

YEAR OF ADVT: 2024

DATE OF EXAM: 04,05-OCTOBER-2024

Booklet Serial No. **4293**

DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

SERIES : I

QUESTION BOOKLET

Subject : AGRICULTURE (Paper—I)

Full Marks : 100

Time Allowed : 1 Hour

Read the following instructions carefully before you begin to answer the questions.

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Example :

Suppose the following question is asked :

The Capital of Meghalaya is

- (A) Guwahati
- (B) Kohima
- (C) Shillong
- (D) Delhi

You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :

(A) (B) (C) (D)

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AGRICULTURE

Paper-I

(Marks : 100)

Each question carries 2 marks

1. The nutrient content in FYM is
 - (A) N-0.5%, P-0.25%, K-0.5%
 - (B) N-0.25%, P-0.05%, K-0.01%
 - (C) N-1.5%, P-2.5%, K-1.5%
 - (D) N-10%, P-15%, K-10%
2. The word agronomy is derived from the words 'agros' and 'nomos' which are
 - (A) Latin words
 - (B) Greek words
 - (C) Indian words
 - (D) Spanish words
3. Which of the following is a variety of rice?
 - (A) HQPM-1
 - (B) IR 64
 - (C) Vijay composite
 - (D) JS-335
4. Detasseling is an important cultivation practice associated with
 - (A) sweet corn
 - (B) sugarcane
 - (C) fodder maize
 - (D) baby corn
5. Indian mustard is
 - (A) *Brassica juncea*
 - (B) *Brassica nigra*
 - (C) *Brassica campestris*
 - (D) *Brassica campestris* L. var. toria
6. If the spacing of maize is 60 cm × 25 cm sown in an area of 600 m², then the plant population will be
 - (A) 2.5×10^5
 - (B) 4000
 - (C) 25000
 - (D) 90
7. Growing of coconut, black pepper, cocoa and pineapple together utilizing the canopy and height difference is called
 - (A) mixed cropping
 - (B) multi-storied cropping
 - (C) mixed farming
 - (D) companion cropping
8. Which among the following is an erosion permitting crop?
 - (A) Green gram
 - (B) Cowpea
 - (C) Maize
 - (D) French bean
9. A plant which is undesirable, troublesome and difficult to control is called
 - (A) objectionable weed
 - (B) noxious weed
 - (C) obligate weed
 - (D) parasitic weed
10. Ring basin is suitable for which crop?
 - (A) Cereal
 - (B) Pulse
 - (C) Potato
 - (D) Fruit crop

11. When a herbicide is applied to soil as soon after sowing of crops but before emergence of weeds is termed as
 - (A) pre-plant incorporation
 - (B) pre-emergence treatment
 - (C) post-emergence treatment
 - (D) non-selective application
12. Tensiometer is sensitive up to
 - (A) 850 pascals
 - (B) 1 bar
 - (C) 1.85 bars
 - (D) 0.85 bar
13. The process of limiting the weed infestation so that the crop can be grown profitably and other operations can be conducted efficiently is called
 - (A) weed eradication
 - (B) weed prevention
 - (C) weed control
 - (D) All of the above
14. The soil-water potential at field capacity is
 - (A) -0.1 to -0.3 bar
 - (B) 0.33 to -15 bar
 - (C) -15 to -30 bar
 - (D) <0.1 bar
15. The average annual precipitation India receives in a year (including snowfall) is
 - (A) 1190 mm
 - (B) 1190 cm
 - (C) 1190 m
 - (D) 1.19 cm
16. The oil and protein contents in soybean seed are
 - (A) 20% protein and 40% oil
 - (B) 20% oil and 20% protein
 - (C) 15% protein and 30% oil
 - (D) 20% oil and 40% protein
17. Deficiency symptoms of which nutrients are seen on the older leaves?
 - (A) N and P only
 - (B) S, Fe and Mn
 - (C) N, P and K
 - (D) Ca and B
18. Nitrogen content in diammonium phosphate (DAP) is
 - (A) 46%
 - (B) 48%
 - (C) 28%
 - (D) 18%
19. The process of removal of plants of a variety admixed with other variety of same crop is called
 - (A) roguing
 - (B) weeding
 - (C) eradication
 - (D) purity maintenance
20. Paraquat is a
 - (A) translocated non-selective herbicide
 - (B) contact selective herbicide
 - (C) pre-plant incorporation herbicide
 - (D) contact non-selective herbicide

- 21.** The edible part of potato is
- (A) root
 - (B) tuber
 - (C) rhizome
 - (D) corm
- 22.** Colour development in tomato fruit is due to
- (A) lycopene
 - (B) carotenoid
 - (C) polypropylene
 - (D) All of the above
- 23.** The curcumin content of Lakadong variety is about
- (A) 1.5%–2.5%
 - (B) 8%–9.5%
 - (C) 6%–7.5%
 - (D) 3%–4%
- 24.** What type of mulches reduces soil temperature?
- (A) Organic mulch
 - (B) Grey polythene
 - (C) Black polythene
 - (D) Transparent polythene
- 25.** Arka Anamika is the variety of
- (A) tomato
 - (B) carrot
 - (C) okra
 - (D) brinjal
- 26.** Blanching is done to
- (A) inactivate enzymes
 - (B) inactivate microbes
 - (C) remove moisture
 - (D) All of the above
- 27.** Indian Institute of Horticulture Research (IIHR) is located at
- (A) Delhi
 - (B) Lucknow
 - (C) Hyderabad
 - (D) Bengaluru
- 28.** Virus-free seeds of potato are produced
- (A) in hilly areas
 - (B) as spring crops
 - (C) in plains
 - (D) as autumn crops
- 29.** Hollow heart of potato is a/an
- (A) disease
 - (B) disorder
 - (C) insect attack
 - (D) deficiency
- 30.** Alternate bearing is a problem of which of the following fruit crops?
- (A) Mango
 - (B) Apple
 - (C) Citrus
 - (D) All of the above

