

SEAT No. _____

[36/A-21]

No. of Printed Pages : 2

Sardar Patel University
B.Sc Biotechnology Sixth Semester
Wednesday, 04th April 2018
10:00 am to 1:00 pm
US06CBIT05 (Industrial Biotechnology)

Total Marks: 70

Note: Figures to the right indicates marks.

Q.1 Multiple Choice Questions

[10]

- 1) A technique design to isolate growth factor producing microorganisms from heterogeneous microbial population is _____.
 - a. Crowded plate technique
 - b. Auxanography
 - c. Enrichment culture technique
 - d. Use of indicator dye
- 2) Which statement is not correct for secondary screening?
 - a. It evaluates true potential of microorganisms
 - b. It does not detect gross genetic stability of the microorganisms.
 - c. It provide information whether the organism is produced actually new product or not.
 - d. None of these
- 3) Crude media require a relatively longer sterilization time period in compare to synthetic because of its greater _____.
 - a. Concentration
 - b. Flow ability
 - c. Viscosity
 - d. Mobility
- 4) _____ prevents vortex hence increasing aeration efficiency in fermenter.
 - a. Impeller
 - b. Sparger
 - c. Electrodes
 - d. Baffles
- 5) In which method of KLa determination the oxygen concentration of the solution is lowered by gassing the liquid out with nitrogen gas?
 - a. Oxygen balance technique
 - b. Sulphide oxidation technique
 - c. Static gassing out technique
 - d. None
- 6) Cross flow filtration is also known as _____.
 - a. Tangential
 - b. Pressure leaf filtration
 - c. Rotary vacuum filtration
 - d. None of these
- 7) Thermistors are made from mixture of _____.
 - a. Pure oxide of iron
 - b. Pure oxide of nickle
 - c. Both
 - d. Pure oxide of sulphite
- 8) Which type of electrodes gives a faster, stable and accurate response in pH measurement?
 - a. Liquid filled
 - b. Gel filled
 - c. Both
 - d. None
- 9) The crushed grapes used for wine manufacturing are also known as _____.
 - a. Wort
 - b. Must
 - c. Hop
 - d. Pilsener
- 10) Which of the following classified as a 'Hard cheese'?
 - a. Brick
 - b. Cheddar
 - c. Monterey jack
 - d. Brie

(P.T.O)

- Q.II Answer the following questions (Attempt any TEN) [20]**
- a) Define fermentation. Give its applications.
 - b) Define crude and synthetic media with example.
 - c) Write the advantages of continuous sterilization process.
 - d) What are Baffles? Give the use of Baffles.
 - e) Write about alkali treatment chemical method use for cell disruption.
 - f) Define the terms: a) liquid liquid extraction b) cell disruption.
 - g) Mention three steps of oxygen transfer from air bubble to cell.
 - h) Write derived equation of KLa.
 - i) What is sparkling wine?
 - j) Write the basic fermentation parameters for wine production.
 - k) Enlist different types of techniques use for food preservation.
 - l) Give the classification of cheese.

Q.III What is screening? Write about all types of primary screening. [10]

OR

- Q.III a) Give an account on Strain improvement. [05]**
b) Write about the different methods use for sterilization of media. [05]

- Q.IV a) What is centrifugation? Write about three types of centrifuges. [06]**
b) Enlist different types of impellers. Explain its types in detail. [04]

OR

- Q.IV a) What is filtration? Give a note on theory of filtration. [06]**
b) Discuss any three "Physical mechanical" methods use for cell disruption. [04]

Q.V What is KLa? Explain all three methods use for KLa determination. [10]

OR

- Q.V a) Discuss about different types of thermometers use for temperature measurement. [06]**
b) Write about pH measurement in detail. [04]

- Q.VI a) Explain brewing steps in beer production with diagrammatic representation. [05]**
b) Describe about the spoilage of food. [05]

OR

- Q.VI a) Enlist basic steps of cheese making process. Write about additives use for cheese production. [06]**
b) Write the all fermentation conditions required for alcohol fermentation. [04]