

Agriculture Engineering Paper-II (200 marks)

(Note: words in bold letter are the answers)

1. In ordinary residential and public buildings, the D.P.C is generally provided at

a. ground level

c. water table level

b. plinth level

d. midway between ground level and water level.

2. A king Closer is

a. 1/4 of brick

c. 3/4 of brick

b. 4/3 of brick

d. None of these

3. Sand is mixed with lime mortar to

a. improved strength

c. reduce setting time

b. reduce cost

d. prevent shrinkage

4. In which type of bond all the bricks are laid as towards the face of wall?

a. stretcher bond

c. English bond

b. header bond

d. flemish bond

5. Volatility of a fuel is related to

a. its viscosity

c. its vaporization

b. its density

d. its pour point

6. Draft increases with

a. decrease in speed of implements

c. does not have any effect

b. increase in speed of implements

d. None of the above

7. choke controls

a. the amount of air

c. the amount of air and fuel mixture

b. the amount fuel

d. None of the above

8. A line which connects distributor to the submain lines

a. service mains

c. distributor

b. feeder

d. none of the above

9. A booster is a

- a. shunt wound motor
- c. synchronous generator

10. Valve timing is a function of

- a. engine speed**
- c. engine torque

11. In precision planting, the height of seed drop is

- a. more than 50 cm from ground
- c. close to the ground**

12. Pitman that is used in reaper is a type of

- a. belt and pulley
- c. connecting rod**

13. Which of the following is not used for transmission and distribution of electrical power?

- a. copper
- c. aluminium

14. The height of farm gate should be

- a. 5 meter**
- c. 6 meter

15. The oil pump of force feed lubrication is driven by

- a. electric motor
- c. crankshaft**

16. The cylinder of air cool engines is enclosed in sheet metal casing called

- a. radiator
- c. fins

17. Slat type M.B plough is suitable for ploughing

- a. tough soil
- b. soft soil

b. series wound motor

d. None of the above

- b. engine compression
- d. all of the above

- b. At least 50 cm from the ground
- d. far from the ground

- b. crankshaft
- d. all of the above

b. steel

d. tungsten

- b. 4 meter
- d. 7 meter

- b. camshaft
- d. all of the above

b. cowling

d. blower

b. sticky soil

d. all of the above

18. The type of pump used in forced water cooling system of tractor is

- a. gear pump
- b. vane pump
- c. piston pump
- d. centrifugal pump**

19. The firing order of 6 cylinder 4 stroke engine is

- a. 1-4-2-6-3-5
- b. 1-5-3-6-2-4
- c. 1-2-4-6-5-3
- d. both a & b**

20. Strain gauge dynamometer is type of

- a. brake dynamometer
- b. belt type dynamometer
- c. drawbar dynamometer**
- d. hydraulic dynamometer.

21. A diesel engine transmits 25 kw at the end of crankshaft, moving at 1650 r.p.m the torque exerted by the piston is

- a. 145.4 N.m
- b. 144.75 N.m**
- c. 146.6 N.m
- d. 148.4 N.m

22. Diesel fuels are rated according to

- a. Octane no
- b. API gravity
- c. Cetane no.**
- d. none of the above

23. The diameter of longitudinal bars in column should not be less than

- a. 16 mm
- b. 10 mm
- c. 24 mm
- d. 12 mm**

24. Hollow bricks are used for

- a. Earthquake proof buildings
- b. reducing cost
- c. resistance against heat flow**
- d. for decreasing heat flow

25. No load speed is highest in

- a. shunt motor
- b. cumulative compound motors
- c. differential compound motors
- d. series motors**

26. Which of the following is used for finding the direction of rotation of D.C motor?

- a. columb's law
- b. Lenz's Law
- c. Fleming's left hand rule**
- d. Fleming's right hand rule

27. For optimum working the slip should not exceed?

- a. 15 %
- b. 20 %
- c. 25 %
- d. 10 %

28. Air blower sprayers are also called as

- a. Micron sprayers
- b. Fogger
- c. Mist sprayers
- d. Dusters

29. ASPEE is the manufacturer of

- a. Tractors
- b. **Sprayers & Dusters**
- c. Power Tillers
- d. all of the above

30. Cut-off device is not required in

- a. **Inclined plate metering**
- b. vertical plate metering
- c. horizontal plate planting
- d. all of the above

