

Test Booklet  
Series

**A**

Paper No.

**22**

Written Test Paper, 2021

**SKILL INSTRUCTOR  
(AGRICULTURE)**

Test Booklet No.

Name of Applicant ..... Answer Sheet No. ....

Application No. : SVSU/2020/Estt/NT/ ..... Signature of Applicant : .....

Date of Examination : **26 / 12 / 2021**

Signature of the Invigilator(s)

1. ....

Time of Examination : .....

2. ....

**Duration : 2 Hours]**

**[Maximum Marks : 100**

**IMPORTANT INSTRUCTIONS**

- (i) The question paper is in the form of Test-Booklet containing **100 (Hundred)** questions. All questions are compulsory. Each question carries four answers marked (A), (B), (C) and (D), out of which only one is correct.
- (ii) On receipt of the Test-Booklet (Question Paper), the candidate should immediately check it and ensure that it contains all the pages, i.e., **100** questions. Discrepancy, if any, should be reported by the candidate to the invigilator immediately after receiving the Test-Booklet.
- (iii) A separate Answer-Sheet is provided with the Test-Booklet/Question Paper. On this sheet there are **100** rows containing four circles each. One row pertains to one question.
- (iv) The candidate should write his/her Application number at the places provided on the cover page of the Test-Booklet/Question Paper and on the Answer-Sheet and **NOWHERE ELSE**.
- (v) No second Test-Booklet/Question Paper and Answer-Sheet will be given to a candidate. The candidates are advised to be careful in handling it and writing the answer on the Answer-Sheet.
- (vi) For every correct answer of the question **One (1) mark will be awarded**. For every unattempted question, Zero (0) mark shall be awarded. **There is no Negative Marking**.
- (vii) Marking shall be done only on the basis of answers responded on the Answer-Sheet.
- (viii) To mark the answer on the Answer-Sheet, candidate should **darken** the appropriate circle in the row of each question with Blue or Black pen.
- (ix) For each question only **one** circle should be **darkened** as a mark of the answer adopted by the candidate. If more than one circle for the question are found darkened or with one black circle any other circle carries any mark, the question will be treated as cancelled.
- (x) The candidates should not remove any paper from the Test-Booklet/Question Paper. Attempting to remove any paper shall be liable to be punished for use of unfair means.
- (xi) Rough work may be done on the blank space provided in the Test-Booklet/Question Paper only.
- (xii) *Mobile phones (even in Switch-off mode) and such other communication/programmable devices are not allowed inside the examination hall.*
- (xiii) No candidate shall be permitted to leave the examination hall before the expiry of the time.

**DO NOT OPEN THIS QUESTION BOOKLET UNTIL ASKED TO DO SO.**

[P.T.O.

**22 / 1**



1. The term Pf is related to-
  - (A) Soil reaction
  - (B) Water potential
  - (C) Cropping intensity
  - (D) Climate
2. Maize + Cowpea – Wheat rotation has the rotation intensity of-
  - (A) 100%
  - (B) 150%
  - (C) 200%
  - (D) 300%
3. The physical condition of soil in relation to plant growth is called-
  - (A) Tilt
  - (B) Primary tillage
  - (C) Secondary tillage
  - (D) Soil structure
4. Foundation seed is the progeny of-
  - (A) Nucleus seed
  - (B) Certified seed
  - (C) Truthful seed
  - (D) Breeder seed
5. The optimum ratio of wheat and mustard intercropping is-
  - (A) 3:1
  - (B) 9:1
  - (C) 6:1
  - (D) 9:3
6. Safe moisture content in grains of oilseed crop for storage is-
  - (A) 7-8%
  - (B) 12-14%
  - (C) 15-16%
  - (D) Below 5%
7. One hectare centimetre of water is equivalent to-
  - (A) 1000 litre
  - (B) 10000 litre
  - (C) 100000 litre
  - (D) 1000000 litre
8. Relative proportion of sand, silt and clay is known as-
  - (A) Bulk density
  - (B) Soil structure
  - (C) Soil pH
  - (D) Soil texture

