GAZ-464

Seat No. _____

B. Sc. (Sem. VI) Examination

March / April – 2017

Microbiology : Paper - MI-602

(Industrial Microbiology)

Time : 3 Hours] [Marks : 70

1 (A) Answer the following : (any two) 15

(a) The range of fermentation processes in industrial microbiology.

(b) Isolation and selection of induced mutants synthesizing improved levels of primary metabolites.

(c) Isolation and screening of industrially important organisms by enrichment liquid and solidifying media.

(B) Answer in brief : 2

(a) What is parasexual cycle ?

(b) What is analog resistant mutant ?

2 (A) Describe the following : (any two) 15

(a) Functions and design of an ideal industrial fermenter.

(b) Enlist various raw materials used for the production of industrial medium and discuss the role played by carbon and nitrogen sources.

(c) Sterilization by batch method.

(B) Answer in brief : 2

(a) What is Nebla-factor ?

(b) What is maillard reaction ?

3 (A) Discuss the following : (any two) 15

(a) Recovery of formation products by batch and continuous methods.

(b) Recovery by ion-exchange and by HPLC methods.

(c) Bioassay of vitamins.

(B) Answer in brief : 3

(a) What is foam separation ?

(b) What is affinity chromatography ?

(c) What is ultrasonification ?

4 (A) Answer any two : 15

(a) Fermentation condition, microbiology and recovery of ethanol.

(b) Industrial scale production of amylase and its applications.

(c) Single-cell-protein production.

(B) Answer in brief : 3

(a) Define : Fermentation.

(b) Name the precursor used for production of penicillin antibiotic.

(c) Draw TCA-cycle.
