Question
Booklet No. : [redacted]

AOE/18

Register
Number | | | | | | | | | |

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 Ⓐ, Ⓑ, Ⓒ and Ⓓ 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, Ⓑ is the correct answer, you have to mark as follows :

   Ⓐ ● Ⓒ Ⓓ

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.

SEAL

SPACE FOR ROUGH WORK

1. The lowest area under irrigation in Tamil Nadu is

(A) Tirunelveli Dt. (B) Nilgris Dt.

(C) Tanjore Dt. (D) Cuddalore Dt.

2. 'Autumn Planting' sugarcane is planted during

(A) September to November (B) June to August

(C) December to March (D) December to January

3. Groundnut is intercropped with

(A) Rice (B) Pigeon pea

(C) Coconut (D) Eucalyptus

4. The foliar spray recommended for Rice fallow pulse in Tamil Nadu is

(A) DAP – 5% (B) DAP – 2%

(C) DAP – 10% (D) Urea – 5%

5. Striga is an important weed in

(A) Rice (B) Sugarcane

(C) Bengal gram (D) Black gram

6. Minimum tillage can be practiced by

(A) Complete disc ploughing (B) Row zone tillage

(C) Complete disc harrowing (D) Complete cultivator ploughing

7. The Intergovernmental panel on climate change (IPCC) help its 43rd session in April 2016 at

(A) India (B) Kenya

(C) France (D) Srilanka

8. The accuracy of Long Range weather forecast is

(A) > 80% (B) 60%

(C) > 90% (D) > 70%

9. NCMRWF refers to

(A) National Centre for Medium Range Weather Forecast

(B) National Centre for Meteorological Region in Weather Forecast

(C) New Centre for Micro Research in Weather Forecasting

(D) New Delhi Central Medium Range Weather Forecast

10. Medium Range Weather Forecast is given by

(A) RMC (Regional Meteorological Centre)

(B) NCMRWF (National Centre for Medium Range Weather Forecast)

(C) MC (Meteorological Centre)

(D) AIR (All India Radio)

11. Priming is a post harvesting process carried out in

(A) Coconut

(B) Tobacco

(C) Blackgram

(D) Rice

12. The economical part of sunflower is

(A) Capitula

(B) Leaf

(C) Stem

(D) Root

13. The water requirement of rice crop is

(A) 700 m.m

(B) 1200 m.m

(C) 2500 m.m

(D) 500 m.m

14. The 'Poor man's friend' crop is

(A) Rice

(B) Cumbu

(C) Potato

(D) Tapioca

15. Sugar content in brix of sweet sorghum juice varies from

(A) 16 – 23%

(B) 32 – 40%

(C) 8 – 10%

(D) 8 – 12%

16. The mean particle diameter of sand particles is

(A) 2.0 – 0.05 mm
(B) < 0.02 mm
(C) < 0.002 mm
(D) 0.05 – 0.002 mm

17. Agricultural grade gypsum contains

(A) 70% purity
(B) 90% purity
(C) 30% purity
(D) 35% purity

18. A unit of CSWCR & TI (Central Soil and Water Conservation Research and Training Institute) in Tamil Nadu is located at

(A) Ooty
(B) Kodaikanal
(C) Palani
(D) Yercaud

19. Alfisols are otherwise called as

(A) Black soils
(B) Red soils
(C) Clayey soils
(D) Clay loam soils

20. AI refers to

(A) Arid Inlands
(B) Aridity Index
(C) Actual Index
(D) Actual Initial Moisture

21. Ephemerals are those plants that can

(A) resist the drought
(B) evade the drought
(C) tolerate the drought
(D) cannot tolerate the drought

22. The soil type of drylands in India is dominated by

(A) Sandy soil
(B) Clayey soil
(C) Alluvial soils
(D) Black soils

23. CAZRI (Central Arid Zone Research Institute) is located at

(A) Raipur
(B) Jaipur
(C) Hyderabad
(D) Jodhpur

24. Water content in the plant body on fresh weight basis is

(A) 10%
(B) 20%
(C) 30%
(D) 90%

25. The mass (weight) per unit volume of a dry soil including pore space is called

(A) particle density
(B) soil density
(C) soil porosity
(D) bulk density

26. A common phenomenon in areas with good canal irrigation but poor drainage

(A) Salinisation / Alkalisation
(B) Calcification
(C) Laterisation
(D) Cheluviation