9. The most critical stage for water need in wheat is-
- (A) Dough stage
  - (B) Flowering stage
  - (C) Crown root initiation stage
  - (D) Booting stage
10. Parthenium weed is native to-
- (A) India
  - (B) Sri Lanka
  - (C) America
  - (D) China
11. Indian Institute of Wheat and Barley Research is located at-
- (A) Karnal
  - (B) Ludhiana
  - (C) Bikaner
  - (D) New Delhi
12. White bud of maize is caused due to-
- (A) Fe deficiency
  - (B) Zn deficiency
  - (C) White fly
  - (D) N toxicity
13. Which among the following is a nutri-cereal?
- (A) Rice
  - (B) Maize
  - (C) Soybean
  - (D) Sorghum
14. Agronomy has been derived from-
- (A) Latin language
  - (B) Greek language
  - (C) Arabic language
  - (D) Sanskrit language
15. The vertical section of soil is called-
- (A) Soil profile
  - (B) Regolith
  - (C) Soil horizon
  - (D) Soil core
16. Soil moisture tension at field capacity is-
- (A) 3.3 bar
  - (B) 0.33 M Pa
  - (C) 0.33 atm
  - (D) 0.33 k Pa
17. Which among the following has highest CEC?
- (A) Kaolinite
  - (B) Organic matter
  - (C) Vermiculite
  - (D) Illite

18. SSP has about-
- (A) 16% P
  - (B) 18%  $P_2O_5$
  - (C) 7% P
  - (D) 12%  $P_2O_5$
19. Which among the following is a bio-herbicide
- (A) NPV
  - (B) IDBU
  - (C) Rhizobium
  - (D) Collego
20. Pretilachlor (50 EC) is a common herbicide of-
- (A) Maize
  - (B) Rice
  - (C) Wheat
  - (D) Sugarcane
21. National food security Act came into existence in which Year:
- (A) 2010
  - (B) 2011
  - (C) 2012
  - (D) 2013
22. According to International Poverty line, the persons earning per day fall in the category of poor.
- (A) One dollar
  - (B) 1-2 dollar
  - (C) 2-10 dollars
  - (D) More than 10 dollars
23. Percentage share of marginal and small farmers in India is :
- (A) 90 percent
  - (B) 95 percent
  - (C) 80 percent
  - (D) 86 percent
24. When the land reform act was passed
- (A) 1950
  - (B) 1953
  - (C) 1952
  - (D) 1957
25. Which agency is responsible for procurement, distribution and storage of food grains in India?
- (A) Ministry of Agriculture
  - (B) Food cooperation of India
  - (C) NAFED
  - (D) TRIFED

26. Who among the following used the term Evergreen Revolution for increasing agricultural Production in India.
- (A) Norman Borlaug
  - (B) MS Swaminathan
  - (C) Raj Kishan
  - (D) RKV Rao
27. When was the Targeted Public Distribution System started in India.
- (A) 1956
  - (B) 1984
  - (C) 1997
  - (D) 1992
28. Special Economic Zones (SEZs) are being set up to attract:
- (A) Foreign tourists
  - (B) Foreign Investment
  - (C) Foreign Goods
  - (D) Foreign policies
29. Multinational corporations have succeeded in entering global markets through
- (A) WTO
  - (B) UNO
  - (C) UNESCO
  - (D) None of the above
30. The provision of WTO, "reduction in export subsidies" effects to India as:
- (A) Advantage
  - (B) Disadvantage
  - (C) No effect
  - (D) None of the above
31. Balance of payments of a country is a statement that records
- (A) Sources of foreign exchange
  - (B) Uses of foreign exchange
  - (C) Both (A) and (B)
  - (D) None of the above
32. Trade deficit refers to the situation where
- (A) Export of goods is more than the import of goods
  - (B) Export of goods is less than the import of goods
  - (C) Export of services is more than the import of services
  - (D) Export of services is less than the import of services
33. The treaty of Rome was signed in which year :
- (A) 1959
  - (B) 1957
  - (C) 1956
  - (D) 1955

