

## IFS Forestry 2007

### PAPER - I

#### SECTION A

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

(a) Discuss the silvicultural system for managing mangrove forests of India.

(10)

(b) How are forests managed under the clear felling system ?

(10)

(c) Neem (*Azadirachta indica*) is a tree for solving global problems. Justify the statement.

(10)

(d) Classify the methods of regeneration of forests. How will you select the trees for seed collection?

(10)

(e) Discuss the importance of exotics in Indian Forestry.

(10)

2. (a) Discuss the impact of deforestation on ecological aspects.

(20)

(b) Why is thinning necessary in forest crops? Discuss in brief the various methods of thinning.

(20)

3. (a) Discuss the salient features of shelterwood system of forest management with its merits and demerits.

(20)

(b) Discuss the impact of forests on the climate of a locality. How do forests affect soil and water conservation ?

(20)

4. Describe the silviculture of any four of the following species :

(a) *Pinus roxburghii*

(10)

(b) *Tectona grandis*

(10)

(c) *Eucalyptus tereticornis*

(10)

(d) *Terminalia tomentosa*

(10)

(e) *Prosopis juliflora*.

(10)

#### SECTION B

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

(a) Describe environmental impact assessment tool in forestry.

(10)

(b) Describe the ethnic communities of India. Give their contribution to ethnobotany.

(10)

(c) What is gene conservation ? Discuss in brief the different methods of ex situ conservation of forest species.

(10)

- (d) Describe the importance and future scope of medicinal and aromatic plants in India.  
(10)
- (e) Define Joint Forest Management (JFM). Discuss the role of NGOs in effective implementation of management plans.  
(10)
6. (a) Discuss different agroforestry systems under different agroecological zones.  
(20)
- (b) Discuss briefly the role of forests in control of air, water and noise pollution.  
(20)
7. (a) Explain the importance of watershed management in rural development. Discuss the factors affecting watershed management in detail.  
(20)
- (b) What is a progeny test? Discuss the various objectives of progeny testing in tree improvement.  
(20)
8. Write short notes on any four of the following:
- (a) Carbon sequestration  
(10)
- (b) Clonal seed orchards  
(10)
- (c) Hi-tech nursery  
(10)
- (d) Ozone layer depletion  
(10)
- (e) Wind-breaks and shelter-bells.  
(10)

**PAPER - II**  
**SECTION A**

1. Attempt any four questions from the following (not more than 150 words for each) :
- (a) How is the remote sensing used in monitoring forest cover ?  
(10)
- (b) Write in brief on Topographic Surveys in Forestry.  
(10)
- (c) What is the importance of estimating form factor of a tree ? Write common formula used to estimate the form factor.  
(10)
- (d) Discuss how yield can be regulated in regular forests with clear felling system,  
(10)
- (e) What are the main objects of preparation of Divisional working plans for the forest plantations?  
(10)
2. (a) Explain with diagram how annual yield of a forest is regulated by using Von Mentel's method. Provide formulae wherever necessary.  
(20)
- (b) Show the relationship between Current Annual Increment (CAI) and Mean Annual Increment (MAI) of a forest stand.  
(10)
- (c) Describe working principles of Christen's Hypsometer in tree height measurement.

(10)

3. (a) To compute volume of standing trees which parameters are required to be measured ? Write instruments used and brief procedure of their handling.

(20)

(b) After introduction of Joint Forest Management (JFM) scheme in different States, Forestry Administration is nearer to the people. Substantiate the statement with examples.

(10)

(c) How age of the trees can be determined in which annual rings are not clearly observed ?

(10)

4. (a) What are the major principles of designing roads in the remote forest area? Provide diagrams wherever necessary.

(20)

(b) Write in brief on different types of timber bridges commonly constructed in interior areas of forest.

(10)

#### SECTION B

5. Attempt any four from the following (not more than 150 words each) :

(a) Why herbaria and arboreta are prerequisites for Dendrology ?

(10)

(b) Write in brief on important conservation projects for wild animals in India.

(10)

(c) What are the important features of Demand and Supply Curve? On what factors of Demand and Supply of Forest produce depend ?

(10)

(d) What is rotational grazing? What are its advantages? Under what situations this is followed?

(10)

(e) Write properties and uses of Turpentine oil and Lac.

(10)

6. (a) Describe general scenario of marketing and Trade of timber and Non-Timber Forest Products (NTFP) through various agencies in India.

(20)

(b) List important modern harvesting practices adopted in forest plantations.

(10)

(c) What is shifting cultivation? List adverse effects of shifting cultivation on forests.

(10)

7. (a) What is Succession ? Describe primary and secondary succession along with examples. How the succession is studied in Natural Forests ?

(20)

(b) Which are the defects in National Forest Policy of 1894 and 1952?

(10)

(c) What are various causes for large scale drying of Shisham (*Dalbergia sisso*) in Northern India? How can you effectively manage Shisham plantation in the back drop said problem ?

(10)

8. (a) What is controlled burning ? Under Indian conditions how is it advantageous to prevent occurrence of wild fire in a forest? During which season it is followed?

(20)

(b) Tiger census raises question mark in Indian wildlife management. Give your view points. How can you effectively tackle the problem?

(10)

(c) Timber Identification is pre-requisite to check adulteration in the timber market. Give reasons.

(10)