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**UG/II/BOT/H/III/16(Old)**

**2016**

**BOTANY**

**[ Honours ]**

**PAPER – III**

**Full Marks : 90**

**Time : 4 hours**

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

*Illustrate the answers wherever necessary*

**[ OLD SYLLABUS ]**

**GROUP – A**

**1. Answer any ten of the following : 2 × 10**

**(a) Write the families where verticillaster and  
Umbel inflorescence are found.**

**( Turn Over )**

- (b) What is OTUs ? State its application.
- (c) What are adhesion and cohesion ?
- (d) What is quincuntial aestivation ?
- (e) What is syngenesious anthers ?
- (f) What is effective publication ?
- (g) Name the taxol and biodiesel producing plants.
- (h) What is the morphological nature of the following (i) Lentil ; (ii) Teak ; (iii) Litchi ; (iv) Cumin.
- (i) Give two economic importances of the family Solanaceae.
- (j) Name the active principles of periwinkle.
- (k) What is silviculture ?
- (l) What are glume and lodicule ?
- (m) What is staminode ? Cite an example where it is present.

- (n) What is definitive nucleus ?
- (o) What is synandrous stamen ?

GROUP – B

2. Answer any *five* of the following : 8 × 5

- (a) Elaborate the phases of taxonomy.
- (b) Describe the method of embryo development in dicot plants.
- (c) With line drawings describe various types of placentation and cite example to each.
- (d) Write about the kinds of nomenclatural types.
- (e) Describe with example the role of cytology in study of taxonomy.
- (f) Describe the silvicultural practices of *Shorea* sp.
- (g) Write the distinguishing characters of  
(i) Alismataceae ;

- (ii) Asteraceae ;
- (iii) Euphorbiaceae ;
- (iv) Solanaceae.

(h) Write in brief the method of cultivation of cashew nut.

GROUP – C

3. Answer any *two* of the following : 15 × 2

(a) Write the scientific names, their respective families and morphological nature of used parts of any *five* : 3 + 3 + 3 + 3 + 3

- (i) Coconut oil ;
- (ii) Rubber ;
- (iii) Tea ;
- (iv) Ginger
- (v) Arjun ;
- (vi) Jack fruit ;
- (vii) Ganja ;
- (viii) Potato.

- (b) Differentiate between economic botany and ethnobotany. Comment on the cultivation and trading of Rose. Describe the extraction method of lemongrass oil.  $4 + (5 + 2) + 4$
- (c) Differentiate any three of the following pairs of families with special reference to floral biology.  $5 + 5 + 5$
- (i) Lamiaceae and Verbenaceae ;
  - (ii) Poaceae and Cyperaceae ;
  - (iii) Cannaceae and Zingiberaceae ;
  - (iv) Malvaceae and Tiliaceae ;
  - (v) Apocynaceae and Asclepiadaceae.
- (d) (i) Give an outline of the system of classification of Authur Cronquist (1988) upto subclasses.
- (ii) Mention the advanced features of the family Asteraceae and Orchidaceae.  $6 + 4 + 5$
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