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AGRICULTURAL ENGINEERING POLYTECHNIC**

AGRIENGGCET – 2019

1. The utility created by storage pertains to (C)
a) Form b) Place
c) Time d) Possession

2. The loans provided to the farmers to overcome distress sales is called (C)
a) Production loans b) Consumption loans
c) Marketing loans d) Investment loans

3. The following budgeting technique is used to evaluate the profitability of input substitution, enterprise substitution and scale of operation (D)
a) Enterprise budgeting b) Complete budgeting
c) Cash flow budgeting d) Partial budgeting

4. The apparent change in frequency of sound due to relative motion between source and observer is called (C)
a) See beck effect b) Peltier effect
c) Doppler effect d) Visible effect

5. The phenomenon of bending of light at the boundary between two different media is called (B)
a) Reflection b) Refraction
c) Diffraction d) Interference

6. The persistence of sound on human ear is about (B)
a) 0.01 second b) 0.1 second
c) 1 second d) 10 seconds

7. The second most abundant non-metallic element in the earth crust is (B)
a) Oxygen b) Silicon
c) Aluminium d) Iron

8. Cubical expansion of feldspars and quartz is in the ratio of (A)
a) 1:2 b) 1:1
c) 2:1 d) 1:3

9. In the process of soil formation, when decomposition of parent material reaches final stage it is denoted by (D)
- a) Catena b) Juvenile
c) Virile d) Senile
10. Alkali / Sodic soils are those which have; (D)
- a) pH < 8.5, ESP < 15 b) pH = 8.5, ESP = 15
c) pH < 8.5, ESP > 15 d) pH > 8.5, ESP > 15
11. In normal soils, the dominant cations on exchange complex are (C)
- a) Al^{+3} b) H^{+}
c) Ca^{+2} d) Na^{+}
12. Which of the following is used for testing horizontal position of a surface (C)
- a) Trammel b) Plumb bob
c) Spirit level d) Odd leg calipor
13. The warrington hammer weight ranging from (B)
- a) 100 gm to 5550 gm b) 200 gm to 6550 gm
c) 200 gm to 5550 gm d) 100 gm to 6550 gm
14. The joining of two metal pieces by means of heat and a special filler metal knows as (C)
- a) Soldering b) Spot welding
c) Spelter d) Brazing
15. Which of the following is a band saw (B)
- a) Cold saw b) Friction blade
c) Abrasive disc d) Friction disc
16. Angle plate is made up of (B)
- a) Copper b) Grey cast iron
c) Alloy steel d) Soft steel
17. The drill which is intended for enlarging cored, punched or drilled hole is (A)
- a) Core drill b) Oil tube drill
c) Flat drill d) Centre drill
18. The weight of an object will be maximum when it is placed at (D)
- a) North pole b) South Pole
c) Equator d) Centre of earth

19. The moment of inertia of a body does not depend upon (A)
 a) The angular velocity of the body
 b) Mass of the body
 c) The axis of rotation of the body
 d) The distribution of mass in the body
20. The area under stress strain curve represents (C)
 a) Hardness of material
 b) Breaking strength of the material
 c) Energy required to cause failure
 d) Toughness of material
21. Which of the following is dimensionless (C)
 a) Specific speed
 b) Specific volume
 c) Specific gravity
 d) Specific weight
22. The share are usually made up of (B)
 a) Aluminium
 b) Soft centred steel
 c) Alloy iron
 d) Mild steel
23. A four bottom 40 cm M.B plough has a working depth of 15 cm and draft of 1600 kg then find the unit draft (B)
 a) 0.33 kg/cm^2
 b) 0.66 kg/cm^2
 c) 0.66 kg/m^2
 d) 0.33 kg/m^2
24. In which type of shaper, ram is driven by rack and pinion mechanism (B)
 a) Crank shaper
 b) Geared shaper
 c) Hydraulic shaper
 d) Push type shaper
25. Swiss type automatic screw machine is also known as (C)
 a) Automatic cutting off machine
 b) Single spindle automatic screw machine
 c) Sliding head type machine
 d) Bar type machine
26. Which of the following is not a work holding device (A)
 a) Die holder
 b) T-bolts
 c) Chucks
 d) Angle plate
27. The process of machining narrow or grooves on a work piece is known as (D)
 a) End milling
 b) Cam milling
 c) Gear milling
 d) Saw milling
28. Planer tools are made up of (B)
 a) Cast iron
 b) High speed steel
 c) Carbon steel
 d) Alloy steel

