

Q.P. Code – 50828

Third Year B.Sc. Degree Examination

OCTOBER/NOVEMBER 2014

(Directorate of Distance Education)

Botany

**(DSC 290) Paper III – MORPHOLOGY, TAXONOMY OF
ANGIOSPERMS, ECONOMIC BOTANY AND CYTOGENETICS**

Time : 3 Hours]

[Max. Marks : 75/85

Instructions to Candidates :

- 1) *Answer ALL questions.*
- 2) *Draw diagram **wherever** necessary.*
- 3) *Question No. **V** is **compulsory** for **85** marks scheme **only**.*

I. Simple Answer Questions :

Answer in a word or a phrase or a sentence :

10 × 1 = 10

1. What is placentation?
2. What is test cross?
3. What is synandrous type of stamens?
4. Give an example for stilt root.
5. What is Karyotype?
6. What is Karyoplasm?
7. What is hypogeal germination?
8. State the first law of Mendel.
9. What is the power house of the cell?
10. Expand ICBN.

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II. Short Answer Questions :

Write any **FIVE** of the following :

5 × 3 = 15

11. Write a note on beverages.
12. Explain the cyathium inflorescence.
13. Write a note on herbarium techniques.
14. Mention three functions of plasma membrane.
15. Write a note on any two insectivorous plants.
16. Describe the floral characters of Anacardiaceae.
17. Explain deletion with respect to chromosomal aberration.

III. Medium Answer Questions :

Answer any **FIVE** of the following :

5 × 6 = 30

18. Give an account of different types of stipules.
19. Describe the important characters of Asteraceae. Mention botanical names of two examples.
20. Explain the ultrastructure of the chromosome.
21. What is epistasis? Explain dominant epistasis with a suitable example.
22. Give an account of oil yielding plants.
23. Write the botanical name, family and economic importance of the following
 - (a) Ashwagandha
 - (b) Tobacco
 - (c) Neem

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IV. Long Answer Questions :

Answer any **TWO** of the following : **2 × 10 = 20**

24. Describe the salient features of Lamiaceae and Apocynaceae. Mention two scientific names for each family.
25. Describe the structure and function of Endoplasmic reticulum.
26. Give an account of fleshy fruits.
27. Answer the following :
 - (a) Merits and demerits of Bentham and Hooker's system of classification.
 - (b) Allopolyploidy with reference to carpanchenko work.

V. **Compulsory** Question for **85** marks scheme only :

Answer any **ONE** of the following : **1 × 10 = 10**

28. Describe salient features of Papilionoideae, Caesalpinioideae and Mimosoideae.
 29. Explain dihybrid cross of Mendel.
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