End Semester Examination, May 2014
B. Sc. (N & D) - First Semester
FUNDAMENTALS OF FOOD AND NUTRITION (BND-101)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Classify vitamins. Explain in detail about any two vitamins. 10

Q.2 What are functions of minerals? Describe functions, RDA, dietary sources and deficiency problems related to calcium and iron. 10

Q.3 What are the objectives of cooking? Explain the principles of cooking with examples. 10

Q.4 Discuss in detail different functions of foods. Justify your answer with suitable examples. 10

**PART-B**

Q.5 What are functional foods? 5

Q.6 What are organic foods? 5

Q.7 What are convenience foods? 5

Q.8 What are genetically modified foods? 5

Q.9 What are Nano foods? 5

Q.10 Write short note on water and electrolyte balance. 5

Q.11 Discuss food groups and food pyramid. 5
End Semester Examination, May 2014
B. Sc. (N & D) - First Semester
PHYSIOLOGY (BND-102)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Explain the process of absorption in the small intestines.  10
Q.2 Explain the process of CO₂ carriage in the blood.  10
Q.3 What is glomerular filtration rate? Explain the factors affecting glomerular filtration rate.  10
Q.4 What are the structure and functions of neurons?  10

**PART-B**

Q.5 Explain the various cell organelles with their functions.  5
Q.6 Explain the functions of various blood cells.  5
Q.7 What is bile? Explain its role in the process of digestion.  5
Q.8 Explain the different valves involved in the functioning of heart.  5
Q.9 Describe the role of dietary fibre in the process of defecation.  5
Q.10 Describe the functions of the parathyroid gland.  5
Q.11 Define the following:
   a) Cerebrospinal fluid
   b) Apnoea
   c) Haemopoiesis
   d) Leukopenia
   e) Cholecystectomy  1×5
End Semester Examination, May 2014
B. Sc. (N & D) - First Semester
FUNDAMENTALS OF BIOCHEMISTRY (BND-103)

Time: 3 hrs Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 What are fats? Discuss physical properties of fats in detail. 10

Q.2 Discuss chemistry, sources, daily requirements and deficiency symptoms of vitamin D. 10

Q.3 Explain in detail monosaccharide’s of biological importance. 10

Q.4 a) Define amino acids. Explain classification of amino acids. 5x2
   b) Discuss functions of amino acids.

PART-B

Q.5 Biochemistry and pharmacology are interrelated. Explain. 5

Q.6 Define lipids. Discuss bloor classification of lipids. 5

Q.7 List down the differences between lactose and sucrose. 5

Q.8 Write a short note on potassium. 5

Q.9 Define the following terms:
   a) Phenylalanine
   b) Conjugated protein
   c) Phosphoproteins
   d) Peptides
   e) Proteins 1x5

Q.10 Write a note on glycogen. 5

Q.11 Enlist the biomedical importance of amino acids. 5
End Semester Examination, May 2014
B.Sc. (N & D) - Second Semester
NUTRITIONAL BIOCHEMISTRY (BND-201)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Write a detailed note on insulin and explain the effect of insulin on carbohydrate metabolism.  10

Q.2 Explain glycolysis. State in detail the steps of cycle. Calculate number of ATP produced in cycle.  10

Q.3 Discuss mode of action of enzymes and factors affecting enzyme activity in detail.  10

Q.4 Discuss the reaction of deamination and transamination and also explain urea cycle in detail.  10

PART-B

Q.5 Write a shot note on genetic code.  5

Q.6 Write a note on ketone bodies in brief.  5

Q.7 Calculate the total number of ATP produced in TCA cycle.  5

Q.8 Discuss viscosity and surface tension in brief.  5

Q.9 Define hormones. Write down biological functions of thyroid hormone.  5

Q.10 Explain the formation of acetyl CoA from pyruvate.  5

Q.11 Differentiate between:
   a) DNA and RNA  5
   b) Endocytosis and Exocytosis
End Semester Examination, May 2014
B.Sc. (N & D) - Second Semester
NUTRITION THROUGH LIFE CYCLE (BND-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 What do you understand by weaning? Explain the principles and importance of weaning at different stages of infancy. 10

Q.2 Discuss the importance of adequate nutrition among adult men and women. Describe the energy and protein needs of adult men and women. 10

Q.3 "A pregnant women must eat for two". Explain in detail. 10

Q.4 Describe the physiological and psychological changes seen in adolescent stage. How do psycho-social influences affect food behaviour during adolescence? 10

**PART-B**

Q.5 Explain the following terms:
   a) Hyperplasia  
   b) PICA  
   c) Galactogogue  
   d) Placenta  
   e) Amniotic fluid. 5

Q.6 Describe the complications which arise during pregnancy. 5

Q.7 Discuss the dietary modifications suggested during first six months of lactation. 5

Q.8 Which nutrients require special attention while planning weaning foods and why? 5

Q.9 Discuss the nutritional requirement and food preferences of a preschooler. 5

Q.10 Mother Milk is best milk for baby. Explain. 5

Q.11 Explain the nutritional requirement and feeding pattern of elderly population. 5
## End Semester Examination, May 2014
B.Sc. (N & D) - Second Semester
CLINICAL PSYCHOLOGY (BND-203)

**Time:** 3 hrs

**Max Marks:** 60

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

### PART-A

| Q.1  | Explain in detail various applications of psychology. | 10 |
| Q.2  | Explain general principles of development with suitable examples. | 10 |
| Q.3  | Define stress. Explain various methods to overcome psychological stress and physical disorder. | 10 |
| Q.4  | Explain various steps and approaches of counseling. | 10 |

### PART-B

| Q.5  | Explain the role of a psychologist. | 5 |
| Q.6  | Briefly explain the relative importance of heredity and environment in child’s behaviour. | 5 |
| Q.7  | Write short note on mood disorder. | 5 |
| Q.8  | Differentiate between guidance and counseling. | 5 |
| Q.9  | What is reality therapy? What is the importance of reality therapy in counseling? | 5 |
| Q.10 | Explain briefly why mental health model is considered as a very good counseling technique for children. | 5 |
| Q.11 | Explain various anxiety disorders. | 5 |
End Semester Examination, May 2014
B. Sc. (N & D) - Third Semester
THERAPEUTIC NUTRITION AND DIETETICS (BND-301)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Describe the contributing factors in the development of tuberculosis. What are the common signs and symptoms in this condition? State dietary modifications for the same. 10

Q.2 Differentiate between Type-I and Type-II diabetes. Also discuss etiology and dietary management for diabetes mellitus. 10

Q.3 Write in detail about etiology and dietary management for Cirrhosis of liver. 10

Q.4 Write a detailed note on eating disorders and their types. 10

**PART-B**

Q.5 Write a short note on nutritional assessment. 5

Q.6 Describe dietary management for atherosclerosis in brief. 5

Q.7 Write short notes on:
   a) Gout
   b) Yo Yo effect
   5

Q.8 What is acute renal failure? Explain its causes and treatment. 5

Q.9 Explain dietary management for burns. 5

Q.10 What are the dietary guidelines for constipation? 5

Q.11 Discuss methods of feeding in hospital in brief. 5
End Semester Examination, May 2014
B. Sc. (N & D) - Third Semester
PROBLEMS IN HUMAN NUTRITION (BND-302)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Discuss the etiology and classification of PEM in detail. 10
Q.2 Explain the treatment and plan of action for vitamin-A deficiency. 10
Q.3 Write in detail about the prevention of iron deficiency anemia. 10
Q.4 Give the symptoms of fluorosis in detail. 10

**PART-B**

Q.5 Write a short note on symptoms of PEM. 5
Q.6 Write a short note on importance of vitamin-A for the body. 5
Q.7 Write a short note on adverse effects of iron deficiency. 5
Q.8 Write a short note on sources of iodine and its importance. 5
Q.9 Write a short note on symptoms of lathyrisim. 5
Q.10 Write a short note on national IDD programme. 5
Q.11 Write a short note on factors affecting the availability of non-haem iron. 5
End Semester Examination, May 2014
B. Sc. (N & D) - Third Semester
COMMUNITY RESOURCE MANAGEMENT AND EXTENSION (BND-303)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Define management. Explain its characteristics. 10

Q.2 What is fatigue? Explain in detail different methods of reducing psychological fatigue citing suitable examples. 10

Q.3 "Sender and receiver are two essential elements of communication". Justify the statement explaining process of communication. 10

Q.4 Define extension. Explain different principles of extension. 10

**PART-B**

Q.5 Write short notes on:
   a) Universality of management.
   b) Systems approach in management. 5

Q.6 Explain any two functions of communication. 5

Q.7 Differentiate between projected and non-projected audio visual aids. 5

Q.8 "Decision making is a crux of management". Explain. 5

Q.9 Explain different communication-extension approaches adopted by an extension worker. 5

Q.10 Differentiate between values, goals and standards. 5

Q.11 What principles of design you will keep in mind while designing audio visual aids? 5
End Semester Examination, May 2014
B. Sc. (N & D) – Third Semester
COMPUTER APPLICATIONS (BND-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 Depict and discuss in detail the various components of computer. 10
Q.2 Write a note on various types of I/O devices used in computer applications. 10
Q.3 Discuss the various types of networks. 10
Q.4 What is MS Excel? Discuss any of its two features in detail. 10

