

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. Science of society.
2. Social consciousness.
3. Socialization.
4. Community.
5. Caste.
6. Folkway.
7. Prostitution.
8. Social legislation.
9. Social work.
10. Culture.

Section - B

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

[40]

1. Write an essay on uses of Sociology for physiotherapy.
2. How does social consciousness influence perception of illness? Explain.
3. Write a note on the relation between sociology and health.
4. Explain the influence of social factors on an individual's personality.
5. Discuss the relation between informal group and sickness.
6. How is family related to an individual's health? Explain.
7. Explain the role of rural community in public health.
8. Discuss the relation between Cultural factors and a patient's choice of treatment
9. Write an essay on the Caste system.
10. Write a note on factors of social change.
11. How is social control exercised by religion.
12. Discuss population explosion as a social problem.

Section - C

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

[30]

1. What is a Group? Describe the role of social groups in hospitals and rehabilitation centres.
 2. Discuss the relation between family and sickness.
 3. Describe the role of Culture in inducing symptoms of a disease and fighting it as well.
 4. Discuss the social problem of poverty and unemployment in relation to sickness and disability.
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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 Biceps Brachii muscle.
2. Thenar muscles.
3. Branches of external Carotid artery.
4. Boundaries of Digastric triangle.
5. Parts of female reproductive tract.
6. Branches of medial cord of brachial plexus.
7. Branches of abdominal aorta.
8. Branches of common Peroneal nerve.
9. Parts of cerebellum.
10. Muscles supplied by Posterior interosseous nerve.

Section - B

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

Describe briefly:

1. Medial longitudinal arch of foot.
2. Cubital fossa.
3. Boundaries and contents of Axilla.
4. Histological structure of Hyaline cartilage.
5. Trachea.
6. Urinary Bladder.
7. Adrenal(Supra renal) Gland.
8. Oesophagus.
9. Graffian Follicle.
10. Stratified Squamous epithelium.
11. Submandibular gland.
12. Deltoid muscle.

Section - C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each question 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 Internal Capsule under following headings:**
- a. **Origin .** [2]
 - b. **Parts.** [3]
 - c. **Fibres present in different parts.** [10]
3. **Name the parts of Male genital tracts. Describe the testis.** [15]
4. **Describe the Elbow joint under following headings:**
- a. **Articulating surfaces.** [5]
 - b. **Movements possible and muscles producing them.** [10]

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. What is an asymmetric carbon.
2. List the essential fatty acids. Are they saturated or unsaturated.
3. What are Zymogens? Give two examples.
4. What is the normal reference range for fasting blood glucose and for postprandial blood glucose.
5. Write the names of two compounds acting as second messengers.
6. What are uncouplers? Give two examples.
7. Write the reaction catalyzed by a typical transaminase and indicate the coenzyme required by this enzyme.
8. Define pH.
9. What are aromatic amino acids? Name them.
10. What is Tetany? How is it caused.

Section - B

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

1. What are Mitochondria. Explain their structure and list their functions.
2. Classify Carbohydrates giving the functions and uses of each class.
3. What are Glycolipids. How do they differ from phospholipids? Explain with suitable examples.
4. Describe with the help of a labelled diagram the salient features of the Watson and Crick model of DNA.
5. What are amino acids. Classify them according to the nature of their side chain.
6. What are the biological functions of Calcium in the body. Discuss the homeostasis of Calcium.
7. Describe the Cori's cycle.
8. Differentiate between Coenzymes and Isoenzymes giving suitable examples each.
9. What is Atherosclerosis? Explain the initiation of atherosclerosis with reference to metabolism of LDL.
10. What is RNA. List the various types. Describe the features and functions of tRNA.
11. Give an account of the energy requirement with respect to the extent of physical activity of an individual. What is a balanced diet.
12. Describe in detail β -oxidation of palmitic acid with energetics.

