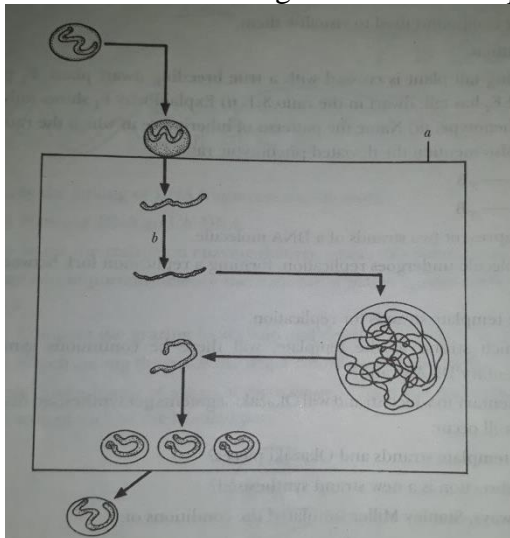


KENDRIYA VIDYALAYA SANGATHAN, VARANASI REGION KENDRIYA VIDYALAYA BHU CAMPUS (FS) MONTHLY TEST- SEPTEMBER (2024-25)				
SET: 1	CLASS: XII	SUBJECT & CODE: BIOLOGY (044)	TIME: 1:30 HOURS	M.M.: 40
General Instructions: 1) All the questions are compulsory. 2) The question paper is divided in 3 sections : SECTION A (1 Marks each), SECTION B(2 Marks each) , SECTION C (3 marks each), SECTION D (4 marks each), SECTION E(5 marks each) 3) Draw neat and labelled diagrams if necessary. 4) Use pencils for diagrams.				
Q. N.	SECTION A			MAR KS
1	The infectious stage of plasmodium that enters the human body is (a) sporozoites (b)Female gametocytes (c) male gametocytes (d) trophozoites			1
2	Which of the following immune responses is responsible for rejection of kidney graft? (a) Humoral immune response (b) Inflammatory immune response (c) Cell mediated immune response (d) Auto immune response			1
3	Which of the following is not used as biopesticides (a) <i>Bacillus thuringiensis</i> (b) <i>Trichoderma harzianum</i> (c) <i>Nuclearpolyhedrovirus</i> (d) <i>Xanthomonas campestris</i>			1
4	The transfer RNA molecule in 3D appears as (a) L-shaped (b) E-shaped (c) Y-shaped (d) S-shaped			1
5	Which of the following statement describe the function of promoter in a transcription unit? (a) signals the termination of polypeptide chain (b) serves as sequence where transcription will initiate (c) serves as DNA template for transcription to take place (d) determines the first nucleotide to be transcribed into RNA			1
6	The principle of vaccination is based on the property of (a) Specificity (b) Diversity (c) memory (d) discrimination between self and non self			1
7	Select the option which is /an incorrect statements (s) with respect to T-lymphocytes in the human body : (i) They are a type of WBC. (ii) They are produced in bone marrow. (iii)They remain active at all times in the body (iv) They mature in bone marrow (a) i & iv only (b) iii only (c) (iv) only (iii) and (iv) only			1
	ASSERTION & REASON TYPE QUESTION : A. Both A and R are true and R is the correct explanation of A B. Both A and R are true and R is not the correct explanation of A C. Assertion is true but Reason is false D. Both Assertion and reason is false			
8	Assertion: BAC & YAC are the common vectors used in HGP. Reason: In HGP, sequencing was done by automated DNA sequencers that worked on methods of F. Sanger.			1
9	Assertion: Taylor and colleagues in 1958 used CsCl density gradient centrifugation techniques to prove semiconservative DNA replication Reason: They use ¹⁵ N heavy nitrogen which is not a radioactive isotope.			1
10	Assertion : Cocaine has a potent stimulating action on CNS Reason : Excessive dosage of cocaine causes hallucinatio.			1
11	Assertion: Biogas is produced by anaerobic digestion of biomass by methanogenic bacteria. Reason : Biogas is made up of methane entirely and is the most eco-friendly fuel.			1

	SECTION B				
12	“DNA polymerase plays a dual function during replication” Justify the statement.				2
13	How microbes act as Biocontrol agents? Give one example supporting it.				2
14	What is it that prevents a child to suffer from a disease he/she is vaccinated against. Give one reason.				2
	SECTION C				
15	Identify a, b, c, d and f in the table given below.				3
	S.no	Organism	Bioactive molecule	Use	
	i	<i>Monascus purpureus</i>	a	b	
	ii	c	d	Antibiotic	
	iii	e	cyclosporine	f	
16	Give reasons for: (i) Both strands of DNA are not copied during transcription. (ii) Transcription and translation in bacteria can be coupled.				3
17	From which plant are cannabinoids obtained? Name any two cannabinoids. Which part of the body is affected by consuming these substances.				3
	SECTION D				
18	CASE BASED QUESTION: Observe the following and answer the questions: 				4
	(i) What does this diagrammatic sketch depict?				
	(ii) Identify 'a' and 'b'.				
	(iii) Name any two ways the disease infect the human other than sexual contact.				
	(iv) Mention the events that occur in the cells when the infectious agent gets into blood after gaining entry into human body.				
	SECTION E				
19	Microbes play a dual role when used for sewage treatment as they not only help to retrieve usable water but also generates fuel. Explain.				5
20	.(a) List the two methodologies which were involved in human genome project. Mention how they were used. (b) Expand YAC and mention what was it used for.				5