



RO-003-001510

Seat No. _____

B. Sc. (Sem. V) (CBCS) Examination

February - 2019

Botany : Paper - B-502

(Biology of Seed Plants)

(Old Course)

Faculty Code : 003

Subject Code : 001510

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) This question paper contains three questions. All questions are compulsory.
- (2) Write answers of all the questions in main answer sheet.
- (3) Draw neat and labelled diagram wherever necessary.
- (4) Figures to the right side indicated full marks for the questions.

1 Objective type questions : 20

(each question carries one marks)

- (1) Define taxonomy
- (2) Give one special character observed in Ginkgo leaf
- (3) Write a floral formula of Lythraceae family
- (4) What is the meaning of sign – $K_{(5)}$?
- (5) What is the function of tapetam?
- (6) The fused cup-like bracts, in the cone of Gnetum are called _____
- (7) Define translators in Asclepidiaceae family
- (8) Who gave the natural system for plant classification?
- (9) Give one example of Malvaceae family.

- (10) Write the main characters of series bicarpellatae.
- (11) How many cotyledons are present in a seed of Ephedra?
- (12) Define – Embryogenesis.
- (13) What is Microspore in gymnosperm?
- (14) Give the sign of bracts in floral formula
- (15) Give one example of solanaceae family
- (16) Who is the father of Indian Angiosperm Embryology?
- (17) Define open vascular bundle
- (18) Give the floral formula of this – five fused sepals, five free petals, three free stamens, three fused carpels.
- (19) Which gymnosperm is known as "living fossils"?
- (20) Give the scientific name of China rose.

2 (A) Answer in short : (Any Three) 6

- (1) What is endosperm? Write its function.
- (2) Write any two characters of Anonaceae family.
- (3) Write any two examples with scientific names of Bignoniaceae family.
- (4) Give demerits of Bentham and Hooker's classification.
- (5) Give only diagrammatic representation of the life cycle of Gnetum.
- (6) Define phylogenetic system of classification with one example

(B) Give the Answer : (Any Three) 9

- (1) Write a short note on Bennettitales - Rannales theory for origin of angiosperms.
- (2) Write about the four whorls of Malvaceae family.
- (3) Explain anatomy of Gnetum young Root.
- (4) Give floral formula and diagram of Convolvulaceae family with two scientific names of plants belonging to family.
- (5) Describe Need for embryo culture.
- (6) Write the merits of Bentham and Hooker classification.

(C) Answer in detail : (Any Two) 10

- (1) Describe Bentham and Hooker classification system.
- (2) Describe internal structure of Gnetum ovule.
- (3) Explain anatomy of Ephedra young stem.
- (4) Give general characteristics of Nyctaginaceae family with floral formula and floral diagram with two examples
- (5) Describe methods of embryo culture.

3 (A) Answer in short : (Any Three) 6

- (1) Give systematic position of Ginkgo.
- (2) Write any two application of embryo culture.
- (3) Define Numerical Taxonomy
- (4) Write the external features of Pentoxylon.
- (5) Give the common name of
 - (a) Tridax procumbence.
 - (b) Annona squamosa.
 - (c) Canna indica.
 - (d) Cleome viscosa
- (6) Write any two merits of Engler and Prantle classification.

(B) Give the Answer : (Any Three) 9

- (1) Give information about the reproductive whorls of Tiliaceae family with one plant example of the family.
- (2) Describe general characters of Ginkgo plant.
- (3) Write the general characteristic of Amaranthaceae family.
- (4) Explain about the development of embryo in monocotyledons.
- (5) Write the principles of taxonomy which is given by C. E. Bessey.
- (6) Explain the anatomy of Cordites root.

(C) Answer in detail : (Any Two)

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- (1) Describe internal structure of Ginkgo young stem.
 - (2) Explain Capparidaceae family with floral formula and floral diagram.
 - (3) Describe the morphology of Cycadeoidea.
 - (4) Write a note on the development of dicot embryo in *Capsella bursa-pastoris*
 - (5) Explain main concept of Takhtajan classification system.
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