

Post of Forest Apprentice in Tamil Nadu Forest Subordinate Service (Group-VI Services)

1. Seed dealers should obtain licence to carry business of selling of seeds as per the
 - (A) Essential Commodities Act, 1955
 - (B) Seeds Act, 1966
 - (C) Seed (Control) Order, 1983
 - (D) Seed Rules, 1968
 - (E) Answer not known

2. Moist and conditioning in recommended for _____ seed.
 - (A) Sunflower
 - (B) Ragi
 - (C) Soybean
 - (D) Paddy
 - (E) Answer not known

3. Which of the following is considered as the Hub of seed quality control?
 - (A) Seed Certification Agency
 - (B) Seed Testing Laboratory
 - (C) State Seed Corporation
 - (D) National Seed Corporation
 - (E) Answer not known

4. Form VI of Seed Rules, 1968 deals about
 - (A) Memorandum to Seed Analyst by Seed Inspector
 - (B) Notice for sampling by Seed Inspector
 - (C) Certificate of test (or) analysis by the Seed Analyst
 - (D) Details of sample taken by Seed Inspector
 - (E) Answer not known

5. Which of the following is not a Routine test in Seed Testing Laboratory?
(A) Seed germination test (B) Seed vigour test
(C) Seed moisture test (D) Physical purity test
(E) Answer not known
6. Final Count of Germination for Groundnut seed is to be taken on _____ days after sowing.
(A) 7 (B) 10
(C) 14 (D) 21
(E) Answer not known
7. _____ is used for determination of genetic purity on the basis of seed characters under laboratory.
(A) Grow-out test
(B) Other distinguishable varieties test
(C) Germination test
(D) Vigour test
(E) Answer not known
8. The minimum population required for taking observation in GOT shall be
(A) 2000 plants (B) 800 plants
(C) 400 plants (D) 200 plants
(E) Answer not known
9. Phenol test is used for identification of varieties in testing genetic purity of
(A) Oat (B) Wheat
(C) Barley (D) Ragi
(E) Answer not known

10. Identify the incorrect pair on the basis of maximum size of seed lot in seed sampling.
- (A) Rice – 20,000 kg (B) Maize – 25,000 kg
(C) Sorghum – 10,000 kg (D) Finger Millet – 10,000 kg
(E) Answer not known
11. The first State to establish the official seed certification agency during 1970 as a part of Dept. of Agriculture.
- (A) Tamil Nadu (B) Karnataka
(C) Andhra Pradesh (D) Maharashtra
(E) Answer not known
12. Seed rate of sun hemp is _____ kg/ha.
- (A) 6–8 kg/ha (B) 8–10 kg/ha
(C) 10–12 kg/ha (D) 12–14 kg/ha
(E) Answer not known
13. Minimum isolation distance should be maintained for the production of foundation stage of maize seed.
- (A) 200 m (B) 300 m
(C) 400 m (D) 500 m
(E) Answer not known
14. The objectionable weed in wheat is
- (A) Agremone mexicana
(B) Convolvulus arvensis (Hiran Khuri)
(C) Red rice
(D) Wild abelmoschus
(E) Answer not known

19. Match the following screens with its function in a typical four-screen cleaner used in Seed Processing Unit :

Screen	Function
(a) First screen	1. Fine grading
(b) Second screen	2. Close scalping
(c) Third screen	3. Grading
(d) Fourth screen	4. Scalping

- | | (a) | (b) | (c) | (d) |
|---|------------------|-----|-----|-----|
| (A) <input checked="" type="checkbox"/> | 4 | 3 | 2 | 1 |
| (B) <input type="checkbox"/> | 4 | 3 | 1 | 2 |
| (C) <input type="checkbox"/> | 4 | 2 | 3 | 1 |
| (D) <input type="checkbox"/> | 4 | 1 | 3 | 2 |
| (E) <input type="checkbox"/> | Answer not known | | | |

20. Kernel colour variation termed as metazenia is to be removed before processing of seeds in _____ crop.

- | | |
|----------------------|---|
| (A) Sorghum | (B) <input checked="" type="checkbox"/> Maize |
| (C) Bajra | (D) Groundnut |
| (E) Answer not known | |

21. *Cuscutta* sp. is a parasitic weed on

- | | |
|---|---------------|
| (A) <input checked="" type="checkbox"/> Onion | (B) Rice |
| (C) Blackgram | (D) Greengram |
| (E) Answer not known | |

22. Pre-plant incorporation of herbicides are applied
- (A) after sowing of crop
 - (B) before sowing or planting of crop
 - (C) during the grand crop growth
 - (D) after emergence of weeds
 - (E) Answer not known
23. Cynodon dactylon is a major weed of crop lands reproduce several times before dying is belongs to the category of
- (A) Annual weed
 - (B) Biennial weed
 - (C) Emergent weed
 - (D) Perennial weed
 - (E) Answer not known
24. Which of the following fungal antagonistics towards plant pathogens?
- (A) Trichoderma
 - (B) Pseudomonas
 - (C) Bacillus
 - (D) Agrobacterium
 - (E) Answer not known
25. Which of the following insect order contains maximum parasitoids?
- (A) Diptera
 - (B) Hymenoptera
 - (C) Neuroptera
 - (D) Coleoptera
 - (E) Answer not known
26. One Larval Equivalent (LE) can be had from _____ fully grown up virus infected larvae.
- (A) One
 - (B) Two
 - (C) Three
 - (D) Four
 - (E) Answer not known

