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**CODE : FS-17**

**FORESTRY**

*Time : 3 Hours*

*Maximum Marks : 200*

- Note* :— (1) Attempt any *five* questions including question numbers 1 and 5, which are compulsory. Minimum of *two* questions including compulsory shall be attempted from each Part. Be brief and to the point.
- (2) Parts of same questions must be attempted together and not to be attempted in between the answers to other questions.

**Part-I**

1. Write notes on any *five* of the following :
- (i) Current annual Increment and Mean annual increment.

8

P.T.O.

- (ii) Law of Probability. 8
- (iii) Shifting cultivation and Taungya system. 8
- (iv) Role of GIS in Forest Management and Modelling. 8
- (v) Concept of Watersheds. 8
- (vi) Biosphere Reserves and Wildlife Sancturaries. 8
2. (a) What are the principles and objectives of Forest Management ? 10
- (b) Describe in detail the techniques and equipments used in calculation of the height of forest trees. 15
- (c) What are all the biotic and abiotic factors, responsible for tree/forest growth ? Discuss.

*Or*

What is Carbon sequestration ? Describe the role of afforestation on CO<sub>2</sub> absorption. 15

3. (a) What is Waterlogging and salinity ? Also suggest resistant trees for afforestation of such soils. 15
- (b) What are important physical properties of timber wood ?

*Or*

Discuss wood seasoning methods and importance of wood seasoning. 10

- (c) What is the importance of nurseries for tree seedling production ? Also describe various nursery operations. 15

4. (a) Describe the following :

- (i) Plant pathogens
- (ii) Disease Forecasting
- (iii) Disease epidemics
- (iv) Disease resistance
- (v) Integrated Disease Management of trees. 15

- (b) What is Biodiversity ? Discuss the in-situ and ex-situ methods of conservation. 15
- (c) Discuss different types of Wood rots of hard wood and soft woods, how to prevent these ?

*Or*

Discuss the importance and role of computers in Forestry. 10

### **Part-II**

5. Write notes on any *five* of the following :
- (i) Role of Forests in the life of Tribal communities. 8
- (ii) Wood seasoning methods. 8
- (iii) Indian Gums, types and uses. 8
- (iv) Trees yielding Fibers Flosses Katha, bio-pesticides and tannins. 8
- (v) Forest policy of 1952 and 1988. 8

- (vi) Trees yielding resins, dyes beedi leaves and tannin. 8
6. (a) What is the scope and importance of Agroforestry in India ? Discuss the various AF systems in practice. 15
- (b) What are composite woods ? Discuss the different types of Composite Wood with their properties. 15
- (c) Discuss the physical and chemical properties of Soil.

*Or*

Describe :

- (i) Rayon industry
- (ii) Plywood industry. 10
7. (a) Discuss the following :
- (i) Cost benefit analysis

P.T.O.

- (ii) Estimate of demand and supply of forest products
- (iii) Socio-economic analysis of forest productivity. 15
- (b) Discuss the history of forestry development in India. 10
- (c) What are the following terms :  
ORP, LLP, FLD, KUK and TARP of ICAE.

*Or*

What is the importance of Herbaria and Arborata in Forestry ? 15

8. (a) Describe the following :
- (i) Social Forestry Plantation
- (ii) Protein banks
- (iii) Alley Cropping

- (iv) JFM Schemes and their importance in context to India. 16
- (b) What is the role of NGO's and other agencies in Social forestry programmes ? 10
- (c) What are Particle Boards ? Discuss the importance and uses of these boards.

*Or*

Describe the raw materials and process of Paper Pulp formation. 14