SECTION - C

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

1. What is Glycolysis and what is its significance. Describe this pathway in detail. How does it differ from Gluconeogenesis.
 2. Describe the various types of enzyme inhibition in detail.
 3. Describe the chemical nature and metabolic role of Vitamin D. Discuss diseases caused due to its deficiency. What are the symptoms of Vitamin hypervitaminosis?
 4. What are inborn errors of metabolism? Describe the causes of the following diseases:
 - a. Phenylketonuria.
 - b. Alkaptonuria.
 - c. Maple syrup urine disease.
 - d. Hartnup disease.
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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. Neutrophilia.
3. Synaptic Delay.
4. Diabetes Insipidus.
5. S.A. Node.
6. Peristalsis.
7. Horner's syndrome.
8. Vital capacity.
9. Feeding centres.
10. Essential amino acids.

Section - B

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

1. Parkinson's disease.
2. Middle ear.
3. Fight and Flight response.
4. Conduction of Action potential.
5. Functions of Parathyroid hormone.
6. Chemical regulation of Respiration.
7. Facilitated diffusion.
8. Functions and fate of hemoglobin.
9. Micturation reflex.
10. Pyramidal tracts.
11. Gastric Juice.
12. Oxygen debt.

Section - C

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

1. Discuss the Cardiovascular effects of exercise.
2. Describe in detail the Regulation of Body temperature.
3. Discuss the Excitation Contraction Coupling.
4. Describe the source and functions of Growth Hormone.

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. Surface tension.
2. Inverse square law.
3. Electron theory.
4. Amplifiers.
5. Dipole.
6. Fuses.
7. Potential difference.
8. Modified direct current.
9. Orthodormic conduction.
10. Faradic Galvenic test.

Section - B

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

[40]

1. Explain Oscillator circuits and its effects and uses.
2. Explain the types and sources of IRR generation and techniques of irradiation.
3. Explain Conductors and Insulators - its effects and uses in our physiotherapy department.
4. Explain production of interrupted and surged current and their effects.
5. Describe principle of clinical applications of TENS.
6. Explain the properties of SD curve in axanotomosis of nerve fibres.
7. Describe Dosimetry of UVR.
8. Explain the Stable and Labile methods of faradic stimulation.
9. Explain the role of Skin impedance in electrical stimulation and the common procedures to reduce the same.
10. Explain Theraktin Tunnel and its uses.
11. Explain Non luminous generators of IRR.
12. Explain indications and contraindications of TENS application.

Section - C

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

[30]

1. Discuss about properties of solids, Liquids and Gases and write about Ohm law and its application in electrotherapy.
 2. Write an essay on Low frequency currents.
 3. **Discuss:**
 - i) Physical principles of Sound and its properties.
 - ii) Electro magnetic spectrum and its biophysical application.
 4. How to calculate a test dose for Ultra Violet Irradiations and write about different types of UVR.
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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. Measurement of External rotation of shoulder by Goniometer.
2. Grade 3 evaluation of triceps.
3. Oxford techniques.
4. Accessory movements.
5. Efflurage.
6. Stretch reflex in motor learning.
7. Therabands.
8. 3rd order lever with example in human body.
9. Eccentric motion.
10. Isolytic contractions.

Section - B

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

[40]

1. Describe the fundamental starting position of Kneeling and its modifications.
2. Suspension therapy for medial rotation assistance at the Hip joint.
3. Progressive relaxation techniques.
4. Differentiate Fatigue from Soreness.
5. Indications of Passive movements.
6. Describe the procedure of testing of transverse abdominis muscle strength.
7. Contraindications of Manual therapy.
8. Environmental changes to induce relaxation.
9. Classification of Motor skills.
10. Types of Goniometers and Parts of a clinical goniometer.
11. Describe uses of Swiss ball.
12. What is Muscle spasm. How can massage help in relieving it.

Section - C

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

[30]

1. Write a detailed note on active exercises.
 2. Describe various techniques of massage along with the physiological effect of each of these.
 3. Describe measurement of Range of Motion of Lumbar and Cervical spine.
 4. Describe types of Suspension. What are the uses and its contraindications.
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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. Melanin pigment.
2. Metastatic calcification.
3. Apoptosis.
4. Megabaryocyte.
5. Fat necrosis.
6. Structure of Aspergillus.
7. Exudate.
8. Tumor giant cell.
9. Air embolism.
10. Acid fast bacilli.