34. More expansion of foreign direct investment can boost:
- (A) Money circulation
  - (B) Demand
  - (C) Employment
  - (D) Unemployment
35. How will the offer curve react when customers are heterogeneous
- (A) Zero quadrant
  - (B) Negative quadrant
  - (C) Optimum quadrant
  - (D) Positive quadrant
36. Who announced the launch of Rashtriya Krishi Vikas Yojana
- (A) Narendra Modi
  - (B) Dr Manmohan Singh
  - (C) A. B. Bajpayee
  - (D) IK Gujral
37. When was the new agricultural policy established
- (A) July 2000
  - (B) March 2002
  - (C) March 2004
  - (D) January 2004
38. India is the biggest producer as well as the largest consumer and importer of which of the following crop.
- (A) Wheat
  - (B) Cotton
  - (C) Sugarcane
  - (D) Pulses
39. The concept of five year plan was borrowed from
- (A) USA
  - (B) England
  - (C) Russia
  - (D) France
40. The rolling plan was designed for the period of
- (A) 1985-90
  - (B) 1974-79
  - (C) 1980-85
  - (D) 1978-83
41. Treatment of acetosyringone is given during transfer of transgene using Agrobacterium as vector. The rationale behind this is that acetosyringone
- (A) helps in anchorage of bacteria to plant cell wall
  - (B) activates vir operon of bacteria
  - (C) helps in integration of T-DNA in plant genome
  - (D) promotes bacterial growth by activating genes in plant

42. Choose the INCORRECT statement from the following statements made for the events that occur during sexual reproduction in a population contribute to genetic variation-

- (A) Independent Assortment of Chromosomes during Meiosis first.
- (B) Crossing over during meiosis first.
- (C) Random fertilization of male and female gametes.
- (D) Crossing over during meiosis second.

43. Which of the following is not true about plasmid?

- (A) It is a circular piece of DNA.
- (B) It is required for normal cell function.
- (C) It is found in bacteria.
- (D) It can be transferred from cell to cell.

44. The man-made cereal 'Triticale' was produced by making a cross between:

- (A) Wheat × Sorghum
- (B) Wheat × Rice
- (C) Wheat × Rye
- (D) Wheat × Barley

45. The scientist in list A are to be matched with list B. Select the correct answer given below the list-

**List A**

**List B**

- |                         |                          |
|-------------------------|--------------------------|
| (a) Dr. Harbhajan Singh | 1. Quality Protein Maize |
| (b) Dr. S.K. Vasal      | 2. H4                    |
| (c) C.T. Patel          | 3. Indian Vavilov        |
| (d) D.S. Athwal         | 4. Pearl Millet          |

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

46. Who proposed the concept of pure line-

- (A) Jenkins
- (B) Vilmorin
- (C) Johannsen
- (D) N.E. Borlaug

47. Prevention to self pollination due to some physical barrier is known as-

- (A) Homogamy
- (B) Herkogamy
- (C) Cleistogamy
- (D) Dicliny



48. In ABR system of hybrid seed production the line 'A' is-
- (A) Male fertile
  - (B) Male sterile
  - (C) Incomplete male fertile
  - (D) Maintainer
49. Maize is a cross pollinated plant because of
- (A) monoecy
  - (B) protandry
  - (C) Both monoecy and protandry
  - (D) None of the above
50. A situation, when pollination and fertilization complete in closed bud-
- (A) Herkogamy
  - (B) Cleistogamy
  - (C) Chasmogamy
  - (D) Dichogamy
51. Who is known as father of plant genetic engineering-
- (A) Kary Mullis
  - (B) Stanley Cohen
  - (C) G. J. Mendel
  - (D) Paul Berg
52. Following statement are made about cloning vector -
1. a vector should have an origin of replication
  2. a vector should have selectable markers
  3. a vector should have unique restriction sites
- (A) Only 1 is correct
  - (B) 1 and 2 are correct
  - (C) Only 3 is correct
  - (D) All are correct
53. Tumour inducing (Ti) plasmid that is used as a plant vector is obtained from-
- (A) *Agrobacterium tumefaciens*
  - (B) *Agrobacterium rhizogenes*
  - (C) *Agrobacterium radiobactor*
  - (D) *Thermus aquaticus*
54. The number of stamens in rice are-
- (A) Six
  - (B) Five
  - (C) Four
  - (D) three

