

M.Sc. (Ag.) Semester-II Examination 2017

Agronomy

Course : AGR 507

(Agronomy of Major Cereals)

Time : 3 Hours

Full Marks : 50

Questions are of value as indicated in the margin

Answer **any five** questions

1. (a) Describe different growth stages of rice with different phenomenon that occur in each stage.
(b) Write about weed management in *Kharif* rice.
(c) What do you understand by rice ecosystem?
(d) Discuss N transformations in a submerged soil using schematic diagram. 3+3+2+2=10
2. (a) Classify wheat on the basis of growth habit and use.
(b) Discuss the modern production technology of wheat with reference to
(i) Sowing parameters (ii) Nutrient management
(iii) Weed management (iv) Critical stages of irrigation 2+(2+2+2+2)=10
3. (a) Write down the soil and climatic requirement of maize.
(b) Enlist the herbicides, their dose and time of application for weed control in maize.
(c) Write in short about nutrient management in maize.
(d) Write in short about the package of practices of Baby corn cultivation with special reference to (i) sowing variable and plant population (ii) nutrient management (iii) harvesting 2+2++3+3=10
4. (a) What is the importance of barley in Indian scenario?
(b) Write down the soil and climatic requirement of Barley.
(c) Discuss the modern production technology of Barley grown with reference to
(i) Sowing parameters (ii) Nutrient management (iii) Water management 2+(1+2)+(2+2+1)=10
5. Write short notes on (**any five**) : 5×2=10
 - (a) Popcorn
 - (b) Six rowed barley
 - (c) Malted Barley
 - (d) Surface seeding of wheat
 - (e) *Haveli* method of wheat cultivation
 - (f) Transplanting of wheat
 - (g) Sterility in Rice
6. (a) What do you mean by Nitrogen use efficiency?
(b) Write down the possible measures for enhancing nitrogen use efficiency under lowland rice ecosystem.
(c) Differentiate between *japonica* and *javanica* type of Rice
(d) What is the importance of Amylose in rice. 2+4+2+2=10

7. Write short notes on (**any four**) : 4×2.5=10
- (a) Growth stages of wheat
 - (b) Wheat growing zones of India
 - (c) SRI-Advantages and limitations
 - (d) Drum seeding-Advantages and limitations
 - (e) Zero till wheat
 - (f) Aerobic Rice.
8. Explain the following facts (**any four**) : 4×2.5=10
- (a) Why upland grown rice seedlings perform better after transplanting than lowland grown seedlings.
 - (b) Average rice yield of India is quite low when compared with China.
 - (c) Yield of *boro* rice is more dependent on environment than its genetic potential.
 - (d) Rice plant becomes autotrophic at physiological age of 3.7.
 - (e) Brown manuring has more advantages than green manuring.
 - (f) Yield of wheat under West Bengal condition is much less than the national average.
 - (g) Rice can tolerate submergence much better than other crops.
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