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

BF/2007/12

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. Name all body buffers helping in regulation of P_H of blood.
2. Give functions of Ribosomes and Mitochondria of cells.
3. Write the differences in structures of Starch and Cellulose.
4. Write the diseases caused by deficiencies due to Vitamin E and Vitamin D.
5. What are Prostaglandins? Write their functions.
6. What is Atherosclerosis?
7. What are Receptors? Give examples.
8. What are the cause of Hyponatremia?
9. What is Oxidative Phosphorylation?
10. What is physiological Jaundice?

Section - B

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

1. Discuss biochemical actions of Parathyroid hormone [PTH].
2. What is Glutathione? Discuss its role.
3. Write a note on Vitamin C, discussing its requirement, sources, biochemical functions and deficiencies.
4. Discuss Secondary and Tertiary structures of Protein.
5. Discuss Oxidative phase of HMP shunt pathway. Also discuss importance of HMP shunt.
6. Write a short note on high energy compounds.
7. What is Osmotic pressure? Write its physiological importance.
8. Discuss enzyme deficiency and clinical features in any of the inborn error of metabolism.
9. Write structure of Cholesterol and give its importance.
10. Discuss deamination and transamination reactions.
11. Discuss maintenance of Water and electrolyte balance in body.
12. How is Creatinine synthesized in the body? What is its importance.

SECTION - C

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

1. Describe structures and functions of DNA & RNA. Discuss features of genetic code.
 2. Classify Enzymes. Discuss different factors affecting enzyme activity. Add a note on diagnostic importance of enzymes.
 3. How are Ketone bodies synthesized & utilized in the body? Add a note on Ketosis.
 4. Describe Glycolysis giving enzymes, Co-enzymes and regulation of the process.
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B.P.T. [1st Prof.]

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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. Actions of Trapezius muscle.
2. Hamstring muscles.
3. Features of lower Motor neuron lesions.
4. Boundaries of Popliteal fossa.
5. Parts of male reproductive tract.
6. Branches of Lateral cord of brachial plexus.
7. Branches of Arch of aorta.
8. Branches of Basilar artery.
9. Parts of Corpus Callosum.
10. Muscles supplied by Median nerve.

Section - B

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

[40]

Describe briefly:

1. Erb's Palsy.
2. Femoral triangle.
3. Flat foot.
4. Cartilage.
5. Bell's Palsy.
6. Transtuberular plane.
7. Bronchopulmonary segments.
8. Pituitary gland.
9. Menstrual cycle.
10. Epidermis.
11. Thyroid gland.
12. Skin.

Section - C

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

[30]

1. **Describe Temporo-mandibular joint, under the following headings:**

- a. Type of Joint. [2.5]
- b. Articulating surface. [2.5]
- c. Movements & muscles involved in producing them. [10]

P.T.O.

1/6 (A)

2. **Describe Pyramidal tract under following headings:**
 - a. Origin. [2.5]
 - b. Course. [5]
 - c. Functions. [2.5]
 - d. Effects of lesion to it at the level of:
 - i) Pons. [5]
 - ii) Lower medulla.
 3. **Describe Meninges under following headings:**
 - a. Layers. [5]
 - b. Modifications of each of the layers of Meninges. [5]
 - c. Applied anatomy. [5]
 4. **Describe Shoulder Joint under following headings:**
 - a. Articulating bones. [5]
 - b. Movements possible & muscles responsible for them. [5]
 - c. Applied anatomy. [5]
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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. Pace maker potential.
2. Facilitated diffusion.
3. Immunoglobulins.
4. Oxygen carrying capacity.
5. Gastrin.
6. Gastrocolic reflex.
7. Planter reflex.
8. Excitation-Contraction coupling.
9. Chemoreceptors.
10. Renin-Angiotensin system.

Section - B

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

[40]

1. Functions of gall bladder.
2. Physiology of Vision.
3. Pyramidal tracts.
4. Functions of Basal Ganglia.
5. Withdrawal reflex.
6. Anti Diuretic Hormone[ADH]
7. Juxta Glomerular apparatus.
8. Regulation of Cardiac output.
9. Impulse conduction through Unmyelinated and Myelinated axons.
10. Physiology of hearing.
11. Vestibular apparatus.
12. Functions of Glucocorticoids.

