

Sl. No. :

FAAGR

Register
Number

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2018

**AGRICULTURE
(Degree Standard)**

Time Allowed : 3 Hours]

[Maximum Marks : 300

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. The applicant will be supplied with Question Booklet 15 minutes before commencement of the examination.
2. This Question Booklet contains 200 questions. Prior to attempting to answer the candidates are requested to check whether all the questions are there in series and ensure there are no blank pages in the question booklet. **In case any defect in the Question Paper is noticed it shall be reported to the Invigilator within first 10 minutes and get it replaced with a complete Question Booklet. If any defect is noticed in the Question Booklet after the commencement of examination it will not be replaced.**
3. Answer all questions. All questions carry equal marks.
4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.
5. An answer sheet will be supplied to you, separately by the Room Invigilator to mark the answers.
6. You will also encode your Question Booklet Number with Blue or Black ink Ball point pen in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per commission's notification.
7. Each question comprises *four* responses (A), (B), (C) and (D). You are to select **ONLY ONE** correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
8. In the Answer Sheet there are **four** circles (A), (B), (C) and (D) against each question. To answer the questions you are to mark with Blue or Black ink Ball point pen **ONLY ONE** circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. *e.g.* If for any item, (B) is the correct answer, you have to mark as follows :

(A) ● (C) (D)
9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the time of examination. After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.
10. The sheet before the last page of the Question Booklet can be used for Rough Work.
11. Do not tick-mark or mark the answers in the Question Booklet.
12. Applicants have to write and shade the total number of answer fields left blank on the boxes provided at side 2 of OMR Answer Sheet. An extra time of 5 minutes will be given to specify the number of answer fields left blank.
13. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

1. 'Hidden hunger' means
- (A) Deficiency of soil nutrients and deficiency symptoms on plants
 - (B) Deficiency of soil nutrients and no deficiency symptoms on plants
 - (C) Excess soil nutrients and deficiency symptoms on plants
 - (D) Adequate soil nutrients and deficiency symptoms on plants
2. The seed rate recommended for sugarcane with two-budded setts in Tamilnadu is
- (A) 10,000 per ha
 - (B) 25,000 per ha
 - (C) 50,000 per ha
 - (D) 75,000 per ha
3. The herbicide recommended for aerobic rice in Tamilnadu is
- (A) Atrazine
 - (B) Pendimethalin
 - (C) Glyphosate
 - (D) Paraquat
4. Moisture stress can be mitigated by reducing
- (A) Transpiration
 - (B) Respiration
 - (C) Photosynthesis
 - (D) Evaporation
5. The IPCC (Intergovernmental Panel on Climate Change) Secretariat is located at
- (A) France
 - (B) Geneva
 - (C) India
 - (D) Finland
6. El Nino is associated with
- (A) Deficit rain over pesu
 - (B) Deficit rain over India
 - (C) Excess rain over India
 - (D) Deficit rain over Pacific ocean

7. The zinc deficiency in paddy plant causes
- (A) Blight disease
 - (B) Ergot disease
 - (C) Khaira disease
 - (D) Smut disease
8. Potato tuber is a modified form of
- (A) Root
 - (B) Stem
 - (C) Flower
 - (D) Leaf
9. Total population of blackgram crop sown adopting a spacing of 30×10 cm will be
- (A) 1, 11, 111 plants ha^{-1}
 - (B) 2, 22, 222 plants ha^{-1}
 - (C) 3, 33, 333 plants ha^{-1}
 - (D) 1, 48, 4818 plants ha^{-1}
10. The most suitable intercrop for sugarcane
- (A) Blackgram
 - (B) Maize
 - (C) Bajra
 - (D) Redgram
11. Suitable intercrop for turmeric is
- (A) Onion
 - (B) Sesame
 - (C) Chilli
 - (D) Bhendi

