

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

COMBINED COMPETITIVE (PRELIMINARY) EXAMINATION, 2013

Serial No.

AGRICULTURE

Code No. 01



Time Allowed : Two Hours

Maximum Marks : 300

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C OR D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE RESPONSE SHEET.
3. You have to enter your Roll Number on this
Test Booklet in the Box provided alongside.
DO NOT write *anything else* on the Test Booklet.
4. This Booklet contains 120 items (questions). Each item comprises *four* responses (answers). You will select *one* response which you want to mark on the Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. In case you find any discrepancy in this test booklet in any question(s) or the Responses, a written representation explaining the details of such alleged discrepancy, be submitted within three days, indicating the Question No(s) and the Test Booklet Series, in which the discrepancy is alleged. Representation not received within time shall not be entertained at all.
6. You have to mark all your responses **ONLY** on the separate Response Sheet provided. *See directions in the Response Sheet.*
7. All items carry equal marks. Attempt **ALL** items. Your total marks will depend only on the number of correct responses marked by you in the Response Sheet.
8. Before you proceed to mark in the Response Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Response Sheet as per instructions sent to you with your Admit Card and Instructions.
9. While writing Centre, Subject and Roll No. on the top of the Response Sheet in appropriate boxes use **“ONLY BALL POINT PEN”**.
10. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator only the Response Sheet. You are permitted to take away with you the Test Booklet.

Your Roll No.

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ROUGH WORK

1. The rice varieties grown in India belong to :
 (A) Indica (B) Japonica
 (C) Javanica (D) Asiatica
2. The rice inflorescence is known as :
 (A) Panicle (B) Spikelet
 (C) Ear (D) Silique
3. For transplanting one hectare area of rice how much area is sufficient for nursery raising ?
 (A) 100 m² (B) 500 m²
 (C) 1000 m² (D) 1500 m²
4. Tungro virus of rice is transmitted by :
 (A) Stem borer (B) Green leaf hopper
 (C) Leaf roller (D) White fly
5. Dwarf wheat (Mexican) is introduced in India by :
 (A) Dr. N.E. Borlaug (B) Dr. M.S. Swaminathan
 (C) Dr. B.P. Pal (D) Dr. C. Subramaniam
6. The normal seed rate of wheat is :
 (A) 50 kg/ha (B) 75 kg/ha
 (C) 100 kg/ha (D) 125 kg/ha
7. Triticale is a cross between :
 (A) Wheat × oat (B) Wheat × barley
 (C) Oat × barley (D) Wheat × Rye
8. Cytoplasmic male sterility is used in :
 (A) Hybrid seed production (B) Composite seed production
 (C) Varietal development (D) Biotechnology
9. Most serious disease of Sugarcane is :
 (A) Red stripe (B) Wilt
 (C) Red rot (D) Smut
10. How many sets are required to plant one hectare of sugarcane ?
 (A) 30,000-35,000 (B) 35,000-40,000
 (C) 40,000-45,000 (D) 50,000-55,000
11. In which of the following crops azolla is used as biofertilizer ?
 (A) Rice (B) Sorghum
 (C) Sunflower (D) Maize

12. Which one of the following crop rotation is the best for maintaining soil fertility ?
(A) Maize-toria wheat (B) Paddy-wheat-Maize
(C) Paddy-potato-greengram (D) Soyabean-wheat-greengram
13. The capacity of a soil to resist appreciable change in pH value is called :
(A) CEC (B) Buffering capacity
(C) Percentage base saturation (D) Anion-exchange capacity
14. Humic acid is a fraction of humus, which is :
(A) Soluble in alkali and acid (B) Insoluble in alkali and soluble in acid
(C) Soluble in alkali and insoluble in acid (D) Insoluble in both
15. Tetrazolium test is used to determine :
(A) Seed purity (B) Seed viability
(C) Seed germination (D) Seed quality
16. Potato is a :
(A) Modified Stem (B) Modified Root
(C) Modified leaf (D) Modified flower
17. The type of germination in mungbean is known as :
(A) Epigeal (B) Hypogeal
(C) Hypoepigeal (D) Epihypogeal
18. The term “Evergreen Revolution” has been given by :
(A) Dr. A.S. Paroda (B) Dr. M.S. Swaminathan
(C) Dr. V.L. Chopra (D) Dr. M.V. Rao
19. Which one of the following microbial agents is being commercially exploited as biocontrol agent ?
(A) *Penicillium notatum* (B) *Bacillus subtilis*
(C) *Trichoderma viridae* (D) *Sclerotium rolfsii*
20. The place of origin of Potato is :
(A) China (B) Africa
(C) India (D) South America
21. Excess uptake of which element is known as Luxury consumption ?
(A) N (B) P
(C) K (D) Zn

