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# OPSC AHO

Previous Year Paper  
11 Aug, 2024





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Test Booklet Series

T.B.C. : AHO – 2023

**A**

**TEST BOOKLET**  
**ASSISTANT HORTICULTURE**  
**OFFICER**

Serial No.

11609

Time Allowed : 3 hrs.

Maximum Marks : 200

**INSTRUCTIONS TO CANDIDATES**

1. Immediately after 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 of same series issued to you.
2. Encode clearly the Test Booklet Series A, B, C or D, as the case may be, in the appropriate place in the Answer Sheet using ball point pen (blue or black).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided along side.   
**DO NOT** write anything else on the Test Booklet.
4. **You are required to fill up and darken Roll No., Test Booklet/Question Booklet Series in the Answer Sheet as well as fill up Test Booklet/Question Booklet Series and Serial No. and Answer Sheet Serial No. in the attendance sheet carefully. Wrongly filled up Answer Sheets are liable for rejection at the risk of the candidate.**
5. This Test Booklet contains **200** items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses **ONLY** on the **separate Answer Sheet** provided, by using **BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. **There shall be negative marking for wrong answers with a deduction of 0.25 mark for every wrong answer.**
8. Before you proceed to mark (darken) in the Answer Sheet, the responses to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses on the Answer Sheet and after conclusion of the examination, you should handover to the Invigilator the Answer Sheet issued to you. You are allowed to take with you the candidate's copy/second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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1. Vitamin C content is found maximum in
  - (A) Barbados cherry
  - (B) Aonla
  - (C) Guava
  - (D) Lime
2. Pusa Srijan is a dwarfing rootstock of
  - (A) Mango
  - (B) Papaya
  - (C) Guava
  - (D) Apple
3. Which among the following is not a pome type of fruit ?
  - (A) Apple
  - (B) Pear
  - (C) Loquat
  - (D) Plum
4. Hen and chicken disorder is found in
  - (A) Mango
  - (B) Grape
  - (C) Guava
  - (D) Litchi
5. Which among the following is a climacteric fruit ?
  - (A) Cherry
  - (B) Litchi
  - (C) Strawberry
  - (D) Papaya
6. Top working in old and uneconomical bael trees is done during
  - (A) February
  - (B) March
  - (C) May
  - (D) June
7. *Artocarpus heterophyllus* is a
  - (A) Diploid
  - (B) Triploid
  - (C) Tetraploid
  - (D) Hexaploid
8. Passion fruit cannot be propagated through
  - (A) Seeds
  - (B) Layering
  - (C) Cutting
  - (D) Grafting
9. Yield of golden passion fruit per hectare is
  - (A) 5 – 10 tons
  - (B) 10 – 15 tons
  - (C) 20 – 25 tons
  - (D) 30 – 50 tons
10. Avocado has originated in
  - (A) Central America
  - (B) China
  - (C) South India
  - (D) Japan
11. Giant Kew is an important variety of
  - (A) Sapota
  - (B) Papaya
  - (C) Pineapple
  - (D) None of the above
12. The apple of the tropics is
  - (A) Mango
  - (B) Papaya
  - (C) Pineapple
  - (D) Guava



13. Indian State with the reputation of growing the best guava in the country as well as in the world is  
 (A) Uttar Pradesh  
 (B) Bihar  
 (C) Madhya Pradesh  
 (D) Maharashtra
14. *Hasta bahar* crop regulation in pomegranate is done during  
 (A) February – March  
 (B) June – July  
 (C) September – October  
 (D) November – December
15. Family of custard apple is  
 (A) Apocynaceae  
 (B) Annonaceae  
 (C) Rhamnaceae  
 (D) Moraceae
16. Which of the following fruit crop has axillary bearing habit ?  
 (A) Jackfruit  
 (B) Bael  
 (C) Loquat  
 (D) Ber
17. Which of the following pair of citrus is incorrectly matched ?  
 (A) *Citrus limettoides* – Sweet lime  
 (B) *Citrus paradisi* – Rough lemon  
 (C) *Citrus medica* – Citron  
 (D) *Citrus aurantifolia* – Sour lime
18. Storage life of jamun fruits at room temperature is  
 (A) 4 days  
 (B) 6 days  
 (C) 8 days  
 (D) 10 days
19. Inflorescence of banana has  
 (A) Male flowers  
 (B) Female flowers  
 (C) Hermaphrodite flowers  
 (D) All of the above
20. Filler plants are planted in  
 (A) Rectangular system  
 (B) Quincunx system  
 (C) Hexagonal system  
 (D) Square system
21. The term *Kalpavriksha*/tree of heaven is associated with  
 (A) Oil palm  
 (B) Coconut  
 (C) Cashew  
 (D) Rubber
22. The largest producer and consumer of arecanut in the world is  
 (A) China  
 (B) USA  
 (C) Japan  
 (D) India
23. The somatic chromosome number (2n) of arecanut is  
 (A) 24  
 (B) 30  
 (C) 32  
 (D) 40



