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.

<u>PART – A</u>

Q.1. Fill in the blanks with suitable word / figure.

a. Silking generally occurs -----(earlier/later) than tasseling in maize.

b. Centre of origin of sesamum is -----

c. The first pigeonpea hybrid in the world is ------

- d. Papilionaceous corolla is observed in the family of----- (Papaveraceae / Fabaceae/Poaceae)
- e. Manipulation of gossypol content is an important breeding objective in ------

AR- 17

- f. Bahar is a variety of ----- crop.
- g. The chemical '2-AP' contributes towards -----(aroma / blast resistance/ flood resistance) in rice.
- h. Stamens are enclosed by keel petals the family------ (Fabaceae / Poaceae/ Asteraceae)
- i. Bristles in pearl millet impart resistance against ------
- j. The cotton species that covers maximum area in India is ------

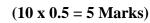
Q. 2. Define (or) Explain the following in one or two sentences.

- a. Dee geo woo gen
- b. Vertical resistance
- c. Quality protein maize
- d. Emasculation
- e. Genetic male sterility

Q3. Match the following

$(10 \times 0.5 = 5 \text{ Marks})$

| 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 |



(5 x 1 = 5 Marks)

The figures in t

Q4. Write True (T) or False (F) against each statement

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 <u>ANY FIVE</u> questions. All question carries equal marks

 $(6 \times 5 = 30 \text{ Marks})$

- 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.

--- End of Paper ---

 $(10 \times 0.5 = 5 \text{ Marks})$