

169/23

Question Booklet Alpha Code

A

Question Booklet Sl. No.

A

Total Number of Questions : 100

Time : 90 Minutes

Maximum Marks : 100

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator **IMMEDIATELY**.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

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1. \_\_\_\_\_ is a fibre cum oilseed crop of India.  
A) Soybean                      B) Jute                      C) Flax                      D) Mustard
2. The nutrient with specific influence on urease enzyme activity is  
A) Nickel                      B) Nitrogen                      C) Molybdenum                      D) Copper
3. Botanically sesamum belongs to \_\_\_\_\_ family.  
A) Onagraceae                      B) Capparidaceae                      C) Plantaginaceae                      D) None of these
4. Photosynthetically active radiation is measured using  
A) Infrared thermometer                      B) Quantum sensor  
C) Net radiometer                      D) Spectro-radiometer
5. One ha cm of water is equal to \_\_\_\_\_ cu.m.  
A) 100                      B) 1000                      C) 50                      D) 500
6. At IW/CPE ratio of 1.0, at 50 mm depth of irrigation water and mean per day evaporation of 5 mm, irrigation interval is \_\_\_\_\_ days.  
A) 5                      B) 15                      C) 10                      D) 20
7. The herbicide used for the selective drying of panicles of weedy rice is  
A) 2, 4-D                      B) Glufosinate ammonium  
C) Fenoxaprop-p-ethyl                      D) Cyhalofop butyl
8. Scientific name of nut grass is  
A) *Cyperus iria*                      B) *Cyperus esculentus*  
C) *Cyperus rotundus*                      D) *Echinochloa stagnina*
9. Multistoreyed cropping is an example for  
A) Spatial annidation                      B) Competitive interaction  
C) Allelopathic interaction                      D) Temporal annidation
10. The yields of cassava and cowpea under intercropping system were recorded as  $20 \text{ t ha}^{-1}$  and  $800 \text{ kg ha}^{-1}$  respectively and the per hectare sole crop yields were  $40 \text{ t ha}^{-1}$  in cassava and  $1600 \text{ kg ha}^{-1}$  in cowpea. The Land Equivalent Coefficient (LEC) of the system is  
A) 0.500                      B) 0.250                      C) 1.000                      D) None of these

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11. The following equation in nitrification process is mediated by
- $$2\text{NH}_4^+ + 3\text{O}_2 \rightarrow 2\text{HNO}_2 + 2\text{H}^+ + 2\text{H}_2\text{O}$$
- A) *Nitrobacter* B) *Nitrosomonas*  
C) *Nitrosolobus* D) None of the above
12. The sulphidic mineral present in acid sulphate soils of Kuttanad of Kerala is  
A) Jarosite B) Apatite C) Calcite D) Anorthite
13. The Neutralizing Value (NV) or Calcium Carbonate Equivalent (CCE) of agricultural lime (Calcite CaCO<sub>3</sub>) is  
A) 136 B) 179 C) 108.7 D) 100
14. The water that is retained in the soil between the water potential of -1/3 bar and -31 bars is known as  
A) Gravitational water B) Hygroscopic water  
C) Capillary water D) None of the above
15. NPOP stands for  
A) National Programme for Organic Products  
B) National Programme for Organic Production  
C) National Project for Organic Products  
D) National Project for Organic Production
16. Alkali or sodic soil is defined as a soil having a conductivity of the saturation extract  
A) Greater than 4 dSm<sup>-1</sup> B) Lesser than 4 dSm<sup>-1</sup>  
C) Greater or equal to 4 dSm<sup>-1</sup> D) None of the above
17. The clay minerals (2 : 2 or 2 : 1 : 1) characterized with silicates of magnesium with some iron and aluminium belong to  
A) Montmorillinite B) Illite C) Chlorite D) Kaolinite
18. The phenomenon slickenside found in which type of soil ?  
A) Vertisol B) Inceptisol C) Gelisol D) Spodosol
19. Whiptail symptom in cauliflower is due to the deficiency of  
A) Copper B) Molybdenum C) Iron D) Zinc
20. The Fertilizer Control Order came in to force in India in the year  
A) 1999 B) 1985 C) 1957 D) 1956

