013/2025

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Which of the following statement is/are correct about Hexagonal socket head cap screw?

(i) It is used in countersunk holes.

(ii) It is used in counterbored holes.

(iii) It can be fastened with Ring spanner.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) (D) Only (ii)

2. Which of the following statement is/are correct about Castle nut?

(i) It can be locked with split pin.

(ii) Slots are cut on the hexagonal part of the nut.

(iii) Slots are cut on the cylindrical part of the nut.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iii) (D) All of the above (i), (ii) and (iii)

3. Which of the following statement is/are correct about Counter sinking operation?

(i) It is an operation of cylindrical enlargement at the end of a drilled hole.

(ii) It is an operation of conical enlargement at the end of a drilled hole.

(iii) It can be used for providing chamfer at the end of holes.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iii) (D) All of the above (i), (ii) and (iii)

4. Which one of the following statement is correct about ABC of First aid?

(A) ABC stands for Airway, Breathing and Circulation

(B) ABC stands for Airway, Breathing and Chocking

(C) ABC stands for Airway, Balancing and Chocking

(D) ABC stands for Airway, Balancing and Circulation

5. Which of the following statement is/are correct about Combination Set?

(i) It is used for measuring angles upto an accuracy of 5 minutes.

(ii) It is used for locating center of round bars.

(iii) It is used for marking 45 degree lines.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iii) (D) All of the above (i), (ii) and (iii)

6. What is the least count of a Vernier caliper having 25 vernier scale divisions coincide with 24 divisions of the main scale?

(A) 0.01 mm (B) 0.02 mm

(C) 0.03 mm (D) 0.04 mm

7. What is the pitch of micrometer screw spindle thread?

(A) 0.5 mm (B) 0.05 mm

(C) 0.1 mm (D) 0.01 mm

8. Which one of the following tool is used for locating the center of round bars?

(A) Jenny Caliper (B) Divider

(C) Scriber (D) Outside Caliper

9. Which of the following statement is/are correct about Hand file?

(i) Its edges are parallel throughout its length.

(ii) Its one edge is uncut.

(iii) Its faces are double cut.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iii) (D) All of the above (i), (ii) and (iii)

10. Which one of the following file is used for filing 55 degree corner?

(A) Triangular file (B) Knife edge file

(C) Rasp cut file (D) Hand file

11. Which one of the following file is called 'Fish back file'?

(A) Barrette file (B) Mill saw files

(C) Crossing file (D) Riffler file

12. Which of the following statement is/are correct about Mass production?

(i) It reduce cost of product.

(ii) High initial expenditure.

(iii) Spare parts are easily available.

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iii) (D) All of the above (i), (ii) and (iii)

13. In limit system, what is the difference between actual size corresponding to its basic size?

(A) Actual deviation
(B) Fundamental deviation
(C) Upper deviation
(D) Lower deviation

14. Which of the following statement is/are correct about Twist drill flutes?

(i) It forms the cutting edges.
(ii) It allows coolant flow to the cutting edge.
(iii) It increase the strength of drill bit.

(A) Only (i) and (ii)
(B) Only (ii) and (iii)
(C) Only (i) and (iii)
(D) All of the above (i), (ii) and (iii)

15. In drilling machine, which one of the following drill holding device is used when the size of drill taper shank is bigger than the drilling machine spindle taper?

(A) Sleeve
(B) Socket
(C) Chuck
(D) Drift

16. What is the blank size required for cutting M10×1.5 external thread?

(A) 8.5 mm
(B) 8.85 mm
(C) 9.5 mm
(D) 9.85 mm

17. In machining operation, what is the unit of cutting speed?

(A) Meter/minute
(B) Revolution per minute
(C) Millimeter/Revolution
(D) Meter/Revolution

18. Which one of the following super finishing operation is used in engine bores?

(A) Lapping
(B) Horning
(C) Buffing
(D) Grinding

19. In screw thread, which one of the following term is used for representing the surface joining crest and Root?

(A) Pitch
(B) Lead
(C) Face
(D) Flank

20. What is the distance advanced by a screw thread in one complete revolution?

(A) Pitch
(B) Hand
(C) Depth
(D) Lead

21. Select the correct statement/s regarding the applicability of Ohm's Law :

(i) Ohm's Law applies to non-metallic conductors and semiconductors only.

(ii) Ohm's Law is valid only for linear resistors.

(iii) Ohm's Law is valid for all types of electrical circuits, including those with capacitors and inductors.

(iv) Ohm's Law applies to all materials, including those with non-linear properties.

