

ARUNACHAL PRADESH PUBLIC SERVICE COMMISSION

AGRICULTURE PAPER - I

Time: 3 (Three) hours

Full marks: 100

(Group - A is compulsory. Attempt any FOUR questions from Group - B).

GROUP - A

(This Group is COMPULSORY)

Q. 1. Attempt any 10 (ten)

10x2=20

- a. What do you mean by sustainable management of natural resources?
- b. How does acid rainfall affect agricultural production?
- c. Explain what is meant by "Cropping pattern" ?
- d. What are the merits of Mixed farming?
- e. Define soil fertility and soil health.
- f. What are the different types of nitrogenous fertilizers?
- g. Write a note on regulated market.
- h. Distinguish between fixed cost and variable cost.
- i. Distinguish between bulk density and particle density.
- j. What are the advantages of inter-cropping?
- k. What is farm layout? How it is helpful in Farm management?
- l. What do you mean by cropping intensity?

GROUP - B

(Answer any Four.)

Q.2. Answer any 8 (eight) of the following questions.

2.5x8=20

- a) Explain what do you mean by Market Integration.
- b) Distinguish between Grading and standardization.
- c) What is climate resilient agriculture?
- d) What do you understand by training in relevance to Extension workers?
- e) What are method demonstration and result demonstration? Explain.
- f) Write a short note on soil nitrogen loss through denitrification.
- g) What is monitoring?
- h) What do you mean by rehabilitation of degraded areas?
- i) Write a brief note on water harvesting and conservation.
- j) Write briefly the significance of Social forestry programme.

Q.3. Answer any 5 (five) of the following questions.

4x5=20

- a) Briefly discuss the different categories of adopter farmers?
- b) Distinguish between marketable and marketed surplus.
- c) What should be the desirable characteristics of a green manuring crop?
- d) What are the major pollutants that lead to global warming? Discuss.
- e) What are the adverse effects of acid soils on plant growth?

- f) Write a note on the importance of agro-silviculture system. How can it be integrated into a farming system?
- g) "Scientific drainage system is more important in the hilly tracts of the North-East than irrigation, especially during the monsoon". Give yours views with justification.

Q.4 Answer any 4 (four) of the following questions.

5x4=20

- a) What is soil aeration? Discuss the types of aeration between atmosphere and soil.
- b) Discuss in brief the impact of high-yielding and short duration varieties on shifts in cropping pattern in Arunachal Pradesh.
- c) How do you classify natural resources based on renewability? Explain with suitable examples.
- d) What are the different types of Factor-Product Relationships? Explain in brief.
- e) "Sustainable agriculture implies, among other things, conservation of natural resources and ecology". Give your comments.

Q.5 Answer any 2 (two) of the following questions.

10x2=20

- a) Write a brief note on management practices followed in reclamation of saline and alkaline soils.
- b) Define Integrated Farming System (IFS). What are the major components of IFS? Discuss the advantages of IFS.
- c) How does pH affect nutrient availability and plant growth? Describe the concept and mechanism of ion exchange in soil.

Q.6. Answer any 4 (four) of the following questions.

5x4 = 20

- a) Write the factors responsible for soil erosion. Explain the agronomic measures followed to control it.
- b) Discuss the various mechanisms followed for cultural and biological control of weeds.
- c) What is private extension? Give the names of the agencies involved in this type of technology dissemination.
- d) State the processes involved in reproduction and dissemination of weed seeds. What practices will you suggest for preventing introduction and spread of weeds?
- e) Discuss about the package of practices of two major oilseeds crops grown in Arunachal Pradesh.

Q.7. Explain the criteria for scheduling irrigations. Write about the ways and means of reducing run-off losses of irrigation waters.

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Q.8. Discuss climatic parameters in relation to agro-ecosystem. What are major threats to agro-ecosystems?

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Q.9. What is integrated nutrient management? Briefly discuss about the mineral and organic constituents of soils and their role in maintaining soil productivity.

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Q.10. Write short notes on, any 4(Four)

5x4 = 20

- a) Wind breaks
- b) AGMARK
- c) Rainfed agriculture
- d) Landslide controls
- e) Green house effect