Section - B

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

[40]

1. Bronchopneumonia.
2. Tuberculoid leprosy.
3. Lab. Diagnosis of Typhoid fever.
4. Gram positive bacterial infections.
5. Rickets.
6. Viral meningitis.
7. Spread of Hepatitis viruses.
8. Etiopathogenesis of Atherosclerosis.
9. Type II hypersensitivity reactions.
10. Hospital acquired infections.
11. Microcytic hypochromic anaemia.
12. Pathology of rheumatic heart disease.

Section - C

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

[30]

1. Describe the causative agent of Syphilis. Discuss the different stages and lab diagnosis of Syphilis.
2. Give the morphology and life cycle of Taenia Solium. Discuss the diagnosis of tapeworm infection.
3. Define Thrombosis. Discuss the pathogenesis and morphology of Thrombus.
4. Discuss in detail the chemical mediators of Inflammation.

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. Explain the term 'Clinical Psychology'.
2. What is an experiment.
3. Describe the principle of Creative synthesis.
4. What is Reaction formation.
5. What do you mean by Phi Phenomenon.
6. Define Motivation and mention the different types of motives.
7. With the help of an example differentiate between negative reinforcement and punishment.
8. What is Stress interview.
9. What are degenerative disorders.
10. What do you mean by drug dependence and drug tolerance.

Section - B

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

1. Define Psychology and discuss the major fields in which psychology can be applied.
2. Briefly explain the merits and demerits of experimental method in psychology.
3. With the help of empirical evidence, explain the role of heredity in the development of intelligence in children.
4. Elucidate the laws of Perceptual organisation.
5. Describe the nature and significance of Raven's progressive matrices for the measurement of intelligence.
6. What are Emotions. Describe the physiological correlates of emotions.
7. Briefly explain the basic concepts of learning as proposed by Dollard and Miller.
8. Define Leadership. What are the characteristics of an effective leader.
9. Illustrate the general adaptation syndrome while experiencing stress.
10. Distinguish between Guidance and Counselling. Explain the basic principles of Counselling.
11. What is Substance abuse. Highlight some of the psychological aspects of substance abuse.
12. What do we mean by Personality styles. Discuss some of the personality styles of the patients.

Section - C

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

1. Highlight the significance of structuralism in Psychology.
2. Describe the psycho-sexual stages of Personality development as proposed by Freud.
3. What are Projective techniques. Explain the significance of the Rorschach test in clinical cases.
4. What is Attitude change. Discuss some of the procedures that lead to attitude change.

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. Coupling media in Ultrasound therapy.
2. Desquamation.
3. F-reflex.
4. SD curve.
5. Hot pack.
6. Motor point.
7. Types of TENS.
8. Cross fire method in SWD.
9. Tuning in Diathermy.
10. FM radio in EMG.

Section - B

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

1. Explain the orthodromic conduction effects of faradic type current.
2. Describe the various functions and types of emitters used in Microwave Diathermy.
3. Explain the physical principles of therapeutic Ultrasound.
4. Briefly explain about the theories of pain modulation.
5. Explain the biophysical effects of flower pattern 90° rotating vector stimulation in Interferential therapy.
6. Explain the different methods of Ultrasound applications.
7. Explain the uses of LASER therapy in wound healing.
8. Describe contraindications to the Intermittent compression therapy.
9. Explain the instrumentation of Electro Myography.
10. Describe the various methods of applications of Cold therapy.
11. What is High Voltage Galvenic Current [HVGC] and explain its uses.
12. What is Phonophoresis and explain its basic principles.

Section - C

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

1. Describe in detail about Bio-Feedback on the following points:
 - a. Instrumentation.
 - b. Principles
 - c. Indications.
 - d. Contraindications.
 - e. Operational skills.
2. Write about the therapeutic effects of following:
 - a. Heat
 - b. Electric current.
3. Write in detail about LASER
4. Write about conceptual frame work of medium frequency current, its biophysical effect types and techniques of application.

