2021

Department of Botany

Kaliachak College

BOTANY (Honours)

Paper Code: IV-A

[New Syllabus]

Full marks: 14   **Time: Twenty Minutes**

Choose the correct answer.

Each question carries 1 mark.

1. The inflorescence umbel is characteristic of the family —
    (A) Apiaceae
    (B) Poaceae
    (C) Lamiaceae
    (D) Asteraceae

2. The innermost layer of sporoderm according to Erdtman is —'
    (A) Exine
    (B) Intine
    (C) Sexine
    (D) Nexin

3. The point of attachment of the funicle to the body of the ovule is called —

    (A) Raphe
    (B) Hilum
    (C) Chalaza
    (D) Micropyle

4. When carpels are completely free from one another, it is called —
    (A) Apocarpous
    (B) Syncarpous
    (C) Reniform
    (D) Sagittate

5. When generic name of a species is repeated with specific epithet, it is called
    (A) Synonym
    (B) Autonym
    (C) Tautonym
    (D) Later homonym

6. A pair of contrasting characters in keys are called —
    (A) Doublet
    (B) Duplet
    (C) Couplet
    (D) Lead

7. Monadelphous stamens and kidney shaped anthers are the diagnostic features of the family —

(A) Magnoliaceae
(B) Solanaceae
(C) Papilionaceae
(D) Malvaceae

8. The study of pollen and spore present in honey is —
   (A) Palaeopalynology
   (B) Copropalynology
   (C) Tatropalynology
   (D) Melissopalynology

9. 'Tapioca' a starch rich food is obtained from the root of
   (A) *Dioscorea alata*
   (B) *Ipomoea batatus*
   (C) *Asparagus racemosus*
   (D) *Manihot esculenta*

10. The type of ovule where funicle coils around the micropyle is called
    (A) Amphitropous
    (B) Orthotropous
    (C) Campylotropous
    (D) Circinotropous

11. One of the major changes of Melborne code (2011) is
    (A) One fossil many names
    (B) One fossil one name
    (C) One fungus many names
    (D) One bacteria many names

12. Vittae or oil ducts on the fruit/seed wall are present in the family —
    (A) Nymphaeaceae
    (B) Magnoliaceae
    (C) Apiaceae
    (D) Brassicaceae

13. The male florets in cyathium inflorescence is being represented by —
    (A) One stamen
    (B) Two stamens
    (C) Four stamens
    (D) Many stamens

14. Author of Bengal Plants —
    (A) David Prain
    (B) Bentham and Hooker
    (C) Carolus Linnaeus
    (D) None of them

2021

Department of Botany

Kaliachak College

BOTANY (Honours)

Paper Code: IV-B

[New Syllabus]

Full marks: 14   **Time: Two Hours Forty Minutes**

The figure in the margin indicate full marks

Group: A

1. Write short answers of any *two* of the following :   4x2=8

(a) Comment on NPC classification of Pollen grains.   4

(b) Comment on cyathium and verticillaster inflorescences.   4

(c) Briefly describe the aestivation of flowers.   4

(d) Write the applications of forensic palynology.   4

2. Answer any *two* of the following :   10x2=20

(a) Describe various kinds of dry dehiscent and schizocarpic fruits with examples.   5+5=10

(b) Describe different types of cohesion of stamens. Describe different types of ovules found in angiosperms with diagrams.   5+5=10

(c) Describe various kinds of pollen apertures and sporoderm structure with diagrams.   3+7=10

(d) What is melissopalynology ? What is honey and how is it formed ? Mention different zones of India including plants from where honey is mainly formed by honey bees?

2+1+3+4=10

Group: B

3. Write short answers of any *two* of the following :   4x2=8

(a) Write about the principles of ICN.   4

(b) Mention the diagnostic characters of the family Apiaceae with scientific of one economically important plant.   3+1=4

(c) What is Key? Explain types of keys with examples.   4

(d) Explain any *four* illegitimate of rejected names with examples. 4

4. Answer any *two* of the following :   10x2=20

(a) Characterize Asteraceae and Orchidaceae with floral diagrams and floral formula. Write systematic position of both the families according to Bentham and Hooker's system of classification (1862-1883).   8+2=10

(b) What do you mean by ICN ? Define herbarium. Describe the importance of herbaria and botanical garden. How herbarium sheets are maintained in national herbaria ?   1+1+6+2=10

(c) Write about typification of taxonomy. What is principle of priority? What are the limitations of principle of priority?   6+2+2=10

(d) Give a detailed account on the outline of Angiosperm classification as proposed by Takhtazan (2009). What is an apomorphic character?   8+2=10