12. The spacing adopted for short duration paddy in Tamilnadu is

(A) 30 × 30 cm

(B) 15 × 10 cm

(C) 20 × 10 cm

(D) 20 × 20 cm

13. Desuckering is followed in

(A) Cotton

(B) Sorghum

(C) Maize

(D) Tobacco

14. One of the following is a narcotic crop

(A) Tobacco

(B) Rice

(C) Blackgram

(D) Ragi

15. Khaira disease in rice is caused due to the deficiency of

(A) Boron

(B) Molybdenum

(C) Zinc

(D) Copper

16. Soils containing more pore spaces than that of solid per unit volume will have

(A) Very low bulk densities

(B) Very high bulk densities

(C) High bulk densities

(D) Bulk densities equal to that of normal soil

17. Which of the following soil orders have high organic matter?
- (A) Andisol, Aridisol
 - (B) Ultisol, Alfisol
 - (C) Mollisol, Histosol
 - (D) Spodosol, Entisol
18. Which of the following hard pan horizon is cemented by iron?
- (A) Duripan
 - (B) Fragipan
 - (C) Plinthite
 - (D) Petrogypsic
19. What is the minimum requirement of air capacity for plant growth?
- (A) >20%
 - (B) <10%
 - (C) <5%
 - (D) <20%
20. Which of the following nutrient is essential for seed formation?
- (A) Nitrogen
 - (B) Potassium
 - (C) Phosphorus
 - (D) Chlorine
21. Which of the following crops are highly tolerant to salinity?
- (A) Peas, sesamum
 - (B) Pulses, grams
 - (C) Linseed, sunflower
 - (D) Rice, sugarcane
22. In Universal Soil Loss Equation (USLE), what does 'T' indicate?
- $E = f(I, C, K, L, V)$
- (A) Wind erosion
 - (B) Soil erodibility
 - (C) Vegetative cover
 - (D) Surface roughness

23. Which one of the following is grouped under non-silicate mineral?

- (A) Haematite (B) Chlorite
(C) Vermiculite (D) Illite

24. Organic matter in surface soil = Organic carbon x _____?

- (A) 1.724 (B) 1.247
(C) 1.427 (D) 1.540

25. Which soil mineral that impart reddish brown colour to the soils?

- (A) Gibbsite (B) Diaspare
 (C) Haematite (D) Maghemite

26. Resistance offered by the soil to change in pH is

- (A) Exchange capacity
 (B) Buffering capacity
(C) Conductivity
(D) Redox potential

27. What is the pollutant of soil and water from phosphatic fertilizer industry?

- (A) Lead
 (B) Cadmium
(C) Mercury
(D) Chromium

28. In soil, what form of N are lost through leaching?

- (A) Nitrate (B) Ammoniacal
(C) Amide (D) Amine

29. On an average, 10 tonnes of leguminous green manure per hectare will add
- (A) 35 Kg of N (B) 3 – 5 Kg of N
(C) 50 Kg of N (D) 100 Kg of N
30. Intercropping with crops of different maturity periods could be done when the rainfall is
- (A) 500 – 625 mm (B) 625 – 750 mm
(C) 750 – 900 mm (D) > 900 m
31. The number of crops grown per annum on a given area of land multiplied by 100 is called
- (A) Cropping Potential
 (B) Cropping Index
(C) Land Equivalent Ratio
(D) Yield Advantage Index
32. The quantity of heat required to raise the temperature of one gram of the substance through 1°C is
- (A) Heat capacity
 (B) Specific heat
(C) Volumetric specific heat
(D) Thermal diffusivity
33. For implementation of which of the following programme, DRDA was set up?
- (A) NATP
 (B) IRDP
(C) CDP
(D) Lab to Land Programme

34. The expression of ends towards which our efforts are directed are
(A) Goals (B) Objectives
(C) Aims (D) Targets
35. In India, Central Sericulture Research Station located at
(A) Mysore (B) Berhampur
(C) Ranchi (D) Chennai
36. A bee that visits same species of plant for pollen and nectar is referred as
 (A) Floral fidelity
(B) Royal fidelity
(C) Both (A) and (B)
(D) None of these
37. The Fecundity of queen bee in the colony is
(A) 3000 eggs per day
 (B) upto 2000 eggs per day
(C) 2000 – 5000 eggs per day
(D) > 5000 eggs per day
38. The yellow colour in soils due to the presence of
 (A) Goethite (B) Hematite
(C) Magnetite (D) Calcite
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39. In a compound soil structure, peds are elongated more in vertical than in horizontal direction with angular top is
(A) Blocky (B) Prismatic
(C) Columnar (D) Platy

40. First interspecific cross between Carnation and sweet William species of Dianthus was made by
- (A) Thomas Fairchild (1717)
 - (B) Andrew Knight (1835)
 - (C) Vilmorin (1856)
 - (D) Koelreuter (1760)
41. These are ideas which help an individual to discriminate whether a particular object or behaviour is good or bad, desirable or undesirable
- (A) Social control
 - (B) Social system
 - (C) Social value
 - (D) None of the above
42. The over dominance hypothesis of heterosis was independently proposed by
- (A) Davenport (1908)
 - (B) Bruce (1910)
 - (C) Keeble and Pellew (1910)
 - (D) East and Shull (1908)
43. The selected plants are crossed to a tester with broad genetic base in
- (A) Simple recurrent selection
 - (B) Recurrent selection for general combining ability
 - (C) Recurrent selection for specific combining ability
 - (D) Reciprocal recurrent selection
44. _____ refers to the failure of viable pollen from a flower to fertilize the same flower
- (A) Dichogamy
 - (B) Heterostyly
 - (C) Self incompatibility
 - (D) Male sterility