31. Which group of fruits is non-climacteric in nature?
- (A) Banana and mango
 - (B) Guava and orange
 - (C) Mandarin and grape
 - (D) All of the above
32. Parthenocarpy refers to
- (A) seedless fruits
 - (B) fruit without pollination
 - (C) seeds without pollination
 - (D) None of the above
33. Bt brinjal is developed for resistance against
- (A) bacterial wilt
 - (B) nematodes
 - (C) aphids
 - (D) fruit and shoot borer
34. Ginger soft rot is caused by
- (A) *Fusarium oxysporum*
 - (B) *Pythium* spp.
 - (C) *Alternaria*
 - (D) *Xanthomonas campestris*
35. Which of the following institutes is located in India?
- (A) IRRI
 - (B) CIMMYT
 - (C) ICRISAT
 - (D) IITA
36. Litchi is propagated through
- (A) grafting
 - (B) air layering
 - (C) cutting
 - (D) budding
37. Which of the following annuals is used as foliage beauty?
- (A) Kochia
 - (B) Phlox
 - (C) *Portulaca*
 - (D) *Antirrhinum*
38. Citrus is a special type of
- (A) berry
 - (B) pome
 - (C) drupe
 - (D) None of the above
39. Damping-off is caused by
- (A) fungi
 - (B) bacteria
 - (C) nematodes
 - (D) virus
40. Propagation of banana is done by
- (A) runners
 - (B) sword suckers
 - (C) slips
 - (D) crown

41. End product of glycolysis is
- malic acid
 - citric acid
 - pyruvic acid
 - oxalic acid
42. Whiptail of brassica is associated with deficiency of
- Mo
 - Zn
 - Ca
 - B
43. Growth is measured by
- osmometer
 - auxanometer
 - potometer
 - clinometer
44. Fruit ripening hormone is
- ethylene
 - ABA
 - GA
 - cytokinin
45. The formation of carbon-containing compounds from carbon dioxide and water by illuminated green cells, water and oxygen being the by-products is called
- photorespiration
 - photosynthesis
 - photolysis
 - None of the above
46. Theory of 'optimum and limiting factors' was given by
- Mitscherlich
 - Macy
 - J. V. Liebig
 - F. F. Blackman
47. The movement of particles from a region of higher concentration to its lower concentration is known as
- osmosis
 - diffusion
 - inhibition
 - None of the above
48. Which of the following is a day-neutral crop?
- Tomato
 - Maize
 - Sunflower
 - All of the above
49. The correct order of water-use efficiency is
- CAM > C4 > C3
 - C4 > C3 > CAM
 - C3 > CAM > C4
 - C3 = C4 > CAM
50. Which of the following is used for measurement of growth?
- Horizontal microscope
 - Auxanometer
 - Bose's crescograph
 - All of the above

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SEAL

AGRICULTURE

Paper—II

(Marks : 100)

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1. Mendel's laws were rediscovered in which of the following years?
(A) 1890 (B) 1905
(C) 1900 (D) 1898
2. Mutation breeding can be used as which of the following?
(A) Alternative to conventional breeding
(B) Complementary to conventional breeding
(C) Supplementary to conventional breeding
(D) All of the above
3. Genes which affect the expression of more than one character are known as
(A) hypostatic genes
(B) pleiotropic genes
(C) epistatic genes
(D) overdominant genes
4. In onion, what we eat is a
(A) sucker (B) bulb
(C) corm (D) rhizome
5. Development of isogenic lines is usually done by the method namely
(A) backcross
(B) pedigree
(C) bulk
(D) single-seed descent
6. Self-pollination increases
(A) homozygosity
(B) heterozygosity
(C) heterogeneity
(D) homogeneity
7. A person with blood group AB can receive blood from which of the following persons?
(A) A or O
(B) AB
(C) B
(D) All of the above
8. Which of the following is the oldest method of selection?
(A) Recurrent selection
(B) Ear to row selection
(C) Mass selection
(D) Mass-pedigree selection
9. Intervarietal hybridization is also called as
(A) interspecific hybridization
(B) distant hybridization
(C) intraspecific hybridization
(D) intergeneric hybridization
10. Generally, emasculation is done one day before anthesis at
(A) 10-12 AM (B) 6-8 AM
(C) 4-6 PM (D) 6-8 PM