PART-B

Write short notes on any six of the following:
Q.5 What are the basic services provided by the internet to its users? 5
Q.6 What are the different types of data that are commonly used in the cells of spreadsheet? 5
Q.7 What are the functions of an operating system? 5
Q.8 What are the various file access methods? 5
Q.9 Discuss any one type of operating system in short. 5
Q.10 Write short notes on any two:
   a) Windows accessories
   b) Security of file
   c) File naming 2½x2
Q.11 Convert the following into the required number system:
   a) \(10.11_2 = ?_{10}\)
   b) \(1111_2 = ?_{10}\)
   c) \(110010_2 = ?_{10}\)
   d) \(40_{10} = ?_2\)
   e) \(200_{10} = ?_2\) 1x5
End Semester Examination, May 2014
B. Sc. (N & D) - Fourth Semester
COMMUNITY NUTRITION (BND-401)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Discuss in detail ISI certification marks scheme. 10

Q.2 Write a detailed note on National AIDS Control Programme. 10

Q.3 Discuss Integrated Child Development Services (ICDS) Programme in detail. 10

Q.4 Write a detailed note on developing adequate community leadership as one of the process of community development programmes. 10

**PART-B**

Q.5 Write a note on community nutritionist. 5

Q.6 Enlist the rights enshrined in the Consumer Protection Act, 1986. 5

Q.7 Write short notes on:
   a) Extension education
   b) Community organization. 2½×2

Q.8 Discuss any five deficiency diseases along with its clinical sign and symptoms. 5

Q.9 Write a short note on 20-point programme. 5

Q.10 Discuss Mid-day Meal Programme. 5

Q.11 Write a note on Appraising the Situation – Identifying Needs and Problems. 5
End Semester Examination, May 2014  
B. Sc. (N & D) - Fourth Semester  
FOOD PROCESSING AND TECHNOLOGY (BND-402)

Time: 3 hrs  
Max Marks: 60

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

PART-A

Q.1 What is cheese? Enumerate the various steps involved in process of cheese making.  
10

Q.2 Discuss with help of flow chart various steps involved in rice milling.  
10

Q.3 Write a detailed note on the various process of oil extraction.  
10

Q.4 Explain the various types of packaging. Support your answer with relevant examples.  
10

PART-B

Q.5 What does AMUL stand for? Draw the three tier co-operative structure of Anand Model.  
5

Q.6 Discuss any two processed oil products in brief.  
5

Q.7 What are various toxic factors present in legumes?  
5

Q.8 Discuss any two post-harvest diseases of fruits and vegetables.  
5

Q.9 Discuss the role of any one agency concerned with food (grain) storage in India.  
5

Q.10 What were the various traditional methods employed for processing of food.  
5

Q.11 Write short note on any two:  
a) Pasteurization  
b) Homogenization  
c) Decortication  
2\frac{1}{2}x2
End Semester Examination, May 2014  
B.Sc. (N & D) - Fourth Semester  
NUTRITION FOR HEALTH FITNESS AND SPORTS (BND-403)

Time: 3 hrs  
Max Marks:  60  
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.  
No. of pages: 1

**PART-A**

Q.1  Discuss the spiritual health chakras.  

Q.2  Discuss the pre-game meals and post-game meals.  

Q.3  Highlight the importance of role of fluid balance in a sportsperson. How can we tackle the problem of dehydration in a sportsperson?  

Q.4  Discuss in detail the nutritional requirements of a sportsperson.  

**PART-B**

Q.5  Write short notes on any two:  
   a) Ayurveda  
   b) Dietary supplements  
   c) Meditation  

Q.6  What are ergogenic aids? Give examples.  

Q.7  Write short note on carbohydrate load.  

Q.8  Describe the ABCS approach involved in measuring the nutritional status.  

Q.9  Explain the following:  
   a) Skinfold measurements  
   b) Estimation of body fat among athletic group  

Q.10 Describe the interrelationship between health, nutrition and physical fitness.  

Q.11 What is the difference between health status and specific fitness?
End Semester Examination, May 2014
B.Sc. (N & D) - Fourth Semester
ENTREPRENEURSHIP MANAGEMENT (BND-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 What measures have been taken by the Government to promote small units in India? 10

Q.2 What do you mean by mobilization of resources? What factors help in determining the resources required? 10

Q.3 You are the marketing manager of a company producing bakery products. Explain briefly the factors to be considered by you before finalizing the price of the bakery product. 10

Q.4 Personal management is pervasive in nature. Justify the statement and explain in detail the nature of personal management. 10

PART-B

Q.5 Explain the need and importance of entrepreneurship in the context of the Indian economy. 5

Q.6 List the three aspects of personality that entrepreneur posses to convert perceived opportunities into successful business venture. 5

Q.7 Briefly explain market survey technique. 5

Q.8 Explain the procedure to file a complaint under CPA 1986. 5

Q.9 Give advantages of fund flow analysis. 5

Q.10 What is performance appraisal? Explain the importance of performance appraisal. 5

Q.11 Give pre-requisite of a good label while doing label intervention. 5
End Semester Examination, May 2014  
B. Sc. (N & D) - Fifth Semester  
STATISTICS AND RESEARCH METHODOLOGY (BND-502)  

Time: 3 hrs  
Max Marks: 60  
No. of pages: 1  
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.  

PART-A  

Q.1 What are various measures of central tendency used in statistical analysis? Calculate median from the data given below:  

<table>
<thead>
<tr>
<th>Marks:</th>
<th>0-10</th>
<th>10-30</th>
<th>30-60</th>
<th>60-80</th>
<th>80-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of students:</td>
<td>5</td>
<td>15</td>
<td>30</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

10  

Q.2 What is the meaning of measurement in research? What difference does it make whether we measure in terms of a nominal, ordinal interval or ratio scale? Explain giving examples.  

10  

Q.3 In the following table mid-values of a size of farms and their numbers are given. Calculate mode:  

<table>
<thead>
<tr>
<th>Mid value:</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of farm:</td>
<td>7</td>
<td>12</td>
<td>17</td>
<td>20</td>
<td>31</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

10  

Q.4 Clearly explain the difference between collection of data through questionnaires and schedules.  

10  

PART-B  

Q.5 Describe technique involved in defining a research problem.  

5  

Q.6 Explain the meaning and significance of a research design.  

5  

Q.7 Explain and illustrate the procedure of selecting a random sample.  

5  

Q.8 Distinguish between an experiment and survey method.  

5  

Q.9 Distinguish between primary data and secondary data. State various sources of secondary data.  

5  

Q.10 What is skewness? What are the various measures of skewness?  

5  

Q.11 Explain Karl Pearson’s coefficient of correlation in brief.  

5
End Semester Examination, May 2014
B. Sc. (N & D) - Sixth Semester
FOOD SCIENCE (BND-601)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Enlist various sensory evaluation tests. Explain any four in detail.  
10

Q.2 Write short notes on:
   a) Broiling
   b) Shortening effect of fat.  
5x2

Q.3 Describe gel formation and factors affecting it.  
10

Q.4 Draw and explain the structure of egg. Also mention role of eggs in cookery.  
10

**PART-B**

Q.5 Describe the changes on ripening of fruit.  
5

Q.6 Write a short note on hydrogenation.  
5

Q.7 Explain the effect of dry heat on starch.  
5

Q.8 Give reasons for the following:
   a) Boiling over of milk.
   b) Apple turning brown on cutting, if kept.
   c) Spinach turns olive green if cooked covered.
   d) Green ring formation in egg yolk (sometimes).
   e) Curd turns sour in summers.  
1x5

Q.9 Explain non-enzymatic browning with an example.  
5

Q.10 Classify the types of fish. Mention the criteria for selection of fish.  
5

Q.11 Briefly discuss emulsion and its types.  
5
End Semester Examination, May 2014
B.Sc. (N & D) - Sixth Semester
INSTITUTIONAL FOOD ADMINISTRATION (BND-602)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Explain the development of food service institutions. 10
Q.2 Explain the methods used for constructing recipes on large scale. 10
Q.3 Discuss the employee benefits to be provided under personnel management. 10
Q.4 Discuss the organization of kitchen spaces in detail. 10

PART-B

Q.5 Write a short note on planning menus for cafeteria. 5
Q.6 Write a short note on selection and buying of:
   a) Cereals and breads 5
   b) Eggs
Q.7 Write a short note on standardization of recipes. 5
Q.8 Write a short note on furnishing of dining room. 5
Q.9 Write a short note on steps involved in staff employment. 5
Q.10 Write a short note on forms of services. 5
Q.11 Write a short note on advantages of meal management. 5
End Semester Examination, May 2014
M. Sc. (N & D) - First Semester
ADVANCED NUTRITIONAL BIOCHEMISTRY (MND-101)

Time: 3 hrs

Max Marks: 60

No. of pages: 1

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

PART-A

Q.1 Tabulate the sources, biochemical role and deficiency disorders related to vitamins. 10

Q.2 Explain the oxidation of fatty acids in human body. 10

Q.3 Explain the significance and derivation of Michaelis-Menten equation. 10

Q.4 Define and classify proteins. Also, with the help of a well-labeled diagram, explain the absorption of proteins. 10

