MCQ-003-001510

MCQ-003-001510 Seat No. _____

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

May / June - 2018

Botany : B - 502

(Biology of Seed Plants)

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**

(1) Write a floral formula of Lythraceae family.

(2) Define - Numerical taxonomy.

(3) What is the function of tapetam ?

(4) Which type of xeromorphic characters is observed in *Ginkgo* leaf. ?

(5) What do you mean by sign - $\mathbf{P}_{(3)}$

(6) The fused cup - like bracts in the cone of *Gnetum* are called _____.

(7) Write the main characters of series Inferae.

(8) In Asclepidiaceae, the stamens are modified and known as _____.

(9) Explain the term - Taxonomic hierarchy.

(10) Who is the father of Indian Angiosperm Embryology ?

(11) Which gymnosperm is known as "living fossills" ?

(12) Give scientific name of Potato and Brinjal.

(13) Bentham and Hooker published their work as name _____.

(14) Give the botanical name any two plants of Malvaceae family.

(15) According to Bentham and Hooker family Solanaceae is belongs to _____ sub class.

(16) Define - Embryogenesis.

(17) The first cell during the development of male gametophyte in any gymnosperm is _____.

(18) How many cotyledons are present in a seed of *Ephedra* ?

(19) The endosperm is formed by the fusion of _____ haploid nuclei.

(20) Which type of vascular bundle is observed in *Ephedra leaf* ?

2 (a) Answer in short : (any **three**) **6**

(1) Write any two application of embryo culture.

(2) Define - Taxonomy.

(3) Write the external features of Pentoxylon.

(4) Give systematic position of Ginkgo.

(5) Write any two demerits of Engler and Prantle classification.

(6) Assign the following plants to the respective family.

(a) *Tridax procumbence*

(b) *Annona squamosa*

(c) *Canna indica*

(d) *Cleome viscosa*

(b) Give the Answer : (any **three**) **9**

(1) Write the principles of taxonomy which is given by C. E. Bessey.

(2) Give a short essay on the development of embryo in monocotyledons.

(3) Explain the anatomy of *Cordites* root.

(4) Give information about the reproductive whorls of Tiliaceae family. Mention the name of one plant belonging to the family.

(5) Write the general characteristic of Amaranthaceae family.

(6) Describe anatomy of Ginkgo petiole.

(c) Answer in detail : (any **two**) **10**

(1) Describe the development of dicot embryo in *Capsella bursa- pastoris.*

(2) Explain main concept of Takhtajan classification system.

(3) Give general characteristics of Capparidaceae family with floral formula and floral diagram. Give the two examples of plants belonging to it.

(4) Describe internal structure of *Ginkgo* young stem.

(5) Describe the morphology of Cycadeoidea.

3 (a) Answer in short : (any **three**) **6**

(1) Give only diagrammatic representation of the life cycle of *Gnetum.*

(2) Write demerits of Bentham and Hooker classification.

(3) Write general characters of Bignonaceae family.

(4) Mention the aims of taxonomy.,

(5) What is endosperm? Write its function.'

(6) Draw a floral diagram and floral formula of Anonaceae family.

(b) Give the Answer : (any **three**) **9**

(1) Write the merits 'of Bentham and Hooker classification.

(2) Write a short essay on Bennettitales - Rannales theory for origin of angiosperms.

(3) Explain: Need for embryo culture.

(4) Give floral formula and diagram of Convolvulaceae family with two scientific names of plants belonging to family.

(5) Explain anatomy of Gnetum young Root.

(6) Give information about the four whorls of Malvaceae family.

(c) Answer in detail : (any **two**) **10**

(1) Give general characteristics of Nyctaginaceae family with floral formula and floral diagram. Give the two examples of plants belonging to it.

(2) Explain main concept of Bentham and Hooker classification system.

(3) Describe methods of embryo culture.

(4) Describe internal structure of *Gnetum* ovule.

(5) Give an illustrated account of the anatomy of *Ephedra* young stem.
