# COMPUTER BASED TEST – 2023
## PAPER – I – SUBJECT PAPER
## AGRICULTURE
## (P.G. DEGREE STANDARD)

1. Which of the following statement are true among integrated weed management major principles.

(i) Measures should be directed to reduce survival mechanism of weeds.

(ii) Any individual element of weed management should be as far as possible eco friendly.

(iii) Crop husbandry practices should be incorporated which will discourage the establishment of perennal weeds.

(A) (i) only
(B) (ii) only
(C) (i) and (ii) only
(D) (i), (ii), (iii)
(E) Answer not known

2. The warehouse that is specially constructed at a seaport (or) an airport and accept imported goods for storage

(A) Private warehouse
(B) Public warehouse
(C) Bonded warehouse
(D) General warehouse
(E) Answer not known

3. The major problems in Agricultural Marketing which affects the profit of farmers.

(1) Large number of middle men
(2) Small and scattered holdings
(3) Increasing land price
(4) Inadequate storage capacity

Find the correct combination

(A) (1), (2), (3) only
(B) (2), (3), (4) only
(C) (1), (2), (4) only
(D) (1), (3), (4) only
(E) Answer not known

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4. Which of the following statement are disadvantages of drip irrigation.
(i) Drip irrigation is better to saline soil
(ii) Clogging of emitters
(iii) High initial cost
(A) (i) only
(B) (i) and (ii) only
(C) (ii) and (iii) only
(D) (i) and (iii) only
(E) Answer not known

5. In India Economic Liberalization was introduced during _____
(A) January 1991
(B) July 1991
(C) January 2001
(D) July 2001
(E) Answer not known

6. The Ideal Marketing System is one that maximizes the long run _____.
(A) Profit to producer
(B) Net profit to producer
(C) Welfare of society
(D) Welfare of consumer
(E) Answer not known

7. In the Forward Markets the purchase and sale of a commodity takes place at time $t$ but the exchange of the commodity takes place on some specified date i.e. at _____ time period.
(A) $t-1$
(B) $t+1$
(C) $1+t$
(D) $1-t$
(E) Answer not known

8. Identify the wrong match among below types.

(1) Expenses — Bullock labour

(2) Receipts — Land Revenue

(3) Gifts — Receipts

(4) Interest on working capital — Expenses

(A) (1) is wrongly matched

(B) (2) is wrongly matched

(C) (3) is wrongly matched

(D) (4) is wrongly matched

(E) Answer not known

9. Choose the correct ratio which indicates the solvency position of the farmers

(A) Current Ratio

(B) Quick Ratio

(C) Working Ratio

(D) Net Capital Ratio

(E) Answer not known

10. Assertion [A] : Repaying capacity is the available money for the repayment of the loan.

Reason [R] : Repaying capacity is worked out as a residual after meeting the requirements of the family consumption.

(A) [A] is true but [R] is false

(B) [A] is false but [R] is true

(C) Both [A] and [R] are true; and [R] is the correct explanation of [A]

(D) Both [A] and [R] are true; but [R] is not the correct explanation of [A]

(E) Answer not known

11. Farm machinery is an example for one of the following assets

(A) Current assets
(B) Fixed assets
(C) Intermediate assets
(D) Working assets
(E) Answer not known

12. Farm work simplification enables

(i) reducing time and energy
(ii) saving of money
(iii) rearrangement of doors, gates etc.
(iv) tools and equipments of less efficient type and size

(A) (i) and (ii) only
(B) (ii) and (iii) only
(C) (ii), (iii) and (iv) only
(D) (i), (ii) and (iii) only
(E) Answer not known

13. Which of the following statements is or are not true about casual labour?

(i) They are hired from time to time.
(ii) The necessity of casual labour arises in all periods of operations.
(iii) The demand for casual labour is generally local and specific.
(iv) In India casual labours are more than attached (permanent) labours.

(A) (i) only
(B) (i) and (ii) only
(C) (ii) only
(D) (ii) and (iii) only
(E) Answer not known

14. A set of elements (or) components that are inter-related and interacting among themselves is

(A) Family System
(B) Inter Cropping
(C) Cropping Pattern
(D) Cropping System
(E) Answer not known

15. The absolute amount by which one product is decreased in order to gain another product by a unit is called as _____.

(A) Marginal Rate of Technical Substitution (MRTS)
(B) Marginal Rate of Substitution (MRS)
(C) Marginal Rate of Product Substitution (MRPS)
(D) Iso-product
(E) Answer not known

16. One of the following is not the alternate name of Iso-cost line

(A) Budget line
(B) Iso-outlay line
(C) Unit cost line
(D) Equal outlay line
(E) Answer not known

17. _____ is the additional income received from using an additional unit of input.

(A) Marginal Revenue (MR)
(B) Marginal Cost (MC)
(C) Marginal Value Product (MVP)
(D) Marginal Input Cost (MIC)
(E) Answer not known

18. Why Iso-product curves are convex to the origin?

(A) Marginal Rate of Technical Substitution falls, as more and more of $X_1$ is substituted for $X_2$.

(B) Marginal Rate of Technical Substitution increases, as more and more of $X_1$ is substituted for $X_2$.

(C) Marginal Rate of Technical Substitution falls, as less and less of $X_1$ is substituted for $X_2$.

(D) Marginal Rate of Technical Substitution does not change as more and more of $X_1$ is substituted for $X_2$.

(E) Answer not known

19. The crop components like Tapioca, Ragi, Groundnut, Horsegram, Rice with other components like Sheep or Goat or Poultry or Dairy is best suitable for which of the agro climatic zones of TamilNadu

(A) North Eastern Zone
(B) North Western Zone
(C) Southern Zone
(D) High altitude and hilly Zone
(E) Answer not known

20. Collective farming is practiced only in the following country

(A) India
(B) Bangladesh
(C) Japan
(D) Russia
(E) Answer not known

21. A chemical substance produced by an insect to repel and disperse other insects in the area is

(A) Parapheromone
(B) Sex pheromone
(C) Aggregation pheromone
(D) Alarm pheromone
(E) Answer not known

22. Engineering transgenic crops with more than one gene to get multi mechanistic resistance is termed as

(A) Gene Cloning
(B) Gene pyramiding
(C) Single Gene Resistance
(D) Vertical Resistance
(E) Answer not known

23. A chemical substance produced by one or both sexes of a species that bring/attract both sexes together for feeding and reproduction is

(A) Sex pheromone
(B) Aggregation pheromone
(C) Alarm pheromone
(D) Protopheromone
(E) Answer not known

24. Choose the correct match from the following :

| | Insects | | Repellents |
|---|---|---|---|
| (1) | Mosquito | (a) | Benzyl benzoate |
| (2) | Mites | (b) | Smoke |
| (3) | Wood Feeder | (c) | Dimethly pthalate |
| (4) | Bees | (d) | Pentachlorophenol |

(A) (1)-(b); (2)-(c); (3)-(a); (4)-(d)
(B) (1)-(c); (2)-(a); (3)-(d); (4)-(b)
(C) (1)-(a); (2)-(d); (3)-(b); (4)-(c)
(D) (1)-(b); (2)-(d); (3)-(c); (4)-(a)
(E) Answer not known

