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1. What is total net sown area of India?
(A) 120 mha (B) 180 mha
(C) 140 mha (D) 95 mha

 2. Share of Gross value added (GVA) of agriculture and allied sectors in total economy (%) at current prices for the year 2022-23
(A) 18.3 (B) 25.3
(C) 21.3 (D) 22.3

 3. The highest exported agricultural commodity during 2022-23
(A) Sugar (B) Rice
(C) Wheat (D) Cereals

 4. Norman E. Borlaug got Nobel Prize in the field of
(A) Peace (B) Physics
(C) Chemistry (D) Economics

 5. The headquarter of National Bureau of Soil Survey and Land Use Planning is situated at
(A) Pune (B) New Delhi
(C) Nagpur (D) Hyderabad

 6. The area of wheat in the states
(A) Uttar Pradesh > Madhya Pradesh > Punjab > Haryana
(B) Uttar Pradesh > Madhya Pradesh > Haryana > Punjab
(C) Uttar Pradesh > Punjab > Madhya Pradesh > Haryana
(D) Uttar Pradesh > Haryana > Madhya Pradesh > Punjab

 7. National Food Security Mission (NFSM) is a centrally sponsored scheme launched based on the recommendations of the agriculture sub- committee of National Development Council (NDC) during the year
(A) 2010 (B) 2020
(C) 2007 (D) 2017

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8. The somatic chromosome number of *Oryza sativa* is
- (A) $2n = 20$ (B) $2n = 12$
(C) $2n = 22$ (D) $2n = 24$
9. Which agency is involved in enhancing export of processed agri products?
- (A) DMI (B) TRIFED
(C) APEDA (D) NAFED
10. A mutation, which is not induced by a mutagenic agent, is classified as
- (A) Somatic mutation (B) Polygenic mutation
(C) Psuedo- mutation (D) Spontaneous mutation
11. Seed act was enacted during the year
- (A) 1956 (B) 1986
(C) 1966 (D) 1976
12. Which is the radiation reflecting anti-transparent?
- (A) CCC-S (B) Kaolin
(C) Mobil-Leaf (D) Phenyl mercuric acetate
13. The primary raw material used for commercial production of Muriate of potash fertilizer
- (A) Sylvite (B) Schoenite
(C) Sylvinite (D) Langbeinite
14. A cropping pattern in which the lifecycle of one crop overlaps that of another crop
- (A) Multiple cropping (B) Mixed Cropping
(C) Relay cropping (D) Inter cropping
15. The family of white fly is
- (A) Pyrolididae (B) Termitidae
(C) Aleyrodidae (D) Arctidae

16. Dead heart in sugarcane is caused by
(A) *Tryporyza nivella* (B) *Chilo partellus*
(C) *Sesamia inferens* (D) *Emmalocera depressella*
17. Sesame phyllody is caused by
(A) Bacteria (B) Phytoplasmas
(C) Viruses (D) Fungi
18. Gene to gene hypothesis of disease resistance and susceptibility was given by
(A) Erikson (B) Biffen
(C) Flor (D) Blaksle
19. Bacterial leaf blite of rice is caused by
(A) *Xanthomonas malvacerum*
(B) *Xanthomonas campestris* pv. *oryzae*
(C) *Pseudomonas rubrileans*
(D) None of the above
20. Fusarium wilt of banana is also known as
(A) Bunchy top (B) Panama disease
(C) Both (A) and (B) (D) None of these
21. Little leaf disease of Brinjal is transmitted by a vector
(A) *Hishimonus phycitis* (B) *Bemisia tabaci*
(C) *Orosius albicinctus* (D) *Aphis gossypii*
22. Synthesis of IAA in plants requires
(A) Zinc (B) Nitrogen
(C) Boron (D) Copper
23. The commercial method of propagation of guava is
(A) Air layering (B) Suckers
(C) Stem cutting (D) Seed