Section - C

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

[30]

1. Describe the functions, fate and factors affecting Haemoglobin.
 2. Describe the role of Stretch reflex in maintenance of Muscle tone.
 3. Describe the role of Hypothalamus in body temperature regulation.
 4. Describe the role of various Hormones in regulation of blood glucose level.
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B.P.T. [1st Prof.]
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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. Lenz's law.
2. Series Rheostat.
3. Joule's law of heating.
4. Triode valve.
5. n-p-n transistor.
6. Inverse square law.
7. Earth shock.
8. Variable capacitor.
9. Vant Hoff's law.
10. Accomodation in nerve fibers.

Section - B

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

1. Explain the principle of Iontophoresis along with its clinical application.
2. Discuss Faradism under pressure.
3. Give characteristics, physiological and therapeutic effects of faradic currents.
4. Give various precautions to be taken in a physiotherapy department to prevent an electric shock.
5. Explain various modes of heat transfer along with examples.
6. Explain the various techniques of application of Paraffin wax bath.
7. What are the various types of Infra-red radiation generators?
8. Give physiological & therapeutic effects of UVR.
9. Give indications and contraindications of Paraffin wax bath.
10. Discus molecular theory of Magnetism.
11. Discuss the various physical properties of Sound waves.
12. Explain the following:
 - a. Neurapraxia.
 - b. Axonotmesis.
 - c. Neurotmesis.

Section - C

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

1. Give the physiological and therapeutic effects of Heat in detail.
2. Explain Pain gate theory and its application. What are the various types of TENS used therapeutically.
3. What is S.D. curve? Explain the S.D. curves for innervated, partially denervated & denervated muscle. Also define Chronaxie and Rheobase and give their application.
4. Give various principles that govern the Electromagnetic radiation. Explain the technique of application for I.R. radiations.

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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. Transverse frictions.
2. Percussions.
3. Grade III of Occipito-frontalis muscle testing.
4. Balastic stretching.
5. Crook lying position.
6. Walk standing position.
7. Muscle tone.
8. Physiological benefits of effleurage.
9. Therabands.
10. Delorme's P.R.E. regime.

Section - B

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

[40]

1. Laura Mitchels relaxation technique.
2. Muscle testing protocol for Sartorius muscle.
3. Method of measuring R.O.M. of lateral rotation of hip joint.
4. Indications of Passive movements.
5. Comparison of Frankel's exercise and co-ordination exercises.
6. Basic principles of Active assistive movements.
7. Theories of motor control.
8. Augmented feed back.
9. What are Circulatory benefits of Massage.
10. Difference in application of Passive movements for UMN and LMN lesions.
11. Describe the grades of M.M.T.
12. What are factors responsible for muscle fatigue.

Section - C

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

[30]

1. Describe indications and contraindications of Suspension therapy.
2. Describe various tools used in therapeutic Gymnasium.
3. Classify Massage. Briefly give its history and various techniques in brief.
4. Give the method of application of Passive movements in right lower limb.

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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. Occupational therapy.
2. Health.
3. Formal groups.
4. Community.
5. Sub-culture.
6. Folkways.
7. Juvenile delinquency.
8. Social security.
9. Social work.
10. Religion.

Section - B

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

[40]

1. What is Sociology? How can sociology be of use in physiotherapy?
2. Explain the meaning of socialization. How does socialization mould individual personality.
3. Distinguish between Primary and Secondary groups. What role do these groups play in hospitals and rehabilitation settings?
4. Write a note on the nature and functions of family.
5. Point out the distinctive features of rural communities.
6. What is Social control? How does religion help in social control?
7. Discuss Prostitution as a social problem.
8. Why do societies change?
9. Explain the role of medical social worker.
10. Elucidate the role of social security in relation to the disabled.
11. How do social factors affect the perception of illness?
12. What are the causes and consequences of alcoholism in Punjab?

Section - C

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

[30]

1. Explain the main features of Caste system. How is caste system changing.
 2. What is Culture? How is it different from civilization? What are the main components of culture?
 3. Write a detailed note on the problems faced by working women.
 4. Distinguish between Community, Society and association. What role does a Community play in public health?
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Psychology

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. Define abnormal psychology.
2. What do we mean by Free association.
3. Differentiate between Id, Ego and Superego.
4. Distinguish between 'Illusions and Hallucinations'.
5. Give an example of approach-avoidance conflict.
6. What is Insight learning.
7. Distinguish between Primary and Secondary reinforcement.
8. What do we mean by professional burnout.
9. Define Rationalization.
10. What is Geriatric psychology.

