

1. If the discharge rate of a nozzle is 30 liters/hr, swath width (with normal stretched arm) is 200 cm and speed of the operator is 3 km/hr, then required volume /ha is:

- (A) 300 lit
- (B) 400 lit
- (C) 500 lit
- (D) 600 lit

2. Reducing the width of a bund is a common practice to combat which infestation in the field?

- (A) *Heiroglyphuss banian*
- (B) *Bandicota bengalensis*
- (C) *Agrotis ipsilon*
- (D) *Holotrichia consanguinea*

3. Smothering of ear head in paddy is the damage symptoms of what?

- (A) *Leptocorisa acuta*
- (B) *Brebhenia rehi*
- (C) *Heiroglyphus banian*
- (D) *Scirpophaga incertulas*

4. Dark spiral streak on cane rind is found to be made of a series punctures lying side by side like beads in a rosary symptom is caused by:

- (A) *Chilo infuscatellus*
- (B) *Chilo sacchariphagus indicus*
- (C) *Scirpophaga nivella*
- (D) *Acigona steniellus*

5. The giant cell formation in infected plant's roots is due to

- (A) *Meloidogyne* sp
- (B) *Pythium* sp
- (C) *Anguina* sp
- (D) Virus

6. *Heterodera* avenue is a

- (A) Root knot nematode
- (B) Cyst nematode
- (C) Lesion nematode
- (D) Lance nematode

7. 'Onion Bloat' disease is caused by

- (A) *Ditylenchus dipsaci*
- (B) *Tylenchulus semipenetrans*
- (C) *Rotylenchulus reniformis*
- (D) *Pratylenchus* sp.

8. Non-domesticated species of silk worm that produce Chinese tasar is:

- (A) *Antheraea mylitta*
- (B) *Antheraea royeli*
- (C) *Antheraea proylei*
- (D) *Antheraea pernyi*

9. The weight of cocoons required to produce a kilogram of raw silk is called

- (A) Renditta
- (B) Denier
- (C) Pongee
- (D) Noil

10. A silk filament of 1000 m length and weighing 28 centigram then the estimated Denier of the filament is:

- (A) 2.80
- (B) 2.52
- (C) 1.82
- (D) 3.00

11. Undegummed silk thread spun by the silkworm; it consists of two filaments that are cemented together by silk sericin is called as _____.

- (A) Bave
- (B) Brin
- (C) Fibril
- (D) Cuite

12. 'Black spots' on the lateral body aspect of the infected silkworm larvae is due to infection of _____.

- (A) Virus
- (B) Bacteria
- (C) Fungus
- (D) Protozoa

13. Cutting followed by planting of new saplings of tree is _____

- (A) afforestation
- (B) deforestation
- (C) reforestation
- (D) none of these

14. Production of woody plants combined with pasture is referred to _____.

- (A) Silvipastoral system
- (B) Taungya system
- (C) Kangeyan system
- (D) Agrisilvipastoral system

15. One of the most common features noticed in forest areas is

- (A) Ecological niche shift
- (B) Highly productive
- (C) Ecological succession
- (D) Poor diversity index

16. Which one of the following is not a green house gas

- (A) Carbon dioxide
- (B) Methane
- (C) Nitrous oxide
- (D) Hydrogen

17. Which among the following is used for artificial rain making

- (A) Silver iodide
- (B) Sodium chloride
- (C) Dry ice
- (D) All of these

18. Which one of the following is a day neutral plant?

- (A) Barley
- (B) Cotton
- (C) Sunflower
- (D) Maize

19. Line connected between the places with equal sunshine hours is called

- (A) Isotach
- (B) Isohyet
- (C) Isohel
- (D) Isoprecet

20. Out of total radiation received by the earth from the Sun the waves significant to plant life are

- (A) UV, Radio Waves and Visible
- (B) Radio, UV and Infrared
- (C) Visible, Radio and Infrared
- (D) Visible, UV and Infrared

21. In weather satellite the sensor mainly used is

- (A) Photography
- (B) Line scan
- (C) Microwave system
- (D) Both Line scan and microwave

22. Doldrums are

- (A) High pressure areas
- (B) Low pressure areas
- (C) Temperate areas
- (D) All of these

23. Which tillage implement is suitable for breaking the hard pan formed at plough sole layer of soil profile?

- (A) Indigenous plough
- (B) Chisel Plough
- (C) MB Plough
- (D) Blade harrow

24. A tillage system when 15-30% soil surface remains under crop residues cover after planting is called

- (A) Zero tillage
- (B) Conservation tillage
- (C) Reduced tillage
- (D) Intensive tillage

25. The crop(s) known as pseudo cereals is/are

- (A) *Amaranthus cruentus*
- (B) *Fagopyrum esculentum*
- (C) *Chenopodium quinoa*
- (D) All of these

