

**University of Mumbai**  
**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Program: Biotechnology Engineering

Curriculum Scheme: Rev2016

Examination: Second Year Semester IV

Course Code: BTC403 and Course Name: Fermentation Technology

Time: 1 hour

Max. Marks: 50

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

Q1.	In lactic acid fermentation, the final electron acceptor is:
Option A:	Oxygen
Option B:	Lactic acid
Option C:	NAD
Option D:	Pyruvate
Q2.	Glucose molecule during the process of glycolysis is broken down into
Option A:	Two pyruvic acid
Option B:	Four pyruvic acid
Option C:	One pyruvic acid
Option D:	Three pyruvic acid
Q3.	Identify the correct sequence during the industrial production of substances
Option A:	Inoculation, screening, fermentation, downstream processing, removal of waste
Option B:	Screening, Inoculation, fermentation, downstream processing, removal of waste
Option C:	Fermentation, screening, inoculation, removal of waste, downstream processing
Option D:	Fermentation, inoculation, inoculation, removal of waste, downstream processing
Q4.	The production of microbial biomass is used in
Option A:	Baking industry
Option B:	Making Single cell protein
Option C:	Making corn syrup
Option D:	Both A and B

**University of Mumbai**

**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Q5.	Which of the following does not have the property of secondary metabolite?
Option A:	Antimicrobial activity
Option B:	Pharmacological properties
Option C:	Essential to the growth of cells
Option D:	Specific enzyme inhibitors
Q6.	Microbial transformation processes have advantage over chemical processes that they can, p) Work at relatively low temperatures, q) Work at relatively high temperatures, r) Work at low pressures, s) Behave as chiral catalyst with high positional specific
Option A:	p and r
Option B:	p, r and s
Option C:	Only s
Option D:	Only p
Q7.	In continuous fermentation
Option A:	Steady state conditions do not exists
Option B:	Rate of product formation do not change
Option C:	Rate of product formation changes
Option D:	Substrate content and the biochemical reactions within the cells changes
Q8.	Partially germinated barley grains when heated it is converted into
Option A:	Wart
Option B:	Molasses
Option C:	Malt
Option D:	Alcohol
Q9.	Contamination can be prevented in fermentor by
Option A:	Addition of acid to the medium
Option B:	Adding salt to the medium

**University of Mumbai**  
**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Option C:	Adding toxic chemicals to the medium
Option D:	Maintaining sterilisation at each stage
Q10.	Which of the following fermenters are characterized by height to diameter ratio?
Option A:	Tower fermenter
Option B:	Airlift fermenter
Option C:	Hollow fibre
Option D:	Perfusion bioreactor
Q11.	Which of the following method is useful for isolation and detection of organisms having the ability to produce growth factors?
Option A:	Crowded plate technique
Option B:	Auxanographic technique
Option C:	Enrichment Culture technique
Option D:	Indicator dye technique
Q12.	The Yield Factor (Y) does not vary upon which of the following?
Option A:	pH
Option B:	Growth rate
Option C:	Temperature
Option D:	Amount of enzyme
Q13.	A period during which the growth rate of cells gradually increases is known as _____
Option A:	Lag phase
Option B:	Log phase
Option C:	Stationary phase
Option D:	Deceleration phase
Q14.	Which of the following is not a stage of product recovery?

**University of Mumbai**  
**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Option A:	Removal of solids
Option B:	Isolation of organism
Option C:	Purification and concentration
Option D:	Cell disruption
Q15.	The agitator is required to _____
Option A:	Provide air
Option B:	Mixing objectives
Option C:	Purify the product
Option D:	Sterilize the media
Q16.	Which of the following is NOT a cryoprotective agent?
Option A:	DMSO
Option B:	Glycerol
Option C:	Ethylene Glycol
Option D:	Paraffin wax
Q17.	Which of the following resists the change in pH?
Option A:	Buffer
Option B:	Growth factors
Option C:	Minerals
Option D:	Inhibitors
Q18.	The levels of primary metabolites are regulated by _____
Option A:	Feedback mechanism
Option B:	rDNA Technology
Option C:	Incubating the microorganism in dark
Option D:	Adding the inhibitors

**University of Mumbai**  
**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Q19.	Which of the following is correct with respect to Fermentation?
Option A:	A process involving the mass culture of micro-organisms
Option B:	It is a fast process
Option C:	Fermented food products are always healthy
Option D:	Oxygen is produced during fermentation
Q20.	A double spiral heat exchanger is
Option A:	direct heat exchanger
Option B:	indirect heat exchanger
Option C:	temperature control device
Option D:	thermostat
Q21.	Which of the following procedure has a great application in strain improvement?
Option A:	rDNA Technology
Option B:	Conjugation
Option C:	Transformation
Option D:	Transduction
Q22.	What is the dilution rate (D)?
Option A:	$D = F/V$
Option B:	$D = V/F$
Option C:	$D = \mu F$
Option D:	$D = \mu D$
Q23.	Sulphite waste liquor is obtained from _____
Option A:	Paper pulp industry
Option B:	Wood industry
Option C:	Liquor industry
Option D:	Sulphur production

**University of Mumbai**  
**Examination 2020 under cluster \_\_\_ (Lead College Short name)**

Q24.	The Replica plate technique was used for _____
Option A:	Isolation of auxotrophs
Option B:	Isolation of revertants
Option C:	Isolation of analogue-resistant mutants
Option D:	Isolation of prototrophs
Q25.	What is the change of using antifoaming agents on KLa?
Option A:	KLa increases
Option B:	KLa decreases
Option C:	KLa becomes constant
Option D:	No effect