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OPSC ASCO

Previous Year Paper
(Agriculture-I)
09 Feb, 2025



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T.B.C. : ASCO-I(i)-24/25

Test Booklet Series

Sl. No. **12825**

TEST BOOKLET
ASSISTANT SOIL CONSERVATION OFFICER
AGRICULTURE
(PAPER-I)

A

K-40

Time Allowed : 1 & ½ hrs.

Maximum Marks : 100

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 & 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 **100** 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.
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 hand over 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.

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

1. Share (%) of agriculture and allied sectors in Gross Value Added of India at current basic prices in 2022-23.
 (A) 30.2
 (B) 25.3
 (C) 21.1
 (D) 15.3
2. In India, share of women in agriculture and allied sector was _____ per cent in 2021.
 (A) 11.7
 (B) 23.2
 (C) 30.9
 (D) 41.8
3. In 2021, the global agricultural land area was down by _____ per cent, compared with 2000.
 (A) 1
 (B) 2
 (C) 3
 (D) 4
4. The number of people working in agriculture worldwide, including forestry and fishing, went down by _____ per cent between 2000 and 2021.
 (A) 5
 (B) 10
 (C) 15
 (D) 20
5. In India, _____ million people have left the agriculture sector between 2000 and 2021.
 (A) 4
 (B) 11
 (C) 33
 (D) 47
6. Growth rate (% Growth over previous year) of Gross State Value Added of agriculture and allied sector at constant (2011-12) prices of Odisha in 2021-22.
 (A) 1.28
 (B) 4.07
 (C) 10.33
 (D) 14.04
7. Odisha has _____ lakh hectares total geographical area.
 (A) 97.7
 (B) 103.3
 (C) 155.7
 (D) 207.1
8. As per the Agriculture Census 2015-16, the average size of operational land holding in Odisha is _____ ha.
 (A) 0.75
 (B) 0.85
 (C) 0.95
 (D) 1.25

9. The usage of chemical fertilizers in Odisha is _____ kg/ha in 2021-22.
- (A) 73.74
(B) 82.71
(C) 98.23
(D) 123.28
10. Odisha has forest cover of _____ per cent of total area in 2021-22.
- (A) 39
(B) 35
(C) 16
(D) 11
11. In which year, cyclones Yaas, Gulab and Jawad hit Odisha?
- (A) 2018
(B) 2019
(C) 2020
(D) 2021
12. The term 'agronomy' comes from two _____ words, i.e., 'agros', which means field and 'nomos', meaning to manage.
- (A) Greek
(B) Latin
(C) Italic
(D) Spanish
13. A German researcher called 'Father of Farming Science'.
- (A) Justus von Liebig
(B) Francis Bacon
(C) Jethro Tull
(D) Nicolas Theodore de Saussure
14. _____ age (12000 to 4000 B.C.) is referred to as the '*Age of Food Producers*'.
- (A) Palaeolithic
(B) Mesolithic
(C) Neolithic
(D) Chalcolithic
15. Technical book dealing exclusively with agriculture was Sage Parashara's '*_____*' in 1000 A.D.
- (A) Agni Purana
(B) Krishi Sukti
(C) Amarakosha
(D) Krishiparashara
16. Which of the following is not a property of Idiotypic for Dryland farming?
- (A) Effective root system
(B) Long growth duration
(C) High yield potentiality with Altered morphology
(D) Drought tolerance

17. The yields of both crops in intercropping are higher than of their pure crop on unit area basis.
- (A) Companion cropping
 - (B) Parallel cropping
 - (C) Multi-tiered cropping
 - (D) Synergetic cropping
18. It is cultivation of crops in regions with annual rainfall of less than 750 mm.
- (A) Dry farming
 - (B) Dryland farming
 - (C) Rainfed farming
 - (D) Arid farming
19. It is reflecting type antitranspirant.
- (A) Atrazine
 - (B) Silicone
 - (C) Kaolin
 - (D) Cycocel
20. It is a technique where in trenches of 40 cm wide & 15 cm deep are dug at 2-4 m interval across slope and filled with stubbles or organic wastes to a height of 10 cm above soil surface.
- (A) Vertical mulching
 - (B) Live mulching
 - (C) Dust mulching
 - (D) Trenching
21. Globally, India ranks _____ in respect of equipped area for irrigation.
- (A) First
 - (B) Second
 - (C) Third
 - (D) Fourth
22. It includes all water consumed by the plants and the water evaporated from bare land and water surface in the area occupied by the crop plants.
- (A) Net irrigation
 - (B) Gross irrigation
 - (C) Leaching requirement
 - (D) Consumptive use
23. It is defined as the percentage of water held by one centimetre thick moist layer of soil subjected to a centrifugal force of 1000 times of gravity for half an hour.
- (A) Field capacity
 - (B) Wilting coefficient
 - (C) Hygroscopic coefficient
 - (D) Moisture equivalent
24. The unsaturated soil water movement is also called as _____ movement.
- (A) Hygroscopic
 - (B) Gravitational
 - (C) Capillary
 - (D) Non-capillary

