

Crop Improvement-II (Fibre, Sugar, Starches, narcotics, vegetables, fruits and flowers) -ASPG 3205

Credit hour: 1+1

One mark questions

1. Origin of diploid wheat is _____ (Asia minor)
2. _____ is probably the ancestor for all the cultivated wheats (*T. boeoticum*)
3. International Maize and Wheat improvement Centre (CIMMYT) is located at _____ (Mexico)
4. Directorate of Wheat Research (DWR) is located at _____ (Karnal)
5. The semi dwarf varieties of wheat have been developed through the use of Japanese line _____ as a source of dwarfing gene (Norin 10)
6. Origin of Sugarcane (*Saccharum officinarum*) _____ (India)
7. _____ is also known as noble cane (*S. officinarum*)
8. The wild progenitor for *S. officinarum* is _____ (*S. robustum*)
9. The major sugarcane varieties which are found to be resistant to red rot disease are _____ (Co 1148, 1336, 6304, Co 5659, CoS 698)
10. Indian Institute of Sugarcane Research located at _____ (Lucknow)
11. According to Vavilov (1926) origin of chickpea is _____ (S.W. Africa and Mediterranean)
12. Sunflower (*Helianthus annuus*) chromosome number is _____ ($2n=34$)
13. Directorate of Oil seed Research (DOR) is located at _____ (Hyderabad)
14. Seeds of mustard (*Brassica nigra*) contain _____ per cent oil (40 – 45)
15. In Brassica removal of _____ toxin make them edible (Erucic acid)
16. National Research Centre for Mustard (NRCM) is located at _____ (Bharatpur-Rajasthan)
17. Barley scientifically called as _____ (*Hordeum vulgare*)
18. Barley chromosome number is _____ ($2n=14$)
19. Origin of Berseem *Trifolium alexandrium* is _____ (Egypt)
20. *Nicotiana tabacum* ($2n=48$) is a native of _____ (America)
21. Okra Lady's finger (*Abelmoschus esculentus*) chromosome number is _____ ($2n=130$)
22. Origin of Okra is _____ (India)
23. Origin of mari gold (*Tagetes erecta* L) is _____ Mexico
24. Chromosome number of mari gold (*Tagetes erecta* L) is _____ ($2n = 24$)
25. Origin of Banana (*Musa paradisiaca*) is _____ (Tropical Asia)
26. Adverse conditions for crop growth caused by biological or environmental factors is _____ (Stress)
27. Adverse effects due to pests and diseases abiotic stresses _____ (Biotic)
28. Adverse effects on host due to environmental factors _____ (Abiotic)
29. Plant effected by a disease or which can accommodate pathogen _____ (Host)
30. An organism that produces the disease _____ (Pathogen)
31. The ability of a pathogen to infect a host strain _____ (Pathogenicity)
32. Capacity of a pathogen to incite a disease _____ (Virulence)
33. Strains of a single pathogen species with identical or similar morphology but differ in pathogenic capabilities _____ (Physiological race)
34. Strains of a pathogen classified on the basis of their virulence to known resistance genes present in the host (Pathotype)

35. Severe and sudden out break of disease beginning from a low level of infection _____ (Epidemic)
36. The ability of susceptible host plants to avoid attack of disease due to environmental conditions _____ (Disease escape)
37. Early maturing varieties of groundnut may escape _____ disease (Tikka)
38. The ability of the plants to tolerate the invasion of the pathogen without showing much damage _____ (Disease endurance or tolerance)
39. The ability of plants to withstand, oppose or overcome the attack of pathogens _____ (Disease Resistance)
40. Resistance is largely controlled by _____ characters (inherited)
41. When the host does not show the symptoms of disease it is known as _____ reaction (immune)
42. Resistance to Jassid attack in cotton has been achieved with the _____ (hariness of varieties)
43. Resistance of grape to _____ is highly correlated with the acidity of cell sap. (powdery mildew)
44. More secondary thickening of the cell walls of resistant potato varieties resists the mechanical puncture of the _____ pathogen (*Pythium*)
45. The first study on genetics of disease resistance was done by _____ (Biffen)
46. In Oligogenic inheritance the disease resistance is governed by _____ (one or few major genes)
47. The concept of gene for hypothesis was first developed by _____ (Flor)
48. Flor based on his studies of host pathogen interaction in flax rust caused by _____ (*Malampsora lini*). proposed gene for gene hypothesis
49. _____ introduced the term vertifolia effect (Vander plank)
50. Resistance to _____ in oats was induced by irradiation with x-rays or thermal neutrons (Victoria blight)
51. Early varieties of groundnut introduced from USA have been resistant to _____ (leaf spot tikka)
52. Kalyanasona and Sonalika wheat varieties introduced from _____ (CIMMYT, Mexico)
53. Kufri Red potato is selection from _____ (Darjeeling Red round)
54. In Rice _____ are resistant to Blast (Co25, Co26)
55. In Wheat _____ resistant to all three rusts (NP 809)
56. In Wheat _____ resistant to Yellow rust (NP 785, NM86)
57. In Wheat _____ resistant to Black rust (NP 789)
58. In Wheat _____ resistant to Brown rust (NP 783, NP 784)
59. In Sugarcane _____ resistant to Red rot (Co 419, Co 421, Co 527)
60. In Cotton _____ resistant to Wilt (Vijay, Kalyan, Suyog)
61. In Groundnut _____ resistant to Tikka leafspot (Ah 45)
62. In Chilli _____ are Mosaic resistant (Pusa red, Pusa orange)
63. Strains of a species of an insect pest, differing in their ability to attack different varieties of the same host species _____ (Biotypes)
64. Insects feed on a wide range of hosts avoiding few plant species _____ (Polyphagy)
65. Insects live on one taxonomic unit only _____ (Oligophagy)
66. Insects may live on many species in one part of the year and on few in another part of the year are _____ (Seasonal oligophagy)
67. Insects avoid all hosts except one particular species or variety are _____ (Monophagy)
68. Examples of Polyphagy _____ (Scales & moths)

