Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.PHARM(OLD)/SEM-4/PT-405/2010

2010

PHYSIOLOGY

Time Allotted : 3 Hours Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10

   i) Normal body temperature is

   a) 40°C b) 98·4°C

   c) 98·4°F d) 30°F.

   ii) The potential inside large nerve fibers is 90 m V more ..... than the potential in the extra cellular fluid.

   a) positive

   b) negative

   c) none of these.

   iii) Identify the temperature-regulating center in the brain.

   a) Cerebrum b) Cerebellum

   c) Thalamus d) Hypothalamus.

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iv) ..... is a tactile receptor.

a) Nociceptor b) Pacinian corpuscle

c) Baro receptor d) Glucoreceptor.

v) The sacral autonomic fibres are

a) parasympathetic fibres

b) cholinergic fibres

c) both of these

d) none of these.

vi) Thermostatic mechanism resides in our

a) limbic system b) adipose tissue

c) hypothalamus d) glands.

vii) Tubocurarine is a

a) general anaesthetic

b) local anaesthetic

c) skeletal muscle depressants

d) analgesic.

viii) Acetylcholine and adrenaline are neurotransmitters of the

a) ANS

b) Sympathetic N.S.

c) Para sympathetic N.S.

d) None of these.

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ix) Activation of classical neurons of the CNS for transmission of nerve impulse occurs as a consequence of

a) depolarization

b) hyperpolarization

c) none of these.

x) The example of light receptor is

a) Organ of Corti b) Rod cell

c) Pacinian corpuscle d) Free nerve terminals.

xi) Intraocular pressure is

a) 45 - 50 mm Hg b) 20 - 30 mm Hg

c) 70 - 75 mm Hg d) 10 - 15 mm Hg.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Write a short note on the Blood Brain Barrier.

3. Briefly explain "accommodation of the eye".

4. Define fever and explain how temperature regulation occurs.

5. Define reflex arc. Give a diagrammatic representation and explain to various components. 1 + 2 + 2

6. What is CSF ? Give its composition and functions. 1 + 2 + 2

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GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Discuss the various stages of action potential with a diagrammatic representation. Explain its propagation. What is meant by refractory period ? 6 + 6 + 3

8. a) Distinguish between Autonomic Nervous System and Somatic Nervous System.

   b) What is meant by dual supply ?

   c) Distinguish between Sympathetic and Parasympathetic system. (Key words : origin, transmitter, position of ganglia, functional differences)

   d) Give the function of ANS. 3 + 2 + 5 + 5

9. a) State difference between : 5 × 2

      i) Protanope and deuteronope

      ii) Blind spot and yellow spot

      iii) Fungi form and circumvallate papilae

      iv) Sustentacular cells and olfactory cells

      v) Scala tymphani and scala vestibuli.

   b) Describe in brief the structure of the olfactory membrane. 5

10. Define sleep. What Physiological changes occur in our body during sleep ? Why sleep is necessary for us ? 2 + 10 + 3

11. Describe the structure of the eye with the help of a labeled diagram. Write down the function of each part. Differentiate between Mydriasis and Miosis. 6 + 7 + 2

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