2012 **Paper - I** **Full Marks - 50**

Use separate answer script for each group
Attempt all questions. Draw suitable diagrams wherever necessary.
The figures in the margin indicate full marks;

Group -A

1. a) A young married lady with a history of missed period, suddenly collapsed with sharp lower abdominal pain and was diagnosed having ruptured tubal pregnancy. What is the commonest site of tubal pregnancy and its fate. Mention the parts of this tube, blood supply, histological structure and development. 2+3+2+3+2

or

b) What are the muscles exposed after cutting Gluteus maximus? Name the nerves supplying these muscles. What are the actions of these muscles on Hip joint. 3+4+5

Group - B

2. Answer *any two* of the following :—
   a) Why ischiorectal abscess is very painful when abscess is superficial. "Write boundary and content of fossa. 1+4+2
   b) Mention the main structural characteristics of synovial joint. Classify synovial joint with example of each type 3+4
   c) Describe the histology of classical hepatic lobule.What is a liver acinus ? 5+2

Group - C

3. Write notes on *any four* of its following :— 4 x3
   a) Quadrangular and triangular space b) Epiploic foramen c) Umbilical Cord d) Epiphyseal cartilage e) Mackenrodts ligament.

Group - D

4. Explain the following statement : 4x3
   a) Injury to radial nerve in cubital fossa will not cause wrist drop.
   b) Tracheo oesophageal fistula.
   c) Monozygotic twins are identical whereas dizygotic twins are not identical.
   d) Injury to long thoracic nerve causes winging of scapula.

Use separate answer script for each group

Attempt all questions. Draw suitable diagrams wherever necessary. The figures in the margin indicate full marks.

Group-A

1. a) A man suffering from hypertension bleeds from Little's area of nose. Give an account of the formation, arterial supply, nerve supply & lining epithelium of nasal septum with a note on Little's area. 4+2+2+2+2

OR

b) Following thyroidectomy a patient may develop hoarseness of voice. Explain the statemet. Give a brief account of intrinsic muscles of the larynx and their action on Rimaglottidis.2+10

Group - B

2. Answer *any two* of the following : 4+2+1
   a) Write a note on Internal Capsule of brain with its blood supply. What is hemiplegia?
   b) Give an account of usual pattern of coronary artery supply of heart. What is coronary dominance? 6+1
   (c) Describe the development of tongue. Correlate the nerve supply of tongue with its development. 4+3

Group - C

3. Write short notes on *any four* of the following :— 4x3
   a) Ciliary gaglion
   b) 1st intercostal nerve
   c) Lacrimal apparatus.
   d) Tympanic membrane
   e) Ansa cervicalis

Group-D

4. Explain the following statement : 4x3
   a) Macular vision is generally spared in lesion of posterior cerebral artery.
   b) Optic nerve cannot regenerate after injury.
   c) Type of respiration in children is abdominal, whereas it is thoraco-abdominal in adult.
   d) Barrbody is present in klinefelter's syndrome.

2012 **Paper - I** **Full Marks - 50**

Use separate answer script for each group
Attempt all questions. Draw suitable diagrams wherever necessary.
The figures in the margin indicate full marks;

Group - A

1. a) Discuss the role of Neutrophils in defence. What is innate immunity? 8+4

Or

b) Describe in brief the regulation of Blood Pressure. What is malignant hypertension? What is Vasomotor Reversal of Dale? 8+2+2

Group - B

2. Answer *any two* of the following :—
   a) Write about the different types of intestinal movements. What is adynamic ileus? 5+2
   b) Write the molecular basis of skeletal muscle contraction. Write a note on Neuromuscular blockers. 4+3
   c) What is hypoxic hypoxia? What are the adaptations that occur when a person ascends to an altitude of 12,000 feet. ?

Group-C

3. Write short notes on *any four* of the following :— 4X3
   a) E.S.R.
   b) Na^+ - K^+ ATPase
   c) Mucosal barrier of stomach
   d) Rigor mortis
   e) Surfactant.

