

ARUNACHAL PRADESH PUBLIC SERVICE COMMISSION

AGRICULTURE PAPER – II

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. Answer any 10 (ten) of the following questions.

2x10=20

- What is induced mutations?
- State the two most important abiotic factors for proliferation of store grain pests?
- Write a short note on staining of bacteria.
- List the major approaches of breeding for draught resistance varieties.
- What do you understand by 'dumping off' of seedlings?
- Distinguish between andromonoecious and gynomoecious vegetables.
- Mention the important nematode pests of rice.
- Describe the characteristics of viroids.
- Distinguish between seed viability and seed vigour.
- Write a note on "intergeneric hybridization".
- State the uses of papaine?
- Write a brief note on "CAM mechanisms".

GROUP – B

(Answer any Four.)

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

2.5x8=20

- State the major fruits grown in Arunachal Pradesh?
- Distinguish between monogenic and polygenic traits.
- What do you mean by incompatibility? Discuss in brief.
- Explain vernalization in the context of plants.
- State the laws of heredity.
- What is surface tension? What is its role in plant life?
- What are enzymes? How enzymes are classified?
- What are the different types of reproduction found in fungus?
- What do you mean by "IPM"? How it is helpful in agriculture?
- What is cucurbitacin? Describe measure(s) to be adopted to counter the effects of cucurbitacin.

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

4x5=20

- What is photosynthesis? Discuss the modern concept of photosynthesis.
- What are the characteristics of clonally propagated crops? Discuss.
- Distinguish between aerobic respiration and anaerobic respiration.
- Describe the disease cycle of late blight of potato which results in year after year infection along with the causal organism.
- What are the causes of seed dormancy? Discuss.
- Discuss the role of cytokinin in cell division.
- Explain; any 2(two)
 - Cole crops
 - Panama disease
 - Sex-pheromone

