the role of rennet and other proteases in the dairy industry. **10**
- Q.7 What is the role of malting barley for making beer? Discuss the process of mashing in beer making. **10**

End Semester Examination, May 2017

B.Sc. (N&D)–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 Explain the history of culinary as an Art and Science. **10**

PART-A

Q.2 Define the following culinary terms:

- a) AU-gratin.
- b) Blanch.
- c) Cut and Fold.
- d) Marinade.
- e) Larding.

Q.3 Explain **any two** methods of cooking:

- a) Broiling.
- b) Poaching.
- c) Roasting.

5×2

Q.4 Discuss the regional and religious influences on Indian cuisines. **10**

PART-B

Q.5 a) Define:

- i) Recipe
- ii) Yield Adjustment.

b) Explain:

- i) Thermal conductivity.
- ii) Freezing of Food.

2½×4

Q.6 a) Convert the following:

- i) 1 Oz = g
- ii) 16T = cup
- iii) 2 quart = gallon
- iv) 1C = ml
- v) 1T = ml

1×5

b) What are the safety procedures adopted for handling equipments. **5**

Q.7 a) Recipe of Rice Kheer:

<u>Ingredients</u>	<u>Amounts</u>
Rice	2 kgs
Milk	40 lts
Sugar	4 kgs
Raisins	1 kg
Almonds	1 kg

Yield - 200

Each Portion - 1 cup

i) The Rice Kheer recipe yields 200 servings. Adjust the recipe to serve 150. **5**

ii) The recipe for Rice Kheer given above calls for 200 servings of Rice Kheer at 1 cupeach. Carry out the serving size adjustment at $\frac{3}{4}$ cup.

- b) A corporate has an industrial canteen catering to 800 employees which provides snack, beverage and lunch for `40 per person per day. Calculate the food cost, labour cost, maintenance cost and profit.

End Semester Examination, May 2017
B.Sc. (N&D) - First Semester
HERBS AND HOME REMEDIES(BN&D-GE-01)

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 Why have you selected herbs and home remedies as a subject to study? **10**

PART-A

Q.2 Give the classification of herbs based on their active constituents. Also give suitable examples. **10**

Q.3 Discuss the role of herbs in day – to – day life. **10**

Q.4 Write in detail about the uses and importance of *Zingiber Officinalis* as a medicinal herb. **10**

PART-B

Q.5 Discuss the beneficial use of herbs as a food supplement. **10**

Q.6 Write ten home remedies for skin care. **10**

Q.7 Write five home remedies for each:

a) Headache

b) Eye Infection

5x2

End Semester Examination, May. 2017
B.Sc. (N&D) - First Semester
FOOD 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 Explain the relationship between Indian foods and food beliefs.
10

PART-A

Q.2 Discuss Satvik foods, Rajasic foods and Tauasic foods.
10

Q.3 What do you understand by Indian food ethos and Indian ethnic cuisines?
10

Q.4 Write a short note on the following:
a) Foods in Ayurveda.
b) Food consciousness.

5
5

PART-B

Q.5 Explain various traditional food processing technologies.
10

Q.6 Discuss nutritional / medicinal properties of foods of Indian origin.
10

Q.7 Write a short note on the following:
a) Spiritual health.
b) Food and culture.

5
5

End Semester Examination, May 2017
B.Sc. (N&D) - Second Semester
FAMILY MEAL MANAGEMENT(BN&D-GE-03)

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 a) Define balanced diet.
b) For adults, how many grams of protein are needed per kilogram body weight?
c) What are galactogogues?
d) Name two nutritional problems that are common among adolescents.
e) What is Pica? **2x5**

PART-A

- Q.2 Describe various food groups. **10**
- Q.3 Write short notes on:
a) Food Pyramid.
b) Food Fadism. **5x2**
- Q.4 Explain Indian meal patterns. **10**

PART-B

- Q.5 What is weaning? Write points to be considered in introducing weaning foods. **10**
- Q.6 Explain nutritional management during pregnancy. **10**
- Q.7 Describe nutritional management for an elderly person. **10**

End Semester Examination, May 2017
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**. Each question carries equal marks.

Q.1 What are the strategies to improve maternal and child nutrition in India? **10**

PART-A

Q.2 Explain the factor affecting outcomes during pregnancy. **10**

Q.3 Explain the physiological changes during lactation. **10**

Q.4 Explain the fertilization, ART and role of ART during pregnancy. **10**

PART-B

Q.5 Explain the nutrition requirement during preschooler. **10**

Q.6 Why breast milk is important for neonate and what are the components in first secretion of breast milk. **10**

Q.7 Define the role of BPNI in promotion of breast feeding in India. **10**

End Semester Examination, May 2017

B. Sc. (N& D) – 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**. Each question carries equal marks.

Q.1 "Food labels can help you make personal food choices". Comment on the statement. **10**

PART-A

Q.2 What nutritional information must be present on food pack? Explain with example. **10**

Q.3 What information should be provided on the label for hypersensitivity causing ingredients? **10**

Q.4 Write short notes on:

a) Nutritional claim.

b) PHD.

5×2

PART-B

Q.5 Discuss the general principles for making claims on pre-packaged foods. **10**

Q.6 Explain the claims related to dietary guidelines or healthy diets. **10**

Q.7 Write short notes on:

a) Net weight.

b) Labeling symbols.

5×2

End Semester Examination, May 2017
B.Sc. (N&D)–Fourth Semester
COMMUNITY DEVELOPMENT PROJECT(BN&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 Explain how essential elements of community development help in developing community? **10**

PART-A

Q.2 Discuss the principles of community development programme. **10**

Q.3 Explain community development process in detail. **10**

Q.4 Discuss the following:
a) Types of community development programme.
b) Factors behind community development. **5×2**

PART-B

Q.5 Explain the importance and types of Community Need Assessment. **10**

Q.6 Discuss Integrated Rural Development Programme in detail. **10**

Q.7 Discuss the following programme:
a) Training of Rural Youth for Self-employment.
b) Rural Drinking Water programme. **5×2**

End Semester Examination, May 2017
B.Sc. (N&D)–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 Write short notes on:
- Angel investor vs venture capitalist.
 - Customer relations.
 - Need of entrepreneurship.
 - SMART Goals.
 - Creativity and Innovations.

2×5

PART-A

- Q.2 Explain the concept of entrepreneurship, its function and put forth your point of views about various myths prevailing about entrepreneurship profession. **10**
- Q.3 What is a process of an entrepreneurship? Describe various advantages and disadvantages of being an entrepreneur. **10**
- Q.4 What are the elements of business opportunity? How one should explore and select the right opportunity? **10**

PART-B

- Q.5 Describe the various types of Business Entities that Exist? What are the formalities for starting any business? **10**
- Q.6 For any startup venture, what sort of marketing and sales strategy, branding and promotional activities will be suitable? **10**
- Q.7 Why any business gets failed? Analyze its reasons and suggest the strategies for its turnaround. **10**

End Semester Examination, May 2017

B.Sc. (N&D) - First Semester
PHYSIOLOGY-I(BND-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 Write the composition and functions of saliva. **10**
- Q.2 Explain the digestion of CHO, proteins and fats in human digestive system. **10**
- Q.3 Draw and explain the microscopic structure of nephron. **10**
- Q.4 Describe the transport of oxygen in the body. **10**

PART-B

- Q.5 Give the ABO blood group system. **5**
- Q.6 Describe actions of estrogen. **5**
- Q.7 What are the factors which affect to arterial blood pressure? **5**
- Q.8 Write a short note on 'pituitary gland'. **5**
- Q.9 Define diabetes mellitus. Discuss clinical features of diabetes mellitus. **5**
- Q.10 Describe the functions of the thyroid gland. **5**
- Q.11 Describe functions of hypothalamus. **5**

End Semester Examination, May 2017
B.Sc. (N&D) –First Semester
FUNDAMENTALS OF BIOCHEMISTRY(BND-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 Write notes on:
- a) Vitamin A deficiency **3**
 - b) Hypervitaminosis A **2**
 - c) Biochemical role of zinc **5**
- Q.2 Classify proteins on the basis of their structures. **10**
- Q.3 Discuss the biochemical role of calcium in detail. **10**
- Q.4 Discuss in detail the biological importance of monosaccharides. **10**

PART-B

- Q.5 How proteins are hydrolyzed? **5**
- Q.6 Write down various properties of fats and lipids. **5**
- Q.7 Explain the classification of lipids with the help of structures. **5**
- Q.8 Give structure of:
- a) Sucrose.
 - b) Maltose. **5**
- Q.9 Write a note on goals and objectives of biochemistry. **5**
- Q.10 List down the differences between reducing and non-reducing sugars. **5**
- Q.11 Write a short note on phospholipids. **5**

End Semester Examination, May 2017
B.Sc. (N & D)- Second Semester
NUTRITIONAL BIOCHEMISTRY(BND-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 Draw a labeled diagram of Krebs's cycle and explain in detail how many ATPs are produced in this cycle. **10**
- Q.2 Explain glycolysis. State in detail the steps of cycle. Calculate number of ATP produced in cycle. **10**
- Q.3 Explain urea cycle in detail. **10**
- Q.4 Discuss biochemical importance of cholesterol in body. **10**

PART-B

- Q.5 Write a shot note on genetic code. **5**
- Q.6 Give account of total number of ATP produced during Krebs's cycle. **5**
- Q.7 Discuss the main points of difference between DNA and RNA. **5**
- Q.8 Discuss viscosity and surface tension in brief. **5**
- Q.9 What are Ketone bodies and explain their importance in brief? **5**
- Q.10 Define hormones. Explain insulin in brief. **5**
- Q.11 Explain in brief thyroid hormone. **5**

End Semester Examination, May 2017
B.Sc. (N&D) - Third Semester
THERAPEUTIC NUTRITION AND DIETETICS(BND-301)

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 State the principles involved in the dietary management for typhoid and tuberculosis. Plan a diet for a male adult admitted in hospital for treatment of tuberculosis. **10**
- Q.2 Differentiate between Type-I and Type-II diabetes. Also discuss etiology and dietary management for diabetes mellitus. **10**
- Q.3 Discuss eating disorders and their types in detail. **10**
- Q.4 What nutritional support is required in pre-and post-operative situations? **10**

PART-B

- Q.5 Write a short note on 'nutritional assessment'. **5**
- Q.6 Describe dietary management for atherosclerosis in brief. **5**
- Q.7 What is a kidney stone? Discuss the etiology for kidney stones. **5**
- Q.8 What is acute renal failure? Explain its causes and treatment. **5**
- Q.9 Explain myocardial infarction in brief. **5**
- Q.10 What are the dietary guidelines for constipation? **5**
- Q.11 Write a short note on 'nutritional assessment'. **5**

End Semester Examination, May 2017
B.Sc. (N&D) - Third Semester
PROBLEMS IN HUMAN NUTRITION(BND-302)

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 down the symptoms of vitamin A deficiency and elaborate on the national programme to combat vitamin A deficiency. **10**
- Q.2 Explain the symptoms of fluorosis in detail. **10**
- Q.3 Write in detail about the prevention of iron deficiency anemia. **10**
- Q.4 Explain the etiology of PEM in detail. **10**

PART-B

Write short notes on:

- Q.5 Symptoms of PEM. **5**
- Q.6 Symptoms of lathyrism'. **5**
- Q.7 Etiology of fluorosis. **5**
- Q.8 Sources of iodine and its importance. **5**
- Q.9 HIV infection. **5**
- Q.10 National IDD programme. **5**
- Q.11 Briefly discuss etiology and symptoms of iodine deficiency disorder. **5**

End Semester Examination, May 2017
B.Sc. (N&D) - Fourth Semester
FOOD PROCESSING AND TECHNOLOGY (BND-402)

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 are the agents causing spoilage of food grains? Also explain method of their control. **10**
- Q.2 What do you know about the processing in dairy industry? Explain. **10**
- Q.3 What is operation flood? Discuss all the phases of operation flood in detail. **10**
- Q.4 Explain the various methods of oil extraction from oilseeds. **10**

PART-B

- Q.5 Explain the steps involved in cheese manufacturing and ripening. **5**
- Q.6 Differentiate between 'winterization' and 'deodorization'. **5**
- Q.7 What are different methods employed in drying of cereals? **5**
- Q.8 'NDDDB formulated the project for operation flood'. Justify. **5**
- Q.9 Write a note upon milk products and their utilization. **5**
- Q.10 How are instant cooking legumes prepared? **5**
- Q.11 Write short notes on **(any two)**:
- a) Clarification of oil.
 - b) Randomization and interesterification.
 - c) Winterization.
- 2½x2**