27. The headquarters of CSWCRI (Central Soil and Water Conservation Research Institute) is located at

(A) Jodhpur
(B) Dehradhun
(C) Jaipur
(D) New Delhi

28. Which one of the following is not a dimension of social change?

(A) Structural change
(B) Cultural change
(C) Interactional change
(D) Functional change

29. ICRISAT refers to

(A) International Crop Research Institute for Semi Arid Tropics
(B) Indian Crop Research Institute for Semi Arid Tropics
(C) Institutional Central Research Initiative for Semi Arid Tropics
(D) Indian Central Research Institute for Semi Arid Tropics

30. The soil order which have high content of clays that swell when wetted

(A) Alfisols
(B) Ultisols
(C) Vertisols
(D) Mollisols

31. The biogas produced from animal dung and crop residues is

(A) oxygen
(B) methane
(C) nitrogen
(D) sulphur

32. The noncontact type of thermometer is

(A) Bimetallic strip thermometer
(B) Mercury thermometer
(C) Thermocouple thermometer
(D) Infra red thermometers

33. Total soil water potential is

(A) Σ of gravitational, osmotic, capillary and pressure potential
(B) Σ of gravitational, osmotic and capillary potential
(C) Σ of gravitational and osmotic potential
(D) Equal to gravitational potential

34. Expand BGA

(A) Bio Green Azolla
(B) Blue Green Algae
(C) Bio Generated Azolla
(D) Biological Graded Azospirillum

35. One of the following is a micronutrient required for plant growth

(A) Nitrogen (N)
(B) Manganese (Mn)
(C) Phosphorous (P)
(D) Potassium (K)

36. VAM refers to

(A) Very Attractive Microorganism
(B) Vesicular Arbuscular Mycorrhizae
(C) Virtual Azolla Microbes
(D) Visual Azolla Medium

37. Lac dye contains ———— and used as manure.

(A) Phosphorous
(B) Potash
(C) Ammonium sulphide
(D) Nitrogen

38. Modern bee keeping is possible after the discovery of movable frame hive by

(A) L. Langstroth
(B) Newton
(C) Karl Von Frisch
(D) Bee man

39. The best method for characterization of aeration status of the soil is

(A) Air-filled porosity
(B) Redox potential
(C) Diffusion coefficient of gases
(D) Oxygen diffusion rate

40. Intermediate textured rock is

(A) Granite
(B) Diorite
(C) Ryolite
(D) Felsite

41. In agriculture wind energy is mainly used for

(A) Water pumping
(B) Harvesting
(C) Fertilizer application
(D) Sowing / planting

42. A good example of trap crop for cotton to attract jassids and cotton bollworm is

(A) Bajra
(B) Lady's finger
(C) Maize
(D) Tomato

43. This type of evaluation is carried out by the agency responsible for the planning and implementation of the programme

(A) Self evaluation
(B) External evaluation
(C) Internal evaluation
(D) None of the above

44. The process by which neutron moisture meter works is

(A) Thermalisation
(B) Evaporation
(C) Conduction
(D) Convection

45. The best agronomic practices to improve the water use efficiency is

(A) Minimum tillage
(B) Mulching
(C) Planting geometry
(D) All of these

46. Which one of the following is incorrect?

(A) Qualitative characters are discrete

(B) Quantitative characters are polygenic

(C) Quantitative characters are not affected by environment

(D) Qualitative characters are oligogenic

47. Wheat varieties NP4 and NP6 are developed through

(A) Mass selection

(B) Heterosis breeding

(C) Pureline selection

(D) Pedigree breeding

48. Which method of breeding is followed to transfer of disease resistance to a ruling variety?

(A) Mass selection

(B) Mass – pedigree

(C) Single seed descent

(D) Back cross

49. A position in a chromosome that contains one or more polygenes involved in the determination of a quantitative trait

(A) Polygeneric trait locus

(B) Oligogenic trait locus

(C) Quantitative trait locus

(D) Qualitative trait locus

50. Production of hybrid plants through the fusion of protoplasts of two different plant species / varieties is called

(A) Distant hybridization

(B) Somatic hybridization

(C) In vitro pollination

(D) Wide hybridization

51. Development of embryo either from Synergids or antipodal cell is referred to as

(A) Apospory

(B) Adventive Embryony

(C) Apogamy

(D) Diplospory

52. ———— is a reproductive deficiency of same plants where male organs in hermaphrodite flowers are rendered defunction

(A) Self incompatibility
(B) Male Sterily
(C) Cleistogamy
(D) Chasmogamy

53. The dwarfing gene in rice is

(A) Dee Gee Woo Gen
(B) Norin 10
(C) Milo
(D) Tift

54. In ———— a large number of plants of similar phenotype are selected and their seeds are mixed together to constitute the new variety.

