

FORESTRY

Paper II

Time Allowed : Three Hours

Maximum Marks : 200

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.

Question Nos. **1** and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two **Sections A** and **B**.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Answers must be written in **ENGLISH** only.

Neat sketches may be drawn, wherever necessary.

SECTION 'A'

1. Answer each of the following questions :
 - 1.(a) Why site specific planning is essential for forest management ? Explain different components of site-specific management. 8
 - 1.(b) How the forest cover was measured prior to and post 1980's in India ? Define the various categories of forest cover. 8
 - 1.(c) What are the objectives of working plan ? How it is helpful for conservation of biodiversity and natural resource conservation of forests ? 8
 - 1.(d) What are the applications of remote sensing and GIS in the field of forestry and wildlife ? 8
 - 1.(e) How volume tables are classified on the basis of kind of outturn ? Describe briefly. 8
- 2.(a) How a selection forest is managed under the felling series ? Describe with suitable examples/diagrams. 15
- 2.(b) How the geometrical measurements for calculating volume yield are made in (i) Buttressed tree, (ii) Leaning tree on a slope, and (iii) a tree forked at the base ? Give thematic presentation. 15
- 2.(c) Describe the effect of thinning on volume increment. 10
- 3.(a) Describe the different formulae used in forest trees for determining increment percent in diameter and volume. 15

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- 3.(b) Describe the various kinds of maps prepared by the Working Plan Officer. What is their utility and purpose ? 15
- 3.(c) Describe the dead and live loads and how they are calculated on the roof trusses over buildings ? 10
- 4.(a) Write about the concept of normal forest and kind of abnormalities which affect the normal growing stock. 15
- 4.(b) Write in detail as to why Joint Forest Management Policy was initiated and what are its constraints in implementation ? 15
- 4.(c) Write a note on kinds of enumeration and explain in brief different random sampling techniques used in forest inventories. 10

SECTION 'B'

- 5.(a) Define herbarium and write its significance. What are the steps in establishing herbarium and which method of plant classification is followed in herbarium arrangement ? 8
- 5.(b) Briefly write about the natural defects observed in wood. 8
- 5.(c) What are the major grazing systems and grazing regions in India ? Describe briefly, methods to prevent pressure from grazing in forests. 8
- 5.(d) Narrate the background and objectives of implementation of national forest policies of India. 8
- 5.(e) What is ethnobotany and describe the role of ethnobotany in the Indian systems of medicine. 8
- 6.(a) Define succession. Explain different types of succession in detail, citing suitable examples. Discuss various theories of succession. 15
- 6.(b) What is wood seasoning ? Write in detail the aims of wood seasoning and explain salient steps in manufacturing of plywood. 15
- 6.(c) Discuss briefly the impacts of humans on forest health. Explain different measures to check forest encroachment. 10
- 7.(a) What is logging ? What are the objects of felling ? Briefly write the general rules of felling and basic cuts of tree felling. 15
- 7.(b) Explain the discounting measures in forest business management with different formulae used in forest economics. 15
- 7.(c) Explain the classification of forest types in India by Champion and Seth. Enlist major forest types and their group. 10
- 8.(a) Describe types of forest fires, their ill-effects and preventive measures. Briefly discuss the role of forest fire on forest ecosystems. 15
- 8.(b) Discuss in detail the roles and interventions of Government and Private agencies in marketing of forest produce. 15
- 8.(c) What are the differences between gums and resins ? How are gums and resins classified ? Enlist different methods of tapping resins. 10