31. The shape of furrow slice cut by desi plough

- a. I shape
- b. L shape
- c. **V shape**
- d. triangle shape

32. The ideal moisture content for operation of primary tillage implements is

- a. Lower plastic limit of soil
- b. **upper Limit of plastic soil**
- c. both a & b
- d. None of the above

33. Bakhar is also called

- a. Acme harrow
- b. **Blade harrow**
- c. Triangular harrow
- d. Spike tooth harrow

34. The maximum permissible noise level from the tractor near the operator's ear is

- a. 80 dB
- b. **90 dB**
- c. 95 dB
- d. 70 dB

35. Jump clutch is a safety device that should be used when

- a. **Overload magnitude is small but frequency occurrence is high**
- b. Overload magnitude is high but frequency occurrence is small

- c. Overload magnitude & frequency occurrence is low
d. Overload magnitude & frequency occurrence is high

36. The camber is a component of

- a. Clutch
c. steering
b. differential
d. hydraulic

37. Toe-in provided in tractor should be

- a. 7-10 mm**
b. 6-7 mm
c. 8-10 mm
9-12 mm

38. The battery should be charged when its specific gravity falls below

- a. 1.225**
b. 1.150
c. 1.28
d. 1.420

39. Most common type of battery used in tractor engines is

- a. zinc sulphate battery
c. Lead acid battery
b. Lithium Ion battery
d. all of the above

40. Type of gear box used in tractors are

- a. constant mesh
c. synchromesh
b. sliding mesh
d. all of the above

41. Flash Fire test is associated to

- a. lubrication quality**
b. ignition quality
c. diesel quality
d. petrol quality

42. Splash system of lubrication is generally used in

- a. single cylinder & stationary engine**
b. Multi cylinder
c. tractor engines
d. all of the above

43. In diesel engine fuel is injected into the cylinder through

- a. carburetor
c. fuel injector
b. fuel injection pump
d. all of the above.

44. Which is not the component of M.B plough?

- a. frog
b. share

c. tail piece

d. shovel.

45.. Tillage in which isolated bands of soil are tilled, is called

a. zero tillage

b. strip tillage

c .primary tillage

d. minimum tillage

46.four strokes of IC engine completes its cycle in

a. four revolution of crankshaft

b. two revolution of crankshaft

c.one revolution of crankshaft

d. all of the above

47. The opening and closing of valve in IC engine is operated by

a. Cam

b. crank

c. pump

d. all of the above

48.The speed of high speed engine is

a.less than 350 rpm

b.less than 350 rpm

c.between 350 and 1000 rpm

d. more than 1000 rpm

49. fuel is injected into the combustion chamber in diesel engine

a. during the suction stroke

b. at the start of compression stroke

c. at the end of compression stroke

d. during the expansion stroke

50.Surkhi is added to lime mortar to

a.prevent shrinkage

b. decrease setting time

c.increase bulk

d. impart hydraulicity

51.Before testing setting time of cement one should test for

a. strength

b. soundness

c. fineness

d. consistency

52. Polyvinyl chloride is a

a. thermosetting material

b. thermoplastic material

c. elastoplastic material

d. rigid-plastic material

53.The power factor of purely resistive circuit is

a. leading

b. lagging

c. unity

d. zero

54. The disc angle of good disc plough should be

a. 43-45°

c.32-35°

b.15-20°

d.28-32°

55.Khurpi and Kodali are

a. interculture tools

c. harvesting tools

b. tillage tools

d. seeding tools

56.Transformer is used for

a. step up voltage

c. current regulation

b. step down voltage

d. both a & b

57.Which part of DC motor can sustain maximum temperature

a. Armature windings

c. Slip ring

b. Field windings

d. Commutator

58.The distribution mains are design for

a. maximum daily demand

c. average daily demand

b. maximum hourly demand

d. maximum hourly demand on maximum day

59.The most common cause of acidity in water is

a. carbon dioxide

c. hydrogen

b. oxygen

d. nitrogen

60..The components which have no driven moving components is called

a. equipment

c. implement

b. tool

d. machine

61. which of the following is not a secondary tillage implement?