(A) Pureline Selection
(B) Mass Selection
(C) Pedigree Selection
(D) Bulk Method

55. The superiority of F_1 over its parents is known as

(A) Composite
(B) Heterosis
(C) Cybrids
(D) Inbreeding depression

56. The primary centre of origin of Hordeum Vulgare (Barley) is

(A) Abyssynian centre
(B) Asia Minor centre
(C) Mediterranean centre
(D) Central Asia centre

57. Integrated Rural Development Programme (IRDP) was extended to all the blocks of the country on

(A) 15th August, 1980
(B) 2nd October, 1980
(C) 2nd October, 1979
(D) 15th August, 1979

58. Polyethylene Glycol is used in

(A) Hydro priming
(B) Halo priming
(C) Osmotic priming
(D) Matrix priming

59. Number of plants to be counted per count during field inspection in 'Wide-Spaced row crops' seed field

(A) 100
(B) 500
(C) 1000
(D) 1500

60. Which one of the following is a direct vigour test for seeds?

(A) Speed of germination
(B) Tetrazolium test
(C) Accelerated ageing test
(D) Seedling length measurements

61. TZ test is used to estimate

(A) Seed moisture
(B) Seed purity
(C) Seed viability
(D) Genetic purity

62. Hard seeds are commonly found in families of

(A) Amaranthaceae
(B) Leguminosae
(C) Alliaceae
(D) Solanaceae

63. As per the ISTA Rules, the Final count for Maize Seed germination test has to be taken on

(A) 4^{th} day
(B) 7^{th} day
(C) 10^{th} day
(D) 14^{th} day

64. What is the name of the journal published by ISTA?

(A) Seed Research
(B) Seed Tech News
(C) Seed Science and Technology
(D) Journal of Seed Technology

65. The ISTA standard for minimum number of seeds for germination test are

(A) 50
(B) 100
(C) 200
(D) 400

66. "Vrikshabhaksha" is

(A) a book written by Surapal
(B) Experimental Plant Pathology
(C) Phanerogamic parasite
(D) Seewee of Botany

67. To prepare 1 per cent Bordeaux Mixture, quantity of copper sulphate, lime and water required are

(A) 1000 g + 1000 g + 1000 ml
(B) 500 mg + 500 mg + 50 ml
(C) 500 gm + 500 gm + 100 lit
(D) 1000 g + 1000 g + 100 ml

68. Banana Bunchy top virus can be detected by

(A) Iodine test
(B) Tetrazolium test
(C) Ooze test
(D) Koch's Postulates

69. The technique shoot tip culture is employed to get

(A) Cross protected plants
(B) Virus free plants
(C) Pre immunized seedlings
(D) Bacterial resistant plants

70. Directorate of plant protection, quarantine and storage is located in

(A) Agra
(B) Chennai
(C) Faridabad
(D) Mumbai

71. Brinjal lacewing bug is ———— pest.

(A) Monophagous
(B) Oligophagous
(C) Polyphagous
(D) Cosmopoliton

72. Use of higher seed rate and early saving are the cultural methods used to manage ———— pest in sorghum.

(A) Calocoris angustatus
(B) Athenigona seccala
(C) Chilo partellus
(D) Ophiomyia phaseoli

73. Detrashing in sugarcane is used to manage ———— pest.

(A) Early shoot borer
(B) Internode borer
(C) Top shoot borer
(D) Root grub

74. Which one is the non-host plant for rhinocerous beetle?

(A) Coconut
(B) Sugarcane
(C) Pineapple
(D) Acacia

75. In Rice, a night temperature of 20°C alternating with day temperature of 30°C with 14 hrs of light and 10 hrs of darkness is most favourable for infection by

(A) Rice Tungro Bacilliform Virus

(B) Bipolaris oryzae

(C) Magnaporthe oryzae

(D) Xanthomonas oryzae pr. oryzae

76. Identify the break even point in terms of rupees if the fixed cost is Rs. 8,000/ha of a crop, price/quintal is Rs.950 and variable cost/quintal is Rs. 485.

