Instructions:

(1) All Questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any EIGHT of the following: 16

(a) What is a joint? Name the bones forming the elbow joint.

(b) Name two muscles of facial expression.

(c) Define:
   (i) Digestion
   (ii) Absorption

(d) List the types of cells present in the blood.

(e) What are true and false ribs?

(f) Define hormone. Give two examples of it.

(g) Draw and label the structure of cell.

(h) List the fundamental tissues of the body.

(i) What is cardiac output? Write its normal value.
(j) Name the three auditory ossicles.

(k) Mention any two functions of spleen.

(l) Define:
   (i) Cell
   (ii) Anatomy

2. Attempt any FOUR of the following: 12

   (a) Give the structure and functions of mitochondria.

   (b) Write the mechanism of blood clotting.

   (c) What are the functions of lymphatic system? Draw a well labelled diagram of ‘lymph node’.

   (d) Define Skeleton. Write the difference between male and female pelvis.

   (e) Write the composition and functions of gastric juice.

   (f) Define:
       (i) Sickle cell anaemia
       (ii) Angina pectoris
       (iii) Menopause

3. Attempt any FOUR of the following: 12

   (a) Name the various types of epithelial tissues. Explain any one.

   (b) Name the different types of blood groups. Explain erythroblastosis foetalis.

   (c) Give the role of diaphragm in the mechanism of respiration.

   (d) Draw a well labelled diagram of ‘functional areas of cerebrum’.

   (e) Enumerate six functions of skin.
(f) Define:
   (i) Oedema
   (ii) Glaucoma
   (iii) Congestive cardiac failure

4. **Attempt any FOUR of the following**: 12
   (a) Explain the circulation of blood in the heart.
   (b) Draw a diagram of ‘LS of kidney’ and label it.
   (c) What are the functions of medulla oblongata?
   (d) Justify ‘Pituitary gland is known as master gland’.
   (e) Write the physiology of digestion of proteins.
   (f) Define and give normal value of
      (i) Tidal volume
      (ii) Residual volume

5. **Attempt any FOUR of the following**: 12
   (a) Name the methods of measurement of blood pressure. Explain the auscultatory method of measurement of BP.
   (b) Describe the process of urine formation.
   (c) Justify that pancreas is both exocrine and endocrine gland.
   (d) Draw a sagittal section of eye.
   (e) What is puberty? Give the features of puberty in male.
   (f) Define:
      (i) Renal calculi
      (ii) Arthritis
      (iii) Tonsillitis
6. Attempt any FOUR of the following:

(a) Differentiate between artery and vein.
(b) Explain the negative feedback mechanism of endocrine glands.
(c) Write the functions of liver.
(d) What is menstrual cycle? Describe the phases of menstruation.
(e) Describe the structure of neuromuscular junction.
(f) What is the effect of sympathetic and parasympathetic stimulation on
   (i) Heart
   (ii) Bronchi
   (iii) GIT
   (iv) Eye