11. Which is the commonly used agent for chromosome doubling?
- Decapitation
 - Nitrous oxide
 - Ethidium bromide
 - Colchicine
12. Certified seeds are the progenies of
- breeder seeds
 - foundation seeds
 - nucleus seeds
 - TL seeds
13. For breeder seed, tag of which colour is used?
- Blue
 - White
 - Red
 - Yellow/Golden
14. Biosphere reserves are the areas to preserve
- grassland
 - atmospheric balance
 - genetic erosion
 - genetic diversity
15. Which of the following crops show high inbreeding depression upon selfing?
- Self-pollinated crops
 - Cross-pollinated crops
 - Often cross-pollinated crops
 - All of the above
16. The term 'WIPO' stands for
- World Investment Policy Organization
 - World Intellectual Property Organization
 - Wildlife Investigation and Policing Organization
 - World Institute for Prevention of Organized Crime
17. Patents can be granted for
- processes
 - products
 - ideas
 - both processes and products
18. Which of the following chemicals is used to break dormancy of potato?
- Urea
 - Agalal
 - Thiourea
 - Aritone
19. Which is **not** a phase of mitosis?
- Prophase
 - Metaphase
 - Anaphase
 - Prephase
20. Golden rice is rich in
- vitamin D
 - vitamin B
 - vitamin C
 - vitamin A

21. The process of soil formation from parent material is called
- weathering
 - erosion
 - compaction
 - irrigation
22. Which type of soil particle is the smallest in size?
- Sand
 - Silt
 - Clay
 - Gravel
23. Which soil horizon is known as the top layer, rich in organic material?
- O-horizon
 - A-horizon
 - B-horizon
 - C-horizon
24. Soil porosity refers to
- the percentage of soil that is occupied by water
 - the percentage of soil volume that is occupied by air spaces or voids
 - the ability of soil to absorb water
 - the rate at which water infiltrates the soil
25. What is the main cause of soil crusting?
- Excessive organic matter
 - Poor soil structure and high silt content
 - Overirrigation
 - High clay content
26. The type of bond which links amino acids together in proteins is
- hydrogen bond
 - ionic bond
 - peptide bond
 - van der Waals bond
27. Which enzyme catalyses the formation of glycogen from glucose?
- Glycogen synthase
 - Glycogen phosphorylase
 - Glucokinase
 - Hexokinase
28. The form of nitrogen easily absorbed by plants is
- ammonium (NH_4^+)
 - nitrate (NO_3^-)
 - urea ($\text{CO}(\text{NH}_2)_2$)
 - nitrite (NO_2^-)
29. Which of the following fertilizers is known as muriate of potash?
- Potassium chloride
 - Potassium sulphate
 - Calcium nitrate
 - Superphosphate
30. What is the primary greenhouse gas emitted by human activities?
- Methane
 - Carbon dioxide
 - Nitrous oxide
 - Water vapour

31. The main cause of acid rain is
 (A) nitrogen oxides
 (B) sulphur dioxide
 (C) Both (A) and (B)
 (D) None of the above
32. Which of the following elements is primarily responsible for root development and flowering in plants?
 (A) Nitrogen (B) Phosphorus
 (C) Potassium (D) Calcium
33. What is the term for adding calcium carbonate to soil to correct soil acidity?
 (A) Liming (B) Calcification
 (C) Composting (D) Carbonation
34. The soil component having the highest cation exchange capacity is
 (A) sand (B) silt
 (C) clay (D) humus
35. What does 'soil buffering capacity' refer to?
 (A) Soil's ability to absorb nutrients
 (B) Soil's ability to resist changes in pH
 (C) Soil's ability to hold water
 (D) Soil's capacity for cation exchange
36. What does DRIS stand for?
 (A) Diagnostic and Recommendation Information System
 (B) Diagnostic and Recommendation Integrated System
 (C) Data and Research Integrated System
 (D) Diagnostic and Resource Information System
37. What type of charge do most soil colloids carry?
 (A) Positive charge
 (B) Negative charge
 (C) Neutral charge
 (D) Alternating charge
38. The type of clay mineral known for its high cation exchange capacity is
 (A) kaolinite
 (B) illite
 (C) montmorillonite
 (D) chlorite
39. Which of the following is **not** typically included in the Soil Health Card report?
 (A) Soil pH
 (B) Organic matter content
 (C) Soil temperature
 (D) Nutrient level
40. In the phosphorus cycle, what is the primary source of phosphorus for plants?
 (A) Soil mineral
 (B) Atmospheric deposition
 (C) Ocean sediment
 (D) Organic matter
41. The biological nitrogen fixation is restricted to the prokaryotes of the domain
 (A) Eukarya and Archaea
 (B) Archaea and Bacteria
 (C) Protozoa and Fungi
 (D) All of the above
42. _____ discovered the first antibiotic, 'Penicillin' in 1928.
 (A) Robert Koch
 (B) Louis Pasteur
 (C) Edward Jenner
 (D) Alexander Fleming