25. Amount of water required for scheduling irrigation at 0.8 IW/CPE ratio with 10 cm of CPE.
- (A) 0.08 cm
(B) 0.80 cm
(C) 8.00 cm
(D) 12.50 cm
26. Which state has the highest area under micro irrigation?
- (A) Andhra Pradesh
(B) Karnataka
(C) Maharashtra
(D) Rajasthan
27. A project with a cultivable command area of _____ hectares is classified as a major irrigation project.
- (A) Less than 2000
(B) 2000-5000
(C) More than 5000
(D) More than 10000
28. The moisture percentage in a soil on wet-weight basis is 30% and particle density is 2.5 g/cm^3 . Find out the bulk density.
- (A) 1.125
(B) 1.207
(C) 1.336
(D) 1.409
29. Of the total annual loss of agricultural produce from various pests in India, weeds account for _____ %.
- (A) 6
(B) 20
(C) 37
(D) 53
30. It is holo root parasitic weed.
- (A) *Orabanche*
(B) *Striga*
(C) *Cuscuta*
(D) *Loranthus*
31. It is an effective biocontrol agent of *Parthenium hysterophorus*.
- (A) *Neconchetina eichhorniae*
(B) *Zygogramma bicolorata*
(C) *Coctoblastis cactorum*
(D) *Dactylopius indicus*
32. A wettable powder bioherbicide containing fungal spores of *Colletotrichum gloeosporoides* causes stem and leaf blight in Northern jointvetch.
- (A) Devine
(B) Collego
(C) Bipolaris
(D) Biolophos

33. It is contact and non-selective herbicide.
- (A) Atrazine
 - (B) Glyphosate
 - (C) Paraquat
 - (D) Pendimethalin
34. It is the state or situation of the atmosphere at a particular place and point of time.
- (A) Weather
 - (B) Climate
 - (C) Environment
 - (D) Atmosphere
35. The ideal temperature for most crops is _____ °C.
- (A) 5 to 25
 - (B) 10 to 30
 - (C) 15 to 40
 - (D) 20 to 45
36. It is a day neutral plant.
- (A) Cotton
 - (B) Oat
 - (C) Maize
 - (D) Wheat
37. Photosynthetically Active Radiation (PAR) is defined as radiation in the spectral range of _____ nm.
- (A) 100 to 300
 - (B) 400 to 700
 - (C) 800 to 1100
 - (D) 1200 to 1500
38. Almost a constant amount of solar radiation *i.e.* _____ cal/cm²/min is emitted by the sun continuously.
- (A) 0.97
 - (B) 1.94
 - (C) 2.27
 - (D) 3.73
39. It is polar orbiting satellite operate at an altitude between 550 and 1600 km along an inclined circular plane over the poles and used for remote sensing purposes in India.
- (A) LANDSAT
 - (B) SPOT
 - (C) IRS
 - (D) INSAT
40. _____ events begin with large-scale warming of surface water in the central and eastern equatorial Pacific Ocean.
- (A) El Niño
 - (B) La Niña
 - (C) Southern Oscillation
 - (D) Trans-Niño

41. Odisha falls under which horticultural zone?
- (A) Temperate
 - (B) N.W. Sub-tropical
 - (C) N.E. Sub-tropical
 - (D) Central tropical
42. India is the _____ largest producer of fruits after Brazil.
- (A) First
 - (B) Second
 - (C) Third
 - (D) Fourth
43. Around 50 per cent of the world coconut production is consumed in the form of _____
- (A) Fresh nuts and tender nuts
 - (B) Desiccated coconut
 - (C) Oil production
 - (D) Making powder
44. Growing annual food crops in between the rows of trees or shrubs in arable lands.
- (A) Inter cropping
 - (B) Alley cropping
 - (C) Relay cropping
 - (D) Multiple cropping
45. What is the spacing under high density planting of mango?
- (A) 10 m × 10 m
 - (B) 7 m × 7 m
 - (C) 5 m × 5 m
 - (D) 3 m × 2 m
46. It is not used to induce off-season flowering in mango.
- (A) Gibberellic acid
 - (B) Paclobutrazol
 - (C) Ethrel
 - (D) Potassium nitrate
47. It is used to control bunchy top of banana.
- (A) Mancozeb
 - (B) Carbendazim
 - (C) Chlorothalonil
 - (D) 2,4-D
48. It is an inter-specific polyembryonic acid lime hybrid developed for resistance to bacterial canker disease.
- (A) Rasraj
 - (B) Vikram
 - (C) Thar Vaibhav
 - (D) Kuliana

49. The guava hybrid developed from the cross between Pant Prabhat and Arka Kiran.

- (A) Pusa Pratiksha
- (B) Pusa Aarushi
- (C) Lalit
- (D) Shweta

50. A closer spacing of 1.2×1.2 m. for cv. _____ is adopted for high density planting in papaya.

- (A) Washington
- (B) Red Lady
- (C) Pusa Nanha
- (D) Coorg Green

51. Tea contains alkaloids called _____, which is a caffeinaceous alkaloid relieving body fatigue.

- (A) Tannin
- (B) Trigonelline
- (C) Xantheose
- (D) Thein

52. When the mother trees of rubber are evolved by cross pollination (hand pollination) between two primary clones and are then multiplied vegetatively.