22. Phosphate containing mineral is :
(A) Dolomite (B) Aptatite
(C) Marble (D) Pyrites
23. Black cotton soil is rich in :
(A) Montmorillonite (B) Kaolinite
(C) Illite (D) Chlorite
24. Which form of nitrogen is absorbed by paddy under water logged conditions ?
(A) N_2 (B) NH_4 ion
(C) NO_2 ion (D) Nitrate ion
25. Which soil has the highest cation exchange capacity ?
(A) Loam (B) Loamy Sand
(C) Sandy Loam (D) Clay Loam
26. Which one of the following causes pungency of mustard oil ?
(A) Phenols (B) Amino acids
(C) Glucosinolates (D) Erucic acid
27. Texture of the soil can be changed by :
(A) Use of fertilizers (B) Use of tillage practices
(C) Use of manures (D) None of these
28. Khaira disease in rice is caused due to :
(A) Fungal infection (B) Bacterial infection
(C) Zinc deficiency (D) Boran deficiency
29. Which one of the following crops has the highest consumption of pesticides ?
(A) Cotton (B) Paddy
(C) Oil seeds (D) Pulses
30. Rancidity in Sunflower oil is caused by :
(A) Reduction (B) Oxidation
(C) Esterification (D) Nitrification
31. Arkel, Bonneville and Early December are the improved varieties of :
(A) Lentil (B) Pea
(C) Gram (D) Safflower

32. Weight of one cotton bale is equal to :
(A) 160 kg (B) 170 kg
(C) 178 kg (D) 190 kg
33. Berseem a fodder crop was introduced in India during 1904 from which country ?
(A) South Africa (B) England
(C) Egypt (D) USA
34. The ideal temperature of tuberization in potato is :
(A) 14°C (B) 18°C
(C) 21°C (D) 34°C
35. Generally soil pH increases during :
(A) Summer (B) Zaid
(C) Winter (D) Post monsoon season
36. Which one of the following elements is considered to be an immobile element in the plants ?
(A) Ca (B) Mg
(C) N (D) P
37. 'P' content in DAP fertilizer is :
(A) 20% (B) 36%
(C) 46% (D) 50%
38. Which of the following soils have poor physical condition ?
(A) Saline (B) Saline-alkali
(C) Sodic (D) None
39. Vertical section of a soil is known as :
(A) Horizontes (B) Solum
(C) A soil (D) Profile
40. Which country has largest deposits of 'K' ?
(A) India (B) USA
(C) China (D) Canada
41. 'Pungency' in chilli is due to presence of :
(A) Amids (B) Sulphur
(C) Capsaicin (D) Boran

42. "Prabhani Kranti" is a popular variety of :
(A) Brinjal (B) Potato
(C) Chilli (D) Okra
43. Gladiolus is propagated by which method ?
(A) True seed (B) Bulbs
(C) Stem cutting (D) Roots
44. Which one is a stem vegetable ?
(A) Carrot (B) Sweet potato
(C) Radish (D) Knol-knol
45. Yellow coloured fruits and vegetables are rich source of :
(A) Vitamin E (B) Vitamin A
(C) Vitamin C (D) Vitamin B
46. Vegetables are canned in :
(A) Brine (B) Distilled water
(C) Syrup (D) None of these
47. Wind breaks are planted in Orchards towards :
(A) East-South (B) North-West
(C) North-East (D) South-West
48. National Horticultural Board was established in :
(A) 1976 (B) 1987
(C) 1984 (D) 1986
49. 'Santa rosa' is a popular variety of :
(A) Plum (B) Pear
(C) Cashew nut (D) Walnut
50. Most common training system of apple in India is :
(A) Open centre (B) Modified Leader
(C) Spindle bush system (D) Leader
51. Dwarfing Root stock in mango is :
(A) Totapuri Red Small (B) Dashehari
(C) Alphonso (D) Olour