43. Phycology is the study of
 (A) fungi (B) protozoa
 (C) algae (D) bacteria
44. Which of the following bacteria **cannot** fix atmospheric nitrogen?
 (A) *Nostoc* (B) *Anabaena*
 (C) *Oscillatoria* (D) *Lactobacillus*
45. Consider the following for viroids and prions :
 I. Capability of causing infections
 II. Lack protein
 III. Lack nucleic acid
 Select the correct option :
 (A) I is not true for both viroids and prions, II is true for only viroids and III is true for only prions
 (B) I is true for both viroids and prions, III is true for only viroids and II is true for only prions
 (C) I is true for both viroids and prions, II is true for only viroids and III is true for only prions
 (D) I and II are true for both viroids and prions and III is true for only prions
46. Which of the following statements is **incorrect**?
 (A) Viroids are infectious RNA molecules.
 (B) Prions are infectious protein particles.
 (C) Fungi reproduce inside the cell wall of host organism.
 (D) Mycoplasma is bacterium that lacks cell walls.
47. Associate nitrogen (N_2)-fixing bacteria
 (A) belong to the genera *Azospirillum*, *Herbaspirillum* and *Burkholderia*
 (B) belong to the genera *Azotobacter*, *Clostridium* and *Klebsiella*
 (C) belong to the genera *Frankia* and *Anabaena*
 (D) belong to the genera *Glomus*, *Gigaspora* and *Acaulospora*
48. Which microorganism is eliminated in canned foods?
 (A) *Mycobacterium tuberculosis*
 (B) *Clostridium botulinum*
 (C) *Lactobacillus*
 (D) *Coxiella burnetii*
49. Biodegradable plastics produced by *Methylobacterium* is
 (A) polypropylene
 (B) polyhydroxybutyrate
 (C) polystyrene
 (D) None of the above
50. Which of the following statements is correct?
 (A) *Metarhizium* (biopesticide) is entomopathogenic bacteria that can act as the parasite of the insects and kill them.
 (B) *Metarhizium* (biopesticide) is entomopathogenic fungus that can act as the parasite of the insects and kill them.
 (C) *Metarhizium* (biopesticide) is entomopathogenic virus that can act as the parasite of the insects and kill them.
 (D) *Metarhizium* (biopesticide) is entomopathogenic nematode that can act as the parasite of the insects and kill them.

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AGRICULTURE

Paper—III

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1. Entomological Society of India was established in the year
(A) 1930
(B) 1938
(C) 1942
(D) 1948
2. *Trichogramma chilonis*, an egg parasitoid is extensively used against the pests of
(A) lepidoptera
(B) coleoptera
(C) diptera
(D) thysanoptera
3. The Headquarters of Locust Warning Organization (LWO) is situated at
(A) Karnal
(B) Pune
(C) Jodhpur
(D) Lucknow
4. Golden nematode is a
(A) cyst forming nematode
(B) root knot nematode
(C) root lesion nematode
(D) None of the above
5. Termite has which type of antennae?
(A) Filiform
(B) Unipectinate
(C) Moniliform
(D) Bipectinate
6. *Amsacta moorei* (Butler) is known as
(A) greasy cutworm
(B) gram cutworm
(C) Bihar hairy caterpillar
(D) red hairy caterpillar
7. The most commonly used fumigant for large scale storage pests control is
(A) ethylene dichloride
(B) carbon tetrachloride
(C) aluminium phosphide
(D) methyl bromide
8. Sponging types of mouth parts are found in
(A) termite
(B) housefly
(C) grasshopper
(D) honeybees
9. *Polyphagotarsonemus latus* attacks on
(A) potato
(B) chilli
(C) jute
(D) All of the above
10. The differentiation of the body into distinct functional regions is called
(A) Tagmosis
(B) Oogenesis
(C) Metamorphosis
(D) Blastogenesis

11. *Bacillus thuringiensis* was first isolated from diseased larvae of
 (A) honeybee
 (B) silkworm
 (C) spruce budworm
 (D) American bollworm
12. In India, *Spodoptera frugiperda* (J. E. Smith) is causing damage extensively on
 (A) rice
 (B) brinjal
 (C) maize
 (D) chilli
13. Dimethoate insecticide is under the group of
 (A) carbamates
 (B) organophosphates
 (C) organochlorines
 (D) synthetic pyrethroids
14. Milky disease organism is
 (A) *Beauveria bassiana*
 (B) *Lecanicillium lecanii*
 (C) *Bacillus popilliae*
 (D) *Metarhizium anisopliae*
15. Karanjin is found in
 (A) custard apple
 (B) neem
 (C) pongram
 (D) tobacco
16. *Leucinodes orbonalis* is a major pest of
 (A) okra
 (B) brinjal
 (C) tomato
 (D) cucumber
17. ETL of maize stem borer is
 (A) < 2% dead heart
 (B) 5%–10% dead heart
 (C) 10%–20% dead heart
 (D) > 20% dead heart
18. Burrowing types of legs are known as
 (A) fossorial
 (B) natatorial
 (C) foragial
 (D) cursorial
19. Hamulate wing coupling is present in
 (A) butterflies
 (B) moth
 (C) honeybees
 (D) None of the above
20. Juvenile hormone is produced by
 (A) neurosecretory cells
 (B) corpora allata
 (C) corpora cardiac
 (D) prothoracic