Section - B

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

1. What are the merits and demerits of Introspection method in psychology.
2. With the help of examples, explain the role of environment in the development of intelligence in children.
3. What is Operant conditioning. Explain the role of reinforcement in Operant conditioning.
4. What is an interview? Explain the different types of Interviews.
5. What are Projective techniques? Explain any one of them.
6. Define Creativity? What are the characteristics of a creative person.
7. What is Attention? What are the factors that determine attention.
8. Define Perception. Explain the basic principles of Perception.
9. Distinguish between Delusions and Hallucinations. Explain the different types of Hallucinations. Give examples.
10. Explain the psychological reaction to death and bereavement.
11. Discuss the specific psychological needs of Geriatric patients.
12. Explain the different Personality styles of patients.

Section - C

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

1. Highlight the significance of Psychoanalysis in Psychology.
 2. Explain the stages of Personality development as proposed by Erickson.
 3. What are the barriers to effective communication. What steps should we take to make our communication effective with patients.
 4. What is Behaviour modification? Explain the various conditioning and learning principles used to modify patients behaviour.
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Biomechanics

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. Equilibrium.
2. 1st law of Newton's law of motion.
3. Concentric muscle contraction.
4. Waddling Gait.
5. Synergists and their function.
6. Myosin.
7. Ground reaction force.
8. Bone Cartilage(Articular Cartilage)
9. Isometric contraction.
10. Motor Unit.

Section - B

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

1. Write about Active and Passive insufficiency.
2. Measurement of 'Q' angle and its significance.
3. Write about Intervertebral disc and mention about nutrition and function.
4. Describe the structure of Sarcomere.
5. Describe Scoliosis.
6. Advantages of IInd order lever.
7. Femoral Anteversion and Retroversion.
8. Structure of Synovial joint.
9. Enumerate muscle work during Flexion of elbow.
10. Significance of Transverse arch of foot.
11. Describe the Knee locking and unlocking mechanism.
12. Describe Scapulo-Humeral Rhythm.

Section - C

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

1. What is Gait deviation? Mention any three Gait deviations with description of analysis.
 2. Classification of Connective tissues and their functions.
 3. Describe the ligaments around Hip joint and discuss their role in stability of Hip joint.
 4. Describe the structure of Skeletal muscle and explain about the Contractile and non Contractile structures of the skeletal muscles.
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B.P.T. [2nd Prof.]

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Exercise Therapy-II**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. Passive insufficiency.
2. Gomukhasana.
3. Free exercises for Subtalar joint.
4. Vajrasana.
5. High stepping gait.
6. Step length & Stride length.
7. Positional traction.
8. Gutter crutches.
9. Closed packed and Loose packed position for shoulder.
10. Sherrington's law of innervation.

Section - B

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

1. Explain the technique of Pranayama with its physiologic effects.
2. Define Co-ordination. Explain causes for Co-ordination.
3. Enumerate an exercise programme to improve dynamic balance for a patient who has achieved static balance recently.
4. Kinetics of Gait.
5. Kinetics and Kinematics of Posture.
6. Explain ideal posture as it relates to surface landmarks from a side view.
7. Explain various PNF stretching techniques with examples.
8. Describe therapeutic effects of mechanical traction with precautions.
9. Describe Endurance training.
10. Explain mechanics of Respiration.
11. What are the walking aids available in rehabilitation. Explain indications for various types of walking aids.
12. Review contraindications for Cervical traction. Explain the technique of application for the same.

Section - C

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

1. How do you diagnose a case of Scoliosis? List down various stretching & strengthening exercises for Scoliosis in detail.
2. Explain points to remember while setting up of Hydrotherapy department in a Multispeciality hospital. How do you provide exercises in water to improve lower limb function with review of contraindications.
3. Describe techniques to Re-educate ADL function for a patient from lying to walking.
4. Explain techniques & principles for Frenkel's exercises. Describe in detail to improve co-ordination for Upper limb[Lt].

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Pathology and Microbiology

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. Cardinal signs of inflammation.
2. Wet gangrene.
3. Pernicious anaemia.
4. Muscular dystrophy.
5. Megaloblast.
6. Lipoma.
7. Borderline leprosy.
8. Negri body.
9. Structure of Cryptococcus.
10. Portal of entry of infectious agents.

