

Time : 3 hours

Full Marks : 200

Instructions :

- (1) Answer Question No. 1 which is compulsory and any other **nine** questions from the remaining.
- (2) The figures in the margin indicate full marks for the questions.

1. "Nature has endowed Arunachal Pradesh with diverse forests and wildlife." Justify the statement indicating the various forest types, varied forests resources as well as diverse wildlife of the State. 10+5+5=20
2. What is meant by agroforestry? What are the major components of agroforestry system? Specify the advantages of agroforestry programmes. 4+8+8=20
3. "Remote sensing is of paramount importance in forest management." Justify the statement indicating the role of remote sensing in forest planning and management. 10+10=20
4. Distinguish between the following (any *eight*) : 2½×8=20
- (a) Provenance testing and Progeny testing
- (b) Biotic and Abiotic factors in forest ecosystem
- (c) Coppicing and Pollarding
- (d) Afforestation and Deforestation
- (e) Seed scarification and Seed stratification
- (f) Tropical rain forests and Temperate deciduous forests
- (g) Ecology and Environment
- (h) Pruning and Thinning
- (i) Root suckers and Rhizomes

5. State the prime objectives of National Forest Policies. Justify the necessities of enacting forest laws. 10+10=20
6. "Minor forest products also play significant role in augmenting forest economy." Justify the statement indicating various minor forest products as well as preparing the list of varied components. 10+10=20
7. "Forest mensuration is the science of measurement applied to forest vegetation and forest products." Substantiate the statement indicating techniques of measurement of various growth parameters as well as the various mensurational instruments used. 10+10=20
8. What are the basic concepts of social forestry programme? State the economic benefits and constraints in implementation of social forestry programme. 4+8+8=20
9. Prepare a list of key factors damaging forest vegetation and forest products. Discuss in brief the various integrated control measures to combat the problems. 10+10=20
10. Prepare a list of Indian timber trees indicating common names, scientific names and specific characteristics. 8+8+4=20
11. Define the following terms in 1 or 2 sentence(s) (any *eight*) : 2½×8=20
- (a) Annual ring
 - (b) Clone
 - (c) Dendrology
 - (d) Shellac
 - (e) Silviculture
 - (f) Stump in plant
 - (g) Biodiversity
 - (h) Wood seasoning
 - (i) Seed certification

12. Write brief notes on any *four* of the following :

5×4=20

- (a) Forest fire prevention
- (b) Principles of wildlife conservation
- (c) Forest tribology
- (d) Wood preservatives
- (e) Role of forest in watershed management