(A) Rs. 15,326.5

(B) Rs. 16,324.5

(C) Rs. 16,326.5

(D) Rs. 15,320.5

77. In the year 1969, how many commercial banks were nationalised?

(A) 15

(B) 14

(C) 18

(D) 16

78. Who is the sponsor bank for Pallavan grama bank and where is the headquarters?

(A) Indian Bank, Salem

(B) Indian Bank, Cuddalore

(C) SBI, Salem

(D) IOB, Salem

79. The shape of isoquant for perfect substitutes is

(A) parallel to x axis

(B) linear line

(C) parallel to y axis

(D) convex to origin

80. Match the following :

(a)	Tractor loan	1.	Marketing loan
(b)	Motor cycle loan	2.	Production loan
(c)	Key loan	3.	Consumption loan
(d)	Warehouse receipt loan	4.	Hypothecation loan

	(a)	(b)	(c)	(d)
(A)	3	4	2	1
(B)	2	1	4	3
(C)	2	3	4	1
(D)	2	4	3	1

81. Which statements are correct with respect to rational stage of classical production function

1. MPP < APP
2. MPP = 0 when stage ends
3. $E_p = 1$ when stage starts
4. TPP negative

(A) 1, 2, 3, 4

(B) 1, 2, 3 only

(C) 2, 3 only

(D) 2, 3, 4 only

82. The decision rule drawn from the principle of Marginalism is

(A) MC > MR

(B) MC = MR

(C) MC < MR

(D) MC $\gtrless$ MR

83. The first type of co-operative societies established in India are

(A) credit societies

(B) farming societies

(C) marketing societies

(D) housing societies

84. The following is not an affiliate body of World Bank

(A) IMF (B) IFC

(C) IDA (D) WTO

85. LAMPS were established in India based on the recommendations of

(A) Narasimham

(B) Bava committee

(C) Nicholson

(D) Mohan Kanda

86. Which statements are correct with respect to random factor in Time series analysis?

1. includes all omitted factors
2. tastes and preferences are not included
3. selling costs are included
4. advertisement cost enhances random factor

(A) 1 only

(B) 1 and 2 only

(C) 1, 3, 4 only

(D) 2 and 4 only

87. Kinked demand and price rigidity are seen in this market structure

(A) Oligopoly (B) Monopoly

(C) Perfect (D) Duopoly

88. Expansion of firms by consolidating additional marketing functions and activities under a single management is

(A) Market integration (B) Marketing efficiency

(C) Price spread (D) Technical efficiency

89. Match the following :

(a)	Production risk	1.	Due to fluctuation in price
(b)	Marketing risk	2.	Increase with increase in credit
(c)	Price risk	3.	Based on rainfall distribution
(d)	Financial risk	4.	Based on fluctuation in supply

	(a)	(b)	(c)	(d)
(A)	1	4	3	2
(B)	3	4	2	1
(C)	3	1	4	2
(D)	4	1	3	2

90. Match the following :

(a)	Secular market	1.	Demand over entire country
(b)	Terminal market	2.	Cattle market
(c)	Local market	3.	Manufactured goods
(d)	National market	4.	Processing and Storage are dominant

	(a)	(b)	(c)	(d)
(A)	3	4	2	1
(B)	3	2	1	4
(C)	2	3	4	1
(D)	3	1	4	2

91. Match the commodity boards with their headquarters :

	Board		Head quarters
(a)	Coconut development Board	1.	Bangalore
(b)	Tobacco board	2.	Kottayam
(c)	Rubber board	3.	Guntur
(d)	Coffee board	4.	Kochi

	(a)	(b)	(c)	(d)
(A)	4	3	2	1
(B)	4	2	3	1
(C)	2	1	3	4
(D)	4	1	3	2

92. Who is responsible to announce minimum support price and when it is announced?

(A) State Government, after sowing

(B) CACP, after sowing

(C) Government of India, before sowing

(D) Government of India, after sowing

93. The demand for farm inputs is said to be

(A) derived demand

(B) reservation demand

(C) effective demand

(D) ineffective demand

94. Source – Transmitter – Signal – Receiver – Destination is the model of communication proposed by

(A) Berlo

(B) Laswell

(C) Shannon and Weaver

(D) Aristotle

95. Sponsoring agency of 'Village Knowledge Centre' is

(A) M.S. Swaminathan Research Foundation, Chennai

(B) MANAGE, Hyderabad

(C) NAARM, Hyderabad

(D) National Information Centre

96. A blog is a fusion of two words

(A) Web and Google

(B) Web and Log

(C) WAN and LAN

(D) Glob and Log

97. Sponsoring agency of 'Cyber Extension Project' is

(A) NAARM, Hyderabad

(B) MANAGE, Hyderabad

(C) ICAR, New Delhi

(D) GBPUA & T, Pantnagar

98. Production of wheat during 2016 – 17 is estimated at a record level of

(A) 98.38 million tonnes
(B) 43.33 million tonnes
(C) 143.33 million tonnes
(D) 208.38 million tonnes

