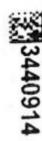
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M.Sc. (Previous) Examination – 2024 ZOOLOGY Fifth Paper [Biochemistry]



Time Allowed: Three Hours

Maximum Marks: 100

Note: In M.Sc. Zoology Previous Examination the theory papers will have the following pattern.

Question papers will have 5 (five) questions in all having equal marks.

- (i) Question number I will be compulsory and will have 20 very short answer question of I mark each.
- (ii) Question numbers 2 and 3 will consist of only short answer type questions with 4 subdivisions of 5 marks each. There will be internal choice in these questions.
- (iii) Question numbers 4 and 5 will be long answer type questions with internal choice.

No supplementary answer-book will be given to any candidate. Hence the candidates should write the answer precisely in the main answer-book only.

All the parts of one question should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

PART-A

Answer the following questions in brief -

 $[1 \times 20 = 20]$

- (a) What are the pseudoknot structures of nucleic acid?
- (b) What are essential fatty acids?
- (c) What is Zwitterion?
- (d) Write the significance of Vitamin K.
- (e) What is Methemoglobin?
- (f) Differentiate Coenzymes and Isoenzymes.
- (g) What is a chaperon?
- (h) Write the name of the method used for Sequencing of DNA.
- (i) What is the motif?
- (i) What do you mean by signal transduction?
- (k) What are protein domains?
- What are steroids?_
- (m) What do you mean by protein splicing?
- (n) Write the name of aromatic amino acids.

	(o) What do you mean by divergent evolution?	
	(p) Name of any two disease caused by protein misfolding	
	(q) Why are oil remains in liquid form at room temperature?	
	(r) What is Gaucher disease?	
	(s) Write effect of morphine alkaloids.	
	(t) Write two functions of Terpenoids.	
	PART-B	
2.	Describe the followings -	
	(a) Edman's degradation method of amino acids sequencing	[10+10=20]
	(b) Covalent modification of proteins	
	OR	
	Write short notes on -	
	(a) Fibrous protein	[10+10=20]
	(b) Structure of bone	
3.	Write short notes on	
	(a) Levinthal Paradox	[10+10=20]
	(b) Ramachandran Plot	
	OR	
	Write short notes on -	14147710 000
	(a) Myoglobin	[10+10=20]
	(b) Sickle cell anemia	
4.	Describe the following -	(10.10.00)
	✓(a) Phospholipids	[10+10=20]
	(b) Modified nucleosides	
	OR	
	Write short notes on -	***
	(a) Phenolics	[10+10=20]
	(b) Vitamin B complex (any four)	
5.	Write short notes on -	[10.40.40
	. (a) Structure and form of DNA	[10+10=20]
	(b) Hairpin structure of RNA	
	OR	
	Write short notes on -	
	(a) Ribozymes_	[10+10=20]
	(b) Phenylketonuria and Galactosemia	