

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

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 Explain how the study of Health Promotion helps in describing socio-cultural value for determination of health promotion.

**10**

**PART-A**

Q.2 Explain Bangkok Charter for Health Promotion in a globalized world.

**10**

Q.3 Explain the various concepts or theories of attitude change.

**10**

Q.4 Write short notes on:

- a) Positive Health.
- b) Health Determinants.

**5x2**

**PART-B**

Q.5 Explain in detail the model of Health Promotion.

**10**

Q.6 Design suitable intervention for promotion of oral health program, giving suitable examples.

**10**

Q.7 Write short notes on:

- a) Oral Health Problem.
- b) Health Education.

**5x2**

# End Semester Examination, May 2018

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 Explain briefly the following:

- a) Erythrocytes are protected against hemolysis by  $H_2O_2$ .
- b) Vitamin K activates prothrombin.

**10x2**

## **PART-A**

Q.2 How is  $1, 25 (OH)_2$  cholecalciferol synthesized? Give the chemical relations. When serum calcium levels fall how does it help maintain homeostasis of calcium levels.

**20**

Q.3 a) Explain the transportation of iron in blood.

**10**

b) Discuss the importance of Zn in diet.

**10**

Q.4 What is enzyme inhibition? Explain the difference between the different types of reversible enzyme inhibition.

**20**

## **PART-B**

Q.5 a) Give the reactions of mevalonate synthesis from acetyl CoA. Summarise the synthesis of cholesterol from mevalonate.

**10**

b) What are Ketone bodies? How are they synthesized and where and how are they utilized in the body?

**10**

Q.6 a) Explain what is meant by salvage pathways in the body. How are purines and pyrimidines recycled by this pathway?

**10**

b) Give the synthesis of triacylglycerol.

**10**

Q.7 Enumerate the steps, with details, for epinephrine action when blood sugar levels fall.

**20**

# End Semester Examination, May 2018

M.Sc. (N&D) – First Semester  
**BIOCHEMISTRY (MN&D-101)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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# End Semester Examination, May 2018

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 Answer the following:

- a) What is Dromotropic and Inotropic effect?
- b) What is subliminal syringe?
- c) What is Chyme and Chyle?
- d) What is apnea, biot's and breathing?
- e) What is GFR?
- f) Name two bile salts.
- g) What is Landsteiner Law?
- h) State two functions of Plasma Protein.
- i) What is CSF?
- j) Define cardiac output.

**2x10**

### **PART-A**

Q.2 a) What are the different processes by which cellular materials transfer?

**10**

b) State the functions of blood.

**10**

Q.3 Describe the gastric secretion? Give detailed discussion of fat absorption and metabolism. Discuss the functions of bile.

**20**

Q.4 Give a detailed note on ECG. Discuss about composition, circulation and significance of CSF. Discuss the difference between both autonomic system nerve fibres.

**20**

### **PART-B**

Q.5 How does respiration regulation take place? Describe the structure and functions of different respiratory tract.

**20**

Q.6 What is cardiac cycle and discuss with diagram? Define Blood pressure and its regulation.

**20**

Q.7 a) Discuss the structure of Juxtaglomerular apparatus and their functions.

**10**

b) What is Micturition? Give detailed discussion.

**10**

# End Semester Examination, May 2018

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

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

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 Discuss nutrition in historical retrospect in detail.

**20**

### **PART-A**

Q.2 Write short notes on:

- a) Simmering.
- b) Pan Broiling.
- c) Pressure Cooking.
- d) Shallow Frying.

**5x4**

Q.3 What do you understand by relationship between food, nutrition and health? **20**

Q.4 Explain the structure of cereals and pulses. Also, discuss the culinary uses and nutritive value of nuts and oilseeds.

**20**

### **PART-B**

Q.5 Discuss the components of energy expenditure and factors affecting the same, in detail.

**20**

Q.6 Define protein quality. Discuss biological and chemical methods of assessment of protein quality in detail.

**20**

Q.7 Explain the different principles of food preservation, in detail. What do you understand by causes of food spoilage?

**20**

**End Semester Examination, May 2018**  
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 any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Illustrate all those points which should be considered while preparing any diet plan. **20**

**PART-A**

Q.2 Discuss the physiological changes during infancy. How do these influence the nutritional requirement of an infant?  
**20**

Q.3 a) Discuss the nutritional requirement of a five year old child.  
**10**  
b) Comment on the food preferences of a preschooler.  
**10**

Q.4 Write short notes on:  
a) Complementary feeding.  
b) Significance of growth chart.  
c) Factorial and depletion-repletion method of RDA derivation.  
d) Food Pyramid.  
**5x4**

**PART-B**

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

Q.6 a) Discuss the physiological changes occur during pregnancy.  
**10**  
b) Highlight the nutritional needs and dietary modification suggested during first six months of lactation.  
**10**

Q.7 a) Describe the nutritional requirements of industrial worker in detail.  
**10**  
b) Discuss the dietary alternations suggested for space worker.  
**10**

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

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 question carries equal marks.

Q.1 Explain in detail the health benefits of various Functional Foods.  
**10**

**PART-A**

Q.2 Write short notes on:  
a) Fatty Acids.  
b) Antioxidants.  
**5x2**

Q.3 Discuss the categories of nutraceuticals. Give examples for each category with explanation.  
**10**

Q.4 Write down the mechanism of action of the following:  
a) Prebiotics.  
b) Cinnamon.  
**5x2**

**PART-B**

Q.5 Explain the health benefits of the following:  
a) Cocoa.  
b) Berries.  
**5x2**

Q.6 Explain various regulatory and marketing issues related to use and selling of nutraceuticals.  
**10**

Q.7 Give functional component and its action for the following:  
a) Soy.  
b) Cabbage/Onions.  
**5x2**

**End Semester Examination, May 2018**  
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 Describe the different steps involved in a research process. Illustrate with a suitable example.

**10**

**PART-A**

Q.2 a) What is the difference between probability and non-probability samples?

**4**

b) Discuss the importance of the following in research methods:

i) Hypothesis Construction.

**3**

ii) Selection of Research Design.

**3**

Q.3 Compare the following pairs of terms:

a) Null and Alternate Hypothesis.

b) Type I and Type II errors.

**5x2**

Q.4 a) Calculate mean and median for the given set of scores:

59, 65, 71, 67, 61, 63, 69, 73

**4**

b) Calculate variance and standard deviation of the given set of scores:

15, 14, 11, 11, 9

**4**

c) The mean and standard deviation of a set of scores is 100 and 20 respectively. What will be the new mean and standard deviation if:

i) 10 points are subtracted from each score.

ii) Each score is multiplied by 2.

**2**

**PART-B**

Q.5 Enlist the various commonly used methods of primary data collection in the field of Nutrition and Dietetics. Discuss the utility of any one method, giving its merits and demerits.

**10**

Q.6 What does the term “significant” imply in the results of a statistical test? Explain the concept of  $\alpha = 0.05$ , giving a suitable example.

**10**

Q.7 The following are ages (years) and systolic blood pressures (mmHg) of apparently healthy adults:



**Age (X)**

20  
43  
63  
26  
53  
31  
58  
46  
58  
70

**B.P (Y)**

120  
128  
141  
126  
134  
128  
136  
132  
140  
144

Find the relationship between the two variables.

**10**

**End Semester Examination, May 2018**  
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 What is Henderson-Hasselbalch equation? What is the significance of pH indicators?

**20**

**PART-A**

Q.2 Discuss the principle and working of spectrophotometer.

**20**

Q.3 Write short notes on:

a) Colorimetry.

b) Photometry.

**10x2**

Q.4 What is Beer-Lambert's law? Explain the principle and working of GLC.

**20**

**PART-B**

Q.5 Write short notes on:

a) RIA.

b) NMR.

**10x2**

Q.6 What is ELISA? Explain its significance in hematology.

**20**

Q.7 What is electrophoresis? Explain various types of electrophoresis used in clinical studies.

**20**

# End Semester Examination, May 2018

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 Plan a Nutrition Care Process for a 65 year old male who is suffering with diabetes mellitus. He is vegetarian and belongs to middle income group. His weight is 60 Kg and height is 172 Cm.

**20**

### **PART-A**

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

**20**

Q.3 Write short notes on:

- a) Pathophysiology of liver cirrhosis.
- b) Dietary Management of celiac disease.
- c) Fluid Diet.
- d) Osmotic diarrhea.

**5x4**

Q.4 a) Discuss the pathophysiology and dietary management of chronic pancreatitis. **10**

b) Theories of Hepatic Encephalopathy.

**10**

### **PART-B**

Q.5 Discuss the role of dietary factors in the etiology of hypertension. What dietary changes are beneficial to control it?

**20**

Q.6 Discuss the etiological factors of obesity. How does the 'Set-Point' theory explain the problem of weight management?

**20**

Q.7 Discuss the physiological mechanisms that regulate blood glucose in the body. How are these disturbed in diabetes and what are their metabolic implications?

**20**

**End Semester Examination, May 2018**  
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 Discuss the development of food service institutions with time in detail. **10**

**PART-A**

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

Q.3 Write short notes on:

a) Types of Kitchen.

b) Service Areas.

**5x2**

Q.4 Discuss the important factors affecting selection of equipments for any food service establishment. **10**

**PART-B**

Q.5 Discuss the methods to maintain hygiene and sanitation in a catering establishment. **10**

Q.6 Write short notes on:

a) Employee Benefits.

b) Types of Service.

**5x2**

Q.7 Discuss costing and budgeting in detail for any food service institution. **10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**DOPING AND SUPPLEMENT USE (MN&D-307)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 Comment on the uses of supplements and also state whether these are good or bad. **10**

**PART-A**

Q.2 Discuss the role of simple and complex carbohydrates in exercise. **10**

Q.3 Explain the role of minerals for a sportsperson. **10**

Q.4 Discuss about the drugs use and abuse in sportspersons. **10**

**PART-B**

Q.5 Give an account of drugs prohibited by law. **10**

Q.6 Explain the ethical issues of doping. **10**

Q.7 Give an account of IOC accredited laboratories. **10**

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

Time: 2hrs

Max Marks: **50**

No. of pages: 1

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

Q.1 Explain the provisions regarding consumer dispute resolution under Consumer Protection Act.

**10**

**PART-A**

Q.2 Give any four methods of evaluation of food adulteration.

**10**

Q.3 What do you mean by HACCP? Give the importance and application of food safety. **10**

Q.4 Explain the physical and biological hazards to food during food supply in food industry.

**10**

**PART-B**

Q.5 Define ISO. Explain the structure and governance of ISO.

**10**

Q.6 Discuss the regulations regarding labeling in India.

**10**

Q.7 Write short notes on:

a) Codex alimentarius commission.

b) FSSAI.

**5x2**

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

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 Define Management. Discuss its function and principles in detail.  
**10**

**PART-A**

Q.2 Explain the following theories:  
a) Trait Theories.  
b) Behavioural Theories.  
**5x2**

Q.3 Explain following schools of management thoughts:  
a) Neo-Classical.  
b) System Approach school.  
**5x2**

Q.4 Write short notes on:  
a) Line and staff authority.  
b) Barriers to effective communication.  
**5x2**

**PART-B**

Q.5 Define Team. Explain its types and the process of creating effective team.  
**10**

Q.6 Explain the importance of effective communication in an organization, by giving suitable example.  
**10**

Q.7 Write short notes on:  
a) Job satisfaction.  
b) Functions of a Manager.  
**5x2**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**HOSPITAL ORGANISATION AND MANAGEMENT (MN&D-GE-05)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 “For health professionals study of hospital organization and management enables them to acquire expertise in their related field”. Justify the statement. **10**

**PART-A**

Q.2 Define Management. Explain the process of management in detail. **10**

Q.3 Explain any two school of thoughts of management in detail. **10**

Q.4 Write short notes on the following:  
a) Functions of planning.  
b) Centralization and decentralization of authority. **5×2**

**PART-B**

Q.5 Write short notes on the following:  
a) Importance of decision making in management.  
b) Traits of a good leader. **10**

Q.6 Differentiate between team and a group. Explain group dynamics and its importance. **10**

Q.7 Explain any two motivational theories giving suitable examples. **10**



**End Semester Examination, May 2018**  
M. Sc. (N & D) - Second Semester  
**NUTRITION RELATED DISORDERS (MNDC-206)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 A male who is 50 years old is suffering from Cancer. What Medical Nutrition Therapy will be recommended to treat the patient? **20**

**PART-A**

Q.2 Discuss the pathophysiology and dietary management of the following:  
a) Galactosemia.  
b) Wilson's disease. **10x2**

Q.3 Explain the various stages of HIA-AIDs. Give the Nutritional Management for the same. **20**

Q.4 Explain Nutritional recommendations for general adverse effects in AIDS patients. **20**

**PART-B**

Q.5 Discuss the following:  
a) Complications and Nutritional effects of Alcohol.  
b) Osteoarthritis. **10x2**

Q.6 Explain Dying Process. Write the difference between Palliative and Curative Care. **20**

Q.7 Describe the following in detail:  
a) Methods for detection of food allergy.  
b) Celiac disease. **10x2**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**CLINICAL NUTRITION (MNDC-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Describe the effect of drugs on the nutritional status in detail. **20**

**PART-A**

Q.2 Explain the pathophysiology and dietary management for the following:  
a) Diverticular disease.  
b) Ulcerative colitis. **10×2**

Q.3 Define and describe the following:  
a) Hemodialysis.  
b) Prudent diet.  
c) Mechanism of anti-diuretic hormone (ADH).  
d) Systemic lupus erythematosus. **4×5**

Q.4 Write the etiology and dietary management of:  
a) Nephrotic syndrome.  
b) Acute renal failure. **10×2**

**PART-B**

Q.5 Discuss the symptoms and pathophysiology of the following:  
a) Bronchopulmonary dysplasia.  
b) Cystic fibrosis. **10×2**

Q.6 What do you mean by Wernicke KorSakoff syndrome? Explain the pathophysiology in detail. Discuss the medical nutritional therapy. **20**

Q.7 Give the etiology and dietary management of:  
a) Osteoporosis.  
b) Multiple sclerosis. **10×2**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION IN CRITICAL CARE (MNDC-302)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 Write a note on nutritional guidelines in critical care. **10**

**PART-A**

Q.2 Explain the types of enteral and parenteral nutrition along with the complications. Draw diagrams in support. **10**

Q.3 Explain acid base abnormalities. **10**

Q.4 Write a note on ventilator support. **10**

**PART-B**

Q.5 Explain fluid and electrolyte imbalance. **10**

Q.6 Write a note on sign and symptoms, diagnosis, pathophysiology, pharmaceutical and dietary management of lung cancer. **10**

Q.7 Explain in detail pathophysiology and dietary management of:  
a) Burn patients.  
b) Trauma patients. **5×2**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**DIETETICS TECHNIQUE AND COUNSELLING (MNDC-303)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 What is nutrition counseling? Describe in detail stages of nutrition counseling. **10**

**PART-A**

Q.2 Write the areas that can be chosen by a dietician. What dietetics practice group is of interest to you? **10**

Q.3 Explain in detail any 2 direct methods of nutritional assessment with suitable examples. **10**

Q.4 Define the term communication. Discuss the principle of an effective counseling with special focus on the importance of feedback in a communication process. **10**

**PART-B**

Q.5 Give detailed information regarding general and clinical profile of OPD patients. **10**

Q.6 What strategies can be used to help people make dietary change and promote better adherence. **10**

Q.7 Discuss various stages of counseling process. Prepare a leaflet for a 60 years old male patient suffering from diabetes and obesity. **10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Fourth Semester  
**NUTRITION IN EMERGENCIES AND DISASTERS (MNDC-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

- Q.1 How do we understand special nutrition concerns arising out during various natural and man-made emergencies? Justify your answer with suitable examples. **20**

**PART-A**

- Q.2 Define emergencies and disaster and classify them. Explain the factors giving rise to emergency situations during disasters. **20**
- Q.3 What are the main causes of malnutrition situations? Explain the major deficiency diseases in emergencies. **20**
- Q.4 How do we control the communicable diseases during emergencies? Discuss the role of immunization and sanitation during emergencies. **20**

**PART-B**

- Q.5 Describe the methodology for organization of nutritional surveillance and nutritional screening during disaster situations. **20**
- Q.6 How do we assess the food needs in emergency situations? Explain the procedure of mass feeding/general food distribution system. **20**
- Q.7 What is the role of national and international rehabilitation programmes to tackle nutritional problems in emergencies? Explain any two programmes in detail. **20**

**End Semester Examination, May 2018**  
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 'Food Industry comprises of many components'. Comment. Also, explain the role of Food Scientists in Food Industry.

**20**

**PART-A**

Q.2 Discuss in detail the milling process of wheat and rice.

**20**

Q.3 Differentiate between:

a) Enzymatic and Non-enzymatic Browning.

**10**

b) Red Meat and White Meat.

**10**

Q.4 a) Explain the cheese making process in detail.

**10**

b) Mention the importance of Food labeling as per FSSAI.

**10**

**PART-B**

Q.5 a) Define Adulteration, using suitable examples of different food items.

**10**

b) Explain the following terms:

i) Artificial sweeteners.

ii) Processing of fruit juices.

**10**

Q.6 What are the risks and hazards associated with food safety and quality?

**20**

Q.7 a) Briefly describe the process of parboiling in rice.

**10**

b) 'Milk processing involves too many steps'. Explain.

