

IFS 2001 FORESTRY

PAPER - I

SECTION A

1. Answer any four of the following:

- (a) Variations in stand density, such as induced by thinning, cause very large variations in diameter growth but remarkably little in height growth. Discuss. (10)
- (b) Discuss the relative merits of direct seeding and planting. (10)
- (c) Describe the 'volume method of regulation' of cut for sustained yield. (10)
- (d) Describe the different variations of shelter wood method of regeneration of even-aged stands. (10)

(e) Discuss the relative merits of pure and mixed stands. (10)

2. (a) Discuss the problems of stand establishment in cold areas. (20)

(b) Describe the method of periods and periodic blocks for regeneration. (20)

3. (a) Discuss the environmental effects of clear-cutting and harvesting. (20)

(b) Describe the various objectives of formulating a silvicultural system for a stand. (20)

4. Describe the silviculture of the following species in details: (40)

(a) Poplars

(b) Bamboos

(c) Prosopis juliflora

(d) Cedrus deodara

SECTION B

5. Answer any four of the following:

(a) Discuss the impact of fire on forest regeneration. (10)

(b) Describe the chemical composition of acid rain and its impact on forest vegetation. (10)

(c) Describe the general guidelines for the selection of plus trees from even-aged stands. (10)

(d) Write a note on integration of livestock in agro forestry practices. (10)

(e) Discuss the importance NTFPs in the life of tribals. (10)

6. (a) Describe the different types of damage caused by wind erosion of soil. (13)

(b) How can forest trees be deployed for checking soil erosion by wind? (13)

(c) Write a note on rehabilitation of degraded areas through forestry. (14)

7. (a) How do agro-forestry practices lead to increase in soil fertility. (20)

(b) Briefly describe the main agro forestry systems. (20)

8. (a) Describe the types, sequence and time scale of species trials. Give object and features of each phase. (20)

(b) Give a detailed account of selection and management of seed stands in conifers. (20)

PAPER - II

SECTION A

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

(a) Describe the concept of normality in regular and irregular forests.

(10)

(b) What are the advantages of remote sensing in forestry?

(10)

(c) What is the yield table? How is it used in determining rotation?

(10)

(d) Discuss peculiar features of forestry practices.

(10)

(e) What are the objectives of joint forest management? How does it differ from the traditional

forest management?

(10)

2. (a) Describe Brand is diameter class method of yield regulation in an irregular forest.

(20)

(b) Discuss the importance of form factor in calculation of standing volume of tree.

(10)

(c) Describe the various reasons for having high biological diversity in tropics.

(10)

3. (a) Describe any two methods of volume measurement in a sample plot.

(20)

(b) What are Culverts? How are they de signed?

(10)

(c) Discuss the importance of soil expectation value in deciding economic rotation.

(10)

4. (a) Describe the method of survey by the use of a prismatic compass and its chain.

(20)

(b) What is mortar? Describe the functions of mortar in building construction.

(10)

(c) What is the lean on tree? How is it measured?

(10)

SECTION B

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

(a) Discuss the process of typical succession in riverine and coniferous forests.

(10)

(b) What are the objectives of seasoning?

(10)

(c) Describe the nursery disease of economically useful trees.

(10)

(d) Discuss the importance of cost-benefit analysis in forestry.

(10)

(e) Describe utilization of forest products in ayurvedic medicine with examples.

(10)

6. (a) How are forest fires classified ? Discuss the importance of fire lines.

(20)

(b) Describe collection and processing of bidi (tendu) (*Diaspyros embryopteris*, Pers) leaf.

(10)

(c) Describe different types of papers used in daily life.

(10)

7. (a) What is gum? Describe different types of gum obtained from trees.

(20)

(b) What is Vermin? How does it differ from game animals?

(10)

(c) Describe different kinds of non-timber forest products obtained from Indian forests. (10)

8. (a) Write down the damages caused to the forests by grazing animals and discuss how rotational grazing helps in the protection of forests?

(20)

(b) Discuss the mechanism of drought resistance, drought tolerance and drought avoidance by plants to avoid water stress.

(10)

(c) Describe timber grading and state its importance.

(10)