A

21. Papaya mealy bug is  
 A) *Paradasynus rostratus* B) *Ferrisia virgata*  
 C) *Paracoccus marginatus* D) *Pseudococcus longispinus*
22. The parapheromone used to attract curcurbit fruit fly to trap is  
 A) Cuelure B) Ferrolure  
 C) Cosmolure D) Methyl isocyanate
23. Parthenogenesis and viviparity are associated with  
 A) Coccids B) Aphids  
 C) Mealy bugs D) Mirid bugs
24. *Chrysocaris johnsoni*, is the parasitoid of  
 A) *Oenospila flavifusata* B) *Epilachna vigintioctopunctata*  
 C) *Oxya chinensis* D) *Nezara viridula*
25. In rice, infestation by *Orseolia oryzae* results in  
 A) Dead heart B) White ear head  
 C) Stunting D) Silver shoot
26. Haemoglobin is found in the body fluid of  
 A) Mosquitoes B) Horse flies  
 C) Bed bugs D) Chironomids
27. Eri silk worms are reared on  
 A) Castor B) Ficus  
 C) Papaya D) Mulberry
28. The mechanism of resistance wherein the host plant exerts an adverse effect on the biology of insects is  
 A) Tolerance B) Antixenosis  
 C) Antibiosis D) Sympatry
29. Trade name of chlorpyriphos is  
 A) Dursban B) Confidor  
 C) Fame D) Spintor
30. An egg parasitoid of rice stem borer is  
 A) *Leucinodes orbonalis* B) *Trichogramma japonicum*  
 C) *Bracon brevicornis* D) *Metarhizium anisopliae*

31. **Statement i** : Triazole fungicides interfere with ergosterol biosynthesis.  
**Statement ii** : Triazole fungicides exhibit translaminar movement.
- A) Statement i and ii are correct  
 B) Statement i is correct and Statement ii is wrong  
 C) Statement i and ii are wrong  
 D) None of the above
32. Phytoalexin produced in solanaceous plant is
- A) Hircinol  
 B) Scopoletin  
 C) Phloretin  
 D) Rishitin
33. A disease not favoured by acidic pH is
- A) Wart of potato  
 B) Common scab of potato  
 C) Powdery scab of potato  
 D) Bacterial wilt of potato
34. Match List – I with List – II :
- | List – I       | List – II                    |
|----------------|------------------------------|
| 1. ssRNA virus | i. Wound tumour virus        |
| 2. dsRNA virus | ii. Cauliflower mosaic virus |
| 3. ssDNA virus | iii. Tobacco mosaic virus    |
| 4. dsDNA virus | iv. Maize streak virus       |
- A) 1 – ii, 2 – i, 3 – iv, 4 – iii  
 B) 1 – iii, 2 – i, 3 – iv, 4 – ii  
 C) 1 – iii, 2 – iv, 3 – i, 4 – ii  
 D) 1 – iv, 2 – iii, 3 – i, 4 – ii
35. Suberin degrading enzymes are produced by
- A) *Claviceps purpurea*  
 B) *Colletotrichum capsici*  
 C) *Fusarium solani*  
 D) *Pythium vexans*
36. Spores of *Puccinia graminis tritici* seen in barberry
1. Basidiospores  
 2. Aeciospores  
 3. Teliospores  
 4. Uredospores  
 5. Pycniospores
- A) 4 and 5  
 B) 1 and 2  
 C) 2 and 5  
 D) 3 and 4
37. An example of a bacterial toxin is
- A) H C toxin  
 B) Victorin  
 C) A K toxin  
 D) Tab toxin

38. Rice variety resistant to udbatta disease is  
A) Uma                      B) Onam                      C) Deepthi                      D) Dhanya
39. Pigeon pea sterility mosaic virus transmitted by  
A) Mite                                      B) Aphid  
C) Nematode                              D) White fly
40. Example of a polyetic disease is  
A) Citrus canker                              B) Citrus tristeza  
C) Apple scab                              D) Downey mildew of grapes
41. Texas cytoplasm of male sterility is utilized in  
A) Bajra                                      B) Maize  
C) Sorghum                                      D) Finger millet
42. Who is the father of Green Revolution ?  
A) Yuan Long Ping                              B) Norman Borloug  
C) Gregor Mendel                              D) Charles Darwin
43. Cultivated wheat *Triticum aestivum* is  
A) Triploid                                      B) Diploid  
C) Hexaploid                                      D) Monoploid
44. \_\_\_\_\_ is an ex situ conservation method.  
A) Seed Bank                                      B) Biosphere Reserve  
C) National Biological Park                              D) Forest
45. \_\_\_\_\_ is a physical mutagen.  
A) CO<sub>2</sub>                                      B) X-rays                                      C) Oxygen                                      D) EMS
46. Father of hybrid rice is  
A) Yuan Long Ping                                      B) Norman Borloug  
C) Herman Young                                      D) Charles Cove
47. The superiority of F<sub>1</sub> Hybrid over both parents is termed as  
A) Heterosis                                      B) Inbreeding depression  
C) Apoptosis                                      D) Glycolysis
48. Most expensive spice in the world is  
A) Pepper                                      B) Cinnamon                                      C) Garlic                                      D) Saffron