25. Pheromones are one of the best component of Integrated Pest Management Sex Pheromones and Aggregation Pheromones are extensively used in a IPM programme for the purpose of

(A) Monitoring and Mass trapping
(B) Mass trapping
(C) Mating distruption and monitoring
(D) Monitoring, Mass trapping and Mating distruption
(E) Answer not known

26. Imperata Cylindrica propagated through

(A) Rhizomes and seed
(B) Seed and stolon
(C) Tuber and seed
(D) Stolon and tuber
(E) Answer not known

27. Milky disease, a disease of Japanese beetle is caused by the bacterium

(A) Bacillus thuringiensis
(B) Bacillus pepilliae
(C) Bacillus subtilis
(D) Bacillus megaterium
(E) Answer not known

28. Bacillus popilliae, an entomopathogen successfully applied to control insect pest

(A) Alfalfa caterpillar
(B) Grass hopper
(C) Japanese bettle
(D) Cabbage lopper
(E) Answer not known

29. Assertion [A]: Subsoiling is the primary deep soil tillage practice which needs to be done every two to three years. Depending upon soil type and conditions to improve productivity.

Reason [R]: Subsoiling breaks compacted soil hard pans that restricts crop growth by limiting root access to moisture and nutrients in the subsoil.

(A) [A] in true but [R] is false
(B) ✓ Both [A] and [R] are true: and [R] is the correct explanation of [A]
(C) [A] is false, [R] is true
(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]
(E) Answer not known

30. The primary site of infection of Granulosis Virus (GV) virus is _____.

(A) Carbohydrate
(B) Vacuoles
(C) Vericles
(D) ✓ Fat bodies
(E) Answer not known

31. Use of Resistant varieties in the IPM is an example of

(A) Biological control
(B) Legal control
(C) ✓ Cultural control
(D) Physical control
(E) Answer not known

32. Horizontal resistance is governed by

(A) Single gene
(B) Few gene
(C) ✓ Many gene
(D) Antixenosis
(E) Answer not known

33. The pest which occurs is an isolated condition is

(A) Sporadic pest
(B) Regular pest
(C) Key pest
(D) Occasional pest
(E) Answer not known

34. A device used to break the insect pest infested kernels and kill the life stages of the storage pests while the whole grains are unaffected

(A) Hopper dozer
(B) Entoletter
(C) Silos
(D) Morari
(E) Answer not known

35. The lowest degree of pest population that does economically significant damage is known as

(A) General Equilibrium
(B) Economic Threshold
(C) Economic Injury Level
(D) Damage Boundary
(E) Answer not known

36. A species that interferes with human activities, property, or health or is objectionable is called

(A) Pest
(B) Host
(C) Predator
(D) Parasite
(E) Answer not known

37. Choose the right matches among type.
Match the sex pheromone with their insect.

(1) Gypsy moth — Gyplure
(2) Pink bollworm — Gossyplure
(3) Cabbage lopper — Litlure
(4) Tobacco cutworm — Looplure

(A) (1) and (3) are correct
(B) (1) and (2) are correct
(C) (2) and (3) are correct
(D) (3) and (4) are correct
(E) Answer not known

38. DDT insecticidal property discovered by _____.
(A) Paul Muller
(B) A.P.W. Dupire
(C) O. Zeidler
(D) Gerhand Schrades
(E) Answer not known

39. IPM word is coined by
(A) Agastino Bassi
(B) Gier and Clark
(C) Linnaeus
(D) Wersman
(E) Answer not known

40. The propotion of crop losses which can be saved by proper use of currently available are called
(A) Actual losses
(B) Avoidable losses
(C) Potential losses
(D) Unavoidable losses
(E) Answer not known

41. The first observable symptom of potassium deficiency is

(A) Interveinal Chlorosis
(B) Terminal bad dying
(C) Marginal Chlorosis
(D) Purpling
(E) Answer not known

42. Which of the following statement about Magnesium is correct?

(i) Mg is a constituent of chlorophyll.
(ii) Mg is constituent of ATP.
(iii) Mg acts as Phosphorus carrier in plant particularly in connection with the formation of seeds of high oil content.
(iv) Deficiency of Mg symptoms develop first on younger leaves.

(A) (i) only
(B) (i) and (iii) only
(C) (i) and (ii) only
(D) (ii) and (iii) only
(E) Answer not known

43. _____ method for the detection of insect pest of vegetatively propagation material.

(A) Visual Examination
(B) ELISA Test
(C) Washing technique
(D) Agar Plate Test
(E) Answer not known

44. Match the following :

| | Causal Organism/Disease | | Seed Health Test |
|---|---|---|---|
| (1) | Karnal bunt | (a) | PCNB Test |
| (2) | Fuscorium wilt | (b) | ELISA Test |
| (3) | Bacterial leaf blight | (c) | Seed Wash Test |
| (4) | Nematode | (d) | NaOH Test |

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| (A) | (a) | (b) | (c) | (d) |
| (B) | (c) | (a) | (b) | (d) |
| (C) ✓ | (d) | (a) | (b) | (c) |
| (D) | (a) | (b) | (d) | (c) |

(E) Answer not known

45. Blotter Test is recommended by ISTA for analysing of

(A) Seed germination
(B) Seed vigour
(C) ✓ Seed health
(D) Mechanical damage
(E) Answer not known

46. _____ temperature ranges are favourable for more insects activity during storage.

(A) 17 to 22°C
(B) ✓ 28 to 38°C
(C) 10 to 15°C
(D) 2 to 8°C
(E) Answer not known

47. Assertion (A): As per the Seed Act 1966 labelling is compulsory.
Reason (R) : Under the provision of Seed Act 1966, Seed Certification is voluntary.

(A) (A) is true but (R) is false.
(B) Both (A) and (R) is true and (R) is correct explanation of (A)
(C) (A) is false, (R) is true.
(D) Both (A) and (R) are true but (R) is not the correct explanation of (A)
(E) Answer not known

48. Choose the right answer

(i) The insect activity will be low at low seed moisture content.
(ii) Seeds can be safely stored at low RH than at high RH.
(iii) Recalcitrant seeds have longer viability.
(iv) Seed moisture affects the storage life of seeds.