52. Best time for propagation of apple is :
 (A) Dec.-Jan. (B) Feb.-March
 (C) July-Aug. (D) April-May
53. Litchi is commercially propagated by :
 (A) Veneer grafting (B) Tip layering
 (C) Air layering (D) March grafting
54. Which one of the following is a rich source of fat ?
 (A) Almond (B) Cashew nut
 (C) Walnut (D) Mango
55. Which portion of the plant is considered free from viruses ?
 (A) Embryo (B) Xylum
 (C) Cambium (D) Meristem
56. The crop richest in protein is :
 (A) Sunflower (B) Soyabean
 (C) Peanut (D) *Phaseolus*
57. Optimum seed rate (g/ha) of Cauliflower is :
 (A) 300-400 (B) 500-700
 (C) 700-800 (D) 800-900
58. Leaf curl virus of chilli is transmitted by :
 (A) White fly (B) Aphid
 (C) Honey bees (D) Jassds
59. Kasmir beauty and Golden heart are the varieties of :
 (A) Radish (B) Carrot
 (C) Beet root (D) Turnip
60. Garlic contains which organo sulphur compound ?
 (A) Alliin (B) Allicin
 (C) Allinase (D) Diallyl disulphide
61. White grub beetles lay eggs :
 (A) On the underside of the leaf
 (B) On the plant stem at the level of ground
 (C) Within the floral parts
 (D) Singly in sandy soil upto the depth of 10 cm

62. Yellow mosaic virus disease of moongbean is transmitted by :
 (A) *Bemisia tabaci* (B) *Aphis crassivova*
 (C) *Nephotettix virescens* (D) *Aphis gossypii*
63. Pink boll worm is a serious pest of :
 (A) Mustard (B) Cotton
 (C) Gram (D) Pea
64. Pheromone trap attracts :
 (A) Female bugs (B) Catterpillars
 (C) Female moths (D) Male moths
65. Which of the following is not a bio-pesticide ?
 (A) Bioneem (B) Biolep
 (C) Carbaryl (D) Dipel
66. Which is a carbamate pesticide ?
 (A) Aldicarb (B) Heptachlor
 (C) Malathion (D) Endosulphau
67. The worker honey bee is :
 (A) Drone (B) Sterile male
 (C) Sterile female (D) None
68. Following is an example of Bt transgenic cotton :
 (A) Jayadhar (B) Vaxalaxmi
 (C) NH-44 (D) Bollgaurd
69. Use of light trap for the management of pest is an example of :
 (A) Cultural control (B) Legal method of control
 (C) Biological control (D) Mechanical method of control
70. The dwelling place of termite is also known as :
 (A) Canal (B) Tunnel
 (C) Mound (D) Cave
71. The insecticide which is used in mosquito mat is :
 (A) Endosulphan (B) Diazinon
 (C) Malathion (D) Allethrin

72. Munga silkworm belongs to the family :
(A) Curculionidae (B) Formicidae
(C) Saturniidae (D) None
73. A disease not prevalent throughout the country, continent or world is known as :
(A) Endemic (B) Epidemic
(C) Sporadic (D) Pandemic
74. Who is considered father of plant virology ?
(A) Beijerinck (B) AE Mayer
(C) WM Stanley (D) Diener
75. Loose smut of wheat is :
(A) Externally seed borne (B) Internally seed borne
(C) Both (A) and (B) (D) None of the above
76. Tea rust is caused by :
(A) MLO (B) Virus
(C) Fungus (D) Algae
77. Panama wilt is a disease of :
(A) Bamboo (B) Mango
(C) Pineapple (D) Banana
78. Which of the following is not a disease of apple ?
(A) Bird eye (B) Powdery Mildew
(C) Downey mildew (D) Bunchy top
79. Most widely used fungicide for smut fungi is :
(A) Vitavax (B) Plantvax
(C) Dithane M-45 (D) Sulfex
80. Race specific resistance is called :
(A) Vertical Resistance (B) Horizontal resistance
(C) Adult plant resistance (D) Apparent resistance
81. Which fungicide is used against downey mildew ?
(A) Karathane (B) Metalaxyl
(C) Oxathius (D) Bavistin

82. Rosette of apple is the deficiency symptom of :
(A) Fe (B) Cl
(C) Mo (D) Zn
83. The end product of glycolysis is :
(A) Glucose (B) Sucrose
(C) Pyruvic acid (D) None
84. World Standard Day is celebrated on :
(A) 14th January (B) 14th October
(C) 14th November (D) 14th December
85. National income generated by agriculture is calculated by using :
(A) Income method (B) Output method
(C) Expenditure method (D) Both (A) and (B)
86. 'Giffen' goods refer to :
(A) Stock of goods (B) Inferior goods
(C) Lack of goods (D) Superior goods
87. Government of India signed WTO agreement in :
(A) 1981 (B) 1994
(C) 1995 (D) 1997
88. The first KVK was established at :
(A) Nagpur (B) Pondichery
(C) Ludhiana (D) Jammu Tawi
89. The classical gene-for-gene hypothesis was proposed by :
(A) Flov, 1956 (B) Painte, 1951
(C) Robinson, 1969 (D) Hayes, 1947
90. 'A' form of DNA has :
(A) 10 base pairs/turn (B) 12 base pairs/turn
(C) 11 base pairs/turn (D) 9.33 base pairs/turn
91. 'Tetrazolin test' is used for :
(A) Testing seed viability (B) Membrane permeability test of seed
(C) Estimation of amino acid in seed (D) Phospholipid determination of seed

