Instructions: (1) All Questions are compulsory.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.

1. Attempt any FIVE of the following: 10
   (a) What is systole and diastole of heart?
   (b) Name the 1st and 2nd Vertebrae of vertebral column.
   (c) Name different types of blood groups.
   (d) Define tissue and name fundamental tissues of human body.
   (e) Write normal counts of RBCs and WBCs.
   (f) Draw a well labelled diagram of simple living cell.
   (g) What are abnormal constituents of urine? Write composition of normal urine.

2. Attempt any FOUR of the following: 14
   (a) Describe mechanism of blood clotting in short.
   (b) Define:
       (i) Myopia
       (ii) Infertility
       (iii) Glaucoma
   (c) Define skeleton. Give functions of skeleton.
   (d) How circulation of blood takes place through heart?
(e) Give composition and functions of intestinal juice.

(f) Define and give normal value of: (Any two)
   (i) Residual volume
   (ii) Tidal volume
   (iii) Vital capacity

3. Attempt any FOUR of the following: 14
   
   (a) Describe physiology of urine formation.
   (b) Draw and label structure of Ear.
   (c) Define:
      (i) Cardiac output
      (ii) Stroke volume
      (iii) Heart rate
   (d) Give composition and functions of CSF.
   (e) Write different functions of skin.
   (f) Describe structure and function of golgi body.

4. Attempt any FOUR of the following: 14
   
   (a) Draw and describe well labelled diagram of Nephron.
   (b) What is spleen? Describe its structure and functions.
   (c) Describe different types of epithelial tissue.
   (d) Name the hormones of anterior pituitary gland and state their role in the body.
   (e) Define Blood. Give composition of blood.
   (f) Define and give normal values of
      (i) Blood pressure
      (ii) Pulse
5. **Attempt any FOUR of the following**:  
(a) Explain with example feedback mechanism of secretion of hormones.  
(b) Draw a well labelled diagram of cerebrum showing functional areas of cerebrum.  
(c) Describe physiology of muscle contraction in short.  
(d) Draw a neat labelled diagram of Neuron and explain.  
(e) Mention the functions of Ovaries.  
(f) Define:  
   (i) Meningitis  
   (ii) Leukemia  
   (iii) Stenosis

6. **Attempt any FOUR of the following**:  
(a) What is puberty? What physical and physiological changes occur in female at puberty?  
(b) Classify Leucocytes and describe their functions.  
(c) List any seven cranial nerves and write their functions.  
(d) Differentiate between sympathetic nervous system and parasympathetic nervous system.  
(e) Define and explain the following terms:  
   (i) Haemolytic anaemia  
   (ii) Atherosclerosis  
   (iii) Nephritis  
(f) Give composition and functions of salivary glands.