**10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**ADVANCED FOOD SCIENCE AND CHEMISTRY (MNDF-301)**

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**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Draw the structure of ice and water.
- b) What are oligo saccharide sugars? Give one example.
- c) What is the difference between amylose and amylopectin protein in starch?
- d) What is peptide linkage? How primary and secondary proteins are different in their structure?
- e) What are texturized proteins?
- f) Name two enzymes used in waste management.
- g) What are food flavors? Write with one example of each.
- h) What is the effect of frying on lipids?
- i) Explain the role of enzymes in food modifications.
- j) What is the use of color additives in food? Name any 2 permitted natural colors in India. **2×10**

**PART-A**

- Q.2
- a) Explain water activity and how it is useful to explain the shelf life of food products. **10**
  - b) How many types of aqueous solutions are possible? Explain. **5**
  - c) What is phase transition of food containing water? **5**

- Q.3
- a) Write short notes on the following:
    - i) Pectin.
    - ii) Guar gum.
    - iii) Carrageenans.
    - iv) Agar-Agar. **2½×4**
  - b) Write the following reactions:
    - i) Inversion of sugar.
    - ii) Oxidation of monosaccharides. **2½×2**
  - c) What are the effects of heating on food products containing starch? **5**

- Q.4
- a) Explain the following:
    - i) Precursor of aroma compounds.
    - ii) Hydrogenated fats.
    - iii) Protein isolates and protein hydrolysate.
    - iv) Role of lipids in flavor. **5×4**

**PART-B**

- Q.5
- a) Define Enzymes. How these are classified on the basis of nomenclature? **10**
  - b) What are immobilized enzymes? What are their role in food processing? **5**
  - c) What are the factors that influence enzyme activity? **5**

- Q.6 a) Explain refrigeration and freezing and heat transfer during the processing of food products. **10**
- b) Write short notes on the following:
- i) Food irradiation.
  - ii) Pasteurization. **5×2**
- Q.7 a) Write major flavor compounds in the following:
- i) Spices. **5**
  - ii) Fats and oils. **5**
  - iii) Fruits and vegetables. **5**
- b) What are thermally induced flavors? Give examples. **2**
- c) Explain processing of coffee, in detail. **5**
- d) Write the difference between natural and synthetic colors with 2 examples each. **5**



**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**FOOD BIOTECHNOLOGY (MNDF-302)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

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

- Q.1 Explain the scope of food biotechnology. Also, discuss the current status of the application of traditional and new biotechnologies in food processing in developing countries. **10**

**PART-A**

- Q.2 a) What do you understand by the term secondary metabolites? Explain with example. **5**  
b) Define food fermentor. Give details of working principle of the plug flow reactor. **5**
- Q.3 What do you understand by Gene Cloning? Discuss the steps involved in plasmid cloning strategy. **10**
- Q.4 What do you understand by Genetic Engineering? Explain with suitable examples. **10**

**PART-B**

- Q.5 Write down about the production method of the following:  
a) Penicillin.  
b) Citric acid. **5×2**
- Q.6 Write short notes on the following:  
a) Immobilized enzymes.  
b) Lipase production. **5×2**
- Q.7 a) What do you understand by the term Bioremediation? **4**  
b) Give the use of enzyme in the production of the following:  
i) Wine.  
ii) Cheese.  
iii) Meat tenderizing. **2×3**

# End Semester Examination, May 2018

M. Sc. (N & D) – Third Semester

## FOOD PRODUCT DEVELOPMENT AND MARKETING (MNDF-303)

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

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

- Q.1 What is the significance of new food product development in clinical nutrition and dietetics? Support your answer with the help of an example.  
**10**

### **PART-A**

- Q.2 “Market analysis at pre-launch and post-launch of a product is vital”. Comment upon this statement using at least two examples. **10**
- Q.3 Write short notes on the following:  
a) Economic evaluation of food product development.  
b) Role of technology in product development. **5×2**
- Q.4 How can you carry out consumer research on “Baby foods”? Prepare a suitable questionnaire to carry out this consumer research in support of your answer. **10**

### **PART-B**

- Q.5 What is screening in product development? List all the major factors involved in product screening. **10**
- Q.6 Write short notes on the following:  
a) Food spoilage.  
b) Product design. **5×2**
- Q.7 Describe the various methods of sensory evaluation of the products. Prepare a sample sensory evaluation sheet (any one) for any product of your choice. **10**

**End Semester Examination, May 2018**  
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 Comment upon the following:  
“Microorganisms: their harmful and beneficial role in food industry.”  
**20**

**PART-A**

- Q.2 Write short notes on the following:  
a) Bacteria.  
b) Yeast.  
**10x2**
- Q.3 What are the various phases of growth in the life cycle of a microorganism? Explain TDT curve.  
**20**
- Q.4 What is Danger Zone? Write a note on spoilage caused by microbes in following foods:  
a) Eggs.  
b) Milk and Milk products.  
**20**

**PART-B**

- Q.5 Write short notes on the following:  
a) GMP.  
b) Food Poisoning.  
**10x2**
- Q.6 What is Personal hygiene? What is the role of food handler in food industry?  
**20**
- Q.7 What is Industrial Microbiology? Explain the production of any two food products involving microbes.  
**20**

**End Semester Examination, May 2018**  
M.Sc. (N&D) – Second Semester  
**NUTRITION AND PUBLIC HEALTH (MNDP-206)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

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

Q.1 Discuss the evolution of the science of public health. **20**

**PART-A**

Q.2 Explain the different determinants of health in detail. **20**

Q.3 Discuss the different study designs in epidemiology in detail. **20**

Q.4 Discuss the aim, scope and content of Public Health Nutrition in detail. **20**

**PART-B**

Q.5 Write short notes on:

a) Direct methods of assessing nutritional status.

b) Indirect methods of assessing nutritional status.

**10x2**

Q.6 Explain the etiology and preventive strategies for PEM and Nutritional Anemia in detail. **20**

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

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**PROGRAMMES AND POLICIES FOR FOOD AND NUTRITION  
SECURITY  
(MNDP-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Discuss in detail any one issue related to food and nutrition security in India? Support your answer with suitable data/example. **20**

**PART-A**

Q.2 Describe (**any two**) topics given below, in detail:

- a) Swachh Bharat Abhiyan.
- b) NREGA.
- c) AAY.

**10×2**

Q.3 Discuss the role of public sector programmes for improving food and nutrition security in the country. **20**

Q.4 Write a note on various short term and long term plans of government to combat/address the problems associated with food security. **20**

**PART-B**

Q.5 What is malnutrition? What are the various national programmes to overcome the micronutrient deficiency in India? **20**

Q.6 Write short notes on the following:

- a) Organic foods.
- b) Food supplementation.

**10×2**

Q.7 What is “Global Hunger Index”? Discuss its significance with the help of examples. **20**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**PROGRAM PLANNING IN PUBLIC HEALTH (MNDP-302)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

Q.1 Discuss the concept of health economics and its impact on health planning in detail.

**10**

**PART-A**

Q.2 Describe the planning cycle, in detail. **10**

Q.3 Write short notes on the following:

a) Cost benefit analysis with example.

b) Merit and demerits of program development chain model. **5×2**

Q.4 Explain various steps of Sussman's model. Illustrate with example. **10**

**PART-B**

Q.5 Describe the importance and steps of "Program Evaluation and Review Technique (PERT)". **10**

Q.6 Write the aim, objectives, beneficiary and significance of National Health Policy. **10**

Q.7 Give the names of Health Committees of Government of India. Describe any one, in detail.

**10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION COMMUNICATION FOR HEALTH PROMOTION**  
**(MNDP-303)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 In the process of change, explain the role of Nutrition Communication for Health Promotion. **10**

**PART-A**

Q.2 Explain in detail various strategies for intervention at ecological level. **10**

Q.3 Critically evaluate National Nutrition Guidelines and their role in nutrition/health promotion. **10**

Q.4 Write short notes on the following:  
a) International guidelines in health promotion.  
b) Factors affecting food choices. **5×2**

**PART-B**

Q.5 Write short notes on the following:  
a) Importance of Nutrition Advocacy.  
b) Behaviour change communication. **5×2**

Q.6 Explain various ethics in nutrition to be followed by health professionals. **10**

Q.7 Explain, in detail, the process of developing and field testing of communication material for various Community Development Programs. **10**

**End Semester Examination, May 2018**  
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 How does epidemiology play an important role in the prevention of health problems in public? Discuss. **20**

**PART-A**

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

Q.3 Discuss protein energy malnutrition (PEM) in detail. **20**

Q.4 Explain severe acute malnutrition and any two micronutrient deficiencies of public health significance in detail. **20**

**PART-B**

Q.5 Discuss in detail the public health implications and preventive strategies for hypertension, coronary heart disease and dental caries. **20**

Q.6 Write short notes on:  
a) Land and water resources and food supply.  
b) Malnutrition, health and productivity. **10x2**

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



**End Semester Examination, May 2018**  
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 Discuss the role of Nutrition for a sportsperson.  
**20**

**PART-A**

Q.2 Explain the relationship of food intake with exercise in detail.  
**20**

Q.3 Write the importance of pre-game, during-game and post-game meals for a sportsperson.  
**20**

Q.4 Discuss the components of Female Athlete Triad. Also, suggest prevention strategies for the same.  
**20**

**PART-B**

Q.5 Explain the role of physical activity as an important factor in weight control.  
**20**

Q.6 Write short notes on following Ergogenic Acids:  
a) Amphetamines.  
b) Diuretics.  
c) Oxygen Supplementation.  
d) Human Growth Hormone.  
**5x4**

Q.7 Discuss in detail about (**any four**) supplements and sports foods.  
**20**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**NUTRITION FOR VARIOUS GAMES AND SPORTS (MNDS-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

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

Q.1 Discuss the benefits of eating a well-balanced diet in sports. Also, state the need to play sports. **20**

**PART-A**

Q.2 Explain the principles of proper nutrition in wrestling, giving suitable examples of food choices to be followed. **20**

Q.3 Discuss in detail about the components of training diet for racket players giving suitable examples of each food group. **20**

Q.4 Plan an off season sample menu for a wrestler. Also, compute the RDAs. **20**

**PART-B**

Q.5 Discuss the history of women in sports. **20**

Q.6 Discuss the banned substances and their effects in sportsperson. **20**

Q.7 What gynaecological disorders does female sportsperson suffer from? Explain. **20**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**EXERCISE PHYSIOLOGY (MNDS-302)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

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

Q.1 Discuss different protocols of measurement of maximum aerobic capacity.  
**10**

**PART-A**

Q.2 Write short notes on the following:  
a) Oxygen dissociation curve.  
b) Bucket handle movement of ribs.  
c) Role of diaphragm during breathing.  
d) Role of intrapleural pressure during breathing. **2½×4**

Q.3 Discuss different physiological changes that take place at high altitude and in hot desert condition during moderate exercise. **10**

Q.4 What is lactate threshold? Discuss the metabolic processes during immediate and short term intense exercise. **10**

**PART-B**

Q.5 Discuss the aerobic and anaerobic adaptation changes that take place during exercise training. **10**

Q.6 Write short notes on the following:  
a) General training principle.  
b) Type-I and Type-II muscle fiber.  
c) Different lung volumes and capacities.  
d) Co<sub>2</sub> transport. **2½×4**

Q.7 What are the important immune and bone function changes that take place during adaptation to exercise. Write their importance. **10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Third Semester  
**SPORTS BIOCHEMISTRY (MNDS-303)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

Q.1 Define the following:

- a) Glycosaminoglycans.
- b) Derived lipids.
- c) Amino acids.
- d) Structure of galactose.
- e) Polysaccharides.

**2×5**

**PART-A**

Q.2 What are the functions of carbohydrates? How are they classified? Explain all its types, with suitable examples and structures. **10**

Q.3 For a sports person, what is the role of proteins? How are they utilized to build muscle mass? Can it be used as energy source? If yes, how? **10**

Q.4 If an athlete is at fed state, which metabolic pathway will be providing him energy and how? **10**

**PART-B**

Q.5 Which metabolic cycle is called hub of metabolism and why? Explain all its steps, in detail. **10**

Q.6 What are lipids? Explain in detail the compound lipids. Also, mention any ten functions of it. **10**

Q.7 Explain how Liver is a producer of glucose. Also, explain the cycle which produces glucose in liver. **10**

**End Semester Examination, May 2018**  
M. Sc. (Nutrition and Dietetics) – Fourth Semester  
**CURRENT TRENDS IN SPORTS NUTRITION (MNDS-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Discuss the current trends in sports nutrition with reference to:

- a) Diet
- b) Supplements

**10x2**

**PART-A**

Q.2 Explain in detail, the current nutritional guidelines for athletes in training.

**20**

Q.3 Discuss the career opportunities in sports management companies.

**20**

Q.4 Give a description of the roles and functions of BCCI.

**20**

**PART-B**

Q.5 Give an account of the issues faced by the Sports Administrators on day to day basis.

**20**

Q.6 Explain about the drug abuse and gratuitous violence in sports.

**20**

Q.7 What is new Product Development? Explain the factors affecting it in detail.

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy – First Semester  
**BUSINESS DEVELOPMENT IN HEALTH CARE (MPT-001)**

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 Answer the following:
- a) Explain information technology (ICT) for mental health with suitable example.
  - b) Explain patient safety in health care.
  - c) Role of e-Health.
  - d) Define Mental Health.
  - e) Quality Management.
- 2×5**

**PART-A**

- Q.2 What is the role of Policy options for Health System Improvement?  
**10**
- Q.3 What are the workforces required for delivering the care in health care sectors. Explain their roles.  
**10**
- Q.4 Write down the essential factors that determine the structure of local safety nets. **10**

**PART-B**

- Q.5 Define Quality in Health Care. Explain its importance. What are the factors affecting the quality in health sector?  
**10**
- Q.6 What are the different sectors of the Health Care System?  
**10**
- Q.7 Explain the challenges in healthcare system improvement. Explain all the measures. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy – First Semester  
**KINESIOLOGY AND BIOMECHANICS (MPTM-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 **Answer briefly:**

- a) Determinants of gait.
- b) Difference between walking and running.
- c) Q-Angle.
- d) Patellar Alta and Baja with method of measurement.
- e) Genu valgum.
- f) Enlist any four WRMSD.
- g) Differentiate between Arthrokinematics and Osteokinematics.
- h) Define Hand-to-knee gait.
- i) Define Young's Modulus.
- j) Arches of Foot.

**2x10**

**PART-A**

Q.2 Describe biomechanics of tibio-femoral and patello-femoral joints with diagrams. **20**

Q.3 a) Explain stress-strain curve.

**8**

b) What are the different categories of joint? Discuss the characteristics of synovial joint.

**12**

Q.4 a) Describe dynamic stabilization of Gleno-Humeral joint.

**12**

b) Discuss different spatial parameters of Gait.

**8**

**PART-B**

Q.5 Discuss the importance of biomechanics in Manual Therapy. Explain with examples.

**20**

Q.6 Define gait cycle. What are the different phases of gait cycle? Describe any three abnormal gait patterns.

**20**

Q.7 Discuss the principles of Ergonomics. Describe the sitting alignment of computer work station as per ergonomic principles.

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy — Second Semester  
**EXERCISE PHYSIOLOGY (MPTM-201/MPTN-201)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

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

- Q.1 Write short notes on the following:
- a) Role of oxygen in energy metabolism.
  - b) What is oxygen debt?
  - c) How to measure work in Bicycle Ergometer?
  - d) What is stroke volume?
  - e) What is cold rigor?
  - f) Write on static training.
  - g) What is periodization?
  - h) What is long term acclimatization?
  - i) What is SCUBA?
  - j) Explain how heat quality is assessed. **2×10**

**PART-A**

- Q.2 Explain the training at high altitude and sea level performance. Write about the different high altitude medical problems. **20**
- Q.3 Write in detail about blood pressure change during rest and during different forms of exercises. Also, write its influence on changes in blood flow regulation with exercise. **20**
- Q.4 Write notes on the following:
- a) Role of endocrine function in anaerobic exercises. **10**
  - b) Effect of detraining and over training on the athlete performance. **10**

**PART-B**

- Q.5
- a) Describe neuromuscular adaptations to strength training. **10**
  - b) Describe the muscle spindle structure and its function. **10**
- Q.6 Write about the energy requirement during different phases of exercises. **20**
- Q.7
- a) Explain how pulmonary ventilation is changed during test and exercise. **10**
  - b) Describe test protocols for assessing aerobic power capacity. **10**



**End Semester Examination, May 2018**  
Master of Physiotherapy — Second Semester  
**EVALUATION AND DIAGNOSIS IN MUSCULOSKELETAL (MPTM-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Answer the following in brief:

- a) What is apparent limb length measurement?
- b) List various deformities in Rheumatoid arthritis.
- c) What do you understand by VAS?
- d) Explain tendinitis of supraspinatus muscle.
- e) Define MUAP.
- f) Explain Coxa Valga.
- g) Explain Ape Thumb deformity.
- h) What is the rule of nine?
- i) Explain one method of static balance assessment.
- j) Explain the clinical features of rickets.

**2×10**

**PART-A**

Q.2 Write in detail about the physical disability evaluation.

**20**

Q.3 Enlist the common disorders of shoulder joint that you see in physiotherapy OPD. Explain any one with its assessment and physiotherapeutic management.

