## Bs/ZOO/M4(T)

LIBRARY

2025

FYUGP )

(4th Semester)

ZOOLOGY

MINOR ) and of printers

Paper Code: ZOO/M4 (T)

(Fundamentals of Biochemistry)

Full Marks: 75 Pass Marks: 40%

Time: 3 hours

( PART : B—DESCRIPTIVE )

( Marks: 50 )

The figures in the margin indicate full marks for the questions

 Define monosaccharide. Write notes on disaccharides and polysaccharides. 1+9=10

Or

Elucidate glycolysis with a detailed diagram. 10

 What are glycolipids? Discuss the structures of triacylglycerols and phospholipids. 1+9=10 Bs/200/M4(T)

2 00 2

What are steroids? Discuss types of steroids. Add a note on its significance of human health. 1+6+3=10

3. What are amino acids? Classify amino acids according to their side chains with examples.

1+9=10

Paper Code 200/M4 (T)

Write notes on any two of the following:

5×2=10

- (a) Non-essential amino acids
- (b) Physiological importance of essential amino acids PART: B-DESCRIPTIVE
- Secondary structure of protein
- 4. Define deoxyribonucleic acid. Explain the complementarity of DNA with suitable illustration. 1+9=10

In Define monosaccharole, Write notes on

Write notes on any two of the following:

 $5 \times 2 = 10$ 

- (a) Denaturation and renaturation of DNA
- (b) Types of RNA
- (c) Hypo and hyperchromicity of DNA

5. Explain the nomenclature and classification of enzymes. 10

Or

Write notes on the following:

 $5 \times 2 = 10$ 

- (a) Isozymes
- (b) Factors affecting enzyme catalyzed reactions

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Subject Code : Bs/ZOO/M4(T)	Booklet No. A 93
2.5	Date Stamp
To be filled in by the Candidate	
BA / BSc / BCom / BBA / BCA 4th Semester End Term Examination, 2025 (FYUGP)	OGY DRA
Subject	
Paper	To be filled in by the Candidate
INSTRUCTIONS TO CANDIDATES	BA / BSc / BCom / BBA / BCA
1. The Booklet No. of this script should be	4th Semester End Term

2. This paper should be ANSWERED FIRST and submitted within 1 (one) Hour the commencement Examination.

versa.

Signature of

Scrutiniser(s)

quoted in the answer script meant for descriptive type questions and vice

3. While answering the questions of this booklet, any cutting, erasing, overwriting or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question

only.

Signature of Examiner(s)

Signature of Invigilator(s)

Examination, 2025 (FYUGP)

Roll No. .....

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DESCRIPTIVE TYPE

Booklet No. B .....

Subject .....

Paper .....

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bond ( )  (c) It is a double sugar ( )  (d) All of the above ( )  3. Lipids are  (a) essential components of cel membrane ( )  (b) absent in eggs ( )  (c) involved in short-term energy source ( )  (d) soluble in water but insoluble in organic solvents ( )  4. Phospholipids  (a) are hygroscopic in nature ( )  (b) exhibit non-permeability in cellular membrane ( )  (c) have no application in nanotechnology ( )  (d) ensure accumulation of cholesterol in the body.	2.	Wh disa	ich of the following is <i>not</i> false for accharide?
bond ( )  (c) It is a double sugar ( )  (d) All of the above ( )  3. Lipids are  (a) essential components of cel membrane ( )  (b) absent in eggs ( )  (c) involved in short-term energy source ( )  (d) soluble in water but insoluble in organic solvents ( )  4. Phospholipids  (a) are hygroscopic in nature ( )  (b) exhibit non-permeability in cellular membrane ( )  (c) have no application in nanotechnology ( )  (d) ensure accumulation of cholesterol in the body.		(a)	Lactose is found in milk ( )
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<ul> <li>(a) essential components of cell membrane ( )</li> <li>(b) absent in eggs ( )</li> <li>(c) involved in short-term energy source ( )</li> <li>(d) soluble in water but insoluble in organic solvents ( )</li> <li>4. Phospholipids</li> <li>(a) are hygroscopic in nature ( )</li> <li>(b) exhibit non-permeability in cellular membrane ( )</li> <li>(c) have no application in nanotechnology ( )</li> <li>(d) ensure accumulation of cholesterol in the body.</li> </ul>		(c)	It is a double sugar ( )
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(c) have no application in nanotechnology ( )  (d) ensure accumulation of cholesterol in the		(b)	membrane ( )
hody ( )		(c)	have no application in
attenegogyig (p)		(d)	ensure accumulation of cholesterol in the body ( )

5. Pro	line is		
(a)	a non-cyclic amino acid (	) ucl	
(b)	the only cyclic amino acid (	)3)	
(c)	known for its sulfhydryl group	(	)
(d)	achiral in structure ( )		
6. Prot	tein structure is stabilized due to		
(a)	covalent and hydrogen bonds	othe (	)
(b)	disulfide and ionic bonds (	)	
(c)	hydrophobic interactions (	)	
(d)	All of the above ( )		
7. Ade	nine and guanine are		
(a)	pyrimidine ( )		
(b)	cyclic adenosine monophosphate	(	)
(c)	purine ( )		
(d)	adenylate kinase ( )		

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8.	Pro	tein synthe	sis inv	olves	e i les		
	(a)	only	messe	nger		and	transfer
		RNA	( )				
	(b)	small 1	nuclea	r	RNA	and	micro
		RNA	( )				
	(c)	only ribose	omal F	RNA	(	)	
	(d)	None of th	e abov	⁄e	rd ( ni	paido	
9.	The other	property to cr catalyst i	S				
	(a)	rigidity	(	)			
	(b)	specificity	berne	( )			
	(c)	exhibition	minin	( )			
	(d)	inhibition	(	)	ods a	is to He	
10.	$V_{\rm max}$	in enzyme	kinet	ics re	efers t	O MAN S MI	
	(a)	volume of	substr	ate p	resen	t (	)
	(b)	maximum		со	ncent	ration	of
		reactants	(	).			
	(c)	maximum	rate	of a	an er	zyme	catalyzed
		reaction	(	)			
	(d)	a universa	l cons	tant	aid at	siyn <b>)</b> be	

## II. Match the following:

1.	Ribose	(a)	Treat skin condition
2.	Topical Steroids	(b)	Building block of nucleic acid
3.	Side chain	(c)	Simple sugar
4.	Nucleoside	(d)	Helper molecules
5.	Cofactors	(e)	Distinctive for each amino acid

III. Write short notes on any five of the following: 2×5=10

(a) Carbohydrates a rest to the state of A I be a state of A I be

(b) Gluconeogenesis

(c) Biological significance of phospholipids

(d) Proteins

(e) Nucleotides

(f) Cofactors

(g) Lineweaver-Burk plot

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