24. Cashew is native of
- (A) India
  - (B) Brazil
  - (C) China
  - (D) Germany
25. Cherelle wilts is a physiological disorder of
- (A) Cocoa
  - (B) Date palm
  - (C) Oil palm
  - (D) Coffee
26. The genus name *Cocos* and popular name Coconut are derived from
- (A) Greek word
  - (B) Japanese word
  - (C) Latin word
  - (D) Spanish word
27. Kondali or stem wasting is a non-parasitic disorder due to toxicity of
- (A) Magnesium
  - (B) Boron
  - (C) Copper
  - (D) Potassium
28. The highest and cheapest edible oil yielding crop is
- (A) Oil palm
  - (B) Coconut
  - (C) Palmyrah palm
  - (D) Date palm
29. Removal of young and early male and female inflorescence and bunches is called
- (A) Pruning
  - (B) Training
  - (C) Ablation
  - (D) Trimming
30. Toddy, a fermented drink is prepared from
- (A) Palmyrah palm
  - (B) Date palm
  - (C) Oil palm
  - (D) Coconut
31. The alcohol content in a fully fermented toddy is about
- (A) 5%
  - (B) 10%
  - (C) 15%
  - (D) 25%
32. Coffee is a
- (A) Short day plant
  - (B) Long day plant
  - (C) Day neutral plant
  - (D) Facultative long day plant
33. Pollination in rubber is mainly carried out by
- (A) Wind
  - (B) Bats
  - (C) Insects
  - (D) None of the above



34. Which Indian State is not a part of Southern Plateau and hills zone ?  
(A) Andhra Pradesh  
(B) Karnataka  
(C) Tamil Nadu  
(D) Kerala
35. In meteorology, the word “*meteo*” has been taken from \_\_\_\_\_ language.  
(A) French  
(B) Latin  
(C) Greek  
(D) Japanese
36. Which statement among the following is incorrect ?  
(A) Arid climate having less than 3.0 humid months.  
(B) Semiarid – wet climate having 4.5 – 7.0 humid months.  
(C) Semiarid – dry climate having 4.5 humid months.  
(D) Humid climate having more than 7.0 humid months.
37. The study of climate over relatively smaller areas between 10 and 100 km across is known as  
(A) Microclimate  
(B) Mesoclimate  
(C) Macroclimate  
(D) None of the above
38. Medium range weather forecasting by agro-advisory service gives forecasting up to  
(A) 10 days  
(B) 15 days  
(C) 20 days  
(D) 30 days
39. Atmospheric pressure is measured through  
(A) Hygrometer  
(B) Anemometer  
(C) Barometer  
(D) None of these
40. Western disturbances affect Indian weather during  
(A) April – June  
(B) July – August  
(C) September – November  
(D) December – March
41. Weather conditions conducive within a fortnight before an outbreak of potato blight  
(A) At least 4 hours of dew in the night  
(B) Minimum temperature  $< 10^{\circ}\text{C}$  during night  
(C) Rainfall of at least 0.1 mm in the 24 hours following the dew night  
(D) All of the above
42. Total approximate rainfed area in central plateau and hills is  
(A) 25%  
(B) 40%  
(C) 50%  
(D) 75%
43. The warmest full year so far was in  
(A) 1990  
(B) 1997  
(C) 2000  
(D) 2005



44. National Centre for Medium Range Weather Forecasting (NCMRWF) was established in
- (A) 1988
  - (B) 1990
  - (C) 1995
  - (D) 1999
45. Form of rainfall when precipitation occurs by striking a warm and humid air against a mountain barrier and is forced to rise to condense is known as
- (A) Conventional rainfall
  - (B) Orographic rainfall
  - (C) Cyclonic rainfall
  - (D) Frontal rainfall
46. Commercial processing of vegetables in India is done to the extent of
- (A) 2%
  - (B) 5%
  - (C) 10%
  - (D) 15%
47. ICAR – Indian Institute of Vegetable Research is located at
- (A) Lucknow
  - (B) Kanpur
  - (C) Varanasi
  - (D) Karnal
48. Which among the following is not a member of chenopodiaceae family ?
- (A) Palak
  - (B) French Spinach
  - (C) New Zealand Spinach
  - (D) Garden beet
49. Characteristic pungency in garlic is due to
- (A) Diallyl sulphide
  - (B) Allyl propyl disulphides
  - (C) Isothiocyanates
  - (D) Thiocyanates
50. Vernalization effect in cabbage, European carrot, etc. could be obtained by application of gibberellin at
- (A) 100 – 150 ppm
  - (B) 200 – 250 ppm
  - (C) 300 – 350 ppm
  - (D) 400 ppm
51. The area of organic land with respect to the total agricultural land of the world is
- (A) Less than 1%
  - (B) Less than 3%
  - (C) Less than 5%
  - (D) Less than 10%
52. Leguminous cover crop which can be applied in organic vegetable farming are
- (A) Alfalfa
  - (B) Cowpea
  - (C) Desmodium
  - (D) All of the above
53. Potato is a native of
- (A) India
  - (B) China
  - (C) South America
  - (D) Japan