PART-B

Q.5 With the help of examples explain different types of isomers. 5

Q.6 Write short notes on:
   a) Lock and key hypothesis
   b) Non-competitive inhibition 2½x2

Q.7 Describe the mode of action of hormones. 5

Q.8 Give the structure and function of hemoglobin. 5

Q.9 Write a shot note on water insoluble vitamins. 5

Q.10 Write the structure of following:
   a) ATP
   b) Lecithin 2½x2

Q.11 What are disaccharides? Give the structure of any three. 5
End Semester Examination, May 2014
M. Sc. (N & D) - First Semester
ADVANCED HUMAN PHYSIOLOGY (MND-102)

Time: 3 hrs

Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Describe the physiology of hearing. 10
Q.2 Describe blood pressure and factors affecting it. 10
Q.3 What is homeostatic regulation and discuss functional complexes in detail? 10
Q.4 Explain the role of kidneys in water and electrolyte balance. 10

**PART-B**

Q.5 What are the pacemaker tissues of the heart? Explain with the help of a diagram. 5
Q.6 What are the passive transport processes involved in the cell? 5
Q.7 Differentiate between diffusion and osmosis. 5
Q.8 Discuss the functions of any two:
   a) Gall bladder
   b) Stomach
   c) Large intestine 5
Q.9 Explain the chemical regulation of respiration. 5
Q.10 Define the sensory system. Explain the physiology of vision. 5
Q.11 Explain the mechanical properties of the cardiac muscle. 5
End Semester Examination, May 2014
M. Sc. (N & D) - First Semester
NUTRITION FOR VULNERABLE AND SPECIAL GROUP (MND-103)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Why are recommended allowances set-up? What are the guiding principles used to derive RDAs? 10

Q.2 Discuss the physiological changes during infancy. How do these influence the nutritional requirement of an infant? 10

Q.3 Discuss giving reasons, the various nutrition related problems common among elderly. What steps would you advocate to overcome the same? 10

Q.4 Explain the physiological changes which occur during pregnancy. Highlight the complications which may arise during this period. 10

PART-B

Q.5 Explain nutritional management for industrial worker. 5

Q.6 Discuss special considerations and nutritional management during extreme climatic condition. 5

Q.7 Discuss how do we manage nutritional requirement of a space person? 5

Q.8 Discuss advantages of breast feeding. 5

Q.9 Discuss fundamental aspects of meal planning. 5

Q.10 Discuss allied aspects of meal planning. 5

Q.11 Explain the importance of exchange list and food guide pyramid. 5
End Semester Examination, May 2014  
M. Sc. (N & D) - First Semester  
PEDAGOGY, ADMINISTRATION AND ETHICAL ISSUES IN NUTRITION AND DIETETICS (MND-104)  

Time: 3 hrs  
Max Marks: 60  
No. of pages: 1  
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.

**PART-A**

Q.1 Why should the curriculum of nutrition and dietetics be frequently revised. Discuss some of the factors which should be considered in selecting materials for the nutrition and dietetics curriculum.  
10

Q.2 Explain unit method in teaching nutrition and dietetics.  
10

Q.3 Describe different agencies of education and explain their importance in the life of a child.  
10

Q.4 Discuss the taxonomy of educational objectives given by Bloom and his associates.  
10

**PART-B**

Q.5 What do you mean by pragmatism. Explain its contribution to education.  
5

Q.6 Enumerate the functions of measurements.  
5

Q.7 Write short notes on: Code of ethics in nutrition and dietetics.  
5

Q.8 Privatization of education is improving education system in India. Justify the statement.  
5

Q.9 What factors you will keep in mind while preparing audio-visual aids?  
5

Q.10 Write merits of case-study method in teaching learning process.  
5

5
End Semester Examination, May 2014
M. Sc. (N & D) - First Semester
FOODS AND NUTRITION (MND-105)

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 canning as a method of preservation in detail. 10
Q.2 Nutrition, immunity and infection are interrelated. Justify. 10
Q.3 Define food fortification. Which nutrients are used for fortifications? Explain various mediums used for fortification of these nutrients. 10
Q.4 a) What is Basal Metabolic Rate (BMR)? Explain the various determinants of BMR. 10
b) How do you estimate BMR by calculation?

**PART-B**

Q.5 Explain the nutritional importance of fish and meat in diet. 5
Q.6 Give the specific functions of the following amino acids:
   a) Glutamic acid
   b) Methionine
   c) Phenylalanine
   d) Tryptophan
   e) Histidine 1x5
Q.7 Define enrichment. Explain the various methods of improving nutritional quality of food. 5
Q.8 What is the principle involved in the preservation jams and jellies? Give the method of making jam in detail. 5
Q.9 Write a note on scoring system of protein to assess the quality and grading of the same. 5
Q.10 What are flavor compounds present in fruits and vegetables? Explain the effect of cooking on sulphur containing vegetables. 5
Q.11 Explain the principle of microwave cooking. Draw a diagram of microwave and lable it. 5
End Semester Examination, May 2014
M.Sc. (N & D) - Second Semester
FOOD MICROBIOLOGY (MND-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 What is HACCP? Discuss the various steps involved in HACCP. 10
Q.2 Discuss the various techniques used to preserve food in detail. 10
Q.3 What do you mean by SCP? List the various advantages of SCP over conventional sources of protein. 10
Q.4 What are the various types of food borne diseases? Discuss any one specific food borne infection in detail. 10

**PART-B**

Q.5 What do you mean by microbial taxonomy? Discuss its various components in brief. 5
Q.6 Discuss the spoilage of any food group. 5
Q.7 What are lactic acid bacteria? Write about two different types of lactic acid bacteria in short. 5
Q.8 Differentiate between a prokaryotic and a eukaryotic cell. Support your answer using relevant diagrams. 5
Q.9 Write a note on indicators of food microbial quality and safety. 5
Q.10 Draw and depict the various phases of bacterial growth curve. Also discuss the various phases in short. 5
Q.11 Write short notes on any two:
   a) Bacteria
   b) Fungi
   c) Algae 2½x2
End Semester Examination, May 2014  
M.Sc. (N & D) - Second Semester  
INSTRUMENTATION FOR FOOD ANALYSIS (MND-202)

Time: 3 hrs          Max Marks: 60  
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.

**PART-A**

Q.1 Discuss briefly the principle and application of paper electrophoresis?  
Q.2 Discuss the nuclear magnetic resonance method and its application?  
Q.3 What do you understand by ion-exchange chromatography?  
Q.4 Describe the principle of fluorometry?  

**PART-B**

Q.5 Write short note on any two:  
   a) Acids     b) Indicators     c) Salts  
   5

Q.6 Write the principle of buffers? Describe the principle of a pH meter.  
  5

Q.7 Describe the principle and instrumentation of a spectrophotometer.  
  5

Q.8 Write short notes on:  
   a) ELISA     b) AAS  
   5

Q.9 Discuss in detail bomb calorimeter.  
  5

Q.10 Solve the following equation indicating acid, base, conjugate acid and conjugate base.  
  5

\[
\begin{align*}
NH_3(aq) + H_2O(l) & \leftrightarrow NH_4^+(aq) + OH^-(aq) \\
Al(OH)_3 + 3HCl & \rightarrow AlCl_3 + 3H_2O \\
Ba(OH)_2 + 2HC_2H_3O_2 & \rightarrow Ba(C_2H_3O_2)_2 + 2H_2O \\
2KOH + H_2SO_4 & \rightarrow K_2SO_4 + 2H_2O \\
NH_3 + H_2O & \rightarrow NH_4^+ + OH^- 
\end{align*}
\]

Q.11 What are radioactive and stable isotopes?  
  5
End Semester Examination, May 2014
M. Sc. (N & D) - Second Semester
CLINICAL NUTRITION (MND-203)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Discuss in detail the pathophysiology and medical nutrition therapy for peptic ulcers. 10

Q.2 What is atherosclerosis? Suggest a suitable dietary modification for patient suffering from Atherosclerosis. 10

Q.3 ’Diet therapy plays a crucial role in acute renal failure’. Discuss. 10

Q.4 What is medical nutrition therapy? Discuss the role MNT in various clinical aspects using suitable examples. 10

PART-B

Q.5 Differentiate between refeeding syndrome and dumping syndrome. 5

Q.6 Enumerate the points of MNT for (any two):
   a) Hypertension
   b) Diarrhea
   c) Jaundice 2½x2

Q.7 What are the different methods of feed administration? Write in detail about any two. 5

Q.8 Enteral nutrition plays a significant role in the recovery of the patient. Justify. 5

Q.9 Discuss the metabolic changes occurring in fever. Also enlist the nutritional modifications for the same. 5

Q.10 Write a short note on complications seen in uncontrolled diabetes mellitus. 5

Q.11 Briefly discuss diet management for cancer patients. 5
End Semester Examination, May 2014
M.Sc. (N & D) - Second Semester
SPORTS NUTRITION (MND-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 What are the general considerations for a physically active individual? 10
Q.2 Discuss the role of protein as a major macronutrient. 10
Q.3 Explain carbohydrate feeding before, during and following intense exercise. 10
Q.4 Write in detail about management of disordered eating behaviour in athletes. 10