End Semester Examination, May 2017

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

FOOD MICROBIOLOGY (BND-501)

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 different phases of bacteria through growth curve. **10**
- Q.2 Define 'food borne diseases'. Explain about any two food borne diseases. **10**
- Q.3 Explain the principles of hygiene in relation to production of food. **10**
- Q.4 Discuss the factors responsible for the food spoilage. **10**

PART-B

- Q.5 What do you understand by salmonellosis? Explain briefly. **5**
- Q.6 Discuss about any one 'food control agency'. **5**
- Q.7 Write a note on any two food preservation methods. **5**
- Q.8 "Aflatoxins are toxic metabolites produced by fungi on foods". Justify the statement. **5**
- Q.9 Why it is important to maintain hygiene during food production? **5**
- Q.10 Briefly discuss the reproduction of fungi (yeast) by fission. **5**
- Q.11 Write short notes on:
a) Molds.
b) Microbiology of water. **5**

End Semester Examination, May, 2017
B.Sc. (N&D) - Fifth Semester
STATISTICS AND RESEARCH METHODOLOGY (BND-502)

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 do you mean by sampling? Explain probability sampling, in detail.
10
- Q.2 Distinguish between primary and secondary data. Describe the methods of secondary data collection.
10
- Q.3 Briefly describe the different steps involved in research process.
10
- Q.4 Calculate median and mode for the following distribution:

Production / Day in tons	No. of days
20 – 30	7
30 – 40	14
40 – 50	22
50 – 60	10
60 – 70	7

10

PART-B

- Q.5 Discuss survey method of research with suitable example. **5**
- Q.6 Discuss the advantages and disadvantages of mean. **5**
- Q.7 Write the difference between Questionnaire and Schedule. **5**
- Q.8 Explain any two measuring scale, in detail. **5**
- Q.9 Explain the good characteristics of research tool. **5**
- Q.10 Write short notes on following:
a) Interview method.
b) Observational method. **5**
- Q.11 Explain the non probability sampling, in detail. **5**

End Semester Examination, May 2017

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

FOOD SCIENCE (BND-601)

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 Discuss the effects of heat, acid and enzyme on milk. **10**
- Q.2 What are the different types of sensory tests? **10**
- Q.3 Explain the effects of moist heat on cereals. **10**
- Q.4 Explain the process of enzymatic and non-enzymatic browning in fruits. **10**

PART-B

- Q.5 What is crystallization? Explain factors affecting it. **5**
- Q.6 Fill in the blanks:
a) The standardized milk contains _____ fat content and _____ solids not fat.
b) Neurotoxin responsible for Lathyrism is _____.
c) Smoking point is _____.
d) pH of milk is _____.
e) Pyrolysis is _____. **1x5**
- Q.7 Explain **any two**:
a) Rancidity.
b) Maillard reaction.
c) Caramelization. **2½x2**
- Q.8 What are the types of pigment present in vegetables? **5**
- Q.9 Explain the role of egg in cookery. **5**
- Q.10 Describe the role of fat and oil in cookery. **5**
- Q.11 Explain the structure and nutritive value of cereal grain. **5**

End Semester Examination, May 2017
B.Sc. (N&D) - Sixth Semester
INSTITUTIONAL FOOD ADMINISTRATION(BND-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 Discuss kitchen space in food service institutions in detail. **10**
- Q.2 What do you understand by the term 'accounting'? Explain the methods of accounting in detail. **10**
- Q.3 What do you mean by 'Standard recipes'? Explain the different phases of recipe standardization in detail. **10**
- Q.4 Describe furnishing of dining room in detail. **10**

PART-B

- Q.5 Explain the development of food service institutions in detail. **5**
- Q.6 Discuss the forms of service with example. **5**
- Q.7 Discuss different laws applicable to the food service industry in brief. **5**
- Q.8 Explain the selection and buying of fish. **5**
- Q.9 Describe work simplification in detail. **5**
- Q.10 Discuss table setting with a suitable diagram. **5**
- Q.11 Explain the methods of pricing. **5**

End Semester Examination, May 2017

Bachelor of Physiotherapy–First Semester

ANATOMY-I(BPT-101)

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**. Each questions carry equal marks.

Q.1 Describe the course, branches and applied anatomy of ulnar nerve in detail. **20**

PART-A

Q.2 Write short notes on the following:

- Differentiate between right and left lungs.
- Muscular spaces around scapular region.
- Rotator cuff.
- Carpal tunnel syndrome.

5x4

Q.3 Describe briefly:

- Inguinal canal.
- Cubital fossa.
- Anatomical sniff box.
- Cutaneous innervations of hand.

5x4

Q.4 Describe hip joint under following headings:

- Type of joint.
- Articular surfaces of bones.
- Capsule and ligaments relations.
- Movements and muscles producing them.
- Applied anatomy.

4x5

PART-B

Q.5 Describe briefly:

- Types of epiphysis.
- Femoral sheath.
- Menisci of knee joint.
- Arches of foot.

5x4

Q.6 Describe briefly:

- Boundaries and content of axilla.
- Boundaries of auscultation triangle.
- Extensor retinaculum of leg.
- Adductor canal.

5x4

Q.7 a) Describe origin, insertion, nerve supply and action of quadriceps femoris in detail. **10**
b) Name the hamstrings of thigh, mention the origin, insertion, nerve supply and action of semimembranosus in detail. **10**

End Semester Examination, May 2017

Bachelor of Physiotherapy–First Semester

PHYSIOLOGY-I(BPT-102)

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**. Each question carries equal marks.

- Q.1
- Write about the endocytosis.
 - State two functions of cell.
 - What is mastication and deglutition?
 - Classify muscle with their function.
 - Name four intact factors of blood coagulation.
 - State the functions of blood.
 - What is EDV, ESV, E Fraction and MAP?
 - What is compensatory pause?
 - Name the events of ventricular systole?
 - State the difference between veins and arteries?

2x10

PART-A

- Q.2 Describe about the active and passive transport. What is action potential and how the propagation takes place in nerve trunks. **20**
- Q.3 Describe the structure of stomach and also write about the gastric secretion and function of it. Describe the functions of liver. **20**
- Q.4 Describe the properties of skeletal muscle with special reference to mechanical and chemical changes. **20**

PART-B

- Q.5 Describe the formation of RBC and fate of same. What is the abnormality found in RBC? Classify the RBC. State the synthesis of hemoglobin. **20**
- Q.6 Describe the cardiac muscle action potential phenomenon. What is ECG and what are the significance of each and all curve of the ECG? What is all-or-none-law? **20**
- Q.7 How cardiac output alters during exercise and postural change? What are the factors that alter the blood pressure? How heart rates are regulated by nervous innervation? **20**

End Semester Examination, May 2017

Bachelor of Physiotherapy–First Semester

BIOCHEMISTRY(BPT-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 questions carry equal marks.

Q.1 Explain the following:

- a) Phosphorylation at the substrate level.
- b) Enzymes.
- c) Iso-electric pH.
- d) Competitive inhibition.
- e) Gluconeogenesis.
- f) MUFA.
- g) Glycogenolysis.
- h) Golgi apparatus.
- i) Aerobic and anaerobic glycolysis.
- j) Protein energy malnutrition.

2x10

PART-A

- Q.2 a) Explain how glucose peroxidase and glutathione protect erythrocytes from hemolysis. **10**
- b) Calculate the total number of ATPs produced when one mole of glucose is oxidised completely. **10**

- Q.3 a) Which biomolecule is called building blocks of our body tissues and why? Explain their functions. Also, classify them on the basis of their structure, functions and importance. **12**
- b) Give the mechanism of enzyme action. **8**

- Q.4 a) How are micronutrients important for our body? Write the role, RDA and deficiency disorders of any five vitamins. **10**
- b) What are the functions of calcium in the body? **10**

PART-B

- Q.5 a) What is the function of (a) Amylase (b) Creatine phosphokinase? **10**
- b) What are the causes and symptoms of gout? **10**

- Q.6 Give the reactions of citric acid cycle with enzymes and co-enzymes **20**

Q.7 Write short notes on the following:

- a) Lipoproteins.
- b) Iodine deficiency.
- c) Phospholipids.
- d) Liver function tests.

5x4

End Semester Examination, May 2017

Bachelor of Physiotherapy–First Semester

SOCIOLOGY(BPT-104A / BPT-104)

Time: 2hrs

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**. Each questions carry equal marks.

Q.1 Write short notes on the following:

- a) What are different types of social deviance?
- b) Enumerate factors of social change.
- c) Define 'social worker'.
- d) Define 'primary and secondary group'.
- e) Write about social legislation for disabled.

2x5

PART-A

Q.2 Discuss relationship of sociology with different sciences.

10

Q.3 Define 'socialization'. Write about agencies of socialization.

10

Q.4 What is family and its function? Write about nuclear and joint family in detail.

10

PART-B

Q.5 Define 'social control'. What is the role of folkways, mores, customs, sanctions, religion and education in social control?

10

Q.6 What is beggary and population explosion? Discuss causes, effects on health and its remedies.

10

Q.7 What are alcoholism and unemployment? Discuss their effects on health and remedies.

10

End Semester Examination, May 2017
Bachelor of Physiotherapy–First Semester
FUNDAMENTALS OF PHYSIOTHERAPY(BPT-105)

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**. Each questions carry equal marks.

- Q.1 Write short notes on the following:
- What is fuse?
 - What are conductors and insulators?
 - Describe composition of force.
 - Discuss Hooke's law.
 - Define 'pulley'. Enumerate type of pulley.
 - Explain centre of gravity.
 - What are synergists? Give example.
 - Give the utility of magnetron.
 - Define 'scattering of ultrasound'.
 - Explain reverse piezoelectric effect.

2x10

PART-A

- Q.2 a) Define axis and planes and classify them. Explain different movements around these axis and planes. **10**
b) Classify types of muscle contractions and explain with the help of an examples. **10**
- Q.3 a) What is lever? Classify and give examples of lever in human body and in daily use. **10**
b) Define 'equilibrium'. Enumerate the factors that affects the equilibrium. **10**
- Q.4 What is hydrodynamics? Give its principles in details with suitable examples. **20**

PART-B

- Q.5 a) What is transformer? Discuss the types of transformers. **10**
b) Explain Ohm's law. Discuss condenser in series and in parallel. **10**
- Q.6 What is electro-magnetic spectrum? Describe the use and application of each radiation. **20**
- Q.7 Define 'electric shock'. What are the precautions need to be taken in the department to prevent electric shock and management of electric shock. **20**

End Semester Examination, May 2017
Bachelor of Physiotherapy–First Semester
FUNDAMENTALS AND PHILOSOPHY OF YOGA (BPT-106)

Time: 3 hrs

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**. Each questions carry equal marks.*

- Q.1 Answer the following in brief:
- a) Give various streams of Yoga.
 - b) Meaning of Hatha Yoga.
 - c) Concept of Yoga according to Upanishads.
 - d) Aim of Yoga in modern era.
 - e) What are the various misconceptions related to Yoga? **2x5**

PART-A

- Q.2 What do you understand by Yoga? Throw light on psychological and mythological concepts of Yoga. **10**
- Q.3 Discuss the historical aspect of Yoga through ages. **10**
- Q.4 Discuss the aim, objectives, benefits and prerequisites of Yoga. **10**

PART-B

- Q.5 Discuss briefly the four paths of Yoga. **10**
- Q.6 Explain the philosophical foundation of Yoga. **10**
- Q.7 Discuss the inter-relationship between Bhakti Yoga and Karma Yoga. **10**

End Semester Examination, May 2017

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**. Each question carries equal marks.

Q.1 Fill in the blanks:

- a) _____ is the nerve which is arising from posterior surface of brainstem.
- b) Lateral Rectus is supplied by _____ nerve.
- c) Lower tapering end of the spinal cord is _____.
- d) Third ventricle communicates with fourth ventricle by _____.
- e) Vertebral artery is a branch of _____.
- f) Epithelium of urinary bladder is _____.
- g) The type of joint that is distinguished by having a fluid-filled joint cavity is a _____ joint.
- h) The stomach is located in _____ of abdomen.
- i) Collection of cell body of neuron outside the central nervous system is _____.
- j) All of muscle of the tongue are supplied by _____ nerve, except _____ which is supplied by _____ nerve. **2x10**

PART-A

Q.2 Write short notes on:

- a) Krukenferg Tumor.
- b) Syntrome of Wallenberg.
- c) Circle of willis.
- d) Adrenal gland.