21. Father of modern experimental plant pathology is
 (A) Anton de Bary
 (B) Antony van Leeuwenhoek
 (C) P. A. Micheli
 (D) Louis Pasteur
22. Diseases where the pathogen is monocyclic but the incidence of diseased plants increases over several seasons are
 (A) polycyclic
 (B) monocyclic
 (C) polyetic
 (D) None of the above
23. Major gene contributes disease resistance in the form of
 (A) horizontal resistance
 (B) vertical resistance
 (C) Both (A) and (B)
 (D) None of the above
24. The Bordeaux mixture was first time used for the control of
 (A) powdery mildew of pea
 (B) damping off
 (C) downy mildew of grape vines
 (D) rust of wheat
25. A virus that multiply in its insect vector is
 (A) non-propagative virus
 (B) propagative virus
 (C) circulative virus
 (D) None of the above
26. The antifungal antibiotics 'Aureofungin and Haymycin' were developed by
 (A) J. C. Luthra and A. Sattar
 (B) T. S. Sadasivan
 (C) M. N. Kamat
 (D) M. J. Thirumalachar
27. Plant pathogenic bacteria that possess flagella on whole periphery/surface are called
 (A) peritrichous
 (B) amphitrichous
 (C) atrichous
 (D) lophotrichous
28. The non-motile spores are known as
 (A) zoospores
 (B) oospores
 (C) aplanospores
 (D) planospores
29. The presence of the pathogen or its part on a host plant is
 (A) disease
 (B) symptom
 (C) infection
 (D) sign
30. If a disease is spreading on continental or global scale, it is known as
 (A) sporadic
 (B) pandemic
 (C) epiphytotic
 (D) endemic

31. The main molecule responsible for the systemic acquired resistance is
 (A) salicylic acid
 (B) nitric oxide
 (C) jasmonic acid
 (D) reactive oxygen species
32. Growth and reproduction of plant pathogens on host surface is termed as
 (A) infection
 (B) colonization
 (C) invasion
 (D) incubation
33. A sustainable approach to manage disease by biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks is
 (A) pest risk analysis
 (B) sustainable disease management
 (C) integrated disease management
 (D) biological control
34. The technique used to produce virus-free plant stocks is
 (A) protoplast fusion
 (B) thermotherapy
 (C) cross-protection
 (D) meristem-tip culture
35. In Gram staining of bacteria, the counter stain used is
 (A) crystal violet
 (B) methyl blue
 (C) malachite green
 (D) safranin
36. Brown spot of rice is caused by
 (A) *Pyricularia oryzae*
 (B) *Rhizoctonia solani*
 (C) *Helminthosporium oryzae*
 (D) *Fusarium oxysporum*
37. Leaf blight of maize is caused by
 (A) *Helminthosporium turcicum*
 (B) *Fusarium moniliforme*
 (C) *Diplodia maydis*
 (D) *Pythium aphanidermatum*
38. In which disease, the chlorotic lesion from leaf margin in cabbage progresses towards the centre in the form of V-shaped yellowish spots?
 (A) Black rot
 (B) Club rot
 (C) Damping off
 (D) White rust
39. Late blight of potato and tomato is caused by
 (A) *Alternaria solani*
 (B) *Phytophthora infestans*
 (C) *Albugo candida*
 (D) *Pythium myriotylum*
40. Leaf miners help in the dissemination of the pathogen of citrus canker disease, the causal of citrus canker is
 (A) *Erwinia carotovora*
 (B) *Ralstonia solanacearum*
 (C) *Pseudomonas fluorescens*
 (D) *Xanthomonas campestris* pv. *citri*

41. Which of the following is **not** considered as a greenhouse gas?
- Carbon dioxide (CO₂)
 - Methane (CH₄)
 - Oxygen (O₂)
 - Nitrous oxide (N₂O)
42. Which greenhouse gas is known for its role in depleting the ozone layer?
- Methane
 - Nitrous oxide
 - Chlorofluorocarbons (CFCs)
 - Water vapour
43. What term describes the climate conditions at a small scale, such as those experienced in a specific field or orchard?
- Microclimate
 - Mesoclimate
 - Macroclimate
 - Phytoclimate
44. Which of the following is a property of solar radiation that affects plant growth and development?
- Wavelength
 - Amplitude
 - Colour
 - Velocity
45. What factors mainly influence the variation in soil temperature?
- Organic matter content only
 - Soil moisture content only
 - Solar radiation and moisture content
 - Soil texture and colour
46. How does soil moisture influence soil temperature?
- Moist soil retains heat more effectively than dry soil
 - Dry soil retains heat more effectively than moist soil
 - Soil moisture has no impact on soil temperature
 - Moist soil cools down faster than dry soil
47. What is the process of artificially inducing rainfall through the introduction of certain substances into clouds known as?
- Cloud formation
 - Cloud seeding
 - Rain enhancement
 - Fog dissipation
48. Which cloud type is often wispy and high in the atmosphere, composed of ice crystals, and indicates fair weather?
- Cumulus
 - Stratus
 - Cirrus
 - Cumulonimbus
49. What is the primary purpose of crop weather diagrams and calendars?
- Tracking market prices of agricultural products
 - Predicting the onset of monsoon
 - Monitoring crop growth stages in relation to weather conditions
 - Identifying new crop varieties
50. What type of energy is typically used in remote sensing to capture information about objects or areas?
- Sound waves
 - Electric waves
 - Electromagnetic waves
 - Magnetic waves

DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

SERIES : I

QUESTION BOOKLET

Subject : AGRICULTURE (Paper—IV)

Full Marks : 100

Time Allowed : 1 Hour

Read the following instructions carefully before you begin to answer the questions.