a. harrow

c. Bakhar

b. bund former

d. hoe

62.Planter is different from seed drill in respect to

a. power transmission

c. furrow opener

b. metering mechanism

d. all of the above

63..Olpad threshers is operated by

- a. tractors
- b. man
- c. electric motor
- d. bullock**

64. The functions of seed drill is

- a.To meter the seeds
- b.To carry the seeds
- c.To deposit the seeds in furrow
- d. all of the above**

65.The horizontal component of pull perpendicular to the direction of motion

- a. draft
- b. side draft**
- c. line of pull
- d. centre of resistance

66. In which type of barn cows are housed and milk in the same building?

- a. Loose housing barn
- b.open air barn
- c. stanchion barn**
- d. both a & b

67. A water supply scheme is usually design for

- a. 25 years
- b. 50 years**
- c. 30 years
- d. 75 years.

68. For the RCC construction of water retaining structures the grade of concrete mix used is generally

- a. 1:2:4
- b. 1:1/2:3**
- b. 1:1:2
- d.1:3:5

69.Full strength of concrete is achieved after

- a.21 days
- b. 28 days**
- c. 14 days
- d. 7 days.

70. From the management point of view, the farm stead should be located

- a. Near the farm**
- b. on side of the farm
- c. Far away from the farm
- d. both a & b.

71.Seed drill size is given by

- a. seed rate per hectare
- b. no. of furrow openers × distance between two furrow opener**

- c. length \times width of seed drill
- d. area covered per unit time.

72. In a seed-cum fertilizer drill, most commonly used power transmission system is

- a. Gears and pulleys
- b. chain & sprocket gears
- c. cam & belt pulleys
- d. Belt pulleys & chain sprockets**

73. Shoe type furrow openers are especially suited for

- a. stony and root infested soils
- b. poorly prepared bed in trashy soils**
- c. hard and sticky soils
- d. all of the above

74. Thermal efficiency of an engine can be increased if its stroke bore ratio is

- a. increased**
- b. decreased
- c. remain same
- d. none of the above

75. In diesel engine the specific fuel consumption is

- a. 150 g/bhp-hr
- b. 200 g/bhp-hr**
- c. 250 g/bhp-hr
- d. 100 g/bhp-hr

76. Ignition delay in diesel engine refers to the period between

- a. completions of fuel injection and ignition
- b. beginning of fuel injection and ignition**
- c. completion of suction stroke and compression stroke
- d. completion of fuel injection and power stroke

77. blue smoke indicates burning of

- a. lubricating oil**
- b. water
- c. diesel
- d. both a & b

78. The function of Tappet in IC engine is to

- a. open the valves
- b. closes the vale
- c. to inject the fuel
- d. both a & b**

