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Question Booklet Alpha Code

A

	Question Booklet Sl. No.
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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. The multiple cropping practice of sowing green gram seeds in the grain filling stage of rice is called
 - A) Parallel cropping
 - B) Sequential cropping
 - C) Ratoon cropping
 - D) Relay cropping
2. Which among the following are considered as plant adaptations to drought ?
 - i. Seed hardening
 - ii. Reduced leaf area
 - iii. Rapid phenological development
 - iv. Early stomatal closure
 - A) ii, iii and iv
 - B) i, iii and iv
 - C) i, ii and iv
 - D) all the above
3. Among the following, which is not considered as a principle in 'System Rice Intensification' ?
 - A) Wider spacing of 25 cm × 25 cm
 - B) Transplanting young seedlings (8 – 12 days old)
 - C) Planting single seedling per hill
 - D) Weed management with herbicides
4. A soil conservation practice that minimizes soil erosion and also ensures safe removal of excess runoff water
 - A) Tied ridging
 - B) Contour bunding
 - C) Graded bunding
 - D) Basin listing
5. Given the N uptake of a crop is 220 kg ha⁻¹, the approximate Ca uptake would be
 - A) 440 kg ha⁻¹
 - B) 44 kg ha⁻¹
 - C) 110 kg ha⁻¹
 - D) 22 kg ha⁻¹
6. Potassium application can be reduced to 25 per cent and even skipped in the nutrient management practice for the cassava variety
 - A) Vellayani Hraswa
 - B) Sree Pavithra
 - C) Sree Reksha
 - D) Sree Suvarna
7. The herbicide recommended in KAU Weed wiper for the management of weedy rice
 - A) Azimsulfuron
 - B) Cyhalofop butyl
 - C) Glufosinate ammonium
 - D) Carfentrazone
8. Which of the following is/are correct with respect to LEISA ?
 - i. Focusses on creating diversity
 - ii. Promotes adoption of hybrid seeds
 - iii. Relies on natural biological control of pests
 - iv. Encourages recycling of resources
 - A) i and ii
 - B) ii, iii and iv
 - C) i, iii and iv
 - D) all the above

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9. Which among the following is not considered as a complementary interaction in sequential cropping systems ?
A) Sorghum effect
B) Cotton effect
C) Legume effect
D) A and B
10. The quantity of urea required for top dressing in Sreyas variety of transplanted rice, cultivated in 2.5 acres is
A) 51 kg
B) 76 kg
C) 65 kg
D) 98 kg
11. In a soil profile, A and B horizons combinedly is called as
A) Solum
B) Pedon
C) Regolith
D) Bedrock
12. Identify the incorrect statement pertaining to soil and soil formation.
A) Soil formation includes formation of regolith by weathering and soil profile development.
B) Weathering refers to disintegration and decomposition of rocks and minerals.
C) Soil is a two - dimensional natural body.
D) Pedon is the smallest volume that can be called a soil.
13. Identify the incorrect statement regarding soil colloids.
A) Inorganic clay and organic humus particles are collectively referred as colloidal fraction.
B) Particles having less than 1-2 μm in diameter behave as colloids.
C) Organic colloids have higher CEC than inorganic colloids.
D) Swelling and shrinkage is characteristic of 1:1 Kaolinite type of clay mineral.
14. The soil consistency where the soil water mass just flows under an applied force and fails to retain shape is called
A) Upper plastic limit
B) Lower plastic limit
C) Plasticity index
D) Plasticity number
15. Which of the following is not correctly matched ?
A) Symbiotic N fixing bacteria – Rhizobium
B) Non-symbiotic N fixing bacteria – Clostridium
C) Cyanobacteria – Frankia
D) Autotrophic bacteria – Nitrosomonas
16. The acid sulphate soils of Kerala are called as
A) Karappadam lands
B) Kari lands
C) Kayal lands
D) Kole lands