Section - B

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

1. Etiopathogenesis of Rheumatoid arthritis.
2. Pyogenic osteomyelitis.
3. Vascular events in inflammation.
4. Fracture healing.
5. Risk factors in Atherosclerosis.
6. Laboratory findings in Iron deficiency anaemia.
7. Contrasting features of Apoptosis versus Necrosis.
8. Amniotic fluid embolism.
9. Hospital acquired infection.
10. Etiopathogenesis of AIDS.
11. Lab. Diagnosis of Typhoid fever.
12. Urine microscopic examination.

Section - C

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

1. Define Necrosis. What are the different types of Necrosis. Explain with examples.
 2. Explain the different types of Hypersensitivity reactions along with examples.
 3. Discuss the etiopathogenesis and morphology of various lesions in Rheumatic fever.
 4. Define Emphysema. Discuss the etiopathogenesis, morphology and complications of Emphysema.
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B.P.T. [2nd Prof.]
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Electro Therapy-II

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. Transducer head.
2. Coherence in Laser
3. Ice pack.
4. Propagation of Sound waves.
5. Faradic foot bath.
6. Strength duration curve.
7. Acoustic streaming.
8. Wallarian degeneration.
9. H reflex.
10. Co axial cable.

Section - B

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

1. What is mean by High Frequency currents.
2. Enumerate the indications of Ultrasound therapy.
3. Write about the biophysical effects of Interferential therapy.
4. Comment on the use of Cryotherapy as an adjunct in physiotherapy practice.
5. Write about the physiological responses to heat gain on various tissues of the body.
6. What are the therapeutic effects of Short Wave Diathermy.
7. Explain the precautions during the use of LASER.
8. Write about the use of mechanical pressure and its principles.
9. What is step down Tranformer? Mention its uses.
10. Enumerate the contraindications of Heat therapy.
11. What are Russian currents. Explain.
12. Describe applications and the contra indications of Faradic foot bath.

Section - C

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

1. Write about the E.M.G and its uses.
 2. What are the biophysical effects and therapeutic effects of LASER.
 3. Write about the Frequency of Ultrasound Waves and mention about the production of Ultrasound.
 4. Write about the techniques of application of Interferential therapy and mention various indications.
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B.P.T. [2nd Prof.]

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Pharmacology

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 why?

1. Lignocaine is combined with adrenaline for local anaesthesia.
2. Metronidazole is generally added to ampicillin for treatment of deep abscess.
3. Glycerol trinitrate is given sublingual in acute Angina pectoris.
4. Succinyl Choline produces prolonged apnoea in some patients during surgery.
5. Timolol is used in treatment of Glaucoma.
6. Neostigmine is preferred over physostigmine in Myasthenia gravis.
7. Pyridoxin is combine with Isoniazid.
8. Clavulanic acid is combined with with amoxycillin.
9. Antiepileptic therapy should not be withdrawn abruptly.
10. Multidrug therapy is used in tuberculosis.

Section - B

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

[40]

1. Discuss in brief the pharmacotherapy of Organophosphorus poisoning.
2. Write short note on Ketamine.
3. Describe mechanism of action and uses of Clonidine.
4. Describe briefly the pharmacological basis of therapeutic uses of Carbamazepine.
5. Discuss in brief the mechanism of action, uses and adverse effects of Omeprazole.
6. Give a brief account of Metronidazole.
7. Explain the drug management of Methyl alcohol poisoning.
8. Discuss in brief the therapeutic uses and adverse effects of Methimazole.
9. Briefly describe the adverse effects and contraindications of Propranolol.
10. Give outline of the drug management of diabetic ketoacidosis.
11. Define Teratogenicity with suitable examples of drugs responsible for causing teratogenicity.
12. Write short note on Co-trimoxazole.

Section - C

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

[30]

1. Discuss the drugs used for the relief of Angina Pectoris along with their limitations for their uses.
 2. Discuss Transdermal drug delivery system. What are the main advantages and disadvantages of this system.
 3. Enumerate Sulfonyl ureas. Describe mechanism of actions, uses, side effects and drug interactions of Glimperide.
 4. Classify the drugs used in Hypertension. Give pharmacotherapeutic details of ACE-inhibitors.
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B.P.T. [3rd Prof.]

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P.T. in Medical Condition-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. Acute Inflammation and its signs.
2. What is Obesity?
3. Clinical signs of DVT.
4. Definition of Crackles.
5. Pigeon chest.
6. Funnel chest.
7. Wet gangrene.
8. Bronchial sounds abnormalities.
9. Signs of Pleurisy.
10. Causes of Arteriosclerosis.

