

SEAL

DO NOT OPEN THE SEAL UNTIL INSTRUCTED TO DO SO

Question Booklet No.

Invigilator's signature

2018

990016

TGT—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. Sustainable agriculture
 - (A) meets the demand of the present generation by eroding the ecological asset
 - (B) meets the demand of the present generation without eroding the ecological asset
 - (C) does not meet the demand of the present generation
 - (D) None of the above
2. Short range weather forecast is made available
 - (A) before 7 days of occurrence
 - (B) before 14 days of occurrence
 - (C) before 21 days of occurrence
 - (D) before 24-72 hours of occurrence
3. Which of the following nitrogen fixing microbes is associated with Azolla in rice field?
 - (A) *Anabaena*
 - (B) *Frankia*
 - (C) *Rhizobia*
 - (D) *Azospirillum*
4. *Phalaris minor* is a crop-associated weed of
 - (A) rice
 - (B) maize
 - (C) wheat
 - (D) cotton
5. A homozygous line developed by self-pollination of cross-pollinated crop is termed as
 - (A) pureline
 - (B) inbred
 - (C) clone
 - (D) mutant
6. Yellow rust of wheat is caused by
 - (A) *Puccinia graminis*
 - (B) *Puccinia recondita*
 - (C) *Puccinia striiformis*
 - (D) None of the above
7. Which among the following crops requires highest water ?
 - (A) Paddy
 - (B) Wheat
 - (C) Maize
 - (D) Sugarcane
8. Fruit of rose is known as
 - (A) bulbs
 - (B) berry
 - (C) hips
 - (D) None of the above
9. Xylem conducts sap from
 - (A) leaves to roots
 - (B) root to leaves
 - (C) stem to roots
 - (D) leaves to stem

10. What should be the size of trainee group in monthly or fortnightly training session under training and visit system of agricultural extension ?
(A) Not more than 20
(B) Not more than 30
(C) Between 30 and 50
(D) More than 50
11. Multiple cropping can be achieved by
(A) intercropping
(B) mixed cropping
(C) sequential cropping
(D) All of the above
12. The instrument used to measure humidity is
(A) barometer
(B) hydrometer
(C) hygrometer
(D) altimeter
13. Relative proportion of sand, silt and clay of soil is called
(A) soil texture
(B) soil structure
(C) soil organization
(D) All of the above
14. Which of the following is soil-active herbicide ?
(A) Paraquat
(B) Glyphosate
(C) Butachlor
(D) All of the above
15. Heterosis estimated over the superior or better parent is called
(A) relative heterosis
(B) standard heterosis
(C) pseudoheterosis
(D) heterobeltiosis
16. Which among the following insects is the most important insect pest of sorghum?
(A) Grasshopper
(B) Shoot fly
(C) Termites
(D) White grub
17. What is the CPE (Cumulative Pan Evaporation), if 5 cm irrigation is applied at IW : CPE ratio 1.0?
(A) 37.5 mm
(B) 50 mm
(C) 60 mm
(D) 70 mm
18. Zero energy cool chamber operates on the principle of
(A) Newton's first law of motion
(B) Boyle's law
(C) Charles' law
(D) evaporative cooling
19. In plant, maximum transpiration takes place from
(A) roots
(B) stem
(C) leaves
(D) flower and fruits
20. The size of a farm which allows a man the chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses is
(A) minimum efficient size
(B) economic size
(C) optimum size
(D) family holding