99. When compared to the total oil seeds production in the year 2015–16, the total oil seeds production in the country in 2016 – 17 is higher by

(A) 6.85 million tonnes
(B) 3.85 million tonnes
(C) 9.85 million tonnes
(D) 12.85 million tonnes

100. Thaladi season is

(A) October/November – January/February
(B) June/July – September/October
(C) August/September – December/January
(D) January/ February – March/April

101. Kuruvai season is

(A) June/July to September/October
(B) October/November to January/February
(C) August/September to December/January
(D) January/ February to March/April

102. ICRISAT was established at Patancheru near Hyderabad in the year

(A) 1982
(B) 1972
(C) 1986
(D) 1962

103. Repetative growing of same sole crop in the same land is called as

(A) Mixed cropping
(B) Poly culture
(C) Inter cropping
(D) Mono culture

104. The peak rainfall season of Tamil Nadu is

(A) Summer
(B) North East Monsoon
(C) South West Monsoon
(D) Winter

105. Phalaris minor is a major weed in

(A) Rice
(B) Wheat
(C) Sorghum
(D) Tobacco

106. Chemicals that reduce shoot growth and increase root growth to enable the plants to resist drought

(A) Growth retardants
(B) Anti evaporants
(C) Soil amendments
(D) Growth promotors

107. Mitscherlich proposed the growth curve in the year

(A) 1809
(B) 1909
(C) 1709
(D) 1609

108. Isotherm is related to

(A) Rainfall
(B) Pressure
(C) Temperature
(D) Humidity

109. The chemical recommended for delinting in cotton seed is

(A) Perchloric acid
(B) Concentrate sulphuric acid
(C) Diluted sulphuric acid
(D) Hydrochloric acid

110. For effective on farm management practices a reliable system of
(A) Short range weather forecast is needed
(B) Medium range weather forecast is needed
(C) Short and Medium range weather forecast is needed
(D) Long range weather forecast is needed

111. Acid delinting in cotton can be done using
(A) Hydrochloric acid
(B) Acetic acid
(C) Concentrated sulphuric acid
(D) Diluted sulphuric acid

112. Zinc sulphate application to rice in zinc deficient soil at the time of last puddling is
(A) 20 – 25 Kg ha^{-1}
(B) 50 Kg ha^{-1}
(C) 5 Kg ha^{-1}
(D) 10 Kg ha^{-1}

113. Queen of cereals is
(A) Rice
(B) Wheat
(C) Maize
(D) Ragi

114. Pomegranate is propagated using
(A) Rooted cuttings alone
(B) Layers alone
(C) Rooted cuttings and layers
(D) Seeds alone

115. A watershed is a
(A) Physical land
(B) Geohydrological unit of land
(C) Vegetative unit of land
(D) Water holding topography

116. Sorghum plant tries to avoid transpiration during day time by
(A) Swelling of its leaves
(B) Drying of leaves
(C) Rolling of its leaves
(D) Shrinking of leaves

117. PRA refers to
(A) Program for Regional Agriculture
(B) Participatory Rural Appraisal
(C) Program for Research and Appraisal
(D) Project Research Agency

118. WUE is the highest in

(A) Flood irrigation
(B) Border irrigation
(C) Sprinkler irrigation
(D) Drip irrigation

119. Darcy's law in water management explains

(A) Flow of water in dam
(B) Flow of water in soil
(C) Flow of water in forest trees
(D) Flow of soil in hills

120. Inceptisols are otherwise called as

(A) Alluvial soils
(B) Black soils
(C) Red soils
(D) Laterite soils

121. Which of the following nutrients is required for synthesis of cystine and methionine?

(A) Nitrogen
(B) Sulphur
(C) Phosphorus
(D) Manganese (Mn)