54. Tomato was introduced in India by  
(A) Mughals  
(B) Britishers  
(C) Portuguese  
(D) Chinese
55. Chilli is a self-pollinated crop but a high degree of cross pollination up to \_\_\_\_\_ makes it as facultative cross-pollinated crop.  
(A) 28%  
(B) 48%  
(C) 68%  
(D) 75%
56. Which is not a rainy season vegetable crop ?  
(A) Amarnath  
(B) Cowpea  
(C) Chilli  
(D) Cluster bean
57. Moderately salt tolerant vegetable is  
(A) Celery  
(B) Snake gourd  
(C) Cucumber  
(D) Kale
58. Trench cultivation is done by farmers of  
(A) Himachal Pradesh  
(B) Jammu and Kashmir  
(C) Both (A) and (B)  
(D) None of the above
59. Brinjal variety resistant to phomopsis blight is  
(A) Pusa Purple Long  
(B) Pusa Bhairav  
(C) Pusa Uttam  
(D) Pusa Kranti
60. Commercial  $F_1$  hybrids in tomato are developed by hand emasculation and pollination by planting female and male parents in the ratio of  
(A) 10 : 1  
(B) 12 : 1  
(C) 15 : 1  
(D) 18 : 1
61. Isolation distance for foundation seed production in cucurbits should be  
(A) 400 m  
(B) 800 m  
(C) 1000 m  
(D) 1500 m
62. Pusa Vishesh is a variety of  
(A) Bitter gourd  
(B) Ash gourd  
(C) Bottle gourd  
(D) Ridge gourd
63. Seed rate for early crop of cabbage is  
(A) 375 g  
(B) 500 g  
(C) 750 g  
(D) 1000 g
64. Blindness in cauliflower is due to  
(A) Extremely low temperature  
(B) Mechanical injury to small plants  
(C) Insect pests attack  
(D) All of the above



65. Pollination in amaranth is caused by  
(A) Insects  
(B) Wind  
(C) Birds  
(D) Water
66. Leaf rosetting in apple and pear is a deficiency symptom of  
(A) K  
(B) Mo  
(C) Zn  
(D) B
67. In which apple species, seeds are produced by apomixis ?  
(A) *Malus sikkimensis*  
(B) *M. hupensis*  
(C) *M. sergenii*  
(D) All of the above
68. Which of the following statement is false regarding asexual method of propagation ?  
(A) Plants are true to type to their mother plants  
(B) Plants possess short juvenile phase  
(C) Plants have long life  
(D) Plants are smaller in stature
69. Acid used in acid scarification in sexual propagation is  
(A) Sulphuric acid  
(B) Nitric acid  
(C) Hydrochloric acid  
(D) Formic acid
70. Mango cannot be propagated asexually through  
(A) Veneer Grafting  
(B) Cleft Grafting  
(C) Tongue Grafting  
(D) Epicotyl Grafting
71. Specialized stem structure which grows horizontally at or just below the ground surface is called  
(A) Rhizome  
(B) Sucker  
(C) Offshoots  
(D) Corm
72. Phenomenon in which seeds germinate without maturation drying in the fruits while still attached to the plant is known as  
(A) Apomixis  
(B) Parthenocarpy  
(C) Ripening  
(D) Vivipary
73. Which plant growth regulator is a potent germination inhibitor ?  
(A) Auxins  
(B) Abscisic acid  
(C) Cytokinins  
(D) Gibberellins
74. In tissue culture, removal of cell wall around the cytoplasm is known as  
(A) Callus culture  
(B) Pollen culture  
(C) Protoplast culture  
(D) Nodule culture



75. Geotropism in plants is associated with  
(A) Auxins  
(B) Cytokinins  
(C) Ethylene  
(D) Gibberellins
76. Media with low moisture holding capacity is  
(A) Sphagnum moss  
(B) Perlite  
(C) Peat  
(D) Vermiculite
77. Inquiry Into Plants treatise was written by  
(A) Shen Nung  
(B) Hippocrates  
(C) Aristotle  
(D) Theophrastus
78. Father of Modern Medicine is  
(A) Hippocrates  
(B) Pliny  
(C) Halen  
(D) Rhazes
79. Medicinal plant used in cancer therapy is  
(A) *Rauvolfia*  
(B) Lemongrass  
(C) Periwinkle  
(D) Kewda
80. Arka Upkar is a high yielding clonal selection of  
(A) Periwinkle  
(B) *Dioscorea*  
(C) *Rauvolfia*  
(D) *Ocimum*
81. Yield of Aloe vera on a fresh weight basis will be around  
(A) 10,000 – 12,000 kg/ha  
(B) 18,000 – 20,000 kg/ha  
(C) 22,000 – 25,000 kg/ha  
(D) 28,000 – 30,000 kg/ha
82. King of Spices term is attributed to  
(A) Cardamom  
(B) Cumin  
(C) Black pepper  
(D) Coriander
83. Cumin crop matures in about  
(A) 3-4 months  
(B) 5-6 months  
(C) 7-8 months  
(D) In one year
84. Seed rate of a pure coriander crop varies from  
(A) 5-10 kg/ha  
(B) 10-15 kg/ha  
(C) 15-20 kg/ha  
(D) 20-25 kg/ha
85. Holy smoke, Egyptian incense used in fumigation and embalming had \_\_\_\_\_ as one of its components.  
(A) Fenugreek  
(B) Ginger  
(C) Coriander  
(D) *Discorea*



