

**University of Mumbai**  
**Online Examination 2020**

Program: BE Chemical Engineering

Curriculum Scheme: Revised 2012(CBSGS)

Examination: Final Year Semester VIII

Course Code: CHE805

Course Name: Biotechnology(Elective)

Time: 1 hour

Max. Marks: 50

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Note to the students:- All Questions are compulsory and carry equal marks .

Q1.	Which of the following is NOT a carbohydrate
Option A:	Sucrose
Option B:	Glycogen
Option C:	Glycine
Option D:	Cellulose
Q2.	Some plants have nitrogen-fixing bacteria in their root nodules. What are these bacteria called?
Option A:	Blue green algae
Option B:	Nitrosomonas
Option C:	Azotobacter
Option D:	Rhizobium
Q3.	_____ is used for the production of alcohol and wine.
Option A:	Yeast
Option B:	Mosquito
Option C:	Ant
Option D:	Algae
Q4.	The production of secondary metabolites requires the use of _____.
Option A:	Meristem
Option B:	Protoplast
Option C:	Axillary buds
Option D:	Cell suspension
Q5.	The primary structure of a protein involves
Option A:	Disulfide linkage

Option B:	Hydrogen bond
Option C:	Peptide linkage
Option D:	Hydrophobic forces
Q6.	The nucleic acid synthesis takes place in
Option A:	3'-5' direction
Option B:	5'-3' direction
Option C:	straight direction
Option D:	Any one direction
Q7.	The first enzyme that reduces nitrates into nitrites and ammonia in plants is
Option A:	Nitrate reductase
Option B:	Nitrite reductase
Option C:	Glutamine synthetase
Option D:	Glutamate dehydrogenase
Q8.	Which of the following is an inorganic material used as support?
Option A:	Pectin
Option B:	Gelatin
Option C:	Ceramics
Option D:	Alginate
Q9.	Who invented the process of producing monoclonal antibodies in 1975?
Option A:	Albert Einstein
Option B:	Watson and Creek
Option C:	Georges Köhler and César Milstein
Option D:	Robert Hook
Q10.	The first transgenic plant to be produced is
Option A:	Brinjal
Option B:	Tobacco
Option C:	Rice
Option D:	Cotton
Q11.	Which of the following is not a macromolecule
Option A:	Protein
Option B:	Starch
Option C:	nucleotide
Option D:	DNA
Q12.	The building blocks for lipids are
Option A:	Fatty acid and glycerol
Option B:	Fatty acid and amino acid
Option C:	Amino acid and nucleotide
Option D:	Glycerol and nucleotide

Q13.	The chemical union of the basic units of carbohydrates, lipids, or proteins always produces the byproduct
Option A:	Carbon
Option B:	Energy
Option C:	Acid
Option D:	Water
Q14.	What is the clinical application of monoclonal antibodies?
Option A:	Biosensors
Option B:	Transplant rejection
Option C:	Infectious disease
Option D:	Purification of drugs
Q15.	Which of the following stationary phase is not used in gel filtration chromatography?
Option A:	Sephadex
Option B:	Sephacryl
Option C:	Bio-Gel
Option D:	Resin beads
Q16.	Which enzyme is used in making Baby Foods?
Option A:	Amylase
Option B:	Rennin
Option C:	Trypsin
Option D:	Liginase
Q17.	Penicillin is produced by_____
Option A:	aerobic fermentation
Option B:	anaerobic fermentation
Option C:	aerobic fermentation followed by anaerobic fermentation
Option D:	anaerobic fermentation followed by aerobic fermentation
Q18.	Which type of cell actually secretes antibodies?
Option A:	plasma cells
Option B:	T cells
Option C:	Macrophages
Option D:	Dendritic cells.
Q19.	The molecule which acts directly on an enzyme to lower its catalytic rate is _____
Option A:	Repressor
Option B:	Inhibitor
Option C:	Modulator

Option D:	Regulator
Q20.	The two strands of DNA are held together by bonds of _____
Option A:	Nitrogen
Option B:	Hydrogen
Option C:	Oxygen
Option D:	Carbon
Q21.	The first hormone artificially produced by bacteria is
Option A:	Insulin
Option B:	Thyroxin
Option C:	Adrenalin
Option D:	Testosterone
Q22.	Which of the following is the main application of embryo culture
Option A:	Clonal propagation
Option B:	Production of embryoids
Option C:	Induction of somaclonal variations
Option D:	Overcoming hybridization barriers
Q23.	Which of the following is not a method of immobilization?
Option A:	Entrapment
Option B:	Ionic bonding
Option C:	Adsorption
Option D:	Encapsulation
Q24.	Immunoaffinity chromatography is used for the purification of
Option A:	Lipoproteins
Option B:	Interferons
Option C:	Antibodies
Option D:	Carbohydrates
Q25.	What principle is used in electro dialysis?
Option A:	Magnetic field and permeable membranes
Option B:	Electric field and cation selective membranes
Option C:	Electric fields and anion selective membranes
Option D:	Electric fields and ion selective membranes

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<b>Question</b>	<b>Correct Option (Enter either 'A' or 'B' or 'C' or 'D')</b>
Q1.	C
Q2.	D
Q3.	A
Q4	D
Q5	C
Q6	B
Q7	A
Q8.	C
Q9.	C
Q10.	B
Q11.	C
Q12.	A
Q13.	D
Q14.	D
Q15.	D
Q16.	C
Q17.	A
Q18.	A
Q19.	B
Q20.	B
Q21.	A
Q22.	D
Q23.	B
Q24.	C
Q25.	D