

M.Sc. (Ag.) Examination, 2018
Semester-II
Agronomy
Course - AGR-507
(Agronomy of Major Cereals)

Time: Three Hours

Full Mark: 50

Questions are of value as indicated in the margin

Answer **any five** questions

1. What are the nutritional qualities of maize grain? Discuss briefly about Maize cultivation with special reference to sowing, fertilizer application, irrigation and weed management. 2+8
2. What are advantages of puddling in transplanted rice cultivation? How age of seedling and planting geometry affects rice cultivation? Write down the method of raising rice seedling in wet nursery bed. 4+2+4
3. Answer **any four** of the questions: 2.5×4=10
 - (i) How green manuring is done for low land rice system?
 - (ii) What are the agro techniques to make late sowing of wheat a success?
 - (iii) Why urea fertilizer is incubated before application in submerged rice field?
 - (iv) What are the quality considerations for barley?
 - (v) Why yield of rice is more in temperate region than tropical region?
 - (vi) What is the temperature requirement of wheat in their different growth stages?
 - (vii) What are the critical stages of irrigation for barley?
4. (a) Enumerate the method of wheat cultivation with special reference to variety, sowing, manures and fertilization.
(b) What are the problems of wheat cultivation in West Bengal? How irrigation scheduling is done in wheat? Why CRI stage is considered the most critical stage for irrigation of wheat? (1+2+3)+(2+1+1)
5. Justify the following statements (**any four**): 2.5×4=10
 - (i) Maize is an indicator plant for Zn.
 - (ii) Barley can fit into areas having limitations of inputs and environment.
 - (iii) Rice can be grown in wide range of climate but wheat cannot.
 - (iv) Barley for malt purpose.
 - (v) Average rice yield in India is much lower than China.
 - (vi) The yield of winter maize is higher than rainy season maize.
6. Write short notes on the following (**any four**): 2.5×4=10
 - (i) Maize-based intercropping.
 - (ii) Utera cropping in rice fallow.

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- (iii) Critical stages of irrigation in rice.
- (iv) Classification of barley based on arrangement of spikelets on rachis.
- (v) Cold injury in seedlings of boro rice nursery.
- (vi) System of wheat intensification (SWI).

7. Distinguish between the following (*any four*): 2.5×4=10

- (i) India rice vs Japonica rice.
- (ii) Tall and dwarf wheat.
- (iii) Pop corn and Pod corn.
- (iv) Photo sensitive and photo non-sensitive rice.
- (v) Rainfed and irrigated barley.
- (vi) Spring wheat and winter wheat.

8. Write down short notes on (*any four*): 2.5×4=10

- (i) Baby corn.
 - (ii) FIRBS.
 - (iii) Beushening in rice cultivation.
 - (iv) Wheat cultivation under minimal tillage.
 - (v) Growth stages of rice.
 - (vi) Split application of N in rice field.
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