27. In which of the formulation the pesticide is used undiluted at a quantity less than 2.0 lit per ha.
- (A) Low volume (B) Ultra low volume
(C) High volume (D) None of the above
(E) Answer not known
28. Example for tablet formulation of pesticide.
- (A) Zinc phosphide (B) Aluminium phosphide
(C) Hydrogen cyanide (D) Activated clay
(E) Answer not known
29. Pesticide residue tolerance limit in ppm are fixed under _____ act.
- (A) Prevention of Food Adulteration Act, 1954
(B) The Infecticidal Act, 1968
(C) Poinsons Act, 1919
(D) Drugs and Cosmetics Act, 1940
(E) Answer not known
30. Which of the following insecticidal formulation in comparatively highly toxic to beneficial insects?
- (A) Wettable Powders (WP) (B) Soluble Powders (SP)
(C) Dusts (D) (D) Granules (G)
(E) Answer not known
31. In India, pesticide resistance was first reported in case of
- (A) American bollworm (B) Cotton Whitefly
(C) Rice Brown Plant Hopper (D) Singhara beetle
(E) Answer not known

32. An Insecticide isolated from bacteria is
 (A) Vertimec (B) Spinosad
 (C) Imidacloprid (D) Cartap
 (E) Answer not known
33. Which one of the following is a fumigant?
 (A) Zink phosphide (B) Aluminium phosphide
 (C) Thiacloprid (D) Phosphomidan
 (E) Answer not known
34. The ability of an insect to multiply in the given time, in the absence of environmental resistance is known as
 (A) Biotic Potential (B) Environmental Resistance
 (C) Reproductive Potential (D) Biological Resistance
 (E) Answer not known
35. The pink globular subterranean insect which develops by parthenogenetic and viviparous methods and causes wilting and drying of the plants is
 (A) Rice root weevil (B) Ragi root aphid
 (C) Sugarcane root grub (D) Cotton root weevil
 (E) Answer not known
36. The hymenopteran pest which attack the red gram is
 (A) Athalia lugens proxima (B) Lipaphis erysimi
 (C) Tanaostigmodes cajaninae (D) Ceroplastodes cajani
 (E) Answer not known

37. The site of pupation for jasmine budworm is
(A) Jasmine bud (B) Soil
(C) Unopened flower (D) Leaf petiole
(E) Answer not known
38. Find out the wrong pair of diseases introduced into India from other countries
(A) Grapes downy mildew and onion smut
(B) Potato warf and powdery mildew of enensials
(C) Banana Bunchy top and coffee rust
(D) Black rot of crucifers and Downy mildew of maize
(E) Answer not known
39. Major source for the survival of plant pathogen is
(A) Seed (B) Soil
(C) Water (D) Host Plant
(E) Answer not known
40. The book "Systema Naturae" is written by the Swedish Botanist, Zoologist and Physician.
(A) Gaspard (B) J. Anderson
(C) Johann (D) Carl Linnaeus
(E) Answer not known

41. Indemnity payable under the crop Insurance Scheme is

(A) $\text{Indemnity} = \frac{\text{Actual yield of crop}}{\text{Short fall in yield of crop}} \times \text{Sum insured}$

(B) $\text{Indemnity} = \frac{\text{Potential yield}}{\text{Threshold yield}} \times \text{Sum insured}$

(C) $\text{Indemnity} = \text{Sum insured} \times \text{Threshold yield of crop}$

(D) $\text{Indemnity} = \frac{\text{Short fall in the yield of crop}}{\text{Threshold yield of crop}} \times \text{Sum insured}$

(E) Answer not known

42. The General Insurance Company (GK) first introduced the crop insurance scheme in Tamil Nadu for the crop of

(A) Paddy

(B) Sugarcane

(C) Cotton

(D) Wheat

(E) Answer not known

43. The First bank conceived the village adoption scheme is

(A) State Bank of India

(B) Indian Bank

(C) Bank of Baroda

(D) Canara Bank

(E) Answer not known

44. 1BRD, 1DA, 1FC and MIGA are collectively known as

(A) RBI

(B) SBI

(C) IDBI

(D) The World Bank

(E) Answer not known

45. Number of Banks nationalized in 1969

(A) 10

(B) 14

(C) 20

(D) 25

(E) Answer not known

46. RRB's share capital being subscribed by Central Government, State Government and sponsoring bank in the ratio of
(A) 50 : 15 : 35 (B) 50 : 35 : 15
(C) 50 : 25 : 25 (D) 50 : 40 : 10
(E) Answer not known
47. Service Area approach was first introduced in
(A) 1950 (B) 1969
(C) 1982 (D) 1989
(E) Answer not known
48. The introduction of Kissan credit card was announced in the year
(A) 1985–86 (B) 1995–96
(C) 1998–99 (D) 2001–02
(E) Answer not known
49. Which of the following types of farming is regarded as defence against risk?
(A) Dry farming (B) Ranching
(C) Diversified farming (D) Specialised farming
(E) Answer not known
50. The discount rate at which the present values of net cash flows of a project is equal to zero
(A) Internal Rate of Return (B) Net Present Worth
(C) Benefit Cost Ratio (D) Time Value of Money
(E) Answer not known