86. Which of the following plant was grown for adding fragrance to Hanging Garden of Babylon ?
- (A) Fenugreek  
(B) *Ocimum*  
(C) Kewda  
(D) Coriander
87. Birth control oral contraceptive pills are prepared from
- (A) *Dioscorea*  
(B) Cumin  
(C) Periwinkle  
(D) *Rauvolfia*
88. Largest producer of diosgenin in the world is
- (A) Mexico  
(B) Japan  
(C) France  
(D) China
89. The optimum altitude for growing cardamom is
- (A) 400 m AMSL  
(B) 1000 m AMSL  
(C) 1800 m AMSL  
(D) 2000 m AMSL
90. Turmeric seed rate per hectare is
- (A) 1000 kg  
(B) 2000 kg  
(C) 2500 kg  
(D) 3000 kg
91. Kewada belongs to family
- (A) Scrophulariaceae  
(B) Apocynaceae  
(C) Pandanaceae  
(D) Malvaceae
92. Botanically, fennel plants are
- (A) Annual  
(B) Biennial  
(C) Perennial  
(D) All of the above
93. The first evidence of an ornamental plant from a seal from Mohen-jo-daro was of
- (A) *Ficus benjamina*  
(B) *Ficus infectoria*  
(C) *Ficus religiosa*  
(D) *Ficus elastica*
94. First Mughal emperor to enter Kashmir and establish a garden was
- (A) Akbar  
(B) Babur  
(C) Jahangir  
(D) Shah Jahan
95. Vatsayana did not describe which of the following garden ?
- (A) Pramododyan  
(B) Passage garden  
(C) Udyan  
(D) Nandanavana
96. Goddess Saraswati is associated with
- (A) Semal  
(B) Amaranthus  
(C) Lotus  
(D) Bauhinia
97. *Ficus retusa* is commonly known as
- (A) Bodhi tree  
(B) Banyan tree  
(C) Chilkan  
(D) Pakar



98. Shrubs most commonly used in India for making topiary  
(A) *Clerodendron inerme*  
(B) *Duranta plumieri*  
(C) *Cupressus macrocarpa*  
(D) All of the above
99. Medium light conditions are met at  
(A) North window  
(B) South window  
(C) East or West window  
(D) All of the above
100. House plants grown in poor light will show symptoms of  
(A) Etiolation  
(B) Pale leaves  
(C) Lanky growth  
(D) All of the above
101. Flat and hill gardens of Japanese gardens were developed during  
(A) Nara period  
(B) Heian period  
(C) Kamakura period  
(D) Muromachi period
102. Rose species which is very hardy and resistant to cold is  
(A) *Rosa rugosa*  
(B) *Rosa moschata*  
(C) *Rosa foetida*  
(D) *Rosa centifolia*
103. *Tagetes patula* is  
(A) Diploid  
(B) Triploid  
(C) Tetraploid  
(D) Hexaploid
104. Minimum temperature required for bud initiation in thermopositive chrysanthemum cultivars is  
(A) 10°C  
(B) 13°C  
(C) 16°C  
(D) 27°C
105. The first World Orchid Conference was held in  
(A) Australia  
(B) USA  
(C) Singapore  
(D) UK
106. In France and Holland, perfume is extracted from \_\_\_\_\_ coloured flowers of carnation.  
(A) Dark  
(B) Light  
(C) Mixed  
(D) All of the above
107. Origin of gladiolus is  
(A) South Africa  
(B) France  
(C) England  
(D) North America
108. World famous jasmine oil is extracted from flowers of  
(A) *Jasminum sambac*  
(B) *J. grandiflorum*  
(C) *J. auriculatum*  
(D) *J. flexile*



