This question paper contains 3 printed pages. *Your Roll No. .....*

Sl. No. of Ques. Paper : **1661** **C**

Unique Paper Code : **216201**

Name of Paper : **Biodiversity II (Mycology and Phytopathology)**

Name of Course : **B.Sc. (Hons.) Botany**

Semester : **II**

Duration : 3 hours *Maximum Marks* : 75

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

SECTION A
(Mycology)

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

1. (a) Fill in the blanks:

i) The term 'Myxomycetes' was used for slime molds by _____ in 1899.
ii) A spherical and granular cytoplasmic body in the centre of the oosphere of *Albugo* is known as _____.
iii) Amphigynous antheridium is produced by the genus _____.
iv) Aecidial stage of *Puccinia* develops on the host _____.
v) Genus _____ is the largest operculate discomycete having epigean apothecia.
vi) The ascospore, dark brown or black, with nerve-like ribs on the outer wall is characteristic of the genus _____.
vii) In *Stemonitis* the fruiting body is called _____.
viii) A thick strand or root – like aggregation of somatic hyphae in Basidiomycetes is called _____.
ix) An intercellular network of hyphae in ectomycorrhiza is known as _____.
x) Enlargement of the pileus ruptures the velum and leaves a ring called _____ attached to the stipe.

10 X 1 = 10

(b) Define the following terms giving one example (any **two**):

i) Capillitium
ii) Appresorium
iii) AM Fungi
iv) Heteroecism

2 X 1 = 2

2. (a) In what respects slime molds resemble i) plants and ii) animals? Why are they placed under fungi? 6

P. T. O.

(b) Explain the annual recurrence of wheat rust in the plains of India. 6

3. Differentiate between any **four** of the following:

(a) Macroconidia and Microconidia of *Neurospora*
(b) Crustose and Foliose lichens
(c) Ascospore and Basidiospore
(d) Aethelia and Plasmodiocarp
(e) Asexual reproduction of *Alternaria* and *Phytophthora*
(f) Rusts and Smuts 4 X 3 = 12

4. Draw well labelled diagrams of any **three** of the following:

a) VS of wheat leaf infected by *Puccinia*
b) VS apothecium of lichen
c) VS gills of *Agaricus*
d) EM yeast cell – *Saccharomyces cerevisiae*
e) Asexual stage of *Penicillium* 3 X 4 =12

5. (a) Give a comparative account of different types of ascocarps. 6
(b) Describe sexual reproduction in *Rhizopus*. 4
(c) Give asexual reproduction of an **antibiotic** – producing fungal genus. 2

6. (a) Write short notes on any **three** of the following giving examples:

i) Dolipore septum
ii) Mushroom cultivation
iii) Diplodisation
iv) Mycoinsecticides 3 X 2 = 6

(b) Give the generic names of any **six** of the following:

i) Fission Yeast
ii) Blister rust
iii) Drosophila of the fungus world
iv) Bunt spore
v) Naked ascus
vi) Branched multicellular conidiophore
vii) Multicellular, muriform conidia 6 X 1 = 6

SECTION B
(Phytopathology)

Attempt any **one** question from Section B.

1. (a) Give the symptoms caused by the following:

   i) *Alternaria solani*
   ii) *Albugo candida* 2 X 5 = 10

   (b) Give the classification of plant diseases on the basis of

   i) the extent to which diseases are associated with the plant.
   ii) geographic distribution. 5

2. (a) Name the causal organism and mention the control measures of any **one** of the following plant pathogens:

   i) Late blight of potato
   ii) Wheat rust 6

   (b) Write short notes on any **three** of the following:

   i) Systemic fungicides
   ii) Plant Quarantine Regulations
   iii) Antibiosis
   iv) Biological Control
   v) Hypersensitive Reaction 3 X 3 = 9