122. The arrangement of primary soil particles and their aggregates into a certain definite pattern is called as

(A) Soil structure
(B) Soil monolith
(C) Soil texture
(D) Soil reaction

123. The increasingly dominant active factor in soil formation is

(A) Climate
(B) Nature of parent rock
(C) Man and animal
(D) Micro organisms

124. ET (Evapo Transpiration) can be measured using

(A) Lactometer
(B) Lysimeter
(C) Heliometer
(D) Hydrometer

125. CRIDA (Central Research Institute on Dry land Agriculture) is located at

(A) Chennai
(B) Arupukottai
(C) Hyderabad
(D) Kovilpatti

126. The total pore space of the soil occupied by air and water is on

(A) 50:50 basis (B) 25:75 basis

(C) 5:95 basis (D) 45:55 basis

127. The average percentage of nitrogen in vermicompost is

(A) 3 (B) 30

(C) 10 (D) 15

128. One of the following implement is used to break the hard pan

(A) Country plough (B) Chisel plough

(C) Cultivator (D) Rotary weeder

129. Nitrogen contribution to the succeeding crop whom greengram is grown earlier

(A) 15 to 20 kg N/ha (B) 15 to 120 kg N/ha

(C) 40 to 120 kg N/ha (D) 20 to 30 kg N/ha

130. The sustainable agriculture movement started in

(A) 1981 (B) 1991

(C) 1993 (D) 1998

131. The N content of azolla is

(A) 1.0 – 2.0% (B) 0.2 – 0.3%

(C) 0.01 – 0.02% (D) 5.0 – 10.0%

132. The most suitable intercrop in Maize is

(A) Cowpea (B) Sorghum

(C) Cotton (D) Potato

133. Social classes are classified based on

(A) Religion (B) Community

(C) Economic status (D) Political status

134. The National seed corporation was established in the year

(A) 1961 (B) 1963

(C) 1965 (D) 1966

135. The ———— gland of worker bee secretes royal jelly.

(A) Mandibular gland (B) Dufour's gland

(C) Hypopharyngeal gland (D) Rectal gland

136. Match List I and List II and select the correct answer using the codes given in the option.

List I		List II
(a)	Honey mushroom	1. Tricholoma matsuke
(b)	Sacred mushroom	2. Armillaria mellea
(c)	Pine mushroom	3. Lentenus edodes
(d)	Shiitake mushroom	4. Psilocybe semilanceata

	(a)	(b)	(c)	(d)
(A)	2	1	4	3
(B)	4	2	1	3
(C)	1	3	4	2
(D)	2	4	1	3

137. Measuring performance against pre determined goals is called

(A) management (B) measurement

(C) planning (D) evaluation

138. The total porosity of the soil is higher in

(A) Sandy soils (B) Silty soils

(C) Clayey soils (D) Loamy soils

139. The optimum temperature for activities of the most of the micro organisms is

(A) 15 – 20°C (B) 20 – 25°C

(C) 25 – 35°C (D) 35 – 45°C

140. Triticale a man made cereal was developed by crossing

(A) wheat and maize
(B) wheat and rye
(C) wheat and rice
(D) wheat and sorghum

141. Detasseling is practiced for hybrid seed production in

(A) Sorghum
(B) Bajra
(C) Maize
(D) Ragi

142. The minimum isolation distance for foundation seed production of hybrid pearl millet is

(A) 200 m
(B) 400 m
(C) 800 m
(D) 1000 m

143. Chromosome doubling can be done in plants by using

(A) Giberellic acid
(B) Colchicine
(C) Ethylene
(D) Proline

144. The sex in plants was first discovered by

(A) Darwin
(B) Linnaeus
(C) Camerarius
(D) Frankel

145. The ploidy level of seedless watermelon is

(A) tetraploid
(B) triploid
(C) monoploid
(D) hexaploid

146. A line carrying one chromosome pair from a different species in addition to the normal somatic chromosome complement is known as

(A) Alien – Addition line
(B) Alien – Substitution line
(C) Alien monosomic
(D) Alien nullisomic

147. ———————— enzymes that cuts the internal DNA sequence at specific sites.

(A) Lambda exonuclease
(B) SI nuclease
(C) Klenow polymerase
(D) Restriction endonucleases

148. In which of the following crop is a allopolyploids but nullisomics and genomic substitution tolerated

(A) Potato
(B) Groundnut
(C) Cotton
(D) Wheat

149. The polymerase chain reaction (PCR) technique was developed by

(A) Kary Mullis
(B) Haberlandt
(C) Guha and Mageshvari
(D) Jenson

150. Sorghum halepense is a tetraploid with chromosome number

(A) $2n = 4x = 28$
(B) $2n = 4x = 40$
(C) $2n = 4x = 52$
(D) $2n = 4x = 44$

151. The beneficiaries in Small Farmer Development Agency (SFDA) were the farmers who owned land holdings with the size

(A) 7.5 to 10 acres
(B) 5.0 to 7.5 acres
(C) 2.5 to 5.0 acres
(D) Below 2.5 acres