(A) (i) and (ii) are correct
(B) (i) and (iii) are correct
(C) (ii) and (iii) are correct
(D) (i) and (iv) are correct
(E) Answer not known

49. The Indian Seeds Act was passed on _____ and came into force throughout the country on _____.

(A) 25th December 1965; 3rd October, 1968
(B) 29th December 1966; 2nd October, 1969
(C) 29th October 1966; 2nd October, 1968
(D) 28th October 1966; 2nd October, 1968
(E) Answer not known

50. Harringtoise Thumb Rule is applicable for moisture range to _____ and temperature range of

(A) 5-14%; 0 to 50°C
(B) 10-17%; 5 to 55°C
(C) 0-10%; 0 to 70°C
(D) 5-20%; –1 to 30°C
(E) Answer not known

51. Plant showing variation in expression of distinguishing characters or abnormal performance of the plant is called

(A) Off types
(B) Rogues
(C) Shedding tassel
(D) Partial
(E) Answer not known

52. The maximum permissible limit of plants affected the designated disease in sorghum is

(A) 0.10%
(B) 0.05%
(C) 0.02%
(D) 0.04%
(E) Answer not known

53. Match the following :

| Seed Crops | | Minimum No. of field inspection recommended by seed classification | |
|---|---|---|---|
| (1) | Sunflower | (a) | 1 |
| (2) | Cowpea | (b) | 3 |
| (3) | Potato | (c) | 4 |
| (4) | Raddish | (d) | 2 |

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| (A) ✓ | (b) | (d) | (c) | (a) |
| (B) | (c) | (a) | (b) | (d) |
| (C) | (a) | (d) | (b) | (c) |
| (D) | (c) | (a) | (d) | (b) |

(E) Answer not known

54. Which of the following statement is/are correct?

(a) Physical purity analysis is based on the sum of the weight of different components and not on the original weight of working sample.

(b) $\text{Purity (\%)} = \frac{\text{Weight of pure seed (g)}}{\text{Pure seed (g)} + \text{Other seed (g)} + \text{Inert matter (g)}} \times 100$

(c) The result of the purity analysis is presented using one decimal place.

(A) (a) alone is correct

(B) (a) and (b) are correct

(C) ✓ (a), (b), (c) are correct

(D) (a) and (c) are correct

(E) Answer not known

55. The genetic purity of variety during seed production is maintained by

(i) Use of approved class of seed.

(ii) Inspection and approval of seed plots prior to planting.

(iii) Sampling and sealing of cleaned plots.

(iv) Field inspection and approval for growing crops.

(A) (i), (ii) and (iii)
(B) (ii) and (iii)
(C) (i), (ii) and (iv)
(D) (i), (ii), (iii) and (iv)
(E) Answer not known

56. The minimum weight of submitted sample for conducting moisture test is _____ grams for those species that have to ground and _____ grams for all other species.

(A) 50 g and 100 g
(B) 150 g and 150 g
(C) 100 gram and 50 gram
(D) 175 g and 25 gram
(E) Answer not known

57. The following statement is not correct about forced air drying

(A) The air passing through dark seed picks up water.

(B) The evaporation cools the air and seed.

(C) The heat necessary for evaporating the water comes from the temperature drop to the air.

(D) When the vapour pressure in the seed is greater than the surrounding air, the seeds will gain moisture.

(E) Answer not known

58. Pneumatic evaporator a seed processing moisture in which seed separations are made by use to air on the basis of affinities in _____ velocity.

(A) Horizontal
(B) Terminal
(C) Vertical
(D) None of the above
(E) Answer not known

59. The sequence of seed polluting is

(A) Adhesive + Filler + Nutrients + Insecticide + Biofertilizer
(B) Adhesive + Insecticide + Nutrients + Filler + Biofertilizer
(C) Adhesive + Filler + Biofertilizer + Insecticides + Nutrients
(D) Adhesive + Filler + Insecticide + Nutrients + Biofertilizer
(E) Answer not known

60. Stratification is the treatment given to break _____ dormancy.

(A) Mechanical
(B) Chemical
(C) Physical
(D) Morphological
(E) Answer not known

61. The best use of abnormal soils (Sand Dunes, Water logged or Saline/Or so die soils) can be made by tree plantations without even reclaiming them through

(A) Power Plantations
(B) Energy Plantations
(C) Horticultural Plantations
(D) Green Plantations
(E) Answer not known

62. In problem soils tree seedlings are planted in

(A) Surface planting
(B) Auger hole planting
(C) Surface planting in coir pith
(D) Auger hole planting in coir pith
(E) Answer not known

63. Trees with more capacity of pumping out sizeable quantity of water due to high transpiration rate are best suited for

(A) Avenue Plantations
(B) Roadside Plantations
(C) Canal Bank Plantations
(D) Boundary Plantations
(E) Answer not known

64. Choose the best suited example of Silvi-Pastural System

(A) Gmelina Arborea + Cymbopogan Flexuous + Biogas
(B) Acacia Nilotica + Rice + Fish
(C) Popula + Wheat + Dairy cow
(D) Hadwickia + Cenchrus Ciliaris + Goat
(E) Answer not known

65. Rural Forestry benefits communities as a whole through massive plantations along roadside and canal banks, around tanks and ponds and to fallow and uncultivable lands and is also called as

(A) Urban Forestry
(B) Extension Forestry
(C) Farm Forestry
(D) Agro Forestry
(E) Answer not known

66. Phenyl Mercuric Acetate (PMA) is a

(A) Fungicide
(B) Herbicide
(C) Anti-Transpirant
(D) Hormone
(E) Answer not known

67. Agroforestry system aimed to increase the food and fodder production and to enhance the soil fertility is

(A) Alley cropping
(B) Silviculture
(C) Ley Farming
(D) Agri Silviculture
(E) Answer not known

68. Genotypes which exhibit changes in leaf angle and recover quickly after stress are drought resistant adaptation called

(A) Morphological Adaptation
(B) Anatomical Adaptation
(C) Physiological Adaptation
(D) Genotype Adaptation
(E) Answer not known

69. Assertion [A] : Contour Cultivation practices like contour ploughing, contour sowing and other intercultural operations improves infiltration rates.

Reason [R] : Infiltration Rates increases with each ridge of plough furrow and each row of the crop as an obstruction to runoff, providing more opportune time for water to enter into soil.

(A) Both [A] and [R] are true, but [R] is not the correct explanation of [A]
(B) [A] is false, [R] is true
(C) Both [A] and [R] are true, [R] is the correct explanation of [A]
(D) [A] is true but [R] is false
(E) Answer not known

70. Sub-soiler and _____ ploughs are used to break hard pans without disturbing the top soil.

(A) Mould board
(B) Disc
(C) Chiesel
(D) Rotavator
(E) Answer not known

71. _____ planting cannot be considered to be conservation tillage.

(A) No tillage
(B) Intercropping
(C) Stale Seed Bed
(D) Mulching
(E) Answer not known

72. Soil inversion plough is otherwise called as

(A) Disc Harrows
(B) Disc Plough
(C) Mould Board Plough
(D) Rotavator
(E) Answer not known

73. _____ is a system of crop production which involves management of surface residues, prevent degradation of soil by any means and restores and improves soil productivity.