55. A genetic mechanism which prevents inbreeding depression in majority of angiospermic plants is-

- (A) Parthenogenesis
- (B) Apomixis
- (C) Mutation
- (D) Self-incompatibility

56. In Global GM crop scenario, which trait has maximum global planting area under commercial cultivation?

- (A) Herbicide tolerance
- (B) Insect resistance
- (C) Disease resistance
- (D) Salinity resistance

57. In recombinant DNA methods, the term vector refers to

- (A) The enzyme that cuts DNA into restriction fragments
- (B) The sticky end of a DNA fragment
- (C) RFLP marker
- (D) A plasmid or other agent used to transfer DNA into a living cell

58. Match the columns A and B and choose the correct option-

**Column A**

**Column B**

- |                       |                              |
|-----------------------|------------------------------|
| (a) Dr. Ingo Potrykus | 1. Polymerase Chain Reaction |
| (b) Kary B. Mullis    | 2. DNA Sequencing            |
| (c) G. Haberlandt     | 3. Plant Tissue Culture      |
| (d) Frederick Sanger  | 4. Golden rice               |

(a) (b) (c) (d)

- |     |   |   |   |   |
|-----|---|---|---|---|
| (A) | 1 | 3 | 4 | 2 |
| (B) | 3 | 1 | 2 | 4 |
| (C) | 4 | 1 | 3 | 2 |
| (D) | 1 | 3 | 2 | 4 |

59. Stage 3 in tissue culture is

- (A) Preparative stage
- (B) Initiation of culture
- (C) Multiplication
- (D) Transplanting

60. The somatic embryogenesis was first observed by

- (A) Skoog
- (B) Reinert
- (C) Steward
- (D) None of the above

61. Idler pulley is used ....
- (A) For changing the direction of motion of the belt
  - (B) For applying tension
  - (C) For increasing velocity ratio
  - (D) All of the above
62. Which one of the following is NOT correct in respect of "V" belt drive?
- (A) It is compact
  - (B) It can be easily replaced and maintenance is easy
  - (C) It causes less noise and vibration
  - (D) It is used where distance between driver and driven pulley is more
63. Velocity ratio is constant for which of the following?
- (A) Chain drives and gears
  - (B) Belt drives
  - (C) Rope drives
  - (D) Belt and rope drives
64. Due to slip of the belt, the velocity ratio of the belt drive
- (A) decreases
  - (B) increases
  - (C) does not change
  - (D) none of the mentioned
65. Determine power rating of an electric motor if it runs at 1440 r.p.m and line shaft transmits torque of 75 Nm. Assume Reduction ratio = 1.6
- (A) 10.36 kW
  - (B) 11.3 kW
  - (C) 7.068 kW
  - (D) 9.12 kW
66. Which gears are used to connect two intersecting shaft axes?
- (A) Crossed helical gear
  - (B) Worm and worm wheel
  - (C) Bevel gears
  - (D) All of the above
67. The sleeve or muff coupling is designed as :
- (A) Thin vessel
  - (B) Thick vessel
  - (C) Solid shaft
  - (D) Hollow shaft
68. Which coupling requires accurate alignment of input and output shafts.
- (A) flexible disk
  - (B) rigid
  - (C) helical
  - (D) bush pin

69. Which of the following is measure of stiffness?
- (A) Modulus of elasticity
  - (B) Modulus of plasticity
  - (C) Resilience
  - (D) Toughness
70. A sunk key fits in the keyway of the which part.
- (A) Hub
  - (B) Sleeve
  - (C) Both hub and sleeve
  - (D) Neither hub nor sleeve
71. Which primary tillage operation is performed to cut, break and invert the soil partially or completely?
- (A) Ploughing
  - (B) Winnowing
  - (C) Threshing
  - (D) Harrowing
72. The tractor drawn rotavator is specially designed for which purpose?
- (A) Primary tillage implements.
  - (B) Secondary tillage implements.
  - (C) Mulching purpose.
  - (D) Wet land cultivation in paddy crops.
73. Which of the following is not a secondary tillage implement?
- (A) Cultivators.
  - (B) Harrow.
  - (C) Hoe.
  - (D) Meston plough.
74. Field capacity of a tractor drawn power harrow is:
- (A) 1.5 ha/day
  - (B) 1.25 ha/day
  - (C) 2.5 ha/day
  - (D) 2.25 ha/day
75. The heart of seed sowing machine is...
- (A) Seed box.
  - (B) Seed metering mechanism.
  - (C) Seed tube.
  - (D) All of the above.
76. At proper alignment of mower the cutter bar is set at:
- (A) 20° inward
  - (B) 5° inward
  - (C) 10° inward
  - (D) 15° inward