152. In marker assisted selection (MAS), selection is based on Molecular Markers closely linked to the gene of interest rather than the gene itself is known as

(A) Background selection
(B) Foreground selection
(C) Gene selection
(D) Marker selection

153. The first cross between wheat and Rye was made by

(A) Rimpau
(B) Karpechenko
(C) Kihara
(D) Lysenco

154. The colour of Breeder seed tag is

(A) White
(B) Azure Blue
(C) Golden yellow
(D) Opal Green

155. Presence of 'B' line in 'A' line population in Sorghum hybrid seed production plot is called

(A) Shedding tassel
(B) Selfed toll
(C) Partials
(D) Pollen Shedders

156. Find the odd one

(A) Velvet Roll Separator
(B) Magnetic Separator
(C) Inclined Draper
(D) Gravity Separator

157. Under which section of the Indian Seeds Act, 1966 the varieties are notified

(A) Sec. 3
(B) Sec. 5
(C) Sec. 7
(D) Sec. 9

158. Seed pelleting is a

(A) pre-souring seed treatment
(B) pre-storage seed treatment
(C) post-storage seed treatment
(D) mid-storage seed treatment

159. Which of the following types of factor substitution is common in agriculture

(A) Constant rate
(B) Decreasing rate
(C) Increasing rate
(D) Fixed proportions

160. How many number of heads to be counted/count during field inspection of paddy seed crop?

(A) 100 (B) 500

(C) 1000 (D) 1500

161. Minimum number of field counts to be taken in an area of 5 ha seed field

(A) 5 (B) 6

(C) 7 (D) 8

162. The major genetic contaminant found in maize hybrid seed production plot is

(A) Selfed plants (B) Partials

(C) Pollen shedders (D) Shedding tassels

163. The maximum temperature for safe drying of orthodox seeds is

(A) 40°C (B) 41°C

(C) 42°C (D) 43°C

164. Which one of the following is seed upgrading machine?

(A) Debearder (B) Destoner

(C) Pre-conditioning / scalper (D) Gravity separator

165. The priming agent, which does not penetrate the cell wall is

(A) PEG (B) Mannitol

(C) D.Mannitol (D) Halogens

166. The method adopted for the assessment of downy mildew disease in Grapes is

(A) Single point assessment

(B) Assessment in terms of percentage

(C) Assessment using descriptive charts

(D) Probit transformations

167. The effective biological weed killer for the prickly pear Opuntia dillenii is

(A) Dactylopius tomentosus

(B) Orthezia insignis

(C) Ophiomyia lantanae

(D) Zygogramma bicolorata

168. A problem weed, whose seed once mixed with crop seed is extremely difficult to separate is called as

(A) Non parasitic weed

(B) Objectionable weed

(C) Parasitic weed

(D) Aquatic weed

169. Coffee green bug is effectively controlled by using the entomophagous fungi

(A) Hirsutella thompsoni

(B) Lecanicillium lecanii

(C) Beauveria bassiana

(D) Aspergillus flavus

170. The constant watch on the population dynamics of pest is called as

(A) Pest observation

(B) Pest surveillance

(C) Pest survey

(D) Pest monitoring

171. In cotton, rosetting of flowers is caused by

(A) American bollworm

(B) Pink bollworm

(C) Spiny bollworm

(D) Spotted bollworm

172. The field carry over storage pest in pulses is

(A) Pulse pod bug

(B) Pulse pod fly

(C) Pulse pod wasp

(D) Pulse beetle

173. Nematodes produce seed galls in _____ crop

(A) Paddy

(B) Tomato

(C) Wheat

(D) Mustard

174. Citrus nematode Tylenchulus semipenetrans is a _____ nematode.

(A) Endoparasitic

(B) Semi Endoparasitic

(C) Sedentary Ectoparasitic

(D) Migratory Ectoparasitic

175. Identify the incorrect answer with pertinent is ascoma produced by the fungus

(A) bracket

(B) perithecium

(C) apothecium

(D) pseudothecium

176. Which cost is said to be unit cost of production?

(A) total cost
(B) average fixed cost
(C) average variable cost
(D) average cost

177. Elasticity of production is obtained directly from which production function?

(A) Linear
(B) Quadratic
(C) Square root
(D) Cobb Douglas

178. Which statements are correct for continuous production function?

1. Input can be split into small unit
2. Output can be split into small unit
3. Input and output can be split into small units
4. Both input and output cannot be split.