(A) Blind Tillage
(B) Conservation Tillage
(C) Ridge Tillage
(D) Mulch Tillage
(E) Answer not known

74. Any material applied on the soil surface to check evaporation and improve soil water is called as

(A) Anti transpirants
(B) Mulch
(C) Growth retardants
(D) Growth promoters
(E) Answer not known

75. In Dryland Agriculture, if the length of growing period is 14 to 20 weeks, then

(A) Crop failures will occur
(B) A single dryland crop can be cultivated
(C) Ley cropping can be followed
(D) Suitable inter cropping system can be cultivated
(E) Answer not known

76. Which of the following statements are true about distinct soil layers of the puddle land?

(i) Upper 10 cm layer is reduced zone
(ii) Layer below upper zone is oxidized zone
(iii) Upper 10 cm layer is oxidized zone
(iv) Layer below upper zone is reduced zone

(A) (i) and (ii) are correct
(B) (i) and (iv) are correct
(C) (iii) and (iv) are correct
(D) (iii) and (ii) are correct
(E) Answer not known

77. Which of the following is correctly matched?

Soil characteristics before and after tillage.

| | | Before | After |
|---|---|---|---|
| (1) | Hydraulic conductivity (cm/hour) | 17.64 | Increases |
| (2) | Random Roughness (cm) | 1.15 | Decreases |
| (3) | Soil water at saturation (%) | 32.00 | Increases |
| (4) | Bulk Density (g/cm$^3$) | 1.42 | Increases |

(A) (1) and (2) are correct
(B) (1) and (3) are correct
(C) (2) and (3) are correct
(D) (3) and (4) are correct
(E) Answer not known

78. Fruit thinning in Apple is done for quality fruits by application of

(A) NAA @ 20 ppm at petal fall stage
(B) IAA @ 100 ppm at flowering stage
(C) IBA @ 200 ppm at pre flowering stage
(D) IBA @ 400 ppm at pre harvest stage
(E) Answer not known

79. To hasten fruit ripening in tomato and apple, _____ is sprayed on leaves.

(A) 2, 4 D
(B) Ethephon
(C) NAA
(D) GA
(E) Answer not known

80. Technique used to identify a series of overlapping restriction fragments to determine the relative position of genes on a chromosome.

(A) Chromosome Running
(B) Chromosome Walking
(C) Chromosome Jumping
(D) Chromosome Stalking
(E) Answer not known

81. Off season mangoes can be obtained by applying

(A) Thiourea
(B) Potassium nitrate
(C) Ethrel
(D) Paclobutrazol
(E) Answer not known

82. The characteristic pungent flavour of radish

(A) isothiocyanates
(B) glucosinolates
(C) glutathione
(D) brassinins
(E) Answer not known

83. The drought resistant clonal root stock of Apple is _____.

(A) M 27
(B) MM 106
(C) MM 109
(D) MM 111
(E) Answer not known

84. Sugar percentage in Sweet Potato tubers increases during
(A) harvest stage
(B) storage and cooking
(C) pre harvest stage
(D) tuber development stage
(E) Answer not known

85. Scientific name of Winged Bean is
(A) Cyamopsis tetragonaloba
(B) Psophocarpus tetragonolobus
(C) Canavalia gladiata
(D) Vigha radiata
(E) Answer not known

86. Scientific name of loose leaf lettuce type is _____.
(A) Lactuca sativa Var. Capitata
(B) L.s.Var. longifolia
(C) L.s.Var. crispa
(D) L.s.Var. asparagina
(E) Answer not known

87. In lowland transplanted Rice, the preparatory field operations are
(A) Puddling, Bund Shaving, Trimming and Plastering, Levelling
(B) Ploughing, Bund burning, Training and Plucking, Levering
(C) Puddling, Bund burning, Training and Plugging, Levelling
(D) Ploughing, Bund Shaving, Training and Plugging, Levering
(E) Answer not known

88. Arrange the following root system of Maize in growth stage viz.
(1) Seminal roots
(2) Brace (or) aerial roots
(3) Crown (or) coronal roots
(A) (1), (2), (3)
(B) (1), (3), (2)
(C) (2), (3), (1)
(D) (3), (2), (1)
(E) Answer not known

89. Which of the following statement is not true about Sesame?

(A) The oil is resistant to oxidation and rancidity.

(B) It is described as 'Queen of oil Seeds'.

(C) It is an exotic oil seed crop.

(D) Sesame is susceptible to drought and water logging.

(E) Answer not known

90. Among the following quality parameters in Tobacco, high level of chlorine in leaf inhibits

(A) Shatterability

(B) Elasticity

(C) Hygroscopicity

(D) Combustibility

(E) Answer not known

91. Gap Filling in Groundnut is

(A) Advantageous as the population is maintained

(B) Disadvantageous as there is 7 days delay at sowing and 20 days at maturity

(C) Advantageous as the yield is boosted

(D) Disadvantageous as there is no 7 days delay at sowing and 20 days at maturity

(E) Answer not known

92. A farmer grows the following crop rotation over two years in his 3-ha Farm Land. The cropping intensity of the Farm is

Rice — Maize — Blackgram — Rice — First Year

Rice — Rice — Sunflower — Blackgram — Second Year

(A) 200%

(B) 400%

(C) 300%

(D) 600%

(E) Answer not known

93. In a three-course rotation with two years cycle as follows :
Maize — Rice — Green Gram — I Year
Maize — Groundnut — Black Gram — II Year
The "MCI" is
(A) 4.0
(B) 8.0
(C) 3.0
(D) 6.0
(E) Answer not known

94. _____ refers to complementary interaction which occurs both space and time.
(A) Allelopathy
(B) Annidation
(C) Solar radiation
(D) Nutrient injury
(E) Answer not known

95. The chemical responsible for aroma in rice
(A) Beta Carotine
(B) Lysine
(C) Phytic Acid
(D) Diacetyle-I-Pyrolline
(E) Answer not known

96. In Tamil Nadu Wheat Crop is grown in
(A) Western zone
(B) High rainfall zone
(C) Hilly and high altitude zone
(D) North Western zone
(E) Answer not known

97. The special feature of Rainfed Agro Ecosystem is
(A) No Water Deficits
(B) Severe Water Deficits
(C) Occasional Water Deficits
(D) High Rainfall Prone
(E) Answer not known

98. Boiling point of water is

(1) 210°F and 373°K

(2) 210°F and 0°C

(3) 32°F and 273°K

(4) 210°F and 100°C

(A) (1) and (2) are correct

(B) (1) and (3) are correct

(C) (2) and (3) are correct

(D) (1) and (4) are correct

(E) Answer not known

99. It is used to depict the habitation pattern of the region

(A) Mobility mapping

(B) Social map

(C) Resource map

(D) Transect

(E) Answer not known

100. Choose the correct answer regarding P and D

(1) Facilitate self learning process

(2) Thrust to scientific knowledge

(3) Works on mutual trust and respect

(4) Needs and opportunities are identified by scientists

(A) (1), (2) correct

(B) (2), (3) correct

(C) (1), (3) correct

(D) (1), (4) correct

(E) Answer not known

101. Choose the correct statement regarding FSRE

(1) FSRE emphasis on cropping system

(2) FSRE focus top-down extension model

(3) FSRE is multidisciplinary approach

(4) FSRE implementation is done with farmers alone

(A) (1), (3) correct

(B) (2), (3) correct

(C) (1), (4) correct

(D) (2), (4) correct

(E) Answer not known

102. It is the task of collecting, writing, editing and publishing agricultural information, scientific facts, agricultural technology events or agricultural news through Newspapers, Magazines, Radio and Television or by any media of Communication.