Section - B

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

1. Physiotherapy in Buerger's disease.
2. Role of breathing exercises in chest wall deformities.
3. Pulmonary function test in Asthma.
4. Role of physiotherapy in Lung abscess with contraindications.
5. Role of exercises in Osteoporosis.
6. Explain, " Osteoarthritis is not a true arthritis."
7. Common causes of Congestive Cardiac failure.
8. "Hypertension is not a contraindication of exercise"-Explain.
9. Physiotherapy and its role in acute asthma.
10. Pain control in Rheumatoid arthritis.
11. Diabetes and Exercise.
12. Frozen shoulder and conservative treatment.

Section - C

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

1. "Physiotherapy in Intensive Care Unit" -Write with suitable examples.
 2. Write a physiotherapy treatment plan for 35 years old shopkeeper with Ankylosing Spondylitis.
 3. What are the common deformities in Rheumatoid arthritis? How physiotherapy could help in these?
 4. Role of physiotherapy in common Geriatric conditions.
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B.P.T. [3rd Prof.]

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Orthopaedics

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. Vertical talus.
2. Fibrofasciitis.
3. Shoulder-Hand syndrome.
4. Dequervan's disease.
5. Amputation.
6. Smith fracture.
7. Scoliosis.
8. Multiple myeloma.
9. Osteogenesis imperfecta.
10. Leprosy.

Section - B

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

1. Arthrodesis.
2. CDH.
3. Erb's Paralysis.
4. Compound fracture tibia.
5. Fracture healing.
6. Ankylosing spondylitis.
7. Osteochondroma.
8. Volkmann's Ischaemia.
9. Tennis elbow.
10. Medial Meniscus tear.
11. Non union.
12. Bone grafting.

Section - C

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

1. Describe briefly the clinical features, management and complications of Hand injuries.
 2. Describe the aetio-pathology, prevention, management and complications and Poliomyelitis.
 3. Describe the causes, classification, clinical features and management of Chronic Osteomyelitis.
 4. Outline the pathology, clinical features, management and complications of Prolapse intervertebral Disc.
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B.P.T. [3rd Prof.]

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Research Methodology

M.M. : 90

Time : 3 Hours

NOTE : NON-SCIENTIFIC CALCULATOR IS ALLOWED.

Section - A

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

[20]

1. Describe a research problem.
2. Define Median.
3. Define Simple random sampling.
4. What is reliability of a test.
5. Define Standard deviation.
6. What are salient features of a good average.
7. Explain two tailed test.
8. Give the conditions for applying X^2 (Chi-square) test.
9. What are main principles of Sampling.
10. Distinguish between research methods and research methodology.

Section - B

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

[40]

1. What are the sampling errors and how these can be reduced?
2. Design a questionnaire for the Chronic heart disease patients.
3. Compute the Coefficient of Mean deviation from Median from the following data:
Height(in cms) : 150-153 153-156 156-159 159-162 162-165 165-168
No. of students: 2 7 24 27 13 3
4. Discuss the normal probability curve in the context of clinical research.
5. What does 'Validity' stands for? Explain various types of validity that a test can have.
6. Write short notes on the following:
i) Structure of a research proposal ii) Biostatistics
7. Calculate the Co-efficient of Correlation(Prof. Karl Pearson) from the following data:
X: 67 69 71 75 85 93 87 73
Y: 95 80 87 80 79 75 80 85
8. Explain the advantages and disadvantages of Rating scales.
9. Explain one sample run test and give its uses.
10. Describe stratified random sampling and give its advantages.

P.T.O.

11. A certain stimulus administered to each of the twelve patients resulted in the following increase of blood pressure:
5, 2, 8, -1, 3, 0, -2, 1, 5, 0, 4 and 6.
Can it be concluded that the stimulus will, in general, be accompanied by an increase in blood pressure.
 $t_{0.05}(11) = 1.80$ for right tail test.
 $t_{0.10}(11) = 1.80$ for two tailed test.
12. What are the criteria of evaluating a research report?

