

QP Code : 12878

(2½ Hours)

[Total Marks : 75

- N.B. :** (1) All questions are compulsory.
(2) All questions carry equal marks.
(3) Draw neat labelled diagrams wherever necessary.

15

1. Attempt any two of the following :

- Describe inhibition of nucleic acid and protein synthesis by Streptomycin.
- Discuss the chemical structure of Penicillin. Add a note on the history of discovery of Penicillin.
- Explain Disc diffusion plate technique for microbiological assay of antimicrobial compound.
- Define chemical assay and explain titration and gravimetric analysis of antimicrobial compound.

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2. Attempt any two of the following :

- Define culture medium. Discuss advantages and disadvantages of solid and liquid medium.
- Explain the process of inoculum preparation and give the flow sheet of Industrial production of Penicillin.
- Give the source and explain the semisolid culture method for industrial production of Amylase.
- Describe in brief the industrial production of Glutamic acid.

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3. Attempt any two of the following :

- With the help of neat labelled diagrams describe asexual reproduction in *Albugo*. Add a note on its systematic position.
- Describe the stages of *Puccinia* on primary host. Add a note on its systematic position.
- Write classification of *Fusarium*. Explain asexual reproduction in same.
- Give an account of structure of stroma of *Xylaria*. Give its classification.

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4. Attempt any two of the following :

- (a) Discuss symptoms, causal organism and control measures of Tikka disease of groundnut.
- (b) Describe the causal organism, symptoms and disease cycle of Wilt of Pigeon Pea.
- (c) Give various methods of biological control of plant diseases.
- (d) Discuss various physical control methods of plant diseases.

5. Attempt any three of the following :

- (a) Give a brief account of Narrow and Broad spectrum antibiotics.
- (b) Discuss Auxanography.
- (c) Give uses of Glutamic acid.
- (d) Describe pycnidial stage of *Puccinia*.
- (e) Give a brief account of chemical control measures of plant diseases.
- (f) Explain control measures of Wilt of Pigeon Pea.