51. Partial budgeting is used to analyse
- (A) Enterferise substitution (B) Input substitution
 (C) Scale or size of operation (~~D~~) All of them
 (E) Answer not known
52. Seeds, fertilizers, feeds etc. are example of
- (A) Stock resources (B) Mono-period resources
 (C) Variable resources (~~D~~) All of them
 (E) Answer not known
53. Marginal Product is indicated by the slope of
- (~~A~~) Total Product Curve (B) Total Cost Curve
 (C) Iso-Quant Curve (D) Iso-Cost Curve
 (E) Answer not known
54. $\frac{D_1 Y_2}{\Delta_1 Y_1} > \frac{\Delta_2 Y_2}{\Delta_2 Y_1} > \frac{\Delta_3 Y_2}{\Delta_3 Y_1} \dots \frac{\Delta_n Y_2}{\Delta_n Y_1}$ represents
- (A) Fixed Proportion of input combination
 (B) Constant rate of input substitution
 (~~C~~) Decreasing rate of product substitution
 (D) Increasing rate of product substitution
 (E) Answer not known

55. Give the statement and reason, select the correct answer :

Statement : Cost curves and production curves are the duals of each other.

Reason : Because one can be converted into the other

- (A) Statement is wrong; reason is true
- (B) Statement is true; reason is wrong
- (C) Statement and reason are wrong
- (D) Statement and reason are true
- (E) Answer not known

56. Isoquants are linear, when resources are

- (A) Substitutes
- (B) Complements
- (C) Perfect substitutes
- (D) Perfect complements
- (E) Answer not known

57. The value of return sacrificed or foregone from the next best alternative activity is called

- (A) Implicit cost
- (B) Opportunity cost
- (C) Explicit cost
- (D) Social cost
- (E) Answer not known

58. Which of the following is included in Computing Cost A_1 ?

- (A) Depreciation
- (B) Rental value of owned land
- (C) Rental value of leased in land
- (D) Imputed value of family labour
- (E) Answer not known

59. _____ forming is a group of farming families who pool their resource.
- (A) Capitalistic (B) Co-operative
(C) Collective (D) Peasant
(E) Answer not known
60. This type of farming where the ownership as well as operation is collective
- (A) Cooperative Better farming
(B) Cooperative Joint farming
(C) Cooperative Tenant farming
(D) Cooperative Collective farming
(E) Answer not known
61. Vulnerable sections (below poverty line BPL families) was identified on the basis of
- (A) Central Banking enquiring committee
(B) Dr. Lakdowala Committee
(C) Balwant Rai Mehta Committee
(D) Ashok Mehta Committee
(E) Answer not known
62. _____ of the WTO resolves international trade disputes among its number countries.
- (A) Aggregate Measurement of Support
(B) Dispute Settlement Body
(C) Green Room Process
(D) Green Box Measures
(E) Answer not known

63. Regional grouping among a few nations on the basis of reciprocated and coordinated trade policies between them and the word is known as
- (A) Rigorous Trade Arrangement
 - (B) Regional Trade Arrangement
 - (C) Restricted Trade Arrangement
 - (D) Restrained Trade Arrangement
 - (E) Answer not known
64. _____ for a country's agriculture is the sum of product specific and non-product specific subsidies.
- (A) Aggregate measure of Support
 - (B) Market access
 - (C) Export subsidies
 - (D) Anti dumping measures
 - (E) Answer not known
65. The compulsion of mentioning MRP (Maximum Retail Price) was introduced in
- (A) 1990
 - (B) 1980
 - (C) 2020
 - (D) 2010
 - (E) Answer not known
66. Procurement prices also become _____ because the Government is bound to purchase the food grains offered by the producers for sale
- (A) Issue Price
 - (B) Statutory Minimum Price
 - (C) Minimum Support Price
 - (D) Prevailing Market Price
 - (E) Answer not known

67. The term 'entrepreneur' was introduced by
(A) Adam Smith (B) Alfred Marshall
(C) Cantillon (D) Knight
(E) Answer not known
68. Management Cycle comprises of the following sequential activities.
(A) Action → Control → Planning
(B) Action → Planning → Control
(C) Planning → Control → Action
(D) Planning → Action → Control
(E) Answer not known
69. AGMARK act was passed in the year
(A) 1966 (B) 1937
(C) 1933 (D) 1947
(E) Answer not known
70. Central Warehousing Corporation was established in
(A) 1957 (B) 1967
(C) 1977 (D) 1987
(E) Answer not known
71. Warehousing Corporation was established on the recommendation of
(A) CRAFTICARD (B) AIRCSC
(C) AIRCRC (D) Gadgil Committee
(E) Answer not known

72. The following is not included in the warehouse classified on the basis of ownership
- (A) Private warehouse (B) General warehouse
(C) Public warehouse (D) Bonded warehouse
(E) Answer not known
73. _____ is the desire of the consumer for the commodity backed up by his purchasing power.
- (A) Effective demand (B) Derived demand
(C) Speculative demand (D) Reserve demand
(E) Answer not known
74. A market having few buyers is known as
- (A) Perfect Competition (B) Oligopoly
(C) Oligopsony (D) Duopoly
(E) Answer not known
75. The concept of consumer's surplus was explained by
- (A) Adam Smith (B) Robbins
(C) Marshall (D) Samuelson
(E) Answer not known
76. The second stage of functional growth of a market is
- (A) General markets (B) Specialised markets
(C) Dealings with samples (D) Dealings with grades
(E) Answer not known