PART-B

Q.5 Write a short note on food restrictions and exercise. 5
Q.6 Write a short note on sports drinks. 5
Q.7 Write a short note on mineral loss in sweat. 5
Q.8 Write a short note on direct calorimetry. 5
Q.9 Write a short note on Bulimia Nervosa. 5
Q.10 Write a short note on composition of human body. 5
Q.11 Write a short note on carbohydrate as a major macronutrient for the physically active. 5
End Semester Examination, May 2014
M. Sc. (N & D) - Second Semester
STATISTICS AND RESEARCH METHODOLOGY (MND-205)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Briefly describe the different steps involved in a research process. 10
Q.2 Describe fully the technique of defining a research problem. 10
Q.3 Describe some important research designs used in experimental hypothesis – testing research study. 10
Q.4 Following are the marks obtained by 10 students of a class. Calculate mean, standard deviation and coefficient of standard deviation.
Marks: 12  8  17  13  15  9  18  11  6  1  10

PART-B

Q.5 Examine the merits and limitations of the observation method in collecting materials. Illustrate your answer with suitable examples. 5
Q.6 "Research design in exploratory studies must be flexible but in descriptive studies, it must minimize bias and maximize reliability". Discuss. 5
Q.7 Calculate mode for the following distribution of data:

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<thead>
<tr>
<th>Class Interval</th>
<th>Frequency</th>
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<td>4-8</td>
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<td>32-36</td>
<td>5</td>
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<tr>
<td>36-40</td>
<td>4</td>
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</tbody>
</table>

Q.8 What is the necessity of defining a research problem? Explain. 5
Q.9 "Research is much concerned with proper fact finding, analysis and evaluation". Do you agree with this statement? Give reasons in support of your answer. 5
Q.10 Student of class XI secured following works in their statistics paper:
Marks: 20, 44, 65, 28, 45, 67, 30, 50, 68, 39, 53, 70, 40, 60, 75,
Calculate Arithmetic mean using direct method and short cut method. 5
Q.11 Explain the following:
   a) Criteria of good research. 2½
   b) Design of research project. 2½
End Semester Examination, May 2014
M. Sc. (N & D) - Third Semester
FOOD PRODUCT DEVELOPMENT AND MARKETING (MNF-303)

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 any two case-studies discussing about a new food product development. 10
Q.2 Discuss classification along with characterization of new food product development in detail. 10
Q.3 Enlist new products in food science and food ingredient industry in detail. 10
Q.4 Discuss idea-generation and idea-screening in detail. Also enlist the different sources of ideas. 10

PART-B

Q.5 Write a short note on sensory evaluation. 5
Q.6 Define new food product development. Also explain factors shaping new product development in brief. 5
Q.7 Describe role of packaging and labeling in food development process. 5
Q.8 Explain thermal processing and ohmic heating in brief in food development process. 5
Q.9 Discuss objectives and criterion of screening in brief. 5
Q.10 Describe a product life cycle. 5
Q.11 Discuss reasons for a new product development. 5
End Semester Examination, May 2014  
M.Sc. (N & D) - Fourth Semester  
MANAGEMENT OF NUTRITION PROGRAMMES (MNC-401)

Time: 3 hrs  
Max Marks: 60

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

**PART-A**

Q.1 Discuss critical appraisal of anemia prophylaxis programme in detail.  
Q.2 Explain the process of programme planning in detail.  
Q.3 Discuss precede-proceed planning model of programme development in detail.  
Q.4 Explain the relationship between nutrition and development in detail.

**PART-B**

Q.5 Explain what is community diagnosis in brief.  
Q.6 Write a short note on Sussman’s four-step model of empirical curriculum development.  
Q.7 Write a note on chain model in brief.  
Q.8 Discuss sources of information in health for planning of MIS.  
Q.9 What is meant by food security and nutrition security?  
Q.10 Discuss role of surveillance in programme evaluation in brief.  
Q.11 Describe top-down approach and need-based approach in brief.
End Semester Examination, May 2014
M.Sc. (N & D) - Fourth Semester
NUTRITION IN EMERGENCIES AND DISASTERS (MNC-402)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 What are the natural disasters? Explain nutritional management of any one natural disaster situation.

Q.2 What are the major causes of malnutrition in emergency situations? Discuss the treatment strategies for major deficiency diseases in different phases.

Q.3 Discuss in detail the methods of assessment of acute malnutrition screening in emergency affected population.

Q.4 How do we assess the food need in emergency situations? Explain in detail household food security and nutrition in emergencies.

**PART-B**

Q.5 Define: Acute emergency phase, Asylum, Camp, Humanitarian emergency and disasters.

Q.6 Which factors give rise to emergency situation in the disasters?

Q.7 What are causes and prevention measures of communicable diseases during emergencies?

Q.8 Write a short note on role of public nutrition in complex emergencies.

Q.9 Discuss the steps essential in planning and organizing a nutritional survey.

Q.10 What are the advantages of dry and wet feeding methods?

Q.11 What is food distribution strategy? Explain.
End Semester Examination, May 2014
M. Sc. (N & D) - Fourth Semester
ADVANCED FOOD SCIENCE AND CHEMISTRY (MNF-401)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Discuss the properties of water in detail. 10
Q.2 Discuss the classification of enzymes. Also write the role of enzymes in food industry. 10
Q.3 Give the classification and properties of carbohydrates. 10
Q.4 Give a detailed account of pigments present in animal and plant tissues. 10

**PART-B**

Write short notes on:

Q.5 Types of air drying. 5
Q.6 Texturised proteins. 5
Q.7 Classification of Lipids. 5
Q.8 Use of following in food:
   a) Carageenans. 5
   b) Gum Arabic. 5
Q.8 Use of following in food:
   a) Carageenans. 5
   b) Gum Arabic. 5
Q.9 Types of food colours. 5
Q.10 Problems of chemical residues in food. 5
Q.11 Genetically modified foods. 5

2½×2
End Semester Examination, May 2014
M. Sc. (N & D) - Fourth Semester
ADVANCED FOOD PROCESSING AND TECHNOLOGY (MNF-402)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1  Write a detailed note on Potato processing.  10

Q.2  Discuss fermentation process in detail.  10

Q.3  "Functional foods-a boon to mankind". Discuss in detail.  10

Q.4  Discuss the process of extraction of essential of essential oils.  10

**PART-B**

Q.5  Write short notes on:
   a)  Homogenization
   b)  Pasteurization  2½x2

Q.6  Write a short note on antimicrobial agents.  5

Q.7  Write a note on dehydrated egg product.  5

Q.8  Write a note on fermented soy products.  5

Q.9  Write a note on germination.  5

Q.10 Discuss importance and storage of Bajra.  5

Q.11 Write a note on aseptic packaging process.  5
End Semester Examination, May 2014
M. Sc. (N & D) - Fourth Semester
MICROBIOLOGY OF FOOD PROCESSING (MNF-403)

Time: 3 hrs

Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Define sterilization. What are various ways to sterilize equipments used in food microbiology labs?

Q.2 Discuss the microbiological aspect of any food group in detail.

Q.3 Enumerate the various essential milestones achieved in the history of food microbiology.

Q.4 What are various methods used to assess the microbiology of water? Discuss any one method in detail.

**PART-B**

Q.5 What are the general techniques used to assess the microbiology of air?

Q.6 Define food additives. Discuss any two in short.

Q.7 Draw the cycle depicting the association of food borne disease control and prevention.

Q.8 Write a detailed note on food fermentation and its various aspects.

Q.9 How is serving and holding lime/temperature important in maintaining food quality?

Q.10 Discuss the treatments used for the solid waste management of food industries.

Q.11 Write short notes on any two:
   a) Curing
   b) Freezing
   c) Canning

2½x2
End Semester Examination, May 2014
M.Sc. (N & D) - Fourth Semester
ADVANCES IN NUTRITIONAL BIOCHEMISTRY (MNC-403)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Explain in detail the digestion and absorption of fat in human body. 10

Q.2 Write short notes on:
   a) Net protein ratio 5x2
   b) Biological value

Q.3 How is hemoglobin synthesized in the body? Explain. 10

Q.4 Discuss in detail the role of liver in cholesterol synthesis. 10

**PART-B**

Q.5 Give the structure and functions of salivary glands. 5

Q.6 Justify the relationship between malnutrition and brain development. 5

Q.7 Differentiate between tropical and non-tropical sprue. 5

Q.8 Write a short note on clinical evaluation of nutritional status. 5

Q.9 Discuss the regulation of blood glucose in the body. 5

Q.10 What are ketone bodies? Mention any two physiological conditions in which ketone bodies may be formed. 5

Q.11 Explain lac operon model of gene regulation in prokaryotes. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - First Semester
ANATOMY-I (PT-101)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Describe brachial plexus along with its roots, cords and branches along with labeled diagram and applied anatomy. 10

Q.2 Classify in detail the muscles of human body. Give example of each. 10

Q.3 Draw and describe bronchopulmonary segment under definition, gross anatomy, lymphatic drainage and applied anatomy. 10

Q.4 Describe arches of foot under names, functions and formations factors maintaining arches and applied anatomy. 10