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49. Coconut breeding first started in the world in  
A) Texas  
B) Alabama  
C) Neeleshwaram  
D) Guatemala
50. Crossing over occurs in \_\_\_\_\_ during meiosis.  
A) Pachytene  
B) Metaphase  
C) Zygotene  
D) Metaphase 1
51. Identify the incorrect statement.  
A) State Governments are empowered to appoint Seed Inspectors under Sec. 13 of Seed Act, 1966.  
B) Seed Inspectors are empowered to draw samples of seeds of any unnotified varieties from any seed sale points.  
C) Seed Inspector can examine any records in the point of seed sale and preventing them from taking seed samples and examining records is an offense.  
D) Power to take action on defaulters by Seed Inspector is given under Sec. 14 of Seed Act, 1966.
52. The minimum germination percentage of Guinea grass seed is  
A) 70%                      B) 20%                      C) 30%                      D) 50%
53. For the purpose of field inspection, the unit of certification  
i. Should not exceed ten hectares  
ii. Total area specified should be under one variety and not separated by more than 50 m  
iii. Sowing date within the specified seed production field should not differ more than 7 days  
iv. The crop raised can be mixed crop or inter crop or ratoon crop  
Find the correct answer :  
A) Statements i, ii, iii are correct and statement iv is wrong  
B) Statements i, iii are correct and statements ii, iv are wrong  
C) Statements i, ii, iv are correct and statement iii is wrong  
D) Statements i, iii, iv are correct and statement ii is wrong
54. Incertified class soybean seed production, field should be isolated from the source of contaminants for a distance of  
A) 100 m                      B) 10 m                      C) 50 m                      D) 3 m

**A**



55. Expansion for PPV and FRA, 2001 is
- A) Protection of Plant Varieties and Farmer's Rights Act, 2001
  - B) Production of Plant Varieties and Farmer's Right Act, 2001
  - C) Production of Plant Varieties and Fodder Research Agency, 2001
  - D) Protection of Plant Varieties and Farmer's Registration Authority, 2001
56. Manner of seed packing, fastening and scaling the samples for seed analysis is given in
- A) Schedule I Sub Schedule (III) of Seed Control Order, 1983
  - B) Schedule 2 Sub Schedule (IV) of Seed Control Order, 1983
  - C) Schedule 2 Sub Schedule (III) of Seed Control Order, 1983
  - D) Schedule I Sub Schedule (IV) of Seed Control Order, 1983
57. Number of plants to be observed per count in the brinjal seed production field inspection is
- A) 100 plants
  - B) 500 plants
  - C) 1000 plants
  - D) 100 fruits
58. The minimum physical purity percentage for certified sesame seed is
- A) 97%
  - B) 99%
  - C) 98%
  - D) 95%
59. Which one is not a function of Central Seed Testing Lab ?
- A) Act as referee lab
  - B) Collect data continuously on the quality of seeds found in the market and make this data available to the committee
  - C) Carry out the seed analysis work of each state as per the prescribed manner
  - D) Initiate seed testing programmes in collaboration with STL, promote uniformity in test results between all seed testing laboratories in India
60. The colour of foundation seed tag is
- A) Opal Green
  - B) White
  - C) Azure Blue
  - D) Orange
61. Which of the following is not a tropical fruit ?
- A) Banana
  - B) Mango
  - C) Apple
  - D) Papaya
62. Vivipary is seen in
- A) Jackfruit
  - B) Mango
  - C) Banana
  - D) None of the above