109. Orange, Sebaculis Red and Lutea Yellow are cultivars of  
 (A) Crossandra  
 (B) Marigold  
 (C) Dahlia  
 (D) Gerbera
110. Group of dahlia which has full double flowers  
 (A) Ball  
 (B) Pompon  
 (C) Cactus  
 (D) All of the above
111. Minimum diameter of tuberose bulbs suitable for planting is  
 (A) 1.0 cm  
 (B) 1.5 cm  
 (C) 2.5 cm  
 (D) 3.0 cm
112. Gerbera can be grown in  
 (A) Tropical climate  
 (B) Sub-tropical climate  
 (C) Temperate climate  
 (D) All of the above
113. June grass is botanically known as  
 (A) *Poa nemoralis*  
 (B) *Poa pratensis*  
 (C) *Agrostis tenuis*  
 (D) *Lolium perenne*
114. Which among the following is not a flowering hormone ?  
 (A) Florigen  
 (B) Anthesin  
 (C) Vernalin  
 (D) Kinetin
115. Hormone which helps the plants to cope with stress is  
 (A) ABA  
 (B) IBA  
 (C) GA  
 (D) Kinetin
116. Total labour saving through drip irrigation is up to  
 (A) 20%  
 (B) 30%  
 (C) 50%  
 (D) 70%
117. Biofertilizers provide  
 (A) Nitrogen  
 (B) Hormones  
 (C) Amino acids  
 (D) All of the above
118. In hydroponics, plants grow \_\_\_\_\_ faster than soil grown plants.  
 (A) 10%  
 (B) 20%  
 (C) 40%  
 (D) 50%
119. Penetrometer measures \_\_\_\_\_ of fruits.  
 (A) Freshness  
 (B) Firmness  
 (C) TSS  
 (D) All of the above
120. Gene transfer in plants can be accomplished by  
 (A) Sexual methods  
 (B) Asexual methods  
 (C) Sexual and asexual methods  
 (D) None of the above



121. Waxing of fruits help in
- (A) Reducing moisture loss
  - (B) Improve appearance of fruits
  - (C) Reduce incidence of storage diseases
  - (D) All of the above
122. Water stress in plants results in
- (A) Reduced absorption of nutrients
  - (B) Yield and productivity goes down
  - (C) Promote more roots than shoots formation
  - (D) All of the above
123. The failure of seeds/organs to grow under unfavourable environment has been referred to as
- (A) Enforced dormancy
  - (B) Imposed dormancy
  - (C) Quiescence
  - (D) All of the above
124. Exposure of seeds to low temperature for a certain period is known as
- (A) Photoblastism
  - (B) Stratification
  - (C) Scarification
  - (D) Quiescence
125. Seed samples submitted by a farmer, seed grower, cooperative or seed farm are known as
- (A) Service sample
  - (B) Submitted sample
  - (C) Working sample
  - (D) Certified sample
126. Seedlings which carry abnormality caused by physiological or biochemical factors such as chlorophyll deficiency are termed as
- (A) Seedlings with slight defect
  - (B) Damaged seedlings
  - (C) Deformed seedlings
  - (D) Decayed seedlings
127. The schemes for seed multiplication and distribution came into existence in all the States of India during
- (A) First Five Year Plan (1951 – 56)
  - (B) Second Five Year Plan (1956 – 61)
  - (C) Third Five Year Plan (1961 – 66)
  - (D) Fourth Five Year Plan (1969 – 74)
128. National Seed Corporation was established in
- (A) 1950
  - (B) 1953
  - (C) 1963
  - (D) 1965
129. High Yielding Varieties Programme (HYVP) was launched by Govt. of India in
- (A) 1961
  - (B) 1966
  - (C) 1970
  - (D) 1976
130. Successful implementation of High Yielding Varieties Programme (HYVP) was possible due to cooperation of
- (A) National Seed Corporation
  - (B) State Agricultural Departments
  - (C) Private Entrepreneurs
  - (D) All of the above



131. Minimum standard of genetic purity for certified seeds is
- (A) 79.0%
  - (B) 89.0%
  - (C) 95.0%
  - (D) 99.0%
132. Storage duration of carry-over seeds is usually
- (A) 6 – 12 months
  - (B) 12 – 36 months
  - (C) 40 – 48 months
  - (D) 50 – 60 months
133. Yield of hybrid seeds produced after crossing with two parents is
- (A) Less than synthetic variety
  - (B) More than synthetic variety
  - (C) More than pure line
  - (D) Equal with pure line
134. Random change in the gene frequency in a relatively small sample or population is known as
- (A) Genetic drift
  - (B) Mutation
  - (C) Chromosomal aberrations
  - (D) Crossing over
135. Seed imbibition involves
- (A) Absorption of water
  - (B) Release of gases
  - (C) Leakage of solutes
  - (D) All of the above
136. Weed cast 2.D is a program that forecasts three aspects of weed phenology that are
- (A) Weed emergence rate, flowering duration and vegetative duration
  - (B) Weed emergence potential, seedling height and emergence timing
  - (C) Weed emergence potential, rate of propagation and flowering timing
  - (D) Weed emergence potential, vegetative stage and seed maturation stage
137. Which of the following statement is correct ?
- (A) Tillage, hand weeding, mowing, mulching, burning and flooding are all cultural practices that affect weed management
  - (B) Conventional tillage does not vary according to geographical region
  - (C) Conservation tillage has been defined as any tillage system that leaves at least 30% residue cover on that soil surface after planting
  - (D) None of the above
138. Prickly pear or cactus (*Opuntia* spp.) in Australia is controlled by moth borer
- (A) *Tyria jacobaeae*
  - (B) *Cactoblastis cactorum*
  - (C) *Chrysolina* spp.
  - (D) *Longitarsus jacobaeae*