**PART-B**

Q.5 Describe the astrology of humerus. 5

Q.6 Write a short note on cubital fossa. 5

Q.7 Write a short note on locking and unlocking. 5

Q.8 Describe hip joint under classification, ligaments, relations, blood supply, nerve supply, moments and applied anatomy. 5

Q.9 Give a short note on Hunter’s canal. 5

Q.10 Give a short note on Gluteus maximus muscle with structures and its undercover. 5

Q.11 Give a short note on hamstring muscles. 5

Q.12 Describe femoral triangle with contents. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy – First Semester
PHYSIOLOGY-I (PT-102)

Time: 3 hrs. Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Describe the composition and functions of blood. 10
Q.2 Explain the effects of exercise and posture on cardio-vascular functions. 10
Q.3 Enumerate various cell organelles. Describe the structure and functions of each organelle. 10
Q.4 Describe molecular basis of skeletal muscle contraction. 10

**PART-B**

Q.5 Describe the composition and functions of plasma protein. 5
Q.6 What is a sarcotubular system? Write its functions. 5
Q.7 Describe phases of action potential in a nerve. 5
Q.8 Define anemia. Write a note on iron deficiency anemia. 5
Q.9 With the help of labeled diagram, explain peristalsis. 5
Q.10 Write a note on dietary fibres. 5
Q.11 Describe composition and functions of saliva. 5
Q.12 Describe functions of stomach. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - First Semester
BIOCHEMISTRY (PT-103)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Briefly explain the sources, requirement, biochemical functions and deficiency manifestations of vitamin C. 10

Q.2 What is the normal blood pH? How it is regulated? 10

Q.3 What are lipids? Classify them with suitable examples. Write a note on the functions of lipids. 10

Q.4 Describe the formation and fate of pyruvate in the body. 10

**PART-B**

Q.5 Explain the classification and functions of fatty acids. 5

Q.6 Briefly explain the fluid mosaic model of cell membrane. 5

Q.7 What is genetic code? Explain the features of genetic code. 5

Q.8 Explain the functions and deficiency of vit D. 5

Q.9 Describe the chemistry and functions of immunoglobulins. 5

Q.10 Explain glycogen metabolism. 5

Q.11 Explain the role of kidneys in maintaining water and electrolyte balance. 5

Q.12 Explain the structure and functions of RNA. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - First Semester
FUNDAMENTALS OF PHYSIOTHERAPY (PT-104)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Write in detail about characteristics of synovial joints and its classification with suitable examples and diagrams. 10

Q.2 What is kinematics? Write about location, magnitude, direction and types of motion with its diagrammatic representation. 10

Q.3 Write in detail about physical principles of cold and superficial heat, electromagnetic radiations. 10

Q.4 What is lever? Explain its types with appropriate examples and diagrams. 10

**PART-B**

Q.5 Write short notes on:
   a) Alternating current
   b) Physical principles of sound 2 1/2 x 2

Q.6 What is electric shock? Write about first aid management of electric shock. 5

Q.7 Write short notes on:
   a) Archimedes principles
   b) Equilibrium 2 1/2 x 2

Q.8 Explain muscle work and group action of muscles. 5

Q.9 Draw circuit diagram of SWD and MWD. 5

Q.10 Write short notes on:
   a) Electromagnetic spectrum
   b) Ionization 2 1/2 x 2

Q.11 Explain briefly planes and axes with examples. 5

Q.12 Explain clinical relevance of electric currents in physiotherapy practice. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - First Semester
SOCIOLOGY (PT-105)

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 meant by social control? Discuss social deviance and disease. 10
Q.2 Define social security and its availability to disabled in India. 10
Q.3 What do you understand by social change? Discuss the role of social planning in the improvement of health and rehabilitation. 10
Q.4 What is a social group? Examine the role of formal and informal groups in influencing health and sickness. 10

PART-B

Q.5 Write short notes on concept of culture and behavior. 5
Q.6 Discuss the changing family patterns in India. 5
Q.7 What are the factors of social change? 5
Q.8 Discuss the features of modern caste system and its trends. 5
Q.9 Discuss the importance of sociology to health care professionals. 5
Q.10 Write a short note on: Survey method. 5
Q.11 Discuss the relation of sociology and psychology. 5
Q.12 Define sociology and discuss its scope. 5
End Semester Examination, May 2014
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 the following:
   a) Typical spinal nerve.
   b) Spinal segment. 5x2

Q.3 Draw a well labeled diagram showing the branches of a spinal nerve. 10

Q.4 Describe the facial nerve under following heads:
   a) Nuclei of origin
   b) Functional component
   c) Intracranial course
   d) Extra cranial course
   e) Branches 2x5

**PART-B**

Q.5 Write short notes on:
   a) Brain stem
   b) Medulla oblongata 5

Q.6 Describe in short
   a) Neuron
   b) Stomach 5

Q.7 Draw histological features of:
   a) Thyroid gland
   b) Thymus 5

Q.8 Enumerate the cranial nerve. 5

Q.9 What is autonomic nervous system? Describe it in short. 5

Q.10 Write short notes on:
   a) Hyoid bone
   b) Thyroid cartilage
   c) Cricoid cartilage 5

Q.11 Describe Urogenital diaphragm in short. 5

Q.12 Enumerate structures in stomach bed. 5
End Semester Examination, May 2014
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?

Q.2 Explain various phases of menstrual cycle. Describe hormonal control of menstrual cycle.

Q.3 What are the actions of gluco-corticoids? Add a note on Cushing syndrome.

Q.4 Describe mechanisms for regulation of body temperature in humans. Name the factors affecting body temperature.

**PART-B**

Q.5 Discuss Hypoxia and its types.

Q.6 Describe functions of placenta.

Q.7 Explain stretch reflex. Give examples.

Q.8 Describe formation, composition and functions of CSF.

Q.9 Write a note on organ of Corti.

Q.10 Describe innervation of urinary bladder. Explain micturition reflex.

Q.11 Explain role of kidney in regulation of ECF volume.

Q.12 Discuss the effects of exercise on cardiovascular system.
End Semester Examination, May 2014
Bachelor of Physiotherapy – Second Semester
ELECTROTHERAPY-I (PT-203)

Time: 3 hrs                                           Max Marks: 60
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.

No. of pages: 1

PART-A

Q.1 Classify and write the parameters for T.E.N.S. and enumerate the contraindications for use of T.E.N.S. 10

Q.2 Write principle, indications and contraindications for use of iontophoresis. 10

Q.3 Explain in detail classification of electrical currents. 10

Q.4 Write in detail indications and therapeutic uses of Faradic type current. 10

PART-B

Q.5 Explain in brief Faradism under pressure. 5

Q.6 Write a note on pain gate theory. 5

Q.7 Write a note on types of surging. 5

Q.8 Write the use of high voltage pulse galvanic stimulation. 5

Q.9 Write in brief nerve conduction velocity. 5

Q.10 Write a note on chronaxie and rheobase. 5

Q.11 Write a short note on motor point. 5
End Semester Examination, May 2014  
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 Explain the fundamental position of standing along with force derived position.  
10

Q.2 Define and classify stretching. Write the indication and contraindication for stretching.  
10

Q.3 Discuss the principles and grade of manual muscle testing. Describe the testing procedures for right shoulder honors.  
10

Q.4 Explain the types, indication and principles for passive exercises.  
10

**PART-B**

Q.5 Explain the types of goniometers.  
5

Q.6 Describe the stretching procedure for Pectoralis major.  
5

Q.7 Explain the advantages and disadvantages of mechanical resistance exercise.  
5

Q.8 Differentiate between concentric and eccentric exercises.  
5

Q.9 Write a short note on concave-conven rule along with examples.  
5

Q.10 Classify osteo kinematics movement.  
5

Q.11 Explain Ober’s test.  
5

Q.12 Explain the indication for active range of motion exercise.  
5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Third Semester
PHARMACOLOGY (PT-301)

Time: 3 hrs

Max Marks: 60
No. of pages: 1

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

Part-A

Q.1 Classify antimicrobials according to mechanism of action and discuss about penicillin. 10
Q.2 Discuss drugs used for acute and chronic heart failure. 10
Q.3 Explain routes of drug administration. 10
Q.4 Classify muscle relaxants. Discuss pharmacology of commonly used muscle relaxants. 10

Part-B

Write short notes on any six of the following:

Q.5 Cholinergic and anti-cholinergic drugs. 5
Q.6 Principles of pharmacokinetics. 5
Q.7 Local anesthetics. 5
Q.8 OP poisoning. 5
Q.9 Nitrates. 5
Q.10 Cotrimoxazole. 5
Q.11 Chloramphenicol. 5
Q.12 Sedative drugs. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Third Semester
PATHOLOGY AND MICROBIOLOGY (PT-302)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Discuss the infections caused by streptococcus pyogenes and its laboratory diagram. 10
Q.2 Describe the modes of transaction of hepatitis B virus and the laboratory tests to detect this infection. 10
Q.3 Differentiate between benign and malignant tumors. 10
Q.4 Explain various types of jaundice. 10

**PART-B**

Q.5 Discuss: lab diagnosis of Candida infection. 5
Q.6 Different stages in the life cycle of plasmodium vivax. 5
Q.7 VDRL/RPR test. 5
Q.8 Immunoglobulin M. 5
Q.9 Features of acute inflammation. 5
Q.10 Causative factors of oedema. 5
Q.11 Types of anemia. 5
Q.12 Necrosis. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy – Third Semester
ELECTROTHERAPY-II (PT-303)

