PROFESSOR JAYASHANKAR TELANGANA STATE AGRICULTURAL UNIVERSITY
AGRIENGGCET -2020
AGRICULTURAL ENGINEERING POLYTCHNIC

1. Which among the following is an active soil forming factor (b)
   (a) Parent material (b) Climate
   (c) Relief (d) Time

2. Rate of settling of a spherical particle in a viscous medium is given by (c)
   (a) Darcy's law (b) Poiseuilles law (c) Stokes law (d) Charles law

3. Slow neutron detector in Neutron Moisture Metre is filled with ---- gas (d)
   (a) NH_3 (b) NF_3 (c) SF_6 (d) BF_3

4. Relative purity or strength of a colour is denoted by (d)
   (a) Coma (b) Hue (c) Value (d) Chroma

5. The number of drums in commercially available drum seeder to maintain 25 cm row to row spacing (a)
   (a) 3 (b) 4 (c) 6 (d) 8

6. In Telangana, the millet incubation center is located at (c)
   (a) Warangal (b) Nizamabad
   (c) Hyderabad (d) Karimnagar

7. Which of the following is not a synonym of <u>stern</u> (c)
   (a) harsh (b) severe (c) expose (d) stiff

8. Active voice: The students borrowed some books from the library. (d)
   Passive voice: Some books _____ by the students from the library.
   (a) are borrowed (b) have been borrowed
   (c) had been borrowed (d) were borrowed

9. He _____ (do) this job for two years by next year. (c)
   (a) will be doing (b) will do
   (c) will have been doing (d) might be doing

10. Predict the Tense of the sentence: Ravi has been working hard on this book (a)
    (a) Present perfect continuous tense (b) Simple past tense
    (c) Present perfect tense (d) Past perfect tense

11. Software program that has been developed to do harm to other computers is known as (b)
    (a) Virus (b) Malware (c) Spam (d) Phishing

12. Which of the following is not an input device? (d)
    (a) Key board (b) Scanner (c) Light pen (d) Printer

13. A person who accesses a system illegally is called a (b)
(a) Browser (b) Hacker (c) Hawker (d) Spammer

14. One Kilo byte equals to (d)
(a) $(21)^{10}$ bytes (b) 1000 bytes (c) $(1000)^{8}$ bits (d) 1024 bytes

15. Which of the following is an example of non-volatile memory? (c)
(a) VLSI (b) RAM (c) ROM (d) LSI

16. Contact and Non-Selective herbicide is (c)
(a) Alachlor (b) Butachlor (c) Paraquat (d) Pendimethalin

17. The most abundant metallic element in the earth's crust is (b)
(a) Iron (b) Aluminium
(c) Calcium (d) Sodium

18. The pressure exerted by water on the soil through which it percolates is known as (a)
(a) Seepage pressure (b) Hydraulic pressure
(c) Volumetric pressure (d) Differential pressure

19. Theoretical concept of consolidation process was developed by (a)
(a) Terzaghi (b) Casagrande (c) Taylor (d) Mohr

20. An important instrument used for measuring horizontal and vertical angles in surveying is (b)
(a) Dumpy level (b) Theodolite
(c) Prismatic compass (d) EDM

21. The length of the line joining the beginning of the first line and the end of last line is called (a)
(a) Closing error (b) Index error (c) Climate error (d) Instrumental error

22. Force acting along the axis of the shaft is known as (d)
(a) Stress (b) Load (c) Pressure (d) Thrust

23. In light drives, the belt speed is upto (b)
(a) 5 m/s (b) 10 m/s (c) 20 m/s (d) 22 m/s

24. The lead screws of a lathe with nut forms a (b)
(a) Sliding pair (b) Screw pair (c) Helical Pair (d) Rolling pair

25. The operation which is employed for enlarging an established hole is (d)
(a) Drilling (b) Reaming (c) Milling (d) Boring

26. The purpose of clapper box of a shaper is (c)
(a) To avoid overhanging of tools (b) To lift the tool in the middle of the stroke
(c) To lift the tool during return stroke (d) To lift the tool during cutting stroke

