

Navrachana University
School of Liberal Studies and Education, B.Sc Program
End-Semester Examination May 2017
First Year and Semester II

Course name: Angiosperm Morphology and Classification (BO105)

Date: 09.05.17

Marks: 40

Time: 10:30 am – 12:30 pm

Instructions:

- All the Questions are Compulsory
- Please read the questions carefully and answer accordingly
- Draw a neat and labeled diagram wherever necessary

Q.1. (a) Choose the correct answer from the given options

(5 marks)

1. All the following structures are present in dicot seed except
a) radicle b) endosperm c) coleoptiles d) seed coat
2. Which of the following feature distinguish a monocot from a dicot plant
a) phyllotaxy b) venation c) vernation d) aestivation
3. An incomplete, perfect flower is one that:
a) has calyx, corolla, androecium, and gynoecium
b) has calyx, corolla, and androecium
c) has calyx and gynoecium
d) has corolla, androecium, and gynoecium
4. Which of the following patterns of placentation is observed in a bicarpellary, syncarpous, unilocular ovary becoming bilocular due to the development of a false septum?
a) axile placentation b) parietal placentation
c) basal placentation d) superficial placentation
5. Some plants have rhizome and roots as underground structures. Which characteristics of rhizome would distinguish them from roots?
a) rhizomes are thicker than roots b) rhizomes have scaly leaves
c) rhizomes are thinner than roots d) none of the above
6. Jack fruit is developed from
a) Monocarpous pistil b) Apocarpous pistil c) Syncarpous Pistil d) Inflorescence
7. A scar on the seed coat through which the developing seed is attached to the fruit is
a) hypocotyl b) coleorhizae c) epicotyls d) hilum
8. There are two clusters, each with 3-9 flowers on a node in the axis of opposite leaf and each cluster has a condensed dichasial cyme ending in monochasial cyme and flowers have lever mechanism, it represents
a) cyathium b) coenanthium c) verticillaster d) hypanthium
9. Placentation in tomato and lemon is
a) axile b) parietal c) free central d) marginal

10. In albuminous plants, food is stored

- a) endosperm b) cotyledons c) embryo d) plumule

Q.1 (b) Provide the scientific terms for the following:

(5 marks)

- (i) The leaf without a petiole
- (ii) The flat and expanded portion of a leaf
- (iii) Orderly arrangement of leaves on the node
- (iv) Stalk of inflorescence
- (v) Flower with umbrella shape

Q. 1 (c) Define the following terms:

(5 marks)

- (i) Aestivation (ii) Placentation (iii) Monoadelphous Stamen
(iv) Superior ovary (v) Perigynous flower

Q. 2. Answer in brief (Any 5)

(10 marks)

1. 'Potato is a stem and sweet potato is a root.' Justify the statement on the basis of external features.
2. What are the androecium and the gynoecium? What other structures compose flowers?
3. Distinguish between corymb and umbel.
4. Can you cite two examples where leaves perform functions other than photosynthesis?
5. A seed can dehisce in how many ways for dispersal of seeds.
6. How can you tell the difference between a simple leaf and a single leaflet belonging to a compound leaf?

Q. 3. Write short notes on (Any 2)

(7 marks)

1. Aerial modification of stem
2. Venation
3. Fleshy fruits

Q.4. Answer in detail (Any 2)

(8 marks)

1. If a student comes to you with a flower and an inflorescence, how will you explain the difference? Explain any one type of inflorescence.
2. Describe any one type of germination process
3. Explain the different types of dry fruits and describe any one type in detail with examples.

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