77. _____ defined marketing as a human activity directed at satisfying the needs and wants through exchange process.
- (A) ✓ Philip Kotler (B) F.L. Thomson
(C) R.L. Kohls (D) J.R. Moore
(E) Answer not known
78. A process which refers to the expansion of firms by consolidating additional marketing functions and activities under a single management.
- (A) Marketing Cost (B) Marketing margin
(C) Price spread (D) ✓ Market integration
(E) Answer not known
79. On the basis of time span of the market classification the following market is not included.
- (A) Short Period Market (B) ✓ Retail Market
(C) Long Period Market (D) Secular Market
(E) Answer not known
80. Difference between the prices prevailing at successive stages of marketing at a given point of time is termed as
- (A) ✓ Concurrent Margin (B) Lagged Margin
(C) Marketing Cost (D) Price Spread
(E) Answer not known

81. It promises to ensure that the benefits of development from different sectors do not bypass women and special programmes will be implemented to compliment the general development programmes.
- (A) Eleventh Five Year Plan (2007 – 12)
 - (B) Eighth Five Year Plan (1992 – 97)
 - (C) Ninth Five Year Plan (1997 – 2002)
 - (D) Sixth Five Year Plan (1980 – 85)
 - (E) Answer not known
82. Father of Sociology
- (A) Auguste Comte
 - (B) A.R. Desai
 - (C) W.A. Anderson
 - (D) R, Benedict
 - (E) Answer not known
83. Scientific method for identification of leaders and leadership pattern
- (A) PRA techniques
 - (B) RRA techniques
 - (C) Socio metric techniques
 - (D) None of the above
 - (E) Answer not known
84. It is an aggregate of more than one primary family, on the basic of close blood ties and common residue.
- (A) Joint family
 - (B) Polygynous family
 - (C) Patri-local family
 - (D) Poly yandrous family
 - (E) Answer not known

85. The Scheme also called as "Mazdoor Manzil" was originally started to rehabilitate 7000 displaced persons from Pakistan was initiated by S.K. Dey
- (A) Etawah Pilot Project (B) Nilokheri experiment
 (C) Indian Village Service (D) Sarvodaya Programme
 (E) Answer not known
86. According to Ensminger (1974) it is a process of transformation from traditionally oriented rural culture towards an acceptance and reliance on Science and Technology.
- (A) Community Development (B) Rural Development
 (C) Development (D) Social Development
 (E) Answer not known
87. DW CRA stands for
- (A) Development of water channel in Rural Areas
 (B) Development of women and children in Rural Areas
 (C) Development of woman care in Rural Areas
 (D) Development of women and child in Rural Areas
 (E) Answer not known
88. The 'Swarnajayanthi Gram Swarozgan Yojana' (SGSY) was launched on
- (A) April, 1999 (B) October, 1993
 (C) November, 2001 (D) March, 1987
 (E) Answer not known
89. Is an idea practice, or object that is perceived as new by an individual
- (A) Attributes (B) Innovation
 (C) Adoption (D) Perception
 (E) Answer not known

90. Early Adopter are otherwise called
(A) Venture some (B) Locality
(C) Traditional (D) None of the above
(E) Answer not known
91. These people are venture some in nature and first to adopt a new idea or technology much ahead of others.
(A) Early adopters (B) Early majority
(C) Innovators (D) Laggards
(E) Answer not known
92. Software for geographic and remote sensing application
(A) ARCGIS (B) ARIC
(C) ARIS (D) SPBD
(E) Answer not known
93. It is an electronic audio-visual medium which provides pictures with synchronized sound.
(A) Video-Conferencing (B) Television
(C) Radio Rural Forum (D) None of the above
(E) Answer not known
94. It is the process by which messages are transferred from a source to receiver,
(A) Education (B) Learning
(C) Communication (D) None of the above
(E) Answer not known

95. It is the information a communicator wishes his audience to received, understand accept and act upon.
- (A) channel (B) message
(C) receiver (D) none of the above
(E) Answer not known
96. Cone of experience devised by Edger Dale in explaining the
- (A) Relation of Extension Education
(B) Inter relations of various types of AV Aids
(C) Relationship communication
(D) None of the above
(E) Answer not known
97. It is a relatively short time demonstration given before a group to show how to carry an entirely new practice or an old practice in a better way.
- (A) Frontline Demonstration (B) Method Demonstration
(C) Result Demonstration (D) None of the above
(E) Answer not known
98. It is a type of small group interaction designed to encourage the free introduction of ideas on an unrestricted basis and without any limitations to feasibility.
- (A) Workshop (B) Brain storming
(C) Seminar (D) Buzz sessions
(E) Answer not known