5x4

Q.3 Describe the cerebrum under following headings:

- a) Borders and surfaces.
- b) Lobes and poles.
- c) Sulci and gyri on supero-lateral surface.
- d) Functional areas of temporal and frontal lobe.
- e) Applied (clinical anatomy).

4x5

Q.4 a) Describe the fiber types, nuclei and distribution of all cranial nerves. **10**

b) Write a short note on nuclei of hypothalamus with function and clinical anatomy'. **10**

PART-B

Q.5 Write in detail about parts of the urinary bladder with nerve supply and its clinical anatomy. **20**

Q.6 Write short notes on:

- a) Turner Syndrome.
- b) Spermatogenesis.
- c) Blood brain barrier.
- d) Thyroid gland.

4x5

Q.7 Write short notes on:

- a) Lateral wall of nose.

b) Congenital diaphragm.

10x2

End Semester Examination, May 2017
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**. Each question carries equal marks.

- Q.1
- a) Name the 2nd-3rd and 3rd-4th ventricle connection name.
 - b) State the significance of EEG.
 - c) Name the heidi of supha optic pigeons.
 - d) Which cranial nerves are responsible for carrying esophagus, trachea and pharynx pain?
 - e) Name one pyramidal and extra-pyramidal tracts.
 - f) What is the difference between occlusion and subliminal fringe?
 - g) Name a surfactant.
 - h) Write the different part of Renal tubules.
 - i) Name some local hormone which are produced in blood and tissues?
 - j) Define 'chyne-stokes and biot's breathing'. **2×10**

PART-A

- Q.2 With detail structure discuss the gate-control theory and analgesic theory of pain. Give at least four detailed function of hypothalamus. **20**
- Q.3 Write a short notes on EEG and CSF and discuss the properties of reflex actions. **20**
- Q.4 Discuss with details of urine formation? Write about micturition reflex. **20**

PART-B

- Q.5 Discuss in details of mechanics of breathing. Write the significance of pulmonary function test. What is hypoxia and what are the different types of existed? **20**
- Q.6 Write about the mechanism of action of protein and steroidal hormone. Discuss the parathyroidism and briefly discuss about physiology of bone. **20**
- Q.7 Give a detail introduction of menstrual cycle describing ovarian, uterine changes and also regulation and applied physiology related to this topic. **20**

End Semester Examination, May 2017

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**. Each question carries equal marks.

Q.1 Answer the following:

- a) Classify currents.
- b) What is motor unit?
- c) What is medium frequency current?
- d) Classify nerves.
- e) Define hyperpolarization.
- f) What is beat frequency?
- g) Explain chronaxie and Rheobase.
- h) What is NCV?
- i) What is IONTOHYDRORINCSIS?
- j) What is Acupuncture TENS?

2×10

PART-A

- Q.2 a) Explain interrupted direct current. Also explain therapeutic effect of IDC. **10**
b) What is iontophoresis? Explain mechanism and therapeutic effects for iontophoresis. **10**
- Q.3 a) Explain FARDIAC type of current along with its physiological effects. **10**
b) Explain technique for FARDIAC foot bath and FARDIAC under pressure. **10**
- Q.4 Define IFT. Also explain physical principles and method of application and physiological effect of IFT. **20**

PART-B

- Q.5 a) Explain physiology of pain and pain modulation in detail. **10**
b) What is TENS? What are different forms of TENS and uses for TENS? **10**
- Q.6 a) Explain electromyography. **10**
b) What are SD curve? Explain SD curves for Denervated, Innervated and partially innervated nerve fibre? **10**
- Q.7 a) Explain nerve transmission and nerve action potential in detail. **10**
b) Explain seddon classification for nerve lesion. What is Wallerian degeneration and retrograde degeneration? **10**

End Semester Examination, May 2017

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**. Each question carries equal marks.

Q.1 Attempt all questions:

- a) Use of theraband.
- b) Define 'DOMS'.
- c) What is PRE?
- d) Define 'open and closed chain exercises'.
- e) Enumerate determinants of resistance exercises.
- f) What are overload and SAID principles?
- g) Define 'flexibility and contracture'.
- h) What is ober's test?
- i) What is MMST?
- j) How will you grade five isolating gluteus maximus?

2×10

PART-A

Q.2 How will you check strength for latissimusdorsi, triceps, Sartorius and tibialisAnterior? **20**

Q.3 Define strength, power and endurance. Explain in detail different types of resistance exercises. **20**

Q.4 a) What is exercise therapy? Discuss its AIM. **10**
b) Explain the principles of passive movements. **10**

PART-B

Q.5 What are free exercises? Discuss the classification, techniques and uses of free exercises. **20**

Q.6 Define 'goniometry'. How to evaluate the range of motion for trunk and neck muscles? **20**

Q.7 Differentiate between 'manual' and 'mechanical exercises'. Explain the procedure to increase elbow flexors and extensors strength using manual resistance. **20**

End Semester Examination, May 2017

Bachelor of Physiotherapy– Second Semester

ENVIRONMENTAL STUDIES (BPT-205)

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 **any five** of the following:

- a) Natural Resources.
- b) Ecosystem.
- c) Environmental studies.
- d) Air Pollution.
- e) HIV/AIDS
- f) Biodiversity.

2×5

PART-A

Q.2 What are called as renewable and non-renewable resources? How natural resources are beneficial to the mankind? Give proper examples.

10

Q.3 What is the concept of ecosystem? What are its major components? Explain in detail the forest ecosystem.

10

Q.4 How environmental pollution is caused? What are its effects on mankind? How can we control it?

10

PART-B

Q.5 What is the role of human is causing water pollution? How can we control it?

10

Q.6 How human population is dangerous to future generations? Write any ten effects and control measures.

10

Q.7 What is the importance of education in older to provide a better environment to the people?

10

End Semester Examination, May 2017

Bachelor of Physiotherapy–First Semester

PHARMACOLOGY(BPT-301)

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**. Each questions carry equal marks.

- Q.1 Write short notes on:
- Pinocytosis.
 - Active transport.
 - Subcutaneous injection.
 - Routes of drug excretion.
 - Tachyphycaxis.
 - Synerism.
 - Advantages of ETHER.
 - Adverse reactions of Morphine.
 - Transmitters in parasympathetic and sympathetic system.
 - Disinfectant and antiseptic.

2x10

PART-A

- Q.2 Write an explanatory note on 'Diuretics'. **20**
- Q.3 Explain drugs with classification in Parkinsonism. **20**
- Q.4 Write a note on 'drug abuse and dependence'. **20**

PART-B

- Q.5 Write the classification of hypnotics and sedatives. Explain any one drug in detail. **20**
- Q.6 Write a note on 'local anesthetics' in detail. **20**
- Q.7 Explain drugs used in 'heart failure'. **20**

End Semester Examination, May 2017
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) Acute inflammation.
- b) Myasthenia gravis.
- c) Meningitis.
- d) Chemo Taxis.
- e) Disease.
- f) Sterilization.
- g) Bacterial flagella.
- h) Active and passive immunity.
- i) Hot air oven.
- j) Bacterial cell wall.

2x10

PART-A

Q.2 Define "Thrombosis". Explain in detail the classification of Thrombosis. Explain in brief the "Thrombophlebitis". **20**

Q.3 What is Hypothyroidism? Explain in detail about the Myxoedema. Write the clinical features of Myxoedema. **20**

Q.4 Write the structure of HIV, mode of transmission, laboratory diagnosis and post exposure prophylaxis. **20**

PART-B

Q.5 What is pneumonia? Explain in details the pathology and morbid anatomy of 4 stage of the pneumonia. **20**

Q.6 Write pathogenesis and laboratory diagnosis of typhoid. **20**

Q.7 Define 'shock'. Explain in detail the various types of "Shock". **20**

End Semester Examination, May. 2017
Bachelor ofPhysiotherapy–ThirdSemester
ELECTROTHERAPYII (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:

- a) Write contraindication of MWD.
- b) Define scattering of ultrasound.
- c) Explain reverse piezoelectric effect.
- d) Write a short note on fluidotherapy.
- e) What is lewishunting reaction?
- f) What is cosine law?
- g) Enumerate non thermal effects of ultrasound.
- h) Explain conduction.
- i) Enumerate two method of application of SWD.
- j) Write the different methods of heat production in SWD.

2x10

PART-A

- Q.2 a) Write physiological effects of heat. **10**
b) Discuss about the generation of luminous and non-luminous lamps. **10**
- Q.3 a) Discuss about the different method of application of SWD.
b) Write the methods of testing and application of Ultrasound. **20**
- Q.4 a) Explain the production of MWD. **10**
b) Explain cryotherapy in following heading:
i) Physiological effects.
ii) Contraindication and adverse effects. **10**

PART-B

- Q.5 a) Discuss the indications of biofeedback. **10**
b) Discuss the steps of application of biofeedback in gait training. **10**
- Q.6 a) Write the principles and advantage of combination therapy. **10**
b) Give two examples of combination therapy. **10**
- Q.7 a) Discuss the principle of production of LASER. **10**
b) Discuss the classification of LASER. **10**

End Semester Examination, May 2017

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 Explain in brief:
- a) Four point gait.
 - b) Crutch palsy.
 - c) Local relaxation.
 - d) Muscle fatigue.
 - e) Good posture.
 - f) Gluteus medius gait.
 - g) Types of pelvic tilt.
 - h) Slow reversal.
 - i) PNF neck patterns.
 - j) Postural drainage.
- 2x10**

PART-A

- Q.2 Explain types of crutch walking in detail. **20**
- Q.3 Explain types of relaxation techniques in detail. **20**
- Q.4 Explain gait cycle in detail. **20**

PART-B

- Q.5 Explain in detail hold-relax technique of proprioceptive neuromuscular facilitation. **20**
- Q.6 Explain in detail various mat exercises. **20**
- Q.7 Explain in detail types of suspension. **20**

End Semester Examination, May 2017

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**. Each question carries equal marks.

Q.1 Write short notes on the following:

- a) Myxoedema Coma.
- b) Metabolic Acidosis.
- c) TSH.
- d) Eczyma.
- e) Sinusitis.

4x5

PART-A

Q.2 Define 'cataract'. Explain the different types of cataract. Mention the etiological factors and treatment of cataract in detail.

20

Q.3 Define 'infection'. Explain the bacterial infection. What is typhoid? Name the causative organism of typhoid. What are the complication of typhoid? Write in detail.

20

Q.4 Explain 'urinary incontinence'. What are the etiological factors of urinary incontinence? Explain the principles of geriatric medicine.

20

PART-B

Q.5 Explain 'blood transfusion'. What are the complications of blood transfusion? Explain acute reaction of blood transfusion in detail.

20

Q.6 What is diabetes mellitus? Mention the types of diabetes mellitus. Write treatment of diabetes mellitus in detail.

20

Q.7 Explain the different types of inflammatory BOWEL disease in detail.

20

End Semester Examination, May 2017
Bachelor of Physiotherapy–Fourth Semester
SURGERY INCLUDING GYNAECOLOGY AND OBSTETRICS (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**. Each question carries equal marks.

- Q.1 Write short notes on:
- a) Ectopic Pregnancy.
 - b) Foetal Distress.
 - c) Primi.
 - d) Incision in Appendectomy.
 - e) Definition of normal labor.
 - f) Erythroblastosis foetalis.
 - g) Third degree burns.
 - h) Closed wound.
 - i) Types of blood groups.
 - j) Names of barrier methods of contraception. **2x10**

PART-A

- Q.2 Why is blood transfusion required?
- a) Investigations on the blood before transfusing.
 - b) Precautions and complications of blood transfusion. **20**
- Q.3
- a) What are the causes of burns?
 - b) Explain degrees of burns.
 - c) First aid of burns.
 - d) Fluid calculation of a burn patient.
 - e) Percentage of burns. **4x5**
- Q.4 How would you assess a patient of surgery in his:
- a) Pre-surgical phase.
 - b) Post-surgical phase. **20**

PART-B

- Q.5 Explain types of methods of contraception in detail. **20**
- Q.6 How would you assess a female in her antenatal phase and explain the investigations and features of antenatal care. **20**
- Q.7 Explain:
- a) Bad obstetric history.
 - b) Foetal distress.
 - c) Rules for medical termination of pregnancy.
 - d) Carcinoma uterus. **5x4**

End Semester Examination, May 2017
Bachelor ofPhysiotherapy–FourthSemester
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**. Each question carries equal marks.