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17. Submerged soils have a
 A) Low redox potential and a neutral pH B) High redox potential and a neutral pH
 C) Low redox potential and an acidic pH D) None of the above
18. In remote sensing, Normalized Differential Vegetation Index (NDVI) is an index to measure of vegetation health. Pick the incorrect statement.
 A) Healthy plants have a high NDVI value
 B) Irrigated crops appear bright green in a real colour simulated image
 C) Phenology and vigour are main factors affecting NDVI
 D) Stressed vegetation would appear uniformly bright
19. Which of the following is not correctly matched ?
 A) ISRO Satellite Centre (ISAC) – Bangalore
 B) National Remote Sensing Agency (NRSA) – Hyderabad
 C) Space Application Centre (SAC) – Ahmedabad
 D) Indian Institute of Remote Sensing – Delhi
20. The National Institute of Organic farming is in
 A) Coimbatore, Tamil Nadu B) Lucknow, Uttar Pradesh
 C) Chennai, Tamil Nadu D) Ghaziabad, Uttar Pradesh
21. Adult mite possesses
 i. Two pairs of legs
 ii. Three pairs of legs
 iii. Four pairs of legs
 iv. Five pairs of legs
 A) Only i and ii B) Only ii and iii C) Only iii D) Only iv
22. Fossorial or digging type of legs is found in
 i. Housefly
 ii. Mole cricket
 iii. Mosquito
 iv. Honey bee
 A) Only iv B) Only ii C) Only ii and iii D) Only i and iii
23. Rasping and sucking type of mouth parts are found in
 i. Thrips
 ii. Aphids
 iii. Both A and B
 iv. Whiteflies
 A) Only i B) Only i and iii C) Only ii D) Only ii and iv

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24. Which insect cause damage to our books in library ?
i. Cockroach
ii. Crickets
iii. Cloth moth
iv. Silver fish
A) Only i and iii B) Only ii C) Only iii D) Only iv
25. Which insect(s) secretes the honey dew ?
i. Aphids
ii. Mealy bug
iii. Mango hopper
iv. All of the above
A) Only i and iii B) Only iii C) Only ii and iv D) Only iv
26. Insect body divided in
i. Cephalothorax and abdomen
ii. Head and abdomen
iii. Head and thorax
iv. Head, thorax and abdomen
A) Only i and ii B) Only ii and iv C) Only ii D) Only iv
27. Pesticides are better applied to field crops
i. In the evening only
ii. In the morning only
iii. Either morning or in the evening
iv. In the afternoon and evening
A) Only ii and iv B) Only i and ii C) Only iii D) Only iv
28. Scientific name of green lace wing
i. *Cotesia flavipes*
ii. *Telenomus remus*
iii. *Chrysoperla zastrowi sillemi*
iv. None of the above
A) Only i and ii B) Only iv C) Only iii D) Only ii and iv
29. *Beauveria bassiana* is considered as
i. Systematic poison
ii. None of these
iii. Respiratory poison
iv. Contact poison
A) Only iii B) Only i and ii C) Only ii and iv D) Only iv

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30. Which colour on the label of the container indicates the highly toxic pesticides ?
- Bright red
 - Bright yellow
 - Bright green
 - Bright blue
- A) Only i B) Only iv C) Only i and ii D) Only iii
31. Which secretion system in bacteria is associated with quorum sensing ?
- A) Type I Secretion System
B) Type II Secretion System
C) Type III Secretion System
D) Both Type II and Type III Secretion System
32. Smallest plant viroid reported is
- A) Citrus exocortis viroid B) Coconut cadang viroid
C) Hop stunt viroid D) Potato spindle tuber viroid
33. The first plant virus whose genome is completely sequenced is
- A) *Tobacco Mosaic Virus* B) *Cucumber Mosaic Virus*
C) *Cauliflower Mosaic Virus* D) *Tobacco Necrosis Virus*
34. Leaf rust of Coffee was first introduced in India from Sri Lanka during
- A) 1870 B) 1970 C) 1867 D) 1943
35. Computer simulation model for Apple scab is
- A) EPIDEM B) TOMCAST C) EPIDEMIC D) EPIVEN
36. The phenomenon whereby development of resistance to one chemical in a particular class also confers resistance to other or related chemical is called as
- A) Cross resistance B) Cross protection
C) Multiple resistance D) None
37. H_2O_2 scavenging enzymes in plants is/are
- A) Catalase B) Superoxide dismutase
C) Ascorbate peroxidase D) All of the above
38. The technique by which fine sections of any plant tissue are cut to study anatomical details of tissue is
- A) Microtomy B) Mounting
C) Microscopy D) All of these