(A) Journalism

(B) Agricultural Journalism

(C) Community Radio Station

(D) Consultancy Clinic

(E) Answer not known

103. How many digits are there in the ISSN?

(A) 8

(B) 10

(C) 12

(D) 14

(E) Answer not known

104. Journalism is considered as which type of activity?

(A) Political

(B) Economical

(C) Educational

(D) Social

(E) Answer not known

105. The first farm magazine published in India

(A) Krishi Sudhar
(B) Kheti
(C) Krishak Jagat
(D) Krishi Aur Pashupalan
(E) Answer not known

106. The word 'Magazine' has been derived from a French word 'Maagsin' meaning

(A) Bunch of Papers
(B) Store house
(C) Repository
(D) Collection of information
(E) Answer not known

107. Assertion (A) : In layout designing one center of interest will be selected around which other elements play supportive role.

Reason (R) : In layout the center of interest is placed slightly above the mathematical center, in which they eyes are focused first.

(A) (A) is true but (R) is false.
(B) Both (A) and (R) are true and (R) is the correct explanation of (A)
(C) (A) is false (R) is true.
(D) Both (A) and (R) are true but (R) is not the correct explanation of (A) is correct
(E) Answer not known

108. Practical evaluation stage of the Innovation-Decision process is _____.

(A) Adoption
(B) Evaluation
(C) Trial
(D) Awareness
(E) Answer not known

109. It is conducted by a participating farmer on his/her farm or home. Under the guidance of an extension worker, to prove by evidence that the practice being demonstrated is superior to the one in existence.

(A) Method Demonstration
(B) Result Demonstration
(C) Farm Tour
(D) Campaigns
(E) Answer not known

110. This is the first stage which any improved variety of seed, fertilizer, pesticide or any new practices, pass through, before it is taken to the stage of result demonstration or method demonstration and before advocating its large scale adoption.

(A) On farm trial
(B) Mini kit trial
(C) Front line demonstration
(D) Method demonstration
(E) Answer not known

111. Choose the correct statements regarding ATMA.

(1) ATMA is a state level government institute.

(2) FIACs are works at district level.

(3) SREPs are prepared based an agro-ecological conditions.

(4) FIGs are village level bodies with farmers cultivating species crop/product.

(A) (1), (2), (3) correct

(B) (2), (4) correct

(C) (2), (3) correct

(D) (3), (4) correct

(E) Answer not known

112. Arrange the following instructional devices in chronological order.

(1) Television and Digital computer

(2) Printed graphics

(3) Handmade charts and graphs

(4) Photographs and slides

(A) (2), (1), (3), (4)

(B) (3), (2), (4), (1)

(C) (4), (2), (3), (1)

(D) (1), (2), (3), (4)

(E) Answer not known

113. The number of pages a leaflet contain

(A) Eight

(B) Two

(C) Four

(D) Twelve

(E) Answer not known

114. It refers to a video system that is a combination of computer and video. It uses multimedia approach, that is text, stills video, audio, slides overhead etc.

(A) View data
(B) Electronic mail
(C) Interactive video
(D) Audio conferencing
(E) Answer not known

115. Meeting the information needs of the farmers by providing daily prices of agricultural commodities in various mandries for helping the farmer to decide where to sell his produce

(A) Village knowledge centre
(B) AGMARK NET
(C) PERMIS NET
(D) NATP
(E) Answer not known

116. These are interactive computer-based systems that utilize data and models for aiding an organizational decision maker in semi-structured problems. They rely on the man and machine working together for solving Electronic Data Processing which focus on data automating routine process.

(A) Expert system in Agriculture
(B) Decision support system
(C) Management information system
(D) System net work
(E) Answer not known

117. The project implemented to bring information Management Culture to National Agricultural Research System

(A) AKST
(B) ARIC
(C) ARIS
(D) AFRRI
(E) Answer not known

118. Find the right statements regarding Expert System

(1) It is also called as Knowledge Based System.

(2) User friendly navigation is available in Information Management System.

(3) Scientific information about crop, varietal characteristics with images are available in diagnosing system.

(4) Artificial Intelligence is a vital component in Decision Support System.

(A) (1) and (2) are correct
(B) (3) and (4) are correct
(C) (1), (2) and (3) are correct
(D) (2), (3) and (4) are correct
(E) Answer not known

119. QTL mapping is used in disease management strategy since, it helps in _____.

(A) finding pathogenecity of pathogen
(B) finding susceptible gene of the host
(C) finding disease resistance gene
(D) finding phenotype of the host
(E) Answer not known

120. In Biotechnological approaches in disease management, Ti system (Tumour inducing Vector System) are not considered for _____ type of plants.

(A) Dicot
(B) Monocot
(C) Fern
(D) Monocot and Dicot
(E) Answer not known

121. Systemic acquired resistance is expressed in Pathogen-inoculated plant within

(A) 4 hours
(B) 8 hours
(C) 24 hours
(D) 48 hours
(E) Answer not known

122. Host protein synthesis in a diseased plant cell usually

(A) Increases
(B) Decreases
(C) Remains same
(D) Decreases in resistant plant
(E) Answer not known

123. The modus operandi of Penicillium, the antibiotic effective against prokaryotes is _____.

(A) To inhibit murein synthesis
(B) To inactivate membranes containing sterols
(C) To disrupt the synthesis of peptidoglycon layer of bacterial cell wall
(D) To inhibit protein synthesis
(E) Answer not known

124. Decomposition of crucifers residue in soil releases _____ which are antifungal, anti bacterial and antinematode.

(A) Antibiotics
(B) Hydrogen Cyanide (Volatile)
(C) Volatile isothiocyanates
(D) Volatile benzene compounds
(E) Answer not known

125. Predation is an apparent mode of antagonism where a living microorganisms is mechanically attacked by the other with the consequences of death of the farmer. Hence, the relationship is

(A) often non violent and submissive relationship
(B) often non violent but destructive relationship
(C) often violent but not destructive relationship
(D) often violent and destructive relationship
(E) Answer not known

126. Muscodor albus produces volatiles that inhibit growth of _____.

(A) Pythium sp
(B) Fusarium sp
(C) Botrytis sp
(D) Sclerotium sp
(E) Answer not known

127. Choose the Right matches among type match the type of parasitoid with their family.

(1) Ichneumonidae – Eriborus wochan teratis
(2) Chalcididae – Bracon breuicorns
(3) Braconidae – Brachymeria nephantidis
(4) Trichogrammatiade – Trichogramma chilonis

(A) (1) and (3) are correct
(B) (1) and (4) are correct
(C) (2) and (3) are correct
(D) (3) and (4) are correct
(E) Answer not known

128. Soil sterilization is green house conditions plant pathogenic fungi and bacteria usually killed at temperatures between _____ and _____.

(A) 95°C and 100°C
(B) 60°C and 72°C
(C) 60°C and 71°C
(D) 52°C and 68°C
(E) Answer not known

129. Among the following statements, which one is true?

(1) Carboxin inhibits mitochondrial activity

(2) Kitazin inhibits chitin synthesis

(3) Carbendazim inhibits Nucleic and Synthesis

(4) Tridemorph inhibit sterol synthesis

(A) (1) and (4)
(B) (1), (2) and (3)
(C) (1), (2), (3) and (4)
(D) (2), (3) and (4)
(E) Answer not known

130. Amount of initial and secondary inoculums are important for predicting

(A) Apple scab
(B) Septoria leaf spot
(C) Rice blast
(D) Wheat Rust
(E) Answer not known

131. _____ is the forecasting model developed for Potato late blight disease.