24. The concept of chromosomal non disjunction was given by
- (A) Bateson and Punnett (B) AH Sturtevant
(C) HE Muller (D) CB Bridges
25. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R]
Assertion [A]: In reciprocal recurrent selection, the two populations so developed can be used as synthetic variety.
Reason [R]: In reciprocal recurrent selection scheme, the GCA of both the population is improved simultaneously.
In the light of the above statement, choose the correct answer from the options given below
- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
(B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
(C) [A] is true but [R] is false
(D) [A] is false but [R] is true
26. The group of organisms which convert ammonia into nitrite and nitrite into nitrate, respectively
- (A) *Nitrosomonas, Nitrobactor* (B) *Pseudomonas, Azotobactor*
(C) *Agrobacterium, Bacillus* (D) *Streptomyces, Nocardia*
27. How many percent of water loss in plant through Stomatal transpiration?
- (A) 20 % (B) 60 %
(C) 80 – 90 % (D) 75 %
28. Plant hormone causing abscission of leaves, senescence and inhibition of cell division is
- (A) IAA (B) Ethylene
(C) Cytokinins (D) ABA
29. A social forest tree is
- (A) Teak (B) Sandal wood
(C) Subabul (D) Rose wood

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30. Agricultural Price Commission was constituted in the year
- (A) 1955 (B) 1965
(C) 1975 (D) 1985
31. If grain yield is 45 q and water consumed is 40 cm, what will be the water use efficiency?
- (A) 10.25 kg/ ha mm (B) 11.25 kg/ ha mm
(C) 12.25 kg/ha mm (D) 13.25 kg/ha mm
32. *Ricinus communis* L. is the botanical name of
- (A) Linseed (B) Castor
(C) Sawan (D) Toria
33. Agroforestry plant most suited for silk industry is
- (A) *Morus alba* (B) *Ricinus communis*
(C) *Gossypium spp* (D) None of these
34. Triazine herbicides are said as notorious herbicides because of there
- (A) Non- selectiveness (B) Short residual toxicity
(C) Long residual toxicity (D) None of these
35. Which clay among the following has highest CEC?
- (A) Illite (B) Halloysite
(C) Kaolinite (D) Both (A) and (C)
36. Available form of phosphorus ions in soil is
- (A) Phosphorus chloride (B) Phosphorus nitrate
(C) Phosphorus sulfite (D) Phosphoric acid
37. Radioactive tracer technique is used for determining
- (A) Translocation of minerals in plants (B) Cation exchange capacity of soil
(C) Both (A) and (B) (D) None of these

38. The restorer line is represented as
- (A) R-line (B) A-line
(C) B- line (D) C- line
39. First variety of mustard developed through biotechnology by somatic hybridization is
- (A) Kisan (B) M-18
(C) Pusa Kalyan (D) Pusa Jai Kisan
40. Cross pollination is promoted in flowering plants by
- (A) Male sterility (B) Self-incompatibility
(C) Both (A) and (B) (D) None of these
41. ATP synthesis occurs in
- (A) Chloroplast (B) Mitochondria
(C) Nucleus (D) Chloroplast and mitochondria
42. Protandry are found in
- (A) Maize (B) Sugar beets
(C) Both (A) and (B) (D) Bajra
43. What will be the weight of one cotton bale?
- (A) 150 kg (B) 170 kg
(C) 160 kg (D) 180 kg
44. The genetic constitution of *Gossypium hirsutum* is
- (A) AADD (B) BB
(C) DD (D) AAKK
45. Complementary gene produces phenotypic ratio
- (A) 9 : 7 (B) 13 : 3
(C) 15 : 1 (D) 9 : 3 : 3 : 1

46. The scientific name of pink boll worm is
- (A) *Lipaphis erysimi* Kalt (B) *Pectinophora gossypiella* Sound
(C) *Earias vitella* (D) *Athaliaproxima* Klug
47. Which of the following is carbamate pesticide?
- (A) Phorate (B) TEPP
(C) Carbofuran (D) Heptachlor
48. Downy mildew fungi are
- (A) Only seed borne (B) Only soil borne
(C) Both (A) and (B) (D) None of these
49. Red rot of sugarcane is caused by
- (A) Fusarium (B) Dreschlera
(C) Alternaria (D) Colletotrichum
50. The total fixed cost curve
- (A) Increase with the level of output
(B) Decrease as output increase
(C) Remain constant at all the output level
(D) None of these
51. The Central Agmark Lab is located at
- (A) Nagpur (B) Mumbai
(C) Kolkata (D) Bangalore
52. Which of the following is a species of Egyptian cotton or Sea Island cotton?
- (A) *Gossypium arboreum* (B) *Gossypium barbadence*
(C) *Gossypium hirsutam* (D) *Gossypium herbaceum*
53. Hygroscopic water is retained in soil at
- (A) 31 bar (B) 15 bar
(C) 1000 bar (D) 0.3 bar