139. Which of the following weed is not associated with pea ?
- (A) *Cyperus rotundus*  
 (B) *Chenopodium album*  
 (C) *Fumaria parviflora*  
 (D) *Argemone maxicana*
140. Who coined the term allelopathy ?
- (A) Jethro Tull  
 (B) Hans Molisch  
 (C) Duke Muller  
 (D) V.S. Mani
141. Which of the following allelochemical reduces cell elongation in cucumber ?
- (A) Ferulic and cinnamic acid  
 (B) Complier and cineol  
 (C) Ferulic, p-coumeric and vanillic acid  
 (D) Sorgolene
142. Which one of the following is most suitable bio-herbicide to control weed Johnson grass ?
- (A) De Vine  
 (B) Collego  
 (C) Bipolaris  
 (D) Biolophos
143. Which one of the following is a non-selective herbicide ?
- (A) Glufosinate-ammonium picloram  
 (B) Paraquat  
 (C) Glyphosate  
 (D) All of the above
144. Which of the following is the general guideline laid at national level for selection of watershed villages in dry region ?
- (A) Watershed which has a larger or sizable population of downtrodden people  
 (B) Preference given to the villages community that has already been successfully organized various programmes such as development of women and children in rural areas, joint forest management, social forestry, etc.  
 (C) A contiguous watershed to the already developed or selected watershed  
 (D) All of the above
145. Which of the following components of watershed treatments plan is considered to be agronomic measures in agriculture lands ?
- (A) Bench terracing  
 (B) Strip cropping  
 (C) Contour and graded bunds  
 (D) Contour cultivation
146. Which of the following is the strategic approach for dryland farming ?
- (A) Selection for one variety in a crop is strategic approach under rainfed farming  
 (B) The Dapok system of seedlings raising in rice  
 (C) Planning of crops cannot be decided on the basis of predictions  
 (D) Watershed should not be planned to conserve runoff losses in corner of field



147. What do you mean by agriculture drought ?
- (A) A situation when there is significant decrease (25%) of normal rainfall over an area
  - (B) It occurs when both rainfall and soil moisture are inadequate during growing season to support a healthy crop
  - (C) If the rainfall received is less than 50% of a normal value for a consecutive period of more than 20 days in a month
  - (D) Meteorological drought, if prolonged will result in hydrological drought with the marked depletion of surface and ground water level
148. The term 'water harvesting' was used for the first time by which of the following scientist ?
- (A) Myers
  - (B) Nabatean
  - (C) Reddy
  - (D) Kanitkar
149. The Government of India launched a Watershed Management Programme in which of the following Five Year Plans to develop dryland areas on the basis of watershed ?
- (A) Third
  - (B) Fourth
  - (C) Fifth
  - (D) Seventh
150. Which of the following statement is true about rainfed farming ?
- (A) Cultivation of crops in region where average rainfall is more than 1150 mm
  - (B) Cultivation of crops in area where annual rainfall is more than 750 mm but less than 1150 mm
  - (C) Cultivation of crops in area where annual rainfall is less than 750 mm
  - (D) None of the above
151. Which of the two exotic parasitoids have given promising results for the suppression of San Jose scale in apple ?
- (A) *Encarsia perniciosi* and *Aphytis proclia*
  - (B) *Encarsia perniciosi* and *Ooencyrtus erionota*
  - (C) *Aphytis proclia* and *Leptomastix dactylopii*
  - (D) *Ooencyrtus erionota* and *Aphytis proclia*
152. The modern concept of pest management is based on which of the following principles ?
- (A) Ecological principles
  - (B) Sustainable principles
  - (C) Economical principles
  - (D) Physiological principles



153. Name of scientist who reported insecticidal properties of DDT in Switzerland was
- (A) Paul Muller, 1939  
 (B) R. H. Painter, 1935  
 (C) Rachel Carson, 1945  
 (D) R. F. Smith, 1949
154. Destructive Insects and Pest Act was introduced in India during the year
- (A) 1915  
 (B) 1917  
 (C) 1916  
 (D) 1914
155. Which of the following nematode is considered to be responsible for completely wiping out the narcissus industry of Britain ?
- (A) *Meloidogyne spp.*  
 (B) *Ditylenchus dipsaci*  
 (C) *Ditylenchus destructor*  
 (D) *Pratylenchus penetrans*
156. Which of the following is the most important quarantine nematode pest of potato ?
- (A) Root knot nematode (*Meloidogyne incognita*)  
 (B) Reniform nematode (*Rotylenchulus reniformis*)  
 (C) Root gall nematode (*Meloidogyne javanica*)  
 (D) Cyst nematode (*Globodera rostochiensis*)
157. Which of the following bud caterpillar causes severe damage to flower buds of gerbera ?
- (A) *Spodoptera litura*  
 (B) *PLatyptilia molopias*  
 (C) *Leucinodes orbonalis*  
 (D) *Helicoverpa armigera*
158. Which one of the following is a serious pest of grape in Karnataka ?
- (A) Shot hole borer (*Xyleborus crassiusculus*)  
 (B) Flea beetle (*Scelodonta strigicollis*)  
 (C) Thrips (*Rhipiphorothrips cruentatus*)  
 (D) Mealybug (*Maconellicoccus hirsutus*)
159. Who coined the term statistics ?
- (A) Sir Ronald Aylmer Fisher  
 (B) Gottfried Achenwall  
 (C) Prasanta Chandra Mahalanobis  
 (D) Karl Pearson
160. A continuous distribution, grouped in classes is usually represented graphically by a
- (A) Bar diagram  
 (B) Pie chart  
 (C) Frequency polygon  
 (D) Histogram



