



Date:07/11/23

MONTHLY TEST-03 (2023-24)

Max marks:20

Grade:XII

BIOLOGY(044)

Time:50min

General Instructions:

1. There are 9 questions in the question paper. All questions are compulsory.

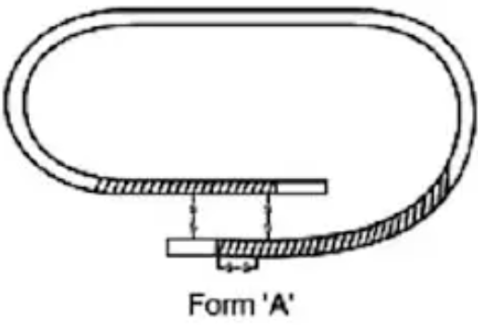
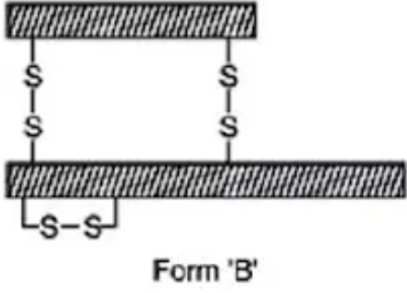
Qn. No	SECTION A	Marks allocated
1	<p>For effective treatment of the disease, early diagnosis and understanding its pathophysiology is very important. Which of the following molecular diagnostic techniques is very useful for early detection?</p> <p>a)ELISA b)Southern blotting c)Western blotting d)Hybridization technique</p>	1
2	<p>Directions: In the following questions, a statement of assertion is followed by a statement of reason. Mark the correct choice as:</p> <p>Assertion: Virus-infected cells secrete proteins known as interferons.</p> <p>Reason: Interferons protect the non-infected cells from bacterial infection.</p> <p>(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.</p>	1
3	<p>Identify the correct arrangement of periods of Palaeozoic era in ascending order in geological time scale.</p> <p>(a) Cambrian → Devonian → Ordovician → Silurian → Carboniferous → Permian</p>	1

	<p>(b) Cambrian → Ordovician → Silurian → Devonian → Carboniferous → Permian</p> <p>(c) Cambrian → Ordovician → Devonian → Silurian → Carboniferous → Permian</p> <p>(d) Silurian → Devonian → Cambrian → Ordovician → Permian → Carboniferous</p>	
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4	<p>For transformation, microparticles coated with DNA and bombarded with a gene gun are made of</p> <p>a) Gold or Tungsten b) Silicon or Platinum</p> <p>c) Platinum or Zinc d) Silver or Platinum</p>	1
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SECTION B		
5	<p>A patient showed symptoms of sustained high fever, stomach pain and constipation, but no blood clot in stools. Name the disease and its pathogen. Write the diagnostic test for the disease. How does the disease get transmitted?</p>	2

6	<p>a) What are cry genes? In which organisms are they present?</p> <p>b) Name a few forms of cry gene</p>	3
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7	<p>In the given figure, Form (A) and Form (B) represent different forms of a proteinaceous hormone secreted by the pancreas in mammals.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">Form 'A' Form 'B'</p> <p>(a) Explain what type of bonding is present between chains of this hormone.</p> <p>(b) What are these forms (A) and form (B)? How do these firms</p>	3
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	differ from each other? (c) How was this hormone produced by Eli Lilly using rDNA technology?	
8	Discuss the role of lymphoid organs in the immune response. Explain the different types of lymphoid organs giving two examples of each type in humans.	3
	SECTION C	
9	a) Explain Hardy-Weinberg's principle. b) How can Hardy-Weinberg equilibrium be affected? Explain giving three reasons.	5