69. Examples of Oligophagy _____(Hessianfly on wheat)
70. Examples of Monophagy _____(Boll weevil on cotton)
71. Examples of Seasonal oligophagy _____(Aphids)
72. Host Varieties that are unattractive or unsuitable for colonization / oviposition show _____ mechanism (Non preference)
73. _____ refers to an adverse effect of feeding on a resistant host plant on the development and/or reproduction of the insect pest (Antibiosis)
74. Rice varieties tolerant to stem borer/gall midge produce _____ to compensate yield losses (additional tillers)
75. Early maturing cotton varieties escape _____ infestation (pinkboll worm)
76. In cotton Hairiness of leaves is associated with resistance to _____ (Jassids)
77. _____ sprouts are less favored than green varieties by butterflies (Red cabbage, Red leaved brussel)
78. Solid stem in wheat confers resistance to _____ (wheat stem sawfly)
79. Leaf hairs of *solanum sps.* secrete gummy exudates in which _____ get trapped in these exudates (Aphids Colorado beetles)
80. Exudates from secondary trichomes of _____ leaves have antibiotic effects on alfalfa weevil. (*Medicago disciformis*)
81. In rice, high silica content in shoots gives resistance to _____ (Shoot borer)
82. Examples for Oligogenic insect Resistance _____ (In rice plant leaf hopper)
83. Examples for Polygenic insect Resistance _____ (In wheat to cereal leaf beetle)
84. Examples for cytoplasmic insect Resistance _____ (Resistance to European corn borer in maize)
85. _____ of *G. hirsutum* are good sources of resistance to Jassids. (SRT 1, Khand waz ; DNJ 286 and B 1007)
86. Jassid resistances is known in wild relatives of cotton _____ (*G. tomentosum*; *G.anomalum* and *G.armourianum*)
87. The Cry gene of _____ is the most successful example for recombinant DNA technology (*Bacillus thuringiensis*)
88. Pedigree is used for the transfer of _____(oligogenic characters)
89. Back cross is used for the transfer of _____(Polygenic characters)
90. Glabrous strains of cotton are resistant to _____ but susceptible to Jassids (Bollworms)
91. Cotton varieties _____ resistant to boll worms (G 27, MCU 7, LRK 516)
92. In Rice _____ resistant to leaf hopper (Vijaya)
93. In Rice _____ resistant to Stemborer (TKM 6, Ratna)
94. In Rice _____ resistant to BPH (Vajram, chaitanya, Pratibha)
95. Scarcity of moisture which restricts the expression of full genetic yield potential of a plant _____ (Drought)
96. The ability of crop plants to grow, develop and reproduce normally under moisture stress _____(Drought resistance)
97. Ability of a genotype to mature early, before occurrence of drought _____(Drought Escapes).
98. The ability of plants to maintain favourable water balance even under stress _____(Drought Avoidance)