161. Information or data collected on some characters is called
- (A) Qualitative characters
  - (B) Quantitative characters
  - (C) Qualitative and quantitative characters
  - (D) None of the above
162. The primary data is gathered through
- (A) A pre-designed experiment
  - (B) Using fixed sampling technique
  - (C) Both (A) and (B)
  - (D) None of the above
163. Numerical data presented in descriptive form are called
- (A) Classified presentation
  - (B) Tabular presentation
  - (C) Graphical presentation
  - (D) Textual presentation
164. Number of nuts/bunches, number of leaves/trees, number of insects/hills are an example of
- (A) Discrete variable
  - (B) Continuous variable
  - (C) Restricted constant
  - (D) Unrestricted constant
165. In an inclusive type of classification, the limits included are
- (A) Lower limits
  - (B) Upper limits
  - (C) Either of the lower or upper limit
  - (D) Both lower and upper limits
166. Different forms of presentation of data are
- (A) Textual form
  - (B) Tabular form
  - (C) Both (A) and (B)
  - (D) None of the above
167. When the information is pertaining to only one set of data then the tabulation is known as
- (A) Dichotomy
  - (B) Manifold division
  - (C) Bivariate
  - (D) Simple table
168. Who gave the statement that "Farming system is a set of agro-economic activities that are inter-related and interact among themselves in particular agrarian settings"?
- (A) Fresco and Westphal (1988)
  - (B) Shaner et al. (1982)
  - (C) Ruthenberg (1971)
  - (D) Collinson (1979)



169. The objectives of farming system research can be met within the context of three multidisciplinary “activity areas”, among which on-farm researches involve
- (A) The collection, collation and analysis of data on many factors characterizing the environment and farming system of a region
  - (B) Studies of existing farming systems, on farm experimentation, studies of technology adoption and assessment of the impact of new technology all in relation to the farm household
  - (C) Focussed research programme aimed at the development of components for improvement of existing systems or for the putting together of new system
  - (D) Farmer participatory research in refining technologies of farming systems and provide feedback of farm problems to on-station researcher
170. The nature of integrated farming system is
- (A) Inter-related
  - (B) Inter-dependent
  - (C) Inter-linking
  - (D) All of the above
171. Which of the following tree is being grown in Kangeyam tract in Tamil Nadu along with fodder grass *Cenchrus* or fodder sorghum as intercrop in Sylvi-pasture system ?
- (A) *Acacia nilotica*
  - (B) *Morus alba*
  - (C) *Acacia leucophloea*
  - (D) *Ficus infectoria*
172. The crop which requires preparatory tillage is
- (A) Arable crop
  - (B) Augmenting crop
  - (C) Ley crops
  - (D) Nurse crop
173. The field at pre-emergence stage of cereal or tuber crops is tilled lightly so as to expose and uproot germinating broad-leaved weeds is known as
- (A) Conservation tillage
  - (B) Zero tillage
  - (C) Blind tillage
  - (D) Minimum tillage
174. The slope % for performing the tillage operations and planting along the contour lines in contour tillage is
- (A) 1 – 2%
  - (B) 3 – 5%
  - (C) 4 – 5%
  - (D) 3 – 4%
175. Agriculture economics is meant to be a science as
- (A) Positive science
  - (B) Normative science
  - (C) Both (A) and (B)
  - (D) None of the above
176. Which one of the following is stingless species of honeybee in India ?
- (A) *Apis dorsata*
  - (B) *Apis florea*
  - (C) *Apis mellifera*
  - (D) *Trigona iridipennis*