(A) NEGFRY
(B) EPIDEM
(C) EPIVEN
(D) FAST
(E) Answer not known

132. Disease prediction equation revealed the between the number of spores in airspora and weather factors.

(A) Correlation
(B) Regression Quotient
(C) Disease severity index
(D) Percent Disease index
(E) Answer not known

133. Sporangia of Phytophthora infestans germinate by producing zoospores at a temperature of

(A) Less than 15°C
(B) 15-20°C
(C) 20-25°C
(D) More than 25°C
(E) Answer not known

134. Schneider et al developed an area under the curve model to estimate _____ disease in cowpea.

(A) Alternaria Leaf Spot
(B) Cercospora Leaf Spot.
(C) Helminthosporium Leaf Spot
(D) Bacterial Leaf Spot
(E) Answer not known

135. The integral components of disease triangle are _____ felicitated successful disease establishment.

(A) Virulent pathogen, Succeptible host, Favourable environment
(B) Virulent host, Resistant pathogen, Favourable environment
(C) Resistant pathogen, Avirulent host, Favourable environment
(D) Resistant host, Avirulent pathogen, Favourable environment
(E) Answer not known

136. Stem pitting symptom observed characteristically in _____.

(A) Citrus Exocortis
(B) Citrus Greening
(C) Citrus Tristeza
(D) Citrus Canker
(E) Answer not known

137. Resistance governed by cytoplasm in Maize Crop is exploited against _____ disease.

(A) Didymella blight
(B) Phytophthora blight
(C) Alternaria blight
(D) Helminthosporium blight
(E) Answer not known

138. About 15 percent of the dry weight of bacterial endospores is due to _____.

(A) Dipicolinic acid and Teichoic acid
(B) Dipicolinic acid and Calcium
(C) Dipicolinic acid
(D) Teichoic acid
(E) Answer not known

139. Match the viral disease with suitable transmitting vectors.

(1) TMV — Synchytrium endobioticum
(2) Potato Virus X — Nephotettix apicalis
(3) Tomato spotted leaf curl virus — Olpidium brassicae
(4) Rice dwarf disease virus — Bemisia tabaci

(A) (1) (2) (4) (3)
(B) (3) (1) (4) (2)
(C) (3) (4) (2) (1)
(D) (1) (3) (2) (4)
(E) Answer not known

140. In Southern blotting, the gel is strained with Ethidium bromide, which gives visible fluorescence on illumination of the gel with

(A) IR Light
(B) UV Light
(C) Visible White Light
(D) Visible Red Light
(E) Answer not known

141. Choose the right answer.

Which of the following statements are true about Golden Rice?

(1) Ingo Potrykus and his team identified the presence of Geranyl Geranyl Diphosphate (GGPP) a precursor for carotenoid production in rice seed.
(2) In Golden rice, GGPP is converted to beta carotene.
(3) Agrobacterium is used to produce Golden Rice.

(A) (1) only
(B) (1) and (2) only
(C) (1) and (3) only
(D) (1), (2) and (3)
(E) Answer not known

142. Viability of tea seeds can be retained for longer time, if it is stored under.

(A) Sterilization with $HgCl_2$
(B) Sterilization with $HgCl_2$ and Cold storage
(C) Cold storage only
(D) Ambients storage
(E) Answer not known

143. The introduction of the recombinant DNA into a host is called

(A) Transcription
(B) Transformation
(C) Translation
(D) None of the above
(E) Answer not known

144. Approximate size of Ti plasmid is _____.

(A) 200 kb
(B) 50 kb
(C) 300 kb
(D) 500 kb
(E) Answer not known

145. Assertion [A] : The ti plasmid of Agrobacterium tumefaciens helps in production of transgenics in several plant species.

Reason [R] : All species are not susceptible to Agrobacterium tumefaciens.

(A) [A] is true but [R] is false
(B) Both [A] and [R] are true; and [R] is the correct explanation of [A]
(C) [A] is false [R] is true
(D) Both [A] and [R] are true; but [R] is not the correct explanation of [A]
(E) Answer not known

146. Choose the correct answer.

| | | | |
|---|---|---|---|
| (1) | RAPD | (a) | Co-dominant marker |
| (2) | SSR | (b) | Mapping population |
| (3) | RIL | (c) | Single nucleotide alterations |
| (4) | SNP | (d) | Dominant marker |

(A) (1)-(d), (2)-(a), (3)-(b), (4)-(c)
(B) (1)-(d), (2)-(b), (3)-(c), (4)-(a)
(C) (1)-(d), (2)-(c), (3)-(a), (4)-(b)
(D) (1)-(d), (2)-(a), (3)-(c), (4)-(b)
(E) Answer not known

147. Assertion (A) : Marker validation and its Exploitation in crop improvement is easy in case of Qualitative traits when compared to Quantitative traits.

Reason (R) : Validating and Exploitation of Markers is complicated by GXE Interaction.

(A) Both (A) and (R) correct and (R) adequately explain (A).
(B) Both (A) and (R) correct but (R) does not explain (A).
(C) Only (A) is correct.
(D) Only (R) is correct.
(E) Answer not known

148. Random Amplified Polymorphic DNAs method was developed by

(A) Vos et al
(B) Hayes and Garber
(C) J.G.K. Williams et al
(D) Jones
(E) Answer not known

149. Pick the correct answer.
Single-locus, multiallelic, codominant markers are
(i) RFLP
(ii) SSR
(iii) AFLP
(iv) RAPB
(A) (i) alone
(B) (i) and (ii)
(C) (ii) and (iii)
(D) (iii) and (iv)
(E) Answer not known

150. Match the following scientist for their contributions?

| | | | |
|---|---|---|---|
| (1) | M.S. Swaminathan | (a) | Drosophila |
| (2) | Stadler | (b) | Mutation |
| (3) | Hugo de Vries | (c) | Wheat |
| (4) | Muller | (d) | Barley |

(A) (1)-(c), (2)-(b), (3)-(d), (4)-(a)
(B) (1)-(c), (2)-(d), (3)-(b), (4)-(a)
(C) (1)-(b), (2)-(d), (3)-(a), (4)-(c)
(D) (1)-(b), (2)-(a), (3)-(d), (4)-(c)
(E) Answer not known

151. Match and select the correct answer.

| | Column I | | Column II |
|---|---|---|---|
| (1) | Dee Gee Woogen | (a) | Wheat-Dwarfing Gene |
| (2) | Combine Kafir | (b) | Sorghum CGMS line |
| (3) | Tift 23A | (c) | Dwarfing gene Rice |
| (4) | Norin-10 | (d) | CGMS Line pear millet |

(A) (1)-(c), (2)-(a), (3)-(b), (4)-(d)
(B) (1)-(c), (2)-(d), (3)-(b), (4)-(a)
(C) (1)-(c), (2)-(b), (3)-(d), (4)-(a)
(D) (1)-(d), (2)-(b), (3)-(c), (4)-(a)
(E) Answer not known

152. Frequency of desirable mutation through induced mutation is _____.

(A) 0.1 per cent
(B) 0.01 per cent
(C) 1.00 per cent
(D) 10.00 per cent
(E) Answer not known

153. Which of the following statements are true about Aneuploidy?

(i) It involves addition or deletion of few chromosomes from 2n.
(ii) It includes presence of multiple copies of the same genome.
(iii) Two or more distinct genomes are involved.

