Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.PHARM(NEW)/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) Average auxiliary temperature in human body during normal condition is

a) 98.4˚F b) 97.4˚F

c) 99.4˚F d) 98.6˚F.

ii) Which of the following pairs of senses are collectively known as chemical senses ?

a) Smell and vision b) Taste and vision

c) Taste and smell d) Smell and hearing.

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iii) The nerve that innervates the sweat glands is

a) somatic nerve

b) sympathetic adrenergic

c) sympathetic cholinergic

d) parasympathetic.

iv) The substance which is not neurotransmitter is

a) Norepinephrine b) Dopamine

c) Nitric oxide (NO) d) Sodium ion (Na^+)

v) Cerebrospinal fluid (CSF) is produced by

a) Choracoid plexus b) Arachnoid villi

c) Hypothalamus d) Pituitary.

vi) Hypothalamus is the part of

a) Diencephalon b) Mesencephalon

c) Rhombencephalon d) Telencephalon.

vii) Body temperature is regulated by

a) Hypothalamus b) Cerebrum

c) Medulla oblongata d) Cerebellum.

viii) Coloured vision is produced by

a) Rod cell b) Cone cell

c) Corneal cell d) All of these.

ix) Conditioned reflex is controlled by

a) Spinal cord b) Cerebellum

c) Cerebral cortex d) Pons.

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x) During excitatory nerve impulse generation ..... ion enters into the cell.

a) Na^+ b) K^+

c) Cl^- d) PO_4^{3-} .

xi) Parasympathetic stimulation on heart causes

a) Bradycardia

b) Tachycardia

c) both Bradycardia and tachycardia

d) none of these.

xii) P^H of tears is

a) 6.5 b) 7

c) 7.2 d) 7.4.

GROUP – B

(Short Answer Type Questions)

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

2. Briefly explain the physiology of hearing.

3. Differentiate between white and gray rami. What is Ramus communicans. 3 + 2

4. What is reflex action ? Differentiate between conditioned reflex and unconditioned reflex. 1 + 4

5. Name the twelve (12) cranial nerves in arranged manner. Mention which ones are belonging to sensory, motor and mixed categories. 3 + 2

6. Explain the process of spermatogenesis.

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GROUP – C

(Long Answer Type Questions)

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

7. Discuss in detail about the mechanism of conduction of nerve impulse. Discuss about the properties of nerve fibres. 7 + 8

8. What are neurotransmitters ? Describe in brief about the synthesis, storage and release of adrenaline at synaptic junction. 2 + 13

9. a) What do you mean by visual cycle ?

   b) Give the physiology of internal ear.

   c) How is test sensation formed in the taste bud of tongue ? 3 + 7 + 5

10. a) What do you mean by normal body temperature ?

    b) What do you mean by core and shell temperature ?

    c) Discuss the different physiological factors which control the body temperature. 2 + 3 + 10

11. Write short notes on any *two* of the following : $2 \times 7\frac{1}{2}$

    i) Cerebrospinal fluid

    ii) Physiology of sleep

    iii) Menstruation.

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