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39. Vertifolia effect derived from
A) R3 gene resistance
B) R4 gene resistance
C) Both R3 and R4 gene resistance
D) Horizontal resistance
40. ISR in Arabidopsis against *Pseudomonas syringae pv tomato* is governed by
A) Iturin
B) Pyrrolnitrin
C) 2-4 Diacetylphloroglucinol
D) Agrocin
41. Which among the following is true about heterosis ?
i. It is due to heterozygous advantage.
ii. It confined to F_1 only.
iii. It is environmentally controlled.
A) Only i and ii
B) Only ii and iii
C) Only i and iii
D) All of the above i, ii and iii
42. Alien addition and alien substitution lines are produced through which of the following methods ?
A) Pedigree method
B) Backcross method
C) Mass selection
D) Polyploidization
43. Which among the following is not an evolutionary force according to Hardy-Weinberg law ?
A) Migration
B) Selection
C) Crossing
D) Genetic drift
44. In pedigree breeding method, selection practiced in F_2 is known as
A) Within line selection
B) Between line selection
C) Individual plant selection
D) Natural selection
45. Hindrance in self-pollination due to some physical barrier is called
A) Homogamy
B) Dichogamy
C) Hekogamy
D) Pseudogamy
46. Term for protection of patent in India is
A) 20 years
B) 30 years
C) 40 years
D) 50 years
47. During meiosis I, synaptonemal complex is formed in which of the following stage ?
A) Leptotene
B) Zygotene
C) Pachytene
D) Diplotene

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48. Which of the following is correct about cytoplasmic inheritance ?
- Reciprocal differences are observed.
 - F₂ and subsequent generation show segregation for cytoplasmically inherited trait.
 - Genes governing cytoplasmic inheritance are located in cytoplasmic organelles.
- A) Only i and ii B) Only ii and iii
C) Only i and iii D) All of the above i, ii and iii
49. Seed certification is done for
- A) Released varieties B) Notified varieties
C) Private varieties D) Central varieties
50. The Seed (Control) Order, 1983 emphasizing the need for
- A) Seed testing B) Notification of variety
C) Seed certification D) License for sale of seed
51. Seed certification system involves administrative checking of seed field to determine the
- A) Physical purity B) Varietal purity
C) Physiological quality D) Health quality
52. The Seed Act (1966) was enacted to regulate the quality of seed sold to farmers. It is applicable to
- A) All traditional varieties
B) All released varieties
C) All released and notified varieties
D) All released but un-notified varieties
53. _____ was set up under the Seed Act (1966) as a main source of advice to the Government on administration of the Act.
- A) Central Seed Committee
B) Central Seed Certification Board
C) Seed Certification Agencies
D) Seed Testing Laboratory
54. The role of _____ is to ensure that action at all stages of seed production are taken expeditiously eg., field inspection, seed processing, plant inspection, sample analysis and certificate issuance.
- A) Central Seed Committee B) Central Seed Certification Board
C) Seed Certification Agencies D) Seed Testing Laboratory