26. Which one of the following nutrient elements plays essential role in pollen tube germination?

- (A) Nitrogen
- (B) Sulphur
- (C) Boron
- (D) Molybdenum

27. Which one of the following nutrient elements play beneficial roles in sugarcane crop, but is not an essential nutrient element?
- (A) Sodium
 - (B) Nickel
 - (C) Vanadium
 - (D) Silicon
28. Which one of the following fertilizers supplies secondary nutrients along with primary nutrient?
- (A) Di-ammonium phosphate
 - (B) Muriate of potash
 - (C) Single super phosphate ✓
 - (D) Nano urea
29. For which category of following plants, the available soil water decreases gradually from FC to PWP resulting into gradual decrease in yield?
- (A) Xerophytes like cactus
 - (B) Shallow rooted plants like onion and garlic ✓
 - (C) Perennial plants like trees
 - (D) Upland crops like maize in sandy loam soils
30. In which method of irrigation, evaporation loss of water is minimized considerably by adopting land configuration?
- (A) Check basin
 - (B) Border strip
 - (C) Sprinkler ✓
 - (D) Ridge and Furrow

31. Which one of the following instruments is useful to know the right time of applying irrigation to field crops grown in non-saline sandy loam soil?

- (A) Tensiometer ✓
- (B) Piezometer
- (C) Lux meter ✓
- (D) Hygrometer

32. Which one of the following herbicides is commonly used for pre-emergence application in upland crops?

- (A) 2,4-D ✓
- (B) Isoproturon ✓
- (C) Glyphosate ✓
- (D) Pendimethalin

33. The ratio between total cropped area and actual net cultivated area expressed in percentage is known as

- (A) Cropping intensity ✓
- (B) Harvest index
- (C) Rotational intensity
- (D) Land equivalent ratio

34. The practice(s) is/are meant for mid-season correction as a contingent management to overcome moisture stress due to the dry spell in dryland agriculture include(s)

- (A) urea top dressing
- (B) thinning of plants ✓
- (C) re-sowing for gap filling
- (D) all of these

35. All decisions and activities of a farming system emanate from

- (A) Farm household
- (B) Farm implements and machineries
- (C) Farm livestock
- (D) Farm enterprises ✓

36. Yearly sequence and spatial arrangements of crops and crops and fallow on a given piece of land is termed as

- (A) Cropping system ✓
- (B) Cropping pattern ✓
- (C) Cropping sequence
- (D) Crop rotation

37. A rotation of arable crops requiring annual cultivation and artificial pasture occupying field for two years or longer is termed as

- (A) Alley cropping ✗
- (B) Inter cropping
- (C) Ley farming ✓
- (D) Crop rotation ✗

38. Which one of the following is the key underlying issue in the concept of sustainable agriculture?

- (A) Social equity
- (B) Gender equity
- (C) Inter-generational equity ✓
- (D) Economic equity

39. Which one of the following sets of agricultural practices could be ideal to achieve sustainable agriculture?

- (A) Zero tillage, crop residue retention and crop rotation ✓
- (B) Intensive tillage, crop residue burning, mono cropping
- (C) Zero tillage, crop residue removal, crop rotation
- (D) Intensive tillage, crop residue incorporation, crop rotation

40. Principles of health, principles of ecology, principles of fairness and principles of care as four basic principles of organic agriculture are proposed by

- (A) APEDA
- (B) IFOAM ✓
- (C) ICAR
- (D) FAO

41. On which aspect, the organic certification is different from other certification?

- (A) product certification
- (B) accreditation
- (C) standards
- (D) process certification

42. Which one of the following accreditation programmes has been formulated by the Government of India for the certification of organic farming and has been recognized by many countries internationally?
- (A) IFOAM
 - (B) JAS
 - (C) NPOP ✓
 - (D) NOP
43. What is the duration of conversion period required for the establishment of a certified organic farm?
- (A) 1 year
 - ✓ (B) 2-3 years
 - (C) 4-5 years
 - (D) 8-10 years
44. Which one of the following types of planting materials is completely prohibited in certified organic farming?
- (A) Certified organic seed and plant materials
 - (B) Uncertified organic seed and plant materials
 - (C) Chemically untreated conventional seed and plant materials
 - ✓ (D) Genetically engineered seeds, transgenic plants or plant materials

45. Which one of the following practices does not address management of soil fertility in a certified organic farming?

- (A) Cultivation of legumes
- (B) Use of green manures
- (C) Cultivation of shallow rooted crops
- (D) Crop rotation

46. Which one of the following growth stages of rice is most sensitive to nitrogen deficiency?

- (A) Panicle initiation
- (B) Flag leaf
- (C) Milk stage
- (D) Flowering

47. What is the seed rate of transplanted rice?

- (A) 10 kg/ha
- (B) 20 kg/ha
- (C) 30 kg/ha
- (D) 50 kg/ha

48. Which one of the following growth stage of wheat is most sensitive to soil moisture and nitrogen supply?

- (A) Crown root initiation
- (B) Tillering
- (C) Flowering
- (D) Late jointing

49. In which one of the following cereal crops, earthing up is generally an essential practice particularly when cultivated in rainy season?