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Example :

Suppose the following question is asked :

The Capital of Meghalaya is

- (A) Guwahati
(B) Kohima
(C) Shillong
(D) Delhi

You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :

(A) (B) (C) (D)

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(A) (B) ● (D)

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AGRICULTURE

Paper-IV

(Marks : 100)

Each question carries 2 marks

1. Social phenomenon which has been primarily practised repeatedly by a multitude of generations is called
 - (A) tradition
 - (B) mores
 - (C) culture
 - (D) custom
2. The first step to extension teaching is
 - (A) creating need
 - (B) getting attention
 - (C) stimulating interest
 - (D) arousing desire
3. Classical conditioning is a learning process discovered by
 - (A) Pavlov
 - (B) Bechterev
 - (C) Kohler
 - (D) Thorndike
4. Marthandam project was set up in 1921 at Marthandam by
 - (A) F. L. Brayne
 - (B) Rabindranath Tagore
 - (C) Spencer Hatch
 - (D) Albert Mayor
5. Centrally sponsored scheme 'Support to State Extension Programs for Extension Reforms' is popularly known as
 - (A) ATMA
 - (B) ARYA
 - (C) NICRA
 - (D) KVK
6. Changes in awareness, knowledge and skills after program implementation are example of
 - (A) output indicator
 - (B) impact indicator
 - (C) outcome indicator
 - (D) None of the above
7. The extension teaching methods which are most effective in teaching new skills and creating goodwill between the farmers and the extension workers are
 - (A) group-contact methods
 - (B) mass or community contact methods
 - (C) individual contact methods
 - (D) None of the above
8. The innovators category of innovation adoption constitutes ____ percent of the population.
 - (A) 13.5
 - (B) 34
 - (C) 2.5
 - (D) 16
9. The personal obligation of everyone, as he acts in his own interest, to assure that the rights and legitimate interests of all others are not infringed, is
 - (A) social responsibility
 - (B) business ethics
 - (C) entrepreneurship
 - (D) corporate responsibility

10. The division of society into permanent groups or categories linked with each other by the relationship of superiority and subordination is called
 - (A) social grouping
 - (B) social stratification
 - (C) social organization
 - (D) None of the above
11. The most multifunctional social institution in a rural society is
 - (A) economy
 - (B) religion
 - (C) family
 - (D) government
12. The financial service which facilitates the development of new breed of entrepreneurs to start high-risk and high-technology projects for higher returns is
 - (A) venture capital
 - (B) angel investing
 - (C) credit-linked capital subsidy
 - (D) None of the above
13. The type of leader who remains in the background and seldom expresses an opinion or works with a minimum of roles is
 - (A) autocratic
 - (B) democratic
 - (C) laissez-faire
 - (D) socialistic
14. A written statement which describes proposed developmental activities, the problems they address, the actions and resources required is
 - (A) planning
 - (B) programme
 - (C) plan
 - (D) goal
15. National Innovations on Climate Resilient Agriculture (NICRA) was launched in the year
 - (A) 2006
 - (B) 2009
 - (C) 2011
 - (D) 2013
16. The Community Development Programme was started in India on
 - (A) 2 October, 1948
 - (B) 2 October, 1962
 - (C) 2 October, 1961
 - (D) 2 October, 1952
17. David Berlo's model of communication consisted of four basic elements, which were
 - (A) personality—encode—message—decode
 - (B) source—message—channel—receiver
 - (C) speaker—speech—audience—effect
 - (D) information source—transmitter—receiver—destination
18. Farm demonstration conducted by the farmers themselves is called
 - (A) method demonstration
 - (B) result demonstration
 - (C) field trial
 - (D) role play
19. According to the famous psychologist Abraham Maslow (1954), the highest order needs are
 - (A) physiological needs
 - (B) safety needs
 - (C) self-actualization
 - (D) esteem needs

20. Unlimited liability exists in which type of business entity?
- Joint venture
 - Corporation
 - Partnership
 - Limited liability company
21. The horizontal demand curve parallel to X-axis implies that the elasticity of demand is
- zero
 - infinite
 - equal to one
 - greater than zero but less than infinity
22. GST is a consumption of goods and services tax based on
- development
 - dividend
 - destiny
 - destination
23. When inflation is a result of an increase in the price of factors of production, the result is
- stagflation
 - cost-push inflation
 - demand-pull inflation
 - None of the above
24. The Reserve Bank of India (RBI) can take the measure of _____ to control inflation within the country.
- rationing of credit
 - introducing a progressive tax system
 - improving profits of the public sector
 - controlling public expenditure
25. Which of the following agencies is responsible for the calculation of gross domestic product in India?
- The Ministry of Finance
 - The Reserve Bank of India (RBI)
 - The Central Statistics Office (CSO)
 - The Indian Statistical Institute
26. The absolute value of the slope of the production possibility frontier at any point
- is always less than zero
 - is isoquant
 - is the marginal rate of substitution
 - is the marginal rate of transformation
27. _____ holds good at break-even point.
- $TR = TC$
 - $TR > TC$
 - $TR < TC$
 - None of the above
28. The word 'credit' is derived from Latin word _____ which means I believe.
- credi
 - cred
 - credo
 - None of the above
29. Which loans are meant to help the farmers in overcoming the distress sales and to market the produce in a better way?
- Consumption
 - Production
 - Marketing
 - Investment