- Q.1 Write short notes on:
- a) Mechanical advantage of levers.
 - b) What is carrying angle?
 - c) What do you mean by angle of pull?
 - d) Enumerate the ligaments of Gleno – humeral joint.
 - e) Write about Carpal Tunnel in brief.
 - f) Briefly explain Scapulo – humeral rhythm.
 - g) What do you mean by active insufficiency of muscles?
 - h) Write down the composition of connective tissues.
 - i) Define stress and strain.
 - j) What are the factors affecting equilibrium?

2x10

PART-A

- Q.2 Explain Newton's laws of motion with examples in human body. **20**
- Q.3 Classify skeletal muscles according to the arrangement of fibers. Write down the biochemical properties and functions of skeletal muscles. **20**
- Q.4 What are the different types of arthrokinematic motions? Discuss the Concave – Convex rule at Gleno – humeral joint. **20**

PART-B

- Q.5 Discuss the articulating surfaces, ligaments, muscles and normal ranges of motion of elbow joint complex. **20**
- Q.6 What do you mean by viscoelasticity? Explain the different viscoelastic properties of connective tissues with appropriate diagrams. **20**
- Q.7 Explain in detail the different types of human grasps. **20**

End Semester Examination, May 2017
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**. Each question carries equal marks.

- Q.1
- a) Draw a labelled diagram of ear.
 - b) What is incentive theory of motivation?
 - c) Define 'personality'.
 - d) What is retrograde amnesia?
 - e) Explain neutral stimulus with appropriate example.
 - f) Explain latent and escape learning.
 - g) Write short note on "MSE".
 - h) Explain biological factors in psychiatry.
 - i) Explain in brief "depression".
 - j) Write a short note on "anxiety".

2x10

PART-A

- Q.2
- a) Write a short note on 'perception processes. **10**
 - b) Explain pain gate theory. **5**
 - c) What is long term memory and explain its type? **5**
- Q.3
- a) Explain PIAJET theory of cognitive development throughout life span. **10**
 - b) What is emotion? Explain various theories for emotions. **10**
- Q.4 Write in detail about schizophrenia. What are the measures adapted for its treatment. **20**
- PART-B**
- Q.5
- a) What is psychology? Explain different schools of psychology. **10**
 - b) What are different methods in psychology? **10**
- Q.6
- a) What is learning? Differentiate between 'maturation' and 'learning'. **10**
 - b) What is difference between stimuli generalization and stimuli discrimination positive and negative reinforcement? **10**
- Q.7 Write in detail about the stress related disorders. Mention the role of psychological counseling in stress related disorders. **20**

End Semester Examination, May 2017

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 **ANYTWO** questions from **PART-A** and **TWO** questions from **PART-B**. Each question carries equal marks.

Q.1 Write short notes on the following:

- a) Expand CSP and WCPT.
- b) Functions of communication.
- c) Confidentiality.
- d) Define 'staffing'.
- e) Define 'CPA'.
- f) Types of referral.
- g) Classification of files.
- h) Types of correspondence.
- i) Importance of records.
- j) History of PT in India.

2×10

PART-A

Q.2 Discuss various laws applicable to medical practice in India.

20

Q.3 Discuss the relationship of physiotherapist with:

- i) Patient
- ii) Other therapist.
- iii) Other medical professional.

20

Q.4 How do you plan for setting up to a new clinic of physiotherapy? Explain in detail. **20**

PART-B

Q.5 Define 'planning'. Explain in detail about planning cycle. Give suitable examples. **20**

Q.6 Write in detail about:

- a) Preparing for first interview.
- b) Career development.
- c) Time management.

10×2

Q.7 Describe in detail about:

- a) Scope of professional practice.
- b) Provision of services and advertising.
- c) Education standards in physiotherapy.
- d) Transparency and responsibility.

5×4

End Semester Examination, May 2017

Bachelor of Physiotherapy- Second Semester

FOREIGN LANGUAGE (BPT-GE-01)

Time: 2hrs

Max Marks: **50**

No. of pages: 2

Note: Attempt any five questions.

Q.1 Completa las frases con la conjugacion correcta del verbo SER (Complete the following sentences with the form of SER):

- a) Ellos _____ mis profesores.
- b) Ella _____ la enfermera del señor Garcia.
- c) Yo _____ Luis Rojas y _____ abogado.
- d) Buenos días. Yo _____ Jose Sanchez. ¡ Mucho gusto!
- e) Nosotros _____ estudiantes de la Universidad de Barcelona.
- f) Ellos _____ los presidentes del banco.
- g) Jorge y yo _____ estudiantes.
- h) Las chicas _____ de Venezuela.
- i) Ellas _____ altas.

1x10

Q.2 Escribe los numeros en español (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 Rellena los campos vacios con los articulos definidos (El, La, los, las) Fill in the blanks with definite articles.

- a) _____ perro.
- b) _____ escuela.
- c) _____ amigos.
- d) _____ casas.
- e) _____ senora.
- f) _____ abogado.
- g) _____ playa.
- h) _____ pais.
- i) _____ abuelos.
- j) _____ doctora.

1x10

Q.4 Relaciona (Match the following):

10

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

Q.5 Escribe los conjugaciones del verbo HABLAR. Write the conjugation of HABLAR

10

Yo	Hablo

Q.6 Rellena los campos con la forma correcta de TENER. Fill in the blanks with TENER

- Mi primo _____ quince años.
- Nosotros _____ dos gatos (cats)
- ¿ Quien _____ los boletos (tickets)?
- Tu _____ mucho dinero.
- Los muchachos _____ bicicletas nuevas.
- Yo _____ que preparar la comida.
- La profesora _____ dolor de cabeza (headache)
- ¿ Cuantos años _____ el hermano de Elisa?
- Mi familia y yo _____ un carro nuevo.
- ¿ _____ ustedes los libros de español?

1x10

Q.7 Responde a las preguntas. Answer the questions as shown in the example.

- ¿ Cómo está Jose?/ enfermo – Jose está enfermo.
- ¿ Cómo está usted?/ cansada-
- ¿ Cómo estáis vosotros?/ bien-
- ¿ Cómo están Pilar y Carmen?/ resfriadas-
- ¿ Cómo está la habitación?/ desordenada-
- ¿ Cómo están ustedes?/ cómodos-
- ¿ Cómo estás tú?/ no bien-
- De dónde eres tú?/ Inglaterra
- ¿ Estudia usted informática? la medicina
- ¿ Estudia ella español para viajar? francés
- ¿ Es Juan periodista? maestro

10

Q8. Preséntate en español (Introduce yourself in Spanish five sentences)

10

End Semester Examination, May 2017

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

ENVIRONMENTAL STUDIES (CH-202)

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 What are renewable and non-renewable resources? Explain natural resources with proper examples. **10**

PART-A

Q.2 What are the roles of an individual to conserve all natural resources? **10**

Q.3 What is the importance of forest resource? How are people spoiling these resource? **10**

Q.4 What is ecosystem? Write all the components of aquatic ecosystem (pond) in detail. **10**

PART-B

Q.5 What is the role of people in causing environmental pollution? Given any ten examples. **10**

Q.6 What do you mean by biodiversity? What is its value? Classify various types of biodiversity. **10**

Q.7 What are the causes, effects and control measures of air pollution? **10**

End Semester Examination, May 2017
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**. Each question carries equal marks.

Q.1 Explain how the study of health promotion help the students to apply health promotion strategic planning and evaluation particularly in the school settings? **10**

PART-A

Q.2 Define health. Explain the goals of health promotion. **10**

Q.3 Explain various components of Ottawa charter of health promotion. **10**

Q.4 Define attitude. Explain in detail how you measure attitude? **10**

PART-B

Q.5 Write short notes on:
a) Health Education.
b) Health Protection. **5x2**

Q.6 Explain in detail models of Health Promotion giving suitable examples. **10**

Q.7 Explain the steps involved in intervention and promotion of Oral Health Program. **10**

End Semester Examination, May 2017

M.Sc. (N&D) - 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 structures of:
- i) Linoleic acid
 - ii) Lactose
 - iii) Phosphatidic acid
 - iv) Fructose
 - v) Palmitic acid
- b) Differentiate between 'hexokinase' and 'glucokinase'.
- 2x5**
10

PART-A

- Q.2 a) Discuss the formation of Calcitriol. **10**
b) Explain the role of vitamin A in vision. **10**
- Q.3 a) Explain the mechanism of enzyme action. **10**
b) Differentiate between 'competitive' and 'non-competitive inhibition'. **10**
- Q.4 a) Discuss the effect of substrate on the velocity of an enzyme catalyzed action. **10**
b) Explain how the body responds to low serum calcium levels. **10**

PART-B

- Q.5 Explain the reactions of the aerobic glycolysis of glucose, complete with enzymes and coenzymes. **20**
- Q.6 Discuss the significance of the pentose phosphate pathway. **20**
- Q.7 a) Give the steps of β -oxidation of fatty acids. **10**
b) Explain how long chain fatty acids enter mitochondria for oxidation. **10**

End Semester Examination, May 2017

M.Sc. (N&D) - First Semester PHYSIOLOGY (MN&D-102)

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

- Q.1
- What is positive bathmotropic and negative chronotropic effect?
 - What is the difference between heart rate and pulse rate?
 - What is Muller Law?
 - What are the main cell organelles that take part in the cell divisions?
 - What is chyme and chyle?
 - State four differences between sympathetic and parasympathetic nervous system.
 - What are the different parts associated with lower respiratory heart?
 - What is Micelles?
 - What is Diuretics?
 - States the content of Malpighian corpuscle. **2x10**

PART-A

- Q.2 Describe the ABO blood groups system with special reference to Rh system? How blood can be coagulated in an injured site? **20**
- Q.3 Describe the function, recreation, mechanism and regulation of salivary recreation. State the absorption of carbohydrates. **20**
- Q.4 Describe the basic properties of receptors and classification of the same. **20**

PART-B

- Q.5 Define blood pressure? What are the different factors that alters the blood pressure? What is hyper and hypotension? Describe the exercise effect and physiological variations on blood pressure. Name the properties of heart. **20**
- Q.6 Draw a structure of Nephron and describe its each part. What is renin Angiotensin system and describe its physiological action? How FFR can be measured? **20**
- Q.7 Define 'hypoxia'. What are the different types of it? What is chloride shift? How it is different from Hamburger effect? What is the importance of FEV and MVV? What is the role of pulmonary surfactant in mechanics of breathing? **20**

End Semester Examination, May 2017

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 **TWO** questions from **Part A** and **TWO** questions from **Part B**. All questions carry equal marks.

Q.1 Explain the introduction between immunity, nutrition and infection, in detail. **20**

PART-A

Q.2 Discuss history related to nutritional science and also explain, in detail, the nutrition research in India. **20**

Q.3 Classify different methods of cooking and explain any two methods, in detail. **20**

Q.4 Write short notes on:

- a) Structure and composition of Cereals.
- b) Culinary uses of milk and milk products.
- c) Selection of fish and poultry.
- d) Germination and fermentation.

20

PART-B

Q.5 Discuss direct and indirect Calorimetry, in detail. **20**

Q.6 Explain factors affecting protein quality and methods of improving protein quality, in detail. **20**

Q.7 Enlist and discuss different methods of food preservation, in detail. **20**

End Semester Examination, May 2017

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

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

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 Explain the role of Nutritionist to enhance the health status of a community. **20**

PART-A

Q.2 Write note on:

- a) Fundamental and allied aspects of meal planning.
- b) Role of food groups and food pyramid.

20

Q.3 How is RDA derived? Give the general principles of deriving RDA.

20

Q.4 What is the importance of mother's milk. Explain the principles and importance of weaning for an infant?

20

PART-B

Q.5 Define reference man and woman. Discuss the dietary pattern and nutrient requirement for adult man and woman.

20

Q.6 Write short note on:

- a) Complication and management during pregnancy.
- b) Nutritional management during lactation.

20

Q.7 What are methods by which we improve the nutritional status of an industrial worker?

20

End Semester Examination, May 2017

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

FOOD MICROBIOLOGY (MN&D-105)

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

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

Q.1 Discuss in detail the diversity of micro-organisms seen in nature. **10**

PART-A

Q.2 Write a detailed note on various components of Fungi. **10**

Q.3 Draw and discuss the growth curve of bacterial cell cycle. **10**

Q.4 Explain the intrinsic and extrinsic parameters of food that effect microbial growth. **10**

PART-B

Q.5 What are the basic principles of food preservation? Discuss any one type of preservation in detail. **10**

Q.6 What is freezing? How is it important in food industries? **10**

Q.7 What is fermentation? Explain its health benefits of fermented foods. **10**

End Semester Examination, May 2017
M.Sc. (N&D) - First Semester
NUTRACEUTICALS AND HEALTH FOODS (MN&D-106)

Time: 2hrs

Max Marks: **50**

No. of pages: 1

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

Q.1 Explain the health benefits of various functional foods. **10**

PART-A

Q.2 Discuss the health benefits of omega 3 fatty acids as nutraceuticals. **10**

Q.3 Explain the mechanism of action of antioxidants. **10**

Q.4 Write short notes on:

a) Regulatory bodies in India for food safety and security.

b) Prebiotics

5x2

PART-B

Q.5 What are the various marketing and regulatory issues related to nutraceuticals and functional foods? **10**

Q.6 Explain the role and health benefits of nutraceuticals. **10**

Q.7 Write short notes on:

a) Phytoestrogens.

b) Dietary fiber.

