

**CSM – 30 / 15**

**Forestry**

**Paper – I**

*Time : 3 hours*

*Full Marks : 300*

*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 **three** of the remaining questions, selecting at least **one** from each Section.*

**Section – A**

1. Answer any **three** of the following :  $20 \times 3 = 60$
- (a) What biotic factors are responsible for regeneration and growth of forests ?
  - (b) Describe, in brief, methods of forestry seeds collection and storage.
  - (c) Give forest types of Odisha and their distribution in State.
  - (d) Explain any one modern technique of raising quality planting stock.

2. (a) Describe any three silviculture systems as adopted for obtaining regeneration in Teak Forests. 30
- (b) 20 hectares of degraded sal forests are to be artificially regenerated. Describe all steps from choice of species to plantation management you would follow. 30
3. (a) Define Mechanical thinking. Describe it for Sal and Teak. How is it different from ordinary and crown thinking? 30
- (b) Describe the steps alongwith field observations to estimate volume of a tree crop on a small area when local volume table is not available. 30
4. Describe silviculture of the following tree species : 15×4 = 60
- (a) **Acacia auriculiformis**
- (b) **Casuarina equisetifolia**
- (c) **Tectona grandis**
- (d) **Bambusa arundinacea**

## **Section – B**

5. Answer any **three** of the following       $20 \times 3 = 60$
- (a) What is coppice system ? Describe coppice with reserve system in relation with pattern of felling and mode of regeneration.
  - (b) Describe the yield and its regulation by area method.
  - (c) What is rotation ? Discuss different types of rotation.
  - (d) Explain the term site quality. Describe site index approach of site quality evaluation.
6. (a) What is regeneration ? How natural regeneration of forest crop is ensured under shelterwood and selection system ?      30
- (b) Discuss the role of forests for carbon sequestration.      30
7. (a) What is working plan ? Describe the methods of preparation and implementation of a working plan.      30

**(b) What is forest fire ? Discuss its impact on forests and use of fire for grassland management. 30**

**8. Write notes on the following :**

**(a) Anthropogenic disturbance to the forests 20**

**(b) Involvement of corporate sector in plantation forestry 20**

**(c) Watershed management and its importance 20**