99. According to _____ extension involves the conscious use of communication of information to help people form sound opinion and make good decisions.
- (A) Leagans (1961)
 - (B) Bhatnagar and Desai (1987)
 - (C) ✓ Van Den Ban and Hawkins (1988)
 - (D) Watts (1984)
 - (E) Answer not known
100. It is a method of determining the suitability or otherwise of a new practice in farmer's situation.
- (A) Multi location trial
 - (B) ✓ Adaptive Research trial (ART)
 - (C) Result demonstration
 - (D) None of the above
 - (E) Answer not known
101. Major Government economic policy for poverty alleviation is
- (A) Public Demand System
 - (B) ✓ Public Distribution System
 - (C) Public Distress System
 - (D) Public Distribution Supply
 - (E) Answer not known
102. The long term guarantee to the farmers in the event of production glut provided by Government of India is
- (A) Direct Procurement
 - (B) ✓ Minimum Support Price
 - (C) Parallel Procurement
 - (D) Providing Production Subsidies
 - (E) Answer not known

103. The prices at which the procurement operation is carried out are reformed to as
- (A) Procurement prices (B) Minimum support prices
(C) Issue prices (D) Open market prices
(E) Answer not known
104. The organisation assisted in the setting up of seed processing plants in India.
- (A) Tarai Development Corporation Limited
(B) Food Corporation of India
(C) State Seed Corporation
(D) National Seed Corporation
(E) Answer not known
105. Food grain production in India during 2006–07
- (A) 209.30 mt. (B) 50.87 mt.
(C) 82.02 mt. (D) 108.42 mt.
(E) Answer not known
106. Share of Agricultural sector in Total Gross Domestic Product in India during 2013–14 at 1999–00 prices.
- (A) 13.9% (B) 15.7%
(C) 9.0% (D) 17.8%
(E) Answer not known
107. Among the foodgrains the largest increase in area has been recorded by _____ after India's Independence.
- (A) Rice (B) Wheat
(C) Bajra (D) Maize
(E) Answer not known

108. Under Tenth Five Year Plan, the Govt. of India had set a target to increase the country's forest cover in plain upto
- (A) 5% (B) 10%
(C) 20% (D) 25%
(E) Answer not known
109. The method of intercropping in which the yield of selected crops is equal to pure crop is known as
- (A) Companion cropping (B) Multistoried cropping
(C) Relay cropping (D) Parallel cropping
(E) Answer not known
110. "Everything else may wait but not Agriculture" whose words are these?
- (A) Mahatma Gandhiji (B) Pandit Jawaharlal Nehru
(C) Dr. M.S. Swaminathan (D) Dr. A.P.J. Abdul Kalam
(E) Answer not known
111. Dr. Mohan Singh Mehta Committee in 1973 suggested the establishment of
- (A) Farm Science Centre (B) Diploma in Agriculture
(C) Niche Areas Excellence (D) Central Agricultural University
(E) Answer not known
112. An accreditation to Board was established in _____ to improve and sustain the quality of higher agricultural education.
- (A) 1966 (B) 1976
(C) 1986 (D) 1996
(E) Answer not known

113. _____ is the ex-officio President of the ICAR society.
- (A) Central Minister of Agriculture
 - (B) Union Minister of Agriculture
 - (C) Prime Minister of India
 - (D) The President of India
 - (E) Answer not known
114. Making Indian Agriculture globally competitive needs to use
- (A) Biotechnology
 - (B) Nanotechnology
 - (C) Space Science
 - (D) Above all
 - (E) Answer not known
115. The total market value of all final goods and services produced in a year in a country is called as
- (A) Gross Domestic Product
 - (B) Gross National Product
 - (C) National Income at Market Price
 - (D) National Income at Factor Cost
 - (E) Answer not known
116. The first State Agricultural University (SAU) in India (in 1960) was established at
- (A) Bangalore
 - (B) Coimbatore
 - (C) Pantnagar
 - (D) Pusa
 - (E) Answer not known

117. NABARD is expanded as indicated below :
- (A) ✓ National Bank for Agriculture and Rural Development
 - (B) National Board of Agriculture Research and Development
 - (C) National Bureau of Agriculture and Rural Development
 - (D) National Bank for Agricultural Reconstruction and Development
 - (E) Answer not known
118. Green Revolution in India was made by the following two “miracle seeds”
- (A) Wheat and Maize
 - (B) ✓ Rice and Wheat
 - (C) Wheat and Mustard
 - (D) Rice and Maize
 - (E) Answer not known
119. Amongst the different States of India, the largest gross irrigated area lies in
- (A) Maharashtra
 - (B) ✓ Uttar Pradesh including Uttaranchal
 - (C) Madhya Pradesh including Chattisgarh
 - (D) Tamil Nadu
 - (E) Answer not known
120. The broad objective of Rashtriya Krishi Vikash Yojana is
- (A) ✓ To provide incentive to the states to increase public investment
 - (B) To enhance production through area expansion
 - (C) To impact basic and strategic research
 - (D) To establish research constitute for livelihood improvement
 - (E) Answer not known