Group - D

4. Give the physiological Explanation of the following : 4x3
   a) Low plasma protein causes oedema .
   b) Vasodilatation occurs in the blood vessels of skeletal muscles in severe exercise.
   c) In obstructive jaundice there may be coagulation defect.
   d) Aspirin in low doses prevents intravascular coagulation.

2012 **Paper - II** **Full Marks - 50**

Use separate answer script for each group

Attempt all questions. Draw suitable diagrams wherever necessary. The figures in the margin indicate full marks;

Group-A

1. a) Describe the nuclei, Connections and functions of Basal ganglia. What are the features of Parkinsonism and how can these be reduced ? 7 + 5

   b) Describe the physiological effects of thyroid hormones. What is thyroid storm? 10 + 2

Group - B

2. Answer *any two* of the following :—

   a) Describe the spermatogenesis. What is Blood-Testis barrier? 5+2

   b) Describe the auditory pathway with suitable diagram. How will you differentiate between conduction deafness and nerve deafness? 5+2

   c) What is glomerular filtration rate? Discuss the factors influencing it. What is filtration fraction ? 1+5+1

Group - C

3. Write short notes on *any four* of the following :— 4x3

   a) Contraceptive pills.
   b) E.P.S.P. (Excitatory Postsynaptic Potential).
   c) Brown - Sequard Syndrome.
   d) Accommodation reflex.
   e) Foeto - Placental Unit.

Group-D

4. Give the physiological explanation of the following statement:4x3

   a) Osmotic diuresis occurs in Diabetes Mellitus.
   b) Prolonged breast-feeding is helpful in family planning.
   c) Speech becomes meaningless if the arcuate fasciculus is damaged.
   d) Chronic renal failure patients have anaemia.

Biochemistry

2012 **Paper - I** **Full Marks - 50**

Use separate answer script for each group.

Attempt all questions. Draw suitable diagrams wherever necessary. The figures in the margin indicate full marks.

Group – A

1. (a) Describe different types of enzyme regulation in vivo. Explain any one of them with example. Justify the meaning of "suicidal inhibition of enzymes" with example. 4+4+4

Or

(b) Name the lipids present in plasma membranes. State their role in maintaining the fludity of plasma membranes. Explain lipid rafts mentioning their functions. 4+4+4

Group – B

2. Answer *any two* of the following :— 2×7

(a) Write the difference in structure and oxygen binding in relation to myoglobin and haemoglobin.

(b) Describe the biosynthesis and degradation of catecholamines.

(c) Elucidate the salient features of DNA structure. Explain T_m of DNA

Group – C

3. Write short notes on *any four* of the following :— 4×3

a) Ribosomes and ribosomal RNA b) Radioimmunoassay
c) Receptor mediated endocytosis d) Plasmalogens
e) Metabolic acidosis

Group – D

4. Explain the following statements : 4×3

a) Lipids can act as intracellular signal
b) RNA is alkali labile white DNA is alkali resistant.
c) Collagens contain quarter staggered triple helical structure.
d) Glycine solution can not rotate the plane of plane polarized light.

2012 **Paper - II** **Full Mar**

Use separate answer script for each group

Attempt all questions. Draw suitable diagrams wherever necessary. The figures in the margin indicate full marks;

Group – A

1. (a) Describe how fructose galactose are metabolized in the body. Mention the disorders associated with their metabolism. 6+6

Or

(b) Describe the molecular organizaiton of fatty acid synthase complex in mammalian system. Describe the sequence of raction of bio-synthesis of palmitate. 6+6

Group – B

2. Answer *any two* of the following : 2x7

(a) Describe the biosynthesis and catabolism of heme.

(b) Describe the 'Lac-operon' model of gene expression in E. Coli

(c) Describe the purine salvage pathway. Explain any disorder related to this pathway.

Group – C

3. Write short notes on *any four* of the following :— 4x3

a) Restriction endonucleases b) Ferritin

c) p-53 gene d) Liver function test

e) Lecithin eholesterol Acyl Transferase

Group – D

4. Explain the following statements :— 4x3

a) Phosphofructokinase-I is known as pacemaker of glycolysis.

b) Von Gierke's disease is associated with hyperuricemia.

c) Methotrexate is used as anticancer durg.

d) Ammonia is toxic to central nervous system.