

IFS 2004 FORESTRY

PAPER - I

SECTION A

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

(10 x 4 = 40)

- (a) What is the criteria to select number of clones and their deployment in plantation forestry ?
- (b) How willow cultivation is life line in cold desert areas of the country?
- (c) Describe storage behaviour of recalcitrant seeds and name seven tree species producing seeds of this category.
- (d) Why do forest plantations fail?
- (e) Describe the storage methods of recalcitrant seeds and name seven tree species which fall under this category.
- (f) Importance and method of tree introduction.

2. (a) Discuss the term site quality and describe the basis of its classification.

(20)

(b) What are different uses of vegetative propagation ? Name the five different examples of topophysis.

(20)

3. (a) Describe briefly clear felling system with its merits and demerits.

(20)

(b) Write the importance of mangrove forests and methods of rehabilitation of degraded mangrove forests.

(20)

4. Describe the silviculture of any four species.

(10 x 4 = 40)

- (a) *Gmelina arborea*.
- (b) *Cedrus deodara*
- (c) *Santalum album*
- (d) *Populus* spp.
- (e) *Tectona grandis*.

SECTION B

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

(10 x 4 = 40)

- (a) Describe the different methods of plus tree selection in uneven aged forests.
- (b) Explain about water pollution and methods of their control with main emphasis on phytoremediation.
- (c) Suggest practical methods for the reclamation of saline and alkaline soils.
- (d) What do you mean by ethno botany, its importance and practice in nature conservation by tribal people?
- (e) Write a note on Environmental Impact Assessment.
- (f) Why the provenance testing is prerequisite before taking genetic improvement of any given species? How it can be done?

6. (a) Describe the role of NGOs in JFM with special reference to biodiversity conservation. Justify with suitable example.

(20)

(b) What do you mean by shifting cultivation and improved fallows and its management under

agro forestry system?

(20)

7. (a) Describe the basis of land classification in brief for watershed management.

(20)

(b) Explain the importance and different ways of carbon sequestration in terrestrial ecosystem.

(20)

8. Write notes on any four of the following:

(10 x 4 = 40)

(a) Importance and types of Heritability. How it can be increased?

(b) Specific combining ability and its utility in tree improvement.

(c) Breeding value.

(d) Acid rain.

(e) Hybrid vigour and its utility in tree breeding.

PAPER - II

SECTION A

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

(10 x 4 = 40)

(a) Describe the method for calculation of normal growing stock from yield table.

(b) Write significance of enumeration map in a divisional working plan.

(c) Explain relationship between sustained yield and normal forest.

(d) Discuss advantages of remote sensing technique in Forestry.

(e) Write procedure for preparation of general volume table.

2. (a) What are the different methods of Plain Table Survey ? Describe any one.

(20)

(b) Explain form of a tree and discuss principle of Girder Theory.

(10)

(c) What is biological diversity? Why Indian subcontinent is rich in biodiversity?

(10)

3. (a) Describe Biolley's check method of yield regulation in irregular forest

(20)

(b) Discuss general specification of cement mortar.

(10)

(c) Explain superiority of remote sensing over ground survey.

(10)

4. (a) Describe Austrian Assessment Method of yield regulation in regular forest.

(20)

(b) What are the advantages and disadvantages of brick masonry work over stone masonry work?

(10)

(c) Discuss the concept of Joint Forest Management and mention the advantages of Joint Forest Management over traditional forest management.

(10)

SECTION B

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

(10 x 4 = 40)

(a) Describe biotic components of an ecosystem.

(b) Describe the process of typical succession in Xeric condition.

(c) Discuss extraction of forest timber by means of aerial ropeways.

(d) Describe concept and method of rotational grazing.

- (e) Discuss the types of fencing applied to protect forestry crops.
6. (a) Discuss artificial and natural systems of classification of plant species.
(20)
- (b) Describe primary as well as derived forest fires.
(10)
- (c) Discuss types of lac crop harvested in India.
(10)
7. (a) Compare and contrast National Forest Policy 1988 with that of 1952.
(10)
- (b) Explain “damping off” diseases of forest nurseries and discuss its control method.
(10)
- (c) Describe the procedures of sales of forest produces.
(10)
8. (a) What is Ethnobotany? How it helps in Indian systems of medicines?
(20)
- (b) What is particle board? Mention common types of particle boards available in India.
(10)
- (c) Describe natural defects of timber.
(10)