

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

**COMBINED COMPETITIVE (PRELIMINARY) EXAMINATION, 2010**

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.*
- Your Roll No.  
\_\_\_\_\_
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.

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**ROUGH WORK**

1. Indian Agriculture is predominantly of :  
(A) Subsistence type (B) Commercial type  
(C) Conventional type (D) Highly intensive type
2. Soil Science began with the theory of humus in :  
(A) 1654 (B) 1809  
(C) 1906 (D) 1960
3. First field experiment started in :  
(A) Rothamsted Experiment Station, England  
(B) PAU, Ludhiana  
(C) TNAU, Coimbatore  
(D) GBPUAT, Pant Nagar
4. The contribution of Agriculture to Indian GDP is :  
(A) 20.2% (B) 25.5%  
(C) 18.5% (D) 21.3%
5. The number of Agro Ecological Regions in India for resource planning at National level :  
(A) 15 (B) 20  
(C) 25 (D) 30
6. The staple food crop of Southern India is :  
(A) Wheat (B) Bajra  
(C) Jowar (D) Rice
7. Rice belongs to the family :  
(A) Leguminaceae (B) Poaceae  
(C) Malvaceae (D) Solanaceae
8. The botanical name of Oats is :  
(A) *Oryza sativa* (B) *Avena sativa*  
(C) *Secale cereale* (D) *Hordium vulgare*
9. Repetitive growing of the same crop in the same land is called :  
(A) Intercropping (B) Sequential Cropping  
(C) Multiple Cropping (D) Monocropping

10. Photo synthetically Active Radiation falls between :
- (A) 200 – 250  $\mu\text{m}$  (B) 300 – 400  $\mu\text{m}$   
(C) 400 – 700  $\mu\text{m}$  (D) > 700  $\mu\text{m}$
11. An alternate crop for sugar industry :
- (A) Beet root (B) Sugar beet  
(C) Sweet sorghum (D) Sweet potato
12. Kalyansona is a variety of :
- (A) Wheat (B) Rye  
(C) Barley (D) Oat
13. Dr. N.E. Borlaugh was responsible for :
- (A) Watershed Development (B) Green Revolution  
(C) White Revolution (D) Integrated Farming System
14. Sweet Corn is botanically called as :
- (A) *Zea mays tunicata* (B) *Zea mays amylacea*  
(C) *Zea mays certain* (D) *Zea mays saccharata*
15. The following is called as “Camel of Crop” :
- (A) Sorghum (B) Bajra  
(C) Maize (D) Rainfed rice
16. The fibre from the following crop is termed as “Fabric of the Future” :
- (A) Cotton (B) Jute  
(C) Agave (D) Hemp
17. The inherent capacity of the soil to supply plant nutrient is :
- (A) Soil Productivity (B) Soil Fertility  
(C) Soil Profile (D) Soil Environment
18. The soil particles ranging from 0.02 – 0.002 mm in size is called as :
- (A) Coarse Sand (B) Fine Sand  
(C) Silt (D) Clay

19. The organic acid produced during the decomposition of organic compounds :  
(A) Humic Acid (B) Sulphuric Acid  
(C) Nitric Acid (D) Hydro Chloric Acid
20. Manuring increases the following composition of the soil air :  
(A) Nitrogen (B) Oxygen  
(C) Carbon dioxide (D) All the above
21. The diameter of soil micropores ranges between :  
(A) 20 – 40  $\mu\text{m}$  (B) 40 – 60  $\mu\text{m}$   
(C) 60 – 80  $\mu\text{m}$  (D) 2 – 20  $\mu\text{m}$
22. The following is a microflora responsible for the soil biological environment :  
(A) Bacteria (B) Moles  
(C) Protozoa (D) Nematodes
23. Conversion of amino acids to ammonium is called as :  
(A) Aminification (B) Ammonification  
(C) Nitrification (D) Hydrolysis
24. The redox Potential of the soil is denoted as :  
(A) % (B) Bars  
(C) Eh (D) dSm
25. The criteria for essentiality of elements is given by :  
(A) N.E. Borlaugh (B) Buckman and Brady  
(C) Black (D) Arnon
26. The nutrient required for the synthesis of ATP:  
(A) N (B) P  
(C) K (D) Zn
27. Calcium nutrient is most needed for :  
(A) Rice (B) Maize  
(C) Groundnut (D) Sunflower

