



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 :

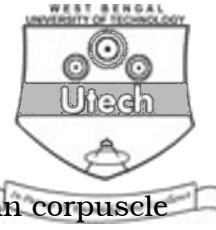
10 × 1 = 10

- 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.

44123

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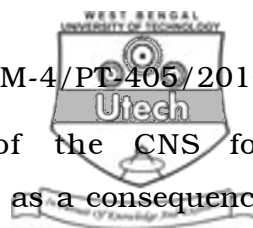


- iv) is a tactile receptor.
- a) Nociceptor b) Pacinian corpuscle
- c) Baro receptor d) Glucoreceptor.
- v) The sacral autonomic fibres are
- a) parasympathetic fibres
- b) cholinergic fibres
- c) both of these
- d) none of these.
- vi) Thermostatic mechanism resides in our
- a) limbic system b) adipose 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.

44123

2

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



- 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. $3 \times 5 = 15$

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. $1 + 2 + 2$

44123

3

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GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

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 deuteranope
- ii) Blind spot and yellow spot
- iii) Fungi form and circumvallate papillae
- 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. $6 + 7 + 2$