IFS Forestry 2006

PAPER - I

SECTION A

1. Answer any four of the following (the answer should not exceed 150 words for each question):

(a) What are the factors that adversely affect natural regeneration of tree species?
(10)

(b) Explain raising of quality tree nursery stock in containers.
(10)

(c) Give an account of silvicultural management of Teak plantations.
(10)

(d) What is ordinary thinning? Explain briefly different grades of ordinary thinning.
(10)

(e) Explain in brief different methods of vegetative propagation in tree species.
(10)

2. (a) Explain the selection system and its application to Sal forests.
(20)

(b) Explain the kinds and pattern of fellings in uniform system.
(20)

3. (a) How degraded mangrove formations can be rehabilitated?
(20)

(b) Discuss afforestation of cold deserts with suitable tree species.
(20)

4. Describe silviculture of the following species

(a) Dalbergia sissoo
(10)

(b) Tectona grandis
(10)

(c) Acacia nilotica
(10)

(d) Dendrocalamus strictus
(10)

SECTION B

5. Answer any four of the following (the answer should not exceed 150 words for each question):

(a) Describe agro-forestry systems under any two agro-climatic zones of India.
(10)

(b) What are multipurpose tree species? Explain with examples.
(10)

(c) Write a brief note on India's experience with joint forest management (JFM) in last fifteen years.
(10)

(d) Forests are key to tribal economy Justify.
(10)

(e) Saline and alkaline soils can be reclaimed by afforestation. Explain.
(10)

6. (a) Explain different kinds of soil erosion, thee causes and management of soil eroded areas.
(20)
(b) Explain integrated watershed management approach.
(20)
7. (a) How forests and tree plantations help in environmental conservation?
(20)
(b) Write a note on Environmental Impact Assessment (EIA).
(20)
8. Write notes on:
(a) Provenance testing of tree species.
(10)
(b) Sea production areas.
(10)
(c) Heritability and genetic gain.
(10)
(d) Progeny testing.
(10)

PAPER - II

SECTION A

1. Attempt any four from the following (not more than 150 words each):
(a) What is the relationship between Mean Annual Increment (MAT) and Current Annual Increment (CAI) for a Normal Forest?
(10)
(b) What are the reasons for loss of Biodiversity? How is the loss of Biodiversity overcome?
(10)
(c) Discuss the concept and use of Horizontal Point Sampling when wedge prism is used.
(10)
(d) What are the advantages of GIS over traditional forest management?
(10)
(e) Write various steps involved in formulation of village forest committees. How do these committees help in J.P.F.M.?
(10)
2. (a) Write the procedure to measure height of a tree in the following situations, when
(i) observer's eye is above the top of the tree.
(ii) observer's eye is below the base of the tree.
(20)
(b) Describe Normal Forest concept for Commercial Plantations.
(10)
(c) What is the importance of Prismatic Compass in Forest Surveys?
(10)
3. (a) What are working plans? How are they prepared and used for planting and enumeration of forest stands in a Forest Division?
(20)
(b) Describe Stump analysis method of determining growth of trees.
(10)
(c) Describe the role of working plans in nature conservation.
(10)
4. (a) Under what circumstances are Chain Survey and Plane Table Survey used in Forestry ? Write

in brief on the procedure for any one survey.
(20)
(b) Distinguish between Silvicultural Rotation and Rotation of the maximum volume production.
(10)
(c) What are the salient differences between Local volume table and General volume table?
(10)

SECTION B
5. Attempt any four from the following (not more than 150 words each)
(a) Name different types of nutrient cycling which occur in tropical forest ecosystems. Give examples.
(10)
(b) In the present context, what is the role of rotational and controlled grazing to overcome damage due to grazing animals?
(10)
(c) Write the Processing and Sale procedure for Katha and Lac.
(10)
(d) Explain the application of Indian Penal Code in Forestry.
(10)
(e) Which are the important defects observed in stored timber?
(10)
6. (a) Enlist insect pests and diseases of Forest Nurseries. Briefly explain the methods to prevent and control both of them.
(20)
(b) List different types of air pollutants. What are their effects on growth and productivity of forests?
(10)
(c) Why are cases of encroachment of forest area still observed in the forests nearby human settlement? How is the damage report framed?
(10)
7. (a) Why is it necessary to take up Cost:
Benefit analysis of Forest Plantations? Describe the main points to be taken into consideration while conducting Cost: Benefit analysis of short rotation commercial species and traditional timber species.
(20)
(b) What are the salient features of the National Forest Policy, 1988?
(10)
(c) Define Climax. State different theories of climax. Which are the different types of climaxes that are found?
(10)
8. (a) What is Composite Wood? Write raw material, manufacturing process, marketing and uses of the most commonly used composite wood in India.
(20)
(b) What are ecosystem energetics? Describe the energy flow in forest ecosystem.
(10)
(c) What is the role of Land depots and Water depots in commercial storage of forest products?
(10)