77. The combine harvester is a machine designed for:
- (A) Harvesting crop
  - (B) Threshing of harvested crop
  - (C) Separation and cleaning of harvested crop
  - (D) All are correct
78. Main part of thresher that removes seeds from grain head is:
- (A) Cylinder
  - (B) Concave
  - (C) Pegs on cylinder
  - (D) Sieve
79. Threshing capacity of a large stationary thresher is:
- (A) 2.5 tonnes
  - (B) 3.55 tonnes
  - (C) 4.17 tonnes
  - (D) 5.0 tonnes
80. What would be the depreciation cost of a tractor purchased by the farmer having 25 KW power at a total cost of Rs. 3,00,000?
- (A) Rs. 25
  - (B) Rs. 24
  - (C) Rs. 27
  - (D) Rs. 29
81. Who is the inventor of the wind scale?
- (A) Francis Beaufort.
  - (B) James Stagg.
  - (C) Carl-Gustaf Rossby.
  - (D) Josh Wurman
82. Who is called as the father of agricultural meteorology in India?
- (A) Jagdish Shukla.
  - (B) G. V. Rao.
  - (C) L. A. Ramdas.
  - (D) Anna Mavi.
83. Which tools measures air pressure?
- (A) Thermometer
  - (B) Anemometer
  - (C) Psychrometer
  - (D) Barometer
84. Which of the following increases air's ability to hold vapour?
- (A) Increase in wind speed
  - (B) Increase in temperature
  - (C) decrease in temperature
  - (D) decrease in air pressure

85. The Indian summer monsoon typically lasts from .....
- (A) July - September.
  - (B) June - October
  - (C) July - August.
  - (D) June - September.
86. The atmosphere is divided into how many layers?
- (A) two
  - (B) three
  - (C) four
  - (D) five
87. The maximum amount of ozone ( $O_3$ ) is present in
- (A) troposphere
  - (B) stratosphere
  - (C) mesosphere
  - (D) thermosphere
88. A measure of the amount of water vapour in the air is called as -
- (A) Evaporation
  - (B) Precipitation
  - (C) Condensation
  - (D) Humidity
89. Cooled (condensed) droplets of water will come together to form
- (A) Snow
  - (B) Cloud
  - (C) Hail
  - (D) Sleet
90. In which region does rainfall occur throughout the year?
- (A) Equatorial region
  - (B) Polar region
  - (C) Sub-polar region
  - (D) Middle latitude region
91. The constant movement of water between earth and atmosphere is called as
- (A) water cycle
  - (B) Precipitation
  - (C) Humidity
  - (D) Sleet
92. When precipitation falls down on earth in liquid form, it is called as
- (A) Cloud
  - (B) Rain
  - (C) Snow
  - (D) Water vapour

93. Which is the place of the highest rainfall in India?
- (A) Cherapunji
  - (B) Sikkim
  - (C) Mawsynram
  - (D) Shillong
94. Which one of the following is not a form of precipitation?
- (A) hail
  - (B) fog
  - (C) snowfall
  - (D) rainfall
95. An instrument to record the wind speed is
- (A) Wind vane
  - (B) Hygrometer
  - (C) Anemometer
  - (D) Barometer
96. An instrument to record maximum and minimum temperatures is
- (A) Wet and dry bulb thermometer
  - (B) Six's maximum and minimum thermometer
  - (C) Clinical thermometer
  - (D) Laboratory thermometer
97. An instrument that tells us the wind direction is
- (A) Wind vane
  - (B) Hygrometer
  - (C) Anemometer
  - (D) Barometer
98. A weather instrument which is placed inside the Stevenson Screen
- (A) Thermometer
  - (B) Anemometer
  - (C) Rain gauge
  - (D) Sunshine recorder
99. India has been divided into how many Agro-climatic Zones?
- (A) 8
  - (B) 15
  - (C) 12
  - (D) 21
100. The prediction of weather over the next 3 to 5 working days is called
- (A) weather forecast
  - (B) climate forecast
  - (C) weather update
  - (D) warning of weather