92. Which one of the following crops do not belong to often allogamous species group ?

- (A) Tomato
- (B) Sorghum
- (C) Cotton
- (D) Tobacco

93. The influence of more than one trait by a single gene is called :

- (A) Polygene
- (B) Polytene
- (C) Pleiotropy
- (D) Phototroph

94. The pair of characters used in Pea by Mendel during his experiments were :

- (A) Six
- (B) Eight
- (C) Nine
- (D) Seven

95. Which one of the following are nonsense codons ?

- (A) UUA, AUG, UUU
- (B) UAC, UUG, UGC
- (C) UAA, UAG, UGA
- (D) UTA, UTG, UGT

96. The term gene was coined by :

- (A) Mendel
- (B) Shull
- (C) Bateson
- (D) Johannsen

97. The chromosomes are most condensed at :

- (A) Prophase
- (B) Anaphase
- (C) Metaphase
- (D) Telophase

98. Seed multiplication ratio in Paddy is :

- (A) 1 : 100
- (B) 1 : 40
- (C) 1 : 80
- (D) 1 : 10

99. Land races are :

- (A) Advanced Strains
- (B) Local varieties
- (C) Hybrid varieties
- (D) All of these

100. In-bred lines in maize are maintained by :

- (A) Self pollination
- (B) Cross pollination
- (C) Open pollination
- (D) Sib pollination

101. The science that considers soil as a medium for plant growth is known as :

- (A) Pedology
- (B) Geology
- (C) Edaphology
- (D) Soil Science

102. The nutrient that plant directly absorbs from air is :

- (A) C (B) N
(C) Cl (D) S

103. Most part of nitrogen is taken by plants in the following form :

- (A) NO_2' (B) NO_3'
(C) NH_4^+ (D) N

104. The elements which readily form metallic bonds are known as :

- (A) Chalcophile (B) Lithophile
(C) Atmosphile (D) Siderophile

105. Main constituent of sandstone is :

- (A) CaO (B) Al_2O_3
(C) SiO_2 (D) H_2O

106. Which one is the macronutrient ?

- (A) Fe (B) B
(C) S (D) Cu

107. Which one is the expanding type mineral ?

- (A) Pyrite (B) Dolomite
(C) Gypsum (D) Smectite

108. In general, in India Organic matter content in soil increases from :

- (A) East to West (B) West to East
(C) South to North (D) North to South

109. Which one of the following is most suitable for its use in agriculture ?

- (A) FYM (B) Straw
(C) Sawdust (D) Dead bodies of the microorganisms

110. In summer widest cracks are seen in :

- (A) Vertisol (B) Mollisol
(C) Alfisol (D) Ultisol

111. Correct sequence of the minerals in order to increase in resistance to weathering is :

- (A) Dolomite, Gypsum, Gipsite, Calcite (B) Calcite, Dolomite, Gypsum, Gipsite
(C) Gipsite, Dolomite, Calcite, Gypsum (D) Gypsum, Calcite, Dolomite, Gipsite

112. Rate of decomposition is fastest for :

- (A) Cellulose
- (B) Sugar
- (C) Hemicellulose
- (D) Fats

113. Which is the most fertile soil ?

- (A) Mollisol
- (B) Ultisol
- (C) Alfisol
- (D) Inceptisol

114. Potential Evapotranspiration is measured by :

- (A) Floating pan
- (B) Rain gauge
- (C) Stevenson's screen
- (D) Lysimeter

115. If the root/shoot ratio is greater, there will be more :

- (A) absorption
- (B) transpiration
- (C) reflection
- (D) transmission

116. Headquarters of 'All India Soil and Land Use Survey' Organization is situated at :

- (A) Mumbai
- (B) Delhi
- (C) Kolkata
- (D) Nagpur

117. Soil profile is defined as :

- (A) Vertical section upto a depth of 30 cm
- (B) Vertical section upto a depth of 1 meter
- (C) Vertical section upto Regolith
- (D) Vertical section upto parent material

118. Group of soils developed from same parent material in similar climate and vegetation but that differ in relief are called :

- (A) Toposequence
- (B) Catena
- (C) Climosequence
- (D) Podzols

119. Physical process of soil formation is :

- (A) Oxidation
- (B) Nitrification
- (C) Hydrolysis
- (D) Transportation

120. 'E' horizon is characteristic of :

- (A) Laterites
- (B) Podzols
- (C) Chernozems
- (D) Chestnuts

ROUGH WORK

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