

FS – 3 / 15-16

Agriculture

Paper – I

Time : 3 hours

Full Marks : 200

The figures in the right-hand margin indicate marks.

Candidates should attempt Q. No. 1 from

Section – A and Q. No. 5 from Section – B

*which are compulsory and any **three** of*

the remaining questions, selecting

*at least **one** from each Section.*

SECTION – A

1. Write short notes on any **four** of the following in about **150** words each : $10 \times 4 = 40$

(a) Integrated weed management

(b) Management of problem soils

(c) Essential and beneficial plant nutrient

(d) Agro-forestry

(e) Irrigation water quality

2. (a) What are likely losses of nitrogen in low land rice soil ? Explain how these losses occur. 4+10 = 14
- (b) Discuss the steps you should taken to minimize these losses and increase use efficiency of nitrogen applied to low land rice. 14
- (c) Suggest an integrated nitrogen management technique for higher productivity of rice. 12
3. (a) What are the common aberrations in rainfed agriculture ? Suggest contingent crop plan and other strategies for mitigating early, mid and late season drought in rice based cropping system. 5+15 = 20
- (b) Define watershed with its objectives. Suggest the management practices you would recommended to increase crop productivity in dryland on a watershed basis. 5+15 = 20
4. (a) Write, in brief, the criteria of scheduling irrigation to filed crops, giving particular emphasis on soils based and climatological based approaches. 20

(b) How does water use efficiency related to crop productivity and crop production ?
Suggest the measure to increase the water use efficiency of a particular crop.

10+10 = 20

SECTION - B

5. Write short notes on any **four** of the following in **150** words each :

10×4 = 40

- (a) Natural resource conservation
- (b) Farm mechanization
- (c) Co-operative in rural agriculture
- (d) Agriculture export zone
- (e) Scope of Second Green Revolution

6. (a) Crop diversification means what ? Briefly discuss the opportunities and impact of crop diversification in Indian Agriculture. 20

(b) How do environmental factors like temperature, rainfall and dry length under changing climatic scenario affect the distribution and adoption of crop ? 20

7. (a) What are the essential elements for Farm Planning ? Explain the characteristics and basic steps of Farm planning. 7+7 = 14
- (b) What are the factors considered for determining the size of farm ? Discuss the inverse relationship between size of farm and output per acre. 7+7 = 14
- (c) Do you think that agricultural markets in India are efficient ? If yes, why ? If no, what measure do you suggest to improve the efficiency of agricultural markets ? 12
8. (a) Explain the role of Extension Education in achieving self sufficiency in food production and livelihood generation in agricultural sector. 10+10 = 20
- (b) The twin problems poverty and unemployment in rural sector needs multi-sectoral approach. Suggest how these problems are effectively handled through integrated Rural Development Programme. 20

