



MCQ-003-001526

Seat No. _____

Third Year B. Sc. (Sem. V) (CBCS) Examination

May/June – 2018

Microbiology : 502

(Bioprocess Technology)

Faculty Code : 003

Subject Code : 001526

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.
(2) Figures on right side indicate total marks.

1 Answer specifically : 20

- (1) The fermentation products produced with the help of Recombinant DNA Technology are called _____.
- (2) Give full form of ATCC and NCYC.
- (3) What is SDA ?
- (4) Enlist Primary Metabolites.
- (5) Give two examples of Chelators.
- (6) Give two examples of Inorganic Nitrogen source.
- (7) What is the formula of Cellulor Yield Coefficient ?
- (8) Enlist two names of Antibiotics and producer Actinomycetes.
- (9) Give three stages of Distillation for solvent Recovery.
- (10) What is containment ?
- (11) What is sparger ?
- (12) Give use of baffle.
- (13) Enlist Types of fermenters.
- (14) Give examples of two agents used for precipitation.
- (15) Enlist Physicomechanical methods for cell Disruption.
- (16) What is the use of super critical fluid ?

- (17) During fermentation of streptomycin _____ is produced as by product.
- (18) Which species of yeast carry out Alcohol fermentation ?
- (19) In Riboflavin fermentation the released endproduct is in the form of _____, or _____.
- (20) The fermentation of Protease is done using _____ fungi.

- 2** (a) Answer any three : **6**
- (1) Give two examples of Transformation process carried out by microorganisms.
 - (2) What are growth factors in fermentation ?
 - (3) Explain any one type of fermenter.
 - (4) What is cross flow filtration ?
 - (5) What is Asepsis in fermentation ?
 - (6) Give two examples of Amylase producing microbes.
- (b) Answer any three : **9**
- (1) Discuss component parts of fermentation.
 - (2) Give difference between Inoculum media and Production media.
 - (3) Mention advantages and limitations of continuous fermentation.
 - (4) Discuss criteria for choice of Recovery process.
 - (5) State major events in Penicillin fermentation.
 - (6) Give essential steps in secondary screening.
- (c) Write notes on any two : **10**
- (1) Carbon sources in fermentation
 - (2) Batch sterilization
 - (3) Protoplast fusion
 - (4) Citric Acid fermentation.

- 3** (a) Answer any **three** : **6**
- (1) Give four applications of Microbial Enzymes.
 - (2) Discuss hydrocarbons as source of carbon.
 - (3) Give any four basic functions of a fermenter.
 - (4) Enlist different centrifuges used in fermentation Industry. Explain any one in short.
 - (5) Give use of Lysine. How lysine fermentation is enhanced ?
 - (6) What is Drying process ?
- (b) Answer any three : **9**
- (1) What is screening ? Discuss technique of primary screening.
 - (2) Give characteristics of an ideal fermentation media.
 - (3) Discuss aeration system in fermentation.
 - (4) Enlist different batch filters. Explain any one.
 - (5) Discuss any two methods of Immobilization.
 - (6) Give advantages and disadvantages of synthetic and crude media used in fermentation.
- (c) Write notes on any two : **10**
- (1) Fermentation Economics
 - (2) Antifoams in fermentation
 - (3) Media sterilization
 - (4) Liquid Extraction
 - (5) Alcohol fermentation.
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