54. Diamond back moth is the serious pest of
- (A) Bottle gourd (B) Tomato
(C) Cauliflower (D) Pea
55. Which of the following fungi produces aflatoxin?
- (A) *F.oxysporum* (B) *A.niger*
(C) *A.flavus* (D) *P.notatum*
56. In photosynthesis, light is an important because it produces
- (A) Sugar, O₂ and ATP (B) Hydrogen, O₂, and formaldehyde
(C) Hydrogen donor, O₂ and ATP (D) O₂ donor, H₂ and ATP
57. Black soils of central high land and plateaus have high content of
- (A) Kalolinite (B) Montmorillonate
(C) Vermiculite (D) Elite
58. A disease occur at a particular area regularly is termed as
- (A) Epidemic (B) Endemic
(C) Both (A) and (B) (D) None of these
59. One ppm is equal to
- (A) 0.1 % (B) 0.01%
(C) 0.001% (D) 0.0001%
60. Which of the following is a C₄ plant?
- (A) Sugarcane (B) Napier grass
(C) Amaranthus (D) All of these
61. Most preferable N fertilizer for paddy crop is
- (A) Ammonium nitrate (B) Ammonium sulphate
(C) Urea (D) CAN
62. Which of the following wheat growing zone enjoy longest and coolest winter?
- (A) North western plains (B) North eastern plains
(C) Central zone (D) Peninsular zone

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63. The cultivation practices based on GIS, GPS and RSS is termed as
- (A) Conservation agriculture (B) Multistoried farming
(C) Precision farming (D) All of these
64. The increase in production per unit time and area from intensive cropping system is termed as
- (A) Vertical growth (B) Horizontal growth
(C) Linear growth (D) Cubical growth
65. Topping in safflower crop is aimed at
- (A) To reduce the lodging
(B) To reduce the water losses
(C) To promote branching and flowering
(D) To reduce losses of seed and fruits
66. 2,4- D is abbreviated as
- (A) 2,4 di phenolic acid (B) 2,4 dichlorophenoxy acetic acid
(C) 2,4 di phenoxy acetic acid (D) None of these
67. A form of soil erosion resulting from soil splash under the impact of falling rain drops is termed as
- (A) Sheet erosion (B) Rill erosion
(C) Splash erosion (D) Gully erosion
68. Which of the following is most controlling factor for soil temperature?
- (A) Soil texture (B) Soil structure
(C) Soil consistence (D) Soil moisture
69. Phosphorus deficiency in plant appears at first in
- (A) Younger leaves (B) Older leaves
(C) Both (A) and (B) (D) None of these

