

[Time: Three Hours]

[Marks: 100]

N.B: 1. All questions are compulsory.

2. Figures to the right indicate full marks.

3. Draw neat and labelled diagrams wherever necessary.

Q.1 (A) Choose the correct option from the following and rewrite the sentence. (10)

- i) *Erysiphe* is an _____.
a) endoparasite
b) ectoparasite
c) saprophyte
d) autotrophs
- ii) *Xylaria* is a member of _____.
a) phycomycetes
b) ascomycetes
c) basidiomycetes
d) deuteromycetes
- iii) The well-known 'Reindeer moss' is a _____.
a) Moss
b) Fern
c) Fungi
d) Lichen
- iv) Late blight of potato is caused by _____.
a) *Erysiphe graminis*
b) *Erysiphe polygonii*
c) *Phytophthora infestans*
d) *Xylaria hypoxylon*
- v) In *Selaginella*, the strobilus is developed at the end of _____.
a) branches
b) stem
c) leaves
d) roots

vi) *Rhynia* is a member of _____

- a) Psilophyta
- b) Lepidophyta
- c) Calamophyta
- d) Pterophyta

vii) _____ is a fossilized tree resin.

- a) Cast
- b) Compression
- c) Impression
- d) Amber

viii) *Pinus gerardiana* seeds are commonly known as _____

- a) Sago
- b) Chilgoza
- c) Chirongi
- d) Chirota

ix) The male and female fructifications are assigned to the genus _____.

- a) Artisia
- b) Amyelon
- c) Cordiainthus
- d) Cardiocarpus

x) Pollination in *Pinus* is through _____.

- a) wind
- b) insects
- c) water
- d) animals

(B) Answer the following in one or two sentences:

(10)

- i) Give any two examples of Crustose lichen.
- ii) Mention the location and function of trabeculae in the stem of *Selaginella*.
- iii) What is Geological time scale?
- iv) What is pycnoxylic wood?
- v) Name the different types of Shoots in *Pinus*.

Q.2 Answer any two of the following: (20)

- i) Describe the sexual reproduction in *Erysiphe*. Add a note on cleistothecium.
- ii) Explain asexual reproduction in *Xylaria*. Add a note on its systematic position.
- iii) Give the causal organism, symptoms, and disease cycle of late blight of potato. Add a note on its control measure.
- iv) With the help of neat labeled diagram explain the V.S. of heteromorous and homomorous types of lichen thallus.

Q.3 Answer any two of the following: (20)

- i) Discuss the salient features of Lepidophyta and Psilophyta.
- ii) With the help of neat and labelled diagrams, explain external and internal structure of leaf of *Selaginella*.
- iii) Explain the process of fossilization. Add a note on Pterification.
- iv) Describe the external morphology of *Rhynia* plant. Add a note on its systematic position.

Q.4 Answer any two of the following: (20)

- i) Enlist the salient feature of Coniferophyta.
- ii) With the help of neat labeled diagram describe T.S. of *Pinus* needle. Add a note on xerophytic adaptations in *Pinus*.
- iii) Describe the external and internal structure of male cone of *Pinus*.
- iv) With reference to *Cordaites* explain: i) T.S. of leaf ii) T.S. of root

Q.5 Write short notes. (Any Four) (20)

- i) Systematic position of *Erysiphe*.
- ii) Ecological significance of lichens.
- iii) T.S. of rhizophore of *Selaginella*.
- iv) Compression
- v) V.S. of *Pinus* ovule
- vi) Economic importance of Coniferophyta.