Section - C

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

1. Explain the importance of Research report. Also pointout its purpose and limitations.
2. a) Define Yates corrections for continuity in a 2×2 contingency table.
b) The following table shows the result of Inoculation against Cholera:
- | | Not attacked | Attacked |
|----------------|--------------|----------|
| Inoculated | 431 | 5 |
| Not inoculated | 291 | 9 |
- Derive your inference on the efficacy of the Inoculation.
Given that d.f. $v=1$ $X^2_{0.05}=3.841$

3. A medical experiment was made to test the additional hours of sleep due to three drugs A, B, C tried on one patient each from four different age groups. Examine whether age has any significant effect on the gain in sleep. Further, whether the three drugs are similar in their effects or not.
Given that at 5% level of significance $F_{(2,6)} = 5.14$ $F_{(3,6)}=4.76$

Age groups	I	II	III	IV	Row total
Drugs					
A	2.0	1.2	1.0	0.3	4.5
B	1.1	0.8	0.0	-0.1	1.8
C	1.5	1.3	0.9	0.1	3.8
Column total	4.6	3.3	1.9	0.3	10.1

4. a. Calculate rank correlation coefficient for the following data:
X: 81 78 73 73 69 68 62 58
Y: 10 12 18 18 18 22 20 24
- b. Define analysis of Variance. Give its applications.

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B.P.T. [3rd Prof.]

BF/2007/12

General Medicine

M.M. : 90

Time : 3 Hours

Section - A

All questions are compulsory. Answer to each question up to 5 lines in length. Each question carries 2 Marks.

[20]

1. Enumerate causes of Pneumonia.
2. Enumerate the complications of Diabetic ketoacidosis.
3. Write complications of infective endocarditis.
4. Treatment of M.D.R. tuberculosis.
5. What is Protein Caloric malnutrition.
6. What is Post exposure prophylaxis of HIV.
7. Differentiate between Anxiety neurosis and hyperthyroidism.
8. Write clinical features of acute nephritis syndrome.
9. Write short note on Acne vulgaris.
10. What is Conversion reaction.

Section - B

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

[40]

1. Write clinical features of Cushing's syndrome.
2. Write management of Thyroid strome.
3. Write causes and treatment of lung abscess
4. Write causes of chronic diarrhoea and treatment of ulcerative colitis.
5. Write clinical features and treatment of Psoriasis.
6. What is E.C.T. and what are its indications.
7. What are various types of hypersensitivity reaction.
8. Write causes and treatment of refractory anaemia.
9. Differentiate between Chronic bronchitis and emphysema.
10. Write complications of Mumps.
11. Write clinical features of Vit. C deficiency.
12. What is acute renal failure. Write its causes and treatment.

Section - C

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

[30]

1. Write causes of haemetemesis and management of Oesophageal varicess.
 2. Write causes of Anasarca and management of tubercular ascitis.
 3. Write causes of Secondary hypertension and management of hypertension.
 4. Write management of Diabetic ketoacidosis.
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B.P.T. [3rd Prof.]

BF/2007/12

P.T. in Ortho Conditions

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. Describe Pes Cavus deformity.
2. How will you manage a case of PPRP with quadriceps Grade 'O' walking with equinus deformity.
3. Write down the clinical features of Fracture Colle's.
4. Write down the post immobilisation P.T. in case of fracture Supracondylar humerus.
5. How will you diagnose a Fracture?
6. Write down the physiotherapy management of retrocalcaneal bursitis.
7. Describe Speed's test.
8. Write down the complications of increased Lumbar Lordosis.
9. What is RJ bandage?
10. Discuss tendon grafting.

Section - B

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

[40]

1. Write down the importance of sensation in amputee.
2. Write down the causes of Circum ductory gait with AK prosthesis.
3. Write down the post operative PT in fracture shaft of Tibia.
4. Write down the post-operative PT following Hamstrings to Patela transfer.
5. What is Orthostatic hypotension?
6. Discuss PT following Synovectomy of Knee.
7. Discuss weight training in sports injury.
8. Write down the PT following extensor tendon repair in hand.
9. Write down the mechanism of Claw hand deformity in Leprosy.
10. Write down the pathomechanics of Genu Recurvatum.
11. Write down the home exercise program for a case of Ankylosing spondylitis.
12. Write down the bladder management in Spinal cord injury.

Section - C

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

[30]

1. Describe the pathogenesis of O.A. Knee and write down its P.T. management.
2. What is Spondylolisthesis? Write down its physiotherapy management.
3. Write down the check out and post-prosthetic training in Bk prosthesis.
4. Write down the problems in Rheumatoid Hand and its physiotherapy management.

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B.P.T. [4th Prof.]