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. Aluminium hydroxide is combined with magnesium hydroxide in various antacid preparation.
2. Trimethoprim is usually combined with Sulfamethoxazole.
3. Corticosteroid should be withdrawn gradually.
4. Adrenaline is the drug of choice in Anaphylactic shock.
5. Diabetic patients on Sulfonylureas should refrain from taking alcohol.
6. Folinic acid is preferred over folic acid for amelioration of methotrexate toxicity.
7. Progestins are combined with estrogens for contraception.
8. Sulbactam is combined with ampicillin.
9. Onset of anticoagulant effects of heparin is faster than that of Warfarin sodium.
10. Radioactive iodine is avoided in pregnant woman and children.

Section - B

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

[40]

1. Enlist the uses and adverse effects of aminoglycoside antibiotics.
2. Write about low dose aspirin therapy.
3. Discuss the pharmacological basis for the use of neomycin in hepatic coma.
4. Write in brief about acute adrenal insufficiency.
5. Write the management of acute left ventricular failure.
6. Discuss about second generation H₁ antihistaminics.
7. Write about margin of safety of drugs.
8. Name the antidote for acute Paracetamol poisoning and mechanism of action.
9. Write drug treatment of Myasthenia gravis.
10. Write brief notes on Human insulin.
11. Describe therapeutic uses and adverse effects of Beclomethasone.
12. Discuss the role of chelating agents.

Section - C

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

[30]

1. Classify Anti Thyroid agents. Discuss the pharmacotherapeutic aspects of thiourea group of drugs giving merits and demerits during their clinical use.
2. Classify the drugs used in hypertension. Give pharmacotherapy details of ACE inhibitors.
3. Describe the factors modifying drug actions, giving suitable examples.
4. Classify Fluoroquinolones. Discuss briefly the mode of action, adverse effects, indication and contraindication of Ciprofloxacin.

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. Curvilinear motion.
2. External forces acting on human body.
3. Equilibrium.
4. Newton's III law of motion.
5. Friction and its applications.
6. Torque.
7. Fast twitch glycolytic fibers.
8. Shunt muscles.
9. Stepping pattern to maintain balance.
10. Step length.

Section - B

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

[40]

1. Explain Type III levers with examples.
2. Describe importance of patella in extensor mechanism.
3. Viscoelasticity of connective tissues.
4. Classify muscles on the basis of fiber arrangement and give examples.
5. Discuss the relationship of Forward Head Posture and neck pain.
6. Gluteus maximus gait.
7. Explain kinematics of cervical spine.
8. Discuss the arthrokinematics of Ulno humeral and radio humeral joint.
9. Discuss biomechanics of MCP joints of fingers.
10. Ligaments at Knee joint.
11. Discuss functioning of Patello femoral joint.
12. Supination and Pronation twist at foot.

Section - C

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

[30]

1. Define and classify Joints. Discuss each type with examples.
2. Define Gait. Give the sagittal plane analysis of gait cycle.
3. Discuss the Scapulo-humeral rhythm at shoulder complex in detail along with the muscle work involved.
4. Discuss the Kinematics and Kinetics of Hip joint in detail.

Exercisetherapy-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. Successive induction.
2. Contract relax.
3. Muscle spindle.
4. Tone.
5. Intermittant cervical traction.
6. Ataxia.
7. Active insufficiency.
8. Cadence.
9. Elbow crutches.
10. Waddling gait.

Section - B

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

1. Draw and explain four point walking pattern while using crutches.
2. General indications and precautions of muscle stretching.
3. Gait analysis in Coronal plane.
4. Explain various factors affecting normal posture.
5. Explain importance and effects of exercises in normal person.
6. Explain various methods of muscle strengthening and describe in detail any one of them.
7. Explain and formulate a exercise regime to re-educate sit to stand activity.
8. Explain and analyze hand to knee gait and its variations.
9. Describe correct use of stick as a walking aid in rehabilitation.
10. Explain principles of PNF.
11. Explain role of central nervous system in neuro-muscular co-ordination.
12. How do you improve static and Dynamic crutch balance in patient with unilateral below knee amputation.

