

2018

## BOTANY – HONOURS

Fourth Paper

Group - A

Full Marks : 50

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer the following questions :
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|--|-----|
| (a) Define Anatroous ovule.  | 1   |
| (b) Define phylogenetic classification.  | 2   |
| (c) What is 'alpha taxonomy'?  | 1   |
| (d) Write morphological nature of epicalyx. Name one genus in the family Malvaceae where epicalyx is absent. | 1+1 |
| (e) Write full form of ICBN and ICN.   | 1+1 |
| (f) Define phenogram and cladogram.  | 1+1 |
2. Answer *any two* of the following questions :
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|--|-------|
| (a) Describe verticillaster and cyathium inflorescence with one example to each.       | 2½+2½ |
| (b) Describe different types of adhesion of stamens with examples.                     | 5     |
| (c) Describe different types of polypetalous corolla with examples.                    | 5     |
| (d) Describe different types of ovules with suitable diagrams and one example to each. | 5     |
3. Differentiate between artificial system and natural system of classifications. Why Linnaean system is called sexual classification? Describe the Bentham and Hooker's system of classification up to series. State its two merits and two demerits. 2+2+7+2+2
- Or,*
- |  |   |
|--|---|
| (a) Define dichotomous key.                          | 2 |
| (b) Define Holotype, Lectotype, Isotype and Syntype. | 8 |
| (c) State the principle of priority.                 | 5 |

Please Turn Over

4. Why Magnoliaceae is considered as primitive family? Why Compositae has an alternative name Asteraceae? State the diagnostic characters of Asteraceae. Add a note on economic importance of Palmae (Arecaceae). 4+2+5+4

*Or,*

- (a) State two roles of cytology in solving taxonomic problems. 2½+2½
- (b) State the salient features of Orchidaceae. 4
- (c) Name the families in which gynobasic style and obliquely placed carpel are found and state their systematic position according to Bentham and Hooker's system with one economically important plant from each family. ½+½+1½+1½+1+1
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