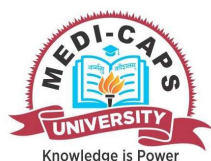


Total No. of Questions: 6

Total No. of Printed Pages: 2

Enrollment No.....



Faculty of Agriculture
End Sem (Even) Examination May-2022
AG3CO48 Crop Improvement -II (Rabi Crops)
Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

Duration: 3 Hrs.

Maximum Marks: 50

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. The centre of origin of Wheat is- **1**
(a) South-West Asia (b) South-East Asia
(c) Asia Minor and Afghanistan (d) Mexico
- ii. 'Halianthusannus' is a botanical name of- **1**
(a) Safflower (b) Sunflower (c) Sesame (d) Soybean
- iii. In the full form of NBPGR, B stands for- **1**
(a) Breeding (b) Board (c) Botanical (d) Bureau
- iv. Land races refers to- **1**
(a) Primitive cultivars (b) Obsolete cultivars
(c) Modern cultivars (d) Mutant lines
- v. Insect resistance which is governed by one or few major gene is **1**
known as.....
(a) Oligogenic resistance (b) Polygenic resistance
(c) Cytoplasmic resistance (d) Multigenic resistance
- vi. A organism that produce disease is called _____. **1**
(a) Host (b) Pathogen
(c) Pathogenicity (d) Disease
- vii. A cross between two inbred lines is called _____. **1**
(a) Poly cross (b) Test cross
(c) Single cross (d) Top cross
- viii. Synthetic and composite varieties mostly relevant to- **1**
(a) Self-pollinated (b) Cross pollinated
(c) Both self and cross pollinated (d) Hybrid crop

P.T.O.

[2]

- ix. Who developed the concept of crop ideotype? **1**
(a) G. Mendal (b) Batson and Crick
(c) Donald (d) Johanson
- x. A short strong stem is reducing the losses due to lodging in which **1**
crop-
(a) Pearlmillet (b) Redgram
(c) Wheat (d) Sorghum
- Q.2 i. Which scientist gives centre of origin? **1**
ii. Write name of any two centre of origin. **2**
iii. Difference between primary centre of origin and secondary centre of **5**
origin.
- OR iv. Explain centre of origin and centre of diversity with examples. **5**
- Q.3 i. Define gene pool. **1**
ii. What are the important features of plant genetic resources? **3**
iii. What is germplasm collection and its type? **4**
- OR iv. What is conservation and explain its types? **4**
- Q.4 i. What is mutation breeding? **2**
ii. What is abiotic stress? Also write its mechanism. **6**
- OR iii. What is disease resistance? Also describe types of resistance? **6**
- Q.5 i. Define synthetic variety. **2**
ii. What is hybrid? **2**
iii. Write hybrid seed production technique in any Rabi season crop. **4**
- OR iv. Enlist different breeding technique in self and cross-pollinated **4**
crops.
- Q.6 Attempt any two:
i. Write different characteristics related to ideotype breeding for **4**
wheat.
ii. Explain ideotype breeding in detail. **4**
iii. Write merits of ideotype breeding. **4**

Marking Scheme
AG3CO48 Crop Improvement -II (Rabi Crops)

Q.1	i.	The centre of origin of Wheat is-		1
		(a) South-West Asia		
	ii.	'Halianthusannus' is a botanical name of-		1
		(b) Sunflower		
	iii.	In the full form of NBPGR, B stands for-		1
		(d) Bureau		
	iv.	Land races refers to-		1
		(a) Primitive cultivars		
	v.	Insect resistance which is governed by one or few major gene is known as.....		1
		(a) Oligogenic resistance		
	vi.	A organism that produce disease is called_____.		1
		(b) Pathogen		
	vii.	A cross between two inbred lines is called_____.		1
		(c) Single cross		
	viii.	Synthetic and composite varieties mostly relevant to-		1
		(b) Cross pollinated		
	ix.	Who developed the concept of crop ideotype?		1
		(c) Donald		
	x.	A short strong stem is reducing the losses due to lodging in which crop-		1
		(c) Wheat		
Q.2	i.	Scientist name (N. I. VAVILOV)	1 Mark	1
	ii.	Two centre of origin names	2 Marks	2
	iii.	5 Difference	1 Mark each	5
			(1 Mark*5)	
OR	iv.	Explain centre of origin with examples.	2 Marks	5
			0.5 Mark	
		Explain centre of diversity with examples.	2 Marks	
			0.5 Mark	
Q.3	i.	Definition	1 Mark	1
	ii.	Features of plant genetic resources	3 Marks	3
	iii.	Definition of germplasm collection	1 Mark	4
		Types	3 Marks	

OR	iv.	Definition of conservation Types	1 Mark	4
			3 Marks	
Q.4	i.	Definition and 1 example	2 Marks	2
	ii.	Definition of abiotic stress with example Mechanism.	2 Marks	6
			4 Marks	
OR	iii.	Disease resistance definition	1 Mark	6
		Types of resistance and description	5 Marks	
Q.5	i.	Definition	2 Marks	2
	ii.	Definition	2 Marks	2
	iii.	Procedure writing	4 Marks	4
OR	iv.	Enlist different breeding technique in self crops	2 Marks	4
		Cross-pollinated crops.	2 Marks	
Q.6		Attempt any two:		
	i.	Characteristics	4 Marks	4
	ii.	Ideotype breeding in detail.	4 Marks	4
	iii.	Merits of ideotype breeding.	4 Marks	4
