

B.P.T. [1st Prof.]

BF/2009/07

Anatomy

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

Enumerate:

1. Branches of Lateral cord of brachial plexus.
2. Boundaries of Cubital fossa.
3. Tributaries of inferior vena cava.
4. Stages of Mitosis.
5. Parts of Brainstem.
6. Functions of Kidney.
7. Actions of Pectoralis major muscle.
8. Muscles innervated by Spinal part of accessory nerve.
9. Arterial supply of Heart.
10. Movements at 1st Carpo-Metacarpal joint.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

Describe briefly:

1. Boundaries and contents of Femoral triangle.
2. Thoraco-abdominal diaphragm.
3. Clavi Pectoral fascia.
4. Radial nerve.
5. Histological structure of Cancellous bone.
6. Placenta.
7. Hamstring muscles.
8. Hypothalamus.
9. Intercostal space.
10. Transitional epithelium.
11. Axillary Lymph nodes.
12. Foetal circulation.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. **Describe Knee joint under following headings:**
 - a. Type of Joint. [2]
 - b. Articulating surfaces. [3]
 - c. Movements and muscles involved in producing them. [10]
2. **Describe Lateral Spinothalamic Tract(Ascending Tract) under following headings:**
 - a. Origin [2]
 - b. Course [3]
 - c. Functional significance. [10]
3. Name the parts of Gastro-Intestinal Tract[GIT]. Describe Stomach. [15]
4. **Describe the Wrist joint under following headings:**
 - a. Type of Joint. [2]
 - b. Articulating surfaces. [3]
 - c. Movements possible and muscles producing them. [10]

Electrotherapy-I

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

1. Viscosity and Elasticity.
2. Structure of Atom.
3. Amplifiers.
4. Thermionic valves.
5. Conductor.
6. Voltmeter.
7. Physical properties of Light.
8. Electromagnetic induction.
9. Earthing.
10. Joule's Law.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. Explain Pain gate theory.
2. Describe the difference between Faradic and Galvenic currents.
3. Write about Iontophoresis.
4. Explain about Strength duration curve and its significance.
5. Describe Electric shock.
6. Explain indications of Faradic stimulation.
7. Explain indications and contraindications of Infra Red Rays[IRR].
8. Explain Luminous Generator of Infra Red Rays[IRR]
9. Explain physical principles of Sound and their properties.
10. Explain Conductor and Insulator.
11. Describe effects of Paraffin wax bath.
12. Explain methods of Faradic stimulation.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. Discuss the physiological effects, indications, contraindications and principles of clinical application of Modified Direct Current.
 2. Discuss about properties of Solid, Liquid and Gases and Write about Ohm's law and its application in electrotherapy.
 3. Explain types and sources of UVR generation and techniques of Irradiation.
 4. Explain principles of clinical application, effects and uses of TENS.
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Exercise therapy – I

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

1. Method of measurement of Range of motion of forearm supination.
2. Physiological benefits of Effleurage.
3. Define Relaxation.
4. Medicinal balls.
5. Guthrie smith frame.
6. Stride standing.
7. Delorm's technique.
8. 1 RM.
9. Method of measurement of Grade 3 for seratus anterior.
10. Kneeding.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. Principles of techniques of Passive movements.
2. Write a note on Progressive resistive exercise, giving examples.
3. Theories of Motor control.
4. Factors causing Muscle tension.
5. Effects of Massage on circulation and metabolism.
6. Describe measurement of Range of motion for Lumber spiner flexion and extension.
7. MMT for Illiopsoas muscle.
8. Describe derived starting positions in sitting.
9. Write a note on types of movements.
10. Write a detailed note on Deep friction massage.
11. Write a note on Learning of Motor skill.
12. Describe the equipments used for Resistive exercises.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. Write in detail the principles, effects, indications and contraindications of Active movements.
2. Write various types of Relaxation techniques and compare their benefits.
3. Describe the use of Suspension therapy for Lower limb.
4. Describe MMT for measuring muscle strength of Trunk muscles.