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70. Which of the following are the characteristics of saline soils?
- (A) $EC > 4 \text{ ds/m}$, $ESP < 15$, $pH < 8.5$
(B) $EC < 4 \text{ ds/m}$, $ESP > 15$, $pH > 8.5$
(C) $EC < 4 \text{ ds/m}$, $ESP < 15$, $pH > 8.5$
(D) None of these
71. Mendel's second law is
- (A) Dominance (B) Polygenic inheritance
(C) Segregation (D) Independent assortment
72. Chromosomes are made up of
- (A) DNA + Pectin (B) RNA + DNA
(C) DNA only (D) DNA + Histone
73. Cross between hybrid and recessive parent is termed as
- (A) Monohybrid cross (B) Dihybrid cross
(C) Test cross (D) Back cross
74. Which of the following is a hexaploid species of wheat?
- (A) *Triticum aestivum* (B) *Triticum monococcum*
(C) *Triticum durum* (D) *Triticum turgidum*
75. Emasculation of flowers is carried out through removal of
- (A) Sepals and petals (B) Entire organ
(C) Anthers (D) Stigma
76. If $2n = 20$ in a plant, then how many linkage groups are present in this?
- (A) 10 (B) 20
(C) 5 (D) 5 or 10
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77. Which of the following is considered as the perfect spore?
- (A) Teliospore (B) Pycniospore
(C) Aeciospore (D) Uredospore
78. Ear cockle of wheat is a
- (A) Fungal disease (B) Viral disease
(C) Nematode disease (D) Bacterial disease
79. Kresek phase is found in, which of the following rice disease?
- (A) Bacterial leaf streak (B) Blast
(C) Sheath blight (D) Bacterial blight
80. The ratio of consumption expenditure to income is called
- (A) Basic consumption (B) Expected consumption
(C) Average propensity to consume (D) Marginal Propensity to consume
81. The Agricultural prices are recommended by
- (A) ICAR (B) CACP
(C) CSIR (D) RBI
82. At linkage equilibrium the gametic frequencies depend on
- (A) Gene frequency (B) Linkage strength
(C) Map distance (D) All of these
83. Sucrose is a
- (A) Reducing sugar (B) Non reducing sugar
(C) Both (A) and (B) (D) None of these

84. Which of the following is not included in pentoses?
- (A) Ribulose (B) Ribose
(C) Mannose (D) None of these
85. Fruits are generally deficient in
- (A) Proteins (B) Carbohydrates
(C) Vitamins (D) Water
86. Ratna variety of mango is a cross of
- (A) Neelam × Alphonso (B) Dashehari × Neelam
(C) Neelam × Dashehari (D) None of these
87. In Citrus, “Reclamation disease” and “Dieback” are caused by the deficiency of
- (A) Copper (B) Zinc
(C) Iron (D) Molybdenum
88. Element involved in stomatal regulation is
- (A) Potassium (B) Zinc
(C) Magnesium (D) Iron
89. When a single gene influences more than one character it is referred as
- (A) Polygene (B) Polymorphism
(C) Pleiotropy (D) Multiple allele
90. India stands _____ in the world, in terms of geographical areas
- (A) Fifth (B) Seventh
(C) Sixth (D) Eighth
91. Niger is a
- (A) Pulse crop (B) Cereal crop
(C) Fiber crop (D) Oilseed crop

92. One acre is equal to
- (A) 100 Sq.m (B) 4000 Sq.m
(C) 1000 Sq.m (D) 10000 Sq.m
93. Rainbow revolution is related to
- (A) Fish production (B) Milk production
(C) Food grain production (D) Increasing production in all together
94. How much quantity of nitrogen is available from 10 bags (500 kgs) of calcium ammonium nitrate?
- (A) 100 kg (B) 200 kg
(C) 125 kg (D) 250 kg
95. Seeds which are dried at low moisture content and stored at low temperature without losing viability are
- (A) Recalcitrant seeds (B) Certified seeds
(C) Orthodox seeds (D) Active seeds
96. Apospory is the formation of
- (A) Gametophyte from vegetative sporophyte
(B) Gametophyte from spore of sporophyte
(C) Sporophyte by dry part of cells of gametophyte
(D) Both (A) and (B)
97. Pollination in mustard is
- (A) Hydrophily (B) Ornithophily
(C) Entomophily (D) Anemophily
98. How many sperms and ova will be produced from 75 primary spermatocytes and 75 primary oocytes?
- (A) 100 sperms and 75 ova (B) 300 sperms and 75 ova
(C) 300 sperms and 100 ova (D) 75 sperms and 50 ova