177. Which one of the following honey can only be sold in non-local markets ?
- (A) Coorg honey
  - (B) Rubber tree honey
  - (C) Shain or sulah honey
  - (D) Kartiki honey
178. The economics of cultivation is dependent on several factors like
- (A) Cost of land, labour and input
  - (B) Sale price of produce
  - (C) Both (A) and (B)
  - (D) None of the above
179. Under optimum growing conditions in the low-cost polyhouse, cucumber Pusa Sanyog can give a net return of
- (A) Rs. 50/sq.m./season
  - (B) Rs. 63/sq.m./season
  - (C) Rs. 90/sq.m./season
  - (D) Rs. 45/sq.m./season
180. Which of the following statement is true about Diara cultivation ?
- (A) Cucurbitaceous vegetables are specially adapted for growing near riverbed due to their fibrous root system
  - (B) Cultivation of cucurbit vegetables in riverbed is a kind of vegetable forcing as the crops are grown during off-season on sand from July – October
  - (C) Both (A) and (B)
  - (D) None of the above
181. Nicking is very essential for hybrid seed set in hybrid seed production which can be achieved by the
- (A) Staggered planting
  - (B) Chemical spray viz. urea, DAP or adapting the jerking and spray of sugar solution on late parent
  - (C) Withholding irrigations in early parent
  - (D) All of the above
182. The economic return of mushroom cultivation enterprise is affected by
- (A) Climate and mushroom type
  - (B) Time and unit size
  - (C) Cultivation method
  - (D) Spawn and compost quality
183. Which of the following does not fall under the horticulture based entrepreneurial opportunities ?
- (A) Mushroom grower
  - (B) Seed processor
  - (C) Nurseryman
  - (D) Manager cold storage
184. The word entrepreneur is originated from the
- (A) French word
  - (B) Latin word
  - (C) Greek word
  - (D) Arabic word
185. Which one among the following is considered as first slow nitrogen release synthetic compound ?
- (A) Isobutylidene
  - (B) Crotonylidene
  - (C) Urea-formaldehyde complexes
  - (D) Magnesium ammonium phosphate



186. The product carrying a mark of FPO in an oval with two hanging strips is mandatory on packed containers of
- Processed fruits
  - Processed vegetables
  - Processed fruits and vegetables
  - Processed fruits, vegetable and seed
187. Rainfall during hot weather period in which of the following State is of great importance for the early spring crop of rice ?
- Uttar Pradesh
  - Kerala
  - Odisha
  - West Bengal
188. India receives most of its rainfall from
- Cyclonic depression and disturbances
  - South-West monsoon
  - North-East monsoon
  - Both (B) and (C)
189. Which of the following leaders laid the foundation of modern irrigation engineering in India ?
- Dr. K. L. Rao and Sir Arthur Cotton
  - Sir Proby Cauthy and Dr. K. L. Rao
  - Dr. K. L. Rao and Capt. Dinshaw J. Dastur
  - Sir Proby Cauthy and Sir Arthur Cotton
190. When plants are in soil with sufficient moisture, the water potential of plant leaves is likely to be in the region
- 0.2 to - 0.8 Mpa
  - 1 - 2 Mpa
  - 0.5 to -1 Mpa
  - 1 - 3 Mpa
191. Permanent wilting point refers to the condition when
- The soil moisture is depleted to a level of - 6.0 Mpa and plants die
  - The soil moisture reaches around - 1.5 Mpa, several crops show wilting symptoms most of the day but do not die
  - The soil moisture is sufficient after irrigation or rain, water deficits develop due to higher transpiration than absorption, especially on hot mid days
  - The soil moisture depleted to - 2.5 Mpa, cannot meet the transpiration and plant wilt due to high sunlight intensity and wind
192. Transpiration rate is measured by
- Atmometer
  - Psychrometer
  - Infrared thermometer
  - Porometer
193. Smaller IW/Epan ratio means
- Irrigation at larger intervals
  - Irrigation at smaller intervals
  - Both (A) and (B)
  - Irrigation schedule does not depend on IW/Epan ratio



194. Irrigation period can be formulated as
- (A)  $I_p = I_n/ET$  (crop) peak  
 (B)  $I_p = M_{fc} - M_{bi}/P_{cu}$   
 (C)  $I_p = ET$  (crop) peak/ $I_n$   
 (D)  $I_p = P_{cu}/M_{fc} - M_{bi}$
195. Crop water use efficiency or consumptive water use efficiency ( $E_{cu}$ ) can be formulated as
- (A)  $E_{cu} = (G + T + E_s)/Y = C_U/Y$   
 (B)  $E_{cu} = (G + T + E_s + D)/Y = WR/Y$   
 (C)  $E_{cu} = Y/(G + T + E_s) = Y/C_U$   
 (D)  $E_{cu} = Y/(G + T + E_s + D) = Y/WR$
196. Which one of the following is the unavailable form of phosphate fertilizer ?
- (A)  $NH_4H_2PO_4$   
 (B)  $Ca(H_2PO_4)_2$   
 (C)  $CaHPO_4$   
 (D)  $Ca_3(PO_4)_2 \cdot CaX$
197. The effect of most potassium fertilizers on soil pH
- (A) Increases the pH  
 (B) Decreases the pH  
 (C) Little or no effect  
 (D) Both (A) and (B)
198. In Odisha, erosion by water is most acute. Which one of the forms of water erosion is not active among all the others ?
- (A) Rill erosion  
 (B) Sheet erosion  
 (C) Gully erosion  
 (D) Splash erosion
199. In general, the Cuttack region of soil is deficient in
- (A)  $P_2O_5$  and N  
 (B)  $P_2O_5$  and  $K_2O$   
 (C) N and  $K_2O$   
 (D)  $K_2O$  and  $P_2O_5$
200. The soil of Odisha in general is
- (A) Acidic in reaction  
 (B) Alkaline in reaction  
 (C) Neutral in reaction  
 (D) Highly acidic in reaction



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