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SRM

COLLEGE OF ENGINEERING AND TECHNOLOGY
SCHOOL OF BIOENGINEERING, DEPARTMENT OF BIOTECHNOLOGY
ACADEMIC YEAR 2021-22 - EVEN SEMESTER; CONTINUOUS LEARNING ASSESSMENT TEST III

Reg. No.	R	A	2	0	1	1	0	0	4	0	1	0	4	1	6

Course Code:18BTB101T	Course Title: BIOLOGY		
Sem & Year:IV &II	Date:24.06.2022	Duration: 100 Minutes	Max. Marks: 50

	Course Outcomes (COs)	Program Outcomes (POs)												PSOs		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO 1	*Describe the cell growth, metabolism and reproduction.*	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO 2	*Explain the concepts and experiments in biochemistry*	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO 3	*Consolidate the significance of photosynthesis*	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO 4	*Determine enzyme catalytic functions in different metabolic reaction*	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-
CO 5	*Analyze the role of biosensors and its applications*	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-
CO 6	*Compile the concepts of nervous system disorder and the diseases associated with it*	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-

Part A Answer the Following **20x1 Marks = 20 Marks**

S. No.	Questions	Marks	CO	BL	Marks Scored
1.	Most commercially successful biosensors are_____glucose biosensors a). Oxidimetric b). Conductometric c). Potentiometric d). Amphoteric	1	5	2	
2.	A device that uses specific biochemical reactions to detect chemical compounds in biological samples is a "Biosensor". Choose the one of the following that is NOT a biosensor a) HCG protein-based pregnancy test kit b) RT PCR c) Handheld glucose monitor device d) Glucose monitor	1	5	2	
3.	The type of biosensor which uses the production of heat in a medium a) Electrochemical biosensor b) Ion sensitive biosensor c)Thermal detection biosensor d) Resonance biosensor	1	5	2	1
4.	Piezo electric device detect a) Potential difference b) Electric current c) Emitted fluorescence light d) Angle of emitted electron wave	1	5	2	1
5.	Myosin head dissociate from this filament due to the hydrolysis of a)GDP b)ATP c)NADP d)FAD	1	5	2	1
6.	The torque generating unit of bacterial flagellar motor is a) Mot B b)MS Ring c) C Ring d) HOOK	1	5	2	
7.	Bioventing is a form of remediation typed under a) In situ bioremediation b) Ex situ bioremediation c) Phyto remediation d) Bioaugmentation	1	5	2	1
8.	If oxygen is terminal electron acceptor of degradation then the process is called a) anaerobic degradation b) aerobic degradation c) Incomplete degradation d) Methanogenesis	1	5	2	1
9.	Identify the Ex situ bioremediation process a) Bioventing b) Biosparging c) Bioaugmentation d) phytofilteration	1	5	2	1
10.	Fluorescence can be detected by a) Photodiode b) pH meter c) Thermal scanner d) colorimeter	1	5	2	
11.	Polio drops are administered at infant stage because of it a)Helps in better digestion of antigens b) Increases RBC count c) Corrects bone marrow stem cells synthesis d) Produces antibodies	1	6	2	
12.	Cell communication mechanisms depend heavily on extracellular signal molecules that are all.....in its nature a) Fats and glycerol b) Carbohydrates c) Lipopolysaccharides d) Protein	1	6	2	1
13.	The multiple projections from the cell body of neurons are termed as a) dendrites b) axons c) spindle fibres d)flagella	1	6	2	1
14.	The cells in the blood originate from the stem cells in the bone marrow through a process called a) haematopoiesis b) diapedesis c) chemotaxis	1	6	2	

	d) homeostasis				
15.	The autonomic nervous system controls the a) Working of the lungs b) Movement of muscles in the alimentary canal c) Pumping action of heart d) All of the above	1	6	2	1
16.	Active artificially acquired immunity is a result of a) vaccination b) contact with a pathogen c) injection of an immune serum d)antibodies of the mother passed to the foetus	1	6	2	1
17.	This type of disease results from the inability of the immune system to distinguish self from nonself antigens a) autoimmune diseases b) allergy c) anaphylaxis d) immunodeficiency	1	6	2	1
18.	The signalling that involves sending signals to other cells of same type or to themselves is referred as a) Autocrine b) paracrine c) mesocrine d) homocrine	1	6	2	
19.	The cells in the blod originate from the stem cells in the bone marrow through a process called a) hematopoiesis b) diapedesis c) chemotaxis d) homeostasis	1	6	2	1
20.	The autonomic nervous system controls the a) Working of the lungs b) Movement of muscles in the alimentary canal c) Pumping action of heart d) All of the above	1	6	2	

Part B Answer the Following **2 x 15 Marks = 30 Marks**

Q. No.	Questions	Marks	CO	BL	Marks Scored
11 a.	Explain the molecular machine which generates energy molecule using electrochemical gradient across the cell with diagrams	15	5	3	13
	OR				
11 b.	Explain the principles of different types of Biosensors		5	4	
12 a.	How neurons conduct information from one part of the body to the other part Explain with diagrams	15	6	3	12
	OR				
12 b.	Draw a pictorial representation of the distribution of primary and secondary immune systems in the human body		6	4	

Attainment

	Quality	Max Marks	Marks Scored	% of Marks	Attainment
COs	L1/L2 = 21 Marks	50			
	L3/L4 = 29 Marks				
POs/PSOs:					

CO5 - 13 + 6 - 19

CO6 - 12 + 6 - 18