Section - C

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

1. Define Balance and explain role of visual, vestibular and musculo-skeletal system in maintaining normal balance.
 2. Describe in detail kinematic analysis of hip, knee and ankle joint in gait.
 3. Explain chest wall movements and role of intercostal muscles in breathing.
 4. Explain various facilitatory and inhibitory techniques used in PNF.
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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. A.K. Amputation.
2. Pott's spine.
3. Block Vertebrae.
4. Ewing's sarcoma.
5. Bone cyst.
6. Cerebral Palsy.
7. Renal rickets.
8. Trigger finger.
9. Sudeck's atrophy.
10. Carpel tunnel syndrome.

Section - B

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

1. Plating of long bones.
2. C.D.H.
3. Compound Fracture femur.
4. Lamenectomy.
5. Non Union.
6. Tennis elbow.
7. Total knee replacement.
8. A.C.L. test.
9. Periarthritis shoulder.
10. Tension band wiring Olecranon.
11. Wrist drop.
12. Bone cement.

Section - C

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

1. Describe the clinical features, diagnosis and management of Posterior dislocation of elbow.
2. Describe clinical features, diagnosis and management of Chronic Osteomyelitis Tibia.
3. How will you diagnose Tuberculosis of Hip. Describe its clinical features and management.
4. What are the clinical features of Lateral popliteal nerve injury. How to diagnose it. Write its management.

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. Write down the factors affecting fracture union.
2. What is stress fracture.
3. Define Osteotomy.
4. Name different reconstructive surgery performed in PPRP lower limb.
5. Write down the physiotherapy for Synovitis.
6. Write down the clinical tests for the diagnosis of Sprain medial co-lateral ligament of Knee.
7. What are the clinical features of internal derangement of knee.
8. What is Pes Planus.
9. What is De quervain's disease.
10. What is Coxa magna.

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 factors determining the function of a Prosthesis.
2. What are the causes of early knee flexion from mid stance to toe off in Bk amputee.
3. Write down the vaulting gait deviation in Ak amputee.
4. Write down the principles of rehabilitation of medial miniscus repair.
5. What are different types of tennis elbow? Write down their physiotherapy management.
6. What is Whiplash injury.
7. Write down the management of Genu valgum.
8. Discuss endurance training.
9. What is heterotrophic bone formation.
10. Write down the management of Pressure sore.
11. What is Seudeck's atrophy.
12. What is Piriformis syndrome.

Section - C

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

1. Discuss the rehabilitation of medial colateral ligament sprain of the knee joint.
 2. List out the problems and its management of ankylosing spondylitis.
 3. Write down the complications and its management in fracture supracondylar of humerus.
 4. Write down the pathogenesis and physiotherapy management of Osteoarthritis of hip.
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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. What are main principles of Sampling.
2. Define Null hypothesis and alternative hypothesis.
3. Define Standard error.
4. Distinguish between research methods and research methodology.
5. Define systematic sampling.
6. Give the applications of χ^2 -test.
7. Define range with its salient features.
8. Define reliability of a test.
9. Give the advantages of sampling.
10. Give the purposes of research in clinical practice.

Section - B

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

1. What is stratified random sampling. Give its advantages also.
2. Design a questionnaire for the chronic sugar patients.
3. What does 'Validity' stands for? Explain various types of validity that a test can have.
4. What are the criterion of evaluating a research report.
5. Explain one sample run test and give its uses.
6. Calculate Coefficient of Correlation by Spearman's method from the following data:

X:	45	56	39	54	45	40	56	60	30	36
Y:	40	36	30	44	36	32	45	42	20	36
7. A certain stimulus administered to each of ten patients resulted in blood pressure:
6, 2, 8, -2, 4, 0, -1, 1, 5 and 2
Can it be concluded that stimulus will, in general, be accompanied by an increase in blood pressure.
 $t_{0.05}(9) = 1.8331$ for right tail test.
 $t_{0.10}(9) = 1.8331$ for two tailed test.
8. Describe the advantages of sample surveys over complete enumeration surveys.
9. Explain the advantage and disadvantages of Rating scales.