**20**

Q.4 Explain Ankylosing Spondylitis. Write down its physiotherapeutic assessment, diagnostic test and management.

**20**

**PART-B**

Q.5 a) What is the significance of Radiography in physiotherapy? Explain the radiographic findings you will get in bilateral osteoarthritic knee (grade-3). **10**

b) What is the difference between CT scan and MRI?

**10**

Q.6 Explain assessment, diagnosis and management for radial nerve injury.

**20**

Q.7 What is amputation? Write in detail about the pre-and-post operative physiotherapeutic management of above knee amputation.

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Musculoskeletal) - Second Semester  
**PHYSIOTHERAPEUTICS - II (MPTM-203)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

- Q.1 Answer the following:
- a) Explain Semi-Active Wheelchairs.
  - b) Write down the uses of Force Platform in Rehabilitation.
  - c) What are the types of dysfunctions according to McKenzie?
  - d) Explain convex-concave rule of mobilization.
  - e) Explain SNAG and NAG.
  - f) Explain types of derangement syndrome.
  - g) What is SIN?
  - h) Explain lateral shift of Lumbar spine.
  - i) Explain Slalom Technique.
  - j) Explain principle of Taping.

**2x10**

**PART-A**

- Q.2 Explain grades of Kaltenborn mobilization. Write its therapeutic uses with examples. **20**
- Q.3 Write in detail about the principles of Mulligan Mobilization therapy. Explain for shoulder joint. **20**
- Q.4 Explain in detail about the taping technique for scapular dyskinesia. What is the principle behind this? **20**

**PART-B**

- Q.5 Explain in detail various basic wheelchair skills used in rehabilitation. **20**
- Q.6 Write about the history of Yoga and its therapeutic benefits. Explain Pranayam in detail. **20**
- Q.7 Explain Isokinetic Dynamometry. How is it different from other assessment technique? **20**

**End Semester Examination, May 2018**  
Master of Physiotherapy - Second Semester  
**APPLIED PSYCHOLOGY (MPTM-204/MPTN-204)**

Time: 2 hrs

Max Marks: **50**

No. of pages: 1

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

Q.1 Attempt the following:

- a) Define 'Attention'.
- b) Define 'Memory' and name the processes of memory.
- c) What do you mean by Mental Retardation?
- d) Define 'Phobia'.
- e) What is ADHD?

**2×5**

**PART-A**

Q.2 What is Cognitive Psychology? Write about its three main divisions and the impact of the decline of behaviorism on cognitive psychology.

**10**

Q.3 Discuss the features and management of Autism.

**10**

Q.4 What is Perception? Discuss the types of deficits in perception.

**10**

**PART-B**

Q.5 a) Describe the types of Attention.

**5**

b) Discuss the major theories of consciousness.

**5**

Q.6 Discuss the theoretical approaches to perception.

**10**

Q.7 Define Wellness in Rehabilitation. What are the different psychological adaptation models?

**10**

**End Semester Examination, May 2018**  
MPT (MUSCULOSKELETAL) – Third Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN MUSCULOSKELETAL-II**  
**(MPTM-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Answer the following in brief:

- a) Define VIC.
- b) Define Mallet finger.
- c) Describe wrist sprain.
- d) Describe any clinical test for tennis elbow.
- e) Enlist the criteria for use of assistive devices.
- f) Classify falls in elderly.
- g) Define Dwyer's osteotomy.
- h) Enlist mental problems in elderly.
- i) Define Ilizarov technique.
- j) Differentiate between impairment, disability and handicap.

**2×10**

**PART-A**

Q.2 Describe the components of physical disability along.

**20**

Q.3 Describe the pre and post immobilization physiotherapy management in the case of long bone fractures.

**20**

Q.4 Describe slipped disc along with signs and symptoms, clinical diagnostic tests and PT management.

**20**

**PART-B**

Q.5 Describe the pre and post-operative assessment and rehabilitation of Total Knee Replacement (TKR). Also, describe the precautions.

**20**

Q.6 Describe the various sensory motor changes and adaptations in elderly. Discuss patient education as a treatment modality.

**20**

Q.7 a) Classify assistive devices. Describe each one in detail.

**10**

b) Discuss measurement of walking aids.

**10**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Third Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN MUSCLED  
SKELETAL-II (MPTM-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Answer the following in brief:

- a) Define VIC.
- b) Define mallet finger.
- c) Describe wrist sprain.
- d) Describe any clinical test for tennis elbow.
- e) Enlist the criteria for use of assistive devices.
- f) Classify falls in elderly.
- g) Define Dwyer's osteotomy.
- h) Enlist mental problems in elderly.
- i) Define Ilizarov technique.
- j) Differentiate between impairment, disability and handicap. **2×10**

**PART-A**

- Q.2 Describe the components of physical disability along. **20**
- Q.3 Describe the pre and post immobilization physiotherapy management in case of long bone fractures. **20**
- Q.4 Describe slipped disc along with signs and symptoms, clinical diagnostic test and PT management. **20**

**PART-B**

- Q.5 Describe the pre and post-operative assessment and rehabilitation of T.K.R. Also describe the precautions. **20**
- Q.6 Describe the various sensory motor changes and adaptations in elderly. Discuss patient education as a treatment modality. **20**
- Q.7 a) Classify assistive devices. Describe each in detail. **10**  
b) Discuss measurement of walking aids. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Third Semester  
**CURRENT CONCEPT AND SCIENTIFIC RATIONALE IN**  
**MUSCULOSKELETAL**  
**(MPTM-302)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Answer the following in brief:

- a) Principle of PRT.
- b) Functions of fascia.
- c) Presentation of somatic dysfunction.
- d) Explain in brief the three tier model for assessing spinal stability.
- e) DAISE model for developing touch.
- f) Explain thoracic inlet release.
- g) Define segmental stabilization.
- h) Explain cerebrospinal fluid pathway.
- i) Frontal lift.
- j) Neutral zone.

**2×10**

**PART-A**

Q.2 What are trigger points? Explain different types of trigger points alongwith their causes and treatment. **20**

Q.3 Explain the principle of pilates? Explain the types of pilates and give three examples of each level? **20**

Q.4 Explain in detail the principal of cyriax mobilization? Explain the technique with example? **20**

**PART-B**

Q.5 Define muscle energy technique. What are the basic elements, principles and treatment guidelines of MET? Write MET procedure for quadratus lumborum. **20**

Q.6 Describe the clinical assessment of deep muscles of lumbar spine. How will you treat motor control problem of lumbopelvic region? **20**

Q.7 Explain the physiological and therapeutic principles of osteopath? **20**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Fourth Semester  
**ASSISTIVE TECHNOLOGY IN PHYSIOTHERAPY (MPTM-404)**

Time: 2 Hours  
**50**

Max Marks:

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 Answer the following:
- a) Types of crutches.
  - b) Name the components of prosthesis.
  - c) Justify for contralateral use of cane on unaffected side.
  - d) Therapeutic use of Taping.
  - e) Measurement of unilateral cane.

**2x5**

**PART-A**

- Q.2 Describe the measurement for axillary crutch and the different types of axillary crutch gait patterns.

**10**

- Q.3 What is Prosthetic feet? Discuss the different types of prosthetic feet.

**10**

- Q.4 Describe the different measurements for wheelchair prescription.

**10**

**PART-B**

- Q.5 What are the three biomechanical principles of orthosis? Name the orthosis used for the following conditions:

- a) Scoliosis
- b) Radial nerve palsy
- c) Low back pain
- d) Brachial plexus injury
- e) Claw hand.

**10**

- Q.6 Discuss the principles of Taping. Describe the technique of Taping for Ankle Sprain. **10**

- Q.7 a) What do you understand by Energy Conservation Strategy and Activity Pacing? **5**

- b) Briefly describe two types of prosthesis based on construction design.

**5**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Fourth Semester  
**APPLIED CLINICAL NUTRITION (MPTS/MPTN/MPTM-403)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

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

Q.1 Discuss the essentials of Meal Planning.  
**10**

**PART-A**

Q.2 Explain Anthropometric and Dietary assessment, methods of Nutritional status in detail.  
**10**

Q.3 Explain the Therapeutic adaptation of a Normal diet.  
**10**

Q.4 Explain types of Enteral feeding in detail.  
**10**

**PART-B**

Q.5 Explain the Pathophysiology and Dietary management of Atherosclerosis.  
**10**

Q.6 Define Diabetes. Give the Dietary treatment of Type 2 Diabetes.  
**10**

Q.7 Explain the following in detail:  
a) Gluten Enteropathy.  
b) Phenylketonuria.  
**5x2**



**End Semester Examination, May 2018**  
Master of Physiotherapy – First Semester  
**RESEARCH METHODOLOGY AND BIostatISTICS**  
**(MPTM/MPTN/MPTS-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 Answer briefly:
- Define face validity.
  - Define the types of Data series.
  - Differentiate between interval and ratio measurements.
  - Define Research Problem.
  - Define level of significance.
  - Differentiate between Type I and II errors.
  - Mention the components of research proposal.
  - Define Kurtosis.
  - Differentiate between dependant and independent variables.
  - Mention any four threats to internal validity.

**2x10**

**PART-A**

- Q.2 Discuss the importance of research in clinical practice, with examples. Describe the inductive and deductive approaches in research.

**20**

- Q.3 a) Describe different types of data collection and representation.

**5**

- b) Describe the various sampling methods used in research.

**15**

- Q.4 What are the various ethical principles followed in clinical research?

**20**

**PART-B**

- Q.5 The marks obtained by a group of 10 students in graduation and MBA entrance test were found as under.

Graduation: 50, 52, 55, 60, 62, 65, 65, 66, 70, 75

Entrance Test: 52, 50, 57, 65, 65, 62, 65, 65, 71, 78

Find the regression equations from these data.

**20**

- Q.6 a) Explain different types of distributions with examples.  
b) Describe the statistical tests used when the data is normally distributed.  
c) Mention how errors occur in data?  
d) Describe theft of Intellectual Property.

**5x4**

Q.7 A certain drug is claimed to be effective in curing cold. In an experiment on 500 patients with cold, half, of them were given the drug and half of them were given the sugar pills. The patients reactions are recorded in the following table:

	Helped	Harmed	No effect	Total
Drug	150	30	70	250
Sugar Pills	130	40	80	250
Total.	280	70	150	500

On the basis of the data can it be concluded that there is significant difference in the effect of the drug and sugar pills.

$$(v = 2, \psi^2 0.05 = 5.99)$$

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Third Semester  
**WOMEN HEALTH (MPTM/MPTN/MPTS-303)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

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

- Q.1 Answer the following in brief:
- a) What is occupational health?
  - b) Types of incontinence.
  - c) Write down various causes of infertility in women.
  - d) Measures to prevent post natal depression.
  - e) What is endometriosis? **2×5**

**PART-A**

- Q.2 Why is it important to have balance between work and family? How can one achieve a balance between work and family life? **10**
- Q.3 Discuss the etiology, patho-physiology and clinical features of cervical cancer. Also add a note on its management. **10**
- Q.4 a) Throw light on the reproductive health and occupational hazards among women workers. **5**
- b) Write a short note on pelvic inflammatory diseases. **5**

**PART-B**

- Q.5 Explain infertility: Polycystic ovarian disease. **10**
- Q.6 Mention the general exercises for elderly female. **10**
- Q.7 Write short notes on the following:
- a) Geriatric incontinence management.
  - b) Sexual disorders in female. **5×2**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Fourth Semester  
**INTERDISCIPLINARY LEARNING (MPTM-402/MPTS-402/MPTN-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 Answer the following briefly:

- a) Workers Compensation law.
- b) Medical Records.
- c) What are the different types of Utilization Review?
- d) Differentiate between projected and non-projected AV aids.
- e) Write briefly about the principle of selection of AV aids.
- f) Differentiate between diagnosis and prognosis.
- g) Define team.
- h) Define Lesson planning.
- i) Define Problem based learning.
- j) Define Collective bargaining.

**2x10**

**PART-A**

Q.2 Describe the types of hospitals in India. Also, describe the services provided by a hospital. **20**

Q.3 Discuss the various principles of Standards of Proficiency for a Physiotherapist. **20**

Q.4 Discuss the different principles of code of conduct, as applicable for a Physiotherapist. **20**

**PART-B**

Q.5 What are the various types of teaching techniques? Explain briefly any one technique of teaching, stating its advantages and disadvantages. **20**

Q.6 Briefly outline the steps and requirements for setting up physiotherapy department. **20**

Q.7 a) Describe Bloom's Taxonomy. **10**  
b) Discuss in brief about the function and role of IAP in Physiotherapy. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Neurology) – First Semester  
**APPLIED BASIC MEDICAL SCIENCE IN NEUROLOGY (MPTN-101)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 **Answer the following in brief:**

- a) Stages of Inflammation.
- b) Types of Joints.
- c) Functions of Extra Pyramidal System.
- d) Classification of Nerve fibres.
- e) Dermatome of Plantar Reflex, Abdominal reflex.
- f) Formation of Lumber Plexuses.
- g) Functions of VIII cranial Nerve.
- h) Functions of Neuroglia.
- i) Clinical features of Meningitis.
- j) Pathology of Parkinsonism.

**2x10**

**PART-A**

Q.2 Discuss the composition of Brachial Plexuses. Also, throw light on the various condition symptoms arising due to injury to Brachial Plexuses at various levels. **20**

Q.3 Discuss the ventricular system of CNS. Also, highlight the various conditions arising due to the pathology of Ventricular system of CNS.

**20**

Q.4 What are the components of Autonomic Nervous System? Discuss the function of Autonomic Nervous System under:

- a) Normal circumstances.
- b) Stress.

**20**

**PART-B**

Q.5 What is Motor Unit potential? Explain the nerve conduction and neuromuscular junction transmission of Impulse.

**20**

Q.6 What are the various stages of Nerve regeneration? Discuss the pathology of Neuropathy.

**20**

Q.7 Discuss the pharmacokinetics and action of Drugs acting upon Brain and spinal cord.

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Neurology) – First Semester  
**KINESIOLOGY AND BIOMECHANICS (MPTN-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 Answer the following in brief:
- a) Mechanical properties of Skeletal Muscle fibre.
  - b) Angle of pull of a muscle.
  - c) Classification of equilibrium.
  - d) Determinants of gait.
  - e) Physical risk factors for WRMSD's.
  - f) Classification of joints.
  - g) Factors affecting Motor learning.
  - h) Discuss the deviation in circumductory gait.
  - i) What are various conditions of practice in Motor Learning?
  - j) Define Ergonomics.
- 2x10**

**PART-A**

- Q.2 a) Elaborate on the clinical application of Levers and mechanical advantage. **10**  
b) Explain the changes in mechanical properties skeletal muscle because of exercise and immobilization. **20**
- Q.3 Describe the various degenerative changes and compensatory actions taking place in weight bearing joints. **20**
- Q.4 Explain the biomechanics of Ankle joint. **20**

**PART-B**

- Q.5 a) Explain the spatial and temporal variables of Gait. **10**  
b) Discuss the biomechanics of stair climbing. **10**
- Q.6 What are the components of environment assessment? Explain in detail the role of environment assessment in Rehabilitation of a Patient. **20**
- Q.7 What is Augmented feedback? Discuss the role of *Augmented* feedback in various stages of Motor Learning. **20**

**End Semester Examination, May-2018**  
Master of Physiotherapy (Neurology) – First Semester  
**PHYSIOTHERAPEUTICS-I (MPTN-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 Answer the following:
- a) Enumerate various indications of L.A.S.E.R.
  - b) Define anterior pelvic tilt.
  - c) Enumerate four contradictions of sketching.
  - d) Grades of mobilization by Maitland.
  - e) Define balance.
  - f) Define Proprioception.
  - g) Define fatigue.
  - h) Open Kinematic chain exercises.
  - i) Indications of cryotherapy.
  - j) Autogenic Inhibition.

**2x10**

**PART-A**

- Q.2 Describe pain modulation at different levels.  
**20**
- Q.3 Define sketching, its types, effects and determinants of sketching.  
**20**
- Q.4 Explain various principles of Proprioceptive Neuromuscular Facilitation.  
**20**

**PART-B**

- Q.5 Define biofeedback, its principle, effects, uses and contradictions.  
**20**
- Q.6 Write in detail various techniques of relocation.  
**20**
- Q.7 Discuss various biomechanical factors for maintaining posture and discuss various postural deviations.  
**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Neurology) - Second Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN NEUROLOGY**  
**(MPTN-202)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

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

- a) Name the orthosis used for the following conditions:
  - i) Scoliosis
  - ii) Low Back Pain.
  - iii) Wrist Drop.
  - iv) Brachial Plexus Injury.
- b) Myotomes of upper limb.
- c) Modified Ashworth Scale.
- d) Types of Spinal Cord Injury according to ASIA Scale.

**5x4**

**PART-A**

Q.2 a) What is cognitive Ergonomics? Discuss the uses of Neuro Ergonomics with its principles.

**10**

b) Discuss the assessment of attention and mental workload in Neuro-Ergonomics.

**10**

Q.3 a) What is EMG Biofeedback? Describe the process involved in EMG Biofeedback. **10**

b) What are the types of Electrodes used in EMG Biofeedback? Discuss the indications and techniques used in EMG Biofeedback.

**10**

Q.4 a) Discuss the importance of Radiological Investigation in Neuro Physiotherapy. **10**

b) What are the differences between MRI and CT scan in Neurological conditions? **10**

**PART-B**

Q.5 a) Define Stroke. What are the clinical features and secondary complications of Stroke Patients?

