

CSM – 30/16
Forestry
Paper – I

Time : 3 hours

Full Marks : 300

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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 **three** of the following : 20×3 = 60
 - (a) What is the role of mangroves in soil conservation ?
 - (b) What are the basis of Champion and Seth's classification ? In how many groups forests have been divided ?
 - (c) Discuss regeneration in Sal (*Shorea robusta*).

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- (d) What is dormancy ? Discuss pre-treatments used in overcoming dormancy in tree seeds.
2. (a) Discuss natural regeneration under shelter wood system. 20
- (b) What is the relationship of silviculture with different branches of forestry ? 20
- (c) Discuss classification of forests based on age, composition, object of management, ownership and legal status. 20
3. (a) Define Topography. What are the topographical factors which influence vegetation of an area ? 20
- (b) Give diagrammatical representation of a forest nursery depicting different components. 20
- (c) Define Increment. Discuss CAI and MAI. 20
4. (a) Define Thinning. What is the object of thinning ? Discuss ordinary thinning in detail. 20
- (b) Calculate quantity of seed that would be required for raising 10 hectare plantation of Sal. Given planting distance is 3×3 meter, no. of seed/kg is 500 and plant percent is 70. 20

- (c) Define stump analysis. What is the object of stump analysis ? How the stump analysis is carried out in field ? 20

SECTION – B

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5. Answer any **three** of the following : 20×3 = 60
- (a) What steps have been taken by Odisha Forest Department in mitigating climate change ?
 - (b) What are invasive species ? How they effect the regeneration and yield of forests ?
 - (c) What is ecotourism ? How it has created awareness among masses for protection of biodiversity ?
 - (d) Discuss the role of private sector in spread of Eucalyptus plantations.
6. (a) Define Sustained Yield. Discuss concept and principle of sustained yield management. 20
- (b) What is shifting cultivation ? What are the advantages and disadvantages ? 20

(c) How the fires affect the productivity of the forests ? Discuss the measures to control forest fires. 20

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7. (a) What are the commercial plantations ? What is their advantages and disadvantages compared to natural forests. 20
- (b) Define Rotation. Enlist various types of rotation. Discuss rotation of maximum volume production. 20
- (c) Enlist five diseases of nursery. Discuss the mechanical and chemical methods to prevent diseases in nursery. 20
8. (a) What is plant succession ? Discuss primary and secondary succession. 20
- (b) What is working plan ? Describe, in brief, the preparation of working plan. 40