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55. The Seed Inspector is entitled to take samples of seed of any notified kind/variety from any person selling such seed for seed analysis. The cost of the seed should be paid to the person by calculating the rate based on
- A) The price sold to the public
 - B) Half the price sold to the public
 - C) The price at which the person purchased the seed from the seed company
 - D) None of the above
56. With respect to rice seed production the land in which the same variety of rice crop was grown in the past _____ season must not be selected for cultivating the rice seed crop, as per the Indian Minimum Seed Certification Standards.
- A) One season
 - B) Two season
 - C) One year
 - D) Two years
57. According to Indian Minimum Seed Certification Standards, the isolation distance prescribed for certified seed production of cabbage is 1000 m while for pearl millet, it is only 200 m. The vast difference in the isolation distance prescribed for the two crops is attributable to
- A) Type of flower
 - B) Type of pollination
 - C) Season of flowering
 - D) Distance travelled by pollen
58. The new Seed Bill was introduced to replace the Seed Act (1966) during the year
- A) 2004
 - B) 2008
 - C) 2014
 - D) 2018
59. The male sterility is highly stable and fertility restoration is also possible in one of the following cotton species
- A) *Gossypium arboreum*
 - B) *Gossypium harkensii*
 - C) *Gossypium anomalum*
 - D) None of the above
60. In one of the following crop, andromonoecious lines are common and they must be emasculated and hand pollinated if used as female parent for hybrid seed production
- A) Red gram
 - B) Bitter gourd
 - C) Pumpkin
 - D) Watermelon
61. Which of the following is true regarding the induction of uniform flowering in pineapple variety 'Mauritius' ?
- 1. Hormone application is done in 10-12 months old plants.
 - 2. 25 ppm ethephon is applied at the rate of 50 ml per plant.
 - 3. Flowering starts by 30 days and completes within 40 days of application of hormone.
 - 4. Fruits will be ready for harvest by 130-135 days after growth regulator application.
- A) All are true
 - B) Only 1, 2 and 4
 - C) Only 2, 3 and 4
 - D) Only 1, 2 and 3

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62. Which of the following is not a dioecious crop ?
 A) Ivy gourd
 B) Rambutan
 C) Pomegranate
 D) Parwal
63. Protogyny is seen in
 A) Sapota
 B) Carrot
 C) Coconut
 D) All the above
64. Which of the following is a rainy season annual ?
 A) Amaranthus
 B) Balsam
 C) Cock's comb
 D) All the above
65. 'Vijay' is a high yielding black pepper hybrid derived from the cross between
 A) Panniyur 1 and Karimunda
 B) Panniyur 2 and Karimunda
 C) Panniyur 1 and Neelamundi
 D) Panniyur 2 and Neelamundi
66. Which of the following is an attached scion method of grafting ?
 A) Stone grafting
 B) Inarching
 C) Softwood grafting
 D) All the above
67. Palmarosa is indigenous to
 A) South Africa
 B) India
 C) Mexico
 D) None of the above
68. The yield of dry ginger is _____ of the green ginger.
 A) 10 – 15%
 B) 16 – 25%
 C) 30 – 35%
 D) None of the above
69. Which of the following is not true regarding coconut mother palm selection ?
 1. Palms with yield not less than 80 nuts per year.
 2. Palms producing at least 10 bunches of nuts with strong bunch stalks.
 3. Palms bearing nuts of large size.
 4. Palms with more than 30 fully opened leaves.
 A) 2 and 3
 B) 3 and 4
 C) 1 and 2
 D) 1 and 4
70. Which of the following is true regarding 'Mango' ?
 1. Mango is pollinated mainly by houseflies.
 2. In Mango, flowers are produced in current season shoots.
 3. Panicles are 'andromonoecious'.
 4. Fruit growth and development in Mango follows a double sigmoid curve.
 A) 1, 3 and 4
 B) 1 and 3
 C) 3 and 4
 D) Only 1

