General Instruction: The question paper is divided into four sections.

1. **Section A:** Question No. 1 contains 4 Multiple Choice type questions carrying one mark each. 
   Q. No. 2 contains 3 very short answer (VSA) type questions carrying one mark each.

2. **Section B:** Q. No. 3 to 8 of Short Answer (SA I) type questions carrying two marks each.

3. **Section C:** Q. No. 9 to 11 of Short Answer (SA II) type questions carrying three marks each.

4. **Section D:** Q. No. 12 and 13 of Long Answer (LA) type questions carrying four marks each.

**Q. 1** Select and write the correct answer. (4)

i) Electrical impulse travels in a neuron from:
   (a) Dendrite → axon → axon end → cell body
   (b) Cell body → dendrite → axon → axon end
   (c) Dendrite → cell body → axon → axon end
   (d) Axon end → axon → cell body → dendrite

ii) A doctor advised a person to take injection of insulin because his:
   (a) Blood pressure was high
   (b) Heart beat was high
   (c) Blood sugar was high
   (d) Thyroxine level in blood was high

iii) Which of the following control and regulate the life process?
   (a) Reproductive and endocrine systems
   (b) Respiratory and nervous systems
   (c) Endocrine and digestive systems
   (d) Nervous and endocrine systems

iv) Which of the following controls the involuntary actions in the body?
   (a) Medulla in forebrain
   (b) Medulla in hindbrain
   (c) Medulla in spinal cord
   (d) Medulla in midbrain

**Q. 2** Answer the following question. (3)

i) Name the part of the brain which controls posture and balance of the body.

ii) Mention the part of the body where gustatory and olfactory receptors are located.

iii) Why is it advised to use iodised salt in our diet?

**Section B**

Attempt any four questions. (8)

**Q. 3** Write the name and functions of any two parts of the human hind-brain.

**Q. 4** Distinguish between spinal nerve and cranial nerve.

**Q. 5** What are the two modes through which the hypothalamus causes the release of hormones by pituitary gland?
Observe the diagram and answer the following questions:

(i) Label the parts A and B.
(ii) Give the function of C and D.

Q.7 What happens if a person suffers from prolonged hyperglycemia?

Q.8 Name, the two main organs of our central nervous system. Which one of them plays a major role in sending command to muscles to act without involving thinking process? Name the phenomenon involved.

**Section C**

**Attempt any two questions** (6)

Q.9 What is synapse? In a neuron cell how is an electrical impulse created and what is the role of synapse in this context?

Q.10 Draw neat diagram of human brain and label on it the following parts:

   (i) Midbrain
   (ii) Pituitary gland

Q.11 (a) How is brain protected from injury and shock?
     (b) Name two main parts of hind brain and state the functions of each.

**Section D**

**Attempt any one question.** (4)

Q.12 Suggest four reflex actions of the body. Explain how the reflex arc is the same in all of them.

Q.13 (i) Name the parts labeled A and B in the neuron drawn above.
     (ii) Which part acquires the information in the neuron?
     (iii) Through which part does the information travel?
     (iv) In what form does this information travel?