## ROUGH WORK



**Skill Instructor Agriculture****KEY**

<b>Question No</b>	<b>Correct option</b>	<b>Question No</b>	<b>Correct option</b>
1.	<b>B</b>	<b>51.</b>	<b>D</b>
2.	<b>C</b>	<b>52.</b>	<b>D</b>
3.	<b>A</b>	<b>53.</b>	<b>A</b>
4.	<b>D</b>	<b>54.</b>	<b>A</b>
5.	<b>B</b>	<b>55.</b>	<b>D</b>
6.	<b>A</b>	<b>56.</b>	<b>A</b>
7.	<b>C</b>	<b>57.</b>	<b>D</b>
8.	<b>D</b>	<b>58.</b>	<b>C</b>
9.	<b>C</b>	<b>59.</b>	<b>D</b>
10.	<b>C</b>	<b>60.</b>	<b>C</b>
11.	<b>A</b>	<b>61.</b>	<b>B</b>
12.	<b>B</b>	<b>62.</b>	<b>D</b>
13.	<b>D</b>	<b>63.</b>	<b>A</b>
14.	<b>B</b>	<b>64.</b>	<b>A</b>
15.	<b>A</b>	<b>65.</b>	<b>C</b>
16.	<b>C</b>	<b>66.</b>	<b>C</b>
17.	<b>B</b>	<b>67.</b>	<b>D</b>
18.	<b>C</b>	<b>68.</b>	<b>B</b>
19.	<b>D</b>	<b>69.</b>	<b>A</b>
20.	<b>B</b>	<b>70.</b>	<b>A</b>
21.	<b>D</b>	<b>71.</b>	<b>A</b>
22.	<b>A</b>	<b>72.</b>	<b>D</b>
23.	<b>D</b>	<b>73.</b>	<b>D</b>
24.	<b>A</b>	<b>74.</b>	<b>A</b>
25.	<b>B</b>	<b>75.</b>	<b>B</b>

26.	<b>B</b>	<b>76.</b>	<b>A</b>
27.	<b>C</b>	<b>77.</b>	<b>D</b>
28.	<b>B</b>	<b>78.</b>	<b>A</b>
29.	<b>A</b>	<b>79.</b>	<b>C</b>
30.	<b>A</b>	<b>80.</b>	<b>C</b>
31.	<b>C</b>	<b>81.</b>	<b>A</b>
32.	<b>B</b>	<b>82.</b>	<b>C</b>
33.	<b>B</b>	<b>83.</b>	<b>D</b>
34.	<b>C</b>	<b>84.</b>	<b>B</b>
35.	<b>B</b>	<b>85.</b>	<b>D</b>
36.	<b>B</b>	<b>86.</b>	<b>C</b>
37.	<b>A</b>	<b>87.</b>	<b>B</b>
38.	<b>D</b>	<b>88.</b>	<b>D</b>
39.	<b>C</b>	<b>89.</b>	<b>B</b>
40.	<b>D</b>	<b>90.</b>	<b>A</b>
41.	<b>B</b>	<b>91.</b>	<b>A</b>
42.	<b>D</b>	<b>92.</b>	<b>B</b>
43.	<b>B</b>	<b>93.</b>	<b>C</b>
44.	<b>C</b>	<b>94.</b>	<b>B</b>
45.	<b>B</b>	<b>95.</b>	<b>C</b>
46.	<b>C</b>	<b>96.</b>	<b>B</b>
47.	<b>D</b>	<b>97.</b>	<b>A</b>
48.	<b>B</b>	<b>98.</b>	<b>A</b>
49.	<b>C</b>	<b>99.</b>	<b>B</b>
50.	<b>B</b>	<b>100.</b>	<b>A</b>