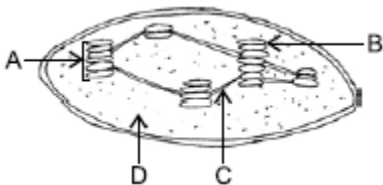
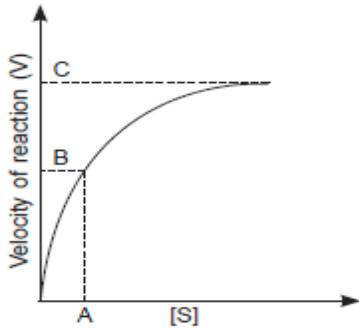


	KENDRIYA VIDYALAYA SANGATHAN LUCKNOW REGION MONTHLY TEST –OCT Session :2024-25 CLASS-XI SUBJECT- BIOLOGY MAX MARK-40 TIME - 90 MINUTES General Instructions: 1 Attempt all questions. Some Internal choices are given. 2. Question paper is divided into five sections. 3. Section A consists of MCQs carrying 1 mark each. 4. Section B contains Short answer type questions carrying 2 marks each. 6. Section C contains Short answer type questions carrying 3 marks each. 7. Section D contains CASE BASED Question carrying 4 marks and 8. Section E contains questions of 5 marks.	
	SECTION A	
1	Identify the amino acid in the figure: <pre> COOH H — C — NH₂ CH₃ </pre> (a) alanine (b) valine (c) glycine (d) serine	1
2	A compound formed of a pentose sugar and a nitrogen base, is called a (a) nucleotide (b) nucleic acid (c) nucleoside (d) disaccharide	1
3	When a dicot leaf is exposed to sunlight, the light rays first pass through the epidermis and then through - (a) lower epidermis (b) spongy parenchyma (c) palisade parenchyma (d) vascular bundles	1
4	A conjoint and open vascular bundle will be observed in the transverse section of a- (a) monocot root (b) monocot stem (c) dicot root (d) dicot stem	1
5	In an animal cell, DNA is present in (a) nucleus and ribosomes (b) ribosomes and mitochondria (c) mitochondria and ER (d) nucleus and mitochondria	1
6	The endomembrane system includes (a) endoplasmic reticulum and plasma membrane (b) endoplasmic reticulum, golgi bodies and vacuoles (c) endoplasmic reticulum, vacuoles, golgi bodies, and lysosomes (d) endoplasmic reticulum, vacuoles, golgi bodies, lysosomes and plasma membrane	1
7	Which of the following is absent in female frog? (a) Webbed feet (b) Copulatory pads (c) Tympanum (d) Moist skin	1
8	Which membrane covers and protects the eyes of frog in water? (a) Tympanum (b) Skin (c) Sebaceous (d) Nictitating	1

	SECTION B	
9	How are exarch and endarch conditions different anatomically?	2
10	Fill in the blanks at (A), (B), (C) and (D) as shown in diagram. Name the chemical present in its (D) part which is also present in mitochondria.	2
		
11	Given below are some proteins and general functions of protein. Match the protein with their appropriate function . Protein (a) Collagen (b) Antibody (c) Insulin (d) GLUT-4 Function 1. Enables glucose transport into cells 2. Hormone 3. Intercellular ground substance 4. Fight infectious agents	2
	SECTION C	
12	What is stomatal apparatus .Explain the structure of stomata with the help of a diagram . What is the difference between guard cells of grasses and dicot plants.	3
13	Draw a neat diagram of a plant cell and label any six parts characteristic of it.	3
14	Write the major differences between DNA and RNA. OR Make distinction between coenzyme and prosthetic group	3
15	Draw a neat diagram of Digestive system of Frog.	3
	SECTION D (case study)	
16	Concentration of Substrate With the increase in substrate concentration, the velocity of the enzymatic reaction rises at first. The reaction ultimately reaches a maximum velocity (V_{max}) which is not exceeded by any further rise in concentration of the substrate. This is because the enzyme molecules are fewer than the substrate molecules and after saturation of these molecules, there are no free enzyme molecules to bind with the additional substrate molecules Study the following graph showing the effect of substrate concentration on the rate of enzyme activity and answer any the questions that follow:	
		
I.	Name the factors that affect enzyme activity.	1
II.	Why is there no further increase in the velocity of enzyme action with addition of more substrate after reaching maximum velocity?	1

III.	How can the catalytic efficiency of the enzyme be inhibited by the presence of competitive inhibitors ?	1
IV.	ASSERTION REASON TYPE QUESTIONS Directions: In the following questions, a statement of assertion is followed by a statement of reason. Mark the correct choice as A/B/C/D in the answer sheet: A.If both Assertion and Reason are true and Reason is the correct explanation of Assertion. B.If both Assertion and Reason are true but Reason is not the correct explanation of Assertion. C.If Assertion is true but Reason is false. D.If both Assertion and Reason are false. ASSERTION : Specific substrate binds at the active site of the enzyme . REASON : Enzymes increase the activation energy of substrate	1
	SECTION E	
17	Who proposed the fluid mosaic model of plasma membrane? Describe the fluid mosaic model of plasma membrane with the help of a labelled diagram. OR What is a centromere? How does the position of centromere form the basis of classification of chromosomes? Support your answer with a diagram showing the position of centromere on different types of chromosomes.	5
18.	Differentiate between the anatomy of a dorsiventral leaf and that of an isobilateral leaf with a well labelled diagram. OR Differentiate between the Anatomical transverse section of dicot stem and monocot stem with a well labelled diagram.	5

End of the paper