27. Drum type milling machine comes under which of the following type (b)
(a) Fixed bed type milling machine (b) Production type milling machine
(c) Column and knee type milling machine (d) Planer type milling machine

28. Which of the following material is very extensively used for most of the solid type cutters (d)
(a) Cemented carbide (b) Stellite (c) High carbon steel (d) High speed steel

29. Which of the following is not a conventional energy source (d)
(a) Coal (b) Oil (c) Natural gas (d) Solar

30. The instrument used to measure beam radiation is (a)
(a) Pyrheliometer (b) Pyranometer (c) Sunshine recorder (d) Solar meter

31. The value of Betz coefficient is (a)
(a) 0.593 (b) 0.563 (c) 05.93 (d) 05.63

32. The motor of ULV sprayer is powered by battery of (b)
(a) 3-5 Volt (b) 6-12 Volt (c) 13-18 Volt (d) 19-24 Volt

33. Boiling point of water in kelvin (b)
(a) 100 k (b) 373 k
(c) 273 k (d) 310 k

34. In a cotton stripper, the speed of rolls is about (b)
(a) 400 rpm (b) 600 rpm (c) 800 rpm (d) 1000 rpm

35. The capacity of power operated chaff cutter is expressed by (b)
(a) Herry's formula (b) Duffee's formula
(c) Priscot's formula (d) Jone's formula

36. PJTSAU was formed on (c)
(a) September 30, 2014 (b) October 1, 2014
(c) September 3, 2014 (d) October 3, 2014

37. A mean annual runoff of 1 m^3/s from a catchment of area 31.53 km^2 represents an effective rainfall for year (365 days) is (a)
(a) 100 cm (b) 1.0 cm (c) 100 mm (d) 3.17 cm

38. A hydrograph is a plot of (b)
(a) Rainfall intensity against time (b) Stream discharge against time
(c) Cumulative rainfall against time (d) Cumulative runoff against time

39. Sprinkler irrigation method is not suitable for soils having infiltration rate less than (a)
(a) 4 mm/hr (b) 2 cm/hr (c) 4 cm/hr (d) 3 m/hr

40. On slopped fields, sub main pipes should be laid _____ in micro irrigation system (c)
(a) Along bunds (b) Along contour (c) Along slope (d) Across slope

41. The required operating pressure at the last emitter for smooth operation of drip irrigation system is (b)
(a) 1.5 kg/cm^2 (b) 1 kg/cm^2 (c) 2 kg/cm^2 (d) 2.25 kg/cm^2

42. Zinc coated iron is known as (b)
(a) Black iron (b) Galvanized iron (c) Cast iron (d) Stainless steel

43. Major Crops of Telangana State are (d)
(a) Rice, Maize, Groundnut (b) Cotton, Green gram, Groundnut
(c) Red gram, Groundnut, Maize (d) Rice, Cotton, Red gram

44. The size of rip saw is about (c)
(a) 50 cm (b) 60 cm (c) 70 cm (d) 80 cm

45. The Instrument which is used to check the pitches of the threads cut on the different items is (a)
(a) Screw pitch gauge (b) Filler gauge (c) Radius gauge (d) Feeler gauge

46. Which of the following material does not comes under conducting material (d)
(a) Magnesium (b) Silver (c) Aluminium (d) Silicon

47. Which of the following is not correct as per Ohm's law (d)
(a) I $=\frac{V}{R}$ (b) R= P/I^2 (c) V= $\sqrt{PR}$ (d) I=$\frac{R}{V}$

48. The melting point of Tungsten is about (c)
(a) 2300^o C (b) 3000^o C (c) 3300^o C (d) 4000^o C

49. How many valence electrons will a semiconductor have (d)
(a) 1 (b) 2 (c) 3 (d) 4

50. Which among the following is NOT a liming material (b)
(a) CaO (b) $CaSO_4$ (c) $Ca(OH)_2$ (d) $CaCO_3$

51. The carriage has no control over (d)
(a) Saddle (b) Compound rest (c) Apron (d) Spindle nose

52. The highest water use efficiency can be obtained with (b)
(a) Furrow method (b) Drip method
(c) Sprinkler method (d) Check basin method