79. The ratio between total cylinder volume to the clearance volume is called

- a. clearance ratio
- b. total volume ratio

c. compression ratio

80. The power available on the crankshaft is

a. IHP

c. FHP

81. A spark ignition engine does not have

a. spark plug

c. Carburetor

82. Thermal efficiency of diesel engine is

a. 30-34%

c. 38-42%

83. The common face and seat angle of valve is

a. 60°

c. 90°

84. The most commonly used valve arrangement in tractors is

a. I head arrangement

c. L head arrangement

85. The stroke-bore ratio for tractor engines is

a. 1.45

c. 1.50

86. API gravity of pure water is

a. 10

c. 22

87. Carbon residue test is done for

a. lubrication oil

c. ignition

88. Turbo charger is driven by

a. engine shaft

c. exhaust gases

d. displacement volume

b. BHP

d. BMEP

b. Distributor

d. F.I pump

b. 25-32 %

d. none of the above

b. 45°

d. 30°

b. T head arrangement

d. both a & b

b. 1.25

d. 1.30

b. 20

d. 31

b. fuel

d. both a & b

b. camshaft

d. both a & b

89. centrifugal governor is a type of

- a. Hit & miss system
- c. Injection system

90. The type of pump generally use in forced lubrication system

- a. centrifugal pump
- c. positive displacement pump**

91. Thermostats fully open in diesel engine at

- a. 88-90°**
- c. 90-95 °

92. Radiator is present in

- a. air cooling system
- c. both a & b

93. A gear used in steering system is

- a. spiral gear
- c. worm gear**

94. Pressure plate is an essential component of

- a. gear box
- c. differential

95. Speed reduction in final drive is

- a. 3 to 5:1**
- c. 3 to 6:1

96. In constant mesh transmission gears use to control noise is

- a. spur gear
- c. bevel gear

97. Final drive is a

- a. speed increase unit
- c. speed reduction unit**

b. Throttle system

d. pump system

b. piston pump

d. none of the above

b. 70-75°

d. 82°

b. water cooling system

d. none of the above

b. helical gear

d. spur gear

b. clutch

d. all of the above

b. 2 to 4:1

d. 2 to 5 :1

b. helical gear

d. spiral gear

b. torque reduction unit

d. torque increasing unit

98. Super charger of an engine is driven by

a.camshaft

c. exhaust gases

b. crankshaft

d. all of the above

99. Angle between the centre line of kingpin and vertical line of tractor is

a. camber angle

c. caster angle

b.helix angle

d.Disc angle

100. The permissible slip for wheel type tyre during slippage is

a.3 to 5 %

c.10-15 %

b.5-10 %

d. 15-20 %

101.In combine header is a component of

a. cutting mechanism

c. cleaning unit

b.power transmission

d. threshing unit

102.Peripheral speed of combine cylinder varies from

a. 2000 to 7000 rpm

c.1550 to 2500 rpm

b. 1440 to 1500 rpm

d., 1700 to 3000 rpm

103. Harvesting capacity of vertical conveyor reaper is

a. 2-4 ha/day

c .4-6 ha/hr

b. 0.2-0.4 ha/hr

d. 0.4-0.6 ha/hr

104.Connecting rod is made of

a. cast iron

c. aluminum

b. mild steel

d. drop forged steel

105.The pressure required for piston to operate the sprayer is upto

a. 27.6 kg/cm²

c.20 kg/cm²

b.15 kg/cm²

d.50 kg/cm²

106.A row crop planter meter the seeds in

a. row at fixed spacing

c. row at 10 meter spacing

b. ridges at fixed spacing

d. water submerged fields.