29. A tractor has a belt speed of 1000 m/min at normal engine speed. A feed mill has a recommended speed of 2200 rev/min. Find the size of pulley, needed on the feed mill (C)
- a) 0.1446 cm b) 1.446 cm
c) 14.46 cm d) 144.6 cm
30. Hydraulic pump oil pressure varies from (D)
- a) 0 to 50 kg /cm² b) 50 to 100 kg / cm²
c) 100 to 150 kg / cm² d) 150 to 200 kg/cm²
31. In fluid coupling, a coupler is mounted on the (B)
- a) Piston b) Crank shaft
c) Cylinder d) Flywheel
32. Which of the following is a semi-conductor (C)
- a) Lithium b) Copper
c) Silicon d) Aluminum
33. Which type of motor is mainly used for cranes (C)
- a) Series wound motor b) Shunt wound motor
c) Compound wound motor d) A.C. motor
34. In alternator, the armature windings are mounted on a stationary element is called (B)
- a) Generator b) Stator
c) Wound motor d) Commutator
35. Clearance range between spindle and doffer is (C)
- a) 0.25 to 0.35 mm b) 0.25 to 0.55 mm
c) 0.25 to 0.75 mm d) 0.25 to 0.95 mm
36. Groundnut harvester blade is made up of (C)
- a) Cast iron b) Copper
c) Mild steel blade d) Alloy steel
37. Fan nozzle form which type of spray pattern (B)
- a) Hollow cone b) Narrow elliptical
c) Solid cone d) Drop type
38. Find the suction capacity of a power sprayer, if diameter is 25 mm, speed is 1000 rpm, length of the stroke is 22 mm, number of plunger is 3 (B)
- a) 3.239 l/min b) 32.39 l/min
c) 323.9 l/min d) 3239.9 l/min
39. Calorific value of ethanol is (A)
- a) 26,880 kJ/kg b) 22,400 kJ/kg
c) 19,740 kJ/kg d) 32,650 kJ/kg

40. The oxygen requirement in gasification of biomass by weight is (A)
a) 1/3 b) 1/4
c) 3/4 d) 1/2
41. Quick lime is known as (B)
a) Calcium b) Calcium oxide
c) Calcium hydroxide d) Calcium peroxide
42. During size reduction, the production of powders and fine particles is also called as (B)
a) Fineness modules b) Comminution
c) Young modules d) Find powder
43. The removal of large particles in an initial process is known as (C)
a) Cleaning b) Grading
c) Scalping d) Sorting
44. In thin layer drying, the maximum depth of grain bed is limited to (A)
a) 20 cm b) 30 cm
c) 40 cm d) 50 cm
45. The percentage of broken or craked grains from all the outlets with respect to total grain input in the thresher by weight is (C)
a) Sieve loss b) Blower loss
c) Visible damage loss d) Cylinder loss
46. Pre-milling treatment given to paddy prior to its milling is (C)
a) Heating b) Cooling
c) Parboiling d) Soaking
47. The most important component of thresher is (A)
a) Cylinder b) Concave
c) Sieves d) Frame
48. In all crops thresher which type of cylinder is used (A)
a) Rasp bar b) Angle bar
c) Loop type d) Peg tooth type
49. Thermostats are designed to start opening at (B)
a) 60 to 65°C b) 70 to 75°C
c) 80 to 85°C d) 55 to 60°C
50. The instrument used for testing the specific gravity of oil is known as (B)
a) Specific meter b) Hydrometer
c) Hygrometer d) Infiltrimeter
51. Density is the reciprocal of the (C)
a) Specific volume b) Bulk density
c) Specific weight d) Volume