30. Government advance loans directly to the farmer in case of emergency is known as ____ loan.
 (A) taccavi
 (B) short-term
 (C) long-term
 (D) None of the above
31. The ____ of an input is the change in total output resulting from using an extra unit of that input, holding other factors constant.
 (A) average product
 (B) marginal product
 (C) diminishing quantity
 (D) None of the above
32. A farmer having less than one hectare of irrigated land is known as
 (A) small farmer
 (B) marginal farmer
 (C) big farmer
 (D) None of the above
33. Economics that passes judgement or provides advice on policy actions is called
 (A) positive economics
 (B) negative economics
 (C) normative economics
 (D) descriptive economics
34. An economy which does not have any relation with rest of the world is known as
 (A) open economy
 (B) mixed economy
 (C) closed economy
 (D) socialist economy
35. Because of increasing marginal cost, most supply curves
 (A) are horizontal
 (B) have a negative slope
 (C) are vertical
 (D) have a positive slope
36. During business cycles, the opposite of a trough is
 (A) an inflation
 (B) a hyperinflation
 (C) a trend
 (D) a peak
37. The aim of WTO is
 (A) to liberalize international trade
 (B) free movement of travellers
 (C) money transfer from developed countries to underdeveloped countries
 (D) None of the above
38. The agency charged with the responsibility of buffer stocking is
 (A) Food Corporation of India
 (B) Commission for Agricultural Costs and Prices
 (C) National Cooperative Union of India
 (D) Central Warehousing Corporation of India
39. Where is NCDEX headquarters located in India?
 (A) Mumbai
 (B) Ahmedabad
 (C) New Delhi
 (D) Bengaluru

40. Successful project management has achieved which of the following objectives?
- Within time-frame and cost
 - At the desired performance
 - Utilizing the resources effectively
 - All of the above
41. The polymerase chain reaction (PCR) technique was first conceptualized and developed by
- Kary Mullis
 - Stanley Cohen
 - Herbert Boyer
 - Cesar Milstein
42. The Protection of Plant Varieties and Farmers' Rights (PPVFR) Act was passed in the year
- 2001
 - 2002
 - 2003
 - 2004
43. Virus-free plants can be recovered from infected plants through
- palisade parenchyma culture
 - gene engineering
 - shoot meristem culture
 - recombinant DNA
44. Pre-zygotic barriers to hybridization can be overcome by
- in vitro* fertilization
 - embryo culture
 - ovule culture
 - pod culture
45. The inherent potentiality of a plant cell to give rise to a whole plant is called
- morphogenesis
 - cellular totipotency
 - organogenesis
 - embryogenesis
46. High auxin and low cytokinin ratio favours
- induce formation of adventitive or axillary shoots
 - initialize root formation, embryogenesis and callus formation
 - chloroplast formation and other processes
 - None of the above
47. The enzyme reverse transcriptase is also called as
- RNA-dependent RNA polymerase
 - DNA-dependent DNA polymerase
 - RNA-dependent DNA polymerase
 - None of the above
48. The natural genetic engineer is
- E. coli*
 - Bacillus subtilis*
 - Agrobacterium tumefaciens*
 - None of the above
49. Flavr-SavrTM is the GM variety of
- tomato
 - canola
 - potato
 - soya bean
50. India ratified the Cartagena Protocol on Biosafety to the Convention on Biological Diversity in the year
- 2003
 - 2004
 - 2013
 - 2014

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SERIES : I

QUESTION BOOKLET

Subject : AGRICULTURE (Paper—V) [GENERAL ENGLISH]

Full Marks : 100

Time Allowed : 1 Hour

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AGRICULTURE

Paper—V (GENERAL ENGLISH)

(Marks : 100)

Each question carries 2 marks

Directions : Choose the correct option.

1. People who are averse _____ hard work do not succeed in life.
(A) with
(B) to
(C) of
(D) regarding
2. A woman who always connives _____ her children to hide their faults, is their worst enemy.
(A) with
(B) by
(C) at
(D) for
3. He dislikes _____ punish his children.
(A) have to
(B) having to
(C) for
(D) regarding
4. Indian perspective of life informs that leading a life of greed _____ in unhappiness.
(A) will lead
(B) shall be
(C) will result
(D) would resulted
5. What is the name of the person _____ son married your cousin this year?
(A) whose
(B) who
(C) whom
(D) with
6. When she _____ her friend after a period of three decades, her throat choked.
(A) meets
(B) had been meeting
(C) met
(D) has met
7. The government has _____ into a specific agreement with a charitable trust to provide medicines to the poor.
(A) enter
(B) entered
(C) entering
(D) been entered
8. Whatever _____, please keep calm.
(A) has happened
(B) is happening
(C) has been happening
(D) happens
9. The police _____ me today amidst busy traffic.
(A) stop
(B) stopped
(C) is stopping
(D) stops
10. I wish I _____ young again.
(A) were
(B) was
(C) had been
(D) have been

11. A biography is _____ person's life history.

- (A) about a
- (B) about
- (C) for a
- (D) with a

12. Raja thought he was _____ selected for the team to play at the national level.

- (A) one of the player
- (B) one of the players
- (C) one player
- (D) the player of the team

13. The portrait of the lady conveys _____ it appears.

- (A) the best
- (B) more than
- (C) the most
- (D) nothing

14. The world is changing _____ that the rich become richer and the poor become poorer.

- (A) through
- (B) in many ways
- (C) in a way
- (D) in such a way

15. The news is _____ good to be true.

- (A) so
- (B) too
- (C) very
- (D) enough

Directions : Select the wrongly spelt word.