5x2

End Semester Examination, May 2017
M. Sc. (N& D) – 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 Explain the various steps involved in research proposal formation with suitable examples. **10**

PART-A

Q.2 Calculate mean, median and mode for the following data:

<u>Marks</u>	<u>No. of students</u>	
0-20	80	
20-40	76	
40-60	50	
60-80	28	
100-120	18	
120-140	9	
140-160	3	10

Q.3 Two different types of drug A and drug B were tried on certain patients for increasing weight. 5 people were given drug A and 7 people were given drug B. The increase in weight in pounds is given below:

<u>Drug A</u>	<u>Drug B</u>
8	10
12	8
13	12
9	15
3	6
	8
	11

Do the two drugs differ significantly with regard to their effect in increasing weight at 0.05 significance level? **10**

Q.4 Discuss different types of sampling error and illustrate the methods to prevent them in detail. **10**

PART-B

Q.5 What do you mean by hypothesis? Explain the different types of hypothesis in detail. **10**

Q.6 What do you mean by sampling? Explain any one type of sampling in detail. **10**

Q.7 Discuss the following:

- a) Define 'optimum sample'.
- b) Observational study design.

5x2

End Semester Examination, May 2017
M.Sc. (N&D) - 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 a) Explain the following:
- i) The use of blank in spectrophotometry.
 - ii) Gratings.
 - iii) Chromatogenic reagent.
 - iv) Iso – electric point.
 - v) Differentiate between phosphorescence and fluorescence. **2x5**
- b) Derive Henderson Hasselbalch equation for the acid HA. **10**

PART-A

- Q.2 a) Explain the working principle of the spectrophotometer. **10**
- b) Explain how a mixture of amino acids can be separated using paper chromatography. **10**

- Q.3 a) What do you understand by the term ion – exchange chromatography? **10**
- b) Explain why thin layer chromatography is superior to paper chromatography. **10**

- Q.4 a) Define the following:
- i) Acid.
 - ii) Base.
 - iii) Salt.
 - iv) Polar compound.
 - v) Visible light. **2x5**
- b) What is phenolphthalein? Give the theory of its use. **10**

PART-B

- Q.5 a) Give the principle and application of:
- i) ELISA.
 - ii) RIA. **5x2**
- b) What is the technique upon which nuclear magnetic resonance is based? **10**
- Q.6 a) Give the principle of electrophoresis. Discuss the nature of polyacrylamide gel. **10**
- b) Discuss the gel agarose used in electrophoresis. **10**
- Q.7 Explain the working principle of:
- a) HPLC. **10**
 - b) Atomic fluorescence spectrometry. **10**

End Semester Examination, May 2017

M.Sc. (N&D) –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
- Name two conditions in which external feeding is given.
 - Write thumb rule for calorie requirement of new born infant for TPN formula.
 - What is Cirrhosis of liver?
 - Ulcerative colitis affects which part of the body.
 - What is cholelithiasis?
 - Write full form of GERD.
 - Define atherosclerosis.
 - Name types of insulin.
 - What is the popular name for Quetelet index?
 - Give principles of diet for a typhoid patient. **2x10**

PART-A

- Q.2 Describe the role of a dietitian in health care. **20**
- Q.3 Discuss therapeutic adaptations of a normal diet. **20**
- Q.4 Explain dietary management of:
a) Peptic Ulcer.
b) Jaundice. **10x2**

PART-B

- Q.5 Describe causes and dietary management of hypertension. **20**
- Q.6 Explain dietary management for an obese person. **20**
- Q.7 Discuss:
a) Meal management of a diabetic person. **10**
b) Chronic complications of diabetes. **10**

End Semester Examination, May 2017
M. Sc. (N&D) – 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**. Each question carries equal marks.

- Q.1 Write short notes on:
- a) Cryogenic chill system.
 - b) Dry heat method of cooking.
 - c) Two effective use of leftovers.
 - d) Hazard Analysis Critical Control Point (HACCP).
 - e) Hidden Cost.
- 2x5**

PART-A

- Q.2 Explain principles of management in detail. **10**
- Q.3 How can work be simplified in the kitchen in detail? **10**
- Q.4 Explain the important factors affecting selection of equipments for any catering establishment. **10**

PART-B

- Q.5 Write short notes on:
- a) Any two methods of service.
 - b) Types of menu.
- 5x2**
- Q.6 How can hygiene and sanitation be maintained in a catering establishment? **10**
- Q.7 Write short notes on:
- a) Any two employee benefits.
 - b) Factors affecting pricing.
- 5x2**

End Semester Examination, May 2017

M. Sc. (N& D) – Second Semester

GERIATRIC NUTRITION (MN&D-208)

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 How we become competent to provide nutritional and health care of elderly for shaping the future of health care of elderly. **10**

PART-A

Q.2 What is geriatric care? Discuss the demographic data and development of geriatrics in India. **10**

Q.3 What are the commonly accepted theories of aging? Explain any three theories in detail. **10**

Q.4 Discuss the philosophy and scope of geriatrics medicine shaping the future of health care of older adults. **10**

PART-B

Q.5 Give the name of nutritional problems of elderly. Define the strategies for management and prevention of these problems. **10**

Q.6 How can one assess the health and nutritional status of elderly? Explain the effect of life style pattern, medication and psychological aspects of aging. **10**

Q.7 Discuss the role of national and international agencies working for welfare of elderly. Explain the main objectives and goals of each agency. **10**

End Semester Examination, May 2017
M.Sc. (N&D) – First Semester
TEACHING IN NUTRITION SCIENCE (MN&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 "The scope of nutrition science is wide, explain the importance of teaching nutrition science at University level" Discuss. **10**

PART-A

Q.2 Explain in detail different agencies of education citing suitable examples. **10**

Q.3 Write short notes on:
a) Relationship between teaching and learning.
b) Privatization of education. **5x2**

Q.4 Explain different principles, which should be kept in mind while framing the curriculum. **10**

PART-B

Q.5 What is problem solving? Describe the various steps in teaching nutrition science through problem solving method. How will you make a choice of suitable problem for solution. **10**

Q.6 Discuss the need and importance of lesson planning. **10**

Q.7 Describe the principles of selection and effectiveness in the use of audio-visual aids. **10**

End Semester Examination, May 2017
M.Sc. (N&D) – First Semester
FOOD LAWS AND FOOD SAFETY (MN&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 What are the current challenges to food safety in India.
10

PART-A

Q.2 Explain bioterrorism. Discuss in relation to anthrax.
10

Q.3 Briefly describe about TQM and food hazards.
10

Q.4 Discuss all the principles of HACCP in detail.
10

PART-B

Q.5 Explain consumer education and regulation of food labeling in detail.
10

Q.6 Describe any two food laws and standards running in India.
10

Q.7 Write short notes on **any two** of the following:
a) ISO series.
b) Consumer protection.
c) Codex Alimentarius Commission.

5x2

End Semester Examination, May 2017
M. Sc. (Nutrition and Dietetics) – Second Semester
NUTRITIONAL EPIDEMIOLOGY (MN&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 Define nutritional epidemiology with its objective. **10**

PART-A

Q.2 What are the advantages of using biomarkers in nutritional epidemiology? **10**

Q.3 What do you mean by study design? Explain different types of epidemiological studies. **10**

Q.4 Explain the epidemiology of cardiovascular disease in detail. **10**

PART-B

Q.5 Explain the process of nutrition monitoring and surveillance. **10**

Q.6 Describe the components of energy expenditure in detail. **10**

Q.7 Emphasize on population obesity trends. **10**

End Semester Examination, May 2017
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 A male who is 38 years old is suffering from lung cancer. His height is 168cm, weight 42kg. He is vegetarian and sedentary worker. What are the steps that are to be kept in mind while giving the nutritional assessment care to the patient? **20**

PART-A

Q.2 Write down the pathophysiology of HIV/AIDS patients including nutritional care of the patients. **20**

Q.3 Explain clinical symptoms of gout and its dietary management. **20**

Q.4 Define celiac disease and its dietary management. **20**

PART-B

Q.5 Write short notes on:

a) Phenylketonuria.

b) Maple syrup urine disease. **10x2**

Q.6 Explain pathophysiology of food allergies and its dietary management. **20**

Q.7 Discuss the dying process and nutritional care during dying process. **20**

End Semester Examination, May 2017
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 natural and manmade disasters resulting in emergency situation. Explain any one situation as a case study from Indian subcontinent. **20**

Q.3 What are the main nutritional problems arises in emergency situations? 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 Briefly describe the scope of assessment of malnutrition in emergencies. How do we organize nutrition surveillance and individual screening? **20**

Q.6 Explain the methods of assessment of food needs in emergency situation. How do we organize mass feeding at feeding centres? **20**

Q.7 Describe the public nutrition approach to tackle nutritional problems in emergencies. **20**

End Semester Examination, May 2017
M.Sc. (N&D)–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**. Each question carries equal marks.

Q.1 Discuss the components of the Food Industry. Also explain the role of Food Scientists in Food Industry. **20**

PART-A

Q.2 a) Describe the process of parboiling of rice. **10**
b) Discuss in detail the milling of wheat. **10**

Q.3 a) What is the role of platform testing in milk industry? **10**
b) Explain the processing of cheese making. **10**

Q.4 Differentiate between:
a) Enzymatic and Non-enzymatic Browning.
b) Meat and Poultry. **10×2**

PART-B

Q.5 a) What do you understand by adulteration? Explain giving examples. **10**
b) Explain Food labelling. **10**

Q.6 Explain the following terms:
a) Artificial Sweeteners.
b) Processing of beverages. **10×2**

Q.7 Discuss the risks and hazards related to food safety and quality. **20**

End Semester Examination, May 2017
M. Sc. (N&D) – 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 Discuss in detail the factors affecting the growth of microbes in food. **20**

PART-A

Q.2 a) Describe the principles of food preservation in detail. **10**

b) Explain the effect of following on microbes:

i) Low Temperature.

ii) Chemical Preservation. **5x2**

Q.3 Discuss food infections and food intoxications responsible for human life risks. **20**

Q.4 Discuss the industrial uses of bacteria in detail. **20**

PART-B

Q.5 Explain the following:

a) HACCP

b) Personal Hygiene. **20**

Q.6 What are various preservation methods used in making following foods?

a) Fermented Milk.

b) Vinegar. **20**

Q.7 Explain the spoilage of following:

a) Fruits.

b) Meat.

c) Eggs.

d) Milk. **5x4**

End Semester Examination, May 2017
M.Sc. (N&D) - Second Semester
HOSPITAL ADMINISTRATION(MN&D-GE-04)

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 questions carry equal marks.

Q.1 Critically discuss the role of the manager in health care and how organizations and people work within the health care system? **10**

PART-A

Q.2 Explain the contribution in the field of management of the following:
a) F. W. Taylor.
b) Henry Fayol. **5x2**

Q.3 Explain following theories of motivation.
a) X and Y theory
b) Maslow hierarchy theory. **5x2**

Q.4 Write short notes on:
a) Function of manager.
b) Need for organizational hierarchy. **5x2**

PART-B

Q.5 Define group. Explain in detail the process of group decision making. **10**

Q.6 Explain the importance of effective communication in organization with suitable example **10**

Q.7 Write short notes on:
a) Leadership.
b) Values and attitudes. **5x2**

End Semester Examination, May 2017
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**. Each question carries equal marks.*

Q.1 What do you understand by relationship between nutrition, health and disease? Explain in detail. **20**

PART-A

Q.2 Discuss determinants of health in detail. **20**

Q.3 Discuss different epidemiological study designs in detail. **20**

Q.4 Describe national health care delivery system in detail. **20**

PART-B

Q.5 Write short notes on:
a) Anthropometry.
b) Dietary patterns survey.
c) Biochemical.
d) Clinical methods. **5×4**

Q.6 Explain etiology and preventive strategies for vitamin A deficiency and Iodine deficiency disorder in detail. **20**

Q.7 Discuss public health implications and preventive strategies for obesity and cancer in detail. **20**

End Semester Examination, May 2017
M.Sc. (N&D)–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 What is the role played by epidemiology in the prevention of health problems in public? **20**

PART-A

Q.2 Discuss different study designs applied in conducting nutrition research in detail. **20**

Q.3 Write short notes on:

a) Physiology of malnutrition. **10**

b) Clinical forms of PEM. **10**

Q.4 a) Discuss severe acute malnutrition in detail. **10**

b) Discuss any two micronutrient deficiencies of public health significance in detail. **10**

PART-B

Q.5 Describe public health implications and preventive strategies for hypertension and diabetes in detail. **20**

Q.6 Write short notes on:

a) Food supply and demand. **10**

b) Population growth and income distribution. **10**

Q.7 Discuss malnutrition as a motivation for policy intervention in detail. **20**

End Semester Examination, May 2017
M.Sc. (N&D)–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**. Each question carries equal marks.

