



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<sup>+</sup> )
- v) Cerebrospinal fluid ( CSF ) is produced by
- a) Choroid 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)  $\text{Na}^+$
  - b)  $\text{K}^+$
  - c)  $\text{Cl}^-$
  - d)  $\text{PO}_4^{3-}$ .
- xi) Parasympathetic stimulation on heart causes
- a) Bradycardia
  - b) Tachycardia
  - c) both Bradycardia and tachycardia
  - d) none of these.
- xii)  $\text{P}^{\text{H}}$  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.  $3 \times 5 = 15$

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.  $3 \times 15 = 45$

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 taste 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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