28. The nutrient responsible for the formation of chlorophyll :
- (A) Fe (B) Zn  
(C) Mn (D) Mg
29. The following is used for the preparation of enriched farm yard manure :
- (A) Super phosphate (B) Urea  
(C) Gypsum (D) Ferrous sulphate
30. Which one of the following is a green leaf manure ?
- (A) *Sesbania aculeata* (B) *Glyricidia maculeata*  
(C) *Crotalaria juncea* (D) *Sesbania speciosa*
31. *Karanj* is a common name of :
- (A) *Pongamia glabra* (B) *Azadirachta indica*  
(C) *Calotrpis gigantean* (D) *Tephrosia purpurea*
32. The nutrient content of Zinc Sulphate is :
- (A) 36% (B) 42%  
(C) 21% (D) 16%
33. The available Nitrogen in oil is estimated by :
- (A) Walkley and Black Method (B) Olsen's method  
(C) Ammonium Acetate Method (D) Alkaline Permanganate Method
34. The major fertiliser marketed in India :
- (A) DAP (B) SSP  
(C) KCL (D) Urea
35. A material used as soil amendment :
- (A) Lime (B) Urea  
(C) Fish meal (D) *Karanj* cake
36. Photosynthesis can be studied under the process of :
- (A) Entry of carbon dioxide (B) Photolysis  
(C) Carbon dioxide reduction (D) All the above

37. The following is a C<sub>4</sub> plant :
- (A) Rice (B) Maize  
(C) Cotton (D) Sunflower
38. The carrier concept theory of plant nutrition was formulated by :
- (A) Olsen (B) Brey  
(C) Van den Honert (D) Donnen
39. Vesicular Arbuscular Mycorrhiza (VAM) is commonly applied for :
- (A) Perennials (B) Annuals  
(C) Biennials (D) Hydroponics
40. A biofertiliser which can be used as dual crop is :
- (A) Green manure (B) Azolla  
(C) VAM (D) Rhizobium
41. The following is a slow release Nitrogenous fertiliser :
- (A) CAN (B) Urea  
(C) Ureaform (D) Anhydrous Ammonia
42. Intervient chlorosis in leaves is caused by the deficiency of :
- (A) Nitrogen (B) Iron  
(C) Zinc (D) Magnesium
43. Which of the following induces leaf and fruit abscission ?
- (A) NAA (B) CCC  
(C) IBA (D) ABA
44. The following is an auxin and used as herbicide at higher doses :
- (A) 2, 4 – D (B) GA  
(C) NAA (D) IBA
45. Emasculation is done to devoid :
- (A) Flowers (B) Pollen  
(C) Gynaecium (D) Fruits

46. A commonly found parasitic weed of sugarcane :  
(A) *Orabanche sp* (B) *Cuscuta sp*  
(C) *Striga sp* (D) *Loranthus sp*
47. Efficiency and effectiveness of conventional breeding can be improved by :  
(A) Selection (B) Mutation  
(C) CMS (D) Molecular Markers
48. Important hybrid of maize :  
(A) Vijay (B) Hi Starch  
(C) Sona (D) CO 5
49. Father of Hybrid Rice :  
(A) Prof. Yuvan Long Ping (B) Dr. N. E. Borlaugh  
(C) Dr. M. S. Swaminathan (D) Dr. G. S. Kush
50. Golden rice is enriched with :  
(A) Vitamin B1 (B) Vitamin D  
(C) Vitamin C (D) Vitamin A
51. Major type of wheat cultivated in India :  
(A) *Triticum diurum* (B) *Triticum aestivum*  
(C) *Triticum sphaerococum* (D) *All the above*
52. Protein content in pulses ranging from :  
(A) 10 – 15% (B) 15 – 20%  
(C) 20 – 25% (D) 25 – 30%
53. A value added product of Soybean :  
(A) Macroni (B) Candy  
(C) Butter (D) Tofu
54. An edible oil with rich of linoleic fatty acid :  
(A) Sunflower oil (B) Ground nut oil  
(C) Gingelly oil (D) Coconut oil



55. Phenyl Mercuric Acetate (PMA) has following action as antitranspirant :
- (A) Film forming (B) Stomatal closing  
(C) Reflectance (D) Growth retardant
56. Which weed is classified as sedge ?
- (A) *Panicum repens* (B) *Cyperus rotundus*  
(C) *Digeria arvensis* (D) *Chloris barbata*
57. The safe grain moisture content for storage of rice :
- (A) 14% (B) 16%  
(C) 18% (D) 20%
58. When the growth is complete and photosynthates are no longer translocated, it is called :
- (A) Senescence (B) Maturity  
(C) Physiological maturity (D) Harvest maturity
59. Loss of nutrients beyond root zone along with water is called :
- (A) Translocation (B) Immobilisation  
(C) Runoff (D) Leaching
60. Thermophile organisms thrive at a temperature of :
- (A)  $> 40^{\circ}\text{C}$  (B)  $20 - 30^{\circ}\text{C}$   
(C)  $10 - 20^{\circ}\text{C}$  (D)  $< 10^{\circ}\text{C}$
61. Cardinal temperature denotes :
- (A) Maximum temperature (B) Minimum temperature  
(C) Optimum temperature (D) All the above
62. Assmann psychrometer is used for observing :
- (A) Relative Humidity (B) Sunshine  
(C) Maximum temperature (D) Minimum temperature
63. The botanical name of Apple :
- (A) *Malus sylvestris* (B) *Pyrus communis*  
(C) *Prunus salicina* (D) *Ananas sativus*