99. CO_2 is reduced into $\text{C}_6\text{H}_{12}\text{O}_6$ by allowing
- (A) 27 ATP and 18 NADPH₂ (B) 9 ATP and 18 NADPH₂
(C) 9 ATP and 9 NADPH₂ (D) 18 ATP and 12 NADPH₂
100. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R]
- Assertion [A]: Soils of North-East India are primarily acidic in nature
- Reason [R] : Among others, the most common element in the soils of NE India is Calcium which contributes towards acidity of the soil.
- In the light of the above statement, choose the correct answer from the options given below
- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
(B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
(C) [A] is true but [R] is false
(D) [A] is false but [R] is true
101. Nearly 25% of all insect species are known to be herbivores. Yet, in spite of such heavy herbivore pressure, globally green plants tend to persist, contributing to a green earth". Which of the following account for the relative success of green plants?
- (i) Herbivore insects are inefficient feeders
(ii) Herbivore insect densities are kept low by predators
(iii) Plants secrete herbivore-deterrent chemicals
- (A) (ii) and (iii) (B) (ii) and (i)
(C) (i) only (D) (i), (ii) and (iii)
102. Identify the correct statement with regard to order of arrangement of insect leg segments
- (A) Coxa, Femur, Trochanter, Tibia and Tarsus
(B) Coxa, Trochanter, Femur, Tibia and Tarsus
(C) Coxa, Trochanter, Tibia, Femur and Tarsus
(D) Coxa, Trochanter, Tibia, Tarsus and Femur

103. Prominent foul smell of Karnal bunt is due to
- (A) Triethylamine (B) Dimethylamine
(C) Trimethylamine (D) None
104. Cotton seed shows :
- (A) Hypogeal germination (B) Epigeal germination
(C) Endocarpal germination (D) Pseudo germination
105. Oxygen which is liberated during photosynthesis comes from :
- (A) CO₂ (B) Chlorophyll
(C) Water (D) Phosphoglyceric acid
106. Photorespiration takes place in :
- (A) Glyoxysome (B) Mesosome
(C) Lysosome (D) Peroxisome
107. RQ of carbohydrates is :
- (A) 1.5 (B) 0.8
(C) 0.5 (D) 1.0
108. Breeder seed is grown from nucleus seed following the procedure of :
- (A) SSD (B) Ear to row
(C) Bulk of selected plants (D) Plant of progeny row
109. Red soils mainly come under the order
- (A) Aridisol (B) Entisol
(C) Alfisol (D) Ultisol
110. Pahala blight of sugarcane is due to the deficiency of
- (A) B (B) Zn
(C) Mg (D) Mn

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111. The soil pH range in which most of the nutrients are available
- (A) 6-7 (B) 7.5 – 8.5
(C) 6.5 – 7.5 (D) 5 – 7
112. Richmond Lang effect is associated with
- (A) Auxin (B) GA
(C) Cytokynin (D) Ethylene
113. Accept when null hypothesis is false
- (A) Type I error (B) Type II error
(C) Both (A) and (B) (D) None
114. Livestock loan is a
- (A) Short Term (B) Medium term
(C) Long term (D) None
115. Grey speck of oat is due to the deficiency of
- (A) Fe (B) Mg
(C) Mn (D) Cu
116. A day neutral plant is
- (A) Maize (B) Tomato
(C) Sunflower (D) All of these
117. High yielding variety program was launched in
- (A) 1955 (B) 1965
(C) 1960 (D) 1970
118. % of nitrogen in urea
- (A) 20.6 (B) 40
(C) 49 (D) 46

119. Who discovered Bordeaux Mixture?

- (A) Millardet (B) Debary
(C) Prevost (D) EM Fries

120. Rain, mist, fog and cloud all these phenomena occurs in

- (A) Troposphere (B) Stratosphere
(C) Ionosphere (D) Mesosphere

121. Soil having ESP (Exchangeable Sodium Percentage) greater than 15 are

- (A) Saline soils (B) Alkali soil
(C) Acid soils (D) None of these

122. Which of the following is complex fertilizer?

- (A) Potassium sulphate (B) Urea ammonium Phosphate
(C) Ammonium sulphate (D) Calcium ammonium Nitrate

123. NBFGR-National Bureau for Fish Genetic Resource is situated at

- (A) Mumbai (B) Lucknow
(C) Cochin (D) Kolkata

124. Which of the following is not bio-control agent?

- (A) Pseudomonas (B) Bt
(C) Xanthomonas (D) Trichogramma

125. Which nutrient helps in Biological Nitrogen Fixation?

- (A) N (B) P
(C) Mo (D) B

126. First CO₂ acceptor in C-3 pathway

- (A) RuBP carboxylase (B) PEP carboxylase
(C) PEP decarboxylase (D) Proteinase

127. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R]

Assertion [A] : Flag leaf clipping in hybrid rice seed production promoted higher seed setting

Reason [R] : Flag leaf of rice intercepts more sunlight and facilitates more photosynthesis in the seeds as it is nearer to the panicle.