82. If we have constant returns to scale and we increase all the inputs by 5 per cent, then the output will increase by
- A) Less than 5 per cent
 - B) More than 5 per cent
 - C) Equal to 5 per cent
 - D) 5 times the number of inputs
83. Demand for labour is called derived demand because it is
- A) Dependent on demand for final goods and services
 - B) Inversely related to wage rate
 - C) Dependent on the availability of capital goods
 - D) Directly related to the marginal utility of working
84. Expansionary monetary policy
- A) Tends to lead to an appreciation of a nation's currency
 - B) Usually has no effect on a currency's exchange value
 - C) Tends to lead to a depreciation of the currencies of other nations
 - D) Tends to lead to a depreciation of a nation's currency
85. When total production is maximum, for labour input
- A) The APL is zero
 - B) The MPL is zero
 - C) The APL is negative
 - D) The APL is declining
86. Which of the following is not an example of distress sale ?
- A) Marketed surplus > Marketable surplus
 - B) Selling price < MSP
 - C) Selling price < Cost of production
 - D) Selling price > Cost of production
87. When APP is increasing, how does the MPP will behave in a production function ?
- A) MPP is greater than APP
 - B) MPP is less than APP
 - C) MPP is equal to APP
 - D) MPP is zero
88. The purchase or sale of a commodity at the present price with the object of sale or purchase at some future date at a favourable price is known as
- A) Hedging
 - B) Speculation
 - C) Market intelligence
 - D) None of the above
89. When the demand for a commodity is perfectly elastic, the consumer's surplus is
- A) Infinity
 - B) Unity
 - C) Zero
 - D) Cannot be calculated
90. The key feature of oligopoly is
- A) Excess capacity
 - B) High profitability
 - C) Product differentiation
 - D) Interdependence of firms

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91. Extension Education is
- Curriculum centric
 - Problem oriented
 - Highly formal
 - Need based
- A) a and b are correct B) b and d are correct
C) b and c are correct D) c and d are correct
92. Community Development Programme was evaluated by a committee headed by
- A) M.N. Roy B) Babu Giri C) Balwant Rai D) J.S. Verma
93. Krishi Vigyan Kendras (KVKs) can only be under control of
- Agricultural University
 - Voluntary Organization
 - Govt. and Voluntary Organization
 - Agricultural University and Voluntary Organization
94. Introductory rural sociology is written by whom ?
- A) J.B. Chitamber B) A.R. Desai C) S.V. Supe D) A.A. Reddy
95. Consider the following essential phase in Extension Educational process as identified by J.P. Leagans :
- Teaching plan of work
 - Evaluation
 - Objectives and solutions
 - Reconsideration
 - Situations and problems
- The correct sequence of these phases is
- A) e-c-b-a-d B) d-e-a-b-c C) e-c-a-b-d D) d-e-b-a-c
96. Arrange the following steps of teaching in correct order by using the codes given below :
- Attention
 - Action
 - Interest and desire
 - Conviction
 - Satisfaction
- The correct order of the steps of teaching is
- A) a-b-c-e-d B) c-a-b-d-e C) a-c-b-d-e D) c-b-a-d-e

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97. Select the major styles of leadership.

- a. Authoritarian
- b. Democratic
- c. Laissez-faire
- d. Self styled

Codes :

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

98. Arrange the steps of programme planning process in correct order :

- a. Follow plan of work
- b. Determine objectives
- c. Analysis of situation
- d. Evaluation

The correct order of programme planning process is

- A) c-b-a-d
- B) a-c-d-b
- C) b-d-a-c
- D) d-a-c-b

99. **Assertion (A)** : Extension has a growing body of knowledge with both tools and techniques of its own.

Reason (R) : Extension as a service and education relies mostly on immediate needs of the people.

Codes :

- A) Both (A) and (R) are true and (R) is a correct explanation of (A)
- B) Both (A) and (R) are true but (R) is not a correct explanation of (A)
- C) (A) is true and (R) is false
- D) Both (A) and (R) are false

100. Considering the following statements regarding National Agricultural Technology Project (NATP) :

- a. It has been implemented by ICAR.
- b. The cooperation of Department of Agriculture and Cooperation, Govt. of India is also in it.
- c. The financial assistance is drawn from the World Bank.
- d. Asian Development Bank gives the financial support.

Which of these statements are correct ? Select the right answer using the codes given below.

Codes :

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

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Space for Rough Work



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