

**FS – 15 / 15-16**

**Forestry**

**Paper – I**

*Time : 3 hours*

*Full Marks : 200*

*The figures in the right-hand margin indicate marks.*

*Candidates should attempt Q. No. 1 from*

*Section – A and Q. No. 5 from Section – B*

*which are compulsory and any **three** of*

*the remaining questions, selecting*

*at least **one** from each Section.*

### **SECTION – A**

1. Answer any **two** of the following :  $20 \times 2 = 40$

(a) Define seedling establishment. Write, in detail, about the various factors affecting establishment of seedlings.

(b) Define High Forest. Describe the technique of obtaining natural regeneration of **Shorea robusta** in different types of forests.

(c) Write, in detail, about the various types of

containers used in raising nursery stock. Describe the advantages and disadvantages of using polythene containers.

2. (a) Define and classify silvicultural system. What is shelterwood system ? Write, in detail, about different shelterwood systems. 20
- (b) What do you mean by sowing and planting ? What are the different methods of planting ? Discuss the general rules of planting. 20
3. (a) What are the characteristics and role of mangrove forest ? Write down the methods of afforestation of degraded mangrove forest. 20
- (b) What is a Cold Desert ? What are its characteristics ? Explain, in detail, the forest types of cold desert as per Champion and Seth classification. 20
4. Answer any **two** of the following :  $20 \times 2 = 40$ 
  - (a) Write down the silviculture of **Pterocarpus santalinus** in respect to site factors, phenology, regeneration methods, management and economic importance.

(b) Explain the distribution, commercial cultivation and management of **Casuarina equisetifolia**.

(c) Briefly explain the site factors, silvicultural characters, natural regeneration, management and economic importance of **Dalbergia sissoo**.

### SECTION – B

5. Answer any **two** of the following :  $20 \times 2 = 40$

(a) Define Agroforestry. Write down the concept and objectives of agroforestry. Describe, in detail, the benefits of agroforestry and its limitations.

(b) What do you mean by Agroforestry Systems ? Note down the purpose and criteria of its classification. Name important forest species involved in Apisilviculture, Aquasilviculture and Lac culture (Three each).

(c) What is Joint Forest Management (JFM) ? What are the role of JFM in forest

conservation and management ? Write down the major constraints faced during successful implementation of JFM.

6. Answer any **two** of the following :  $20 \times 2 = 40$

(a) Classify and write, in detail, about soil forming factors. Define weathering and mention different agents involved in different types of weathering. Write about the role of soil organic matter in the improvement of physical and chemical properties of soil.

(b) What are the different methods for reclamation of saline and alkaline soil ? Write down the plant species and planting methods suitable for stabilising the coastal sand dunes.

(c) Define Watershed. Classify and describe different types of watersheds. Describe forest as a component of watershed to help in water conservation.

7. (a) Define Environment. Write down the importance and scope of environmental

- science. Discuss briefly on socio-economic causes of environmental degradation. 20
- (b) Write down the different types of pollution. Briefly discuss the causes and its control measures for soil and water pollution. 20
8. (a) Describe the different methods of selection of plus tree from natural forests and plantations. 20
- (b) Describe the methods of collection and processing of seeds in forest tree species. 20



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