In the light of the above statement, choose the correct answer from the options given below.

- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
- (C) [A] is true but [R] is false
- (D) [A] is false but [R] is true

128. Which of the following is highly salt tolerant fruit crop?

- (A) Date palm
- (B) Mango
- (C) Apple
- (D) Citrus

129. A device that is used for measuring the rate flow of a fluid flowing throughout the pipe

- (A) Weir
- (B) Cuthroat flume
- (C) Parshal flume
- (D) Venturi meter

130. Price fixed by government recently for agricultural products

- (A) Minimum support price
- (B) Retail price
- (C) Wholesale price
- (D) Procurement price

131. If farmer has only one irrigation is available for wheat crop, at which stage it is recommended

- (A) Booting stage
- (B) CRI stage
- (C) Tillering stage
- (D) Milking stage

132. Which of the following is called as energy currency of the cell
- (A) ATP (B) NADH
(C) AMP (D) FADH₂
133. Which of the following is essential component of nucleic acid and protein?
- (A) S (B) P
(C) N (D) Mg
134. Widely cultivated wheat species in India after *T. durum*
- (A) *T. diococcum* (B) *T. speltoids*
(C) *T. monococcum* (D) *Aegilops squarossa*
135. Which of the following is not found in plant cell?
- (A) Starch (B) Glycogen
(C) Glucose (D) Fructose
136. Certified seed is produced from
- (A) Breeder seed (B) Nucleus seed
(C) Foundation seed (D) Truthful seed
137. In prophase which is correct?
- (A) Elongated threads like chromosome (B) Darkly stained shorter chromosome
(C) Chromatics are more condensed (D) Pairing of the chromosome
138. Random or free segregation of chromosomes and genes during gamete formation is known as
- (A) Incomplete dominance (B) Law of independent assortment
(C) Law of purity of gametes (D) Law of segregation
139. Citrus canker is caused by
- (A) Bacteria (B) Fungi
(C) Nematodes (D) Algae

140. Which one is not a monosaccharide in nature?
- (A) Ribulose (B) Galactose
(C) Glucose (D) Lactose
141. Pure line selection is used for purity maintaining in which type of crop
- (A) Self – pollinated crop (B) Cross – pollinated crop
(C) Both (A) and (B) (D) None of the above
142. Which is formula of leaf area index?
- (A) Leaf area / ground area (B) Leaf area / leaf dry weight
(C) Ground area / leaf area (D) Leaf area / area duration
143. Pureline theory was given by
- (A) Bateson (B) Johnsen
(C) Lamarck (D) Wolf
144. In which type of soil low permeability is present
- (A) Alkali (B) Saline
(C) Acidic (D) None
145. Which is natural genetic engineer?
- (A) *Xanthomonas citri* (B) *Agrobacterium tumifaciens*
(C) *Azotobacter* (D) *Clostridium*
146. In maize first product formed during photosynthesis is
- (A) Oxalic acid (B) Malic acid
(C) PGA (D) Aspartic acid
147. Which amino acid is positively charged?
- (A) Aspartate (B) Lysine
(C) Methionine (D) Glycine

148. Vector of leaf curl disease of cotton and tobacco

- (A) *Myzus persicae* (B) *Aphis gossypi*
(C) *Bemisia tabaci* (D) *Thrips tabaci*

149. Based on Severity of damage Wheat diseases and pests are ranked in the order

- (A) Brown rust > Loss smut > Termites > Karnal bunt
(B) Termites > Brown rust > Karnal bunt > Loos smut
(C) Brown rust > termites > karnal bunt > Loos smut
(D) Karnal bunt > Loos smut > Termites > Brown rust

150. Bundle sheath chloroplast

- (A) Lack stroma (B) Lack grana
(C) Both (A) and (B) (D) Both present

151. High auxin and low cytokinin favours

- (A) Root (B) Shoot
(C) Bud (D) Flower

152. Kranz anatomy is seen in

- (A) Rice (B) Pineapple
(C) Amaranthus (D) (A) and (B)