16. (A) Inherent
(B) Intend
(C) Indent
(D) Inent

17. (A) Absent
(B) Absence
(C) Absance
(D) Absentee

18. (A) Colleague
(B) Collegium
(C) Collaegue
(D) College

19. (A) Independent
(B) Independant
(C) Independence
(D) Interdependence

Directions : Select the correctly spelt word.

20. (A) Commotion
(B) Comotion
(C) Comation
(D) Commosion

21. (A) Neccessary
(B) Necessary
(C) Necesary
(D) Necessery

22. (A) Reccomend
(B) Reccommend
(C) Recommend
(D) Recomend

23. (A) Restuarant
(B) Restarant
(C) Restaraunt
(D) Restaurant

Directions : Select the correct sentence.

24. (A) Unless you work harder, you will succumb.
(B) Unless you work harder, you will pass.
(C) Unless you work harder, you will fail.
(D) Unless you work harder, you will be promoted.
25. (A) The younger man has more money than brains.
(B) The younger man has more money of brains.
(C) The younger man has more money than brains.
(D) The younger man has more money for brains.
26. (A) He has no other option except he wins.
(B) He has no other option but to accept the challenge.
(C) He has no other option though he has won the challenge.
(D) He has no other option he has to accept the challenge.
27. (A) The company's bid for the contract is rejected since it filled all the conditions.
(B) The company's bid for the contract is rejected for the company fulfilled the conditions.
(C) The company's bid for the contract is rejected for the company filled the forms correctly.
(D) The company's bid for the contract is rejected since the company did not fulfill all the necessary conditions.
28. (A) You can use my computer as long as you can't use any external hard drive.
(B) You can use my computer as long as you used any external hard drive.
(C) You can use my computer as long as you do not use any external hard drive.
(D) You can use my computer as long as you shall use any external hard drive.

Directions : Choose the option that best expresses the given sentence in indirect speech.

29. She said, "Why don't you get a mechanic to look at the car?"
(A) She suggested to get a mechanic.
(B) She suggested that I should get a mechanic to look at the car.
(C) She suggested me why I don't get a mechanic to look at the car.
(D) She suggested mechanic to look at the car.
30. The man with the gun said to us, "Don't move!"
(A) The man with the gun warned us not to move.
(B) The man said don't move.
(C) The man with the gun politely asked us not to move.
(D) The man with the gun said move fast.

Directions : Select the word closest in meaning (synonym) to the word given.

31. Docile
(A) foolish
(B) idle
(C) gentle
(D) stubborn

32. Privy
(A) obvious
(B) known
(C) secret
(D) candid

Directions : Select the word opposite in meaning (antonym) to the word given.

33. Permit
(A) produce
(B) profane
(C) prohibit
(D) polite

34. Absurd
(A) rational
(B) crazy
(C) swift
(D) illogical

Directions : Select the word that can be substituted for the given group of words.

35. A person who knows a lot about good food and wine
(A) commissioner
(B) connoisseur
(C) credulous
(D) critic

36. A forward look or view into the future
(A) retrospect
(B) prospect
(C) introspect
(D) inspect

37. The planting and growing of flowers
(A) viticulture
(B) horticulture
(C) floriculture
(D) mariculture

38. The act of spying
(A) espionage
(B) eyeing
(C) fantasy
(D) mercenary

39. One who looks at the dark side of things
(A) heretic
(B) optimist
(C) pessimist
(D) atheist

40. A person who travels in space
(A) pilot
(B) astronaut
(C) choreographer
(D) spacer

Directions : Select the option closest in meaning to the idiom/phrase given.

41. By the book
(A) to buy a book of one's choice
(B) to understand the book
(C) to follow someone who reads books
(D) to follow rules exactly
42. Feel the pinch
(A) being hurt or wounded by someone
(B) to remain silent on injustice
(C) having financial problems all of a sudden
(D) feeling disappointed
43. Top-notch
(A) the highest marking on a tree or building
(B) organization that attracts only the top
(C) of the highest possible quality
(D) person of integrity
44. Under the table
(A) working under difficult circumstances
(B) working undercover
(C) working under furniture
(D) making or receiving payments surreptitiously

Directions : Fill in the blank with correct idiom/phrase.

45. I have to wake up early. I must _____.
(A) eat like a horse
(B) hit the hay
(C) sit on the fence
(D) black out

46. I haven't had fun in ages. I have _____ right now.
(A) two for the price of one
(B) done all in a day's work
(C) too much on my plate
(D) been hit by the weather
47. After winning the contest, she wouldn't talk to ordinary mortals like us. She now walks with her _____.
(A) head over heels
(B) head in the cloud
(C) out of her head
(D) turn up
48. He watched _____ as the water swept away his car.
(A) sticky wicket
(B) drop the ball
(C) from the sidelines
(D) kick off
49. Getting my car fixed is going to cost me _____ as the engine has completely blown, but I have no choice, I need it for work.
(A) over the moon
(B) an arm and a leg
(C) a piece of cake
(D) a drop in the ocean
50. The job might seem confusing at first as there are a lot of different departments you need to work with but you will soon _____.
(A) cut to the chase
(B) fixed in his ways
(C) find your feet
(D) put all your eggs in one basket