53. The amount of draft recommended on external surfaces varies from (a)
(a) 10-20 mm/m (b) 100-200 mm/m (c) 1-2 mm/m (d) 10-25 mm/m

54. The tilt angle of standard disc plough is (d)
(a) 40-45^0 (b) 5-10^0 (c) 50-60^0 (d) 15-25^0

55. Zero till drill is used mainly for sowing (a)
(a) Maize (b) Paddy (c) Red gram (d) Potato

56. In a spring tooth harrow, the shape of spring tooths are (a)
(a) Eliptical (b) Semicircular (d) Circular (d) Traingular

57. The S.I unit of power is (c)
(a) Horse power (b) Joule (c) Watt (d) Kg.m

58. The forces F_1 and F_2 act along the same line, then resultant force R is equal to (a)
(a) F_1+F_2 (b) F_1-F_2 (c) F_2-F_1 (d) $\sqrt{F_1+F_2}$

59. Moment of inertia of semi-circular section is (a)
(a) $0.11r^4$ (b) $0.11d^4$ (c) $0.011\ r^4$ (d) $0.11\ r^2$

60. Nagarjunasagar Project was constructed on which river (b)
(a) Godavari (b) Krishna
(c) Narmada (d) Tungabadra

61. On-line emitters in drip irrigation system are widely used to irrigate (a)
(a) Orchards (b) Vegetable crops (c) Close spaced crops (d) Leafy vegetables

62. The device used to measure the discharge through Pipe is (b)
(a) Pitot tube (b) Orifice meter
(c) Current meter (d) Bourdon's gauge

63. An example of a tower silo is (b)
(a) Trench silo (b) Metal silo (c) Bunker silo (d) Pit silo

64. The basic empirical formula for calculation of discharge over a rectangular weir is (a)
(a) $Q = CLH^m$ (b) $Q = CLH$
(c) $Q = CL^mH$ (d) $Q = C^mLH$

65. A mechanical device to increase energy of a fluid is (c)
(a) Engine (b) Motor (c) Pump (d) Piston

66. Coke is produced in absence of air, by heating (c)
(a) Wood (b) Peat (c) Bituminous coal (d) Charcoal

67. Thermal efficiency of petrol engine is (a)
(a) 25-32 % (b) 32-38 % (c) 15-20 % (d) 10-15 %

68. Rain drops physical shape is due to (c)
(a) Viscosity (b) Capillary action (c) Surface tension (d) Density

69. The formula to measure the discharge through the cylindrical or convergent mouth piece is (a)

(a) $Q = c_d a\sqrt{2gH}$ (b) $Q = \frac{2}{3}c_d\sqrt{2gH}$

(c) $Q = \frac{2}{3}c_d L\sqrt{2g}\,H^{\frac{3}{2}}$ (d) $Q = c_d\sqrt{2g}\,H^{\frac{3}{2}}$

70. A line which is used to check or prove the accuracy of the frame work as well as plotting work is called (b)

(a) Base line (b) Check line (c) Tie line (d) Offset

71. In 20 m metric chain, the tallies are provided at a length of every _____ of chain for quick reading (a)

(a) 2 m (b) 3 m (c) 4 m (d) 10 m

72. The instrument used for enlarging or reducing maps is (b)

(a) Planimeter (b) Pantograph (c) Abney level (d) Compass

73. The type of bench mark (TBM) is established at the end of days work, next day work might continued from there is called (c)