52. In proximate analysis of fuel determined separately (A)
a) Carbon b) Hydrogen
c) Volatile matter d) Sulphur
53. The sand should be added in sand filter upto..... height of filter (A)
a) $1/2^{\text{th}}$ b) $1/4^{\text{th}}$
c) $2/3^{\text{rd}}$ d) $3/4^{\text{th}}$
54. The instrument used to measure soil moisture is (A)
a) Tensiometer b) Hydrometer
c) Lysimeter d) Tachometer
55. Hydrocyclone filters use _____ motion to remove suspended particles in micro irrigation system (A)
a) Vortex b) Reciprocating
c) Rotary d) Axial flow
56. The discharge rate of emitter usually ranges from (C)
a) 2-10 l/d b) 2-10 l/s
c) 2-10 l/h d) 2-10 l/m
57. The blades and spokes on the disc prevents seed mixture to (B)
a) Blend b) Stratify
c) Lift off d) Separate
58. A novel device which combines the functions of both collection and storage is (B)
a) Solar water heater b) Solar pond
c) Solar space d) Solar heater
59. Passive heating technique were adopted by which ancient civilization (A)
a) Mohenjodaro b) Mesopotamia
c) Indus d) Aztec
60. The units of surface tension is (A)
a) N/m b) N/m^2
c) N/m^3 d) N-m
61. The imaginary line drawn in the fluid in such a way that the tangent to any point gives the direction of motion at that point, is known as (B)
a) Path line b) Stream line
c) Steak line d) Potential line
62. The most economical section of a rectangular channel is one which has hydraulic mean depth or hydraulic radius is equal to (A)
a) Half the depth b) Half the width
c) Twice the depth d) Twice the width

63. A line joining the apex of a triangle to some fixed point on the opposite side is called as (A)
- a) Check line b) Tie line
c) Base line d) Contour line
64. The instrument attached to the wheel of a vehicle in order to measure the distance travelled, is called (C)
- a) Passometer b) Pedometer
c) Odometer d) Speedometer
65. The length of a line was found to be 600 m when measured with 20 m chain. If the chain is 15 cm short, what is the correct length of the chain line is (D)
- a) 500 m b) 550 m
c) 575.5 m d) 595.5m
66. Whole circle bearing value is $N 60^{\circ} 30' W$, the reduced bearing value is (B)
- a) $46^{\circ} 30'$ b) $299^{\circ} 30'$
c) $100^{\circ} 00'$ d) $200^{\circ} 00'$
67. The most common and least expensive greenhouse heating system is (B)
- a) Central heating system b) Unit heating system
c) Exchange or conduction d) Fan and pad cooling system
68. The amount of heat that can be held by one kg of water for each $1^{\circ}C$ rise in temperature is (A)
- a) 4.23 kJ b) 4.23 J
c) 0.423 kJ d) 0.0423 kJ
69. The mixture of pour cement concrete is (B)
- a) 1:2:3 b) 1:3:6
c) 2:4:6 d) 2:5:6
70. A branch of surveying, in which the horizontal and vertical distances of points are obtained by instrumental observations, is known as (C)
- a) Chain surveying b) Plane table surveying
c) Tacheometric surveying d) Hydrographic surveying
71. In indirect method of contouring, the best method of interpolation of contours is (C)
- a) Graphical method b) Grid method
c) Arithmetic method d) Rational method
72. Collimation method is used in (A)
- a) Profile levelling b) Differential levelling
c) Check levelling d) Reciprocal levelling