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Physiology

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

1. Golgi apparatus.
2. Synaptic delay.
3. Feeding center.
4. Immunoglobulins.
5. Heart sounds.
6. Residual volume.
7. Cerebrospinal Fluid.
8. Homeostasis.
9. Essential Amino acids.
10. Glomerular Filtration Rate.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. Chemical regulation of respiration.
2. Parkinsons disease.
3. Action potential.
4. Visual pathway.
5. Vital capacity and factors affecting it.
6. Micturation reflex.
7. Pyramidal tracts.
8. Jaundice.
9. SA Node.
10. Hemoglobin.
11. Gastric juice.
12. Cardiac cycle.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. Describe structure and mechanism of transmission at Neuromuscular junction.
 2. Describe mechanism of temperature regulation and role of Hypothalamus in it.
 3. Discuss differences between sympathetic and Parasympathetic nervous system.
 4. Describe structure and functions of White blood cells [WBC].
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Biochemistry

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

1. Write the components of two important blood buffers.
2. Enumerate the functions of Cholesterol in the human body.
3. List the important blood lipids.
4. Define Basal Metabolic Rate.
5. Write the names of 4 unsaturated fatty acids indicating their chain length and position of unsaturation.
6. List the Mucopolysaccharides found in Connective tissue.
7. Name the Antioxidant vitamins.
8. List the enzymes which are found to be elevated in blood after the Myocardial infarction.
9. Write 4 differences between DNA and RNA.
10. List four inborn errors of Protein metabolism.

SECTION - B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. What are Polysaccharides? Classify them and list the differences between Starch and Glycogen.
2. What is a Codon? Describe the salient features of the genetic code.
3. Classify enzymes giving at least two examples of each class.
4. Describe the biochemical function of Vitamin C and explain how deficiency of this vitamin leads to the symptoms exhibited in the disease Scurvy.
5. What are Isotopes? How can they be used to diagnose diseases.
6. Write a note on energy rich compounds.
7. Describe the structure of Collagen.
8. How are Thyroid hormones synthesized and secreted?
9. "Gluconeogenesis is not merely a reversal of Glycolysis". Justify this statement giving reasons, why?
10. Describe the Chemiosmotic hypothesis of oxidative phosphorylation.
11. Describe the reactions of the Urea cycle.
12. Create ideal diets for a chronically ill and for a terminally ill patient.

SECTION - C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. What is the normal fasting blood glucose level? Which are the hormones which influence blood glucose levels and how do they act. Discuss the changes in metabolism in Diabetes Mellitus.
 2. Describe in detail the chemistry and metabolism of bone. Add a note on role of Parathyroid hormone and Vitamin D in bone metabolism.
 3. What are Lipoproteins? List their types and their functions. Which one of these Lipoproteins is implicated in the causation of atherosclerosis. Explain how this Lipoprotein may cause atherosclerosis.
 4. Write a detailed note on the mode of action of enzymes and the various factors affecting enzyme action.
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Sociology

M.M. : 90

Time : 3 Hours

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

Explain the followings concepts:

1. Physiotherapy.
2. Socialization.
3. Secondary groups.
4. Family and nutrition.
5. Public health.
6. Culture.
7. Social control.
8. Norms.
9. Social problems.
10. Social worker.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. Write uses of Sociology.
2. How can health of individuals be improved through health institutions?
3. What social factors influence the Personality of an individual?
4. Define Social groups. Discuss main types of Groups.
5. Write a note on psychosomatic diseases.
6. What do you know about culturally induced symptoms and diseases?
7. Discuss the main factors of social change?
8. How is social control exercised by law?
9. What types of diseases occur due to social deviance?
10. How can the problem of Prostitution be checked?
11. Define Social control. What is role of morals in the life of an individual?
12. Write a note on Population explosion.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. Define Sociology. Why is it called a science of society? How can we utilize the knowledge of sociology in physiotherapy and Occupational therapy.
 2. What do you understand by Family? What are its main functions and discuss the changes taking place in family?
 3. Highlight the role of Rural and Urban communities in Public health.
 4. Write a note on Poverty and Unemployment.
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