64. Which one is a non edible oil cake ?  
(A) Coconut (B) Ground nut  
(C) Castor (D) Sesame
65. Which of the crop is self pollinated ?  
(A) Millets (B) Onion  
(C) Rice (D) Cotton
66. Foundation seed is obtained from :  
(A) Nucleus seed (B) Breeder seed  
(C) Registered seed (D) Certified seed
67. The following is used in biological measure of soil conservation :  
(A) Neem (B) Agave  
(C) Casuarina (D) Glyricidia
68. *Cucumis sativus* is the botanical name of :  
(A) *Ashgourd* (B) *Bottlegourd*  
(C) *Cucumber* (D) *Sweet pepper*
69. Karimunda is a variety of :  
(A) Pepper (B) Ginger  
(C) Turmeric (D) Onion
70. The ecosystem of the following State favours cultivation of spices :  
(A) Jammu & Kashmir (B) Maharashtra  
(C) Assam (D) Kerala
71. A commonly used chemical for rhizome rot :  
(A) Carbofuran (B) Bordeaux Mixture  
(C) Mancozeb (D) Dimethoate
72. Which of the following is used as standard for Vanilla ?  
(A) Coconut (B) Arecaanut  
(C) Cocoa (D) Glyricidia
73. Skiffing is a pruning method followed in :  
(A) Tea (B) Coffee  
(C) Rubber (D) Cocoa

74. The annual yield of rubber in South India is :  
(A) 500 kg/ha (B) 375 kg/ha  
(C) 750 kg/ha (D) 1000 kg/ha
75. *Cymbopogon winterianus* is the botanical name of :  
(A) Citronella (B) Lemon grass  
(C) Palmarosa (D) Patcholi
76. Following is an export variety of Mango :  
(A) Neelam (B) Bangalora  
(C) Alphonso (D) Mulgoa
77. Papaya seeds are viable upto :  
(A) 1 – 2 months (B) 3 – 4 months  
(C) One year (D) > one year
78. Number of trees accommodated in one acre of land with a spacing of  $20 \times 20$  ft. :  
(A) 72 trees (B) 89 trees  
(C) 109 trees (D) 132 trees
79. Chlorotic symptom beginning in older leaves because of the deficiency of :  
(A) Nitrogen (B) Phosphorous  
(C) Iron (D) Manganese
80. Irish Peach is a variety of :  
(A) Mango (B) Apple  
(C) Pear (D) Plum
81. Scurvy can be prevented by intake of :  
(A) Vitamin A (B) Vitamin B1  
(C) Vitamin C (D) Vitamin D
82. Post harvest losses in fruits and vegetables account to :  
(A) 5 – 10% (B) 10 – 30%  
(C) > 30% (D) < 5%
83. Brown Plant Hopper is a pest of :  
(A) Sorghum (B) Wheat  
(C) Rice (D) Maize

84. *Pseudomonas fluorescens* is used in :  
(A) INM (B) IWM  
(C) IPM (D) SSNM
85. *Chilo infuscatellus* in sugarcane is commonly called as :  
(A) Shoot borer (B) Internode borer  
(C) Top shoot borer (D) White grub
86. Woolly aphid (*Ceratovacuna lanigera*) is a common pest found in :  
(A) Apple (B) Sugarcane  
(C) Mango (D) Tomato
87. Acid delinting in cotton is done by :  
(A) Conc. Sulphuric Acid (B) Conc. Nitric Acid  
(C) Conc. Hydrochloric acid (D) Combination of all above
88. Soil application of carbofuran 3G in cotton controls :  
(A) Whitefly (B) Mites  
(C) Cutworms (D) Stem weevil
89. *Rotylenchulus reniformis* is :  
(A) Lesion nematode (B) Lance nematode  
(C) Reniform nematode (D) Rootknot nematode
90. Application of the following is done in biocontrol of plant pests and diseases :  
(A) *Rhizoctonia bataticola* (B) *Pseudomonas fluorescens*  
(C) *Pemptherulus affinis* (D) *Bemisia tabaci*
91. *Trichogramma chilonis* is called as :  
(A) Larval parasite (B) Pupal parasite  
(C) Adult parasite (D) Egg parasite
92. Which of the following is used in the control of pests ?  
(A) Inter cropping (B) Mixed cropping  
(C) Trap cropping (D) Multiple cropping
93. The accurate quantification of pesticide residues is determined by :  
(A) GC (B) HPLC  
(C) TLC (D) GLC