21. Uppermost biochemically weathered portion of the regolith is called
 (A) soil
 (B) earth
 (C) rock
 (D) None of the above
22. Organic food is
 (A) food produced by adopting organic package of practices
 (B) food which has only organic carbon and does not contain any minerals
 (C) Both (A) and (B)
 (D) None of the above
23. According to Indian Meteorological Department, meteorological drought is the situation when the seasonal rainfall received over an area is
 (A) less than 85% of its long-term average value
 (B) less than 75% of its long-term average value
 (C) less than 25% of its long-term average value
 (D) rainfall is less than long-term average value
24. In transplanted rice soil, main objective of puddling is
 (A) disease control
 (B) pest control
 (C) weed control
 (D) creation of impervious layer
25. Viability of seed is tested by
 (A) 2,3,5-triphenyltetrazolium chloride
 (B) indole acetic acid
 (C) GA_3
 (D) mancozeb
26. Tungro disease of rice is caused by
 (A) fungus
 (B) bacteria
 (C) virus
 (D) nematode
27. Water use efficiency is the highest in
 (A) C_3 plants
 (B) CAM plants
 (C) C_4 plants
 (D) None of the above
28. Sweet potato belongs to family
 (A) Leguminosae
 (B) Malvaceae
 (C) Convolvulaceae
 (D) Solanaceae
29. The by-product of photosynthesis is
 (A) CO_2
 (B) O_2
 (C) H_2O
 (D) glucose
30. All the members have right of ownership in the business in
 (A) family farming
 (B) cooperative farming
 (C) institutional farming
 (D) state farming
31. Removal of off type from a seed production plot is known as
 (A) thinning
 (B) weeding
 (C) selection
 (D) roguing

32. In relay cropping
- (A) succeeding crop is sown/planted immediately after the harvest of the preceding crop
 - (B) succeeding crop is sown/planted just before the harvest of the preceding crop
 - (C) succeeding crop is sown/planted after the preceding crop has reached its reproductive stage of growth, but before it is ready for harvest
 - (D) All of the above
33. SSP is preferred as source of phosphorus in rapeseed to DAP as it also contains
- (A) S
 - (B) Ca
 - (C) Both S and Ca
 - (D) None of the above
34. In tobacco plant, nicotine is synthesized in
- (A) leaf
 - (B) shoot
 - (C) xylem
 - (D) root
35. In case of monohybrid cross, incomplete dominance gives which of the following phenotypic ratio in F_2 ?
- (A) 1 : 1
 - (B) 1 : 2 : 1
 - (C) 3 : 1
 - (D) 2 : 1
36. The major pest of gram is
- (A) pod borer
 - (B) cutworm
 - (C) white grub
 - (D) stem borer
37. Which of the following methods of irrigation is called 'overhead irrigation'?
- (A) Drip irrigation
 - (B) Sprinkler irrigation
 - (C) Furrow irrigation
 - (D) Basin irrigation
38. In a lifetime of banana how many times it gives fruit?
- (A) Once
 - (B) Twice
 - (C) Thrice
 - (D) None of the above
39. High concentration of auxin is present in
- (A) shoot tip
 - (B) root tip
 - (C) leaf
 - (D) flower
40. The word 'communication' has its root in
- (A) French
 - (B) Greek
 - (C) Latin
 - (D) English
41. Most predominant cropping system in India is
- (A) rice-wheat
 - (B) rice-rice
 - (C) rice-mustard
 - (D) rice-potato
42. Which one of the following nutrients' deficiency cause hard fruit of citrus ?
- (A) Zinc
 - (B) Boron
 - (C) Manganese
 - (D) Phosphorus

43. Mahsuri is a variety of
- (A) green gram
 - (B) black gram
 - (C) rice
 - (D) wheat
44. The number of inbred lines used in producing a double cross hybrid is
- (A) 2
 - (B) 1
 - (C) 4
 - (D) 6
45. Which one of the following sets of the abbreviations correctly designates pesticide formulation in the solid state?
- (A) SP, EC and G
 - (B) SP, EC and WP
 - (C) SP, G and WP
 - (D) EC, G and WP
46. In subsurface drainage, if main line is located at the depressions and laterals are connected from both sides, the layout is called
- (A) gridiron
 - (B) herringbone
 - (C) natural
 - (D) None of the above
47. In grafting, the lower part of stem containing root is known as
- (A) scion
 - (B) bud
 - (C) stem
 - (D) stock
48. The first stable product of C_4 cycle is
- (A) starch
 - (B) oxaloacetic acid
 - (C) acetic acid
 - (D) malic acid
49. Which of the following marketing intermediaries is more common in regulated market ?
- (A) Farmer
 - (B) Retailer
 - (C) Commission agent
 - (D) Broker
50. India is the first country to develop hybrids in
- (A) cotton
 - (B) rice
 - (C) maize
 - (D) brinjal