(A) Only (i) and (ii)

(B) Only (ii) and (iii)

(C) Only (ii)

(D) All of the above (i), (ii), (iii) and (iv)

22. Choose the correct statement/s about factors affecting resistance :

(i) Resistance decreases as the temperature of the conductor increases for metals.

(ii) Resistance is the same for all materials under identical conditions.

(iii) Resistance depends only on the length of the conductor.

(iv) Resistance increases with an increase in the resistivity of the material.

(A) Only (ii) and (iv)

(B) Only (iv)

(C) Only (i), (ii) and (iii)

(D) All of the above (i), (ii), (iii) and (iv)

23. Identify the correct statement/s about lead-acid batteries :

(i) The chemical reaction in a lead-acid battery involves the conversion of lead dioxide and sponge lead into lead sulfate during discharge.

(ii) During charging, lead sulfate is converted back into lead dioxide and sponge lead.

(iii) Lead-acid batteries typically have a shorter lifespan compared to lithium-ion batteries, especially in deep cycle usage.

(iv) The electrolyte in a lead-acid battery is sulfuric acid diluted with water.

(A) Only (i), (ii) and (iv)

(B) Only (ii), (iii) and (iv)

(C) Only (i), (ii) and (iii)

(D) All of the above (i), (ii), (iii) and (iv)

24. Select the correct statement/s about the working principle of transformers :

(i) A transformer can increase or decrease the current and voltage based on the ratio of turns in the primary and secondary coils.

(ii) A transformer works by using the principle of electromagnetic induction to transfer electrical energy between two circuits.

(iii) In a step-up transformer, the secondary voltage is higher than the primary voltage, but the secondary current is lower.

(iv) A transformer works only with a pure sinusoidal input current.

(A) Only (i), (ii) and (iv)

(B) Only (ii), (iii) and (iv)

(C) Only (i), (ii) and (iii)

(D) All of the above (i), (ii), (iii) and (iv)

25. Identify the correct statement/s about grounding in electrical systems :

(i) Grounding provides a path for electric current to flow safely into the Earth in case of a fault.

(ii) A ground connection helps to maintain the electrical potential at zero volts for the system.

(iii) A ground connection is used to prevent electrical surges in a circuit.

(iv) Grounding is used to prevent Electromagnetic Interference (EMI) in AC circuits.

(A) Only (i) and (ii)

(B) Only (ii), (iii) and (iv)

(C) Only (i), (ii) and (iii)

(D) All of the above (i), (ii), (iii) and (iv)

26. Identify the correct statement/s about an ohmmeter :

(i) An ohmmeter should always be connected to a live circuit to measure resistance.

(ii) The polarity of the connections does not matter when using an ohmmeter to measure resistance.

(iii) An ohmmeter should be connected across the component or resistor when measuring its resistance.

(A) Only (i) and (ii)

(B) Only (i) and (iii)

(C) Only (ii) and (iii)

(D) All of the above (i), (ii) and (iii)

27. Identify the correct statement/s about a Digital Voltmeter (DVM) :

(i) A digital voltmeter is unable to measure low voltage levels accurately.

(ii) Digital voltmeters have fixed accuracy and cannot be calibrated.

(iii) Digital voltmeters are typically more accurate and provide more precise voltage readings compared to analog voltmeters.

(iv) A digital voltmeter is connected in parallel across the component or circuit to measure voltage.

(A) Only (i) and (ii)

(B) Only (iii) and (iv)

(C) Only (i), (ii) and (iii)

(D) Only (i), (iii) and (iv)

28. Choose the correct statement/s about capacitors in electrical circuits :

(i) Capacitors are used to smooth out voltage fluctuations.

(ii) Capacitors block DC current but allow AC current to pass through.

(iii) Capacitors store energy in the form of electrical fields.

(iv) Capacitors only function in AC circuits and cannot be used in DC circuits.

(A) Only (i) and (iii)

(B) All of the above (i), (ii), (iii) and (iv)

(C) Only (i), (ii) and (iii)

(D) Only (i), (iii) and (iv)

29. A 1.5 KW electric motor runs for 2 hours at full load. If the efficiency of the motor is 75%, what is the total energy input (in kWh)?