**10**

b) Discuss the Brunnstrom stages. Describe the rehabilitation of chronic stroke patients.

**10**

Q.6 a) Describe the classification of orthosis. Discuss the biomechanical principles of orthosis.

**10**



b) Enumerate the indications and contraindications for the use of orthosis.  
**10**

Q.7 a) What are the types of Traumatic Brain Injury? Discuss the classification for Severity of Traumatic Brain Injury.  
**10**

b) What is Decorticate and Decerebrate positioning of limbs in TBI? Discuss the clinical features of TBI according to lesions of different lobes of Brain.  
**10**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Neurology) - Second Semester  
**PHYSIOTHERAPEUTICS - II (MPTN-203)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 **Answer briefly the following questions:**

- a) Recovery of function after Brain damage.
- b) Facilitatory techniques for Spasticity reduction.
- c) Principle of Music therapy.
- d) Define Learned Non Use.
- e) Principle of Rood's approach.
- f) Write down the differences between active and passive wheelchairs.
- g) Explain eight stages of yoga.
- h) What do you understand by Kinanthropometry?
- i) What are the advantages of active wheelchair in Rehabilitation?
- j) What are the physiological benefits of Yoga?

**2x10**

**PART-A**

Q.2 a) Explain the Physiology, Principles and Applications of Neuroplasticity in the recovery of Motor Function.

**10**

b) Write the assumptions of Sensory Integration for treatment of sensory processing disorder in Children.

**5**

c) Explain the principle and steps of MRP. Briefly explain the augmented feedback.

**5**

Q.3 a) Explain the reflex inhibiting techniques as Facilitation and Inhibitory techniques of NDT in the treatment of a head injured patient.

**10**

b) Discuss Brunnstrom's sequential recovery with stages of stroke.

**10**

Q.4 a) Discuss the PNF technique for the treatment of Upper limb functions in the light of evidence based practice.

**5**

b) Explain the principles of CIMT and mCIMT.

**5**

c) Critically analyze the usage of Music Therapy for neurological disorders.

**5**

d) Use of Hyperbaric Therapy for Neurologically ill patients.

**5**

**PART-B**

Q.5 a) Explain in detail the basic wheelchair skills used in rehabilitation.

**15**

b) Explain the usage of wheelchair for recreational activities.

**5**

Q.6 a) What are various Yogic practices? Briefly discuss the application and benefits of yogic postures.

**10**

b) What is pranayama? Discuss the benefits of pranayamas on various systems of body.

**10**

Q.7 a) Explain Body composition analysis? Write in detail about its importance and its uses in rehabilitation.

**10**

b) Write a short note on application of Isokinetic dynamometry in Rehabilitation. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Sports) – First Semester  
**ADVANCED BASIC MEDICAL SCIENCE (MPTS-101)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

Q.1 Attempt the following:

- a) Syncitium.
- b) How many H<sup>+</sup> ion derived from glucose metabolism?
- c) Muscle twitch.
- d) Fast and slow muscle.
- e) Pharmacokinetics of antipsychotic drug.
- f) Opiate receptors.
- g) What is fascia?
- h) Define anatomical position. What are different axes and planes of body?
- i) Osteoporosis.
- j) Muscular Atrophy.

**2x10**

**PART-A**

Q.2 Discuss the properties of muscle. What is endurance and exercise effects on it? What is OBLA?

**20**

Q.3 State the structure of muscle with diagram. Describe the pathological reflexes. What is superficial reflex?

**20**

Q.4 Discuss about muscular dystrophy. Differentiate between various cell deaths. Explain in detail about osteoarthritis. Differentiate about various vitamin D deficiencies.

**20**

**PART-B**

Q.5 Describe the basis of drug action. Use a dose response curve to demonstrate reversible and irreversible antagonists? What are the 2<sup>nd</sup> messengers and how do they work?

**20**

Q.6 Enumerate the action of sulbutamol, sodium cromoglycate, antiplatelet agents? What is benzodiazepine toxicity?

**20**

Q.7 Describe Brachial Plexus and various injuries associated with it, in detail.

**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy – First Semester  
**KINESIOLOGY AND BIOMECHANICS (MPTS-103)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

- Q.1 Write short notes on the following:
- Determinants of gait.
  - Biomechanical difference between running and walking.
  - 'Q' Angle.
  - Patellar Baja and Alta with method of measurement.
  - Genu Valgum.
  - Name any four WRMSD
  - Arthrokinematics and Osteokinematics.
  - Hand-to-knee gait.
  - Young's Modulus and Elasticity.
  - Arches of Foot.
- 2x10**

**PART-A**

- Q.2 Describe the biomechanics of tibio-femoral and Patello-femoral joints with diagram. **20**
- Q.3 Explain stress-strain curve. What are the characteristics of synovial joint and explain with diagram? What are the different categories of joints?  
**20**
- Q.4 What is dynamic stabilization of Gleno-Humeral joint? Describe different spatial parameters of gait.  
**20**

**PART-B**

- Q.5 Discuss the biomechanics of throwing in detail.  
**20**
- Q.6 Define gait cycle. What are the different phases of gait cycle? Describe any three abnormal gait patterns.  
**20**
- Q.7 Discuss the principles of Ergonomics. Describe the sitting alignment of computer work station as per ergonomic principles.  
**20**

**End Semester Examination, May 2018**  
Master of Physiotherapy — Second Semester  
**EXERCISE PHYSIOLOGY (MPTS-201)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

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

- Q.1 Write short notes on the following:
- a) Explain Athlete heart.
  - b) Explain oxidative phosphorylation.
  - c) Define second wind.
  - d) How to measure work in treadmill exercise.
  - e) Write about runner's high.
  - f) What is immediate acclimatization?
  - g) What is SCUBA?
  - h) What is Heat Rigor?
  - i) Define stroke volume.
  - j) What is OBLA?

**2×10**

**PART-A**

- Q.2 a) Explain the role of hormone on resistance training. **10**  
b) Explain how electrolyte and fluid balance affected with hormone during resistance exercise training? **10**
- Q.3 a) Explain the importance of pre-game meal. **10**  
b) Write about the advantages and disadvantages of carbohydrate loading. **10**
- Q.4 Write how functional capacity (parameters) of cardiovascular system is affected by different forms of exercises. **20**

**PART-B**

- Q.5 Discuss about thermoregulation, Clo value and G0 physiology. **20**
- Q.6 Discuss in detail immediate short and long term energy utilization during exercise. **20**
- Q.7 a) Explain about ultrastructure of muscle. **10**  
b) Write about sliding filament theory. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Sports) – Second Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN SPORTS-I**  
**(MPTS-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 Answer the following:
- a) Importance of Resisted Isometric Movements/Contraction.
  - b) Write a note on PRICER in sports physiotherapy.
  - c) Discuss about M.O.I of ACL.
  - d) Importance of warm up in injury prevention.
  - e) Write a note on greenstick fracture.
  - f) Common findings to be observed in X-Ray of Lumbosacral area.
  - g) Explain how to perform A.K.E test?
  - h) What is Rheobase?
  - i) Define Dynamic Stretching.
  - j) What is Osgood Schlatter's disease in adults?

**2x10**

**PART-A**

- Q.2 Discuss about the causes of supraspinatus tendonitis, clinical presentation and management.  
**20**
- Q.3 Discuss about M.O.I., classification of injury, clinical presentation and management of medial Meniscus.  
**20**
- Q.4 Discuss the role of shoes and protective devices in sports.  
**20**

**PART-B**

- Q.5 Discuss about the importance of S.D. Curve and EMG Biofeedback in rehabilitation of a sportsperson.  
**20**
- Q.6 Discuss about the types of shock and their management.  
**20**
- Q.7 Discuss about the first line Management in case of acute asthma and heat stroke. **20**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Sports) - Second Semester  
**PHYSIOTHERAPEUTICS - II (MPTS-203)**

Time: 3 hrs

Max Marks: **100**

No. of pages: 1

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

- Q.1 Answer the following:
- Explain Semi-Active Wheelchairs.
  - Write down the uses of Force Platform in Rehabilitation.
  - What are the types of dysfunctions according to McKenzie?
  - Explain convex-concave rule of mobilization.
  - Explain SNAG and NAG.
  - Explain the types of derangement syndrome.
  - What is SIN?
  - Explain lateral shift of Lumbar spine.
  - Define Somatotyping.
  - Explain the formula for calculating the X and Y axis somatochart.
- 2x10**

**PART-A**

- Q.2 Explain grades of Kaltenborne mobilization. Write its therapeutic uses with examples.  
**20**
- Q.3 Define Anthropometry. What are the various methods to calculate Body Fat? Write down their advantages and disadvantages.  
**20**
- Q.4 Explain in detail about taping technique for scapular dyskinesia. What is the principle behind this?  
**20**

**PART-B**

- Q.5 Explain in detail various basic wheelchair skills used in rehabilitation.  
**20**
- Q.6 Write about the history of Yoga and its therapeutic benefits. Explain Pranayam in detail.  
**20**
- Q.7 Explain Isokinetic Dynamometry. How is it different from other assessment technique?  
**20**



**End Semester Examination, May 2018**  
Master of Physiotherapy — Second Semester  
**SPORTS PSYCHOLOGY (MPTS-204)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

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

- Q.1 Write short notes on the following:
- a) Define Attention.
  - b) Pre competitive anxiety.
  - c) Name any four benefits of breathing exercises.
  - d) Qualities of a Leader.
  - e) Biofeedback training.

**2×5**

**PART-A**

- Q.2 Write down the importance of studying sports psychology as a Sports Physiotherapist. **10**
- Q.3 Define Motivation. What are the different techniques of motivation and add a note on motivation inhibitors. **10**
- Q.4 Define Relaxation and enumerate different relaxation techniques used in sports. Discuss in detail Progressive Muscle Relaxation. **10**

**PART-B**

- Q.5 Define mental imagery. How mental imagery technique helps in improving performance of an athlete. Explain. **10**
- Q.6 Discuss Anorexia Nervosa and Bulimia Nervosa in detail. **10**
- Q.7 Enumerate the different techniques of stress management. Discuss any one in detail. **10**

**End Semester Examination, May 2018**  
Master of Physiotherapy (Sports) – Third Semester  
**EVALUATION, DIAGNOSIS AND MANAGEMENT IN SPORTS-II**  
**(MPTS-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

Q.1 Answer the following in brief:

- a) Name the indication for hydrotherapy.
- b) Buoyancy.
- c) Protective equipment in squash.
- d) Percussion and vibration uses.
- e) TUE.
- f) Ergogenic aids.
- g) Duties of Doping Control Officer in short.
- h) Define periodization.
- i) Indication for massage.
- j) Pre competition massage importance.

**2×10**

**PART-A**

Q.2 What do you understand by track and field events. What are the common overuse injuries seen in track and field events? Write the etiological factors, sign & symptoms and management for shin splint. **20**

Q.3 What are the different levels of injury prevention? Discuss the principals involved in choosing/selecting the protective equipment. Name the various protective equipments used in cricket and hockey. **20**

Q.4 Define “Massage”. Discuss the different physiological effects of massage? Write a note on the effects of effleurage. **20**

**PART-B**

Q.5 a) Discuss the properties of water, advantages of water exercises over land exercises. **10**  
b) Discuss the importance of hydrotherapy in sports physiotherapy. **10**

Q.6 a) Discuss the principles of training, in detail. **15**  
b) Write a note on different methods of training. **5**

Q.7 Define “Doping”. What are the different methods of doping? Write a note on blood and gene doping. **20**

**End Semester Examination, May 2018**  
Master of Physiotherapy – Third Semester  
**CURRENT CONCEPTS AND SCIENTIFIC RATIONALE IN SPORTS**  
**(MPTS-302)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

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

- Q.1 Answer the following in brief:
- a) Contraindication to Taping.
  - b) Functions of fascia.
  - c) Presentation of somatic dysfunction.
  - d) Explain in brief the three tier model for assessing spinal stability.
  - e) DAISE model for developing touch.
  - f) Explain thoracic inlet release.
  - g) Define segmental stabilization.
  - h) Explain cerebrospinal fluid pathway.
  - i) Frontal lift.
  - j) Define Neutral Zone. **2×10**

**PART-A**

- Q.2 What are trigger points? Explain different types of trigger points and mention the causes and treatment of trigger points. **20**
- Q.3 Explain the principle of pilates. Explain the types of pilates and give three examples of each level. **20**
- Q.4 Explain, in detail, the principal of Cyrix mobilization. Explain the technique with example. **20**

**PART-B**

- Q.5 Discuss the various heart rate monitoring devices with their advantages and disadvantages. Discuss, in detail, the training in heart rate zones. **20**
- Q.6 Describe clinical assessment of deep muscles of lumbar spine. How will you treat motor control problem of lumbopelvic region? **20**
- Q.7 Define Kinesiotaping. Describe indications, contraindications and principles of application of Taping. **20**

# End Semester Examination, May 2018

Bachelor of Physiotherapy- Fifth Semester

## MARKETING MANAGEMENT (PT-002)

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 Answer the following:
- What is marketing?
  - What is targeting?
  - Name any five products that use gender as basis of segmentation.
  - Give two benefits of consumer behavior.
  - Mention four ways of promotion.
- 2×5**

### **PART-A**

- Q.2 What is Management? Explain the various functions of management.  
**10**
- Q.3 What is decision making? Explain the process of decision making.  
**10**
- Q.4 Write short notes on:
- Collective Bargaining.
  - Job Satisfaction.
- 5x2**

### **PART-B**

- Q.5 Write short notes on:
- Product.
  - Price.
  - Place.
  - Promotion.
- 2½x4**
- Q.6 What are the various factors that affect consumer behavior? Briefly explain each one of them.  
**10**
- Q.7 What is quality management? Explain some quality assurance programs in hospitals. **10**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – First Semester  
**ANATOMY-I (PT-101)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

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

**PART-A**

- Q.1 Describe the origin, insertion, nerve supply and action of following muscles:  
a) Trapezius.  
b) Hamstring. **5×2**
- Q.2 Describe the components of cardiovascular system and explain the difference between artery and vein. **10**
- Q.3 Draw the labeled diagram of heart. **10**
- Q.4 Describe the femoral triangle. **10**

**PART-B**

- Q.5 Describe the ball and socket joint. **5**
- Q.6 Define the bronchopulmonary segment. **5**
- Q.7 Explain the lymphatic drainage of axilla. **5**
- Q.8 Describe the rotator cuff. **5**
- Q.9 Explain the ligaments of knee joint. **5**
- Q.10 Classify the bones. **5**
- Q.11 Describe arches of foot. **5**
- Q.12 Write a short note on Haversian system. **5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – First Semester  
**PHYSIOLOGY-I (PT-102)**

Time: 3 hrs.

Max Marks: **60**

No. of pages:

1

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

**PART-A**

- |     |   |           |
|-----|---|-----------|
| Q.1 | Describe about the muscle contraction.                          | <b>10</b> |
| Q.2 | Discuss with diagram about the cardiac cycle.                   | <b>10</b> |
| Q.3 | Discuss the gastric secretion and functions of salivary glands. | <b>10</b> |
| Q.4 | What do you know about homeostasis and haemostasis?             | <b>10</b> |

**PART-B**

- |      |   |          |
|------|---|----------|
| Q.5  | Define blood pressure and state the factors affecting it. | <b>5</b> |
| Q.6  | How does cutaneous circulation take place in human body?  | <b>5</b> |
| Q.7  | What is platelets and state its functions?                | <b>5</b> |
| Q.8  | Describe the structure and functions of hemoglobin.       | <b>5</b> |
| Q.9  | What is facilitated diffusion? Give an example.           | <b>5</b> |
| Q.10 | Write a note on “Blood Groups”.                           | <b>5</b> |
| Q.11 | Describe the functions of gall bladder.                   | <b>5</b> |
| Q.12 | State the four properties of reflex.                      | <b>5</b> |

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – First Semester  
**BIOCHEMISTRY (PT-103)**

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 How does Krebs cycle lead to formation of ATP's? Explain all its steps. **10**
- Q.2 Differentiate between HDL and LDL. Explain their functions and compositions. Support your answer with suitable diagrams. **10**
- Q.3 Classify Proteins. Explain various types of classifications of it with proper examples. **10**
- Q.4 Write any ten functions of fats with proper examples. **10**

**PART-B**

- Q.5 What is the role of calcium? What are its sources? **5**
- Q.6 How is vitamin-C important for our body? **5**
- Q.7 Write the role of unsaturated fats. **5**
- Q.8 What are Di-Saccharides? **5**
- Q.9 Write a note on liver function tests. **5**
- Q.10 What are enzymes? Write any two enzymes and their reactions. **5**
- Q.11 What is the role of hexokinase? **5**
- Q.12 Explain primary structure of proteins. **5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – First Semester  
**FUNDAMENTALS OF PHYSIOTHERAPY (PT-104)**

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 What is hydrotherapy? Explain in detail about the effects of buoyancy on movements and hydrostatics and hydrodynamics. **10**
- Q.2 Explain levels along with examples in human body and their practical applications in physiotherapy. **10**
- Q.3 What is electric shock? Explain the dangers, precautions and initial management of electric shock. **10**
- Q.4 Explain the transformers along with their types, construction and uses. **10**

**PART-B**

- Q.5 Write a short note on electromagnetic spectrum. **5**
- Q.6 Write in brief about physical principles of superficial and deep heat. **5**
- Q.7 Write short notes on:  
a) Capacitors.  
b) Hooke's law. **2½×2**
- Q.8 Draw a circuit diagram of SWD. **5**
- Q.9 Write a short note on the types of muscle contractions. **5**
- Q.10 Write a short note on muscle action groups. **5**
- Q.11 Explain in brief about equilibrium. **5**
- Q.12 Write a short note on classification of joints. **5**



**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Second Semester  
**ANATOMY-II (PT-201)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Describe the gross anatomical features of spinal cord in detail.  
**10**
- Q.2 Describe in brief:  
a) Vertebral artery.  
b) Coronary sinus.  
**5x2**
- Q.3 Draw a well labeled diagram showing the branches of a spinal nerve.  
**10**
- Q.4 a) Enumerate tracts passing through internal capsule.  
**5**  
b) Write a short note on Klienfelter's syndrome .  
**5**

**PART-B**

- Q.5 Write short notes on:  
a) Brain stem  
b) Medulla oblongata  
**5**
- Q.6 Describe effect of lesions of optic nerve in short.  
**5**
- Q.7 Draw histological features of:  
a) Thyroid gland  
b) Thymus  
**5**
- Q.8 Enumerate:  
a) Branches of mandibular nerve.  
**3**  
b) Nerve supply of extraocular muscles of eye.  
**2**
- Q.9 What is autonomic nervous system? Describe it in short.  
**5**
- Q.10 Write short notes on:  
a) Dural venous sinuses.  
**3**

b) Fourth ventricle.