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 various techniques of application of cryotherapy. 10
Q.2 Write in detail the physiological effect and contraindication of Ultra-Violet radiation. 10
Q.3 Discuss the thermal and non-thermal effect of ultrasound. 10
Q.4 Explain LASER under the following:
   a) Production of LASER
   b) Energy Density
   c) Indications for use 10

**PART-B**

Q.5 Explain the advantages of combination therapy. 5
Q.6 Classify IRR Radiation and discuss the production of luminous generators. 5
Q.7 Enumerate the dangers of microwave diathermy. 5
Q.8 Explain the capacitor field method of application of short-wave diathermy. 5
Q.9 Explain the following terms:
   a) Inverse square law
   b) Radiation. 5
Q.10 Write the method of application of paraffin wax bath. 5
Q.11 Write the advantages of use of whirlpool. 5
Q.12 Explain the factors affecting the selection of application of heat therapy Vs cryotherapy. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Fourth Semester
MEDICINE (PT-401)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 What is jaundice? Describe type, causes and management of jaundice. 10
Q.2 What is renal failure? Describe causes, clinical feature and management of renal failure. 10
Q.3 What are the indications of blood transfusion? Describe the process of transfusion and reactions occurs during blood transfusion. 10
Q.4 Explain tuberculosis of lungs—risk factors, Ix and treatment of T.B. 10

PART-B

Write short notes on:
Q.5 Inflammatory Bowel disease-types and treatment. 5
Q.6 Iron deficiency of anaemia—causes and management. 5
Q.7 GERD (Gastro Esophageal Reflux Disease). 5
Q.8 ASOM (Acute Suppurative Otitis media). 5
Q.9 Open angle glaucoma—Ix and treatment. 5
Q.10 Scabies. 5
Q.11 Hypokalemia-causes and treatment. 5
Q.12 What is WHO ORS? 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Fourth Semester
SURGERY INCLUDING GYNAECOLOGY AND OBSTETRICS (PT-402)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

PART-A
Q.1 What is appendicitis? Describe various steps of appendicectomy. 10
Q.2 Describe physiological change in pregnancy. 10
Q.3 What are the types of scars? Describe the management of ulcer. 10
Q.4 Discuss pre-operative examination and preparation. 10

PART-B
Write short notes on:
Q.5 Incisional hernia-causes and treatment. 5
Q.6 Boil-causes and management. 5
Q.7 Management of a case of burns. 5
Q.8 Types of abortions. 5
Q.9 Normal puerperium. 5
Q.10 Incisions of nephrectomy. 5
Q.11 Complications of blood transfusion. 5
Q.12 Routine investigations before and after surgery. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Fourth Semester
BIOMECHANICS-I (PT-403)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Define biomechanics. How can a physiotherapist gain from the knowledge of biomechanics? 10

Q.2 Write in detail about shoulder joints biomechanics. Draw a well labeled diagram for the same. 10

Q.3 Define levers. Give classification of levers in detail with examples from the human body. Write a note on mechanical advantage. 10

Q.4 Give the classification of joints with suitable examples and diagrams. 10

PART-B

Q.5 Define Newton's 2nd law with an example. 5

Q.6 Draw a carrying angle diagram with its significance. 5

Q.7 Describe the difference between muscle, tendon and ligament on the basis of their properties. 5

Q.8 Write down the functions of skeletal muscle and write a note on factors affecting muscle tension. 5

Q.9 Define gravity. Write a note on line of gravity passing through human body. Write a note on significance of LOG. 5

Q.10 Enumerate the various ligaments of wrist joint. 5

Q.11 Write short notes on:
   a) Torque
   b) Friction 2½x2

Q.12 Write a note on biomechanical properties of skeletal muscle. 5
End Semester Examination, May 2014  
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 schizophrenia.  
Q.2 Write about sleep disorders.  
Q.3 Write a detailed note on drug dependence and alcoholism.  
Q.4 Describe classical and instrumental conditioning. Explain the importance of learning in practice.

PART-B

Q.5 Write a short note on post-traumatic stress disorder.  
Q.6 Write a note on the types of motives.  
Q.7 Write a short note on communication.  
Q.8 Write about impulse control disorders.  
Q.9 Explain therapy for psychological distress.  
Q.10 Explain methods of enquiry in psychology.  
Q.11 Explain the difference between anorexia nervosa and bulimia.
End Semester Examination, May 2014  
Bachelor of Physiotherapy - Fourth Semester  
ETHICS AND ADMINISTRATION (PT-405)

Time: 3 hrs  
Max Marks: 60  
No. of pages: 1  
Note: Attempt any THREE questions from Part-A and SIX questions from Part-B.

**PART-A**

Q.1 Describe various accreditation agencies regulating physiotherapy practice and education.  
10

Q.2 What are medico-legal cases? Discuss in detail.  
10

Q.3 Discuss the relationship of physiotherapist with:  
a) Patient  
b) Other therapist  
c) Other medical professional  
10

Q.4 Discuss the importance of medical records.  
10

**PART-B**

Q.5 Discuss budgeting and various types of budgets.  
5

Q.6 Briefly discuss various methods of filing.  
5

Q.7 Enumerate the confidentiality principles implied for a physiotherapist.  
5

Q.8 Write a short note on Workman’s Compensation Act.  
5

Q.9 Discuss planning cycle.  
5

Q.10 Comment on history of physiotherapy.  
5

Q.11 How do you prepare for your first interview?  
5

Q.12 Write a short note on career development.  
5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Sixth Semester
NEUROLOGY AND NEUROSURGERY (PT-601)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Explain about the etiology, clinical features and management of acute bacterial meningitis.  10
Q.2 Discuss the etiology of cerebral palsy and management.  10
Q.3 Define ataxia. Explain about the signs and symptoms.  10
Q.4 Write types of spina bifida and management.  10

PART-B

Q.5 Write a note on pathogenesis of stroke.  5
Q.6 Explain Writer’s cramps.  5
Q.7 Enumerate the signs and symptoms of head injury.  5
Q.8 Write a management of a case of head injury.  5
Q.9 Write about Syringomyelia.  5
Q.10 Enumerate the signs and symptoms of poliomyelitis.  5
Q.11 Explain amyotrophic lateral sclerosis.  5
Q.12 Write treatment of Parkinsonism.  5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Sixth Semester
NEUROLOGICAL PHYSIOTHERAPY (PT-602)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Write in detail various primitive reflexes in terms of stimulus, position, negative/positive reactions and their significance. 10

Q.2 Write in detail physiotherapy management of patient with Gullian Barre Syndrome. 10

Q.3 Write in detail various principles of motor relearning program. 10

Q.4 Write in detail physiotherapy management of patient with spinal cord injury. 10

**PART-B**

Q.5 Explain briefly two point and four-point gait. 5

Q.6 Describe role of TENS in pain management. 5

Q.7 Explain briefly various types of coordination tests. 5

Q.8 Explain briefly positioning in stroke patient during acute stage. 5

Q.9 Explain briefly structure of neuron and synapse. 5

Q.10 Explain briefly anatomy of spinal cord. 5

Q.11 Explain various principles of proprioceptive neuromuscular facilitation. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Sixth Semester
MANUAL THERAPY (PT-603)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 Explain Kaltenborn technique in detail along with its grades. 10

Q.2 What is massage therapy? Explain in detail about its technique of giving massage to the back area. 10

Q.3 Explain the technique of Mckenzie mobilization with a suitable diagram. 10

Q.4 Describe neurodynamics. Explain in detail about its principles, indications and contraindications of neurodynamics. 10

PART-B

Q.5 What are the indications and contraindications of manual therapy? 5

Q.6 Explain the principle of Maitland mobilization. 5

Q.7 What are the contraindications of massage therapy? 5

Q.8 Explain the mobilization technique of knee joint. 5

Q.9 What are the principles of Mulligan mobilization? 5

Q.10 Explain dysfunction syndrome in brief. 5

Q.11 Explain Slump test. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Sixth Semester
RESEARCH METHODOLOGY AND BIOSTATISTICS (PT-604)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 What is sample design? Explain various sample designs used in scientific research. 10

Q.2 What are the components of report writing? 10

Q.3 Find the missing frequency if the arithmetic mean is 28. Then find the median:

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<thead>
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<th>Marks:</th>
<th>0-10</th>
<th>10-20</th>
<th>20-30</th>
<th>30-40</th>
<th>40-50</th>
<th>50-60</th>
</tr>
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<tbody>
<tr>
<td>Students:</td>
<td>12</td>
<td>18</td>
<td>27</td>
<td>?</td>
<td>17</td>
<td>6</td>
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10

Q.4 Calculate the Karl Pearson’s co-efficient of co-relation between expenditure and sales. Comment on the type of co-relation.