(A) 2.4 kWh (B) 3 kWh

(C) 4 kWh (D) 5 kWh

30. The range of a one milliampere meter movement is to be extended to 10 milliamperes and the moving coil has a resistance of 45 ohms. Calculate the required shunt resistance for extension of the range of an ammeter :

(A) 0.5 ohms (B) 50 ohms

(C) 0.05 ohms (D) 5 ohms

31. Ratio of active power used to the total power drawn from the system is known as :

(A) Power ratio (B) Power factor

(C) Power rate (D) Power transmission

32. In AWS codification EB5426HJX what does the third digit indicates?

(A) Type of covering (B) Type of strength

(C) Type of welding position (D) Type of current

33. Short arc length produce ———————— sound.

(A) Humming (B) Popping

(C) Cracking (D) Hizing

34. Which type of wire brush is used to clean ferrous metals?

(A) Carbon steel (B) Stainless steel

(C) High carbon steel (D) Medium carbon steel

35. Purpose of normalising the steel is

(A) Prevent cracking

(B) To control hardness

(C) To make softness

(D) To produce fine grains of uniform structure

36. Which action to be taken for controlling back fire?

(A) First close oxygen cylinder valve

(B) First close acetylene cylinder valve

(C) Close acetylene control valve

(D) Close oxygen control valve

37. What should be the angle for a double bevel butt joint?

(A) 45° (B) 35°

(C) 25° (D) 15°

38. Which defect can detect by liquid penetrant test:

(A) Crater (B) Cracks

(C) Undercut (D) Spatters

39. Magnetic particle testing is a destructive testing method used to find:

(A) Surface discontinuity (B) Subsurface continuity

(C) Both (A) and (B) (D) Any discontinuity in material

40. Which heat treatment of steel increases hardness but decrease strength and ductility?

(A) Annealing (B) Hardening

(C) Normalising (D) Case hardening

41. In air compressor generally a FRL unit is fitted in main supply line of compressed air system. What is the advantage of using FRL system in air compressor?

(i) Can deliver air at a fixed pressure

(ii) Can deliver cleaned and lubricated air

(iii) Can deliver air after filtering with particles below 20 microns

(iv) Can deliver more moisturised air

(A) Only (i) and (ii) (B) Only (i) and (iii)

(C) Only (i) and (iv) (D) Only (ii) and (iv)

42. In diesel cycle the fuel is sprayed at high pressure and ignited by hot compressed air. In this process the heat addition is takes place at :

(A) Varying pressure and volume (B) Constant pressure and volume

(C) Constant volume (D) Constant pressure

43. Diesel engines are working with high compression pressure. Generally what will be the compression pressure of diesel engines?

(A) 400 to 550 PSI (B) 100 to 180 PSI

(C) 200 to 300 PSI (D) 600 to 700 PSI

44. When compared to direct engines indirect engines are difficult to start form cold. Which of the following cold starting device uses ether in inlet manifold to start the engine?

(A) Decompression devices
(B) Heater plugs
(C) Chemical sprays
(D) Inlet manifold heater

45. The combustion in a diesel engine occurs in different stages. These stages are going simultaneously in different parts of combustion chamber during injection of fuel. Select any two correct stages from the below options :

(i) Delay period
(ii) Flash period
(iii) After burning
(iv) Fire period

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (iii) and (iv)

46. Which law state that the pressure intensity of a static liquid is equal in all directions?

(A) Boyle's law
(B) Charles law
(C) Pascals law
(D) Hook's law

47. If 'n' is the number of cylinders and 'Vs' is the piston displacement, 'S' is the swept volume of the given engine cylinder then the engine capacity 'Vd' is calculated by:

(i) $Vd = Vs \times n$
(ii) $Vd = Vs \times n$
(iii) $Vd = \pi r^2 \times S \times n$
(iv) $Vd = Vs \times n$

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (iii) and (iv)

48. In which of the following method the horse power of the engine is measured with all the accessories like generator, air cleaner, cooling fan etc. fitted on the engine?

(A) S A E rating
(B) R A C rating
(C) A P I rating
(D) D I N rating

49. In a two stroke six cylinder engine the power impulse occurs after 'x' degrees of crankshaft rotation. What will be value of 'x'?

(A) 90
(B) 60
(C) 120
(D) 180

50. Oil pressure gauge is equipped with pressure lubricating system to warm the engine operator. These oil pressure gauge may be of pressure expansion or electric type. Which of the following involves in electric type oil pressure gauge?

(i) Balancing type

(ii) Bimetal thermal type

(iii) Plunger type

(iv) Static type

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (iii) and (iv)

51. In dry sump lubricating system a tube is connected between delivery pump and oil tank to collect the oil from sump to oil tank. What is the name of that connected tube?

(A) Oil pan tube
(B) Pick up tube
(C) Pressure relief tube
(D) Crank vent tube

52. Where is the location of oil filter is in bypass oil filter lubrication system?

(A) Between pressure gauge and oil pump

(B) Between pump and strainer

(C) Between regulating valve and return line

(D) Between main gallery and return line

53. Any mineral oil by itself does not possess all the properties. The oil companies add a number of additives into the oil during manufacturing process. Which are the following main additives?