[P.T.O.]

10. Write notes on the following
 - i) Type I and Type II error.
 - ii) Bio statistics.
11. Discuss the usefulness of the normal probability curve in the context of clinical research.
12. How would you differentiate between sampling and non sampling errors.

Section - C

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

1. Discuss the importance of research in clinical practice with scientific approach. Also point out its purposes and limitations. [15]

2.
 - a. Define Yates Corrections for continuity in 2 x 2 contingency table. [5]
 - b. The following table shows the result of inoculation against tuberculosis: [10]

	Inoculated	Not inoculated
Not attacked	235	220
Attacked	10	35

Derive your inference on the efficacy of the inoculation.

Given that d.f. = 1 $\chi^2_{0.05} = 3.841$

3. Describe the techniques of the analysis of variance. Write down the analysis of variance for one way classified data for testing the homogeneity of 'K' classes. [15]
4.
 - a. Calculate Coefficient of Correlation by Karl Pearson for the following data: [8]

X:	78	68	81	73	69	62	58	73
Y:	22	12	10	18	20	24	23	26
 - b. Discuss the applications of t-distribution. Give the detail of any two applications. [7]

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. What are the important features of Chronic inflammation.
2. What is Fibromyalgia.
3. Write common causes of Osteoporosis.
4. What is Pump-handle movement.
5. Describe Pigeon chest.
6. What are grades of Dysnea.
7. Write the types of COPD.
8. What is Intrinsic Asthma.
9. Describe Senile dementia.
10. What is Buerger's disease.

Section - B

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

[40]

1. What is the treatment for Paralytic Oedema.
2. What is the difference in Fibrositis and Fibromyalgia.
3. What is the physiotherapy management for Periarthritic shoulder.
4. What are the principles of management for Spondylosis.
5. Describe the physiotherapy management for Psoriatic arthritis.
6. What are the principles of management for Osteoporosis.
7. Write briefly on breathing control.
8. Write briefly on Percussion notes and their clinical implications.
9. Describe exercise field test.
10. What are Restrictive lung disorders.
11. Write in short about conduction of impulse in heart.
12. What are the physiotherapy management in Buerger's disease.

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 on management of Rheumatoid arthritis patient with involvement of bilateral knees, ankles and feet.
2. How will you manage a case suffering from Arteriosclerosis.
3. Describe Respiratory examination and its clinical implications.
4. Write in detail about the differentiating features of Chronic bronchitis and Emphysema.

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. Criteria for diagnosis of Acute Rheumatic fever.
2. Treatment of Bacillary dysentery.
3. Write about treatment of Megaloblastic anemia.
4. Post exposure prophylaxis of Rabies.
5. Describe the clinical features of Aortic regurgitation.
6. Treatment of Acute severe asthma.
7. Side effects of Glucocorticoid therapy.
8. Clinical picture and treatment of Psoriasis.
9. Clinical features and treatment of Carbuncle.
10. Prophylaxis of Bacterial Endocarditis.

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 hazards of Smoking.
2. Describe the etiology and treatment of Tetanus.
3. What is the treatment of Duodenal ulcer.
4. Enumerate the causes of Jaundice.
5. What is the clinical picture of Acute Lymphocytic leukaemia. What is the treatment regimen.
6. Discuss the causes of Chronic diarrhoea.
7. Describe the clinical picture and treatment of Herpes zoster.
8. Discuss the signs, symptoms and treatment of Lung abscess.
9. Write about the etiology and treatment of Anaphylactic shock.
10. Write the clinical features and treatment of anxiety neurosis.
11. Describe the clinical picture and management of Liver abscess.
12. Discuss the role of sex education in school children.