**2**

Q.11 Describe Urogenital diaphragm in short.

**5**

Q.12 Describe ascending tracts of spinal cord (with suitable diagrams) with clinical tests done to test them.

**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Second Semester  
**PHYSIOLOGY-II (PT-202)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Describe oxygen-hemoglobin dissociation curve. What are the factors which shift the curve?  
**10**
- Q.2 Explain how CO<sub>2</sub> is transported in the body in detail.  
**10**
- Q.3 What are the actions of gluco-corticoids? Add a note on Cushing syndrome.  
**10**
- Q.4 Describe various methods of contraception in males and females in detail.  
**10**

**PART-B**

- Q.5 Discuss Hypoxia and its types.  
**5**
- Q.6 Describe origin, pathway and functions of pyramidal tract.  
**5**
- Q.7 Explain stretch reflex. Give examples.  
**5**
- Q.8 Describe myopia and its correction with the help of a diagram.  
**5**
- Q.9 Write a note on 'organ of Corti'.  
**5**
- Q.10 Discuss various hormones secreted by placenta.  
**5**
- Q.11 Explain the role of kidney in regulation of ECF volume.  
**5**
- Q.12 Discuss the effects of exercise on cardiovascular system.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Second Semester  
**ELECTROTHERAPY-I (PT-203)**

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 Describe Faradism under pressure. Give Physiological effects for faradic currents. **10**
- Q.2 Explain Wallerian degeneration and classification for nerve lesion. **10**
- Q.3 Define IFT. Give indications and contraindications for current. **10**
- Q.4 What is iontophoresis? Explain its role in hyperhidrosis. **10**

**PART-B**

- Q.5 What is SD curve? Explain curve for innervations and partial innervations.
- Q.6 Write short note on Low TENS and High TENS.
- Q.7 Define low frequency currents. Give indications for short duration current.
- Q.8 What is interrupted direct current; technique of application for galvanic current?
- Q.9 Patient is having flat foot. Give correction electrotherapeutic technique for patient along with method of application.
- Q.10 Explain interrupted direct current with physiological currents.
- Q.11 Explain in detail about depolarization, repolarization and hyperpolarization.
- 5**
- Q.12 Write about pain gate theory.

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy - Second Semester  
**EXERCISE THERAPY-I (PT-204)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Discuss the principles and grades of manual muscle testing. Describe the testing procedures for right hip adductors.  
**10**
- Q.2 Discuss the goal, precautions and determinants of stretching exercises.  
**10**
- Q.3 What do you understand by goniometry? Describe different types of goniometers. How will you test the range of motion of shoulder internal rotation?  
**10**
- Q.4 Explain the fundamental position of sitting along with three derived positions.  
**10**

**PART-B**

- Q.5 Explain the indication, contraindication and techniques of application of Continues Passive Movement (CPM).  
**5**
- Q.6 Enlist the movements of shoulder along with axes and planes.  
**5**
- Q.7 Classify voluntary movements.  
**5**
- Q.8 Describe the limb girth measurement for upper arm.  
**5**
- Q.9 Explain the passive stretching of Pectoralis major.  
**5**
- Q.10 What are osteokinematics movements? Classify them.  
**5**
- Q.11 Discuss the importance of free exercise.  
**5**
- Q.12 Discuss the causes of joint range limitations.  
**5**

**End Semester Examination, May 2018**  
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 various types of crutches along its measurement.  
**10**
- Q.2 Explain various techniques of relaxation.  
**10**
- Q.3 Explain various types of incoordination with its management.  
**10**
- Q.4 Explain kyphosis lordosis posture and its management in detail.  
**10**

**PART-B**

- Q.5 Explain various bed rest complications.  
**5**
- Q.6 Discuss various breathing exercises.  
**5**
- Q.7 Explain various co-ordination exercises for upper limb.  
**5**
- Q.8 Explain hemiplegic gait.  
**5**
- Q.9 Explain various types of suspension.  
**5**
- Q.10 Explain various mat exercises.  
**5**
- Q.11 Explain patterns of PNF.  
**5**
- Q.12 Explain step length and stride length in brief.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Fourth Semester  
**BIOMECHANICS (PT-403)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: 1

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

**PART-A**

- Q.1 Write down in detail the importance of Biomechanics in Physiotherapy field.  
**10**
- Q.2 Give classification of skeletal muscles according to the fibre arrangement with examples.  
**10**
- Q.3 Define Joint. Give its classification with examples.  
**10**
- Q.4 Define Newton's Laws of motion with examples from the human body.  
**10**

**PART-B**

- Q.5 Define Lever and give its classification with examples form human body.  
**5**
- Q.6 Write a note on Carrying angle.  
**5**
- Q.7 Name the static and dynamic stabilizers of the shoulder joint.  
**5**
- Q.8 Define Concave-Convex rule with diagram.  
**5**
- Q.9 What do you understand by Scapulo Humeral Rhythm?  
**5**
- Q.10 Write down the Biomechanical properties of Skeletal muscles.  
**5**
- Q.11 Differentiate between Active Vs Passive Insufficiency.  
**5**
- Q.12 Differentiate between Isometric and Isotonic Exercises.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy - Fourth Semester  
**PSYCHOLOGY AND PSYCHIATRY (PT-404)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Explain the methods of psychology. Add a short note on 'biology of behavior'. **10**
- Q.2 What is BPD? Describe the causes, diagnostic criteria and treatment of depression in detail. **10**
- Q.3 Explain in detail the mental health examination. Discuss the role of history taking in psychiatric patients along with the treatment plan. **10**
- Q.4 Explain therapy for psychological distress. **10**

**PART-B**

- Q.5 Explain physiology of emotion. **5**
- Q.6 Explain the indications and side effects of lithium. **5**
- Q.7 Write about consistency theories of attitude. **5**
- Q.8 Write a short note on the types of delusional disorders. **5**
- Q.9 Discuss about alcohol and substance misuse. **5**
- Q.10 Write a short note on effective communication. **5**
- Q.11 Write a note on anxiety disorder. **5**



**End Semester Examination, May 2018**  
Bachelor of Physiotherapy - Fourth Semester  
**ADMINISTRATION AND ETHICS (PT-405)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Explain the rules of professional conduct in physiotherapy.  
**10**
- Q.2 Explain Consumer Protection Act, in detail.  
**10**
- Q.3 What are the major ethical principles in physiotherapy practice?  
**10**
- Q.4 What are the Accreditation and evaluation standards in physiotherapy?  
**10**

**PART-B**

- Q.5 Describe the relationship between physiotherapy staff and other colleagues.  
**5**
- Q.6 Discuss the sales of goods and services in physiotherapy practice.  
**5**
- Q.7 Define and explain confidentiality.  
**5**
- Q.8 Write briefly about the history of physiotherapy.  
**5**
- Q.9 Write a note on documentation.  
**5**
- Q.10 Describe the scope of physiotherapy practice.  
**5**
- Q.11 Highlight the importance of record keeping in physiotherapy practice.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Fifth Semester  
**ORTHOPEDECS PHYSIOTHERAPY (PT-502)**

Time: 3 hrs.

Max Marks: **60**

No. of pages:

1

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

**PART-A**

- Q.1 Define 'PIVD'. Describe its types, clinical manifestations and PT management. **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, its pathology, clinical features, clinical signs and PT management. **10**

**PART-B**

- Q.5 Describe clinical diagnostic tests for TOS. **5**
- Q.6 Write a short note on Torticollis. **5**
- Q.7 Write a short note on lateral Ankle sprain **5**
- Q.8 Write the PT treatment following radial nerve injury after elbow. **5**
- Q.9 Discuss the PT management in the post immobilization stage of fractures. **5**
- Q.10 Tabulate 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 2018**  
Bachelor of Physiotherapy - Fifth Semester  
**BIOMECHANICS-II (THEORY) INCLUDING ERGONOMICS (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**. Marks are indicated against each question.

**PART-A**

- Q.1 Discuss the biomechanics of knee joint, in detail. Write a short note on home screw mechanism.  
**10**
- Q.2 Define one GAIT cycle. What are the various determinants of GAIT and write their importance in maintaining a proper GAIT.  
**10**
- Q.3 Discuss and design the workstation layout for a computer worker with diagram. **10**
- Q.4 Define ergonomics. What is the importance of ergonomics in physiotherapy field? **10**

**PART-B**

- Q.5 Write a short note on femur neck shaft angle.  
**5**
- Q.6 Discuss any two work related musculoskeletal disorders.  
**5**
- Q.7 Explain the factors responsible for maintaining stability of spine.  
**5**
- Q.8 What are the factors affecting the posture?  
**5**
- Q.9 Write a short note on functional spinal unit.  
**5**
- Q.10 Discuss the hemiplegic GAIT in detail.  
**5**
- Q.11 Discuss the kinematics of HIP joint in short.  
**5**
- Q.12 Explain the various spatial variables of GAIT.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy (Neurology) – Sixth Semester  
**NEUROLOGY AND NEUROLOGY SURGERY (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 What is Duchene muscular dystrophy? Write the management of Duchene muscular dystrophy. Mention the linked related incidence in male and female. **10**
- Q.2 Write an explanatory note on 'motor neuron disease'.  
**10**
- Q.3 What is Parkinsonism? Mention in detail the clinical feature and treatment of Parkinson's disease.  
**10**
- Q.4 Write a note on causes, clinical features, treatment and investigations of different types of chorea.  
**10**

**PART-B**

- Q.5 Explain the diagnosis of Myasthenia Gravis.  
**5**
- Q.6 Write in brief about stroke.  
**5**
- Q.7 Explain movement disorder. What is cerebellar ataxia?  
**5**
- Q.8 Explain what is chorea.  
**5**

Write short notes on:

- Q.9 Writer's cramps.  
**5**
- Q.10 Diabetic Neuropathy.  
**5**
- Q.11 G.B. Syndrome.  
**5**
- Q.12 Spina Bifida.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Sixth Semester  
**NUROLOGICAL PHYSIOTHERAPY (PT-602)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

Note: Attempt any **THREE** questions from **Part-A** and **SIX** questions from **Part-B**.

**PART-A**

- Q.1 Write in detail physiotherapy management of a patient with Guillain Barre Syndrome. **10**
- Q.2 Write in detail about the physiotherapy assessment diagnosis and management for a 65 years old male with Parkinson's disease. **10**
- Q.3 Enlist the higher mental functions. Write the examination of higher mental functions in detail. **10**
- Q.4 Discuss the physiology of micturition. What do you understand by neurogenic bladder? Give the types of neurogenic bladder and its management in detail. **10**

**PART-B**

- Q.5 Describe briefly hold relax technique of PNF. **5**
- Q.6 What are the motor and sensory symptoms in multiple sclerosis? **5**
- Q.7 Describe briefly gait training in Parkinson's disease . **5**
- Q.8 Explain the role of sensory system on motor performance in brief. **5**
- Q.9 Explain briefly two point and four point gait. **5**
- Q.10 Write a short note on: 'residual poliomyelitis'. **5**
- Q.11 Describe briefly structure of neuron. **5**

**End Semester Examination, May 2018**  
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**. Marks are indicated against each question.

**PART-A**

- Q.1 Write down about McKenzie extension exercises protocol in detail.  
**10**
- Q.2 Write, in detail, about the principles of Mulligan mobilization. How it is different from other manual mobilization?  
**10**
- Q.3 Describe, in detail, about the indications and contra-indications of joint mobilization. What are the effects of mobilization on different system of body?  
**10**
- Q.4 Draw a diagram of different grades of Maitland mobilization. Explain the difference between mobilization and manipulation.  
**10**

**PART-B**

- Q.5 Explain the Grades of Kaltenborne technique in detail with examples of shoulder joint.  
**5**
- Q.6 Explain in detail about the upper limb tension tests.  
**5**
- Q.7 What is massage therapy? Write its indication and contra-indication.  
**5**
- Q.8 What is centralization and lateral shift phenomenon of McKenzie Mobilization?  
**5**
- Q.9 State the difference between NAG and SNAG.  
**5**
- Q.10 Explain Maitland mobilization for hip joint.  
**5**
- Q.11 Write the physiological effects of massage.  
**5**
- Q.12 Explain Tapotment technique.  
**5**

**End Semester Examination, May 2018**  
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**. The marks are shown against each question.

**PART-A**

Q.1 Calculate correlation coefficient from the following data of marks obtained in Commerce(X) and Economics(Y).

X	50	60	58	47	49	33	65	43	46	68
Y	48	65	50	48	55	58	63	48	50	70

**10**

Q.2 From the data given below, find out mean, median and mode:

Variables	10-13	13-16	16-19	19-22	22-25	25-28	28-31	31-34	34-37	37-40
Frequency	8	15	27	51	75	54	36	18	9	8

**10**

Q.3 Explain sampling. Enumerate various sampling methods. Explain Random sampling in detail with examples.

**10**

Q.4 What do you understand by research? Explain different types of research.

**10**

**PART-B**

Q.5 Define and classify hypothesis in research. Explain different steps in formulation of Hypothesis in research.

**5**

Q.6 What is the difference between a Questionnaire and survey?

**5**

Q.7 Write a short note on report writing in research.

**5**

Q.8 Write a short note on measures of central tendency.

**5**

Q.9 What is the difference between Laboratory experiment and field experiment?

**5**

Q.10 Explain and classify Hypothesis in research.

**5**

Q.11 Write down the properties of normal distribution curve.

**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy - Seventh Semester  
**CARDIO PULMONARY AND CARDIO PULMONARY SURGERY (PT-701)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

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

**PART-A**

- Q.1 Write a descriptive note on types, features, investigation and treatment of cardiac failure.  
**10**
- Q.2 Explain the presentation, causes, classification, investigation complications and treatment of rheumatic heart disease.  
**10**
- Q.3 Explain causative factors, clinical features, classification, investigations and treatment of chronic obstructive pulmonary disorder.  
**10**
- Q.4 Write a note on the features and treatment of ischemic heart disease and acute coronary syndrome.  
**10**

**PART-B**

***Write short notes on:***

- Q.5 Fallot's Tetralogy.  
**5**
- Q.6 Stove in Chest.  
**5**
- Q.7 Incisions for Cardiothoracic Surgery.  
**5**
- Q.8 Chest Wall Deformities.  
**5**
- Q.9 Pulmonary Embolism.  
**5**
- Q.10 Pneumoconiosis.  
**5**
- Q.11 Haemothorax.  
**5**



Q.12 Burger's Disease.

**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy - Seventh Semester  
**CARDIO PULMONARY PHYSIOTHERAPY (PT-702)**

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 transport of oxygen and oxygen dissociation curve with factors which affect oxygen dissociation curve.

**10**

Q.2 Patient suffering from cystic fibrosis, write autogenic drainage with patient position and therapist position, in detail.

**10**

Q.3 What are Bronchopulmonary segment? Patient having atelectasis of lower and middle lobe. write postural drainage position for patient.

**10**

Q.4 Patient having positive smoking history, 50 years of age, male, having recent MI and angina positive, design cardiac rehab protocol for patient.

**10**

**PART-B**

Q.5 Explain the following technique:

- a) Breathily rupturing for pectoralis major, trapezius scalene.
- b) PEP technique.

**5**

Q.6 Explain active cycle of breathing, its indication and contraindication and technique for the same.

**5**

Q.7 Patient has undergone surgery pneumonectomy. Write post-operative PT treatment for the patient.

**5**

Q.8 Explain lung volume and capacities with suitable diagram.

**5**

Q.9 Write the principle for physiotherapy in ICU and ICCU, with detail, for apparatus attached in ICU and ICCU.

**5**

Q.10 What is pulmonary rehabilitation def indication, contraindication and training in pulmonary Rehab programme?

**5**

Q.11 Write short notes on:

- a) Bohr and Haldane effect.

b) Manual hyperinflation technique.

