

Indian Forest Service

FORESTRY

Paper—II

Time Allowed : Three Hours

Maximum Marks : 200

INSTRUCTIONS

Candidates should attempt questions 1 and 5 which are compulsory, and any THREE of the remaining questions, selecting at least ONE question from each Section.

All questions carry equal marks.

Marks allotted to parts of a question are indicated against each.

Answers must be written in ENGLISH only.

SECTION—A

1. Answer any **FOUR** questions from the following :-
10×4
- Explain the situations under which a forest becomes abnormal.
 - Describe reference point of diameter/girth measurement on a standing tree.

- (c) Explain various types of maps prepared by Working Plan Officer.
- (d) How is yield regulated in a forest which is worked under clear felling system ?
- (e) How is remote sensing advantageous as compared to ground surveys ?
2. (a) Discuss Smythies Safeguarding formula for annual harvest of timber from a selection forest. 20
- (b) Explain principles of height measuring instruments. 10
- (c) What is quarter girth formula ? Why is it preferred for calculation of log volume ? 10
3. (a) Define rotation and discuss different types of rotations giving suitable examples. 20
- (b) Discuss strategies and plans adopted for the treatment of catchment areas. 10
- (c) What is yield table ? How contents of yield table is utilized in forestry ? 10
4. (a) Describe how you would continue the line with the chain only, when :
- (i) Large river interrupts the chain line, and
- (ii) a forest area comes across the chain line. 20
- (b) Explain the terms :
- (i) Whole Circle Bearing, and
- (ii) Quadrantal Bearing. 10
- (c) Describe, with sketches, Suspension Bridge. 10

SECTION—B

5. Attempt any **FOUR** questions from the following :—

10×4

- (a) List ten main bamboo species of commerce in India with their scientific names and the State of origin.
- (b) Give legal definition of forests in India. Write about the major groups of forest types of India.
- (c) Explain “adiabatic lapse rate”.
- (d) Define micro-climate giving suitable examples.
- (e) Write common and scientific names of ten tree species yielding resins and oleoresins.
6. (a) Discuss the factors that inhibit tree growth in Alkali and Saline soils. How is alkali soil managed for tree species plantation ? Write scientific names of four tree species suitable for plantation in Alkali soils. 20
- (b) Describe the initial causes of secondary succession. Write various seral stages of succession leading to the development of *Shorea robusta* forests. 10
- (c) How severe is the damage of *Ganoderma* in Indian Forests ? Discuss with some case history. 10
7. (a) What are the wood composites ? How they are prepared ? What are the common glueing agents used in wood composites ? 20

- (b) What are the effects of particulate air pollutants on the regeneration of a forest ecosystem ? Discuss. 10
- (c) How grazing is managed for the browsing animals ? Discuss various management options for sustainable grazing in forest. 10
8. (a) Write the constitution of National Board of Wildlife. Explain the provisions of the Sections of Wildlife (Protection) Act 1972, used to declare an area as "Sanctuary". 20
- (b) Describe the tangible and intangible benefits of forests. 10
- (c) Discuss the various common defects encountered after harvesting of the wood during stacking. 10