94. The water used for one ha in Ultra low volume sprayer is :  
(A) 2 – 3 litres (B) 3 – 4 litres  
(C) 4 – 5 litres (D) < one litre
95. Uniform distribution of spray fluid is determined by :  
(A) Nozzle (B) Pumps  
(C) Tanks (D) Pressure
96. Which sprayer is used for spraying on tall trees like coconut ?  
(A) Knapsack sprayer (B) Power sprayer  
(C) Rocker sprayer (D) Boom sprayer
97. Poultry management in farm is :  
(A) Competitive enterprise (B) Complementary enterprise  
(C) Supplementary enterprise (D) Individual enterprise
98. Enterprise budgeting is used to define :  
(A) Total Income (B) Total Expenditure  
(C) Returns above defined costs (D) Benefit Cost ratio
99. The cost of using a resource in one way is the return that could be earned from using that resource in its next best, most profitable alternative use is :  
(A) Fixed cost (B) Opportunity cost  
(C) Variable cost (D) Total cost
100. The costs vary according to the size of the enterprise and the amount of inputs used :  
(A) Total cost (B) Fixed cost  
(C) Variable cost (D) Opportunity cost
101. The value lost by an item over its useful life :  
(A) Depreciation (B) Loss  
(C) Variable cost (D) Cash flow
102. A method of making a comparative study of the cost-and-return analysis resulting from a change in a part of the business organisation is :  
(A) Enterprise budgeting (B) Partial budgeting  
(C) Total budgeting (D) Farm planning

103. The National Centre for Agricultural Economics and Policy Research (NCAP) is situated at :  
(A) New Delhi (B) Hyderabad  
(C) Bangalore (D) Mumbai
104. Night blindness disease is associated with the deficiency of :  
(A) Vitamin A (B) Vitamin B  
(C) Vitamin C (D) Vitamin D
105. Lycopene is present in :  
(A) Sweet potato (B) Tomato  
(C) Black berry (D) Rasp berry
106. A length of growing period (LGP) supports double cropping is :  
(A) > 210 days (B) 90 – 150 days  
(C) < 90 days (D) 150 – 210 days
107. An Agro Organization and Professional Society at the International Level :  
(A) Fertilizer Association of India (FAI)  
(B) International Food Policy Research Institute (IFPRI)  
(C) Agricultural Technology Marketing Agency (ATMA)  
(D) Agriculture and Processed Food Products Export Development Authority
108. India is the largest producer of :  
(A) Rice (B) Coconut  
(C) Wheat (D) Sugar
109. Bt seeds are popular in :  
(A) Cotton (B) Vegetables  
(C) Rice (D) Maize
110. National Agricultural Extension Project (NAEP) was supported by :  
(A) NABARD (B) World Bank  
(C) FAO (D) ICRISAT
111. Establishment of “Ryot Samparka Kendras” or “Farmers’ Contact Centres” was initiated by Government of :  
(A) Karnataka (B) Maharashtra  
(C) Kerala (D) Tamil Nadu

112. e-Choupal is an extension system by :
- (A) ITC (B) Coffee Board  
(C) Tea Board (D) Spices Board
113. Which of the following is considered as Public Extension ?
- (A) Extension by NGO (B) Extension by State Departments  
(C) Extension by private institution (D) Extension by Mass media
114. Community Development Programme in India was inaugurated in :
- (A) 1952 (B) 1957  
(C) 1947 (D) 1950
115. The Intensive Agricultural District Programme, launched in five districts by the central government in:
- (A) 1960 (B) 1958  
(C) 1962 (D) 1957
116. A water intensive crop :
- (A) Cotton (B) Sugarcane  
(C) Maize (D) Sorghum
117. Nipping is a practice in :
- (A) Sugarcane (B) Cotton  
(C) Tobacco (D) Forage crops
118. Rice prefers Nitrogen in the form of :
- (A) Nitrate (B) Amide  
(C) Ammoniacal (D) Nitrous
119. Decomposition of organic matter in rice soils generate :
- (A) Ethane (B) Methane  
(C) Propane (D) Butane
120. Which of the following location of tea has more of export potential ?
- (A) Darjeeling (B) Coorg  
(C) Nilgiris (D) Munnar

**ROUGH WORK**