45. The genetic variability present among cultured cells and plants derived from such cells or progeny of such plants is called as
- (A) Somaclonal variation
 - (B) Genetic variation
 - (C) Clonal variation
 - (D) Phenotypic variation
46. Gene used for conferring resistance to BLB disease in rice is
- (A) X a 21
 - (B) Pi 1
 - (C) Pita
 - (D) rgh 1
47. The first intergeneric hybrid Triticale was produced by
- (A) Karpechenko
 - (B) Rionpau
 - (C) Fairchild
 - (D) Koelreuter
48. Latest rice hybrid released from Tamil Nadu
- (A) CORH 3
 - (B) CORH 4
 - (C) ADTRH 2
 - (D) CO 52
49. Which of the following statements is true?
- (A) Culture and civilisation are interdependent
 - (B) Culture and civilisation are not interactive
 - (C) Culture and civilisation are poles apart
 - (D) Culture and civilisation are not interdependent
50. The chromosome number of sesamum indicum is
- (A) $2n = 32$
 - (B) $2n = 26$
 - (C) $2n = 64$
 - (D) $2n = 52$

51. Which of the following communication skills involves speaking and writing
- (A) Encoding (B) Decoding
(C) Feed back (D) Knowledge
52. The enzyme that amplifies DNA segments in PCR technique
- (A) Polynucleotide Kinase (B) Taq DNA polymerase
(C) DNA ligase (D) SI nuclease
53. Which of the following uses centrifugal force to mix and spread seeds over the dividing surface?
- (A) Boerner divider (B) Soil divider
 (C) Gamet divider (D) Riffle divider
54. An equipment used to separate light weight material from the heavier seeds during purity analysis is
- (A) Purity work board (B) Seed blower
(C) Seed cleaner (D) Seed thresher
55. Seeds which, at the end of test period, are neither hard nor fresh and have not produced seedlings, are classified as
- (A) Hard seeds (B) Dead seeds
(C) Fresh and ungerminated seeds (D) Dormant seeds
56. Find the odd one
- (A) Gravity separator (B) Spiral separator
(C) Disc separator (D) Pre-conditioner
57. The science which deals with production, harvesting, processing, testing, packaging storing and marketing of seeds refers to
- (A) Agriculture (B) Agronomy
 (C) Seed Technology (D) Horticulture

58. What is the maximum permissible number of ODV for foundation seed class of maize?
 (A) 5 / kg (B) 10 / kg
(C) 15 / kg (D) 20 / kg
59. Identify the genetic contaminant in seed production plot.
(A) Weed plants
(B) Other crop plants
(C) Plants affected by designated diseases
 (D) Off-types
60. A first generation hybrid between a single cross and an inbred line is called as
(A) Double cross
 (B) Three-way cross
(C) Double top cross
(D) Multiple cross
61. The Seed Multiplication Ratio for hybrid paddy is
(A) 1 : 80 (B) 1 : 100
(C) 1 : 200 (D) 1 : 400
62. In which of the following Crop Time isolation is permitted for seed production with modification in isolation distance
(A) Castor (B) Cumbu
 (C) Maize (D) Sunflower
63. Which property of seed is used spiral separator for upgradation?
(A) Size
(B) Density
 (C) Ability to roll
(D) Seed colour

64. Silvering of leaves in onion and gradual wilting is the symptom of attack at
(A) Aphids (B) White flies
(C) Mealy bugs (D) Thrips
65. Shot hole symptom in grapevine is caused by
(A) Carabid beetle
(B) Coccinellid beetle
 (C) Flea beetle
(D) Rove beetle
66. Which of the following are the anti-oomycete fungicides.
(A) Dinocap, Myclobutanil, Fenarimol
 (B) Metalaxyl, Cymoxanil, Dimethomorph
(C) Carboxin, Lime Sulphur, Metiram
(D) Carpropamid, Tricyclazole, Pencycuron
67. Systemic fungicides having melonin biosynthesis inhibition activity.
(A) Azoxystrobin, Carbendazion, edifenphos
 (B) Tricyclazole, Pyroquolon, Carpropamid
(C) Propiconazole, Kitazin, Tricyclazole
(D) Carbendazion, Tricyclazole, Azoxystrobin
68. In 2, 4-D Blotter method, addition of -0.1 - 0.02% 2,4-D solution is to
(A) Enhance the seed germination
(B) Inhibit the growth of the pathogen
(C) Enhance the growth of the pathogen
 (D) Inhibit the germination of seeds
69. Cucurbitaceous plants are sensitive to
(A) Myclobutanil (B) Wettable sulphur
(C) Karathane (D) Hexaconazole

