

IFS 2000 FORESTRY

PAPER-I

SECTION A

1. Answer any four of the following:

(The answer should not exceed 150 words for each question)

(a) Define vegetative propagation and discuss in detail the various techniques adapted in vegetative propagation.

(10)

(b) Define coppice and explain in detail coppice with standard system (use suitable example).

(10)

(c) What are tidal swamp forests? List the different forest types found in them along with their species composition.

(10)

(d) Differentiate between silvics and silviculture.

(10)

(e) Differentiate between evenaged and unevenaged stands. Discuss the merits and demerits of evenaged stands.

(10)

2. (a) Explain in the detail the silvicultural practices that ensure good natural regeneration in teak forests.

(20)

(b) List the tending operations carried out in stand management and explain in detail various weeding methods adapted.

(20)

3. Describe the silvicultural practices adapted in the stands of the following species:

(a) *Azadirachta indica* (10)

(b) *Dalbergia sissoo* (10)

(c) *Pinus roxburghii* (10)

(d) *Santalum album* (10)

4. (a) Explain the concept of Forest site. (10)

(b) On which criteria the site quality in forests are measured? (10)

(c) Discuss its merits and limitations of the criterion adopted.

(10)

SECTION B

5. Answer any four of the following:

(The answer should not exceed 150 words for each question)

(a) Differentiate between Taungya and alley cropping with suitable examples.

(10)

(b) List the benefits derived from soil mycorrhizae.

(10)

(c) List the different components of watershed and explain their role in micro-watershed management.

(10)

(d) What are exotic species? Briefly describe the advantages and problems associated with exotic forestry.

(10)

(e) Discuss the role of NGO's in popularizing the J.F.M.

(10)

6. Classify the agro-forestry systems based on function, structure and nature of components.

(40)

7. "The route cause of most of the environmental pollution is the increasing population"— justify the statement with facts and figures.

(40)

8. (a) What is indirect selection ? Explain in detail its role in breeding trees for pest and disease resistance.

(20)

(b) Which are the different components of phenotypic variation? How are they important for a tree breeder?

(20)

PAPER-II

SECTION A

1. Attempt any four from the following:

(Not more than 150 words for each)

(a) Describe the pre-requisites for a forest to become a normal forest.

(10)

(b) 'Working Plan is a tool for the management of a forest.' Justify the statement.

(10)

(c) Discuss the rotations that controls the financial returns.

(10)

(d) What is the importance of reduced area method of calculating the annual yield?

(10)

2. (a) Discuss Smythies Safeguarding formula for fixing annual yield in a selection forest.

(20)

(b) Write down the principles and formula for Von Mantel's method of yield regulation and its modifications.

(10)

(c) How is yield regulated in a forest which is worked under uniform system of management?

(10)

3. (a) How the concept of joint forest management has been originated? What are the achievements of joint forest management?

(20)

(b) What do you mean by biodiversity ? How is it assessed ?

(10)

(c) Discuss stand table and its significance in forestry calculations.

(10)

4. (a) Describe the principle and technique for measuring height of a leaning tree.

(20)

(b) Discuss the technique of road alignment in a forest area.

(10)

(c) What are the differences between aerial photographs and maps?

(10)

SECTION B

5. Attempt any four from the following:

(Not more than 150 words for each)

(a) Describe different varieties of wood preservatives and write about the diffusion method of treatment.

(10)

(b) Give a concise account on extraction of Katha.

(10)

(c) Give an account of fibres derived from forest.

(10)

(d) What do you know about the Shellac?

(10)

(e) Write about the important roles played by wild animals on forest regeneration.

(10)

6. (a) Define composite wood and describe the process of plywood making.

(20)

(b) What are the common methods of selling forest produces and which method is most effective?

(10)

(c) Write a detail account on natural defects of timber.

(10)

7. (a) What constitute a fire environment? Discuss the mechanism of spread of forest fire.

(20)

(b) What are resins ? How are they classified? Describe with examples.

(10)

(c) Discuss the importance of wood seasoning and mention the principle involved in it.

(10)

8. (a) What are the objectives of forest valuation? Describe different methodologies for assessing forest goods and services.

(20)

(b) Describe the significance of establishing a herbarium.

(10)

(c) How is the shifting cultivation practised? Mention its disadvantages and control measures.

(10)