153. In photorespiration, NH_3 evolution take place at

- (A) Nucleolus (B) Chloroplast
(C) Cytosol (D) Mitochondria

154. Which one is a total root parasite?

- (A) *Cuscuta* (B) *Loranthus*
(C) *Santalum* (D) *Rafflesia*

155. Components of prokaryotic ribosome are

- (A) 50s and 20s (B) 40s and 30s
(C) 60s and 40s (D) 50s and 30s

156. _____ is a sex limited character.

- (A) Colour blindness (B) Hemophilia
(C) Baldness (D) All of these

157. Replication of DNA is

- (A) Semi conservative (B) Dispersive
(C) Continuous (D) Conservative

158. Law of Minimum was given by

- (A) Liebig (B) Blackman
(C) Shelford (D) Oement

159. Sulphur containing amino acid

- (A) Lysine (B) Glutamine
(C) Methionine (D) Glycine

160. Contribution of agriculture in GDP is

- (A) 20% (B) 30%
(C) 40% (D) 45%

161. Disease caused by Zn deficiency is

- (A) Khaira (B) Mosaic
(C) Die- back (D) Whip tail

162. Karnal bunt is caused by

- (A) Albugo candida (B) Phytophthora infestans
(C) Nevosia indica (D) None of these

163. Vertisol' is related to

- (A) Laterite soil (B) Alluvial soil
(C) Red soil (D) Black soil

164. Rice grain is deficient in

- (A) Lysine (B) Alanine
(C) Glycine (D) Isoleucine

165. Piercing and sucking types of mouth parts are found in :

- (A) Aphid (B) Grasshopper
(C) House fly (D) Beetles

166. Biurate content in urea is

- (A) 1.5% (B) 2%
(C) 4% (D) 5%

167. The plants which open their stomata during night for taking CO_4 are known as

- (A) C_3 (B) CAM
(C) C_4 (D) All of these

168. The net gain of ATP during glycolysis is

- (A) 1 (B) 4
(C) 2 (D) 8

169. Global warming is attributed to increase in concentration of green house gases like

- (A) CO_2 (B) CFCs
(C) CH_4 (D) All of these

170. Red and purple colour of maize (*Zea Mays*) is due to deficiency of

- (A) Ca (B) N
(C) Fe (D) P

171. In plants, enzyme responsible for the synthesis of the malic acid is

- (A) PEP carboxylase (B) Kinase
(C) Rubisco (D) Urease

172. Origin place of soybean is

- (A) China (B) Brazil
(C) India (D) Russia

173. Maize belongs to the category

- (A) Bisexual (B) Monoecious
(C) Dioecious (D) None of these

174. In which of the following crops GM varieties are available for cultivation in India?

- (A) Mustard (B) Soybean
(C) Cotton (D) All of these

175. Crop logging is done in

- (A) Sugarcane (B) Rice
(C) Maize (D) Wheat

176. Photosynthetic inhibition by O₂ is called

- (A) Back inhibition (B) Reaction
(C) Warburg's effect (D) Competitive effect

177. Major cropping system of trans-gangatic plains is

- (A) Soybean – wheat (B) Rice – rice
(C) Rice –wheat (D) Maize – wheat

178. In a plant growing under dark condition, the leaves turn light colored, internodes become much elongated and it is termed as :

- (A) Vernalisation (B) Etiolation
(C) Chlorosis (D) Phyllotaxy

179. Nucleus is absent in :

- (A) Xylem parenchyma (B) Phloem parenchyma
(C) Mature sieve cells (D) Companion cells

180. In which region of the interphase chromosome does transcription take place?

- (A) Heterochromatin (B) Euchromatin
(C) The telomere (D) The centromere

181. Which of the following traits was not studied by Mendel?

- (A) Flower position (B) Seed colour
(C) Flower colour (D) Seed size

182. Which of the following elements is required for Photolysis of water?

- (A) Magnesium (B) Manganese
(C) Zinc (D) Calcium

183. Which of the following statement is false regarding Heterosis?

- (A) Increase in Yield
(B) Increased reproductive ability
(C) Increase in size and decrease in vigour
(D) Greater resistance to Diseases and Pests