70. Copper deficiency in soils leads to
- (A) Exanthema in citrus
 - (B) Mottle leaf in citrus
 - (C) Folio collosin of citrus
 - (D) Bronzing of citrus
71. Which of the following is not caused by wall – less prokaryotes.
- (A) Rice dwarf
 - (B) Sunflower aster yellows
 - (C) Sesame phyllody
 - (D) Sugarcane grassy shoot
72. Pre harvest sanitation spray with malathion 50 EC 0.05%, three to five days before harvest is effective for _____ in pulse
- (A) Pod bug
 - (B) Pulse beetle
 - (C) Pulse pod borer
 - (D) Pod wasp
73. Application of chopped paddy straw treated with quinalphos 1.5 D 50kg/ha is effective against _____ in rice field.
- (A) Rice Mite
 - (B) Termite
 - (C) Rat
 - (D) Army worm
74. The vector for little leaf of brinjal is
- (A) Cestius phycitis
 - (B) Bemisia tabaci
 - (C) Urentius hystricellus
 - (D) Ferrisia virgata

75. The line which represent the points of maximum output from each input, given a fixed quantity of other input is called as
- (A) Expansion path (B) Iso quant
(C) Iso – cost line (D) Ridge line
76. Which of the following is correct
- (A) MC curve is a continuous falling curve
(B) AVC curve lies above ATC curve
 (C) When MC curve is below ATC curve, ATC is falling
(D) When MC curve is above ATC curve, ATC is falling
77. The following is not included under 5 c's of credit
- (A) Character (B) Common sense
 (C) Creative (D) Capacity
78. Loans advance to a fertilizer manufacturing companies are called
- (A) Open loan (B) Key loan
(C) Direct loan (D) Indirect loan
79. Two tier system in co-operative credit structure provides.
- (A) Short term loans (B) Long term loans
(C) Medium term loans (D) Crop loans
80. Calculate the percentage of margin of safety if the total output produced by a firm is 40 quintals and output at break even point is 17.20 quintals.
- (A) 42.67% (B) 42.76%
(C) 42.0% (D) 42.96%
81. Which method of depreciation is used to estimate the value of livestock in its early years of life?
- (A) Annual revaluation (B) Straight line
(C) Diminishing balance (D) Reducing fraction

82. Cost minimization is the goal of
- (A) Factor – Factor relationship
 - (B) Factor – product relationship
 - (C) Input – output relationship
 - (D) Product – product relationship
83. Which of the statement is correct with reference to value addition.
- (1) There are three possible levels of value addition
 - (2) Only level 3 is practiced in our country
 - (3) Level 1 is concern with high equal processing
 - (4) Level 2 is secondary processing
- (A) 1 only
 - (B) 1 and 4 only
 - (C) 3 and 4 only
 - (D) 2, 3, 4 only
84. Which of the statement is correct with reference to demand creation.
- (1) Sub function of selling
 - (2) Done by advertisement
 - (3) Not by display
 - (4) By Trade fairs
- (A) 1 and 2 only
 - (B) 2 only
 - (C) 1, 2, and 4 only
 - (D) 3 and 4 only
85. Choose correct statements with reference to market out look
- (1) Gives market situation in the near future
 - (2) Gives the past price data
 - (3) TNAU provides market out look information to farmers
 - (4) Helps farmers is resource allocation
- (A) 2 only
 - (B) 1, 2 only
 - (C) 1, 2, 4 only
 - (D) 1, 3, 4 only

86. Buying and selling function creates _____ utility.
- (A) Form (B) Place
 (C) Possession (D) Time
87. AGMARK seal is compulsory for
- (A) Food grains (B) Imports
 (C) Exports (D) Edible oil
88. Tea board came into existence in the year
- (A) 1963 (B) 1973
 (C) 1983 (D) 1953
89. The World Trade organization is located at.
- (A) Geneva
(B) New york
(C) Washington
(D) Uruguay
90. HACCP stands for
- (A) Health and Consumer Care Programme
(B) Hazard and Critical Control Point
 (C) Hazard Analysis and Critical Control Point
(D) Health and Critical Care Plan
91. The main objective of hedging is
- (A) Maximization of profit
 (B) Minimization of price risk
(C) Reduction in transaction cost
(D) Reducing marketing cost