99. Traits contribute to dehydration avoidance _____ (Leaf rolling, folding and reflectance narrow leaves, increased pubescence on aerial organs , presence of awns, osmotic adjustment of stomata, cuticular wax, increased water uptake)
100. Reduced Transpiration is achieved by _____ (Increase in concentration of Abscisic Acid (ABA), closure of stomata, ABA plays role in reduction of leaf expansion)
101. Ability of plants to produce higher yield even under low water potential _____ (Drought Tolerance)
102. In cereals drought tolerance generally occur during _____ phase (reproductive)
103. Drought tolerant cultivars exhibit _____ (Better germination, seedling growth and photosynthesis)
104. Drought tolerance may be because of _____ (high proline accumulation, maintenance of membrane integrity)
105. Sum total of avoidance and Tolerance is _____ (Drought Resistance)
106. In Wheat drought resistant species are _____ (*Aegilops. Variabilis*, *Aegilops speltoide*, *Aegilops umbellulata*, *Aegilops squarrosa*)
107. In sugarcane _____ is drought and saline tolerant (*Sacharum. spontaneam*)
108. _____ is the presence of water in soil excess of field capacity. (Flooding i.e. water logging)
109. Water logging leads to _____ (deficiency of O₂, build up of Co₂, Ethylene and other toxic gases and this leads to reduction in aerobic respiration.)
110. Characteristics of plants in response to water logging stress _____ (Reduced growth / elongation., Chlorosis, senescence and abscission of lower leaves, Wilting & leaf curling, Hypertrophy (increase in size of organ due to increase in cell size)
111. Mechanisms of water logging tolerance _____ (Adventitious root formation on lower part of stem, Aerenchyma formation,)
112. Ideotype for flooded areas are _____ (Capacity to carry out functional activity at low O₂, Capacity to synthesis food rapidly, Narrow, medium long and dark green leaves with high sugar and protein content)
113. The ability of plants to prevent, reduce or overcome injurious effects of soluble salts present in their root zone _____ (Salt Tolerance)
114. Problem of salinity can be overcome by _____ (Soil reclamation, use of Resistant varieties)
115. Highly salt tolerant crop _____ (Sugarbeat, sunflower, barley, cotton)
116. Moderately salt Tolerant crop _____ (rye, soghum, wheat, safflower)
117. moderately salt sensitive crop _____ (Rice, corn, foxtail millet, cow pea)
118. Extremely salt sensitive crop _____ (**Citrus, straw berry, melon, peas**)
119. Symptoms of plants to salt stress _____ (Retardation / cessation of growth, Necrosis, Leaf abscission, Loss of turgor)
120. Central Soil Salinity Research Institute located at _____ (Karnal-Haryana)
121. When temperatures remain above _____ it is called chilling (>0⁰ C to <10⁰ -15⁰ C)
122. When temperature. remain below _____ it is called Freezing (.<0⁰ C)
123. Effects of chilling stress on plants _____ (Reduced germination, Poor seedling establishment, Stunted growth, ABA accumulation)
124. Mechanisms of chilling tolerance _____ (Membrane lipid un-saturation, Increased chlorophyll accumulation, Improved fruit / seed set, Pollen fertility)

125. Cooling of water below 0°C without ice crystal formation is called _____ (supercooling)
126. Supercooling is a mechanism of freezing avoidance it is controlled by _____ (Lack of ice-nucleators, Small cell size, Little or no intercellular space, Low moisture content)
127. Freezing Tolerance achieved by _____ (Osmotic adjustment, Plasma membrane stability, Cold-responsive proteins (ABA))
128. In Barley _____ are sources of freezing tolerance (*H. jubatum*, *H. brachyantherum* x *H. bogdanii*, *H. jubatum*)
129. The environment of a single plant or organism as opposed to that of another growing at the same time in almost the same place is known as _____ (micro environment.)
130. The environment associated with variables having large and easily recognizable effect is termed as _____ (macro-environment)
131. The differential behaviour of the genotype under varietal environmental conditions. _____ (Genotypes x Environment Interaction)
132. The capacity of genotypes to adjust themselves in a specific or particular environmental condition is _____ (Adaptation)
133. It is the close adaptation of a genotype to a limited environment _____ (Specific Genotypic Adaptation)
134. The capacity of a genotype to produce a wide range of phenotypes compatible with a range of environments _____ (General Genotypic Adaptation)
135. The capacity of a heterogeneous population to adapt to specific environment _____ (Specific Population Adaptation)
136. The capacity of heterogeneous populations to adapt to a variety of environments. _____ (General Population Adaptation)
137. The ability of a genotype to produce a relatively narrow range of phenotypes in different environments _____ (Adaptability)
138. _____ refers to its performance with respective changing environmental factors overtime within a given location. (Stability)
139. _____ is widely used model and it is relatively simple yet quite informative (Eberhart and Russell Model (1966))