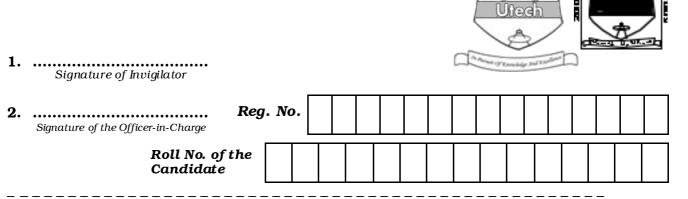
PHYSIOLOGY (OCULAR) (SEMESTER - 2)

CS/B.OPTM/SEM-2/BO-202/09



CS/B.OPTM/SEM-2/BO-202/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009 PHYSIOLOGY (OCULAR) (SEMESTER - 2)

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.
- 4. 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

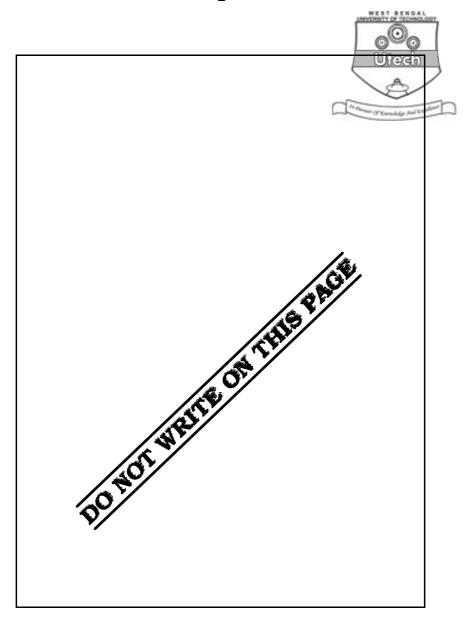
FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

	Group – A									Group – B		Group – C					
Question Number																Total Marks	Examiner's Signature
Marks Obtained																	

Head-Examiner/Co-Ordinator/Scrutineer

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ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2009

PHYSIOLOGY (OCULA)

SEMESTER - 2

Time: 3 Hours [Full Marks: 70

Graph sheet is provided on Page No. 31.

GROUP - A

(Multiple Choice Type Questions)

(Multiple Choice Type Guestions)									
1.	Cho	hoose the correct alternatives for any <i>ten</i> of the following :							
	i)	Nor							
		a)	1-30 mm Hg	b)	5·5-15·5 mm Hg				
		c)	10·5-20·5 mm Hg	d)	20-30 mm Hg.				
	ii)	The	lens derives its nourishment en	tirely f	from				
		a)	Vitreous humour	b)	Aqueous humour				
		c)	Perilimbal capillaries	d)	Atmospheric oxygen.				
	iii)	The	dilator pupillae is supplied by						
		a)	Trigeminal nerve						
		b)	Cervical sympathetic nerve						
		c)	Oculomotor nerve						
		d)	Cervical parasympathetic nerv	æ.					

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iv)	The	primary colours are all except		The state of the s									
	a)	Yellow	b)	Green									
	c)	Blue	d)	Red. Annual (Y Exemple) and Explana									
v)	The lipid layer of the tear film is secreted by												
	a)	ciliary muscle	b)	ciliary processes									
	c)	choroid	d)	iris.									
vi)	Hen	le's layer is also known as											
	a)	Inner plexiform layer	b)	Inner nuclear layer									
	c)	Outer plexiform layer	d)	Outer nuclear layer.									
vii)	Actio	Action of superior oblique is											
	a)	Elevation	b)	Depression									
	c)	Adduction	d)	Extorsion.									
viii)	Poly	coria means											
	a)	more than one cornea	b)	more than one pupil									
	c)	eccentric pupil	d)	none of these.									
ix)	The	thickest part of the retina is											
	a)	Umbob)	Clivu	s									
	c)	Foveola	d)	None of these.									
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5

- x) In humans the normal spontaneous blink rate ranges from
 - a) 10 to 15 times per min.
- b) 5 to 10 times per mir
- c) 12 to 20 times per min.
- d) none of these.
- xi) In dichromatic colour vision, the complete green colour defect is called
 - a) Deuteranomalous
- b) Tritanomalous

c) Deuteranopia

d) None of these.

GROUP - B

(Short Answer Type Questions)

Write short notes on any three of the following.

 $3 \times 5 = 15$

- 2. E.R.G.
- 3. Binocular single vision.
- 4. Blood-ocular barriers.
- 5. Young-Helmholtz theory of colour vision.
- 6. Ocular rigidity.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following.

- $3 \times 15 = 45$
- 7. Give the normal corneal endothelium cell count. Mention the physiological function of the corneal endothelium. What do you mean by corneal hydration? Describe the factors affecting the corneal transparency. 2 + 3 + 3 + 7
- 8. a) With the help of a diagram, describe the different layers of the tear film. Discuss their functions also.
 - b) What do you mean by Direct and Consensual light reflexes?
 - c) Draw a diagram showing the light reflex pathway in detail. (4 + 4) + 2 + 5

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- 9. a) Write about the glucose metabolism of lens.
 - b) What are the different types of cataract? Describe any one of them.

9 + 6

- 10 a) Describe the supranuclear control of eye movements.
 - b) Give the actions of the different extra-ocular muscles along with their nerve supply.
 - c) What is yoke muscle? Give an example.

5 + 8 + 2

- 11. a) Define dark adaptation.
 - b) What is light minimum?
 - c) Draw a graph of dark adaptation with retinal sensitivity along the vertical axis and duration of dark adaptation along the horizontal axis.
 - d) What are the factors that regulate dark adaptation?

2 + 2 + 4 + 7

END