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63. Spacing for high density planting in Banana is  
A) 2 × 2 m                      B) 1 × 1 m                      C) 2.4 × 2.4 m                      D) 1.8 × 18 m
64. In which of the following medicinal plants, the economical plant part used is root ?  
A) Lemon grass                      B) Palmrosa                      C) Vetiver                      D) Patchouli
65. Which of the following statements is not correct ?  
A) Patch budding is done in rubber  
B) Guava is propagated by air layering  
C) Grape is propagated by grafting  
D) Rose is propagated by budding
66. 'Keiki' is related to which flower crop ?  
A) Anthurium                      B) Orchid                      C) Rose                      D) Tuberose
67. Which of the following statement is/are correct ?  
i. Training admits more light and air to the tree canopy.  
ii. Pruning regulates bearing in fruit crop.  
iii. Training remove criss-crossed branches.  
A) Only i and ii                      B) Only iii  
C) Only ii and iii                      D) All of the above (i, ii and iii)
68. 'Forestero' is a variety of which of the following plantation crop ?  
A) Cocoa                      B) Tea                      C) Coconut                      D) Coffee
69. Sorosis is the type of fruit in  
A) Mango                      B) Jackfruit                      C) Citrus                      D) Pomegranate
70. Which of the following is a quarantine post-harvest treatment for fruits/vegetables ?  
A) Sanitization                      B) Hot water treatment  
C) Sterilisation                      D) None of the above
71. Metaxenia is observed in  
A) Pumpkin                      B) Brinjal                      C) Cucumber                      D) All of these
72. Which among the following is a red fleshed seedless watermelon hybrid released from Kerala Agricultural University ?  
A) Arun                      B) Aruna                      C) Sugarbaby                      D) Shonima
73. Heterostyly is present in  
A) Tomato                      B) Brinjal                      C) Bottle gourd                      D) Ivy gourd

**A**

74. Which among the following is a dioecious vegetable ?  
 A) Coccinea  
 B) Spine gourd  
 C) Bitter gourd  
 D) Both A) and B)
75. Scientific name of cabbage is  
 A) *Brassica oleraceae var botrytis*  
 B) *Brassica oleraceae var capitata*  
 C) *Brassica oleraceae var italica*  
 D) *Brassica oleraceae var gemmifera*
76. Primitive sex form of curcubits is  
 A) Gynoecious  
 B) Dioecious  
 C) Andromonoecious  
 D) Hermaphrodite
77. Which among the following is often cross pollinated ?  
 A) Tomato  
 B) Okra  
 C) Amaranthus  
 D) Cucumber
78. \_\_\_\_\_ is a tomato variety released from Kerala Agricultural University suitable for rain shelter cultivation.  
 A) Anagha  
 B) Manulakshmi  
 C) Manuprabha  
 D) Akshaya
79. Optimum temperature for colour development in tomato ranges from  
 A) 15 – 18° C  
 B) 21 – 24° C  
 C) 27 – 30° C  
 D) 32 – 36° C
80. Which among the following is a deep rooted vegetable ?  
 A) Pumpkin  
 B) Cabbage  
 C) Amaranthus  
 D) Cowpea
81. Which of the following statements is false regarding marginal utility ?  
 i. Marginal utility indicates price.  
 ii. Marginal utility decreases as the quantity of complementary goods with the consumer increases.  
 iii. Marginal utility is a function of supply.  
 iv. Marginal utility of substitutes decreases as the quantity of substitute goods with the consumer increases.  
 A) Only i and iii  
 B) Only i  
 C) Only i, iii, iv  
 D) Only i, ii, iv
82. \_\_\_\_\_ defined marketing as a human activity directed at satisfying the needs and wants through exchange process.  
 A) National Commission on Agriculture (XXII Report, 1976)  
 B) Philip Kotler  
 C) S. S. Acharya  
 D) N. L. Agarwal

83. Regulated markets are governed by
- Market Committee
  - Farmer Producer Organisations
  - Department of Agriculture
  - NABARD
- A) Only i                      B) Only i, ii and iii    C) Only iv                      D) Only iii and iv
84. Which one of the following is true regarding ordinal utility analysis ?
- Utility is measurable and quantifiable.
  - Utility is additive.
  - Utility can be measured in units called utils.
  - Many economists criticized cardinal utility analysis as unrealistic.
- A) Only i and ii              B) Only i                      C) Only i, ii, iv              D) All the above
85. \_\_\_\_\_ have no place in representing wealth.
- A) Free goods                      B) Economic goods  
C) Both free and economic goods              D) None of the above
86. \_\_\_\_\_ are those costs which are incurred for purchasing of farm inputs.
- A) Fixed cost                      B) Deflated cost              C) Explicit cost              D) Implicit cost
87. Which of the following statements are true ?
- Marketable surplus of non food crops are greater than food crops.
  - Marketable surplus of food crops are greater than non food crops.
  - Marketed surplus is less than marketable surplus in case of large farmers.
  - Estimation of marketable surplus helps in checking price fluctuations of agricultural commodities.
- A) i and iii only                      B) ii and iii only  
C) i, iii and iv only                      D) ii, iii and iv only
88. Which of the following market conditions represents monopolistic competition ?
- A) A single apple trader selling apples in a region  
B) Seventy sellers selling different mango varieties in a market  
C) Three sellers selling same variety of mangoes in a market  
D) A single buyer for purchasing mangoes
89. Organic manure is an example of
- A) Reservation demand                      B) Derived demand  
C) Aggregate demand                      D) None of these

