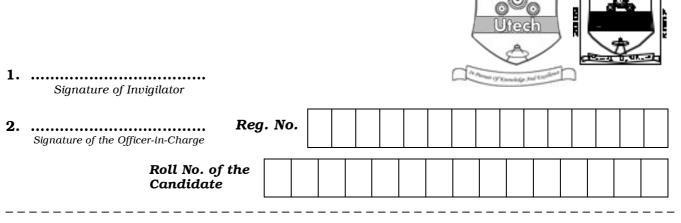
PHYSIOLOGY (SEMESTER - 4)

CS/B.PHARM/SEM-4/PT-405/09



CS/B.PHARM/SEM-4/PT-405/09 ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009 PHYSIOLOGY (SEMESTER - 4)

Time: 3 Hours [Full Marks: 70

INSTRUCTIONS TO THE CANDIDATES:

- 1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
- 2. a) In **Group A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question.**
 - b) For **Groups B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group B** are Short answer type. Questions of **Group C** are Long answer type. Write on both sides of the paper.
- 3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
- Read the instructions given inside carefully before answering.
- 5. You should not forget to write the corresponding question numbers while answering.
- 6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
- 7. Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.
- 8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
- 9. Rough work, if necessary is to be done in this booklet only and cross it through.

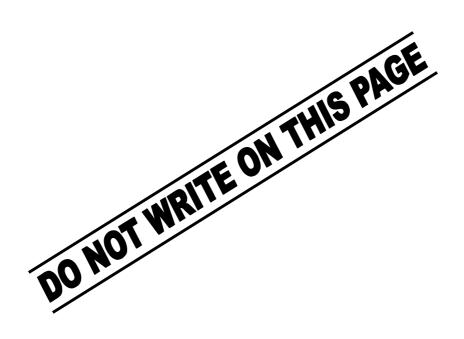
No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY Marks Obtained Group - A Group - B Group - C Question Number Marks Obtained Signature

Head-Examiner/Co-Ordinator/Scrutineer







1.



ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009 PHYSIOLOGY

SEMESTER - 4

Time: 3 Hours]

Full Marks : 70

GROUP - A

(Multiple Choice Type Questions)

Choose the correct alternatives for any <i>ten</i> of the following: $10 \times 1 =$								
i)	The decussation of the motor nerves descending from motor area in cerebrum to spinal cord in the pyramidal tract occurs in							
	a)	mid-brain	b)	pons				
	c)	medulla oblongata	d)	cerebellum.				
ii)	Cross-section of the spinal cord shows grey matter in the							
	a)	centre						
	b)	surrounding the white matter						
	c)	none of these.						
iii)	The cerebral cortex has many enfoldings. They are called							
	a)	sulcus	b)	corpus callosum				
	c)	gyri	d)	projection tracts.				
iv)	A reflex that is learnt by experience can be termed as							
	a)	conditional reflex						
	b)	unconditional reflex						
	c)	none of these.						
v)	Vertebral ganglia consists of							
	a)	7 ganglia	b)	15 ganglia				
	c)	22 ganglia	d)	5 ganglia.				



vi)	Among the organs largest amount of heat is produced by						
	a)	brain	b)	liver Utech			
	c)	heart	d)	intestine.			
vii)	When a nerve impulse reaches a nerve, permeability of which one of the following						
	ions increases?						
	a)	Na ⁺ ion	b)	K ⁺ ion			
	c)	Ca ⁺⁺ ion	d)	Cl ⁻ ion.			
viii)	Which is the part that belongs to the hearing organ?						
	a)	Tympanum	b)	Rod cells			
	c)	Taste buds	d)	Cornea.			
ix)	CSF is present in						
	a)	central canal of spinal cord					
	b)	right and left venticles of the h	neart				
	c) between dura and arachnoid membranes						
	d)	all of these.					
x)	Vomiting centre is present in the						
	a)	pons	b)	medulla oblongata			
	c)	thalamus	d)	hypothalamus.			
xi)	Muscarinic and nicotinic receptors are examples of						
	a)	adrenergic receptors	b)	cholinergic receptors			
	c)	both of these	d)	none of these.			
xii)	Glaı	Glaucoma is associated with rise of					
	a)	intravascular blood pressure					
	b)	intraocular pressure					
	c)	both of these.					



GROUP - B

(Short Answer Type Questions)

Answer any three of the following questions

 $3 \times 5 = 15$

2. What is CSF? Give its composition and functions.

1 + 2 + 2

3. Briefly discuss any two of the following:

 $2 \times 2\frac{1}{2}$

- a) Sodium-potassium pump
- b) Synapse
- c) Sensory nerve tracts in spinal cord.
- 4. Write down the classification of autonomic nervous system.
- 5. What is the role of "critical set point temperature" in the regulation of body temperature?
- 6. Write a short note on the physiology of smell.

GROUP - C

(Long Answer Type Questions)

Answer any three of the following questions.

 $3 \times 15 = 45$

- 7. Define sleep. What are the types of sleep? Give the characteristic features of two types of sleep. Give the physiological effects of sleep on the body. 2 + 1 + 10 + 2
- 8. Describe the structure of eye with the help of labelled diagram. Enumerate the function of each part. Define Hypermetropia and Myopia. 10 + 3 + 2
- 9. What are the main parts of Brain ? Explain the function of brain stem. Briefly discuss the function of the hypothalamus. 2+7+6
- 10. Define neurotransmitters with examples. What is the role of "G protein" in synaptic neurotransmission? Describe in brief the mechanism of synthesis and secretion of neurotransmitters from the presynaptic terminal at the synaptic junction with reference to acetyl choline. 3 + 5 + 7
- 11. Describe the formation, flow and functions of cerebrospinal fluid (CSF). 5 + 5 + 5

END