

SEAL

DO NOT OPEN THE SEAL UNTIL INSTRUCTED TO DO SO

Invigilator's signature

Question Booklet No.

710006

2018

PGT—PAPER—I : AGRICULTURE

Time : 2 Hours

Maximum Marks : 100

ROLL NO.

INSTRUCTIONS FOR CANDIDATES

1. This Question Booklet contains 50 optional questions. Each question comprises four responses (answers). You will select ONLY ONE response which you consider the best and darken the bubble on the OMR RESPONSE SHEET.
2. DO NOT write your Name or anything else except Roll No. and the actual answers to the question, anywhere on the OMR RESPONSE SHEET.
3. DO NOT handle your OMR RESPONSE SHEET in such a manner as to mutilate, fold, etc.
4. No candidate shall be admitted to the Examination Hall **20 minutes** after commencement of distribution of the Test Booklet. The invigilator of the Examination Hall will be the time-keeper and his decision in this regard is final.
5. No candidate shall have in his/her possession inside the Examination Hall any book, notebook or loose paper, calculator, mobile phone, etc., except his/her admit card and other things / paper permitted by the Commission.
6. Immediately after the final bell indicating the closure of the examination, stop bubbling. Be seated till the OMR RESPONSE SHEET is collected by the invigilator, thereafter you may leave the Examination Hall.
7. Violation of any of the above rules will render the candidate liable to expulsion from the examination and disqualification from the examination, and according to the nature and gravity of his/her offence, he/she may be debarred from future examinations and interviews to be conducted by the Commission and other such organizations (i.e., UPSC, SSC and SPSCs).

NB: CANDIDATES ARE ALLOWED TO TAKE THIS QUESTION BOOKLET ONLY AFTER COMPLETION OF 2 (TWO) HOURS OF EXAMINATION TIME.

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1. Which of the following is a pre-requisite of successful intercropping ?
 - (A) The time of peak nutrient demands of component crops should not overlap
 - (B) Competition for light should be minimum among the component crops
 - (C) Component crops should complement each other
 - (D) All of the above
2. Drought proofing means
 - (A) preventing drought
 - (B) management strategy to reduce severity of drought
 - (C) destroying crops when drought occurs
 - (D) All of the above
3. Which of the following microorganisms is responsible for maximum nutrient cycling in the soil?
 - (A) Fungi
 - (B) Bacteria
 - (C) Algae
 - (D) Protozoa
4. Which of the following is a parasitic weed of mustard ?
 - (A) *Cuscuta*
 - (B) *Orobanche*
 - (C) *Striga*
 - (D) All of the above
5. Superiority of hybrid to the standard commercial check variety is called
 - (A) average heterosis
 - (B) heterobeltiosis
 - (C) economic heterosis
 - (D) luxuriance
6. The high-yielding rust-resistant wheat variety 'Kalyan Sona' became susceptible to rust some years after its release due to
 - (A) climate change
 - (B) mutation of the variety
 - (C) emergence of new races of the pathogen
 - (D) None of the above
7. Irrigation water of 1 ha-cm is equal to
 - (A) 1000 litres
 - (B) 10000 litres
 - (C) 100000 litres
 - (D) 1000000 litres
8. Which one of the following crops is known as vegetable meat ?
 - (A) Okra
 - (B) Cowpea
 - (C) Potato
 - (D) Tomato
9. In light phase of photosynthesis, there is formation of
 - (A) ATP only
 - (B) NADPH₂ only
 - (C) both ATP and NADPH₂
 - (D) None of the above

10. Primary colours used in extension are
 (A) red, blue, green
 (B) red, blue, purple
 (C) red, green, yellow
 (D) red, blue, yellow
11. An ingredient added to herbicide formulation to improve the herbicidal activity is known as
 (A) antidote
 (B) filler
 (C) adjuvant
 (D) adsorbent
12. Which of the following is a weather forecasting method ?
 (A) Statistical method
 (B) Satellite forecasting
 (C) Synoptic method
 (D) All of the above
13. Which of the following nitrogenous fertilizer productions is the highest in India ?
 (A) Ammonium sulphate
 (B) CAN
 (C) Ammonium phosphate
 (D) Urea
14. Which one of the following is used for coating urea ?
 (A) Neem
 (B) Mustard
 (C) Sunflower
 (D) Safflower
15. Which one of the following categories of seed is expected to buy by the farmers every year?
 (A) Variety
 (B) Hybrid
 (C) Synthetic
 (D) Composite
16. *Rhizoctonia solani* causes a tuber-borne disease of potato, called
 (A) black scurf
 (B) charcoal rot
 (C) common scab
 (D) powdery scab
17. Which among the following irrigation scheduling approaches is most convenient for the farmers of Arunachal Pradesh ?
 (A) IW/CPE approach
 (B) Soil moisture depletion approach
 (C) Combination approach
 (D) Critical stage approach
18. Gerbera belongs to family
 (A) Asteraceae
 (B) Malvaceae
 (C) Convolvulaceae
 (D) Solanaceae
19. Every molecule of CO₂ fixed by the Calvin-Benson cycle into carbohydrates requires
 (A) 3 ATP and 2 NADPH
 (B) 2 ATP and 6 NADPH
 (C) 6 ATP and 9 NADPH
 (D) 9 ATP and 9 NADPH
20. Which of the following gives specific information on a particular topic ?
 (A) Leaflet
 (B) Folder
 (C) Story
 (D) Newsletter
21. Which of the following countries is pioneer in hybrid rice ?
 (A) India
 (B) China
 (C) Bangladesh
 (D) Australia