92. These charts are particularly useful in showing trends and relationships.
- (A) Bar charts
 - (B) Pie charts
 - (C) Line charts
 - (D) Tabular charts
93. The 'S-M-C-R-E model of communication' is given by
- (A) Berlo
 - (B) Laswell
 - (C) Rogers and Shoemaker
 - (D) Leagans
94. It refers to a computer system that emulates the decision making ability of a human expert.
- (A) Expert system
 - (B) Mobile App
 - (C) IMCD
 - (D) Kisan calls
95. An expert system called 'Rice-crop Doctor' has been developed by which institute?
- (A) MANAGE
 - (B) IARI
 - (C) IRRI
 - (D) CRRI
96. The process by which an innovation is communicated through certain channels over time among the members of a social system is referred as
- (A) Adoption
 - (B) Dissemination
 - (C) Diffusion
 - (D) Transmission

97. Due to interventions in horticulture in India the per capita availability increase during 2016-17 is
- (A) 101 gm/person/day (B) 201 gm/person/day
(C) 301 gm/person/day (D) 51 gm/person/day
98. The 'Kara Suraksha' insurance scheme provides insurance coverage to
- (A) Maize (B) Coconut
(C) Minor millets (D) Jack
99. The major irrigated area in Tamilnadu is located in
- (A) Cuddalore Dt (B) Nilgiris Dt
 (C) Thanjavur Dt (D) Kanyakumari Dt
100. The headquarters of Central Soil and Water Conservation Research Institute (CSWCRI) is located at
- (A) Dehradun (B) New Delhi
(C) Hyderabad (D) Jaipur
101. In India, PMKSY scheme is implemented for
- (A) Providing improved access to irrigation
(B) To support organic farming
(C) To provide marketing support
(D) To improve the financial status
102. In India, agriculture contributes to the country's gross value added product of
- (A) 17% (B) 9%
(C) 21% (D) 4%

103. Growing two or more crops in sequence on the same field in a year is termed as
- (A) Multiple cropping
 - (B) Mixed cropping
 - (C) Sequential cropping
 - (D) Inter cropping
104. South West Monsoon period is
- (A) June to September
 - (B) June to December
 - (C) October to December
 - (D) January to March
105. The physical condition of the atmosphere at a particular place and time is referred as
- (A) Climate
 - (B) Weather
 - (C) Meteorology
 - (D) Climatology
106. Cole crops are
- (A) Cash crops
 - (C) Cold weather crops
 - (B) Ratoon crops
 - (D) Cover crops
107. Evapotranspiration (ET) can be measured by
- (A) USWB open pan evaporimeter
 - (B) Lysimeter
 - (C) Sunshine recorder
 - (D) Rain gauge
108. The economic part of sugar beet is
- (A) Stem
 - (C) Tap root
 - (B) Leaves
 - (D) Lateral root
109. 'Arrow' refers to inflorescence of
- (A) Maize
 - (B) Tobacco
 - (C) Sorghum
 - (D) Sugarcane

110. Castor is grown as mixed crop with
- (A) Wheat (B) Sugarcane
 (C) Groundnut (D) Sunflower
111. PAR is referring to
- (A) Photo Active Region
(B) Phyto Active Region
(C) Phyto Arid Region
 (D) Photosynthetically Active Radiation
112. The early shedding of buds in cotton can be prevented by spraying
- (A) Urea
(B) DAP
 (C) NAA (Naphthalene Acetic Acid)
(D) Potash
-
113. CRIDA refers to
- (A) Central Rainfed Institute for Dryland Agriculture
(B) Chennai Regional Institute for Disaster Agency
 (C) Central Research Institute for Dryland Agriculture
(D) Central Region Institute for Dryland Agriculture
114. LRF refers to
- (A) Longitudinal Region Forecast
 (B) Long Range Forecast
(C) Little Regional Forecast
(D) Late Regional Forecast

115. Alfisols are otherwise called as
 (A) Red soils (B) Black soils
(C) Loam soils (D) Clayey soils
116. The fertilizer scheduling must be based on
(A) Crop nutrient requirement
(B) Climatic conditions
(C) Soil test values
 (D) Soil test values and crop nutrient requirement
117. What is the bulk density of soil having a weight of 25g and a volume of 18 CC
 (A) 1.388 g cm³ (B) 1.242 g cm³
(C) 1.566 g cm³ (D) 1.812 g cm³
118. What level of nitrate nitrogen in water is considered hazardous to human health?
 (A) > 100 ppm (B) <10 ppm
(C) <1 ppm (D) <100 ppm
119. What is the soil moisture tension at saturation?
 (A) 0 bars (B) -15 bars
(C) 31 bars (D) 10,000 bars
120. What is the unit of soil bulk density?
 (A) Mg m⁻³ (B) ds m⁻¹
(C) g Kg⁻¹ (D) Mg Kg⁻¹
121. What is the per cent by volume of carbon-di-oxide in soil air?
(A) 0.03% (B) 0.3%
(C) 0.01% (D) 10%