- (A) Barley
- (B) Wheat
- (C) Paddy
- (D) Maize

50. Shubhra and Kripa are varieties of

- (A) Chickpea
- (B) Wheat
- (C) Cotton
- (D) Lentil

51. Which one of the following is the most important agrotechnique for the cultivation of rabi pulse crops in India particularly under rainfed condition?

- (A) Deep summer tillage
- (B) Timely sowing
- (C) Urea top dressing
- (D) Thinning

52. Which combination of following fertilizers should be more useful in oilseed crops?

- (A) Urea, DAP, MOP
- (B) Urea, SSP, MOP
- (C) Mixed fertilizer (10-26-26), Urea
- (D) DAP only

53. "Pegging" is an important growth stage and is found in case of

- (A) Groundnut
- (B) Sesame
- (C) Cotton
- (D) Mustard

54. The distance between two rows of sugarcane planted in autumn season is generally followed as

- (A) 40 cm
- (B) 60 cm
- (C) 75 cm
- (D) 90 cm

55. The dormancy of seed tuber of potato can be broken with the treatment of

- (A) Thiourea + IAA
- (B) Thiourea + IBA
- (C) Thiourea + GA
- (D) Thiourea + CO₂

56. What should be right stage of harvesting jute crop for better quality as well as higher yield of jute fibre?

- (A) pre-flowering stage
- (B) flowering stage
- (C) small pod stage
- (D) matured pod stage

57. What is the seed rate of fodder maize sown by broadcast method?

(A) 20 kg/ha

(B) 40 kg/ha ✓

(C) 60 kg/ha ✗

(D) 80 kg/ha

58. Disease free plants in micro propagation can be obtained through

(A) ✓ Meristem culture

(B) Anther culture

(C) Embryo culture

(D) Cell culture

59. Example of an aggregate fruits is:

(A) Pineapple

(B) Custard apple ✓

(C) Apple

(D) Orange

60. "Pusa Nanha" dwarf variety of Papaya is developed through

(A) Hybridization

(B) ✓ Mutation

(C) Selection

(D) Heterosis

69. Onion is propagated by

- (A) bulb ✓
- (B) seed
- (C) layering
- (D) cutting

70. Pusa Early Synthetic is a cultivar of

- (A) Cabbage
- (B) Knolkhol
- (C) Cauliflower ✓
- (D) Turnip

71. Buck eye rot is associated with

- (A) Tomato ✓
- (B) Cabbage
- (C) Onion
- ✗(D) French bean

72. Kochia is a

- (A) summer season annual flower
- (B) summer season annual foliage
- (C) winter season annual flower
- (D) winter season annual foliage

73. *Zoysia japonica* is commonly used in

- (A) Hedge
- (B) Edge
- (C) Lawn ✓
- (D) Pergola

74. Degreening of citrus fruit is done by the application of _____

- (A) Ethylene ✓
- (B) Pectin methyl esterase
- (C) Naphthalene ●
- (D) Gibberlic acid

75. The physiological disorder 'Calyx splitting' is associated with

- (A) Marigold
- (B) Carnation ✓
- (C) Rose
- (D) Lily

76. White Flowered Gourd is also known as _____

- ↓(A) Bottle gourd ✓
- (B) Ash gourd ✓
- (C) Sponge gourd
- (D) Apple gourd

61. Which Mango variety is suitable for high density planting?
- (A) Sindhu ✓
 (B) Amrapali ✓
 (C) Mallika
 (D) Ambika
62. Cultivated strawberry is :
- (A) Diploid
 (B) Octaploid
 (C) Hexaploid
 ✓(D) Triploid
63. Vegetative propagation of date palm is through
- (A) Runners
 (B) Slips
 (C) Suckers ✓
 (D) Stolen
64. Indicator plant for tristeza virus in citrus is :
- ✓(A) *Citrus aurantifolia*
 (B) *Citrus reticulata*
 (C) *Citrus maxima*
 (D) *Citrus medica*
65. Guava is generally trained in _____ system
- (A) modified leader
 (B) central leader
 (C) open leader
 (D) modified central leader ✓
66. Sapota is commercially propagated by _____
- (A) inarching ✓
 (B) cleft grafting
 (C) whip grafting
 (D) four-flap grafting
67. Among the following which is the best planting material for banana?
- (A) Water suckers
 (B) Sword suckers ✓
 (C) Pseudo suckers ✓
 (D) Peeper suckers
68. The inception of ripening in grapes is termed as _____
- (A) Verasion phase ✓
 (B) Lag phase
 (C) Bloom phase ✓
 (D) Skin tanning phase

