Botany-1
Plant Diversity
1st/10

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**.

1. Attempt **any two** of the following : **15**
   (a) Describe inhibition of nucleic acid and protein synthesis by Streptomycin.
   (b) Discuss the chemical structure of Penicillin. Add a note on the history of discovery of Penicillin.
   (c) Explain Disc diffusion plate technique for microbiological assay of antimicrobial compound.
   (d) Define chemical assay and explain titration and gravimetric analysis of antimicrobial compound.

2. Attempt **any two** of the following : **15**
   (a) Define culture medium. Discuss advantages and disadvantages of solid and liquid medium.
   (b) Explain the process of inoculum preparation and give the flow sheet of Industrial production of Penicillin.
   (c) Give the source and explain the semisolid culture method for industrial production of Amylase.
   (d) Describe in brief the industrial production of Glutamic acid.

3. Attempt **any two** of the following : **15**
   (a) With the help of neat labelled diagrams describe asexual reproduction in *Albugo*. Add a note on its systematic position.
   (b) Describe the stages of *Puccinia* on primary host. Add a note on its systematic position.
   (c) Write classification of *Fusarium*. Explain asexual reproduction in same.
   (d) 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.