(a) GTS bench mark (b) Permanent bench mark

(c) Temporary bench mark (d) Arbitrary bench mark

74. In sack drying process, one of the following are compulsorily used (b)

(a) Plenum chambers (b) Air blowers

(c) Bins (d) Drums

75. The separation of grain based on size is known as (d)

(a) Expelling (b) Milling (c) Destoning (d) Screening

76. Parboiling of paddy requires the following processing steps of (d)

(a) Washing and soaking (b) Cleaning, steaming and soaking

(c) Steaming and soaking (d) Soaking, steaming and drying

77. The percentage of oil content in raw rice bran is about (b)

(a) 10-15% (b) 15-20% (c) 20-25% (d) 25-30%

78. The process of separating liquid from a liquid-solid system with the use of solvent is known as (c)

(a) Milling (b) Expression (c) Extraction (d) Drying

79. From ground level, a screw conveyor can be used up to angle of (c)

(a) 45^0 (b) 55^0 (c) 90^0 (d) 35^0

80. Conveying capacity of belt conveyor depends on (a)

(a) Width and speed of the belt (b) Height of inclination

(c) Length and speed of the belt (d) Idler support

81. A close mesh woven fence is recommended for (b)

(a) Sheep (b) Poultry (c) Cows (d) Buffalo

82. In a deep litter house, the birds live on the floor with a litter depth of (c)
(a) 10-15 cm (b) 20-30 cm (c) 15-20 cm (d) 5-6 cm

83. Barbed wire is made of (d)
(a) 12 gauge wire (b) 13 gauge wire (c) 15 gauge wire (d) 14 gauge wire

84. Traditional method of preserving food is (d)
(a) Mechanical drying (b) Curing
(c) Filtration (d) Drying

85. In which type of irrigation system, the IW/CPE approach is mostly preferred (a)
(a) Surface (b) Drip (c) Sprinkler (d) Bubbler

86. The pressure maintained in turmeric steam boiler is about (b)
(a) 0.5 kg/ cm^2 (b) 1 kg/ cm^2 (c) 2 kg/ cm^2 (d) 2.5 kg/ cm^2

87. The slope of Land Capability Classification in Class III is (c)
(a) 0-1% (b) 10-30 % (c) 3-5% (d) 15-18%

88. The manning's formula to measure velocity in the open channel is (a)
(a) $V = \frac{1}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ (b) $V = \frac{1}{n} R^{\frac{1}{2}} S^{\frac{1}{2}}$
(c) $V = nR^{\frac{2}{3}} S^{\frac{1}{2}}$ (d) $V = \frac{0.5}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$

89. The shape of the pneumatic tire wheel contact area with the soil is (c)
(a) Parabola (b) Hyperbola
(c) Ellipse (d) Square

90. Ply rating of tyre indicates (d)
(a) Shear strength (b) Compressive strength
(c) Tensile strength (d) Load carrying capacity

91. The force required in the direction of travel to overcome the resistance of motion is (a)
(a) Rolling Resistance (b) Co-efficient of rolling resistance
(c) Traction (d) Co-efficient of traction

92. The type of pump adopted for the high lifts (b)
(a) Centrifugal pump (b) Vertical turbine pump
(c) Propeller pump (d) Mixed flow pump

93. The piping assembly used for air-lift pumping from a well consists of vertical discharge is called (b)
(a) Suction pipe (b) Educator pipe (c) Injector pipe (d) Pressure pump

94. In an electric heater, the electrical energy is converted into (a)
(a) Heat energy (b) Mechanical energy
(c) Renewable energy (d) Chemical energy

95. Biogas contain carbon dioxide of about (a)

(a) 30-40 % (b) 45-55% (c) 55-65% (d) > 65%

96. Methane bacteria works best at a temperature range of (d)

(a) 10-20^{0}C (b) 20-25^{0}C (c) 25-28^{0}C (d) 35-38^{0}C

97. The value of Rankine's constant for mild steel is (b)

(a) $\frac{1}{9000}$ (b) $\frac{1}{7500}$ (c) $\frac{1}{8000}$ (d) $\frac{1}{8500}$

98. The permissible shear stress is usually taken as (c)

(a) 1055 kg/cm^3 (b) 1035 kg/cm^3 (c) 1025 kg/cm^3 (d) 1100 kg/cm^3

99. Oscillation of a simple pendulum is an example of (c)

(a) Periodic motion (b) Vibratory motion

(c) Simple harmonic motion (d) Translatory motion

100. Acceleration due to the earth's gravity (g) is zero at (c)

(a) Equator (b) North pole (c) Centre of earth (d) South pole