



AS-1914

Seat No. _____

B. Sc. (Sem. VI) Examination

March / April - 2018

Microbiology : Paper - MI - 602

(Industrial Microbiology)

Time : 3 Hours]

[Total Marks : 70

- 1 (a) Answer any two : 12
- (1) Range of fermentation process.
 - (2) Screening, enrichment and preservation of industrially important microbes.
 - (3) Explain how strain improvement can be done by developing auxotrophic mutants.
- (b) Answer any three : 6
- (1) Enlist some international microbial culture collection centers.
 - (2) What is primary and secondary screening ?
 - (3) Define fermentation in a broad aspect.
 - (4) Give full form of ATCC. Where it is located and what is its importance ?
- 2 (a) Answer any two : 12
- (1) Auxiliary parts of a typical S.T.R.
 - (2) Different types of impeller blades.
 - (3) Antifoaming agents.
- (b) Answer any three : 6
- (1) Name few substrates used as carbon sources in industrial media.
 - (2) Define : Containment and Baffles.
 - (3) Enlist types of air filters.
 - (4) What are the methods used to regulate pH changes in a fermenter.

- 3 (a) Answer any two : 12
- (1) Various types of Filters for the removal of solids.
 - (2) Use of different chromatography for product purification.
 - (3) Various methods of cell disruption for product recovery.
- (b) Answer any three : 6
- (1) What are supercritical fluids ?
 - (2) What are filter aids ? Name a common filter aid used during filtration.
 - (3) Define : Colligends and precipitants
 - (4) What is solid and Liquid shear ?
- 4 (a) Answer any two : 12
- (1) Fermentative production of Citric acid.
 - (2) Fermentative production of Penicillin.
 - (3) Fermentative production of Amylase.
- (b) Answer any two : 4
- (1) Medicinal value of Mushrooms
 - (2) Micro organisms used for SCP production
 - (3) Enlist Substrates used for ethanol production.