Section - C

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

1. Discuss the etiopathogenesis, management and prevention of HIV infection.
 2. Discuss the epidemiology, treatment and prevention of Ischemic Heart disease[Coronary artery disease].
 3. Describe the clinical picture, complications and management of Type 2 Diabetes Mellitus.
 4. Describe the causes, manifestations and psychosocial aspects of Mental retardation.
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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. Draw section of Cervical spinal cord.
2. Define and classify Epilepsy.
3. Types of peripheral nerve injury.
4. Name Entrapment neuropathy.
5. Causes of young stroke.
6. Types of nerve fibres.
7. Foot drop.
8. Sign and symptoms of Syringomyelia.
9. Blood supply of Spinal cord.
10. Types of multiple sclerosis.

Section - B

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

1. Anatomy of brachial plexus.
2. Discuss presentation of sub acute combined degeneration.
3. Describe Neurogenic bladder.
4. Discuss Spina bifida.
5. Acute disseminated encephalomyelitis.
6. Types of Neuromuscular junction disorder.
7. Classify Motor neuron disease.
8. Discuss tubercular meningitis.
9. Classify Dystonia.
10. Discuss Cerebellum and its connections.
11. Discuss differences between Spasticity and Rigidity.
12. Discuss static encephalopathy.

Section - C

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

1. Discuss types of LGBS. Discuss in detail management of LGBS and discuss role of ICU in management.
 2. Management of Epilepsy and discuss in detail Status Epilepticus.
 3. Recent advances in management of Multiple Sclerosis.
 4. Discuss both medical and surgical treatment in Parkinsonism.
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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. Hypertrophic scar.
2. Flail chest.
3. Eschar.
4. Ischaemic ulcers.
5. Disinfection.
6. Ranula.
7. Cystic hygroma.
8. Cold abscess.
9. Hypermetropia.
10. Endometriosis.

Section - B

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

1. Write pathophysiology and management of Septicaemic shock.
2. Write common causes of blindness and describe management of Glaucoma.
3. What is Sinus? Give some examples and write its treatment.
4. Describe diabetic gangrene of the foot and its management.
5. Write causes of bleeding from nose and its treatment.
6. Write complications and management of a patient having multiple ribs fracture.
7. Describe lower abdominal incisions.
8. Describe ante-natal check up and pelvic exercises.
9. Write about early and late complications of burn injury.
10. Causes and management of bed sores.
11. Describe basic principles of management of Chest injury.
12. Describe clinical features of various malignant Ulcers.

Section - C

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

1. What are the common post-operative complications after a major surgical procedure? How will you manage deep vein thrombosis.
 2. Write etiology of lower abdominal pain in females and management of Pelvic inflammatory disease.
 3. Discuss differential diagnosis of acute red eye and management of Purulent conjunctivitis.
 4. Describe aetiology, clinical features, management and complications of Chronic suppurative Otitis media.
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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. Klumpke's paralysis.
2. Turner syndrome.
3. Congenital dislocation of hip.
4. Parkinsons' disease.
5. Symmetric tonic reflex.
6. Kypho scoliosis.
7. Antioxidants.
8. Spinal muscular atrophy.
9. Osteomalacia.
10. Socio economic impact of aging.

Section - B

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

[40]

1. First day assessment of a newborn.
2. Patent Ductus Arteriosus[PDA]
3. Obesity in the elderly.
4. Risk factors for Atherosclerosis.
5. Management strategies for urinary incontinence in the aged.
6. Clinical and quantitative mental assessment of the elderly.
7. Management of Osteoporosis in the elderly.
8. Management of Pediatric burns.
9. Cerebral Palsy and its classification.
10. Distinguishing features between Delirium and Dementia.
11. Micronutrient requirement of the elderly.
12. Osteoarthritis.

Section - C

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

[30]

1. Enumerate some common causes of limping in a child. How will you examine, diagnosis and manage such a child.
 2. Define Depression. Discuss the possible etiologies, clinical features, diagnosis and management of an elderly patient with depression.
 3. Describe the etiological factors, clinical features, diagnosis and management of patient with stroke.
 4. Enumerate various red alerts suggesting developmental delay in a child. How will you approach such a child and suggest an early stimulation plan.
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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. Define disability as describe by WHO.
2. Describe mobility in community.
3. Flaccidity.
4. Language.
5. Surgical boot.
6. Aptitude test.
7. AFO.
8. Plastic socket.
9. Walker.
10. Non recurring expenditure.