**5**

**End Semester Examination, May 2018**  
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 What is Spina Bifida? Give its various types along with their clinical features. Add a note on the prevention of complications in Spina bifida.  
**10**
- Q.2 Write down the Neurodevelopment assessment for a 10 month old girl having inability to roll over. She has a history of delayed birth cry.  
**10**
- Q.3 Discuss Impairment, Disability and Handicap. Throw light on their inter relationship and impact on one another.  
**10**
- Q.4 A 10 year old boy suffered acute attack of polio six months ago. With timely treatment most of his functions have recovered by he still faces problem in walking. Devise the treatment plan for him.  
**10**

**PART-B**

- Q.5 Discuss the various Immunization programs of India.  
**5**
- Q.6 Write a note on prevention of complications in Duchenne Muscular Dystrophy.  
**5**
- Q.7 Write a short note on Sinusitis.  
**5**
- Q.8 Discuss Illingworth's Principle of development with examples.  
**5**
- Q.9 Discuss the various methods of assessment of scoliosis.  
**5**
- Q.10 Discuss the various methods of feeding and the importance of feeding in an infant.  
**5**
- Q.11 Discuss the Brainstem dominating reflexes.  
**5**
- Q.12 Write a short note on Down's Syndrome.  
**5**



**End Semester Examination, May 2018**  
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**. The marks are shown against each question.

**PART-A**

- Q.1 Describe the roles of the members of Education Team in CBR.  
**10**
- Q.2 Define Family Planning. What are the objectives of Family Planning and different methods of Family Planning?  
**10**
- Q.3 Discuss the Management Cycle of CBR. Describe Evaluation Process in CBR.  
**10**
- Q.4 What are the different types of strategies in CBR?  
**10**

**PART-B**

- Q.5 Name the different types of Exercises for Mental Health Disorders.  
**5**
- Q.6 What are the advantages and disadvantages of CBR?  
**5**
- Q.7 Name any five types of occupation related musculoskeletal disorders/problems. **5**
- Q.8 What do you understand by Decentralization and Empowerment concept in CBR. **5**
- Q.9 Define Communicable Disease. What are the two types of Polio Vaccination? **5**
- Q.10 Briefly describe three factors that support CBR program.  
**5**
- Q.11 Write a short note on Health Care System / services in India.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy – Eighth Semester  
**SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)**

Time: 3 hrs.

Max Marks: **60**

No. of pages: **1**

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

**PART-A**

- Q.1 Write down the assessment and management of hamstring strain.  
**10**
- Q.2 Describe in detail the role of sports physiotherapist in a team.  
**10**
- Q.3 Baseball Pitcher is suffering from pain in shoulder while pitching. Write down the complete assessment, provisional diagnosis and management.  
**10**
- Q.4 Discuss in detail the principles of training.  
**10**

**PART-B**

- Q.5 Write a short note on pre-game meal.  
**5**
- Q.6 What is pre-participation evaluation? Write down its benefits.  
**5**
- Q.7 Write a short note on late onset hypoglycemia.  
**5**
- Q.8 Write short notes on:  
i) Epistaxis  
ii) Swimmer's ear.  
**2½x2**
- Q.9 What is Burner-Stringer's Syndrome? Write down its management.  
**5**
- Q.10 Explain the following special tests:  
i) FABER's Test  
ii) Pivot shift test.  
**2½x2**
- Q.11 Explain Epilepsy. Write down the steps for managing an epileptic attack.  
**5**
- Q.12 Enumerate the various factors for sports injury.  
**5**





**End Semester Examination, May 2018**  
Bachelor of Physiotherapy- Eighth Semester  
**GENERAL PHYSIOTHERAPY (PT-803)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

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

**PART-A**

- Q.1 What are the physiological changes associated with ageing? Explain.  
**10**
- Q.2 Explain Cholecystectomy. What is the problem that is most likely to concern a physiotherapist? Discuss post-operative rehabilitation protocol.  
**10**
- Q.3 Give the indication for Mastectomy. Write a short note on Physiotherapy Management of radical mastectomy.  
**10**
- Q.4 Discuss the different occupational diseases. Explain in brief its screening and assessment. Also, throw light on the management of occupational diseases.  
**10**

**PART-B**

- Q.5 Write short notes on:  
a) Supraspinatus tendinitis.  
b) Patello femoral pain syndrome.  
c) Shin-splints.  
d) Olecranon Bursitis.  
e) Alopecia.  
**1x5**
- Q.6 Define Psoriasis. Explain it's physiotherapy management.  
**5**
- Q.7 Explain the types of urinary incontinence.  
**5**
- Q.8 Explain general post-operative ICU complications.  
**5**
- Q.9 Discuss estimation of burn.  
**5**
- Q.10 Write in brief about the management of Acne vulgaris.  
**5**
- Q.11 Explain the treatment of CTEV.  
**5**

**End Semester Examination, May 2018**  
Bachelor of Physiotherapy- Eighth Semester  
**DISABILITY PREVENTION AND REHABILITATION (PT-804)**

Time: 3 hrs

Max Marks: **60**

No. of pages: 1

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

**PART-A**

- Q.1 Enumerate the members of Rehabilitation team. Describe the roles of any three members of Rehabilitation Team.  
**10**
- Q.2 Define Vocational Rehabilitation. Enumerate the members of Vocational Rehabilitation team and their roles.  
**10**
- Q.3 An individual with an intra-articular fracture of bones of shoulder joint, in addition to 16.5% loss of motion in arm, also has 8.3% loss of strength of muscles and 5% loss of coordination. What will be the total value of loss of functions on arm component?  
**10**
- Q.4 Define Disability. What are the causes and the levels of prevention of disability? **10**

**PART-B**

- Q.5 What are the three Biomechanical Principles of orthosis?  
**5**
- Q.6 Write a short note on Anterior Cord Syndrome in Spinal Cord Injury.  
**5**
- Q.7 What are the different causes of cerebral palsy?  
**5**
- Q.8 What do you understand by Orthostatic Hypotension?  
**5**
- Q.9 Briefly describe the two types of Prosthesis based on construction design.  
**5**
- Q.10 Define Health. What are the phases of disease affecting health?  
**5**
- Q.11 What is Primary and Secondary disability?  
**5**

**End Semester Examination, May 2018**  
Master of Physiotherapy - First Semester  
**PRESENTATION AND COMMUNICATION SKILLS (PT-GE-01)**

Time: 2 hrs  
**50**

Max Marks:

2

No. of pages:

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

**Q.1 Fill in the blanks:**

- a) Learners who learn better by seeing pictures, images, diagrams etc are called \_\_\_\_\_ learners.
- b) Learners who prefer to pen down information to memorise it are called \_\_\_\_\_ learners.
- c) \_\_\_\_\_ refers to the distance between the presenter and his/her audience.
- d) The facial expressions should be \_\_\_\_\_ while talking.
- e) One must always establish an \_\_\_\_\_ contact with the audience while giving presentations.

**1×5**

**State whether the following statements are TRUE or FALSE:**

- f) It is not important to focus on the opening and closing of the presentation.
- g) Breathing exercise helps in overcoming the pre-presentation anxiety.
- h) While giving a presentation one must be flexible to accept audience's viewpoints.
- i) It is important to address the questions put up by the audience.
- j) It is important to finish the presentation in the stipulated time.

**1×5**

**PART-A**

**Q.2** What is the importance of Realia and colour in making presentations? What are Monochromatic, Analogous and Complimentary colour combinations? Explain in detail.

**10**

**Q.3** What do you understand by Voice Modulation? How can you improve voice-projection? Also, explain the 5 P's of voice clarity.

**10**

**Q.4** Write short notes on:

- a) Audience Analysis.
- b) Content Preparation for effective presentations.

**10**

**PART-B**

**Q.5** Explain in detail how do the following aspects of non-verbal communication affect the presentation and what can be done to improve these aspects?

- a) Posture.
- b) Eye Contact.

- c) Gestures.
- d) Para verbals.

**10**

Q.6 Write short notes on:

- a) The importance and types of visual aids
- b) Rapport building with patients.

**10**

Q.7 Read the following essay carefully and designs a 5-6 slide 'Effective Presentation' on Physiotherapy and Mental health.

**10**

### ***Case study:***

PHYSIOTHERAPISTS have an increasingly important role to play in supporting patients with mental illness and dementia, which can help to improve their quality of life.

Baroness Finlay, who is president of the Chartered Society of Physiotherapy (CSP), says in the foreword to the framework for mental health services in Wales: "Over the next decade the world will see a rise in psychological disorders across a wide range of diagnoses from depression and anxiety to dementia."

Physiotherapists who have specialist knowledge and experience in the mental health field use physical activity and manual techniques to support personal and social independence, to manage anxiety and to develop healthier lifestyles to counteract the higher levels of co-morbidity for cardiac, respiratory, diabetes and weight management.

The contribution to the preventative agenda is also very important, as it not only prevents physical problems but also a deterioration of mental health as a result of physical modalities.

Physiotherapy also plays a key role in the management of people with serious neurological impairments who have challenging behaviour.

Often the physical problems will need rehabilitation and physiotherapists with specialist mental health skills and knowledge will be called on to help develop treatment programmes.

Physiotherapy expertise is particularly important for the increasing elderly population with mental illness or dementia, the majority of whom will be cared for by a family member in their own home.

Many older people with dementia find they are unable to access mainstream community services. They are best served by clinicians who already know them and understand their illness as part of a specialist mental health team.

While the framework for Wales outlines physiotherapy's role in mental health services it also raises a number of concerns.

These include the equity of access to physiotherapy services for people who have moderate to severe mental illness compared to other patient groups and the current ability of mental health services to appropriately manage patients who have physical health problems that may be directly or indirectly related to mental health conditions.

And the profession believes the NHS needs to grow the physiotherapy service in mental health in order to deliver quality, comprehensive patient-centred services with dual trained clinicians who have physical and mental health knowledge.

The framework makes a series of recommendations we want to see addressed by the health boards and it spells out what the profession in Wales needs to do to support the change needed.

These include a review to ascertain how many mental health teams access physiotherapy across all settings; the involvement of physiotherapy in workforce and service delivery planning and improving relationships with higher education to strengthen the knowledge base and widen the experience of undergraduates to physiotherapy in mental health.

**End Semester Examination, May 2018**  
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 Fill in the blanks:

- a) Patients expect doctors to \_\_\_\_\_ and \_\_\_\_\_ like professionals but avoid \_\_\_\_\_ behavior.
- b) Persuasion is defined as the method of changing behavior or attitudes with the use of \_\_\_\_\_ and \_\_\_\_\_.
- c) The list one must prepare to organize one's time to improve productivity is called the \_\_\_\_\_ list.
- d) The career planning process begins with a \_\_\_\_\_.
- e) The typical resources used to refer to while planning one's career are \_\_\_\_\_ and \_\_\_\_\_.
- f) \_\_\_\_\_ competency refers to the ability of the counselor to understand and interact with people of different cultures.

**1x10**

**PART-A**

Q.2 Define the following:

- a) Rapport
- b) Empathy
- c) Career Planning
- d) Personality
- e) Negotiation Skills

**2x5**

Q.3 List out different ways to improve one's personality. Explain each way in not more than three lines.

**10**

Q.4 Briefly describe any five laws of persuasion.

**10**

**PART-B**

Q.5 What do you understand by Time-Management? List out the barriers to good Time-Management and discuss at least five ways to manage your time effectively. **10**

Q.6 Explain how will you deal with dis-satisfied patients by enumerating ways to:

- a) Prevent conflicts with patients.
- b) Resolve conflicts with dissatisfied patients.

**10**

Q.7 What do you understand by positive attitude? List 10 ways to develop a positive attitude.

**10**

**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – First Semester  
**FOOD AND BEVERAGE PRODUCTION THEORY-I (BHHA-111)**

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

**PART-A**

- Q.1 Attempt the following:
- a) Write the French terms for the following-i) Potato, ii) Brown Sauce, iii) Fish, iv) Cheese.
  - b) Define the terms - Liaison and Beurre Manie.
  - c) Give the ingredients to make 01 ltr bechamel sauce.
  - d) Name any four leavening agents and the name of the dish in which they are used.
  - e) Differentiate between - Puree soup and Cream soup.
  - f) What are colour pigments? Name 4 colour pigments.
  - g) Differentiate between grilling and sauteing.
  - h) Explain caramel.
  - i) Name 3 each of stem and bulbous roots vegetables.
  - j) Write 4 different roles and use of egg in cooking.

**2x10**

**PART-B**

- Q.2 What is Stock? Explain the different stocks and their importance in cooking.  
**6**
- Q.3 Explain the aims and objectives of cooking food.  
**6**
- Q.4 Give the classification of the soups with one example of each category.  
**6**
- Q.5 Explain the classification of raising agents with one example of each.  
**6**
- Q.6 Draw structure of an egg and list its different constituents. Describe the role of egg in cookery.  
**6**
- Q.7 List down the different attributes and personal qualities of a good Chef.  
**6**
- Q.8 Write a short note on sugars and describe the different cooking stages of sugar.  
**6**



Q.9 Define 'shortening'. Explain the different roles of shortening in food.

**6**

# End Semester Examination, May 2018

## B. Sc. (Hospitality and Hotel Administration) – First Semester **FOOD AND BEVERAGE SERVICE - I (BHHA-112)**

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

- Q.1 Answer the following in brief:
- Define A-La-Carte menu.
  - Define Misce-en-scene.
  - What is pantry?
  - What is busing trolley?
  - What is sorbet in French classical menu?
  - What is a nourishing beverage?
  - What is the use of finger bowl?
  - Who is an Aboyeur in kitchen?
  - Define 'accompaniments'.
  - Explain 'brunch'.

**2x10**

### **PART-B**

- Q.2 Define the role and functions of kitchen stewarding in brief.  
**6**
- Q.3 Elaborate Eleven courses French Classical Menu.  
**6**
- Q.4 Explain the attributes of a good F&B staff.  
**6**
- Q.5 What are the different forms of service? Explain each in two statements.  
**6**
- Q.6 Explain the different sub departments of F&B department.  
**6**
- Q.7 Differentiate between Bar and Pub.  
**6**
- Q.8 Explain the flatware and name any six items in flatware.  
**6**

## End Semester Examination, May 2018

### B. Sc. (Hotel and Humanities Administration) – First Semester ROOMS DIVISION THEORY-I (BHHA-113)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **Seven** question in all; **Section-A** is **compulsory**. Attempt any **SIX** questions from **Section-B**. Marks are indicated against each question.

#### **SECTION-A**

Q.1 **Answer (any five) of the following:**

- a) What are the various furniture components of a standard guest room?
- b) Define 'duplex room'.
- c) What do you understand by the term Eye for detail?
- d) What is the role of a valet in housekeeping?
- e) Differentiate between Rug and Rag.
- f) What are the areas that constitute the layout of a housekeeping department? **2x5**

**Differentiate between (any five):**

- g) Adjoining and adjacent room.
- h) Chain hotel and stand-alone hotel.
- i) Cabana and lanai room.
- j) Skipper and sleeper.
- k) FIT and GIT.
- l) Front office and reception. **2x5**

#### **SECTION-B**

- Q.2 What are the different ways of "Organization of Cleaning"? **5**
- Q.3 Appreciate the role in inter-departmental communications of rooms division department with all other sections of a commercial hotel. **5**
- Q.4 What are cleaning equipments? Give three examples of mechanical cleaning equipments. **5**
- Q.5 What is meant by the terms: Front of the house and 'back of the house'? **5**
- Q.6 Draw the organization chart of housekeeping of a medium size hotel. **5**
- Q.7 Define the term 'hotel' and classify it on different basis (The entire classification chart). **5**
- Q.8 Define the term 'Resort'. Give any eight examples of supplementary accommodations and explain each briefly. **5**
- Q.9 Define the A&D register and give step-by-step procedure for check-in of a guest. **5**
- Q.10 Explain any ten personality traits of front office staff. **5**
- Q.11 Differentiate between Downtown hotel and Sub-urban hotel. **5**

**End Semester Examination, May 2018**  
B.Sc. (Hospitality & Hotel Administration) – First Semester  
**ENVIRONMENTAL STUDIES (BHHA-114)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

- Q.1
- a) Name the 3 R's of recycling.
  - b) Define 'environment studies'.
  - c) What are the main components of an ecosystem?
  - d) Define 'Ecotel'.
  - e) Discuss the importance of forest resources in maintaining our environment.
  - f) What is the role of an individual in maintaining in conservation of natural resources?
  - g) Explain rain water harvesting system.
  - h) Discuss the consequences of climate change.
  - i) Give three reasons for water scarcity.
  - j) What you can do to conserve energy? **2×10**

**PART-B**

- Q.2 Explain how deforestation occurs and its impact, on the environment.
- Q.3 Describe the likely impacts of global warming on India.
- Q.4 Describe the implications of population explosion in the World and in India.  
**6**
- Q.5 Describe some of the efforts of individuals and groups in conserving trees and forests.
- Q.6 Discuss key issues of garbage management in India.
- Q.7 Explain why managing nuclear waste is a problem.
- Q.8 Describe how the water cycle gives us freshwater every year.