73. The height of instrument is equal to (A)
 a) Reduced level of Bench mark + Back sight
 b) Reduced level of Bench mark + Foresight
 c) Reduced level of Bench mark + Intermediate sight
 d) Back sight + Fore sight
74. The ratio of diameter of a circle of the same area as the basin to the maximum basin length is called as (B)
 a) Drainage density
 b) Elongation ratio
 c) Circularity ratio
 d) Compactness coefficient
75. The ratio of average width to aerial length of watershed is (B)
 a) Shape factor
 b) Form factor
 c) Average length of watershed
 d) Drainage density of watershed
76. Elevation difference between the catchment outlet and highest point on the basin perimeter is (B)
 a) Slope
 b) Relief
 c) Length
 d) Shape
77. Lysimeter is used to measure (C)
 a) Infiltration
 b) Evaporation
 c) Evapotranspiration
 d) Vapour pressure
78. If the drainage of channel is 1000 lps and area is 360 ha, the drainage coefficient is (A)
 a) 2.4 cm
 b) 0.24 cm
 c) 24 cm
 d) 2.4 m
79. The vertical distribution of water into the soil is called (A)
 a) Infiltration
 b) Percolation
 c) Seepage
 d) Interflow
80. One Yard is equal to (B)
 a) 1.30 m
 b) 0.91 m
 c) 0.76 m
 d) 1.0 m
81. Drainage coefficient is the depth of water can be removed in (C)
 a) 12 h
 b) 6 h
 c) 24 h
 d) 48 h
82. In place of low rainfall or shallow soils, which type of bench terraces will be used (B)
 a) Slopping in ward
 b) Slopping outward
 c) Level type
 d) Contour
83. The size of particles moves in suspension process is (C)
 a) <0.05 mm
 b) >0.05 mm
 c) <0.5 mm
 d) >0.5 mm

84. The use of unit hydrograph for estimating floods is limited to catchments of size less than (C)
- a) 500 km² b) 1000 km²
 c) 5000 km² d) 6000 km²
85. If $x^2 + \frac{1}{x^2} = 14$, then the value of $x + \frac{1}{x}$ is (D)
- a) $\sqrt{14}$ b) 196
 c) 3 d) 4
86. Which of the following is not true for the matrix (A)
- $$\begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$
- a) Identity matrix b) Upper triangular matrix
 c) Scalar matrix d) Diagonal matrix
87. $\tan^{-1}(x) + \cot^{-1}(x) =$ (B)
- a) 0 b) $\pi/2$
 c) $2 \tan^{-1}(x)$ d) $2 \cot^{-1}(x)$
88. The menu which is available in MS-Word (2003) and not available in MS-Excel (2003) is (C)
- a) Format b) Tools
 c) Tables d) Data
89. The memory unit that is quickly accessed by the processor for reading or storing information is (A)
- a) RAM b) ROM
 c) Pen drive d) Hard disk
90. OHP expands to (A)
- a) Over Head Projector b) Opaque Head Projector
 c) Open Head Projector d) Over Height Projector
91. The method of irrigation suitable for undulated areas is (D)
- a) Furrow method b) Drip method
 c) Check basin method d) Sprinkler method

92. Growing two or more crops simultaneously on the same piece of land with definite row pattern is (C)
a) Sequence cropping b) Mixed cropping
c) Inter cropping d) Relay cropping
93. In rainfed farming rainfall is (C)
a) <1150 mm b) >750 mm
c) >1150 mm d) < 750 mm
94. Nitro Phosphate fertiliser contains..... % of P_2O_5 (B)
a) 15.2 b) 12.9
c) 16.4 d) 11.2
95. In the question below the sentence have been given in Direct speech. From the given alternatives, choose the one which best express the given sentence in Indirect speech
Direct Speech: "Please don't go away" she said. (C)
a) She said to please let her not go away from you
b) She told me to go away
c) She begged me not to go away
d) She begged that I will not go away
96. In measuring horizontal angles, the theodolite should be turned (B)
a) Clockwise from the forward station to the back station
b) Clockwise from the back station to the forward station
c) Anticlockwise from the forward station to back station
d) Anticlockwise from the back station to the forward station
97. Work done is measured by the product of (B)
a) Force and mass b) Force and distance
c) Distance and mass d) Force and acceleration
98. Unit of conductance is (A)
a) \bar{O} b) Ω
c) π d) μ
99. Ram is the topper..... his classmates (C)
a) to b) than
c) among d) on
100. Current information about market arrivals and prices pertains to (C)
a) Market intelligence b) Market survey
c) Market news d) Market analysis