184. The ETL for BPH is?

- (A) 5-10 insects per hill (B) 2-3 insects per hill
(C) 1 insect per hill (D) 10-15 insects per hill

185. Symptoms of damage due to BPH in rice

- (A) Yellowing (B) Drying of plan
(C) Browning (D) All of these

186. Pebrine disease of silkworm is caused by
- (A) Dugesia (B) Nosema
(C) Monocystis (D) Plasmodium
187. Browning of xylem vessels and drooping of leaves are the damaging symptoms of
- (A) Alternaria leaf spot (B) Sterility mosaic
(C) Ascochyta blight (D) Fusarium wilt
188. In C_4 plants, Calvin cycle works at
- (A) Stroma of bundle sheath chloroplasts (B) Grana of bundle sheath chloroplasts
(C) Stroma of Mesophyll chloroplasts (D) Grana of Mesophyll chloroplasts
189. The oil with its quick drying property is used for preparation of paints, furnishes and printing ink of which of the following crops
- (A) Linseed (B) Safflower
(C) Groundnut (D) Castor
190. The seed rate required for paddy under SRI is
- (A) 1-2 Kg/ha (B) 20-25 Kg/ha
(C) 5-10 Kg/ha (D) 50-55 Kg/ha
191. All of the following cost curves are 'U' shaped except the:
- (A) Average variable cost curve (B) Average total cost curve
(C) Average fixed cost curve (D) Marginal cost curve
192. In which Banana variety "hard lump" is a common problem?
- (A) Poovan (B) Nendran
(C) Grand Naine (D) Robusta
193. Most serious post harvest disease of Mango is
- (A) Stem end rot (B) Alternaria rot
(C) Bacterial rot (D) Anthracnose

194. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R].

Assertion [A] : Hot water treatment is effective in controlling post harvest diseases in several fruits

Reason [R] : It improves lignification in outer layers of fruits but in certain cases it enhances ripening and reduces shelf life.

In the light of the above statement, choose the correct answer from the options given below

- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
- (C) [A] is true but [R] is false
- (D) [A] is false but [R] is true

195. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R] :

Assertion [A] : Temperature above 25°C reduces the test weight of wheat grain

Reason [R] : Reduction in test weight is due to hastening in maturity

In the light of the above statement, choose the correct answer from the options given below

- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
- (C) [A] is true but [R] is false
- (D) [A] is false but [R] is true

196. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R] :

Assertion [A]: The main purpose of topping and desuckering operations is to divert the energy and nutrients of the plants from flower heads to leaves

Reason [R] : The activities are done to influence the yield and quality of tobacco

In the light of the above statement, choose the correct answer from the options given below

- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
- (C) [A] is true but [R] is false
- (D) [A] is false but [R] is true

197. Chronological steps in the development and release of a crop variety

- (i) Preliminary yield trial
- (ii) Genotype development
- (iii) Multilocation trial
- (iv) Notification of a variety
- (v) Identification of a variety

- (A) (ii), (iii), (i), (v), (iv) (B) (ii), (i), (iii), (v), (iv)
(C) (ii), (i), (iii), (iv), (v) (D) (v), (ii), (i), (iii), (iv)

198. Given below are two statements, one is labelled as Assertion [A] and the other is labelled as Reason [R]

Assertion [A]: *Brassica juncea* is an allotetraploid having AABB genome

Reason [R] : *Brassica juncea* is produced when *B.nigra* is crosses with *B.campestris*

In the light of the above statement, choose the correct answer from the options given below

- (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true but [R] is NOT the correct explanation of [A]
- (C) [A] is true but [R] is false
- (D) [A] is false but [R] is true

199. Which one of the following biofertilizers is a symbiotic nitrogen fixer?

- (A) *Azotobactor* (B) Blue-green algae
(C) *Azospirillum* (D) *Rhizobium*

200. CIMMYT works on

- (A) Rice and wheat (B) Maize and wheat
(C) Wheat (D) Rice and maize

ROUGH WORK