- (A) True clones
- (B) Secondary clones
- (C) Tertiary clones
- (D) Tributary clones

53. Abortion of one ovule due to non-fertilization leads to the formation of a single seeded fruit in coffee plant.

- (A) Pea berry
- (B) Double berry
- (C) Triangular seeds
- (D) Elephant bean

54. It is dwarf areca nut hybrid developed by cross between VTL 56 \times Mohitnagar.

- (A) Kalpa Sreshta
- (B) Kalpa Sankara
- (C) VTLAH 1
- (D) VTLAH 2

55. The _____ technique is superior over other methods, hence it has been recommended for taking up of commercial multiplication of cashew varieties.
- (A) Air layering
 - (B) Softwood grafting
 - (C) Softwood cutting
 - (D) Budding
56. Many plants with drooping or viny growth habits can be propagated by _____ layering, in which a low branch or one that can be bent easily to the ground is selected and it is injured (or scored) either by ringing, or slicing a cut 15 to 20 cm from the tip of the branch. The injured area is anchored in the soil deep enough to remain moist but the leafy tip is left above ground.
- (A) Air
 - (B) Mound
 - (C) Serpentine compound
 - (D) Tip
57. _____ is the process of a single or group of cells initiating the development pathway that leads to reproducible regeneration of non-zygotic embryos capable of germinating to form complete plants.
- (A) Organogenesis
 - (B) Somatic embryogenesis
 - (C) Embryo culture
 - (D) Callus culture
58. Globally _____ million hectares of farmland is degraded each year.
- (A) 1 to 2
 - (B) 3 to 4
 - (C) 5 to 7
 - (D) 8 to 12
59. Global pesticides use increased by _____ per cent between 2000 and 2021.
- (A) 31
 - (B) 43
 - (C) 55
 - (D) 62
60. The plants that grow better under partially shaded (low light) conditions.
- (A) Heliophytes
 - (B) Sciophytes
 - (C) Mesophytes
 - (D) Halophytes

61. It is soil microfauna.
- (A) Bacteria
 - (B) Algae
 - (C) Nematodes
 - (D) Millipedes
62. _____ diversity is the inter community diversity expressing the rate of species turnover per unit change in habitat.
- (A) Alpha
 - (B) Beta
 - (C) Gamma
 - (D) Delta
63. A German botanist _____ regarded as the Father of Plant Tissue Culture.
- (A) H. L. Duhamel du Monceau
 - (B) R. J. Gautheret
 - (C) Toshio Murashige
 - (D) Gottlieb Haberlandt
64. Replacement of the existing community caused largely by any other external condition and not by the existing organisms.
- (A) Heterotrophic succession
 - (B) Autogenic succession
 - (C) Allogenic succession
 - (D) Secondary succession
65. It is complex organic substances type of pollutant.
- (A) Benzene
 - (B) Ethylene
 - (C) Mercury
 - (D) Iodine
66. 1 ppm rise in CO_2 would add _____ Gt C into the atmosphere.
- (A) 1.21
 - (B) 2.12
 - (C) 3.23
 - (D) 4.42
67. Seawater contains _____ mg/L TDS.
- (A) 1500-3400
 - (B) 3500-5600
 - (C) 15000-21000
 - (D) 30000-34000
68. Heavy metals include all metals with atomic numbers greater than _____.
- (A) 11
 - (B) 23
 - (C) 42
 - (D) 55

69. It is estimated that _____ per cent of the world's landslides occur in the Himalayas.

- (A) 10
- (B) 20
- (C) 30
- (D) 40

70. The U.S. Soil Conservation Service defines conservation tillage (CT) as any tillage system that leaves at least _____ % of the soil surface covered by plant residues for control of soil erosion.

- (A) 10
- (B) 20
- (C) 30
- (D) 40

71. A soil having electrical conductivity of the saturation extract (EC) greater than 4 dS/m and exchangeable sodium percentage (ESP) less than 15.