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<thead>
<tr>
<th>Expenditure</th>
<th>Sales</th>
</tr>
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<tbody>
<tr>
<td>39</td>
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<td>36</td>
<td>51</td>
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<tr>
<td>78</td>
<td>84</td>
</tr>
</tbody>
</table>

10

**PART-B**

Q.5 Define hypothesis. What are types of hypothesis? 5

Q.6 What are the various types of distributions? Explain salient features of any one of them. 5

Q.7 Elaborate various level of measurement with examples. 5

Q.8 Differentiate between type I and II errors. 5

Q.9 Define and describe quantitative research design. 5

Q.10 Differentiate between reliability and validity. What are their types? 5

Q.11 Write a short note on ethics in clinical research. 5

Q.12 The fitness scores on a particular fitness scale for 3 classes A, B, C are as follows:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
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<tbody>
<tr>
<td>Mean</td>
<td>18.2</td>
<td>22.5</td>
<td>24.0</td>
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<tr>
<td>SD</td>
<td>5.4</td>
<td>4.5</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Which class is more likely to be fitter than others? 5
End Semester Examination, May 2014
Master of Physiotherapy (Neurology) - Second Semester
PHYSIOTHERAPY IN NEUROLOGY (MPN-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 Define stroke. Write in detail assessment and physiotherapy management of patient diagnosed with MCA stroke. 10

Q.2 What is ataxia? Write assessment and physiotherapy management of patient with cerebellar ataxia. 10

Q.3 Write in detail physiotherapy management of patient diagnosed with Parkinson's disease. 10

Q.4 Write ICU management of head injury patient. 10

**PART-B**

Q.5 Write a note on stereotactic surgeries. 5

Q.6 Write in brief gait training in Gullian Barre syndrome. 5

Q.7 Write in brief reflex sympathetic dystrophy. 5

Q.8 Write in brief various coma stimulation techniques. 5

Q.9 Write a note on spasticity and its management. 5

Q.10 Write a note on post polio residual paralysis. 5

Q.11 Write a note on subacute combined degeneration of spinal cord. 5
End Semester Examination, May 2014
Master of Physiotherapy (Sports) - Second Semester
EVALUATION AND DIAGNOSIS IN SPORTS (MPS-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 Explain the mechanism of injury of ACL injury. Write special test to identify it. 10

Q.2 What are field tests in sports injury rehabilitation? Write in detail importance of field tests and describe in detail any two field tests deployed in sports injury rehabilitation. 10

Q.3 Discuss the importance of the following as a diagnostic tool:
   a) Electromyograph.
   b) MRI. 10

Q.4 Discuss the importance of on field assessment. 10

**PART-B**

Q.5 What is De-Quevrien's disease? Write the tests done to identify it. 5

Q.6 Describe Phalen's test. 5

Q.7 Describe Ober's test. 5

Q.8 Describe Neural tension test for ulnae nerve. 5

Q.9 How will you test tightness for rectus femoris? 5

Q.10 Write advantages of pre-participation evaluation. 5

Q.11 Write the differential diagnosis for planate fasciitis. 5

Q.12 Explain speed test. 5
End Semester Examination, May 2014
Master of Physiotherapy (Sports) - Second Semester
PHYSIOTHERAPY IN SPORTS (MPS-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 Discuss exercise induced bronchial obstruction in detail. 10
Q.2 Define obesity. Write down the various means of obesity management and health issues associated with it. 10
Q.3 Explain in detail the three principles of segmental stabilization. 10
Q.4 Define massage. Write a note on sports massage and contraindications of massage. 10

**PART-B**

Q.5 Why are flexibility exercises important in sports? 5
Q.6 Write a note on connective tissue massage. 5
Q.7 What are theories associated for runners high and exercise addiction? 5
Q.8 Discuss TUE in detail. 5
Q.9 What role does nutrition have in sports? What kind of diet should be prescribed for?
   a) Wrestlers. 5
   b) Endurance runners. 5
Q.10 What are physiological effects of cryotherapy? Write down a note on Lewis-Hunting phenomenon. 5
Q.11 Discuss DOMS in detail. 5
End Semester Examination, May 2014
Master of Physiotherapy (Sports) - Third Semester
ADVANCED THERAPEUTICS IN SPORTS (MPS-301)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Define somatotyping. Write its classification and discuss the use of somatotype in sports physiotherapy. 10
Q.2 Discuss the role of motion analysis in research and rehabilitation. 10
Q.3 Discuss the offensive and defensive techniques of basket ball. 10
Q.4 Write the assessment techniques of body composition. Write the advantages of underwater weighing methods. 10

**PART-B**

Q.5 Write about the different methods of age determination. 5
Q.6 Discuss the clinical importance of body fat analysis by skin fold caliper. 5
Q.7 Write the principle of muscle energy techniques. 5
Q.8 Write the use of force platform in sports training and rehabilitation. 5
Q.9 Explain capsular stretching. 5
Q.10 Discuss the kinetics of swimming. 5
Q.11 Write the role of EMG in sports training. 5
End Semester Examination, May 2014
Master of Physiotherapy (Sports) - Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN SPORTS
(MPS-401)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**
Q.1 Explain the role of aerobic energy system on performance. 10
Q.2 Discuss the cardio-vascular adaptation due to aerobic training. 10
Q.3 Explain the effect of exercise on the hormone secretion of anterior – pituitary. 10
Q.4 Discuss the importance of difference between men and women for exercise testing and exercise prescription. 10

**PART-B**
Q.5 Explain the term “Second-wind”. 5
Q.6 Explain the role of oxygen debt and oxygen deficit. 5
Q.7 Discuss the importance of pre-game meal on performance. 5
Q.8 Explain the ACSM Guidelines for exercise prescription in type-II diabetes. 5
Q.9 Discuss the effect of exercise in management of obesity. 5
Q.10 Explain Runner’s high. 5
Q.11 Explain fibre type alteration due to strength training. 5
End Semester Examination, May 2014
Master of Physiotherapy (Neurology) - Fourth Semester
EXERCISE PHYSIOLOGY (MPN-401)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Write in detail ACSM guidelines of exercise prescription in type II diabetes mellitus. 10
Q.2 Write various guidelines of exercise prescription in neuromuscular disorders. 10
Q.3 Discuss effects of exercise on various hormones in the body. 10
Q.4 Discuss regulation of respiration and cardiovascular adaptation during exercise. 10

**PART-B**

Q.5 Write a short note on exercise prescription in hypertensive patient. 5
Q.6 Write a short note on VO₂ max. 5
Q.7 Write importance of aging for exercise testing and prescription. 5
Q.8 Explain Bruce’s protocol. 5
Q.9 Explain neural adaptation with exercise. 5
Q.10 Write a short note on oxygen debt. 5
Q.11 Write a short note on fatigue. 5
End Semester Examination, May 2014
Master of Physiotherapy (Musculoskeletal) - Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN MUSCULOSKELETAL (MPM-401)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1 Explain the physiological basis for changes in the cardiovascular system as a result of 6-week exercise training programme. 10

Q.2 Explain the importance of anaerobic energy system and how these system help in improving performance. 10

Q.3 Explain the effect of exercise on the mechanical properties of bone and what are effect of disuse, weightlessness and immobilization. 10

Q.4 Describe in detail about the rational for exercise testing and exercise prescription. 10

**PART-B**

Q.5 Describe the physiological basis of initial gain during strength training. 5

Q.6 Explain in brief about length-tension relationship. 5

Q.7 What are the metabolic adaptation to endurance testing? 5

Q.8 Explain oxygen debt. 5

Q.9 Explain the role of VO2 reserve in exercise prescription. 5

Q.10 Explain muscle fibre typing. 5

Q.11 Explain exercise prescription in prevention of low back pain. 5
End Semester Examination, May 2014
Master of Physiotherapy (Cardiopulmonary) - Fourth Semester
EXERCISE PHYSIOLOGY AND EXERCISE PRESCRIPTION IN CARDIOPULMONARY (MPC-401)

Time: 3 hrs

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

Max Marks: 60
No. of pages: 1

PART-A

Q.1 Explain the changes in the cardiovascular system as a result of 12-week aerobic training program. Add the recent advances. 10

Q.2 How important is cardiac rehabilitation in physiotherapy? Summarize different phases of cardiac rehabilitation. 10

Q.3 Write the recent update of American College of Sports Medicine on exercise prescription elderly population. 10

Q.4 Explain exercise tolerance testing. Write a note on the ECG recording to be observed during testing. 10

PART-B

Q.5 Explain the effect of exercise on the various hormones of the body. 5

Q.6 Explain the "FITT" principle. 5

Q.7 Explain the role of pulmonary rehabilitation in restrictive disorders. 5

Q.8 Write a note on the immediate effects of exercise on the respiratory system. 5

Q.9 Explain the activities for increasing functional abilities. 5

Q.10 Explain the physiological changes of aging. 5

Q.11 Explain the guidelines for exercise prescription for Type II diabetes patients. 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Eighth Semester
COMMUNITY BASED REHABILITATION (PT-801)

Time: 3 hrs  Max Marks: 60
No. of pages: 1

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

PART-A

Q.1 What are communicable diseases? Explain any two of them with special mention of physiotherapist’s role in preventing or alleviating them. 10

Q.2 What is family planning? Explain the various methods of contraception available to people for controlling the family. 10

Q.3 What is census? How does it help the authorities in formulating the health policies for the citizens? 10

Q.4 Define hygiene. Comment on the challenges and opportunities for village and town sanitation in India. 10