BF/2007/12

Neurology

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. Enlist tracts(ascending and descending) spinal cord.
2. Draw course of 7th cranial nerve.
3. Innervation of Urinary bladder.
4. Classify Ataxia.
5. Name types of Diabetic neuropathy.
6. Define and classify Cerebral palsy.
7. Define and enlist causes of Hydrocephalus.
8. Sign and symptoms of upper motor neuron disease.
9. Define Chorea. What are its common causes.
10. Wrist drop.

Section - B

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

1. Anatomy of neuromuscular junction.
2. Blood supply of Spinal cord. Clinical picture of Anterior Spinal artery block.
3. Discuss signs, symptoms and investigations of Syringomyelia.
4. Discuss Subacute Combined Degeneration[SACD].
5. Classify Neuropathy. Discuss Entrapment neuropathies.
6. Define and classify Meningitis. Discuss pyogenic meningitis.
7. Discuss Transverse myelitis.
8. Types of Multiple Sclerosis and its clinical features.
9. Discuss variants of LGBS and clinical features.
10. Management of acute Lumbosacral disk prolapse.
11. Acute Disseminated Encephalomyelitis[ADEM].
12. Classify Spinal Cord tumors and discuss clinical features.

Section - C

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

1. Discuss Myasthenia Gravis - definition and clinical features. Management of Myasthenia Crisis.
 2. Discuss in detail rehabilitation in neurological diseases.
 3. Management of Spasticity.
 4. Describe clinical features and management of Parkinsonism.
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B.P.T. [4th Prof.]
BF/2007/12

P.T. in Medical Conditions-II

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. What is Spasticity.
2. What do you understand by Scoliosis?
3. Babinski's sign and its significance.
4. What is Charkot's joint?
5. Describe Tinnels' sign.
6. Explain Gower's sign.
7. What is ATNR.
8. Write about Rickets and common deformities.
9. Nerve supply to Quadriceps.
10. Explain CDH [Congenital Dislocation of Hip]

Section - B

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

1. Describe Parkinsonian Gait.
2. Assess and manage a case of median nerve injury at wrist joint.
3. Name the splint for Wrist drop and explain its working.
4. Write about Secondary complications in Spinal cord injury patients.
5. Enumerate skills used in facilitation techniques in Flaccidity.
6. What is Erb's palsy. Write its clinical features and management.
7. What are the differences between Pyramidal and Extrapyramidal lesion.
8. Explain Rood's approach.
9. Write about normal developmental milestones in children.
10. Explain physiotherapeutic management for an acute head injury patient.
11. Describe Neuron and explain about the Neuro Muscular Junction [NMJ].
12. Write about the muscle grading as per the MRC scale.

Section - C

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

1. Enumerate Cranial nerves and write about the functions.
 2. What is Motor neuron disease? Write about its types, clinical features and treatment.
 3. Define and Classify Myopathy and write about clinical features and management of DMD.
 4. Write about the common Musculo Skeletal problems in Geriatric persons and their management.
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B.P.T. [4th Prof.]

BF/2007/12

Principles of Rehabilitation

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. Enumerate the members of a CBR team.
2. Define 'Health' as described by WHO.
3. Discuss about the levels of prevention.
4. Define mobility aids.
5. Define ADL and its types.
6. Define Dysarthria.
7. Define PTB prosthesis.
8. Discuss about Spinal orthosis.
9. Define budget.
10. Discuss the role of NGOs and funding agencies in community rehabilitation.

Section - B

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

[40]

1. Discuss about architectural barriers.
2. Discuss the role of physical agents in the prevention of disability.
3. Enumerate the role of social worker.
4. Discuss the management of Communication impairments.
5. Discuss the various Central government schemes for the rehabilitation of persons with disability.
6. Discuss the role of a rehabilitation nurse.
7. Draw and describe the parts of a Wheel chair. Add a note on Wheel chair training.
8. Define Prosthesis. Discuss its components.
9. Write a note on the management of the disabled hand.
10. Enumerate the duties of rehabilitation professionals in Poliomyelitis.
11. Describe the significance and various levels of prevention.
12. Discuss about ADL assessment.

Section - C

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

[30]

1. Discuss the principles of administration of a rehabilitation unit. Underline the difference between administration and management. Add a note on interdepartmental relationships.
 2. Discuss in detail about the need and scope of rehabilitation in India. Add a note on various statutory provisions and schemes for the persons with disability.
 3. Discuss the various methods of delivery of rehabilitative care along with the advantages and disadvantages of each approach.
 4. Describe the rehabilitation team, clearly enumerating the roles of different rehabilitation professionals.
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B.P.T. [4th Prof.]