Section - B

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

1. Care of HKAFO.
2. Check out of above knee prosthesis.
3. Causes of Aphasia.
4. Self employment.
5. Institutional approach of rehabilitation.
6. Role of NGOs in organisation of camp.
7. Role of parents in rehabilitation of a child with cerebral palsy.
8. Elbow crutches.
9. Travel concessions for persons with disabilities.
10. Community resources in CBR.
11. Causes of Amputation.
12. Differences in administration and management.

Section - C

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

1. Describe the causes of muscular weakness and role of secondary level of prevention in reducing impact of disability
 2. Describe components of an above elbow prosthesis.
 3. What do you understand by activities of Daily Living. Describe training of a person with paraplegia.
 4. Describe role of social worker in rehabilitation of a child with PPRP.
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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. Tremor.
2. Assessment of I.Q.
3. Parts of Lymphic system.
4. Define Motor Control.
5. Cortical sensation.
6. Draw the diagram of the Pyramidal tract.
7. Function of Trigeminal nerve.
8. Function of Basal ganglion.
9. Mechano receptors.
10. F-wave.

Section - B

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

1. Roods approaches in Spasticity and Flaccidity.
2. Reflex inhibitory position in Strokes.
3. ICU management of Spinal cord injury [Non surgical care] & PT management.
4. Lacunar syndrome and classification
5.
 - a. TIA-Explain.
 - b. Subclavian steel syndrome.
 - c. Thalamic syndrome.
6. Inhibitory techniques in Spastic Hemiplegia.
7. Write details about physiological process of aging in CNS and its features.
8. Stimulation in Spasticity and FES.
9. Bladder rehabilitation SCI.
10.
 - a. Skin care and wound management in case of Transverse myelitis.
 - b. UVR procedure in wounds.
11.
 - a. PPRP-Physiotherapy management.
 - b. Diffuse axonal injury.
12.
 - a. Pathology of MND.
 - b. PT management in Syringomyelia.

[P.T.O.]

Section - C

162(A)

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

1. 72 years Male sudden paralysis of Lower limb severely, then upper limb, his behaviour abnormality is also found. He is admitted in ICU---Assessment and Physiotherapy management.
 2. 18 years old boy came with intentional Tremor and inco-ordination--- Assessment and Physiotherapy management.
 3. Infantile Hemiplegia---Special techniques, application and Justify your concept / technique.
 4.
 - a. Brachial plexus injuries – Classification, assessment and PT Treatment.
 - b. Intra capsular #Conservative management.
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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. Indications for Laminectomy.
2. Define Postural drainage.
3. What is Purse-Lip breathing.
4. What is triple vessel disease.
5. Define clubbing.
6. What is Median Sternotomy.
7. What is Stereotactic surgery.
8. What is acute suppurative otitis media.
9. What is subdermal burn.
10. What is nephrectomy.

Section - B

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

1. Discuss about the PT management following strangulated hernia.
2. Discuss about the physiotherapy modalities in a gynaecological unit.
3. Write about the types of heart transplantation and add a note on donor and recipient criteria.
4. Discuss about the common deformities following burns.
5. What is Cardiopulmonary resuscitation. Describe its procedure.
6. Discuss about the PT management for a patient who has undergone corrective surgery for Scoliosis.
7. Write about the effects of antenatal exercises.
8. Discuss about the PT management of a patient who has undergone heart transplantation.
9. Discuss about the principles of PT in ICU.
10. Write down the general post operative assessment for thoracic surgeries.
11. Define Tracheostomy. Mention its indications and complications.
12. What is Pneumonectomy. Briefly outline the physiotherapy protocol 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. Describe the pre and post operative physiotherapy treatment regime for Open heart surgeries.

[P.T.O.]

2. What are Broncho Pulmonary segments. Describe in detail about the postural drainage for different segments and also the contraindication for postural drainage.
 3. Explain the treatment for a patient with various depths and extent of burn injury in relation to rehabilitation.
 4. Describe the major abdominal surgeries and their detailed PT management.
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