121. Pre-sowing seed treatment to induce drought tolerance is called
- (A) Seed priming (B) Seed coating
 (C) Seed tolerance (D) Seed hardening
 (E) Answer not known
122. Tillage of wetland soils for transplanted paddy crop is referred to as
- (A) Ploughing (B) Hoeing
 (C) Harrowing (D) Puddling
 (E) Answer not known
123. The atmospheric air contains _____% N.
- (A) 38% (B) 48%
 (C) 58% (D) 78%
 (E) Answer not known
124. The force caused by rotation of earth changes the direction, but not the speed of the wind
- (A) Gravitational force (B) Frictional force
 (C) Coriolis force (D) Tropospheric wind
 (E) Answer not known
125. To get °F (Fahrenheit) from °C (Celsius) the conversion scale is
- (A) $^{\circ}F = C \times \frac{9}{5} + 32$ (B) $^{\circ}F = C \times \frac{5}{9} + 32$
 (C) $^{\circ}F = C \times \frac{9}{5} - 32$ (D) $^{\circ}F = C \times \frac{9}{5} + 12$
 (E) Answer not known

126. Chemical used for artificial rain making is
- (A) ✓ Silver iodide (B) Nitrous oxide
(C) Potassium chloride (D) Arsenic acid
(E) Answer not known
127. Which gas is highly responsible for the green house effect?
- (A) ✓ Carbon-di-oxide (B) Methane
(C) Nitrous oxide (D) Chlorofluoro carbons
(E) Answer not known
128. The seed rate for transplanted Cumbu is _____ kg/ha.
- (A) 5 (B) ✓ 3.75
(C) 10 (D) 5.75
(E) Answer not known
129. The nursery area required to raise 1 ha of ragi seedlings is _____ cents.
- (A) ✓ 12.5 (B) 10.0
(C) 7.5 (D) 5.0
(E) Answer not known
130. The quantity of seed required for irrigated transplanted sorghum is _____ kg/ha.
- (A) 10 (B) ✓ 7.5
(C) 5.0 (D) 12.0
(E) Answer not known

131. A spacing of _____ is recommended wherever groundnut ring mosaic (bud necrosis) is prevalent in Tamilnadu.
- (A) 30 cm × 10 cm (B) 15 cm × 15 cm
(C) 20 cm × 10 cm (D) 25 cm × 25 cm
(E) Answer not known
132. The recommended seed rate for Bengal gram Co4 variety in Tamil Nadu is _____ kg/ha.
- (A) 90 (B) 75
(C) 95 (D) 50
(E) Answer not known
133. Quantity of bacterial biofertilizer recommended for seed treatment and to be sown in an area of 1 ha is
- (A) 400 grams (B) 600 grams
(C) 800 grams (D) 1000 grams
(E) Answer not known
134. Seed hardening chemical used for bajra to induce drought tolerance is
- (A) KH_2PO_4 (B) NaCl
(C) H_2SO_4 (D) CCC
(E) Answer not known
135. The recommended pre-emergence herbicide for wheat in Tamilnadu is
- (A) Isoproturan @ 500 g/ha
(B) Atrazine @ 1 kg/ha
(C) Imazethapyr @ 0.5 kg/ha
(D) Butachlor @ 2 kg/ha
(E) Answer not known

136. To monitor the depth of ponded water on the field, _____ is used under safe Alternate Wetting and Drying Irrigation (AWDI).
- (A) Field water tube (B) Tensio meter
(C) Lysimeter (D) Porometer
(E) Answer not known
137. _____ is a perennial type castor.
- (A) TMV5 (B) TMV6
(C) CO-1 (D) TMV3
(E) Answer not known
138. The variety of cotton with only sympodial branches suited for high density planting is
- (A) DCH-32 (B) SVPR-6
(C) CO-17 (D) CO-14
(E) Answer not known
139. The sowing season for long duration red gram varieties is
- (A) II fortnight of July and I fortnight of August
(B) I fortnight of December and II fortnight of March
(C) II fortnight of April and I fortnight of June
(D) II fortnight of July and II fortnight of December
(E) Answer not known
140. Decline in production of individual crops in drought years was more pronounced in which crop
- (A) Rice (B) Wheat
(C) Coarse grains (D) Pulses
(E) Answer not known

141. The formula proposed for calculating RSC is
- (A) $(CO_3^{2-} + HCO_3^-) - (Ca^{2+} + Mg^{2+} + Na^+ + K^+)$
- (B) $(CO_3^{2-} + HCO_3^-) - (Ca^{2+} + Mg^{2+} + Na^+)$
- (G) $(CO_3^{2-} + HCO_3^-) - (Ca^{2+} + Mg^{2+})$
- (D) $(CO_3^{2-} + HCO_3^-) - \left(\frac{Ca^{2+} + Mg^{2+}}{2} \right)$
- (E) Answer not known
142. The prescribed level of Flourine in irrigation water is
- (A) < 1.0 ppm (B) 2.0 ppm
- (C) < 2.0 ppm (D) None of the above
- (E) Answer not known
143. CAZRI refers to
- (A) Central Agricultural Zonal Research Intitute
- (B) Central Arid Zone Research Institute
- (C) Central Automatic Zone for Research and Implementation
- (D) Chennai Agro climatic Zonal Research Index
- (E) Answer not known
144. The leaching loss of Nitrogen is more in the form of
- (A) Ammonia gas (B) Nitrate
- (C) Nitrogen (D) Water solution
- (E) Answer not known