# End Semester Examination, May 2018

## B. Sc. (Hospitality and Hotel Administration) — First Semester PRINCIPLES OF MANAGEMENT (BHHA-115)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

### **PART-A**

Q.1 Define (**any ten**) of the following in brief:

- a) Strategy
- b) Planning
- c) Intelligence
- d) Forecasting
- e) Organization
- f) Job design
- g) Autocratic leadership
- h) Productivity
- i) Empowerment
- j) Policies
- k) HRM

**2×10**

### **PART-B**

- Q.2 Define 'decision making'. Explain the process of decision making in detail. **6**
- Q.3 Why is stress a problem? Is there a link between stress and illness? **6**
- Q.4 What is the difference between a mission statement and a vision statement? **6**
- Q.5 What is management? Discuss the functions of management at various levels in detail. **6**
- Q.6 What is meant by risk? What are the various types of risks? What are the various measures to deal with the risks and its associated hazards? **6**
- Q.7 Define 'strategy'. What steps are involved in strategic planning? **6**

**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – First Semester  
**TRAVEL AND TOURISM (BHHA-116)**

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

**PART-A**

- Q.1 Write short notes on the following:
- a) Tourism.
  - b) Role of Public Sector in Tourism.
  - c) MICE.
  - d) Sustainable Tourism.
  - e) Role of Travel Agency
  - f) Cuisines of India.
- 2x10**

**PART-B**

- Q.2 Discuss the role of 'railway tourism' in promotion of tourism in India?  
**6**
- Q.3 What are the future trends in indian tourism? Discuss in detail.  
**6**
- Q.4 "Cruises were considered as floating hotels and are now considered as floating destinations". Discuss in detail.  
**6**
- Q.5 What do you understand by itinerary? Mr Kumar wants to experience the culture and heritage of India, prepare an itinerary for 10 days.  
**6**
- Q.6 Describe different types of tourisms in India.  
**6**
- Q.7 Discuss the effects of tourism on the culture and society in detail.  
**6**

# End Semester Examination, May 2018

B.Sc. (Hotel and Hospitality Administration) – First Semester

## NUTRITION (BHHA-117)

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

- Q.1
- Write two good sources of protein.
  - List the role of fats in our body.
  - Give the role of carbohydrates in our body.
  - Name five sources of fat.
  - According to food pyramid which type of food is taken less.
  - Define 'nutrients'.
  - What is the meaning of BMR?
  - Describe 'winterization'.
  - What is homogenization?
  - Describe 'pasteurization'.

**2×10**

### **PART-B**

- Q.2 What are fats? Define different types of fats with their food sources.
- Q.3 What are micro nutrients? Explain its role in body functioning and importance in balance diet.
- Q.4 What are carbohydrates? Explain in detail the types of carbohydrates and their functions in body.
- Q.5 Draw food pyramid and label it.
- Q.6 What happens to gelatin when it gets cook? What is pectin?
- Q.7 Describe in detail the factors effecting the meal planning.

**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – First Semester  
**INTRODUCTION TO PSYCHOLOGY (BHHA-121)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

**PART-A**

Q.1 Explain (**any five**) of the following:

- a) Role of emotional Stability at workplace.
- b) Role of creativity.
- c) Anticipation of guest needs.
- d) What is attention and its role in hospitality.
- e) Customer satisfaction.
- f) Perception in hospitality.

**4×5**

**PART-B**

- Q.2 What do you understand by psychology? How can an understanding of psychology help us in the field of hospitality? **10**
- Q.3 Discuss motivation. What steps can an organization take to ensure that its employees are motivated? **10**
- Q.4 Explain learning. What are the factors affecting learning? How can organizations create a positive learning environment? **10**
- Q.5 What is creativity? What role does creativity play in the field of hospitality? **10**
- Q.6 What is problem solving? How can acquiring this skill help a hospitality professional? **10**



# End Semester Examination, May 2018

## B.Sc. (Hospitality & Hotel Administration) – Second Semester **FOOD AND BEVERAGE PRODUCTION-II (BHHA-211)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

Q.1 Attempt the following:

- a) List the cuts of chicken.
- b) What is laminated yeast dough? Name three products.
- c) What is offal? Name few.
- d) What is pasteurization?
- e) Name three dishes/products made with puff paste and short crust each.
- f) Name few examples of cereals and pulses each.
- g) Define Game. Name few games.
- h) Three types of leavening agents are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
- i) Define, the role of salt and sugar in bread making.
- j) Write the French terms for the following:
  - i) Apple
  - ii) Fish stock
  - iii) Beef
  - iv) Brown stock

**2×10**

### **PART-B**

- Q.2 What are the steps in bread making? Explain.
- Q.3 Describe the milk products with the help of classification.
- Q.4 Describe different parts of wheat, with the help of a diagram. Explain different types of flours, used in bakery.
- Q.5 Explain the steps in slaughtering of an animal.
- Q.6 What is shortening? Describe different shortenings used in cooking.
- Q.7 Explain the steps in making of cheese, with the help of a flow chart.
- Q.8 Give the classification of fish and list the cuts of fish.

**End Semester Examination, May 2018**  
B.Sc. (Hospitality & Hotel Administration) – Second Semester  
**FOOD AND BEVERAGE SERVICE (THEORY II) (BHHA-212)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

Q.1 Define the following terms-

- a) Lager
- b) Wash
- c) Distillation
- d) Aging
- e) Single Malt
- f) Aperitifs
- g) Fermentation
- h) Cognac
- i) Devil's Share
- j) Cider

**2×10**

**PART-B**

- Q.2 With the help of a diagram explain the working of pot still and continuous still.
- Q.3 Elucidate the manufacturing process of Scotch whisky and name three famous distilleries in Scotland.
- Q.4 Define cocktails. What are the different methods of making cocktails?
- Q.5 Define Cigars. Classify cigars according to size, shape and structure.
- Q.6 Briefly explain the role of liqueurs in cocktails. Name two liqueurs with their country of origin and base.
- Q.7 What are the different types of cheese? Give suitable examples for each type.

# End Semester Examination, May 2018

## B. Sc. (Hospitality and Hotel Administration) - Second Semester ROOMS DIVISION THEORY-II (BHHA-213)

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

Q.1 **Attempt any five:**

- a) Corporate rate.
- b) Types of keys.
- c) Studio room.
- d) F.I.T.
- e) DND card
- f) 'C' form
- g) Incidental charges.

**2×5**

**Describe any five of the following key terms:**

- h) Work order form.
- i) Housekeeping control desk.
- j) Stages in the Wash Cycle.
- k) Stain removal.
- l) Waste disposal.
- m) Inspection checklist.
- n) 3 R's of environmental conservation.

**2×5**

### **PART-B**

- Q.2 What are the different types of reservations? Explain the process of cancellation of reservation and draw necessary form.
- Q.3 Discuss the role and function of a bell desk.
- Q.4 'Front office is the mirror of a hotel'. Discuss the importance of this statement with suitable justifications.
- Q.5 What is a 'Guest Bill'? Draw the format of a Guest Bill.
- Q.6 Describe how guest laundry is handled by the housekeeping department in a hotel?
- Q.7 Explain the importance of maintaining "KEY CONTROL" to ensure safety of guest.
- Q.8 What is energy conservation? Discuss methods that may be adopted by eco-sensitive hotels for energy conservation.
- Q.9 Name different types of pests found in hotel atmosphere. Explain how pest control is carried out in hotels?

# End Semester Examination, May 2018

B. Sc. (Hospitality and Hotel Administration) — Second Semester  
**VALUE, ETHICS, CSR (BHHA-214)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

## **PART-A**

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

- a) Work Ethics
- b) CSR
- c) Gender discrimination
- d) Whistleblower
- e) Role of employees in business ethics
- f) Ethical conflicts
- g) Responsibility of business towards community
- h) CSR and business image
- i) What are values and how they affect human conduct?
- j) Marketing and ethics
- k) Cyber crimes
- l) Consumer protection.

**2x10**

## **PART-B**

Q.2 How can you justify profit as ethical in any business?

**5**

Q.3 Discuss the relevance of Business Ethics in the modern world of materialism.

**5**

Q.4 Define what it means to be a socially responsible organization?

**5**

Q.5 Discuss why is integrity considered essential for an organization? Explain with examples.

**5**

Q.6 Explain how Ethics is necessary for Nation Building?

**5**

Q.7 In terms of values and ethics, what are the responsibilities of an employee towards his organization?

**5**

Q.8 Explain ethics in global marketing and advertising, with suitable examples.

**5**

Q.9 Briefly explain the importance of corporate social responsibility to business, shareholders and consumers.

**5**

# End Semester Examination, May 2018

B.Sc. (Hospitality & Hotel Administration) – Second Semester

## HOSPITALITY LAW (BHHA-215)

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

Q.1 Write notes on the following:

- a) Essentials of a Valid Contract.
- b) History of Consumer Rights.

**10×2**

### **PART-B**

Q.2 Write down the powers of Central Government under Environment Protection Act 1986. **10**

Q.3 Write down the comparison between Prevention of Food Adulteration Act, 1954 and Food Safety and Standard Act, 2006. **10**

Q.4 What are consumer councils? What are the criteria for membership of National, State and District Council? **10**

Q.5 Write down the duties, functions and framework of Food Safety Regulations. **10**

# End Semester Examination, May 2018

B.Sc. (Hospitality & Hotel Administration) – Second Semester  
**EVENT MANAGEMENT (BHHA-217)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

## **PART-A**

Q.1 Define briefly the following:

- a) Event Volunteers.
- b) Event promotion.
- c) Name four public utilities from the perspective of event feasibility.
- d) Discuss four major risk areas in a mega event.
- e) Name any four licenses necessary for a big event.
- f) Event insurance.
- g) Contingency plan.
- h) PPL (Phonographic Performance Limited) Licence.
- i) IPRS (Indian Performing Right Society Limited) Licence.
- j) What is meant by site inspection?

**2×10**

## **PART-B**

- Q.2 What is event conceptualization? Discuss the steps involved in event conceptualization?
- Q.3 Describe in detail the check list for an entertainment based mega event.
- Q.4 Discuss various means to generate funds to plan and organize an event.
- Q.5 What do you mean by “Sponsor”? What are the various advantages to an event from sponsorship?
- Q.6 Discuss in detail about waste management after the conclusion of an event. Give some suggestions to improve the present condition regarding the handling of waste.
- Q.7 With the emphasis on inclusivity of the audience, how has the event management industry changed towards its treatment of “especially-abled” people visiting an event? Give some suggestions to improve the present condition of the same.

**End Semester Examination, May 2018**  
B.Sc. (Hospitality and Hotel Administration) – Second Semester  
**OPERATIONAL SAFETY AND HACCP (BHHA-218)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

Q.1 Define the following in brief:

- a) Pathogens
- b) HACCP
- c) FATTOM
- d) Bacteria
- e) Hazard

**4x5**

**PART-B**

Q.2 Describe seven principles of HACCP.

**10**

Q.3 What is USPH? What is its importance?

**10**

Q.4 What is the SOP for blast chiller?

**10**

Q.5 List down the Do's and Don't's of workplace hygiene.

**10**

**End Semester Examination, May 2018**  
B.Sc. (Hospitality and Hotel Administration) – Second Semester  
**OPERATIONAL SAFETY & HACCP (BHHA-218)**

Time: 3 Hours  
50

Max Marks:

pages 1

No. of

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

**PART-A**

- Q.1 Define the following in brief:-  
a) Pathogens  
b) HACCP  
c) GASTTOM  
d) Bacteria  
e) HAZARD  
**4X5**

**PART-B**

- Q.2 Describe seven principles of HACCP.  
**15**
- Q.3 What is USPH? What is its importance?  
**15**
- Q.4 What is SOP for blast chiller?  
**15**
- Q.5 List down the Do's and Don't's of workplace hygiene.  
**15**







**End Semester Examination, May 2018**  
B.Sc. (Hospitality & Hotel Administration) – Second Semester  
**PSYCHOLOGY AND CONSUMERISM (BHHA-221)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

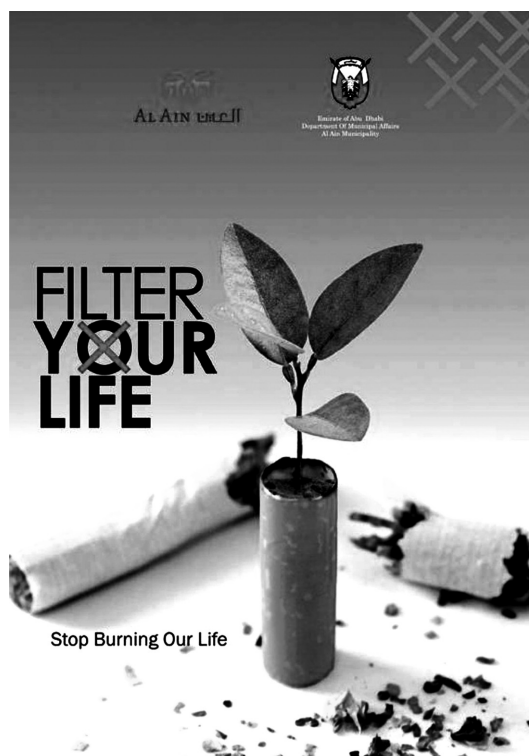
Q.1 Answer the following questions (**any four**):

- a) What is attitude?
- b) What is consumerism?
- c) Give two examples of motivation.
- d) What is creativity?
- e) How the attitude is formed?
- f) Explain values and ethics.

**5×4**

**PART-B**

- Q.2 Explain the role and application of psychology in the hotel industry.
- Q.3 What is the role of creativity in an organization? Explain the various steps to encourage creativity in organization.
- Q.4 What is learning? Explain the theory of classical conditioning of learning.
- Q.5 “Decision making has become complicated now”. Discuss with the help of an example.
- Q.6 How the perception is formed? Explain with the help of an example.
- Q.7 Analyze the following advertisement.





## End Semester Examination, May 2018

### B. Sc. (Hospitality and Hotel Administration) — Third Semester FOOD AND BEVERAGE PRODUCTION THEORY-III (BHHA-311)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

#### **PART-A**

Q.1 Fill in the blanks:

- a) Food Production area in a cruise ship is called \_\_\_\_\_.
- b) Goan cuisine is influenced with \_\_\_\_\_ and \_\_\_\_\_ cuisine.
- c) Different examples for mobile catering are \_\_\_\_\_ and \_\_\_\_\_.
- d) English name for Javitri is \_\_\_\_\_.
- e) Chettinad cuisine is part of \_\_\_\_\_ cuisine.
- f) The Lucknawi buffet / banquet is called \_\_\_\_\_.
- g) Kerala cuisine has a different \_\_\_\_\_ cuisine within kerala, which is very different from Malayali food habits.
- h) English name for Kalonji is \_\_\_\_\_.
- i) Navratan khorma is a dish based on \_\_\_\_\_ gravy.
- j) Patthar ka gosht is a famous dish from \_\_\_\_\_ cuisine.

**2×10**

#### **PART-B**

- Q.2 Describe the institutional catering. **6**
- Q.3 Differentiate between flight catering and Banquette catering. **6**
- Q.4 Describe the factors affecting the cuisine of a region. **6**
- Q.5 Describe the factors affecting the menu planning. Plan a 5 course non vegetarian Hyderabad Menu, for a banquet of 200 pax. **6**
- Q.6 Give 5 major differences between south Indian and north Indian food habits. Also give causes and reasons for those differences. **6**
- Q.7 Describe the Maharashtra Cuisine in detail. **6**
- Q.8 Describe the Goan cuisine in detail. **6**

**End Semester Examination, May 2018**  
B.Sc. (Hospitality & Hotel Administration) – Third Semester  
**FOOD AND BEVERAGE SERVICE THEORY-III (BHHA-312)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

Q.1 Write short notes on the following:

- a) Fermentation.
- b) Champagne.
- c) Vinification.
- d) Safe and sensible drinking.
- e) Wine types.

**2x5**

**PART-B**

Q.2 What is sherry and how it is made?

**10**

Q.3 Give the classification of wines in detail.

**10**

Q.4 Give the flow chart of making the red wine.

**10**

Q.5 Give five white wine grapes and give their characteristics is ties.

**10**

Q.6 Explore wine regions of France and mention their products.

**10**

## End Semester Examination, Dec. 2017

B.Sc. (Hospitality and Hotel Administration) – Third Semester  
**ROOMS DIVISION THEORY-III (BHHA-313)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **SEVEN** questions in all; **Part-A is compulsory**. Attempt any **SIX** questions from **Part-B**. Marks are indicated against each.

### **PART-A**

Q.1 a) Attempt (**any five**):

- i) Differentiate between the contract and outsourcing.
- ii) Mention the various types of contracts available in housekeeping.
- iii) Enlist different types of flowers and foliage used in flower arrangement.
- iv) List five basic mechanics/items of flower arrangement.
- v) What are the dimensions of color?
- vi) List the various kinds of windows.
- vii) Enlist ten different types of uniforms used in a Hotel.

**2x5**

b) Define the following (**any five**):

- i) Hotel safety.
- ii) PMS.
- iii) Cyber security.
- iv) Key card.
- v) Walk in guest.
- vi) Lock out.
- vii)

**2x5**

POS

### **PART-B**

- Q.2 What are the various ways of scheduling housekeeping employees for a day's work?
- Q.3 Enlist and explain five different types of laundry equipments.
- Q.4 What steps can a hotel take to protect the hotels and the guest belongings from getting stolen?
- Q.5 Discuss floor coverings under the following heads:  
a) Hard floor coverings.  
b) Soft floor coverings.
- Q.6 Define 'flower arrangement'. Elaborate the guidelines followed for flower arrangement in the hotel industry.
- Q.7 Mention the factors to be considered by a hotel before selecting a PMS.
- Q.8 Explain the role of 'night audit' and its operations in a hotel.
- Q.9 Explain in detail any two reports generated by the PMS.