107. Mounted type seed drill are attached to the tractor by

a. PTO shaft

c. drawbar

b. three point hitch

d. two point hitch

108. The spokes of pegged type drive wheel of seed drill are made of

a. cast iron rods

c. mild steel strips

b. mild steel round bars

d. aluminum alloys

109. In seed drill and planter, the no of spokes varies from

a. 8-12

c. 6-8

b. 4-8

d. 10-12

110. Hoe type furrow openers are use in

a. planter

c. seed cum fertilizer drill

b. seed drill

d. both a & b

111. A good building stone should not absorb water more than

a. 5 %

c. 15 %

b. 10 %

d. 20 %

112. Area that one man can spray in a day is about

a. 0.1 ha

c. 0.3 ha

b. 0.2 ha

d. 0.4 ha

113. The reel most commonly used in combine now a days is

a. slat type

c. wooden

b. pick up type

d. None of these

114. The rack loss should remain between

a. 0.2-0.4%

c. above 1.0 %

b. 0.6-1.0 %

d. none of the above

115. In deep litter poultry house, the depth of litter should be

a. 10-15 cm

c. 20-25 cm

b. 15-20 cm

d. 30-40 cm

116. Herring Bone is

a. Fencing

c. Milking parlour

b. Barn

d. none of the above

117. Vapour lock is associated to

a. Ignition system

c. cooling system

b. fuel supply system

d. both a & b

118. Most of the high voltage transmission lines in India are

a. underground

c. both a & b

b. overhead

d. None of the above

119. A 3 phase 4 wire system is commonly used on

a. primary transmission

c. primary distribution

b. secondary transmission

d. secondary distribution

120. Sandstone is a

a. sedimentary rock

c. igneous rock

b. metamorphic rock

d. volcanic rock

121. When the knife section of the cutter bar stops in the center of its guard after every stroke it is called

a. alignment

c. stroke length

b. registration

d. Reel index

122. Sticky belt method is associated

a. seed drill performance

c. testing of seed uniformity

b. seed drill performance

d. seed drill calibration

123. Inflation pressure in the rear wheel of tractor varies between

a. 0.8 and 1.5 kg/cm²

c. 2.0 and 2.5 kg/cm²

b. 1.5 and 2.0 kg/cm²

d. 2.5 and 3.0 kg/cm²

124. The force required in the direction of travel to overcome the direction of motion is called

a. rolling resistance

b. tractive force

c.tractive efficiency

d. coefficient of friction

125. During tractor running the tyre slippage can be control by

a. decreasing the load factor

b. increasing the coefficient of traction

c.increasing tractor speed

d.none of the above

126. In tractor testing, the brake test is performed at the maximum speed of

a. 10 kmph

b.20 kmph

c.15kmph

d.25 kmph

127. At maximum efficiency, the engine speed of tractor is about

a. 1650 rpm

b. 1750 rpm

c. 1700 rpm

d.1000 rpm

128.A control valve used in cooling system of an engine to regulate water flow is called

a. control valve

b. pressure relief valve

c. thermostat

d. port

129.The process of removing exhaust gases from the engine cylinder is called

a. knocking

b. turbocharging

c. scavenging

d. supercharging

130.A tractor seat suspension should have natural frequency in the range of

a. 2-4 cycles /sec

b.4-6 cycles/sec

c. 6-8 cycles /sec

d.0-2 cycles/sec

131.Shortening of beam length of indigenous plough

a. decreases penetration

b. increases penetration

c. does not have any impact

d. none of the above.

132.Volumetric efficiency of a tractor varies from

a. 65-70 %

b. 75-80 %

c.85-90 %

d. 80-95%

133.which of the following affect the drawbar performance?

a. total weight

b. centre of gravity

c. hitch height and location

d. all of the above

134. Detonation or knocking in an IC engine can be controlled by

- a. By proper valve adjustments
- b. by using antiknock fuels
- c. by proper spark settings
- d. all of the above**

135. The main function of dynamo is

- a. To supply the electrical current needed by the tractor or vehicle
- b. To keep the battery in a charged condition
- c. both a & b**
- d. none of the above

136. The percentage of unthreshed grain received from all outlets with respect to total grain input is called

- a. blower loss
- b. sieve loss
- c. cylinder loss**
- d. visible damage loss

137. Power Thresher is operated by

- a. electric motor
- b. tractor
- d. all of the above**

138. If the vertical suction of m.b plough is improved then

- a. the depth of cut increased**
- b. width of cut is increased
- c. both depth and width increases
- d. remain same

139. Aluminium alloy is preferred mainly for making piston due to

- a. compressive strength
- b. low coefficient of expansion
- c. its lightness**
- d. none of the above

140. The ratio of indicated thermal efficiency to the corresponding air standard cycle efficiency is called

- a. net efficiency
- b. efficiency ratio
- c. relative efficiency**
- d. overall efficiency

141. The maximum temperature in the I.C. engine cylinder is of the order of

- a. 500- 1000°C
- b. 1000- 1500°C
- c. 1500-2000°C
- d. 2000-2500°C**

141. The air-fuel ratio of the petrol engine is controlled by

- a. fuel pump
- b. governor
- c. injector
- d. carburettor**

142. The specific fuel consumption of a petrol engine compared to diesel engine of same H.P. is

- a. same
- b. more**
- c. less
- d. less or more depending on operating conditions

143. The member which is placed horizontally to support common rafter of a sloping roof is

- a. purlin**
- b. cleat
- c. batten
- d. strut

144. The most important purpose of frog in a brick is to

- a. emboss manufacture name
- b. reduce the weight of brick
- c. form a keyed joint between brick and mortar**
- d. improve insulation by providing hollows

145. In a singly reinforced beam, the effective depth is measured from the compression edge to the

- a. tensile edge
- b. center of tensile reinforcement**
- c. neutral axis of the beam
- d. none of these

146. Normally the tensile strength is about.....of its compressive strength

- a. 10-15 %**
- b. 15-20 %
- c. 20-25 %
- d. 25-30 %

147. A reinforced beam will crack if tensile stress set up in the concrete below the neutral axis is

- a. less than the permissible stress
- b. more than the permissible stress**
- c. equal to the permissible stress
- d. anyone of these

148. The moment of resistance of an under-reinforced section is computed on the basis of

- a. compressive force developed concrete
- b. tensile force developed in steel**
- c. both a & b
- d. none of the above

149. The deep beams are design for

- a. shear force only
- b. bending moment only**
- c. bearing
- d. both a & b

150. Which of the following sections of equal cross sectional area can resist the torsional moment of a R.C.C beam section more efficiently when working stress design is adopted?

