

**2023**

**AGS 5th Semester Examination**

**B.Sc. Hons. in Agriculture**

**Crop Improvement—I (Kharif Crops)**

PAPER — 505

*Full Marks : 50*

*Time : 2 hours*

*The figures in the right-hand margin indicate marks.*

*Candidates are required to give their answers  
in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

Answer from **all** the Groups as directed.

**GROUP—A**

1. Answer *any five* questions from the following :  
2×5=10

(a) What is Xenia effect?

(b) What do you mean by acclimatization?

( Turn Over )

( 2 )

- ~~(c)~~ Define ideotype.
- ~~(d)~~ Explain the 'law of homologous series'.
- (e) What is emasculation? Name different methods of emasculation.
- ~~(f)~~ Name any four wild relatives of rice.
- ~~(g)~~ Name the botanical name of pod and sweet corn.
- ~~(h)~~ What is male sterility in rice?

**GROUP—B**

2. Answer *any four* questions from the following :  
5×4=20

- ~~(a)~~ Write a short note on golden rice.
- ~~(b)~~ Differentiate among Indica, Japonica and Javanica types of rice.
- (c) Briefly explain about quality protein maize.
- ~~(d)~~ Define genetic erosion. Mention different causes of genetic erosion.
- (e) Briefly explain hybrid seed production of pigeon pea.
- ~~(f)~~ Discuss breeding targets in kharif pulse.

**( 3 )**  
**GROUP—C**

**3.** Answer *any two* questions from the following :  
10×2=20

(a) Write down the botanical name, chromosome no, mode of pollination and centre of origin of sorghum. Briefly explain about hybrid seed production of sorghum. 4+6

~~(b)~~ Explain the breeding objectives and breeding methods of rice. 5+5

(c) Name different breeding methods for asexually propagated species. Briefly explain about TGMS and PGMS systems of male sterility. Briefly explain about CGMS system of hybrid seed production. 2+4+4

~~(d)~~ What is detasseling? Why is Texas male sterility not used for hybrid seed production of maize? Explain the characteristics of teosinte and tripsacum relatives of maize. 2+3+5

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