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77. Commercially litchi is propagated through _____.
- (A) Air layering ✓
 (B) Stool layering
 (C) Serpentine layering
 (D) Trench layering
78. 'Bordeaux mixture' was discovered by
- (A) E.F. Smith
 (B) Needham
 (C) P.M.A. Millardet ✓
 (D) None of the above
79. Sesame phyllody disease is caused by
- (A) Bacteria
 (B) Virus
 (C) Fungi
 (D) ✓ Phytoplasma
80. The vector of Yellow vein mosaic of bhindi is
- (A) Aphids
 (B) Mites
 (C) ✓ Whiteflies
 (D) Jassids
81. Bacterial genus having strong pectolytic activity is
- (A) *Erwinia* sp
 (B) *Pseudomonas* sp
 (C) *Ralstonia* sp
 (D) *Xanthomonas* sp
82. The causal agent of Khaira disease of rice is
- (A) Cu deficiency
 (B) Zn deficiency ✓
 (C) Mn deficiency
 (D) Na deficiency
83. An antifungal antibiotic is
- (A) Streptomycin
 (B) Kasugamycin
 (C) ✓ Tetracycline
 (D) None of these
84. Most of the plant viruses have their nucleic acid as
- (A) ssRNA ✓
 (B) dsRNA
 (C) ssDNA ✓
 (D) dsDNA

85. Red rust of mango caused by
(A) fungi
(B) bacteria
(C) virus ✓
(D) algae
86. Irish Famine is associated with
(A) Early blight of potato
(B) Leaf roll of potato
(C) ✓ Late blight of potato
(D) None of these
87. The pathogen of white rust of mustard belongs to the order
(A) Uredinales
(B) Ustilaginales
(C) ✓ Peronosporales
(D) Erysiphales
88. The pathogen causing black rot of crucifers generally enters into the host through
(A) Root primordial
(B) Lenticels
(C) Hydathodes
(D) Stomata
89. Which option does not fall under cultural controls of insects?
(A) Crop rotation
(B) ~~Tillage~~
(C) Weeding
(D) ✓ Bagging
90. Androconia found in the wings of some insects are
(A) Specialized scales
(B) Bristles
(C) Spots
(D) Specialized glands
91. Which stored grain pest requires lowest moisture content for survival
(A) *Rhizopertha dominica*
(B) *Tribolium castaneum*
(C) *Tribolium confusum*
(D) *Trogoderma granarium* }
92. Tomato pinworm belongs to the family
(A) Pterophoridae
(B) Agromyzidae
(C) Pyralidae
(D) Gelechiidae

93. Rossetting of flowers in cotton is due to
 (A) Pink boll worm
 (B) American Boll worm
 (C) Spotted boll worm
 (D) All of these
94. The non-hymenopteran parasitoid recommended for pest management is
 (A) *Apanteles sp.*
 (B) *Brachymeria sp.*
 (C) *Epipyrops sp.*
 (D) *Pachycrepoideus sp.*
95. Physapodan insects are
 (A) White fly
 (B) Thrips
 (C) Leafhoppers
 (D) Aphid
96. From a crop damage function $Y = 729.5 - 4.25x^2 + 3.5x$ then find the unit insect damage per unit area (where $Y = \text{Kg/ha}$; $x = \text{insect damage per plant}$)
 (A) 8 kg/ha
 (B) 7 kg/ha
 (C) 6 kg/ha
 (D) 5 kg/ha
97. Find the EIL of BPH if an average of 20 hoppers/hill caused 500 kg/ha yield loss. The cost of management and market price were Rs. 3000/ha & Rs. 1500 / Qnt resp. and efficiency of chemical treatment is 80% :
 (A) 20 hoppers/hill
 (B) 15 hoppers/hill
 (C) 10 hoppers/hill
 (D) 8 hoppers/hill
98. Higher threshold level in pest management is practiced for
 (A) Crops having high compensatory ability
 (B) Crops having low compensatory ability
 (C) Crops having moderate compensatory ability
 (D) Crops having no compensatory ability
99. Damage boundary is the lowest level of injury which is caused?
 (A) Economic damage
 (B) Damage equal to EIL
 (C) Damage equal to ETL
 (D) Measurable damage
100. "Cry for help" theory in tritropic interaction shows positive interaction in between _____
 (A) Host plant and Pests
 (B) Predators and Parasites
 (C) Both Pests and Predators
 (D) Both Host and Predators

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