22. The instrument used to measure solar radiation is
 (A) barometer
 (B) hydrometer
 (C) pyranometer
 (D) thermometer
23. Arrangement of soil particles is called
 (A) soil structure
 (B) soil texture
 (C) soil organization
 (D) All of the above
24. Which among the following cereals is called as king of cereals ?
 (A) Rice
 (B) Wheat
 (C) Maize
 (D) Sorghum
25. In backcross breeding, the parent contributing valuable gene(s) for removing the bottleneck of an adopted variety is called
 (A) recurrent parent
 (B) non-recurrent parent
 (C) recessive parent
 (D) recipient parent
26. Black heart of potato is caused by
 (A) copper deficiency
 (B) boron deficiency
 (C) potash deficiency
 (D) oxygen deficiency
27. Whenever one irrigation is available, wheat crop should be irrigated at
 (A) crown root initiation
 (B) tillering
 (C) jointing
 (D) flowering
28. Most suitable crop for preventing scurvy is
 (A) apple
 (B) pear
 (C) banana
 (D) aonla
29. The first food substance in plants synthesised in photosynthesis is
 (A) protein
 (B) fat
 (C) sugar
 (D) vitamin
30. Which of the following marketing intermediaries is closest to the consumer in a marketing channel of paddy ?
 (A) Farmer
 (B) Rice miller
 (C) Wholesaler
 (D) Retailer
31. Which of the following is an example of multistoried cropping?
 (A) *Toria* + Wheat
 (B) Coconut + Black pepper + Cocoa + Pineapple
 (C) *Toria* + Oat
 (D) All of the above
32. The most effective absorber of ultraviolet radiation is
 (A) O₂
 (B) O₃
 (C) N₂
 (D) Cl₂
33. The inherent capacity of the soil to supply nutrients to plants is called
 (A) soil productivity
 (B) soil nutrient
 (C) soil fertility
 (D) None of the above
34. In case of typical monohybrid cross, the genotypic ratio in F₂ is
 (A) 1 : 1
 (B) 1 : 2 : 1
 (C) 3 : 1
 (D) 2 : 1

35. Hopper burn is caused by the attack of
(A) grasshopper
(B) brown plant hopper
(C) both grasshopper and brown plant hopper
(D) None of the above
36. Which of the following retards ageing of plants ?
(A) Auxin
(B) Abscisic acid
(C) Cytokinin
(D) Auxin
37. Major source of water used by the plant is
(A) capillary water
(B) gravitational water
(C) hygroscopic water
(D) All of the above
38. Removal of male bud of banana is called
(A) decharring
(B) charring
(C) denovelling
(D) novelling
39. Movement of auxin in aerial part of plant is
(A) acropetal
(B) basipetal
(C) both acropetal and basipetal
(D) None of the above
40. When $MPP = 0$
(A) TPP declines
(B) TPP is maximum
(C) APP is maximum
(D) None of the above
41. Beushening in rice is
(A) method of sowing
(B) method of harvesting
(C) ploughing just before transplanting
(D) ploughing in 4-6 weeks old lowland rice in standing water
42. Which of the following is a rainwater harvesting technique ?
(A) Deep tillage
(B) Retention ditch
(C) Planting pit
(D) All of the above
43. The male flower initiation stage of maize is known as
(A) silking
(B) tasseling
(C) flower initiation
(D) panicle initiation
44. A system of planting that accommodates an additional tree in the centre of each square is called
(A) quincunx
(B) triangular
(C) hexagonal
(D) square
45. Which among the following cereals is largely used in malting and brewing industries?
(A) Rice
(B) Wheat
(C) Barley
(D) Oat
46. Which of the following classes of seeds is tagged with golden brown colour tag?
(A) Breeder
(B) Foundation
(C) Certified
(D) Both (B) and (C)

47. If WR, ER, S and U are water requirement of crops, effective rainfall, soil profile contribution and upward flux respectively, irrigation requirement is equal to
- (A) $WR + ER - (S + U)$
 - (B) $WR + S - (ER + U)$
 - (C) $WR - (ER + S + U)$
 - (D) $WR + ER + S + U$
48. Which one of the following is a pest of field as well as of storage ?
- (A) Rice stem borer
 - (B) Rice moth
 - (C) Sweet potato weevil
 - (D) Wheat flour beetle
49. The process in which water is split during photosynthesis is
- (A) photolysis
 - (B) plasmolysis
 - (C) hydrolysis
 - (D) hemolysis
50. The role of extension education in agricultural development is largely
- (A) supervisory
 - (B) authoritative
 - (C) catalytic
 - (D) administrative