122. Name the form of potassium readily available to crops
- (A) Solution K (B) Mineral K
(C) Non exchangeable K (D) Fixed K
123. Which one of the following is a graphical representation of progress of crop growth?
- (A) Crop logging
(B) DRIS
(C) Nutrient index
(D) Critical nutrient concentration
124. The average annual rainfall of Dryland farming areas are
- (A) > 750 mm (B) < 750 mm
(C) < 1000 mm (D) > 1000 mm
125. What is the N fixing bacteria associated with legumes
- (A) Thiobacillus (B) Rhizobium
(C) Beijerinckia (D) Clostridium
126. Name the amendment used for reclamation of alkali soils
- (A) Limestone
(B) Sodium bicarbonate
(C) Sodium oxalate
 (D) Gypsum
127. Active soil forming factors would include
- (A) Parent material and topography
 (B) Climate and organism
(C) Time and topography
(D) Parent material and time

128. Which one of the following is a pest of honeybees?

- (A) Uzifly
- (B) Varroa mite
- (C) Hoverfly
- (D) Tiger beetle

129. One of the following is not a green manure

- (A) Sun hemp
- (B) Cowpea
- (C) Delonix regia
- (D) Cluster bean

130. The solid portion of sewage is called

- (A) mud
- (B) sand
- (C) sludge
- (D) waster

131. Liming refers to application of

- (A) NaCO_3
- (B) CaCO_3
- (C) KH_2PO_4
- (D) NaCl_2

132. Crop residues decompose quickly and release nutrients if their C.N ratio is

- (A) 100 : 1
- (B) 20 : 1
- (C) 30 : 1
- (D) 80 : 1

133. Iron availability in soil increases whom the pH

- (A) decreases
- (B) increases
- (C) remains neutral
- (D) none of the above

134. The radioisotope used in the measurement of soil water by Gamma Ray Attenuation method is
- (A) Lithium (B) ~~Caesium~~
(C) Beryllium (D) Neptunium
135. Scheduling of irrigation to crops are based on
- (A) Soil-water regime
(B) Meteorological parameters
(C) Plant indices
(D) ~~All of these~~
136. The components of wetland IFS are
- (A) ~~Rice + Fish + Poultry~~
(B) Rice + Goats
(C) Rice + Pig + Poultry
(D) Rice + Fodder trees + Goats
137. The water potential (bar) at hygroscopic coefficient is
- (A) -15 (B) $\frac{1}{10}$
(C) $\frac{1}{3}$ (D) ~~-31~~
138. Expand PIA
- (A) Project Intensive Area Programme
(B) ~~Project Implementation Agency~~
(C) Programme Initiative Agency
(D) Programme Implementing Authority
139. The green biomass obtainable is Sesbania Speciosa is
- (A) 0.3 t/hz (B) ~~15 t/hz~~
(C) 1 t/hz (D) 0.5 t/hz

140. The ratio of total volume of water occupied in the pore space to the total volume of soil
- (A) Air filled porosity
 - (B) Mass wetness
 - (C) Volume wetness
 - (D) Depth of water
141. The difference in the moisture content between upper and lower plastic limit is
- (A) Plastic limit
 - (B) Liquid limit
 - (C) Soil plasticity
 - (D) Plasticity index
142. The ratio of biomass per unit area to the water used by the crop
- (A) Irrigation efficiency
 - (B) Application efficiency
 - (C) Conveyance efficiency
 - (D) Water use efficiency
143. The optimum temperature range for root growth of the most of the crop plants
- (A) 15 – 20°C
 - (B) 20 – 25°C
 - (C) 25 – 30°C
 - (D) 30 – 35°C
144. The cropping system helps to control run-off and erosion is
- (A) Strip cropping
 - (B) Sole cropping
 - (C) Sequential cropping
 - (D) Crop rotation
145. Viral free plants are obtained through
- (A) Anther culture
 - (B) Ovary culture
 - (C) Callus culture
 - (D) Shoot tip culture

151. The method of hybrid seed production in sunflower is
- (A) Hand emasculation and pollination
 - (B) Use of CHAs
 - (C) CGMS
 - (D) GMS
152. Minimum number of Border rows to be planted in $A \times B$ seed production plot of pearl millet is
- (A) 2
 - (B) 4
 - (C) 6
 - (D) 8
153. International centre for Genetic Engineering and Biotechnology is located in
- (A) Lithuania
 - (B) Italy and India
 - (C) Norway, India
 - (D) Sweden
154. Stabilization selection accumulates alleles showing _____ gene action.
- (A) Dominance
 - (B) Epistasis
 - (C) Additive
 - (D) Co-dominance
155. Which of these male sterile cytoplasmic sources are not related to rice
- (A) Wild abortive
 - (B) Chinsurah boro II
 - (C) Oryza perennis
 - (D) Tifton
156. Which one of the following is not an ionizing radiation
- (A) Thermal neutrons
 - (B) α - rays
 - (C) UV rays
 - (D) X - rays