- a. An unsymmetrical section
- b. A box section
- c. A solid rectangular section**
- d. A symmetrical I- section

151. The shrinkage in a concrete slab

- a. causes shear crack
- b. causes tension crack**
- c. causes compression crack
- d. does not cause any cracking

151. In a DC Circuit, Inductive reactance would be _____

- a. equal as in AC Circuits
- b. High
- c. Extremely high
- d. Zero**

152. If a current of 5A flows through a resistor of 12 ohm then the power developed and the energy dissipated in 2 minutes are

- a. 300 W, 36000 J**
- b. 360 W, 30000 J
- c. 380 W, 35000 J
- d. 380 W, 36000 J

153. The unit of electrical energy is / are

- a. Joules
- b. Watt - sec
- c. Kilowatt – hour
- d. All of these**

154. Specific resistance of a material is

- a. Directly proportional to the both area of cross section and length of material
- b. Directly proportional to the area of cross section and inversely proportional to the length of material**
- c. Inversely proportional to the area of cross section and directly proportional to the length of material
- d. Inversely proportional to the both area of cross section and length of material

155. If induction motor is direct switched-on then it will develop

- a. 1.5 times their full load torque
- b. 1.5 to 2.5 times their full load torque**
- c. 2.5 times their full load torque
- d. 1.5 to 5 times their full load torque

156. The overload release protects the motor against

- a. Over voltage
- b. Over current
- c. Over load**
- d. All of these

157.3 - point starter is used to start the

- a. Series motor
- b. Shunt motor
- c. Compound motor
- d. Only (b) and (c)**

158. The expression for total power output of a delta connected system in terms of phase voltage and current is given by

- a. $3V_p I_p \cos \phi$**
- b. $\sqrt{3}V_p I_p \cos \phi$
- c. $1/\sqrt{3} 3V_p I_p \cos \phi$
- d. $1/3 \times V_p I_p \cos \phi$

159. If the armature current of dc series motor has become twice then the torque will become

- a. Twice of the former
- b. Four times of the former**
- c. One fourth of the former
- d. Remains same

160. The field winding of dc series motor consists of few turns of

- a. Thin wire with low resistance
- b. Thick wire with low resistance**
- c. Thin wire with high resistance
- d. Thick wire with high resistance

161. When the motor runs on no load, then

- a. Back emf is almost equal to applied voltage
- b. Back emf will be greater than applied voltage**
- c. Back emf will be less than applied voltage
- d. None of these

162. The rating of Alternator / Generator may be expressed in _____

- a. KW
- b. KVA**
- c. KVAR
- d. HP

163. Alternators are also called Synchronous generators because

- a. They must run at a constant speed irrespective of desired frequency.
- b. They must run at synchronous speed to give the desired frequency**
- c. They must run at a speed which varies with frequency.
- d. They must run at a speed equal to the desired frequency.

164. A buttress in a wall intended to provide

- a. lateral support to the roof slab
- b. lateral support to wall**
- c. to resist vertical loads
- d. lateral support to roof beams only

165. An eccentrically loaded column is subjected to

- a. bending stress
- b. direct stress
- c. shear stress
- d. both a & b**

166. In the roof trusses, the horizontal beam spanning between the two adjacent trusses are known as

- a. spandrel beams
- b. rafters
- c. purlins**
- d. all of the above

167. The percentage of alumina in good brick clay should vary from

- a. 20-30 %**
- b. 30-40%
- c. 40-50%
- d. 10-20%

168. The initial setting time of cement is due to

- a. di-calcium silicate
- b. tri-calcium silicate
- c. tri-calcium aluminate**
- d. tri-calcium aluminato ferrite

169. Threshers should not continuously run for

- a. more than 10 hours**
- b. 5 hours or more
- c. 8 hours
- d. less than 3 hours

170. The useful life of power sprayers

- a. 8 years**
- b. 10 years
- c. 12 years
- d. 5 years

171. While turning a tractor on a curved path, the speed of inner wheel should be

- a. about 10 kmph
- b. about 15 kmph
- c. more than than the outer wheel
- d. less than the outer wheel**

