[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1018 **D**

Unique Paper Code : 2162011101

Name of the Paper : Plant Diversity and Evolution

Name of the Course : **Botany**

Semester : I

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all, including question number **1,** which is compulsory.
3. **All** questions carry equal marks.
4. All parts of a question must be answered together.
5. Draw diagrams wherever required.

1. (a) Match the following : (1×5)

(i) Ribbon shaped chloroplasts	(a) *Selaginella*
(ii) Air bladders	(b) *Gnetum*

P.T.O.

(iii) Resurrection Plant (c) *Sargassum*

(iv) Presence of vessels (d) Bacillus

(v) Rod Shaped Bacteria (e) *Spirogyra*

(b) Fill in the blanks : (1×5)

(i) Viruses are composed of a central core of nucleic acid surrounded by a protein coat called a _____ .

(ii) The ventral surface of the thallus of *Marchantia* bears _____ and _____ scales.

(iii) Protein monomer of bacterial flagella is called _____ .

(iv) Ephedra is the source of _____ used for the treatment of asthama.

(v) Bentham and Hooker's system of classification is an example of _____ system of classification.

(c) Define any **five** of the following : (1×5)

(i) Transduction

(ii) Plasmid

(iii) Heterospory

(iv) Mycelium

(v) Dolipore septum

(vi) Pollen grain

2. Distinguish between any **three** of the following in a tabular manner and draw diagrams wherever required : (5×3=15)

(a) Antheridiophore and archegoniophore of *Marchantia*

(b) Lytic and Lysogenic cycle of bacteriophage

(c) Gram positive and Gram negative bacteria

(d) Gymnosperms and Angiosperms

3. Write short notes on any **three** : (5×3=15)

(a) Binary fission in bacteria

(b) Natural selection

(c) Fairy rings

(d) Asexual reproduction in *Marchantia*

P.T.O.

4. Draw a well labeled diagram of followings : **(any three)** (5×3=15)

(a) LS strobilus of *Selaginella*

(b) LS basidiocarp of *Agaricus*

(c) EM Bacteria

(d) LS capsule of *Funaria*

5. (a) Describe the Asexual reproduction in *Rhizopus*.

(b) Discuss heterospory and seed habit in *Selaginella*.

(c) Give an account of general characteristics of Angiosperms. (5×3=15)

(2000)