157. The percentage of women beneficiaries covered under ATMA is
- (A) 20 (B) 35
 (C) 30 (D) 10
158. On which sample the seed quality tests is made in the Seed Testing Laboratory?
- (A) Primary sample
(B) Submitted sample
 (C) Working sample
(D) Composite sample
159. The Tetrazolium test is a
- (A) Cultivar identification test
 (B) Seed viability test
(C) Seed Health test
(D) Seed moisture test
160. The science of evaluating the planting quality of seed before it is sown refers to
- (A) Seed processing
(B) Seed packaging and handling
 (C) Seed testing
(D) Seed marketing
161. The loss in seed weight when it is dried is termed as
- (A) Seed vigour
(B) Seed viability
(C) Seed germination
 (D) Seed moisture
162. What is the recommended row length for raising crop for conduct of grow out test in paddy?
- (A) 5 m (B) 6 m
(C) 8 m (D) 10 m

163. Under which section of Indian Seeds Act 1966, the State Seed Testing Laboratories are established?
- (A) Sec. 2 (B) Sec. 3
 (C) Sec. 4 (D) Sec. 5
164. The process of adding inert materials to change seed size and shape for improved plant ability is called as
- (A) Halogenation (B) Seed priming
 (C) Seed hardening (D) Seed pelleting
165. What is the maximum number of farmers under one seed village?
- (A) 50 (B) 100
 (C) 150 (D) 200
166. High seed rate and use of fish meal trap are the most important IPM tools for the management of _____
- (A) Cotton weevil
 (B) Shoot fly in Sorghum
(C) Sorghum stemborer
(D) Root aphid in Ragi
167. Banding with grease or polythene sheets on the trunk of the mango helps to prevent
- (A) Stem borer (B) Maugo hoppers
 (C) Fruit flies (D) Mealy bugs
168. In coconut _____ pest is effectively controlled by the larval parasitoid Goniozus nephantidis.
- (A) Red palm weevil
 (B) Black headed caterpillar
(C) Coconut slug caterpillar
(D) Coconut eriophyid mite

169. The entry of Bacterial Canker in tomato is through
- (A) Stomata
(B) Trichomes
(C) Neetarhodes
(D) Hydathodes
170. "Little leaf" disease in brinjal is transmitted by
- (A) Cestius phycitis
(B) Orosius albicinctus
(C) Bemisia tabaci
(D) Thrips tabaci
171. Which of the following entomopathogenic nematodes is effective against soil pests.
- (A) Meloidogyne sp.
(B) Trichodorus sp.
(C) Aphelenchoides sp.
 (D) Heterorhabditis sp.
172. Herbicide application should be done by using
- (A) Hollow cone nozzle
(B) Solid cone nozzle
 (C) Deflector type nozzle
(D) Partially hollow cone nozzle
173. Citrus exocortis disease is caused by
- (A) Spcroplasma
(B) Phytoplasma
 (C) Viroid
(D) Virus
174. In potato, oxygen starvation during storage leads to incidence of
- (A) Brown rot
(B) Scab
 (C) Black heart
(D) Ring rot

175. Match the following

- | | |
|------------------------------------|---|
| (a) Cooperative societies act 1912 | (i) Performance of cooperatives |
| (b) Sir Edward Maclagan committee | (ii) Cooperation failed in India |
| (c) D.R. Gadgil committee | (iii) Rectified shortcoming in 1904 Act |
| (d) Gorwala committee | (iv) Inadequacy of credit |

(a) (b) (c) (d)

(A) (ii) (iii) (iv) (i)

(B) (iii) (i) (iv) (ii)

(C) (i) (iii) (ii) (iv)

(D) (iv) (ii) (i) (iii)