172. Hydro-kinetic transmission refers to

- a. torque convertor**
- b. dog clutch
- c. gear transmission
- d. friction clutch

173. In hydraulic brake system of tractors, the pressure in pump varies from

- a. 10-20 kg/cm²
- b. 40- 75 kg/cm²
- c. 75-100 kg/cm²
- d. 150-200 kg/cm²**

174. Discharge of a centrifugal pump is proportional to

- a. Impeller diameter(D)
- b. D^2
- c. D^3
- d. $1/D^3$

175. For small discharge at high-pressure following pump is preferred
a. Centrifugal
b. Axial flow
c. Mixed flow
d. Reciprocating

176. In a centrifugal pump the liquid enters the pump
a. At the top
b. At the bottom
c. **At the centre**
d. From sides

177. Generally the disc spacing kept in disc harrow
a. 15-20 cm
b. **25-30 cm**
c. 30-40 cm
d. 35-45 cm

178. Field performance index of a machine is also known as
a. Actual field capacity
b. **Field efficiency**
c. Theoretical efficiency
d. all of these

179. The expected annual working hours of seed drill is
a. 1000
b. 2000
c. 2500
d. 1500

180. SAE stands for
a. **Society of automotive Engineers**
b. Society of Agriculture Engineers
c. Society of Aeronautical Engineers
d. None of the above

181. API gravity used for rating diesel, petrole etc stands for
a. African Petroleum Institute
b. Asian petroleum Institute
c. Assam petroleum Institute
d. None of the above

182. Fan belt tension a tractor should be checked after working for
a. **8-10 hours**
b. 10-14 hours
c. 20 hours
d. 50-60 hours

183. As per ASAE tractor PTO should be
a. 540 ± 20 RPM
b. **540 ± 10 RPM**
c. 450 ± 10 RPM
d. 450 ± 20 RPM

184. The bevel pinion of differential of a tractor drives
a. final drive gear
b. **crown gear**
c. crank gear
d. cam gear

185. Carbon content in cast iron
a. 2.5-4 %
b. **0-0.25 %**
c. 0.25-0.50%
d. 0.50-1.0 %

186. In a tractor, the horizontal distance between the front and rear wheels is known as

- a. wheel track
- b. wheel base**
- c. ground clearance
- d. track width

187. In a tractor slogging or lugging ability is related to

- a. Engine speed
- b. Engine Torque**
- c. Engine power
- d. Engine efficiency

188. The angle between direction of travel and gang axis of a disc harrow is known as

- a. Gang axis
- b. disc angle
- c. tilt angle
- d. gang angle**

189. Material used for construction of cultivator shovel is

- a. chilled cast iron**
- b. Mild steel
- c. high grade steel
- d. both a & b

190. Ignition delay of high speed engine should be

- a. 0.01 second
- b. 0.001 second**
- c. 0.0001 second
- d. 0.1 second

191. The size of gutter of a stanchion barn is

- a. 35×10 cm
- b. 45×15 cm**
- c. 45×20 cm
- d. 35×25 cm

192. In a barbed wire fencing, the spacing between barbs

- a. 5-10 cm
- b. 7.5- 15 cm**
- c. 7-22.5 cm
- d. 12.5- 25.5 cm

193. The presence of earth in case of overhead lines

- a. increase the capacitance**
- b. increase the inductance
- c. decrease the capacitance and increase the inductance
- d. does have any effect

194. Overheating of windings of generator

- a. reduces the generated voltage
- b. reduce the power factor
- c. reduces the life of machine**
- d. does not have any significant effect.

195. Transformer zero voltage regulation occurs at

a. unity p.f

c. lagging p.f

b. leading p.f

d. zero leading p.f

196. Speed of high speed potato planter

a. 4-7 kmph

c. 10-20 kmph

b. 7-11 kmph

d. 5-15 kmph

197. In seed drill the inclination of seed tube from vertical is kept

a. less than 20°

c. 30°

b. less than 30°

d. 45°

198. In radiator hot water flows from the

a. bottom

c. side

b. top

d. both a & b

199. Air injection system is mostly used in

a. tractor engines

c. light engines

b. heavy duty stationery engines

d. automobiles

200. combined splash system is associated to

a. lubrication system

c. cooling system

b. fuel supply system

d. ignition system

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