Q.1 What general considerations should be kept in mind for a physically active individual? **20**

PART-A

Q.2 Write short notes on:

a) Pre and Post game meals.

b) Biological functions of fat soluble vitamins.

10×2

Q.3 Discuss the types of sports drinks with examples. Also, explain its benefits. **20**

Q.4 Discuss the psychological features and pathophysiology of Anorexia Nervosa. **20**

PART-B

Q.5 Explain the role of physical activity in weight control. **20**

Q.6 Write short notes on:

a) Pharmacological Agents (any two).

b) Hormonal Agents.

10×2

Q.7 Write short notes on:

a) Multivitamins.

b) Energy Bars.

c) Body Building supplements.

d) Protein.

5×4

End Semester Examination, May 2017
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 What are the current trends in sports nutrition? Describe with reference to diet and supplements. **20**

PART-A

Q.2 Describe in detail about the myths and truths in sports nutrition. **20**

Q.3 Discuss about the career opportunities in sports management companies. **20**

Q.4 What is the role of SAI in control and promotion of sports? **20**

PART-B

Q.5 a) What are the functions of national and international sports organization? **10**
b) Discuss the role and functions of BCCI in detail. **10**

Q.6 a) Discuss in detail about the role of sports in society. **10**
b) What are the issues faced by sports administration. **10**

Q.7 a) What is the product life cycle concept? **10**
b) Explain the process of food product planning and development. **10**

End Semester Examination, May 2017
Master of Physiotherapy (MUSCULOSKELETAL) –Second Semester
EXERCISE PHYSIOLOGY(MPTM-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**. Each question carries equal marks.

Q.1 Write short notes on:

- a) How many ATPs are synthesized from a full glucose molecule oxidation?
- b) Define 'neoglucogenesis'.
- c) What is RQ?
- d) What is OBLA?
- e) What is maximum O₂ consumption for different exercises?
- f) Define 'sliding filament theory'.
- g) Define 'motor unit'.
- h) Define 'decompression sickness'.
- i) Define 'WGBT equation'.
- j) Define 'HAPE'.

2×10

PART-A

- Q.2 a) Discuss the immediate, short term and long term energy transfer systems in the human body. **10**
- b) Discuss the net yield of ATP from different glucose metabolism sources. **10**
- Q.3 Discuss the effects of different forms of exercises on different cardiovascular parameters. **20**
- Q.4 a) Discuss the structure of muscle spindle. **4**
- b) Describe the different types of muscle fibres according to function and structure. **8**
- c) Discuss the effect of chemical and mechanical events during muscle contraction. **8**

PART-B

- Q.5 a) Discuss the mechanism of thermoregulation. **5**
- b) How high altitude and cold affect on exercise? **8**
- c) Write briefly about acclimatization and altitude related health problems. **7**
- Q.6 Discuss three different hormonal effects on exercise. **20**
- Q.7 a) Describe neurological adaptations to strength training. **10**
- b) Discuss fibre type conversion and fibre splitting in response to strength training. **10**

End Semester Examination, May 2017
Master of Physiotherapy (Musculoskeletal) - Second Semester
EVALUATION, DIAGNOSIS AND MANAGEMENT IN MUSCULOSKELETAL-I
(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**. Each question carries equal marks.

- Q.1 Write short notes on:
- a) Limb length measurement.
 - b) Clinical features of different types of TOS.
 - c) Radiological findings in Osteoarthritis knee.
 - d) Stages of adhesive capsulitis.
 - e) Lisfranc's joint.
 - f) Clinical presentation of T4 syndrome.
 - g) Nerve injury classification.
 - h) Classify burns.
 - i) What is tenosynovitis?
 - j) Clinical presentation in gout.

2x10

PART-A

- Q.2 Describe brachial plexus injury causes, clinical features, assessment and physiotherapy management. **20**
- Q.3 What are different sensory and motor examination methods in patient? How will you do examination of function in a patient? **20**
- Q.4 Write in detail about rheumatoid arthritis. **20**

PART-B

- Q.5 Write about post prosthetic assessment and physiotherapy management of above knee amputation in detail. **20**
- Q.6 What are different stages of PIVD? Write about patient presentation and treatment of PIVD. **20**
- Q.7 Discuss the importance of the following in physiotherapy:
- a) Radiography.
 - b) Ultrasonography.
 - c) CT scan.
 - d) MRI.
 - e) EMG.
 - f) BMD.
- 20**

End Semester Examination, May 2017

B. Tech. – Second Semester APPLIED PHYSICS-II(PH-201A)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **2**

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

- Q.1
- Bragg's Equation is given by $2d \sin \theta = n\lambda$. Here $d =$ _____ spacing, $\sin \theta =$ angle of _____, $n =$ _____ of diffraction, $\lambda =$ wavelength of _____.
 - What is a unit cell?
 - With increase in temperature, the conductivity of a semiconductor increases or decreases. Justify your answer.
 - What do you understand by homo-epitaxy? Give an example.
 - Define the term 'sensitivity of a photoconductor'.
 - Define 'magnetic flux density and give its unit'.
 - Explain ferromagnetism in brief.
 - Cooper pairs are a pair of electrons, protons, positrons or neutrons. How Cooper pairs are formed?
 - Superconductivity was discovered by _____ in the year _____. Name anyone superconductor and give its transition temperature.
 - What do you understand by quantum well? **2×10**

PART-A

- Q.2
- What do you understand by Frenkel defects? Show that concentration of Frankle defects is proportional to $(NN_i)^{1/2}$ where symbols have their usual meaning. **10**
 - Give a brief account of powder method for crystal structure analysis. **6**
 - A simple cubic crystal has atomic radius of 2.0 Å. Determine the spacing of planes having Miller indices as (222). **4**
- Q.3
- Discuss Hall Effect and derive an expression for Hall coefficient. Give two important applications of Hall Effect. **9**
 - Give four points of differences between direct band gap semiconductors and indirect band gap semiconductors. **8**
 - Discuss important properties of semiconductors. **3**
- Q.4
- Discuss the modified model to show the effect of traps on the photoconductivity.
 - Explain briefly principle, construction and working of a solar cell. Also give its two applications. **10×2**

PART-B

- Q.5
- Discuss in brief the differences between diamagnetic and paramagnetic materials. **6**
 - Derive an expression for the magnetic dipole moment of an atom. **6**
 - Plot the hysteresis curve for a magnetic material and explain the important features of the curve. Also give one example each of hard and soft materials. **8**
- Q.6
- What are superconducting materials? Explain Meissner effect in superconductors. **6**
 - Derive the London equations. **8**
 - Give an account of BCS theory of superconductor. **6**

- Q.7 a) What are carbon nanotubes? What are their different types? Describe carbon arc method for the fabrication of carbon nanotubes.
- b) Briefly explain nanomaterials. Give their two chemical properties and six physical properties. **10×2**

End Semester Examination, May 2017
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 Describe the anatomy of heart under the following headings:
a) Size and location.
b) Coverings of heart.
c) Walls of heart.
d) Chambers of heart. **10**
- Q.2 Define 'plexus'. Describe brachial plexus in detail. **10**
- Q.3 Classify in detail the tissues of the human body. Give an example of each. **10**
- Q.4 Draw a labeled diagram of synovial joints. **10**

PART-B

- Q.5 Write and illustrate the location of SA node and AV node. **5**
- Q.6 Describe the joints of upper limb in brief. **5**
- Q.7 Give an overview of pulmonary circulation and systemic circulation. **5**
- Q.8 Write a short note on 'Haversian system'. **5**
- Q.9 Describe different types of cartilages based on their structure in brief. **5**
- Q.10 Discuss endochondral bone formation. **5**
- Q.11 Describe the types and location of cartilage. **5**
- Q.12 Write a short note on 'venous drainage of lower limb'. **5**

End Semester Examination, May 2017

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 Explain membrane potentials and action potentials in detail. **10**
- Q.2 Define 'blood pressure and its components'. What are the factors affecting B.P.?
- Q.3 Enumerate various cell organelles. Describe the structure and functions of each organelle. **10**
- Q.4 Explain 'cardiac cycle' and write a note on heart sounds. **10**

PART-B

- Q.5 Describe structure and functions of platelets. **5**
- Q.6 What is a sarco tubular system? Write its functions. **5**
- Q.7 What is facilitated diffusion? Give an example. **5**
- Q.8 Write a note on synapses and synaptic transmission. **5**
- Q.9 Explain peristalsis with the help of a labeled diagram. **5**
- Q.10 Differentiate between 'isotonic and 'isometric contraction'. **5**
- Q.11 Write a note on 'blood groups'. **5**
- Q.12 Describe functions of stomach. **5**

End Semester Examination, May 2017

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 What are the different types of enzyme inhibition? Explain with suitable graphs. **10**
- Q.2 Discuss formation of acetyl COA from pyruvate. How acetyl COA is further metabolized in TCA cycle? **10**
- Q.3 Describe sources, biochemical functions, requirement and deficiency manifestations of vitamin 'D'. **10**
- Q.4 What is the normal pH of blood? Explain the role of plasma buffers and renal mechanisms in the maintenance of acid base balance of the body. **10**

PART-B

- Q.5 Define BMR. What are the factors that affect BMR? **5**
- Q.6 Classify lipoproteins giving their biological significance. **5**
- Q.7 What is diabetes mellitus? Discuss metabolic de-arrangement in DM. **5**
- Q.8 Explain secondary structure of proteins. **5**
- Q.9 Enumerate liner function tests. **5**
- Q.10 Write importance of Van der Bergh test. **5**
- Q.11 Write clinical significance of isoenzymes. **5**
- Q.12 Differentiate between reducing and on reducing sugars giving importance of Benedict's test. **5**

End Semester Examination, May 2017
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 Explain the mechanism of muscle contraction along with diagrams. **10**
- Q.2 Define and classify friction. Explain laws of friction. Also add a note on laws of floatation. **10**
- Q.3 Write in detail about physical principles of cold and superficial heat, electromagnetic radiations. **10**
- Q.4 Explain initial management of an electric shock. Write down precautions for prevention of an electric shock. **10**

PART-B

- Q.5 Describe stress strain relationship with diagrams. Also explain Hooke's law. **5**
- Q.6 Explain Archimedes principle. Briefly explain laws of floatation **5**
- Q.7 Explain construction, working and application of fuse. **5**
- Q.8 Explain muscle work and group action of muscles. **5**
- Q.9 Write short notes on:
a) Rectifiers.
b) Ohm's law. **5**
- Q.10 Write a short note on anatomical axes and planer with corresponding movements in each. **5**
- Q.11 Explain briefly planes and axes with examples. **5**
- Q.12 Explain different types of muscle contraction. Add a note on classification of muscles with an example. **5**

End Semester Examination, May 2017

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 Write a short notes on:
a) Lymphatic drainage of breast.
b) Muscles of anterior abdominal wall. **5x2**
- Q.2 Describe the Thyroid Gland under following headings:
a) Structure. **3**
b) Blood Supply. **5**
c) Applied. **2**
- Q.3 Write short notes on:
a) Cerebellar Syndrome.
b) Cavity of middle ear. **5x2**
- Q.4 Describe the muscles of soft palate, with their nerve supply and action in detail. **10**

PART-B

- Q.5 Write a short note on 'circulation of cerebrospinal fluid'. **5**
- Q.6 Write a short note on 'sternocleidomastoid muscle. (Origin, insertion, nerve supply, action)' **5**
- Q.7 Enumerate ascending and descending tract of spinal cord. Describe pain temperature pathway. **5**
- Q.8 Describe femoral triangle. **5**
- Q.9 Describe urogenital diaphragm. **5**
- Q.10 Structure of tongue, give its nerve supply and lymphatic drainage. **5**
- Q.11 Describe the lateral wall of nose. **5**
- Q.12 Describe the course and distribution of axillary artery. **5**

