

**GIET UNIVERSITY, GUNUPUR – 765022**

B. Sc (AG) (Fifth Semester – Regular) Examinations, December – 2020

AG 356 – CROP IMPROVEMENT-I (KHARIF) 2 (1+1)

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.**PART – A****Q.1. Fill in the blanks with suitable word / figure.****(10 x 0.5 = 5 Marks)**

- Silking generally occurs ----- (earlier/ later) than tasseling in maize.
- Centre of origin of sesamum is -----
- The first pigeonpea hybrid in the world is -----
- Papilionaceous corolla is observed in the family of ----- (Papaveraceae / Fabaceae/ Poaceae)
- Manipulation of gossypol content is an important breeding objective in -----
- Bahar is a variety of ----- crop.
- The chemical '2-AP' contributes towards ----- (aroma / blast resistance/ flood resistance) in rice.
- Stamens are enclosed by keel petals the family ----- (Fabaceae / Poaceae/ Asteraceae)
- Bristles in pearl millet impart resistance against -----
- The cotton species that covers maximum area in India is -----

Q. 2. Define (or) Explain the following in one or two sentences.**(5 x 1 = 5 Marks)**

- Dee geo woo gen
- Vertical resistance
- Quality protein maize
- Emasculation
- Genetic male sterility

Q3. Match the following**(10 x 0.5 = 5 Marks)**

Column – A		Column – B	
(a)	Lalat	(i)	stable
(b)	Ragi	(ii)	Head
(c)	Horizontal resistance	(iii)	Maize
(d)	Boll	(iv)	Philippines
(e)	Sunflower	(v)	Rice
(f)	Sesamum	(vi)	Interspecific hybrid
(g)	Tasseling	(vii)	Niger
(h)	IRRI	(viii)	Epipetalous condition
(i)	Varalaxmi	(ix)	Edible fibre
(j)	Cuscuta	(x)	Cotton

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Q4. Write True (T) or False (F) against each statement**(10 x 0.5 = 5 Marks)**

- a. Ajaya and Rajalaxmi are hybrids of rice.
- b. Protogynous condition is seen in maize.
- c. CGMS has been adopted for development of hybrids in rice.
- d. Genetic advance is not dependent on heritability of a character.
- e. Maize is believed to have originated from teosinte
- f. Centre of origin of tetraploid cotton is India.
- g. Gradual loss of variability in cultivated forms and their wild relatives is called genetic erosion.
- h. Pureline selection is also practised in cross pollinated crops for inbred production.
- i. Divergent parents generally show more heterosis.
- j. ICRISAT is situated in Italy.

PART – B**Attempt ANY FIVE questions. All question carries equal marks****(6 x 5 = 30 Marks)**

5. Write down emasculation technique and breeding objectives of groundnut.
6. Explain 3-line system of heterosis breeding in rice.
7. Define hybrid. Briefly describe different types of hybrids in maize.
8. Explain ideotype breeding.
9. Explain lint quality parameters and breeding objectives of cotton.
10. Write scientific name, family, chromosome number, floral biology and major breeding objectives of sesamum.

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