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(CBCS)

(2nd Semester)

BOTANY

SECOND PAPER

(Phanerogams)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. Xylem vessels are present in

- (a) *Gnetum* () (b) *Cycas* ()
(c) *Pinus* () (d) All of the above ()

2. The wood of *Pinus* is

- (a) polyxylic ()
(b) manoxylic ()
(c) pycnoxylic ()
(d) Both manoxylic and pycnoxylic ()

3. Pappus is present in

- (a) Asteraceae () (b) Malvaceae ()
(c) Acanthaceae () (d) Ranunculaceae ()

4. Fruit modified into berry known as pepo is found in
 (a) Lamiaceae () (b) Rosaceae ()
 (c) Poaceae () (d) Cucurbitaceae ()
5. Phloem wedges are present in the stem of
 (a) *Bignonia* () (b) *Mirabilis* ()
 (c) *Dracaena* () (d) *Amaranthus* ()
6. Amphistomatic type of leaf is found in
 (a) monocot ()
 (b) dicot ()
 (c) both monocot and dicot ()
 (d) None of the above ()
7. Inside the microsporangium, the growing microspore receives nutrients from the
 (a) epidermis () (b) tapetum ()
 (c) endothecium () (d) middle layers ()
8. Triple fusion gives rise to
 (a) embryo ()
 (b) haustoria ()
 (c) endosperm ()
 (d) None of the above ()
9. *Tectona grandis* is a
 (a) fibre-yielding plant ()
 (b) timber-yielding plant ()
 (c) spice-yielding plant ()
 (d) fat- and oil-yielding plant ()
10. The storage tissue in cereal is
 (a) cotyledon () (b) embryo ()
 (c) endosperm () (d) All of the above ()

(SECTION : B—SHORT ANSWER)

(Marks : 15)

Write short notes on the following :

3×5=15

UNIT—I

1. Coralloid root

OR

2. Male cone of *Pinus*

UNIT—II

3. Spikelet inflorescence

OR

4. Characteristic features of Asteraceae

UNIT—III

5. Anomalous stem of *Mirabilis*

OR

6. Mesophyll cells

UNIT—IV

7. Endosperm haustoria

OR

8. Pollenkitt

UNIT—V

9. Timber-yielding plants

OR

10. Pulse-yielding plants

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following questions :

10×5=50

UNIT—I

1. Describe the morphology and reproduction in *Gnetum* with suitable diagram. 5+5=10

OR

2. Write short notes on any *two* of the following : 5×2=10

- (a) Classification of gymnosperm
- (b) Morphology of *Pinus*
- (c) Structure of ovule in *Cycas*

UNIT—II

3. Outline the merits and demerits of Bentham and Hooker system of classification. 5+5=10

OR

4. Describe the distinguishing characters of any *two* of the following families : 5×2=10

- (a) Cucurbitaceae
- (b) Solanaceae
- (c) Brassicaceae

UNIT—III

5. Differentiate between the anatomy of dicot stem and monocot stem. 10

OR

6. Write short notes on any *two* of the following : 5×2=10

- (a) Anomalous secondary growth in *Bignonia*
- (b) Anatomy of dicot leaf
- (c) Anomalous secondary growth in *Dracaena*

UNIT—IV

7. Describe the process of megasporogenesis with labelled diagram. 10

OR

8. Write short notes on any *two* of the following : 5×2=10

(a) Nuclear endosperm

(b) Development of monocot embryo

(c) Structure of microsporangium

UNIT—V

9. Describe the economic importance of the following plants mentioning their scientific names and families : 2×5=10

(a) Rice

(b) Coriander

(c) Sal

(d) Soybean

(e) Mustard

OR

10. Write short notes on any *two* of the following : 5×2=10

(a) Fat- and oil-yielding plants

(b) Spice-yielding plants

(c) Beverage-yielding plants

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