

252009

COMBINED COMPETITIVE EXAMINATION (MAIN)

FORESTRY

Paper-II

Time : 3 Hours

Full Marks : 200

Note : (1) The figures in the right-hand margin indicate full marks for the questions.

(2) Attempt five questions in all.

(3) Question No. 1 is compulsory.

1. Answer any *ten* questions from the following : 4×10=40

- (a) Why is forest legislation required in forestry?
- (b) How is Indian Penal Code applicable in regulation of forest offences?
- (c) What are the important forest types of India?
- (d) What are the important factors that determine the animal population?
- (e) Write the role of NGOs in forest management.
- (f) What are the major protected areas defined as per the Wildlife Protection Act?
- (g) What are the major provisions of the Assam Forest Regulation Act, 1891?
- (h) What is forage crop? Name four forage crops of India.
- (i) What is extension forestry? How is it related to social forestry?
- (j) What are the benefits obtained by the local communities in joining forest management?
- (k) What is forest gap model?
- (l) What are the structural properties of wood?

2. Differentiate between any *eight* of the following : 5×8=40

- (a) Progeny testing and provenance testing
- (b) Incomplete pedigree design and complete pedigree design

- (c) Seed certification and seed quarantine
- (d) National park and wildlife sanctuary
- (e) Sapwood and heartwood
- (f) Critically endangered species and vulnerable species
- (g) Social forestry and farm forestry
- (h) Forest Rights Act and Biodiversity Act
- (i) Exotic species and invasive species
- (j) Seedling seed orchard and clonal seed orchard

3. Answer any *five* questions from the following : 8×5=40

- (a) What is progeny test? Write the objective of progeny testing in tree improvement programme.
- (b) How is the Forest Conservation Act is effective in protection of forest cover of the country? Explain.
- (c) Explain five possible ways for development of tribal communities of North-East India using forest resources.
- (d) Explain different methodologies used in the study of animal population.
- (e) Discuss the importance of cost benefit analysis in forestry.
- (f) Write the objectives and methods of forest valuation.

4. Answer any *four* questions from the following : 10×4=40

- (a) What are the desired characters of the trees selected for agroforestry systems? Name any six multipurpose trees used commonly in agroforestry system in North-East India.
- (b) Explain the procedure for diagnosis and design of agroforestry.
- (c) Explain the major provisions of the Indian Forest Act, 1972. What is the role of Forest Settlement Officer prescribed in the Act?
- (d) What are the objectives of tree improvements? Write the utility of hybrid vigour in tree breeding.
- (e) Discuss the role of cottage industries in utilization of forest resources.

5. Answer any *two* questions from the following : 20×2=40

- (a) Write the characteristic features and compositions of the following forest types of North-East India :

- (i) Tropical rainforest
 - (ii) Subtropical evergreen forests
 - (iii) Broad-leaved temperate forests
 - (iv) Secondary forests.
- (b) Describe briefly the silvicultural management practices of the following trees :
- (i) *Shorea robusta*
 - (ii) *Dalbergia sisso*
 - (iii) *Gmelina arborea*
 - (iv) *Mesua ferrea*
- (c) What are the objectives of forest classification? Classify forests on the basis of different criteria used with definition of each class.
6. Write notes on any *four* of the following : 10×4=40
- (a) Wood-based industries
 - (b) Forest dynamics
 - (c) Social organization and behaviour of animal
 - (d) Environmental effects of shifting cultivation
 - (e) Woodworking tools
7. What do you mean by non-timber forest products (NTFPs)? With examples, classify the NTFPs as per their utilization. Discuss the importance of NTFPs in the life and socio-economic development of tribals. 40
8. Explain different provisions of the current National Forest Policy of India. How is the forest policy effective in the management and utilization of forests of the country? 40
9. Explain the major characteristic features of five families from the following : 40
- (i) Verbenaceae (ii) Combretaceae (iii) Coniferae (iv) Graminae (v) Leguminosae (vi) Guttiferae
10. Why is seasoning of wood essential? Explain the general principle of seasoning. Discuss the common defects encountered after harvesting of wood. 40