Q.10 Effective Key Control can help eliminate major Security threats. Justify.



## End Semester Examination, May 2018

B.Sc. (Hospitality & Hotel Administration) – Third Semester  
**HOTEL INFORMATION SYSTEM (BHHA-314)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

Q.1 Answer the following:

- a) What is 'face book'?
- b) Who is the legend of computer world?
- c) What is the meaning of 'BCC' in case of an e-mail?
- d) What is a joystick?
- e) What is energy management system?
- f) Give full form (**any five**) and explain them in brief.  
i) CAD ii) POS iii) RFID iv) OCR v) GDS vi) HVAC

**2×10**

### **PART-B**

- Q.2 What are the most common front office components of a property management system?
  - Q.3 How has computerization helped both revenue and non-revenue generating departments of a hotel?
  - Q.4 What is a PMS? List some PMS's with their features?
  - Q.5 Why is a computerized reservation system used in a hotel?
  - Q.6 How does the operation of a central reservation system differ from a global distribution system?
  - Q.7 How does computerization help in the night audit process?
  - Q.8 What are the basic components of an automated beverage control system?
- 5**
- Q.9 What is a management information system (MIS)? What are its components? Discuss its usage in a hotel.

**End Semester Examination, May 2018**  
B. Sc. (Hospitality and Hotel Administration) — Third Semester  
**HUMAN RESOURCE MANAGEMENT (BHHA-315)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

**PART-A**

Q.1 Explain the following in brief (**any ten**):

- a) Vacancy
- b) Leadership
- c) Increment
- d) Performance appraisal
- e) Motivation
- f) Job analysis
- g) Employee grievance
- h) Training and development
- i) Job incentives
- j) HRD
- k) LayOff

**2×10**

**PART-B**

- Q.2 Does a team require a leader to accomplish its task? **6**
- Q.3 Explain the following with suitable examples:  
a) Job specification. **6**  
b) Job description. **6**
- Q.4 Discuss in detail how has HR been the at the centre point when the entire business environment, both internal and external has changed drastically. **6**
- Q.5 If any selection made by a firm is wrong or poor selection, what would be the costs to the company? **6**
- Q.6 What is career and career development? **6**
- Q.7 Why it is important to have a grievance handling procedure? **6**
- Q.8 Explain the various sources of recruitment. **6**

**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – Third Semester  
**CUSTOMER RELATIONSHIP MANAGEMENT (BHHA-316)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

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

- a) Customization of services.
- b) Voice of customer.
- c) Interactive marketing.
- d) Strategy vs Planning.
- e) Stages of relationship with customers.
- f) E-marketing.
- g) Data Mining and CRM

**4×5**

**PART-B**

- Q.2 Define 'customer satisfaction'. Why is it important for companies to assess the satisfaction of their customers? Explain in detail.
- Q.3 How does globalization effects Customer Relationship Management?
- Q.4 What is Customer Relationship Management and what are the benefits of Customer Relationship Management to companies?
- Q.5 What are the challenges in acquiring and retaining customers?
- Q.6 What are the four major components of Customer Relationship Management? Discuss in detail.
- 6**
- Q.7 Discuss the benefits of loyalty programs.

# End Semester Examination, May 2018

B.Sc. (Hotel and Hospitality Administration) – Third Semester  
**FOOD AND BEVERAGE CONTROL (BHHA-317)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

## **PART-A**

Q.1 What is control cycle? Draw a flowchart of control cycle and explain its each component in detail. **10**

## **PART-B**

Q.2 What is goods receiving book? What are its uses? Draw a formate of it. **10**

Q.3 What is sales control? What precautions need to be taken care to control the bar frauds? **10**

Q.4 What is meat tag? What are its uses? Draw its figure. **10**

Q.5 What is Bin card? Draw its figure. **10**

Q.6 What are the duties and responsibilities of a purchase manager? **10**

Q.7 Describe different types of costs in detail. **10**

**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – Third Semester  
**MANAGING FOOD AND BEVERAGE COMPANY (BHHA-318)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

- Q.1 Write short notes on the following:
- a) Marketing.
  - b) Product Concept.
  - c) Innovation.
  - d) Challenges of entrepreneurship.
  - e) Distinctiveness of Hospitality Sector Products. **2×5**

**PART-B**

- Q.2 How customers value products and their quality? Discuss in detail. **10**
- Q.3 Explain the role of innovation along the customer experience in food and beverage industry. **10**
- Q.4 Explain the role of distribution networks in local food and beverage market. **10**
- Q.5 Give design of growth strategies in different markets. **10**
- Q.6 Give the elements of entrepreneurship in food and beverage company. **10**

# End Semester Examination, May 2018

B.Sc. (Hotel and Hospitality Administration) – Third Semester  
**FACILITY MANAGEMENT (BHHA-319)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

## **PART-A**

- Q.1 a) Define 'delivery chalan'.  
b) List different types of facility layouts.  
c) Define "service recovery".  
d) List some of the support services in BPO.  
e) Define preventive maintenance and AMC.  
f) List the dimensions of the service quality.  
g) Define 'vendor development'.  
h) State the base principle of material management.  
i) Define 'water recycling'.  
j) Define 'inventory management'.

**2×10**

## **PART-B**

- Q.2 Define 'energy conservation'. Explain the green building concept in detail.
- Q.3 Describe 'service value chain'. Explain its role and importance in facility management.
- Q.4 Write the meaning and purpose of the material management and its importance for a facility manager.
- Q.5 Considering yourself as a facility manager of a university, enlist the "need to have" and "nice to have" support services in their order of preference.
- Q.6 Explain the role of a facility manager listing his duties and responsibilities.
- Q.7 Define 'Cafeteria service style'. Draw a simple service area layout of a cafeteria.

## End Semester Examination, May 2018

### B.Sc. (Hospitality and Hotel Administration) – Fourth Semester **FOOD AND BEVERAGE PRODUCTION THEORY-IV (BHHA-411)**

Time: 3 hrs

Max Marks:

**50**

No. of

pages: 1

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

#### **PART-A**

Q.1 Define the following in brief:-

- a) Galantine
- b) Ballotine
- c) Pate
- d) Terrine
- e) Aspic

**4X5**

#### **PART-B**

Q.2 Describe Force meat with their types and examples in detail.

**10**

Q.3 What are Sandwiches? How many types of Sandwiches are there? How many parts of sandwiches are there? Describe in detail.

**10**

Q.4 Write in detail about Mexican cuisine.

**10**

Q.5 What is the difference between Aspic, Gelee, & Aspic jelly? What is charcuterie? Write in detail about charcuterie.

**10**

**End Semester Examination, May 2018**  
B.Sc. (Hospitality and Hotel Administration) – Forth Semester  
**FOOD AND BEVERAGE PRODUCTION THEORY (BHHA-411)**

Time: 3 Hours  
50

Max Marks:

No. of

pages 1

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

**PART-A**

- Q.1 Define the following in brief:-  
a) Golantine  
b) Ballotine  
c) Pate  
d) Terrine  
e) Aspic  
**4X5**

**PART-B**

- Q.2 Describe Force meat with their types and examples in detail.  
**15**
- Q.3 What are Sandwiches? How many types of Sandwiches are their? How many parts of sandwiches are their? Describe cuisine.  
**15**
- Q.4 Write in detail about Mexican cuisine.  
**15**
- Q.5 What is the difference between Aspic, Gelee, & Aspic jelly? What is char cuisine? Write in detail about char cuisine.  
**15**



**End Semester Examination, May 2018**  
B.Sc. (Hotel and Hospitality Administration) – Fourth Semester  
**FOOD AND BEVERAGE SERVICE (THEORY-IV) (BHHA-412)**

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

**PART-A**

- Q.1 Explain the following terms:
- a) Function Prospectus.
  - b) Bar Accessories.
  - c) Trade Fair.
  - d) ODC
  - e) Cocktail parties.

**4x5**

**PART-B**

- Q.2 Draw the physical layout of a bar and explain its parts. List eight bar equipment.
- Q.3 Draw an organization chart of a banquet and enlist the duties and responsibilities of a banquet manager.
- Q.4 Define Buffet Service. Prepare a checklist of Misc-en-place for buffet service.
- Q.5 In a conference of 160 guests where 20 guests are sitting at top table and rest at the sprigs. Calculate the space required.
- Q.6 What are the different types of buffet? Discuss display and decoration of a buffet.
- Q.7 List down the opening and closing duties of a Bar.

# End Semester Examination, May 2018

## B.Sc. (Hotel and Hospitality Administration) – Fourth Semester ROOMS DIVISION (THEORY) IV (BHHA-413)

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

### **PART-A**

Q.1 Attempt (**any five**):

- a) Guest feedback cards
- b) Retention policy
- c) Different types of tariffs
- d) Bouncing a guest
- e) Up-selling
- f) Rev PAR
- g) ADR

**2x5**

Q.2 Attempt (**any five**) of the following key terms:

- a) Capital budget
- b) Refurnishing
- c) Managing labour costs with technology
- d) Fire prevention
- e) Eco-friendly amenities
- f) Ergonomics
- g) Complying with safety regulations and by-laws

**2x5**

### **PART-B**

Q.3 Explain the role of Front Office Manager in evaluating, forecasting and planning to improve the business of a hotel.

Q.4 What are the various segments of market that provide a hotel with clientele? Explain in brief, about each.

Q.5 What strategies to optimize the revenue generation, must a hotel adopt when the room demand is low?

Q.6 Hotel Luxury has 400 rooms. On 1<sup>st</sup> July 2018, there shall be 10 out of order rooms and 160 stayovers. There are 120 guests with reservations expected to arrive and the no-show percentage has been calculated at 10%. It is forecasted that 10 understays and 18 overstays are to be expected that day.

You are required to:

- a) give the room availability forecast formula.
- b) using that formula, calculate the number of room still to be sold for 100% occupancy on 01.07.2018 using the given information showing each step.

Q.7 Discuss the various types of renovation and the sub processes involved in them.**5**

- Q.8 Explain the importance of applying ergonomic principles in housekeeping.
- Q.9 What is a budget? Discuss its importance.
- Q.10 List and explain 10 hazards in housekeeping and the ways to deal with them safely.

# End Semester Examination, May 2018

B.Sc. (Hotel and Hospitality Administration) – Fourth Semester  
**HOTEL FACILITY PLANNING (BHHA-414)**

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

## **PART-A**

- Q.1 Attempt the following:
- Explain the meaning of “Standard specification of the Equipment”.
  - What is workmanship in design considerations?
  - Three fundamentals of every layout \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
  - Define P Q R S T in any layout designing.
  - Give minimum guest room sizes required for 3\*, 4\*, 5\* and 5\* deluxe hotels.
  - Define different gauge and grades of Stainless steel.
  - Minimum building age and other requirements, to be declared Heritage Grand Hotel.
  - Describe a tilting brat plan.
  - In kitchen layout work triangle is formed between \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
  - Differentiate between Pullman kitchen and Galley kitchen. **2x10**

## **PART-B**

- Q.2 Explain the design considerations to be kept in mind, while designing, any hotel. **6**
- Q.3 Write a short note on the importance of Systematic Layout Patterns.
- Q.4 Explain the SLP patterns, using the P Q R S T.
- Q.5 List all the important equipments required in a commercial cold kitchen.
- Q.6 Name and draw different commercial kitchen layout configurations.
- Q.7 Explain the different functional areas of a main kitchen and give the % ages of the estimated space allocated for different functional areas, out of total space allocated for the main kitchen.
- Q.8 Explain the guidelines for minimum facility requirements for the three categories of heritage hotels.

# End Semester Examination, May 2018

B.Sc. (Hospitality and Hotel Administration) – Fourth Semester  
**HOSPITALITY SALES AND MARKETING (BHHA-415)**

Time: 3 hrs  
**50**

Max Marks:

No. of

pages: 1

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

## **PART-A**

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

- a) e-Marketing
- b) Dynamic pricing
- c) Customer satisfaction
- d) Direct sales
- e) Role of sales person
- f) Grievances and feedback
- g) Customer delight
- h) Types of customers
- i) Relationship marketing
- k) Customer expectations
- l) Sales budget
- m) Sales territory.

**2x10**

## **PART-B**

Q.2 Define the products of sales and marketing in the context of hospitality.

**5**

Q.3 What do you understand by the term consumer behavior? Discuss different external factors that influence consumer behavior.

**5**

Q.4 What are the components one must keep in mind before pricing of products and services?

**5**

Q.5 Discuss the P's of marketing in detail.

**5**

Q.6 What are the forecasting techniques used in tourism?

**5**

Q.7 Explain the different tools that may be used for hospitality sales and marketing.

**5**

Q.8 What is customer retention and why is it critical from business point of view?

**5**

- Q.9 Discuss how does the value chain analysis help in keeping business profitable? **5**
- Q.10 How has online sales and marketing impacted the market scenario? Discuss with examples.  
**5**

# End Semester Examination, May 2018

## B.Sc. (Hospitality and Hotel Administration) – Fourth Semester **ENTREPRENEURSHIP MANAGEMENT (BHHA-416)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

### **PART-A**

Q.1 Answer the following:

- a) Entrepreneurship.
- b) Innovation as specific tool for entrepreneurs.
- c) Startup India programme.
- d) Copyright and patents.
- e) Competitive advantage.
- f) Strategic Plan.
- g) Executive summary.
- h) Value statement of a company.
- i) Publicity.
- j) Confidentiality agreement.

**2x10**

### **PART-B**

- Q.2 a) The husband and wife open another pastries and cookies store near your house. Do they qualify as entrepreneurs? Why or why not?  
b) Some people do it to bring to life their visions and ideas. Others do it for the potentially higher income. What benefits would you contemplate if you had the resources and means to become an entrepreneur?

Q.3 If there were no competition, there would be no need for strategy. The word “competition” brings to the fore the thought of warfare, the battle for dominance. Why? What is strategy? Could you win without crippling or destroying your competitors in business? How? Illustrate with examples. **10**

Q.4 Think about the shaving industry. What are the business models pursued by Gillette and Philips? How do the companies deliver value proposition using the business models? How do you determine whether the business model is any good? **10**

Q.5 You were hired by Taj Hotels (The Indian Hotels Company Limited) to expand its awareness in NCR. What marketing plan would you chalk out to attract customers from NCR? Write briefly about each component of marketing plan. **10**

# End Semester Examination, May 2018

B.Sc. (Hospitality and Hotel Administration) – Fourth Semester  
**WORLD OF DIGITAL MARKETING (BHHA-417)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

## **PART-A**

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

- a) Digital Marketing.
- b) Email Marketing.
- c) Social media marketing.
- d) Online advertising.
- e) Mobile Marketing.
- f) E business.
- g) Customer relationship.
- h) Wireless marketing.
- i) Website marketing.

**2½x8**

## **PART-B**

- Q.2 Identify the role of digital marketing in Hotel Industry and how has it impacted the consumer decision making process? **10**
- Q.3 Discuss the four different online travel marketing domains. **10**
- Q.4 What is Mobile marketing? What is the potential for mobile marketing? **10**
- Q.5 Differentiate between Search Engine marketing and Search Engine optimization. **10**
- Q.6 Define E-Marketing. Discuss the 7 steps of E-marketing plan. **10**



**End Semester Examination, May 2018**  
B.Sc. (Hospitality & Hotel Administration) – Fourth Semester  
**FRONT OFFICE REVENUE MANAGEMENT (BHHA-419)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: 1

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

**PART-A**

- Q.1 Attempt the following:
- a) Overbooking means \_\_\_\_\_.
  - b) What is meant by 'OTA'?
  - c) Define 'advance payment guaranteed reservation'.
  - d) Explain the term 'City Ledger'.
  - e) Define the term 'Understay Percentage'.
  - f) Booking lead time.
  - g) What is meant by 'booking pattern', used as a tool in forecasting?
  - h) Give the formula for 'RevPAR'.
  - i) List various meal plans. Write the component of each meal plan.
  - j) Define the term 'Package'. **2x10**

**PART-B**

- Q.2 What is meant by Forecasting? What are all records required to make accurate forecasting? What are its benefits? **10**
- Q.3 In a locality where there are more than one hotel running their operation, discuss the concept of 'Market share' with proper explanation. **10**
- Q.4 Discuss various means that are used as a measure to ensure optimum revenue generation in a five star hotel. **10**
- Q.5 Define yield Management. Discuss in detail its advantages. **10**

# End Semester Examination, May 2018

B.Sc. (Hospitality and Hotel Administration) – Fourth Semester

## RETAIL MANAGEMENT (BHHA-420)

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

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

### **PART-A**

- Q.1 What factors have led to the prolific growth of the retail sector in India? **10**
- Q.2 Explain the flows which take place in a typical distribution channel in the B2C market. **10**
- Q.3 Explain the process of consumer decision making. What are the major influences on consumers? **10**
- Q.4 Food-based stores, especially bakeries and confectionaries, stores for dairy products and sweets are commonly found in local markets. What are the challenges which such stores face for day-to-day operations? **10**
- Q.5 What is the role of a retail salesperson? What qualities make her/him an effective resource? **10**

### **PART-B**

- Q.6 Suppose a customer complains to an apparel store that a damaged garment was sold to him. Answer the following:
- What strategies may be implemented for handling this complaint?
  - How can the store improve its merchandising strategy to avoid such complaints?