End Semester Examination, May 2017

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 structure of neuro-muscular junction. Write about the mechanism of transmission across neuro-muscular junction. **10**
- Q.2 Explain various phases of menstrual cycle. Describe hormonal control of menstrual cycle.
- Q.3 Discuss the mechanism of formation of urine. **10**
- Q.4 Define vital capacity. Give its normal value. Describe the factors affecting vital capacity. What is F_{EV_1} ? **10**

PART-B

- Q.5 Discuss Hypoxia and its types. **5**
- Q.6 Describe the functions of hypothalamus. **5**
- Q.7 Explain the effect of exercise on respiratory system. **5**
- Q.8 Describe formation, composition and functions of CSF. **5**
- Q.9 Differentiate between two types of nephrons in kidney. **5**
- Q.10 Enumerate non-respiratory functions of lungs. **5**
- Q.11 Describe pyramidal and extra-pyramidal systems. **5**
- Q.12 Discuss the effects of exercise on cardiovascular system. **5**

End Semester Examination, May 2017
Bachelor ofPhysiotherapy- 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 in detail strength duration curve of normal innervated muscle. **10**
- Q.3 Explain in detail physiology of nerve membrane potential. **10**
- Q.4 Write in detail indications and therapeutic uses of Faradic type current. **10**

PART-B

- Q.5 Explain types of nerve injuries. **5**
- Q.6 Explain briefly diadynamic current. **5**
- Q.7 Write a note on 'types of surging'. **5**
- Q.8 Write the use of high voltage pulse galvanic stimulation. **5**
- Q.9 Write a note on SD curve. **5**
- Q.10 Write a note on 'chronaxie'. **5**
- Q.11 Write a short note on 'motor point'. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Third Semester
PATHOLOGY AND MICROBIOLOGY (PT-302)

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 "DISEASE". Explain the etiology of disease in detail. **10**
- Q.2 Define "HEALING". Explain primary healing by first intention in detail. **10**
- Q.3 What is "THROMBOSIS"? Explain the pre-disposing cause for Thrombosis in detail. **10**
- Q.4 Explain in detail about Myasthenia Gravis. **10**

PART-B

Write short notes on the following:

- Q.5 Cellular Changes at the site of inflammation. **5**
- Q.6 "AIDS". **5**
- Q.7 "RICKETS". **5**
- Q.8 "THROMBOPHLEBITIS". **5**
- Q.9 "Ischemic Heart Disease". **5**
- Q.10 "HYPOTHYROIDISM". **5**
- Q.11 "INFARCTION". **5**
- Q.12 "HYPERTENSION". **5**

End Semester Examination, May 2017

Bachelor of Physiotherapy- Third Semester

EXERCISE THERAPY-II (PT-304)

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 Kyphosis Lordosis posture along its physiotherapy management in detail. **10**
- Q.2 Explain techniques of relaxation and indications of relaxation in detail. **10**
- Q.3 Explain various MAT exercises in detail. **10**
- Q.4 Explain various bed rest complications and their physiotherapy management. **10**

PART-B

Write short notes on:

- Q.5 Types of pelvic tilt. **5**
- Q.6 Flat back posture. **5**
- Q.7 Coordination exercises. **5**
- Q.8 Hold relax technique. **5**
- Q.9 Two-point and four-point gait. **5**
- Q.10 Aerobic exercise. **5**
- Q.11 Upper limb patterns of PNF. **5**
- Q.12 Foot drop gait. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Fourth Semester
MEDICINE (PT-401)

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 "IBD" i.e. "inflammatory bowel disease." **10**
- Q.2 What is "OTITIS MEDIA"? Explain in brief about "ACUTE-OTITIS MEDIA", its clinical features and treatment. **10**
- Q.3 Define "DISEASE". Explain about "MEASLES", its clinical features; "incubation period of Measles" and "Treatment of MEASLES". **10**
- Q.4 What is "HEPATIC ENCEPHALOPATHY"? What are its clinical features and mention the treatment? **10**

PART-B

Write short notes on:

- Q.5 Blood Transfusion. **5**
- Q.6 Respiratory Acidosis. **5**
- Q.7 Liver Function Test. **5**
- Q.8 GONORRHOEA. **5**
- Q.9 Treatment of Diabetes. **5**
- Q.10 Latent Leprosy. **5**
- Q.11 FALLS in Geriatrics. **5**
- Q.12 Name the Few "Bacterial Infections". **5**

End Semester Examination, May 2017

Bachelor of Physiotherapy– Fourth Semester

BIOMECHANICS (PT-403)

Time: 3 hrs.

Max Marks: **60**

No. of pages: *1*

Note: Attempt **NINE** questions in all; Attempt any **THREE** questions from **Part-A** and any **SIX** questions from **Part-B**. Marks are indicated against each question.

PART-A

- Q.1 Define 'levers'. Classify them with examples. Write a short note on mechanical efficiency. **10**
- Q.2 Define 'biomechanics'. Write the uses of biomechanics in the field of physiotherapy. **10**
- Q.3 Define 'equilibrium'. Give its classification and explain the factors affecting stability. **10**
- Q.4 Discuss the biomechanics of shoulder joint in detail. **10**

PART-B

- Q.5 Explain Newton's second law of motion. **5**
- Q.6 Write a short note on: 'carrying angle' (importance and measurement technique). **5**
- Q.7 Write the classification of motion with examples. **5**
- Q.8 Write a short note on: 'angle of pull'. **5**
- Q.9 Differentiate between the 'open' and 'closed' chain exercises. **5**
- Q.10 Differentiate between 'slow' and 'fast' twitch skeletal muscle fibres. **5**
- Q.11 Describe different types of hand grip with diagram in detail. **5**

End Semester Examination, May 2017

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**.

PART-A

- Q.1 Describe various accreditation agencies regulating physiotherapy practice and education. **10**
- Q.2 What are methods of ensuring quality assurance and quality review? **10**
- Q.3 How do you plan for setting up a new clinic of physiotherapy? Explain. **10**
- Q.4 Discuss the importance of medical records. **10**

PART-B

- Q.5 Write a short note on 'budget'. **5**
- Q.6 Briefly discuss various methods of filing. **5**
- Q.7 What is accreditation? Discuss the agencies of it in physiotherapy. **5**
- Q.8 How do you take care of equipments in physiotherapy OPD? **5**
- Q.9 Discuss planning cycle. **5**
- Q.10 Elaborate on various types of teaching aids. **5**
- Q.11 Write a short note on career development. **5**

End Semester Examination, May 2017

Bachelor of Physiotherapy – Fifth Semester

ORTHOPEDICS (PT-501)

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 'Soft tissue injury'. Classify soft tissue injury and explain the mechanism to treat the injury. **10**
- Q.2 Define 'Septic Arthritis'. Mention the etiological factors and treatment of Septic Arthritis in detail. **10**
- Q.3 Explain in detail the etiology and treatment of 'FROZEN SHOULDER'. **10**
- Q.4 Explain Colle's fractures in detail. **10**

PART-B

Write short notes on the following:

- Q.5 Sundeck's dystrophy. **5**
- Q.6 OSTEOPOROSIS. **5**
- Q.7 TENNIS ELBOW. **5**
- Q.8 "VOLKMANN'S ISCHEEMIA". **5**
- Q.9 "PROSTHESIS". **5**
- Q.10 "FLAT FOOT". **5**
- Q.11 "BRACHIAL PLEXUS INJURY". **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy–Fifth Semester
ORTHOPAEDIC PHYSIOTHERAPY (THEORY)(PT-502)

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 PND? Describe its types, clinical manifestation and physiotherapy treatment in detail. **10**
- Q.2 Describe indications, contra-indications and phases of rehabilitation in TKR. **10**
- Q.3 Describe the parts of prosthesis. **10**
- Q.4 Describe 'Carpal Tunnel Syndrome'. Describe its pathology, clinical features, clinical signs and PT management. **10**

PART-B

- Q.5 Describe the diagnostic tests for thoracic outlet syndrome. **5**
- Q.6 Write a short note on 'torticollis'. **5**
- Q.7 Write short note on 'Lateral Ankle Sprain'. **5**
- Q.8 Write the PT treatment following radial nerve injury after elbow. **5**
- Q.9 Describe the PT management in the post-immobilization stage of fractures. **5**
- Q.10 Describe the components of ULTT for various nerve biases. **5**
- Q.11 Describe the tests for meniscal tears. **5**
- Q.12 Explain briefly the PT treatment for shoulder impingement. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy–Fifth Semester
BIOMECHANICS - II(THEORY) (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 and its importance in the field of physiotherapy. **10**
- Q.2 Define 'stride'. Discuss the muscular analysis during heel strike and heel off. **10**
- Q.3 Discuss the biomechanics of hip joint, in detail. Add a note on angle of torsion and its importance. **10**
- Q.4 Define 'posture'. Enumerate the postural deviation in sagittal and frontal plane. Explain the assessment of any one deviation. **10**

PART-B

- Q.5 Mention the various ligaments of knee joint with their functions. **5**
- Q.6 Discuss the screw home mechanism with the muscles responsible for it. **5**
- Q.7 Enumerate on the prevention strategies for work related musculo-skeletal disorders in detail. **5**
- Q.8 Mention the relationship between line of gravity to the normal erect posture with the help of the diagram. **5**
- Q.9 What is concave-convex rule? Draw the diagram for the same. **5**
- Q.10 Enumerate the various phases of GAIT and write in short about the importance of determinants of GAIT. **5**
- Q.11 Discuss the static and dynamic stability of the spine. **5**
- Q.12 Define biomechanics and its importance in the field of physiotherapy. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Sixth Semester
NEUROLOGY AND NEUROSURGERY (PT-601)

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 a note explaining 'Neurological behavioral cognitive effects of traumatic brain injury and medical treatment of the same. **10**
- Q.2 Explain the features with treatment of trauma at cervical and lumbar spine level in detail. **10**
- Q.3 Write a note on 'different types of muscular dystrophies'. **10**
- Q.4 Explain features of:
a) Cerebellar Ataxia.
b) Frederick Ataxia. **10**

PART-B

Write short notes on the following:

- Q.5 Features of ischemic stroke. **5**
- Q.6 Features of Encephalitis. **5**
- Q.7 Features of diabetic neuropathies. **5**
- Q.8 Spina Bifida. **5**
- Q.9 Glasgow Comma Scale. **5**
- Q.10 Syringomyelia. **5**
- Q.11 Features of Ulnar Nerve and Radial Nerve entrapment. **5**
- Q.12 Features of Dementia. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Sixth Semester
NEUROLOGY 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 What is balance? Evaluate balance of a 52 year old female complaining of frequent falls. **10**
- Q.2 What do you understand by stroke? Explain the etio-pathology and types of stroke. Explain the typical hemiplegic gait. Write its management. **10**
- Q.3 Define Multiple Sclerosis. Write its signs and symptoms. Discuss the assessment, the goals of treatment and management of 42 year old male complaining of active symptoms. **10**
- Q.4 A 62 year old male complain of fast stepping with difficulty in stopping in between. He also complains of difficulty in initiation of movement. Explain the case. Also, write the treatment plan for the management of symptoms. **10**

PART-B

- Q.5 Write a short note on Transverse Myelitis. **5**
- Q.6 Explain the gait seen in Polio and the deviations from normal. Write its management. **5**
- Q.7 Explain briefly inhibitory techniques as explained by Rood's. **5**
- Q.8 Explain the principles of Sensory Examination. Discuss the procedure for testing of deep Sensory Examination. **5**
- Q.9 Explain the neurological basis of muscle tone. Also, discuss factors influencing alpha motor neuron activity. **5**
- Q.10 Explain the clinical presentation and management of Radial Nerve entrapment at various levels in its course. **5**
- Q.11 Explain the clinical presentation of DMD. Devise the treatment protocol to prevent the complications in later stages of condition. **5**
- Q.12 Explain in detail the acute care of a C5 Spinal Cord Injured Patient. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Sixth Semester
MANUAL THERAPY(PT-603)

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 about percussion and vibratory techniques in detail. **10**
- Q.2 Write in detail about the mulligan mobilization principles. Also explain about mulligan mobilization techniques for frozen shoulder. **10**
- Q.3 Explain various neurodynamic dysfunctions in detail. **10**
- Q.4 What are different clinical groups according to Maitland? Explain using movement diagram. Describe selection of treatment techniques for these clinical groups. **10**

PART-B

- Q.5 Different schools of thought in manual therapy. **5**
- Q.6 Describe concave convex rule and Kaltenborn treatment plane. **5**
- Q.7 What are different therapist positions used attained while giving massage? **5**
- Q.8 What are the therapeutic effects of mobilization? **5**
- Q.9 Briefly discuss the principles of McKenzie manual technique. **5**
- Q.10 Briefly describe the mulligan technique for Tennis Elbow. **5**
- Q.11 What is SIN in assessment? **5**

End Semester Examination, May 2017
 Bachelor of Physiotherapy- Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)

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 'research proposal'. Discuss various components of research proposal in detail. **10**
- Q.2 What do you mean by 'research design'? Explain different types of research design. **10**
- Q.3 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

10

- Q.4 Goals scored by two teams in a Football session were as follows:

No. of Goals scored in a football match	0	1	2	3	4	5	Total
No. of Football matches played Team A	15	10	7	5	3	2	42
No. of Football matches played Team B	20	10	5	4	2	1	42

Calculate coefficient of variation and state which team is more consistent?