- (A) Saline soil
- (B) Sodic soil
- (C) Saline-alkali soil
- (D) Acid sulphate soil

72. In soils, the smallest particles are termed colloids, which are particles that are _____ nm in size.

- (A) 1 to 1000
- (B) 1000 to 10000
- (C) 2000 to 20000
- (D) 5000 to 50000

73. Assimilation of inorganic forms of N by microbes and other soil heterotrophs.

- (A) Mineralization
- (B) Immobilization
- (C) Fixation
- (D) Denitrification

74. Soluble P rapidly precipitates as _____ in alkaline soils.

- (A) Iron phosphates
- (B) Aluminum phosphates
- (C) Calcium phosphates
- (D) Iron oxides

75. Generally, a C:P _____ will result in net mineralization of P.

- (A) < 200
- (B) 200-300
- (C) > 300
- (D) > 500

76. India has _____ per cent share of area under organic agriculture in total agricultural area in 2021.

- (A) 23.0
- (B) 11.6
- (C) 6.3
- (D) 1.5

77. The dissolved fraction of soil organic matter not affected by pH.
- Humin
 - Humic acid
 - Fulvic acid
 - Humate
78. They are not associative nitrogen fixing bacteria.
- Azospirillum*
 - Acetobacter*
 - Herbaspirillum*
 - Azotobacter*
79. It is simple type of soil structure.
- Platy
 - Spherical
 - Massive
 - Prismatic
80. Which form of soil consistency is observed in a dry soil?
- Harsh
 - Friable
 - Plastic
 - Sticky
81. The sea weeds ash is found to have more than _____ % K_2O .
- 5
 - 10
 - 25
 - 35
82. Zinc sulphate hepta hydrate ($ZnSO_4 \cdot 7H_2O$) contains _____ % zinc.
- 19
 - 23
 - 26
 - 35
83. Who gave the essentiality of zinc in plants?
- D. I. Arnon and P. R. Stout
 - A. L. Sommer and C. B. Lipman
 - P. H. Brown, M. Welch and E. E. Cary
 - Theodore de Saussure and J. B. Boussingault
84. A nanometre (nm) is equal to one _____ of a metre.
- Hundredth
 - Thousandth
 - Millionth
 - Billionth

85. Crops grown in summer month from March to June.
- Kharif*
 - Rabi*
 - Zaid*
 - Autumn
86. The enzymes responsible for carboxylation in C_3 plants.
- Ribulose- 1,5-Biphosphate Carboxylase
 - Phosphoenol Pyruvate Carboxylase
 - NADP-Malate Dehydrogenase
 - Pyruvate Phosphate Dikinase
87. Odisha falls under which Agro-climatic Regions/Zone of India?
- Trans Gangetic plain region
 - Western plateau and hills region
 - Central plateau and hills region
 - Eastern plateau and hills region
88. World's _____ % rice is produced in Asia alone.
- 60
 - 70
 - 80
 - 90
89. Optimum age of the seedlings for transplanting is _____ days for medium duration varieties of rice.
- 18-22
 - 25-30
 - 35-40
 - 45-50
90. It is the name of a rice that has been genetically engineered (genetically modified) to produce β -carotene, which the body can convert into vitamin A.
- Super rice
 - Green super rice
 - Golden rice
 - Brown rice
91. Entire outer portion of kernel is hard starch.
- Flint corn
 - Dent corn
 - Sweet corn
 - Pop corn
92. The Bt-cotton technology was first approved in _____ by the GEAC for commercial cultivation in central and south Indian cotton-growing zones of India.
- 1998
 - 2002
 - 2008
 - 2012

93. The botanical name of _____ wheat is *Triticum durum*.
- (A) Bread
(B) Emmer
(C) Macaroni
(D) Einkorn
94. Fertilizer dose for irrigated chickpea is _____ N-P₂O₅-K₂O kg/ha.
- (A) 12.5-25-0
(B) 20-40-0
(C) 25-50-0
(D) 50-50-0
95. Scientific name of green gram is _____
- (A) *Vigna radiata*
(B) *Vigna mungo*
(C) *Phaseolus vulgaris*
(D) *Phaseolus mungo*
96. It contains 20% oil and 40% high quality protein.
- (A) Groundnut
(B) Sunflower
(C) Soybean
(D) Sesame
97. A finger millet variety (Pedigree : GPU 26 × L 5) moderately resistant to blast diseases, non-lodging and non-shattering, released by OAUT, Bhubaneswar.
- (A) OEB 526
(B) OEB 532
(C) OEB 10
(D) VL 376
98. The family of sugarcane crop.
- (A) Asteraceae
(B) Fabaceae
(C) Poaceae
(D) Chenopodiaceae
99. The operation of tying the leaves together using the bottom dry and green leaves in sugarcane.
- (A) Detrashing
(B) Stubble shaving
(C) Propping
(D) Trashing
100. Potato is tolerant to _____ soils.
- (A) Acidic
(B) Saline
(C) Alkali
(D) Waterlogged

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