PART-B

Q.5 Write a short note on school health programme. 5

Q.6 What are various levels of prevention in health and disease? 5

Q.7 Comment on National Polio Eradication Programme. 5

Q.8 Describe the nutritional disorders commonly found in Indian children. Briefly describe any two of them. 5

Q.9 Describe the health care structure of India existing at central and state level. 5

Q.10 Mention the immunization schedule followed in India for children. 5

Q.11 Discuss the public health laws for people in our country. 5

Q.12 How does community behaviour change the ecology? 5
End Semester Examination, May 2014
Bachelor of Physiotherapy - Eighth Semester
SPORTS MEDICINE AND SPORTS PHYSIOTHERAPY (PT-802)

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 role of team physiotherapist in a sports team. 10
Q.2 Explain the biomechanical consideration for lateral epicondylitis. Write a note on rehabilitation program. 10
Q.3 Define diabetes mellitus. Write down the precautions and special considerations while prescribing exercise program for a diabetic athlete. 10
Q.4 What are common injuries (sports) seen in a young athlete? Discuss any two in detail. 10

**PART-B**

Q.5 Write short notes on:
   a) Heat illness
   b) Heat stroke 2½×2
Q.6 Write down the advantages and contraindications for carbohydrate loading. 5
Q.7 Enumerate the courses for myobitis obsificans. What are the most common sites for it? What precautions can we take to prevent it? 5
Q.8 Write short notes on:
   a) Cauliflower ear
   b) Epistaxis 2½×2
Q.9 Enumerate the different test for ligament testing of knee. Explain any two of them. 5
Q.10 Write a short note on special test used for impingement of shoulder. 5
Q.11 Where and how is the Scottish Dog appearance seen? 5
Q.12 What is blood doping? What are the disadvantages of doing it? 5
End Semester Examination, May 2014  
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.  

**PART-A**  

Q.1 List the different occupational disorders. Explain the physiotherapy management of the disorders. Add a note on the preventive strategies of these disorders.  
10  

Q.2 A 52-year old male was admitted to the emergency unit with complaints of loss of appetite, low fever, stomach pain on the right side of the abdomen, nausea and vomiting. Write the probable diagnosis. Explain the physiotherapy (pre and post) management of the same.  
10  

Q.3 Explain the stages of labour. Add a note on the role of physiotherapy in the pre-natal period.  
10  

Q.4 Classify burns. Explain the role of physiotherapy in a burn unit.  
10  

**PART-B**  

Q.5 Explain the role of physiotherapy in psychiatry.  
5  

Q.6 Write a note on mastectomy.  
5  

Q.7 Write a short note on psoriasis.  
5  

Q.8 Explain the role of physiotherapy in the post-natal period.  
5  

Q.9 Explain the importance of physiotherapy in geriatrics.  
5  

Q.10 Explain the common complications following abdominal surgery.  
5  

Q.11 Explain the site and location of surgical incision for abdominal surgery.  
5
End Semester Examination, May 2014  
Bachelor of Physiotherapy - Eighth Semester  
DISABILITY PREVENTION AND REHABILITATION (PT-804)

Time: 3 hrs  
Max Marks: 60  
No. of pages: 1

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

**PART-A**

Q.1  What do you understand by ADLs? Explain the assessment of ADLs. Describe the process of teaching ADLs to a disabled individual. 

Q.2  Explain various biomechanical principles used in designing of Orthosis. 

Q.3  What are communication impairments? Explain in detail assessment of Aphasia. 

Q.4  A person has Scoliosis with apex at T6 level. What sort of Orthosis can be advised? Explain Orthosis in detail. 

**PART-B**

Q.5  Differentiate between impairment, disability and handicap on the basis of ICIDH classification. 

Q.6  Briefly explain below knee prosthesis assessment. 

Q.7  Briefly explain principles of vocational rehabilitation. 

Q.8  Write a short note on behavioural and learning problems in the disabled. 

Q.9  Explain the functions of rehabilitation team. 

Q.10  Mention the modifications of the wheelchair for: 
   a) Obese patient  
   b) Paraplegic patient 

Q.11  Write a short note on rehabilitation of polio. 

Q.12  Explain the laws guiding the right of disabled.
End Semester Examination, May 2014  
Master of Physiotherapy – First Semester  
BIOSTATISTICS AND RESEARCH METHODOLOGY (MPB-103)

Time: 3 hrs  
Max Marks: 60  
No. of pages: 1

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

**PART-A**

Q.1 Describe the structure of a research paper.  
10

Q.2 Differentiate between qualitative and quantitative research. What are their types?  
10

Q.3 The mean and standard deviation of a set of 100 observations were 50 and 10 respectively. But by mistake a value 40 was wrongly taken as 50. Calculate the correct mean and standard deviation.  
10

Q.4 Calculate the Karl-Pearson’s correlation co-efficient from following data:

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<thead>
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<th>Marks in Theory:</th>
<th>45</th>
<th>20</th>
<th>40</th>
<th>25</th>
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<td>35</td>
<td>17</td>
<td>23</td>
<td>47</td>
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</tbody>
</table>

10

**PART-B**

Q.5 Differentiate between primary and secondary data.  
5

Q.6 Explain various scales of measurement with suitable examples.  
5

Q.7 Describe the importance of p-value in a study.  
5

Q.8 Discuss the ethical issues for a human subjects in a study.  
5

Q.9 Differentiate between internal and external validity.  
5

Q.10 Differentiate between Type I and Type-II errors.  
5

Q.11 Calculate the median and mode from following data:

<table>
<thead>
<tr>
<th>Class Interval</th>
<th>Frequency</th>
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End Semester Examination, May 2014
Master of Physiotherapy (Musculoskeletal) - Second Semester
EVALUATION AND DIAGNOSIS IN MUSCULOSKELETAL (MPM-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 Explain the role of isokinetic exercises in rehabilitation with a suitable example. 10
Q.2 Explain amputation and its classification. What method you would be applying to prevent and treat the complications? 10
Q.3 Explain inflammatory discrete of joint. 10
Q.4 Explain Sacroiliac dysfunctions along with its management. 10

PART-B

Q.5 Explain open lock and close lock of temporomandibular joint and its management. 5
Q.6 Write down about physical disability evaluation of spinal dysfunctions. 5
Q.7 What are the mechanical causes of LBA and in PT management? 5
Q.8 Explain biofeed back with a suitable example. 5
Q.9 Explain MUAP. 5
Q.10 Describe radiodiagnosis of spondylolisthesis. 5
Q.11 Explain indication of NCV. 5
End Semester Examination, May 2014
Master of Physiotherapy (Musculoskeletal) - Second Semester
PHYSIOTHERAPY IN MUSCULOSKELETAL (MPM-202)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

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

**PART-A**

Q.1  Describe the salient features of different schools of manual therapy. 10

Q.2  Describe the beneficial aspects of physical therapy in geriatric care. 10

Q.3  A 23-yr old young but rather clumsy male fell on out stretched hand and hurt his wrist. He immediately applied ice on it on advice from his physiotherapist friend. Swelling subsided but noticed a "dinner fork" deformity the next day. How will his PT friend help in his recovery? 10

Q.4  A long standing 43-yr old diabetic female developed ulcers in all her toes of L/L which threatened to turn gangrenous. The Orthosurgeon suggested amputation above the level of malleolii. Name the amputation and pre-and post-operative PT management for the same. 10

**PART-B**

Q.5  Discuss the pathophysiology and PT management for coxa vara. 5

Q.6  A 23-yr old young female complains of pain (Localized) in the anterior knee which is exacerbated by stair climbing (descending > ascending). Diagnose and manage. 5

Q.7  Explain sacral torsion dysfunction. 5

Q.8  Describe PT management for canal stenosis. 5

Q.9  Differentiate between PT management for OA and RA. 5

Q.10 Write a short note on CRPS. 5

Q.11  How does a physiotherapist help in the recovery of Pott’s spine? 5

Q.12  Describe the strengthening protocol for rotator cuff muscles. 5
End Semester Examination, May 2013
Master of Physiotherapy (Neurology) - Second Semester
EVALUATION AND DIAGNOSIS IN NEUROLOGY (MPN-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 A 56-year old woman lost consciousness 2-days back. She regained consciousness in few minutes but since then she is not able to use her right hand and has slight difficulty in walking. Assess the patient in detail. 10

Q.2 What is functional evaluation? Why is it important to carry out functional evaluation of a Parkinson’s patient? Explain the functional evaluation of a Parkinson’s patient. 10

Q.3 Explain in detail neurodevelopment assessment of a 1-year old boy diagnosed with delayed milestones. 10

Q.4 Critically analyse the examination of mental functions in a neurologically ill patient. 10

**PART-B**

Q.5 Briefly explain the examination of dysarthria. 5

Q.6 Comment on the importance of examination of limb length discrepancy in a patient. Explain its measurement also. 5

Q.7 Explain the deviations of the gait in swing phase. 5

Q.8 Explain SLR and its variation for evaluation of neural integrity. 5

Q.9 Briefly explain the various scales for assessment of pain. 5

Q.10 Write a short note on lumbar puncture. 5

Q.11 Explain spinal cord dominating reflexes as neuro-maturation markers. 5

Q.12 Explain in detail examination of eight cranial nerve. 5