BF/2007/12

Pediatrics & Geriatrics

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. Asymmetric Ionic neck reflex.
2. Bells'a palsy.
3. Clinical manifestations of Vitamin D deficiency.
4. Socio economic impact of aging.
5. Alzheimer's disease.
6. Differential diagnosis of language delay.
7. Classification of burns by depth & surface area.
8. Classification of PEM[Protein Energy Malnutrition].
9. Hypertensive encephalopathy.
10. Differential diagnosis of Floppy infant.

Section - B

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

1. Examination of a new born.
2. Exercise programs to improve balance in the elderly.
3. Management & rehabilitation in Empyema thoracis.
4. VSD[Ventricular Septal Defect].
5. Nutritional requirements of the elderly.
6. Management of Marasmus.
7. Role of physiotherapy in a comatosed patient.
8. Depressive disorders in the elderly.
9. Kyphoscoliosis.
10. Management of strategies for Urinary incontinence in the aged.
11. Clinical features of Congestive Cardiac failure.
12. Pathophysiology & immune mediators in Guillain-Barre Syndrome

Section - C

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

1. Outline the causes, clinical features, complications and treatment of Rheumatoid arthritis and Osteoarthritis.
2. Define Cerebral Palsy. Enumerate its subtypes and discuss in detail its clinical features, diagnosis and management.
3. Describe in detail the clinical features, complications and management of Acute Severe Asthma.
4. Describe the etiological factors, clinical features, diagnosis and management of a patient with Stroke.

B.P.T. [4th Prof.]

BE/2007/12

P.T. in Surgical Conditions

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 down the complications of Tension.
2. Describe Mcburney's incision.
3. What is Prolapse.
4. Define Sinus.
5. What is 3rd degree burn.
6. List out the complications of burn involving the groin.
7. Describe posterolateral thoracotomy incision.
8. What is Broncho-pulmonary fistula.
9. What are the principles of positioning in burn.
10. What is PDA.

Section - B

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

1. Write down various techniques of relaxation used in pregnancy.
2. Write down the physiotherapy management of Pressure Sore.
3. What is Hypertrophic scar.
4. Discuss the physiotherapy after Craniotomy.
5. Discuss the complications of chest infection in case of head injury.
6. What is Contusion.
7. What is Diastasis recti.
8. Discuss the method of prevention of DVT in post operative cases.
9. Write down the PT management of Stress incontinence.
10. Write down the PT management of Scar.
11. Briefly mention the post operative PT for renal transplant.
12. Write down the Musculo skeletal complications of Open heart surgery and its PT management.

Section - C

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

1. Write down the physiotherapy management of a case of Pneumonectomy.
2. Discuss the Pre and Post operative physiotherapy for Claw correction.
3. Write down the evaluation and PT management of a case of 2nd degree superficial burn involving anterior Chest wall, Axilla and Upper arm.
4. How will you prepare a woman with pregnancy for easy child birth?

B.P.T. [4th Prof.]

BF/2007/12

General Surgery**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. Trophic ulcer.
2. Disinfection.
3. Basal cell carcinoma.
4. Gas gangrene.
5. Right subcostal incision.
6. Ingrowing toe nail.
7. Ganglion.
8. Spinak headache.
9. Sebaceous cyst.
10. Deep Venous Thrombosis[DVT].

Section - B

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

1. Write clinical features, causes of non healing of ulcers and its management.
2. Write clinical features of a Second degree burn of ant. Chest wall & abdomen and management of the same.
3. Write differential diagnosis of the cervical Lymphadenitis and management of Tubercular Lymphadenitis.
4. Write clinical features and management of hemorrhagic shock.
5. What is Ptosis? Discuss its causes and management.
6. Name Cystic lesions of the Skin and write management of Sebaceous cyst.
7. Describe etiology, predisposing factors and management of "Trachoma".
8. Describe various blood groups and its importance.
9. Describe causes and management of ante partum haemorrhage.
10. Name various types of skin grafts and their importance.
11. Describe causes of Ear discharge and treatment of CSOM.
12. Describe clinical features and management of Uterine prolapse.

Section - C

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

1. Describe stages of Labour and write causes and management of post partum haemorrhage.
2. Describe etiology, clinical features and management of Septicaemic Shock.
3. Describe various types of Conjunctivitis and its management.
4. Describe various causes of Low backache and management.