176. Who is responsible to prepare district credit plan for the district?

(A) SBI

(B) Lead bank

(C) RBI

(D) Cooperative bank

177. Which statements are correct with respect to law of constant return

(1) Termed as linear function

(2) Each additional unit of input produces equal amount of output

(3) Same slope in its entire range

(4) Predominantly used in agriculture

(A) 1 Only

(B) 1, 2, 3 only

(C) 1 and 4 only

(D) 1, 3, 4 only

178. The following is not an advantage of diversified farming

(A) Better utilization of farm resources

(B) Reduced farm risks

(C) Flow of income

(D) Ineffective supervision

179. Which scheme was introduced by general insurance corporation in the year 1985?
- (A) Combined crop insurance scheme
 - (B) Combined cost and insurance scheme
 - (C) Comprehensive crop insurance scheme
 - (D) Comprehensive cost and insurance scheme
180. Under which scheme the loans are being extended to the weaker sections of the society who do not possess tangible security?
- (A) Village adoption scheme
 - (B) Lead bank scheme
 - (C) Farm graduate scheme
 - (D) Differential rate of interest scheme
181. Learning curve is the other name of which cost curve?
- (A) Long run average variable cost curve
 - (B) Long run average cost curve
 - (C) Short run average cost curve
 - (D) Short run average variable cost curve
182. In the classical production function stages, which stage is said to be rational zone?
- (A) Second
 - (B) First
 - (C) Third
 - (D) Fourth
183. The type of ownership is individual and that of operatorship is collective in the case of co-operative
- (A) Tenant farming
 - (B) Joint farming
 - (C) Collective farming
 - (D) Belter farming
184. If output of one product can be increases only through reduction in the output of the other product then that enterprise is said to be
- (A) Complementary enterprises
 - (B) Supplementary enterprises
 - (C) Competitive enterprises
 - (D) Joint products

185. Which commission was appointed by the government of India under the chairmanship of Dr. M.S. Swaminathan to rejuvenate agriculture and thereby improve the lot of millions of farmers?
- (A) National Commission on Farmers
 - (B) National Commission on agriculture
 - (C) Indian Commission on Farmers
 - (D) Indian Commission on agriculture
186. The Indian standards institution has been renamed as the Bureau of Indian standards with effect from
- (A) April 10, 1987
 - (B) April 1, 1987
 - (C) April 1, 1989
 - (D) April 12, 1988
187. A market in which only one seller and only one buyer are present and it is known as
- (A) Monopoly
 - (B) Bilateral monopoly
 - (C) Monopsony
 - (D) Duopoly
188. The situation in which, the marketed surplus is more than marketable surplus arises for _____ farmers.
- (A) Only marginal
 - (B) Small and marginal
 - (C) Medium
 - (D) Large
189. Superior alternative to fair price shop system suggested by tenth five year plan is
- (A) Food coupon scheme
 - (B) Subsidy entitlement card
 - (C) Food stamp system
 - (D) Food card system
190. Calculate rate of growth in demand when the rate of population growth is two per cent per year, rate of growth of per capita income is three per cent per year and income elasticity of demand is 0.8.
- (A) 4.0 per cent/year
 - (B) 3.4 per cent/year
 - (C) 4.4 per cent/year
 - (D) 3.2 per cent/year

191. Which of the following attribute of innovation is inversely related to the rate of adoption?
- (A) Compatibility
 - (B) Complexity
 - (C) Observability
 - (D) Trialability
192. The 'length of time' required to pass through the entire innovation decision process is called
- (A) Decision period
 - (B) Innovation –decision period
 - (C) Rate of adoption
 - (D) Innovation – decision planning
193. Intensive Agricultural District Programme (IADP) was started in 1960 in the month of
- (A) July
 - (B) June
 - (C) March
 - (D) November
194. In which year, 'Development of Women and children in Rural Areas' (DWCRA) was launched?
- (A) 1978
 - (B) 1980
 - (C) 1982
 - (D) 1984
195. The rural development programme aims to develop the capacity of taking decisions among the rural women and make them careful towards their rights
- (A) Mahila Samridhi Yojana
 - (B) Indira Mahila Yojana
 - (C) Sampoorna Gramin Rozgar Yojana
 - (D) Swarna Jayanthi Gram Swarojgar Yojana

196. Ceiling price concept is to protect
- (A) Farmers
 - (B) Consumers
 - (C) Market intermediaries
 - (D) Public Agencies
197. CWC was established in
- (A) 1947
 - (B) 1950
 - (C) 1957
 - (D) 1965
198. Pricing efficiency is said to be achieved if product is sold in two different forms, when,
- (A) Price difference is less than transport cost
 - (B) Price difference is less than storage cost
 - (C) Price difference is less than processing cost
 - (D) Price difference is more than processing cost
199. This means conversion of message in the code form into ordinary language which may be easily understood.
- (A) Decoding
 - (B) Encoding
 - (C) Treatment
 - (D) Fidelity
200. 'Cone of experience' was devised by
- (A) Kelsey and Hearne
 - (B) Edgar Dale
 - (C) Seaman A. Knapp
 - (D) Ensminger
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