145. Who among the below is known as father of soil science?
(A) Jenny (B) Marbut
(C) Dokuchaev (D) Glinka
(E) Answer not known
146. Which clay mineral contains highest potassium?
(A) Montmorillonite (B) Vermiculite
(C) Illite (D) Kaolinite
(E) Answer not known
147. Irrigation water having the SAR value of _____ is considered to be unsuitable for Agriculture.
(A) < 10 (B) 10-15
(C) 20-25 (D) > 26
(E) Answer not known
148. Among the following crops, which is highly salt tolerant?
(A) Beans (B) Cotton
(C) Chick pea (D) Onion
(E) Answer not known
149. Nutrient mobility concept was given by
(A) Bray (B) Cate and Nelson
(C) Lorsen (D) Mitscherlich
(E) Answer not known

150. How many land irrigability classes are recognized based on the sustained use of irrigation?
- (A) 6 (B) 8
(C) 7 (D) 5
(E) Answer not known
151. To map soils on 1:50,000 scale, the resolution of remote sensing data used is
- (A) Coarse resolution (B) Medium resolution
(C) Fine resolution (D) None of these
(E) Answer not known
152. A commonly used chemical amendment for reclaiming sodic soil is
- (A) Lime (B) SSP
(C) Gypsum (D) Sulphuric acid
(E) Answer not known
153. Which of the following forms of nitrogen are available to plants?
- (A) Nitrate, Ammonium (B) Amine, Amide
(C) N_2 , NH_3 (D) NO , N_2O
(E) Answer not known
154. Sub soil contains high amount of
- (A) Cation exchange capacity (B) Biological activity
(C) Organic matter content (D) None of these
(E) Answer not known

155. The Chloride concentration of _____ meq.l⁻¹ in water is not suitable for irrigation purpose.
- (A) < 4
(B) > 20
(C) 4-7
(D) 8-12
(E) Answer not known
156. Organic matter content of organic soil is
- (A) > 20%
(B) < 20%
(C) 5%
(D) 1%
(E) Answer not known
157. For sustaining good physical conditions of the soils
- (A) water stable aggregates are necessary
(B) dispersion of clay particles are necessary
(C) rainfall and irrigation are necessary
(D) tillage is necessary
(E) Answer not known
158. The equation for soil forming factors was formulated by
- (A) Joffe and Marbut
(B) Hillgard
(C) Hans Jenny
(D) Dokuchaev
(E) Answer not known
159. More than 50% loss in productivity of black soils occurs at an ESP of _____ %.
- (A) 5-15
(B) 15-40
(C) > 40
(D) 5-10
(E) Answer not known

160. Distance between field observation in detailed soil survey is
- (A) 10 km (B) 2.5 km
(C) 50-100 m (D) 500 m
(E) Answer not known
161. A plough which is useful for breaking the hard pan of the soil is known as
- (A) Chisel plough (B) Rotary plough
(C) Mulch plough (D) Disc plough
(E) Answer not known
162. Scientific name for Eri silk worm is
- (A) Bombyx mori (B) Philosamia ricini
(C) Antheraea mylitta (D) Antheraea assami
(E) Answer not known
163. The secretion from mandibular gland of the queen is called
- (A) Queen substances (B) Royal Jelly
(C) Bee bread (D) Apitoxin
(E) Answer not known
164. Irrigation scheduling at IW/CPE ratio of _____ is recommended for higher grain yield in maize crop.
- (A) 0.4 to 0.6 (B) 0.6 to 0.8
(C) 0.8 to 1.0 (D) 1.0 to 1.2
(E) Answer not known

165. Which type of pumps are most commonly used in sprinkle and trickle irrigation systems?
- (A) Centrifugal pumps
 - (B) Turbine pumps
 - (C) Propeller and mixed flow pumps
 - (D) Both (A) and (B)
 - (E) Answer not known
166. _____ method of irrigation is suitable for fruit crops.
- (A) Check basin
 - (B) Basin
 - (C) Border strip
 - (D) Furrow
 - (E) Answer not known
167. Among the following elements, which is not a translocation regulator in plants?
- (A) Nitrogen (N)
 - (B) Potassium (K)
 - (C) Sodium (Na)
 - (D) Calcium (Ca)
 - (E) Answer not known
168. Nitrogen content present in concentrated organic manure of fish meal is
- (A) 0.5 – 1%
 - (B) 4 – 10%
 - (C) 13 – 15%
 - (D) 20 – 25%
 - (E) Answer not known

169. Which of the following earthworm species are commonly used in vermi composting?
- (A) *Lampito mauritii* and *Lumbricus terrestris*
 (B) *Eisenia fetida* and *Eudrelis eugina*
 (C) *Lampito mauritii* and *Perionyx excavatus*
 (D) *Eisenia fetida* and *Perionyx excavatus*
 (E) Answer not known
170. *Trichoderma sp* is a phosphorous solubilising organism related to
- (A) Bacteria
 (B) Fungi
 (C) Yeast
 (D) Actinomycetes
 (E) Answer not known
171. Site Specific Nutrient Management (SSNM) technique was launched at
- (A) IARI
 (B) CRRI
 (C) IRRI
 (D) CRIDA
 (E) Answer not known
172. The correct particle size of carrier material lignite used in biofertiliser production
- (A) 500 – 400 mesh sieve
 (B) 400 – 300 mesh sieve
 (C) 300 – 200 mesh sieve
 (D) Less than 200 mesh sieve
 (E) Answer not known
173. Heterocyst is the cell site responsible for
- (A) Phosphate storage
 (B) Lipid storage
 (C) Zinc fixation
 (D) Nitrogen fixation
 (E) Answer not known

