This question paper contains 4+2 printed pages]

Your Roll No.....

1291

B.Sc. (Hons.) Botany/II Sem. A

Paper—BTHT-202

BIODIVERSITY—II

Time : 3 *Hours* *Maximum Marks* : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Section A 60

(Mycology)

Attempt *five* questions from this Section A. Question No. 1 is compulsory.

1. (*a*) Fill in the blanks :

(*i*) The brown rust of wheat is caused by .....

(*ii*) Fungus thallus that becomes differentiated into vegetative parts and reproductive parts is termed as .....

P.T.O.

(*iii*) In deuteromycetes, the septal pore complex is known as ..... septum.

(*iv*) The parasexual cycle discovered by G. Pontecorvo and J.A. Roper in a filamentous fungus is .....

(*v*) In *Albugo candida* the sporangia are produced in a ..... succession.

(*vi*) *Peziza* belongs to the order .....

(*vii*) The phenomenon of heterothallism was discovered by ..... in 1904.

(*viii*) Genus ..... produces beaked, pigmented muriform and multicelled conidia. 2½×10=5

(*b*) Define the following (any *seven*) :

(*i*) Rhizomorph

(*ii*) Haustoria

(*iii*) Obligate parasite

(*iv*) Perithecium

(*v*) Ascocarp

(*vi*) Cyphallae

(*vii*) Helotism

(*viii*) Heteroecism

(*ix*) Lichen. 1×7=7

2. Differentiate between the following (any *four*) :

(*a*) Spermogonium and Aecium

(*b*) Cleistothecium and perithecium

(*c*) Isidium and cephalodium

(*d*) Rusts and smuts

(*e*) Amphigynous and paragynous antheridia. 3×4=12

3. (*a*) Suggest the reasons for including *Saccharomyces* in Ascomycetes. 5

(*b*) Describe the different types of fruiting bodies in Myxomycetes. 4

(*c*) Describe asexual reproduction of *Penicillium*. 3

4. (*a*) Comment on the following :

(*i*) Ecological importance of lichens. 3

(*ii*) *Physarum* as an experimental tool. 2

(*iii*) Special features of Oomycetes. 3

(*b*) Write the botanical names of the following (any *two*) :

(*i*) *Two* hosts on which rusts occur.

(*ii*) *Two* important hosts of *Albugo*.

(*iii*) *Two* fungi used in medicine. 2×2=4

5. Draw labelled diagrams of the following (any *four*) :

(*a*) V.S. heteromerous thallus of lichen.

(*b*) V.S. Potato leaf showing asexual reproduction in *Alternaria*.

(*c*) V.S. wheat leaf showing stages of *Puccinia*.

(*d*) Asexual reproduction of *Rhizopus*.

(*e*) V.S. infected leaf showing asexual stage of *Phytophthora infestans*. 3×4=12

6. Write short notes on any *four* of the following with examples :

(*a*) Dolipore septum

(*b*) Clamp connection

(*c*) Fruticose lichen

(*d*) Fairy ring in mushrooms

(*e*) Coprophilous fungus

(*f*) Biological control. 3×4=12

7. Write notes on any *three* of the following :

(*a*) The various types of life cycle in yeast.

(*b*) Sexual reproduction of *Neurospora*

(*c*) Basidiocarp of *Agaricus*

(*d*) Parasexual cycle. 4×3=12

Section B 15

(Phytopathology)

Attempt both the questions from this Section B.

1. Write down the causal organism and symptoms of white rust of crucifers. 5

2. Name the causal organism, give symptoms and control of early blight of Potato. 1+5+4=10