10

PART-B

- Q.5 Discuss the different ethical principles in research. **5**
- Q.6 What do you understand by 'normal distribution'? **5**
- Q.7 What are the characteristics of research? **5**
- Q.8 Discuss types of probabilistic sampling. **5**
- Q.9 What are different types of errors? **5**
- Q.10 Briefly explain different scales of measurement. **5**
- Q.11 Calculate mean, median and mode for following frequency distribution:

No. of Branches 'classes'	0-3	3-6	6-9	9-12	12-15
No. of Plants frequency 'f'	4	8	22	10	4

5

End Semester Examination, May 2017
Bachelor of Physiotherapy – Seventh Semester
CARDIO RESPIRATORY AND CARDIO PULMONARY SURGERY
(PT-701)

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 short notes on:
a) Ventricular septal disease.
b) Patent ductus arteriosus. **5×2**
- Q.2 Write short notes on:
a) Chronic bronchitis.
b) Emphysema. **5×2**
- Q.3 Write a note on types of respiratory failure. **10**
- Q.4 Write short notes on:
a) Left ventricular failure.
b) Infective endocarditis. **5×2**

PART-B

- Q.5 Write short notes on Jones's Major criteria. **5**
- Q.6 Explain haemothorax. **5**
- Q.7 Write short note on lung abscess. **5**
- Q.8 Write short note on pericardiectomy. **5**
- Q.9 Explain pulmonary embolism. **5**
- Q.10 Explain pneumonectomy **5**
- Q.11 Write short note on lobar pneumonia. **5**
- Q.12 Write short note on pigeon chest. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy – Seventh Semester
CARDIO PULMONARY PHYSIOTHERAPY (PT-702)

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 Explain COPD pathophysiology, clinical feature and physiotherapy treatment. **10**
- Q.2 A patient has undergone cardiac transplant of age 45 years, chronic smoker, alcoholic design cardiac rehab for the patient emphasis on phase 2 protocol. **10**
- Q.3 A patient was suffering from chronic obstructive pulmonary disease having secretion in lower and upper lobes of lungs having respiratory muscle weakness. Write physiotherapy management for the patient. **10**
- Q.4 Explain oxygen dissociation curve and factor affecting the curve. **10**

PART-B

- Q.5 Explain lung volume and capacities with a suitable diagram. **5**
- Q.6 Explain the following technique (**ANY TWO**):
a) Rib springing.
b) Hyperinflation (Manual hyperinflation technique).
c) ACBT **2½×2**
- Q.7 Write short notes on (**ANY TWO**):
a) Rate of perceived exertion scale.
b) Dyspnea scale (ATS).
c) Functional capacity scale. **2½×2**
- Q.8 Write difference between coughing and huffing and stages of coughing. **5**
- Q.9 Explain autogenic drainage its indications and contra indications. **5**
- Q.10 What is non-invasive and invasive ventilation? **5**
- Q.11 Explain the following:
a) Bohr's effect and Haldane effect.
b) ICD. **2½×2**

End Semester Examination, May 2017
Bachelor of Physiotherapy – Seventh Semester
PEDIATRICS AND PEDIATRICS PHYSIOTHERAPY (PT-703)

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 Explain the process of development of disability. Also, throw light on various levels of prevention of disability. **10**
- Q.2 What do you understand by Dystrophy? Explain the pathophysiology of Duchenne's muscular dystrophy? Also, discuss the various clinical features of DMD across various stages. Further discuss the management of cardiorespiratory complications of a DMD patient. **10**
- Q.3 What is polio? Explain the pathophysiology, stages and clinical features of polio. Also devise the treatment protocol for PPRP for a 10 year old child. **10**
- Q.4 What is scoliosis? Explain the various methods of assessment of Scoliosis. Also, devise a treatment protocol for Scoliosis with apex at T6. **10**

PART-B

- Q.5 Write a short note on MalAbsorption syndrome. **5**
- Q.6 Briefly explain the pathophysiology, clinical features and management of chickenpox. **5**
- Q.7 Write down a short note on Down's syndrome. **5**
- Q.8 Briefly discuss spina bifida and its types. **5**
- Q.9 Explain the assessment methods of Scoliosis. **5**
- Q.10 Explain the Illingworth's principles of development. Also, differentiate between growth and development. **5**
- Q.11 What are primitive reflexes? Critically analyze the statement "Primitive reflexes are the precursor to the voluntary movement". **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Eighth Semester
COMMUNITY BASED REHABILITATION (PT-801)

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 factors supporting the CBR program. **10**
- Q.2 Discuss different strategies for CBR. **10**
- Q.3 Define 'portable water'? Discuss the advantages and disadvantages of portable water. **10**
- Q.4 Define 'mental health'. Discuss the role of physiotherapist in mental health patients. **10**

PART-B

- Q.5 Define 'family planning'. What are their objectives? **5**
- Q.6 Write a short note on 'bottom up and top down approach in CBR'. **5**
- Q.7 Briefly describe different approaches in education process. **5**
- Q.8 Classify contraceptive methods. Discuss chemical methods of contraception. **5**
- Q.9 Discuss the objectives and philosophy of health education. **5**
- Q.10 Write down advantages and disadvantages of CBR. **5**
- Q.11 Define 'CBR'. Enumerate the aims of CBR program. **5**

End Semester Examination, May 2017
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 Explain the following:
a) Little leaguer's elbow.
b) Mallet finger. **5x2**

Q.2 What are the clinical features, causes, special test and treatment for shin splint? **10**

Q.3 Explain the rehabilitation goals. Discuss in detail the rehabilitation stages and their treatment method in detail. **10**

Q.4 Name the various heat related injuries with their sign and symptoms. Write down the pre-disposing factors, prevention and management of heat Stroke. **10**

PART-B

Q.5 Enumerate the various symptoms of overtraining and add a note on management of overtraining in short. **5**

Q.6 Explain the principles of periodization. **5**

Q.7 Write the gastrointestinal symptoms associated with exercise. **5**

Q.8 Explain the pre-game meal. **5**

Q.9 Discuss the various factors affecting maximum aerobic capacity. **5**

Q.10 Discuss the various special tests used for checking shoulder instability. **5**

Q.11 Discuss the head injuries in sports and write a note on concussion. **5**

Q.12 Write short notes on:
a) Tennis elbow.
b) Hip pointer. **2½x2**

End Semester Examination, May2017
BachelorofPhysiotherapy- 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**.

PART-A

- Q.1 Define Gerontology. Discuss the different physiological changes that take place with ageing. **10**
- Q.2 Write in detail about ACSM guideline for exercise prescription in Pregnancy. **10**
- Q.3 Describe various types of burns. Discuss its estimation. What rehabilitation principles are followed in burns? **10**
- Q.4 Discuss the different occupational diseases. Explain in brief its screening and assessment. Also throw a light on the management of occupational diseases. **10**

PART-B

- Q.5 Explain the post – operative physiotherapy management after abdominal surgery. **5**
- Q.6 Explain the role of Physiotherapy in Breast Cancer in detail. **5**
- Q.7 Write in brief about management of acne vulgaris. **5**
- Q.8 Explain the treatment of CTEV. **5**
- Q.9 Explain the patho–physiology and management of otitis media. **5**
- Q.10 Explain the role of physiotherapist in wound management. **5**
- Q.11 Explain the types of urinary incontinence. **5**

End Semester Examination, May 2017
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**.

PART-A

- Q.1 Define 'rehabilitation'. Enumerate the members of rehabilitation team and describe role of any three members. **10**
- Q.2 Explain the examination for a patient requiring wheelchair. **10**
- Q.3 Define 'stroke'. Describe the assessment and rehabilitation of chronic stroke patient. **10**
- Q.4 Explain pathophysiology and rehabilitation of ortho arthritis. **10**

PART-B

- Q.5 Explain assessment of stump. **5**
- Q.6 Write a short note on 'Brachial Plexus Injury'. **5**
- Q.7 Write a short note on A.D.L.s. **5**
- Q.8 Explain pain gate theory. **5**
- Q.9 What are causes of disability? **5**
- Q.10 Write a short note on disability process. **5**
- Q.11 Write classification of cerebral palsy. **5**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Second Semester
FOREIGN LANGUAGE (SPANISH)(PT-GE-01)

Time: 2hrs

Max Marks:**50**

No. of pages: 3

Note: Attempt any five questions:

Q.1 Completa las frases con la conjugación correcta del verbo SER (Complete the following sentences with the correct form of SER).

- a) Ellos _____ mis profesores.
- b) Ella _____ la enfermera del Señor García.
- c) Yo _____ Luis Rojas y _____ abogado.
- d) Buenos días. Yo _____ José Sánchez. ¡Mucho gusto!
- e) Nosotros _____ estudiantes de la Universidad de Barcelona.
- f) Ellos _____ los presidentes del banco.
- g) Jorge y yo _____ estudiantes.
- h) Las chicas _____ de Venezuela.
- i) Ellas _____ altas.

10

Q.2 Escribe los números en español (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

10

Q.3 Rellena los campos vacíos con los artículos definidos (El, La, los, las) Fill in the blanks with definite articles.

- a) ___ perro
- b) ___ escuela
- c) ___ amigos
- d) ___ casas
- e) ___ señora
- f) ___ abogado
- g) ___ playa
- h) ___ país
- i) ___ abuelos
- j) ___ doctora

10

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 Escribe las conjugaciones del verbo HABLAR. Write the conjugations of HABLAR.

Yo	Hablo

10

Q.6 Rellena los campos con la forma correcta de TENER. Fill in the blanks with TENER.

- Mi primo _____ quince años.
- Nosotros _____ dos gatos (cats)
- ¿Quién _____ los boletos (tickets)?
- Tú _____ mucho dinero
- Los muchachos _____ bicicletas nuevas.
- Yo _____ que preparar la comida.
- La profesora _____ dolor de cabeza(headache)
- ¿Cuántos años _____ el hermano de Elisa?
- Mi familia y yo _____ un carro nuevo.
- ¿ _____ ustedes los libros de español?

10

Q.7 Responde a las preguntas. Answer the questions as shown in the example:

- ¿Cómo está José?/ enfermo – José está enfermo.
- ¿Cómo está usted?/ cansada-
- ¿Cómo estáis vosotros? / bien-
- ¿Cómo están Pilar y Carmen?/ resfriadas-
- ¿Cómo está la habitación?/ desordenada-
- ¿Cómo están ustedes?/ cómodos-
- ¿Cómo estás tú?/ no bien-
- ¿De dónde eres tú?/ Inglaterra
- ¿Estudia usted informática? la medicina

j) ¿Estudia ella español para viajar? francés

k) ¿Es Juan periodista? maestro

10

Q.8 Preséntate en español (Introduce yourself in Spanish 5 sentences). **10**

End Semester Examination, May 2017
Bachelor of Physiotherapy- Second Semester
PERSONALITY DEVELOPMENT PROGRAM (PT-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**. Each question carries equal marks.

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

- a) Ways to establish rapport with your patients.
- b) Time management matrix.
- c) Principles for powerful persuasion.

5x2

PART-A

Q.2 What is emotional intelligence? What qualities should an effective leader possess to distinguish itself by a higher degree of emotional intelligence? **10**

Q.3 What is attitude? How one can develop a positive attitude? **10**

Q.4 What is negotiation? What are the strategies for good negotiation? **10**

PART-B

Q.5 What qualities do employers seek when interviewing candidates? **10**

Q.6 What is empathetic listening? What is the difference between empathy and sympathy? **10**

Q.7 What are the five behaviour focused strategies to improve self-management? **10**