(A) (i) only
(B) (i) and (iii) only
(C) (i) and (ii) only
(D) (ii) and (iii) only
(E) Answer not known

154. Deletion, Duplication or Inversion of base sequence of genes occur due to

(1) Mutation
(2) Environmental impact
(3) Disease infestation

(A) Only (1)
(B) (2) and (3)
(C) Only (3)
(D) All of the above
(E) Answer not known

155. The term germplasm of a crop includes

(1) Homozygous lines

(2) Mutant lines

(3) Land Races

(4) Obsolete Varieties

(A) (3) and (4)
(B) (1) and (2)
(C) (2) and (4)
(D) All are correct
(E) Answer not known

156. The main objective of cryopreservation of a cell or tissue is to

(1) Destroy viability

(2) Avoid disease attack

(3) Stop cellular metabolic activities

(4) Prevent pest attack

(A) (3) alone
(B) (1) alone
(C) (4) alone
(D) Both (2) and (4)
(E) Answer not known

157. In maize, double cross hybrids are produced by crossing

(A) A × B × C × D
(B) [A × B] × [C × D]
(C) [A × C] × [C × D]
(D) A × C × C × D
(E) Answer not known

158. The Art and Science of bringing wild species under human management is known as

(A) Domestication
(B) Ensitu conservation
(C) Biome conservation
(D) Acclamilation
(E) Answer not known

159. The morphological/agronomical/biochemical/DNA polymorphic description of plant germplasm is called as _____.

(A) Germplasm Characterization
(B) Germplasm Catalogue
(C) Germplasm Collection
(D) Germplasm Evaluation
(E) Answer not known

160. Assertion (A) : Plants uptake of $NH_4^+$ reduces $Ca^{+2}$, $Mg^{+2}$ and $K^+$ uptake.

Reason (R) : Differences in pH units near the soil and root surface have been observed for $NH_4^+$, which can affect nutrient availability and biological activity in the vicinity of roots.

(A) (A) is false (R) is true.
(B) (A) is true but (R) is false.
(C) Both (A) and (R) is true and (R) is the correct explanation of (A)
(D) Both (A) and (R) is true but (R) is not the correct explanation of (A) is correct
(E) Answer not known

161. The changes in gene and genotype frequencies of a population entirely due to change is called as

(A) Genetic erosion
(B) Genetic drift
(C) Genetic pool
(D) Genetic variation
(E) Answer not known

162. Match the Plant Growth Rhizobacteria (PGPR) for which evidence that their promotion of plant growth is due to influence on or by phytohormones.

(i) IAA — Pseudomonas fluorescens
(ii) Cytokinin — Bacillus sp.
(iii) Gibberellin — Azospirillum brasilenge
(iv) Accdeaminase — Bacillus pumilus

(A) (iii) (i) (ii) (iv)
(B) (i) (ii) (iii) (iv)
(C) (iv) (i) (ii) (iii)
(D) (iii) (ii) (i) (iv)
(E) Answer not known

163. Examples for Nitrification inhibitor is _____.

(A) ATC N serve
(B) Oximide
(C) SCU
(D) NCU
(E) Answer not known

164. The conversion between % of $P_2O_5$ to % P is

(A) % P = % $P_2O_5$ × 0.43
(B) % P = % $P_2O_5$ × 2.29
(C) % P = % $P_2O_5$ × 1.43
(D) % P = % $P_2O_5$ × 1.29
(E) Answer not known

165. Identify the INCORRECT statement with respect to Foliar application of nutrients

(A) Nutrient response can be high if plant is severely deficient

(B) Foliar applied micronutrients can meet much of the plants need

(C) Quantity of macronutrients delivered is relatively high

(D) Foliar fertilization is an efficient way to correct deficiency in tree crops

(E) Answer not known

166. The reason for selection of colemanite over Borax under light soil with high rainfall areas are _____.

(A) less soluble and less leaching loss

(B) more soluble and less leaching loss

(C) less soluble and more leaching loss

(D) more soluble and more leaching loss

(E) Answer not known

167. Assertion (A) : The association of legumes with rhizobia is host specific.

Reason (R) : The presence of flavonoids and isoflavonoids in the legume root exudates is reported to be responsible for the host specificity.

(A) (A) is true but (R) is false.

(B) Both (A) and (R) are true but (R) is correct explanation of (A) is correct

(C) Both (A) and (R) are true and (R) is the correct explanation of (A)

(D) (A) is false (R) is true.

(E) Answer not known

168. Calculate the calcium requirement (meq/100 g of soil) for a soil having initial ESP of 60 and CEC of 30 meq/100 g to achieve a final ESP of 10.

(A) 45 (B) 15

(C) 30 (D) 20

(E) Answer not known

169. Identify the correct sentence(s) for the management of surface crusting

(i) Application of Lime @ 2 $tha^{-1}$

(ii) Sowing of bold gram seeds

(iii) Sprinkling water at periodical interval

(iv) Application of clay soil

(A) (i) only (B) (iv) only

(C) (ii) and (iii) only (D) (i), (ii) and (iii) only

(E) Answer not known

170. Calculate the leaching requirement of an irrigation water having electrical conductivity of 4 dS/m and having a electrical conductivity of draining water 8 dS/m

(A) 50%
(B) 37.5%
(C) 62.5%
(D) 70.0%
(E) Answer not known

171. The process of break-down of Na-Clay happened under _____ soil medium

(A) Acid
(B) Alkaline
(C) Saline
(D) Neutral
(E) Answer not known

172. The infiltration capacity of slow permeable soil is less than _____.

(A) 4 cm/day
(B) 6 cm/day
(C) 8 cm/day
(D) 10 cm/day
(E) Answer not known

173. The bulk density of a soil can be calculated on the basis of _____.

(A) $\text{B.D.} = \frac{\text{Wt. of soil mass}}{\text{Soil volume}}$
(B) $\text{B.D.} = \frac{\text{Wt. of soil mass}}{\text{Soil volume} - \text{Pore space}}$
(C) $\text{B.D.} = \frac{\text{Soil volume}}{\text{Weight of soil}}$
(D) $\text{B.D.} = \frac{\text{Soil volume} - \text{P.S.}}{\text{Weight of soil}}$
(E) Answer not known

