



**MAK-003-001510**

Seat No. \_\_\_\_\_

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

**October / November – 2016**

**Botany : Paper - 502**

*(Biology of Seed Plants)*

**Faculty Code : 003**

**Subject Code : 001510**

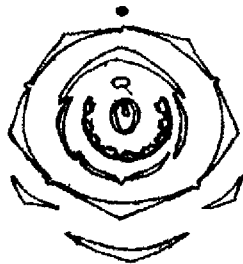
Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

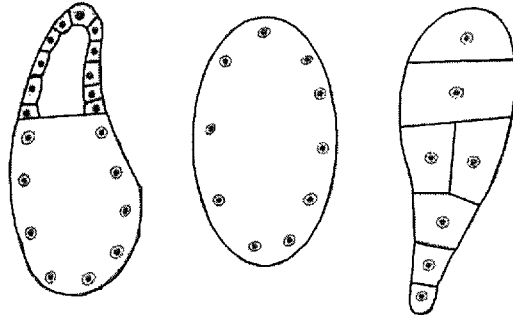
- Instructions :**
- (1) Write answers of all questions in main answer book.
  - (2) Draw neat and labelled diagrams wherever necessary.
  - (3) Figures to the right side indicate full marks for the questions.

1 Give the short answer of the following question : **20**

- (1) What is taxonomic category?
- (2) Which book is published by Carolus Linnaeus in 1<sup>st</sup> May 1753?
- (3) Write any two demerits of Bentham and Hooker classification.
- (4) Write any two merits of Engler and Prantal classification.
- (5) What is Modern taxonomy?
- (6) Write the scientific name of cotton plant.
- (7) Which family known as vegetable family?
- (8) Observe the given floral diagram and write the floral formula.



- (9) Write the one major application of embryo culture.  
 (10) Which family possess gynandrophore ?  
 (11) Write the correct name of following three endosperm :



- (12) In which region *Gnetum* mostly occurs?  
 (13) A diameter of the stem of *Lyginopteris oldhamia* is \_\_\_\_\_.  
 (14) In which zone *Ephedra* is widely spread?  
 (15) Which type of ovule present in *Helianthus*?  
 (16) Define: Pollinia.  
 (17) According to your course which gymnosperm known as "living fossil" ?  
 (18) Write the classification of *Cyperaceae* Family.  
 (19) Match the followings and rewrite the correct pairs

**Group A**

- (A) Aleurone layer  
 (B) Parthenocarpic fruit  
 (C) Ovule  
 (D) Endosperm

**Group B**

- (i) Without fertilization  
 (ii) Nutrition  
 (iii) Double fertilization  
 (iv) Seed

- (20) Monadelphous anther present in \_\_\_\_\_ family.

- 2 (a) Give the answer in short : (any three) 6
- (1) Describe: Male cone of *Ephedra*.
  - (2) Give the name of the 4 species of *Ephedra*.
  - (3) External features of Cycadeoidea.
  - (4) Explain Anatomy : leaf of *Lyginopteris*.
  - (5) Explain the structure of ray and disc florets in a capitulum.
  - (6) Give only two scientific name of family Polygonaceae.

- (b) Give the answer in brief : (any **three**) **9**
- (1) Describe: Female cone of *Ginkgo*.
  - (2) Discuss the three aims of taxonomy.
  - (3) How would you distinguish between Capparidaceae and Nyctaginaceae?
  - (4) Write short note: Development of endosperm.
  - (5) Write taxonomic characters of the Bougainvillea.
  - (6) Give the silent features of Cypreceae family.
- (c) Describe in detail : (any **two**) **10**
- (1) Write an essay on the origin of angiosperms.
  - (2) Describe: Reproduction in *Gnetum*.
  - (3) Discuss the method of embryo culture.
  - (4) Describe the systematic position of family *Moraceae*.
  - (5) Explain mature monocot embryo.
- 3** (a) Give the answer in short : (any **three**) **6**
- (1) Describe: Male cone of *Ginkgo*.
  - (2) Describe: Anatomy of stem of Cycadeoidea with labelled diagram.
  - (3) Draw labelled diagram : Female cone of *Ephedra*.
  - (4) Write short note : Morphology of Pentoxyle.
  - (5) Describe : Anatomy of *Cordites* stem.
  - (6) Explain the distribution of *Ginkgo*.
- (b) Give the answer : (any **three**) **9**
- (1) What is chemotaxonomy? Discuss its role in plant taxonomy.
  - (2) Discuss the affinities and economic importance of family Annonaceae.
  - (3) Write explanatory notes on: Numerical taxonomy.
  - (4) Give the merits of Takhtajan's classification system.
  - (5) Discuss: Taxon, Genus.
  - (6) Describe the range of floral structure in Asteraceae.

(c) Give the answer in brief : (any **two**) **10**

- (1) Describe : Female cone of *Ephedra*.
- (2) Give the outline of Bentham and Hooker classification.
- (3) Write explanatory notes on : Dicot embryo.
- (4) Give the difference between Bentham and Hooker classification and Engler and Prantal classification.
- (5) Explain the taxonomic categories.

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