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GPB-366 Crop Improvement II (Rabi crop)

* Tentative questions for semester end theory examination *.

Section 'A'

1) Define Plant genetic resources. Explain important features of plant genetic resources.
2) Define germplasm. Explain various kinds of germplasm.
3) Define genepool. Give the classification of genepool.
4) Define germplasm conservation. Explain the methods of germplasm conservation.
5) Short notes on.
   a) IPGRI
   b) NBPGR
   c) Types of seed collections
   d) Exploration
6) Define Adaptability. Explain various types of Adaptation.
7) Define stability. Enlist various models of stability analysis. & Explain any one in detail.
8) Describe hybrid seed production techniques in Sunflower with following points.
   a) Isolation distance
   b) Planting ratio
   c) Seed standard
   d) Hybrids
   e) Rouguing
   f) Harvesting
   g) Field standard
9) Explain hybrid seed production techniques in safflower with following points.
   a) Planting ratio
   b) Isolation distance
   c) Rouguing
   d) Agronomic practices
   e) Plant protection measures
   f) field inspection

10) Explain hybrid seed production techniques in castor with following points.
a) Land requirement
b) Isolation distance
c) Season
d) Seed and sowing
e) Spacing
f) Planting ratio
g) Inspection
h) Harvesting
i) Field standards
j) Seed storage
k) Hybrids
l) Seed standards

11) Explain hybrid seed production techniques in Rabi sorghum with following points.
a) Stages of seed production
b) Popular hybrids
c) Isolation distance
d) Seeds & sowing
e) Manures and fertilizers
f) Roguing
g) Field standards
h) Threshing
i) Drying
j) Processing
k) Seed yield
l) Seed standard

12) What do you mean by Ideotype? Explain various steps in Ideotype development.

13) What are different types of Ideotype. Explain ideotypes for a) wheat b) rice c) maize d) sorghum e) cotton.

14) What is climate resilient crop varieties. ? Explain. Enlist various climate resilient crop varieties of wheat, rice, maize, sorghum and cotton.

15) Complete the following table

	Centre of origin.	Distribution of species.	Wild relatives	Breeding objectives	Breeding procedures	Hybrids/ Varieties
a) Wheat						
b) Oat						
c) Barley						
d) Chickpea						
e) Sunflower						
f) Safflower						

16) Complete the following table

	Centre of origin	Distribution of species	Wild relatives	Breeding objectives	Breeding procedures	Hybrids/ Varieties
a) Linseed						
b) Rapeseed						
c) Mustard						
d) Napier's						
e) Bajra						
f) Sorghum						
g) Maize						
h) Berseem						
i) Sugarcane						
j) Potato						
k) Fieldpea						
l) Mango						
m) Aonla						
n) Guava						

Q. 17) Explain methods of crop improvement in wheat with following points.

a) Centre of origin b) Distribution of species
c) Wild relatives d) Floral biology
e) Major breeding objectives f) Major breeding procedures
g) Hybrids and varieties.

Q. 18. Explain methods of crop improvement in chickpea with following points.

a) Centre of origin b) Distribution of species
c) Wild relatives d) Floral biology.
e) Major breeding objectives f) Major breeding procedures
g) Hybrids & varieties.

19) Short notes on.

a) Germplasm utilization
b) Climate resileience crop varieties.
c) Orthodox and Recalcitrant seeds
d) Ideotype concept
e) Hybrid seed production techniques.

Section 'B'

20) Define the following terms

a) Plant genetic resources
b) land races
c) Obsolete cultivars
d) Modern cultivars
e) Advanced breeding lines.
f) Mutants
g) Genepool
h) Primary genepool
i) Secondary genepool
j) Tertiary genepool
k) Base collection
l) Active collection
m) Working collection
n) Core collection
o) Exploration
p) Germplasm conservation
q) Insitu conservation
r) Exsitu conservation
s) Orthodox seed
t) Recalcitrant seed
u) Hybrid
v) A - line
w) B - line
x) R - line

i) Ideotype
ii) Crop ideotype
iii) Isolation Ideotype
iv) Compilation Ideotype
v) Climate resisleince crop variety
vi) Adaptability
vii) Stability
viii) Adaptation
xi)

Refer Book Rajalakshmi Publications
Crop Improvement II
(Crop Improvement)
(Rabi crop)
By. Dr. G. Togale.
Dr. S. Vitthor.