174. Which one of the following is a phosphorus solubilising fungi?
(A) Serraria (B) Erwinia
(C) Aspergillus (D) Burkholderia
(E) Answer not known
175. _____ contain a consortium of N fixers, P solubilizers and PGPR.
(A) Mixmin (B) Biomix
(C) Biomax (D) Maxbio
(E) Answer not known
176. Which of the following statement is true about balanced nutrition of crop plants through fertiliza application?
(A) Continuous availability all essential nutrients
(B) Increases the nutritional value of crops
(C) Difficulty in achieving balanced fertilization is due to varying response of crops
(D) All the above
(E) Answer not known
177. Which of the following nutrients is absorbed in both cationic and anionic forms?
(A) Magnesium (B) Nitrogen
(C) Potassium (D) Sulphur
(E) Answer not known
178. Conversion of yield of different inter crops into equivalent yield of any one crop on economic returns is known as
(A) CEY (B) LER
(C) MCI (D) RYT
(E) Answer not known

179. Growing two or more crops simultaneously on the same piece of land with a definite row spacing is known as
- (A) Inter cropping (B) Mixed cropping
(C) Mono cropping (D) Multiple cropping
(E) Answer not known
180. Length of growing period for double cropping in dry land farming is
- (A) > 180 days (B) 120-180 days
(C) 100-140 days (D) 80-120 days
(E) Answer not known
181. Duration of protection for extant varieties and new varieties of crops under PPVFR Act (2001)
- (A) 20 years (B) 10 years
(C) 5 years (D) 15 years
(E) Answer not known
182. Accessions being actively used in crop improvement programme
- (A) wild collections (B) base collections
(C) active collections (D) working collections
(E) Answer not known
183. The protection of plant varieties and farmer's rights act was established in
- (A) 2005 (B) 2004
(C) 2003 (D) 2001
(E) Answer not known

184. Which one of the following is an ex-situ germplasm conservation?
(A) Natural park (B) Biosphere reserve
(C) Gene Sanctuary (D) Seed Bank
(E) Answer not known
185. _____ technique is used to recover inter specific hybrids.
(A) Callus culture (B) Anther culture
(C) Embryo culture (D) Meristem culture
(E) Answer not known
186. Bt cotton hybrids were approved for commercial cultivation in India during the year
(A) 2000 (B) 2002
(C) 2004 (D) 2005
(E) Answer not known
187. _____ extends the scope of distant hybridization
(A) Anther culture (B) Somatic hybridization
(C) Micro propagation (D) Meristem culture
(E) Answer not known
188. Ability of a plant to retain higher level of hydration under moisture stress
(A) Drought escape (B) Dehydration avoidance
(C) Drought tolerance (D) Drought hardening
(E) Answer not known

189. Superior long fibre cotton should have a fibre length of
- (A) 19 mm or above (B) 22 mm or above
(C) 27 mm or more (D) 24 mm or more
(E) Answer not known
190. In wheat homoeologous pairing is suppressed by genes present in _____ chromosome.
- (A) 5C (B) 5A
(C) 5B (D) 5D
(E) Answer not known
191. It denotes the progeny of a line produced through random pollination by a number of lines selected
- (A) Back cross (B) Poly cross
(C) Single cross (D) Double cross
(E) Answer not known
192. Which of the following is not a genetic emasculation technique?
- (A) Male sterility
(B) Protogyny
(C) Pistillate condition
(D) Chemical hybridizing agents (CHAs)
(E) Answer not known

193. The first Pigeon Pea hybrid released by ICRISAT in India was based on
(A) ✓ Genic male sterility system
(B) Cytoplasmic genic male sterility
(C) Hand emasculation and pollination
(D) Mutation breeding
(E) Answer not known
194. Which one of the following is incorrect?
(A) Minimum seed standards are less for breeder seeds than nucleus seeds
(B) Foundation seed stage II cannot be used to produce foundation seed
(C) ✓ Seed certification is compulsory
(D) Certified seed storage II cannot be used for further multiplication
(E) Answer not known
195. Which method of hybrid seed production is most widely followed in cotton?
(A) CGMS
(B) ✓ Hand emasculation and pollination
(C) CHS
(D) Use of CHAs
(E) Answer not known
196. Two genetically heterogenom testers are used in
(A) Simple recurrent selection
(B) Recurrent selection for gca
(C) Recurrent selection for sca
(D) ✓ Reciprocal recurrent selection
(E) Answer not known

197. Indian grassland and Fodder Research Institute is located in
(A) Indore (B) Nagpur
(C) Junagarh (D) Jhansi
(E) Answer not known
198. An individual carrying the gametic chromosome number 'n' is known as
(A) Diploid (B) Haploid
(C) Triploid (D) Aneuploid
(E) Answer not known
199. A mutation which kills more than 50% of the individual which carry the mutation is called
(A) lethal (B) sub lethal
(C) vital (D) sub vital
(E) Answer not known
200. The Central Institute of cotton research is head quartered at
(A) Jabalpur (B) Kolapur
(C) Trichur (D) Nagpur
(E) Answer not known
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