174. Identify the INCORRECT statement with respect to soil structure

(A) Alternate wetting and drying favours soil aggregation

(B) ✓ Alternate freezing and thawing destroy the soil aggregates

(C) Oxides helps to bind the soil particles

(D) Microbial attack on soil break the aggregates

(E) Answer not known

175. The soil with a mean annual temperature higher than 0°C but lower than 8°C is called

(A) Pergelic

(B) Frigid

(C) Mesic

(D) ✓ Cryic

(E) Answer not known

176. The particle density of normal soils are _____.

(A) 3.65 $Mg/m^3$

(B) 1.30 $Mg/m^3$

(C) 1.60 $Mg/m^3$

(D) ✓ 2.65 $Mg/m^3$

(E) Answer not known

177. During the mechanical analysis of soils, the purpose of treating the soils with hydrogen peroxide is

(A) to separate the soil particle from iron oxide

(B) ✓ to destroy the organic matter

(C) to destroy the soil microfauna

(D) to encourage binding of soil separates

(E) Answer not known

178. In the analysis of humic substances, the fraction which is insoluble in acid is called?

(A) Fulvic Acid
(B) Humic Acid
(C) Humin
(D) Carboxylic Acid
(E) Answer not known

179. The most recent (young alluvial) soils are locally classified as _____.

(A) Khadar
(B) Bhangar
(C) Regur
(D) Usti-Fluvents
(E) Answer not known

180. The diagnostic sub-surface horizon in red soils is

(A) Agric horizon
(B) Argillic horizon
(C) Oxic horizon
(D) Cambi horizon
(E) Answer not known

181. _____ Phanerogamic parasite is commonly appearing in tobacco.

(A) Orabanche sp.
(B) Oxalis corymbosa
(C) Striga sp.
(D) Cuscuta sp.
(E) Answer not known

182. The insect weevil used as biocontrol against water hyacinth

(A) Neochetina bruchi
(B) Dactylophus tomentosus
(C) Zygogramma bicolorata
(D) Teleonemia scruplosa
(E) Answer not known

183. In an experiment in upland rice the dry weight of weeds in unweeded plot was 5.50 kg/ha. The dry weight of weeds in Thiobencarb EC and Oxyfluorfen EC were 320 and 210 kg/ha. Find out the comparative efficiency of the two herbicide treatments.

(A) 4.18 and 6.18
(B) 41.8 and 61.8
(C) 61.8 and 41.8
(D) 6.18 and 4.18
(E) Answer not known

184. Which of the following is not true with the weed parthenium hysterophorus?

(A) It is photoperiodically and thermoperiodically neutral
(B) It excerts allelopathic
(C) It does not cause allergies in human
(D) It is a noxious exotic weed
(E) Answer not known

185. Match the parasitic weeds with their corresponding host.

| | | | |
|---|---|---|---|
| (1) | Striga | (i) | Mango and other trees |
| (2) | Cuscuta | (ii) | Sugarcane |
| (3) | Orabanche | (iii) | Legumes |
| (4) | Loranthus | (iv) | Tobacco |

(A) (1)-(i), (2)-(iii), (3)-(iv), (4)-(ii)
(B) (1)-(ii), (2)-(iii), (3)-(iv), (4)-(i)
(C) (1)-(ii), (2)-(iii), (3)-(i), (4)-(iv)
(D) (1)-(i), (2)-(ii), (3)-(iv), (4)-(iii)
(E) Answer not known

186. Eichhornia crassies grown in pond in an area of 1000 m is to be treated with 0.5% Gramoxone solution at a spray volume of 1000 L $ha^{-1}$, find out the commercial quantity of Gramoxone required?

(A) 0.5 lit
(B) 1.5 lit
(C) 2.0 lit
(D) 2.5 lit
(E) Answer not known

187. Which of the following are true with the weed Cynadon dactylon?

(i) It is an annual grass.
(ii) It has extensive underground rhizomes.
(iii) It propagates only through seeds.
(iv) It is one of the worlds worst weeds.

(A) (i) and (ii) only
(B) (ii) and (iii) only
(C) (i) and (iii) only
(D) (ii) and (iv) only
(E) Answer not known

188. _____ is cutting of a uniform growth of weeds from entire area at the ground level.

(A) Cutting
(B) Mowing
(C) Dredging
(D) Eradication
(E) Answer not known

189. Which of the following is incorrectly paired with its time of application?

(1) Aliphatics — Foliage-Applied herbicide
(2) Arsenicals — More apoplastically as well as symplastically
(3) Benzamides — Soil-applied herbicides
(4) Palaquat — Systemic-soil applied herbicide

(A) (1) and (2) are correct
(B) (1) and (3) are correct
(C) (3) alone correct
(D) (4) alone correct
(E) Answer not known

190. _____ induce acute photosensitivity and Jaundice in Animals.

(A) Parthenium Hysterophorus
(B) Lantana Camera
(C) Datura Metal
(D) Utriua Urens
(E) Answer not known

191. The herbicides paraquat and diquat belongs to the chemical family

(A) Benzothiadiazoles
(B) Bipyridiliums
(C) Benzamides
(D) Benzoics
(E) Answer not known

192. Resistance to most classes of herbicides is caused by

(A) Cytoplasmic Inheritance
(B) Nuclear Inheritance
(C) Mutation
(D) Multiple Inheritance
(E) Answer not known

193. Which of the following statement is not true with the changes take place in plants under waterlogged conditions?

(A) Respiration in the roots changes from aerobic to anaerobic respiration

(B) ✓ Ethanol production decreases

(C) Toxic substances accumulate in roots

(D) Reduced permeability of roots for nutrients

(E) Answer not known

194. Crop evapotranspiration is calculated by

(A) $K_{Pan} \times K_C$

(B) $ET_O \times K_P$

(C) $K_{Pan} \times E_{Pan}$

(D) ✓ $ET_O \times K_C$

(E) Answer not known

195. The formula to workout the Water-Use Efficiency (WUE)

(A) $\text{WUE} = \frac{ET}{Y}$

(B) ✓ $\text{WUE} = \frac{Y}{ET}$

(C) $\text{WUE} = \frac{Y}{PET}$

(D) $\text{WUE} = \frac{PET}{Y}$

(E) Answer not known

196. Thousand Million Cubic foot (TMC) is

(A) ✓ $10^9$ Cubic feet

(B) $10^6$ Cubic feet

(C) $10^8$ Cubic feet

(D) $10^5$ Cubic feet

(E) Answer not known

197. The soil moisture held by the soil against gravitational force is called _____.

(A) Permanent Wilting Point
(B) Soil Moisture Constant
(C) Soil Moisture Status
(D) Field Capacity
(E) Answer not known

198. The water vapour required for saturation of a parcel of air is 50 g and the actual amount of water vapour present is 40 g, calculate the relative humidity

(A) 20%
(B) 60%
(C) 80%
(D) 40%
(E) Answer not known

199. Calculate the moisture content of the soil sample if the wet weight of the soil sample with can is 210 g and dry weight with can is 180 g. Weight of the empty moisture can is 40 g

(A) 1.4%
(B) 21.4%
(C) 14.4%
(D) 12.4%
(E) Answer not known

200. Estimate the amount of water for each irrigation for scheduling irrigation at 0.5 with 8 cm of CPE

(A) 0.04 cm
(B) 14 cm
(C) 0.4 cm
(D) 4 cm
(E) Answer not known