(A) 4 only
(B) 1 and 2 only
(C) 1, 2 and 3 only
(D) 1, 2, 3, 4 only

179. Match the following :

NABARD Refinances the following projects to the tune of

(a)	Farm mechanisation	1.	100%
(b)	Biogas	2.	70%
(c)	Non-farm sector schemes	3.	75%
(d)	Other schemes	4.	50%

	(a)	(b)	(c)	(d)
(A)	3	1	4	2
(B)	1	4	3	2
(C)	4	2	1	3
(D)	4	3	1	2

180. Match the following :

(a)	AFC	1.	Curve crosses both AVC and ATC at their minimum
(b)	AVC	2.	An hyperbola declining at decreasing rate
(c)	TVC	3.	U shaped
(d)	MC	4.	Increasing and decreasing rate, later at increasing rate

	(a)	(b)	(c)	(d)
(A)	2	3	4	1
(B)	1	3	2	1
(C)	2	1	4	3
(D)	1	4	2	3

181. The following is not a disadvantage of specialized farming

(A) failure of crop

(B) increase in the skill of the farmer

(C) non-utilization of productive resources

(D) affects the soil health

182. Line representing various combination of two inputs that can be purchased with given outlay of fund is called as

(A) Iso-quant

(B) Iso-cost line

(C) Iso-revenue line

(D) Income curve

183. Which of the following is not a system of farming based on ownership and operationship?

(A) dry farming

(B) state farming

(C) collective farming

(D) capitalistic farming

184. When large number of seller deal in heterogenous and differentiated form of commodity is called

(A) perfect market

(B) oligopoly market

(C) oligopsony market

(D) monopolistic competitive market

185. First state warehousing corporation was set up in

(A) Tamilnadu

(B) Bihar

(C) Kerala

(D) Maharastra

186. The expert group on Agricultural marketing was established under the chairmanship of

(A) Acharya

(B) Dantwala

(C) Shankarlal Guru

(D) Jha. L.K.

187. Apex organisation of marketing co-operatives in the country is

(A) NCDC

(B) NAFED

(C) FCI

(D) CCI

188. APEDA functions under the

(A) Ministry of Agriculture

(B) Ministry of Food and Consumer Affairs

(C) Ministry of Commerce and Industry

(D) Ministry of Finance

189. In convergent form of Cobb-Web cycle, the relationship between E_d and E_s is

(A) $E_d > E_s$

(B) $E_d < E_s$

(C) $E_d = E_s$

(D) $E_s > E_d$

190. The Central Agmark laboratory is located in

(A) Bangalore

(B) Mumbai

(C) New Delhi

(D) Nagpur

191. In 2017–18, how much percentage of government's total expenditure has been allocated to provide food subsidies under targeted public distribution system?

(A) 7.2%

(B) 7.5%

(C) 7.6%

(D) 7.4%

192. All small scale units with investment limit in plant and machinery upto _____ irrespective of the location of the unit are called tiny enterprises.

(A) 25 lakhs

(B) 22 lakhs

(C) 23 lakhs

(D) 20 lakhs

193. The adopter category considered as 'friends and neighbours' by other members in the social system.

(A) Innovators

(B) Early adopters

(C) Early majority

(D) Late majority

194. What is the percentage of early adopters in the social system?

(A) 2.5%

(B) 13.5%

(C) 34%

(D) 16%

195. The Etawah Pilot project in Uttar Pradesh was originated by

(A) Sir Daniel Hamilton

(B) Dr. Spencer Hatch

(C) Mahatma Gandhiji

(D) Lt. Col. Albert Mayer

196. IVLP stands for

(A) Indian Village Linkage Programme

(B) Indian Village Linkage Plan

(C) Institution Village Linkage Programme

(D) Integrated Village Lab to land Programme

197. Integrated child development services scheme was started in the year

(A) 1976

(B) 1975

(C) 1977

(D) 1980

198. The best extension method to teach a skill involved in the particular practice

(A) Group discussion

(B) Method demonstration

(C) Result demonstration

(D) Lecture

199. Method demonstration works based on the principle of

(A) Learning is believing

(B) Seeing is believing

(C) Learning by teaching

(D) Learning by doing

200. Mention the stage at which poster is most effective?

(A) Awareness

(B) Interest

(C) Trial

(D) Evaluation

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