90. A pump set company follows \_\_\_\_\_ segmentation while producing sophisticated pump set for large farmers.
- A) Geographic segmentation                      B) Psychographic segmentation  
C) Demographic segmentation                      D) None
91. Prof. Holden adopted an innovative method of spreading message of better quality corn seeds in USA are popularly known as
- A) Seed Corm Trains                                      B) Seed Corn Trains  
C) Corn Seed Trains                                      D) Seed Wheat Trams
92. 'Extension Education' taught at undergraduate level for the first time in 1950 in which of the following institutions ?
- A) Bihar Agricultural College, Sabour  
B) College of Agriculture, Nagpur  
C) College of Agriculture, Calcutta University  
D) Punjab Agricultural University, Ludhiana
93. In United States of America (USA), the meaning of the term 'extension' is conceptualized as Education while in India it is
- A) Advisory work                                      B) Rural guidance  
C) Capacitation                                      D) Transfer of technology
94. Field day is a method of motivating people to adopt new practice by showing them what actually been achieved under field conditions, which of the following statements are correct with regard to Field Day ?
- a. Participants can observe the benefits of the practice.  
b. Opportunity for farmers to socialize and acquaint with experts/scientists.  
c. Field days can be held frequently.  
d. Does facilitate in-depth learning.  
e. Farmers can develop confidence help in spreading its wider application among farming community.
- Select the appropriate answer.
- A) a, b and c are correct                                      B) c, d and e are correct  
C) a, b and e are correct                                      D) a, b and d are correct

95. A is assertion and R is reason, based on assertion and reason select the appropriate answer.

**A :** Agri-tourism will create products like agri-shopping, culinary tourism, pick and own your tree/plot, bed and breakfast, pick and pay, bullock cart riding, camel riding, boating, fishing, herbal walk, rural games and health (ayurvedic) tourism etc.

**R :** Hence Agri-Tourism means education through entertainment, seeing is believing, doing is learning.

Select the appropriate answer :

- A) Both (A) and (R) are correct and (R) is correct explanation of (A)
- B) Both (A) and (R) are correct and (R) is not correct explanation of (A)
- C) (A) is correct and (R) is wrong
- D) (A) is not correct and (R) is correct

96. A is assertion and R is reason, based on assertion and reason select the appropriate answer.

**A :** Committee on Doubling Farmers Income defined Agricultural Extension focusing on Empowerment, agricultural sub-sectors, agricultural value chain and entrepreneurship on sustainable basis.

**R :** Because farmers in India today prefer to be empowered than offered merely a temporary succour and knowledge empowerment is vital to manage and exercise agriculture as an enterprise that generates targeted profits.

Select the appropriate answer :

- A) Both (A) and (R) are correct and (R) is correct explanation of (A)
- B) Both (A) and (R) are correct and (R) is not correct explanation of (A)
- C) (A) is correct and (R) is wrong
- D) (A) is not correct and (R) is correct

97. According to O. P. Dahama and O. P. Bhatnagar an extension professional should possess the qualities viz.,

- a. Extension professional should know his audience, objectives, message, channels, how to treat the message and his professional abilities and limitations.
- b. He should be interested in the welfare of his audience.
- c. He prepares himself a plan for communication and a plan for evaluation of results.
- d. Should have skills in selecting the message, selection and use of channels and collecting evidence of results.
- e. Should be aware of the results of his activities.

Choose the correct answer :

- A) a, b and c are correct
- B) c, d and e are correct
- C) a, b, c and d are correct
- D) b, c, d and e are correct

98. **Statement I** : In primitive and static societies, social mobility is restricted.

**Statement II** : In a dynamic and progressive society, birth in a low status family debar a man to reach out high status.

Choose the correct answer :

- A) Both Statement – I and Statement – II are correct
- B) Both Statement – I and Statement – II are incorrect
- C) Statement – I is correct and Statement – II is incorrect
- D) Statement – I is incorrect and Statement – II is correct

99. Please read the below statements :

- A. Replacement discontinuance is a decision to reject an idea in order to adopt a better idea that supersedes it.
- B. Disenchantment is a decision to reject an idea as a result of dissatisfaction with its performance.

Identify the correct statement.

- A) Both (A) and (B) are correct
- B) Only (A) is correct and (B) is wrong
- C) Only (B) is correct and (A) is incorrect
- D) None of the above

100. The degree to which an innovation is perceived as being better than the idea it supersedes is termed as

- A) Observability
  - B) Compatibility
  - C) Predictability
  - D) Relative advantage
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Space for Rough Work