(i) Prussian blue

(ii) Fibre resigns

(iii) Pour point deppresents

(iv) Oxidation inhibitors

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (iii) and (iv)

54. Which of the following reasons is/are leading engine does not start by electrical causes?

(i) Burn valve guide

(ii) High octane fuel

(iii) Loose battery terminals

(iv) Open field in starter motor

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (iii) and (iv)

55. Which of the following remedies is/are to be taken when the engine is not starting by mechanical causes?

(i) Broken valve timing chain

(ii) Poor valve seating

(iii) Broken fan belt

(iv) Vehicle overload

(A) Only (i) and (ii) (B) Only (i) and (iii)

(C) Only (i) and (iv) (D) Only (ii) and (iv)

56. Which of the following reasons is/are leading engine over heating in an automobile?

(i) Wrong injection timing

(ii) Valve seat pitted

(iii) Chocked fuel hose

(iv) Blocked silencer

(A) Only (i) and (ii) (B) Only (i) and (iii)

(C) Only (i) and (iv) (D) Only (ii) and (iv)

57. Which of the following remedies is/are to be taken to avoid low power generation in engines?

(i) Replace oil filter

(ii) Replace starting relay

(iii) Clean clogged exhaust port

(iv) Adjust tappet clearance

(A) Only (i) and (ii) (B) Only (i) and (iii)

(C) Only (i) and (iv) (D) Only (iii) and (iv)

58. Which of the following reasons is/are causing low oil pressure in engine lubrication system?

(i) High oil level

(ii) Low oil viscosity

(iii) Low oil level in sump

(iv) Leakage in combustion gas

(A) Only (i) and (ii) (B) Only (ii) and (iii)

(C) Only (i) and (iv) (D) Only (ii) and (iv)

59. Which of the following reasons is/are causing excessive oil consumption in diesel engines?

(i) Oil reaches in combustion chamber

(ii) Damaged valve seal

(iii) Clogged air filter

(iv) Excessive carbon deposit

(A) Only (i) and (ii) (B) Only (i) and (iii)

(C) Only (i) and (iv) (D) Only (ii) and (iv)

60. Which of the following reasons is/are leading engine noise in automobile?

(i) Wornout gudgeon pins

(ii) Weak compression

(iii) Low oil viscosity

(iv) Big end bearing wornout

(A) Only (i) and (ii)
(B) Only (i) and (iii)
(C) Only (i) and (iv)
(D) Only (ii) and (iv)

61. Which of the following statement is/are correct about belt drives?

(i) Used for transmission of power from one shaft to another which are at a considerable distance apart.

(ii) Used when considerable power is to be transmitted over long distances.

(A) Only (i)
(B) Only (ii)
(C) All of the above (i) and (ii)
(D) Both (i) and (ii) are not correct

62. Which of the following statement is/are correct about velocity ratio of belt drive?

(i) If there is no slip between the belt and driver pulley, then belt velocity will be equal to the peripheral velocity of driver pulley.

(ii) If there is no slip between the belt and driven pulley, then peripheral velocity of the driven pulley will be equal to belt velocity.

(A) Only (i)
(B) Only (ii)
(C) Both (i) and (ii)
(D) Both (i) and (ii) are not correct

63. Which one of the following belt drive is used with shafts arranged at right angles and rotating in one definite direction?

(A) Crossed belt drive
(B) Quarter turn belt drive
(C) Open belt drive
(D) Cone pulley drive

64. When the belt passes from the slack side to the tight side, a certain portion of the belt extends and it contracts again when the belt passes from tight side to slack side. Due to these changes of length, there is a relative motion between the belt and pulley surfaces. These relative motion is termed as:

(A) Velocity ratio of belt
(B) Peripheral speed of belt
(C) Slip of belt
(D) Creep of belt

65. Which of the following statement is/are correct about Power transmitted by a belt?

(i) Tension on the tight side will be greater than the slack side.

(ii) The effective driving force at the circumference of the follower is the difference between the two tensions.

(iii) Power transmitted by the belt drive is equal to the product of difference between the two tensions and length of belt.

(A) Only (i) and (ii)
(B) All of the above (i), (ii) and (iii)
(C) Only (i) and (iii)
(D) Only (ii) and (iii)

66. Which of the following statement is/are correct about Ratio of driving tensions for flat belt drive?

(i) Ratio of driving tension gives the relation between tight side and slack side tensions in terms of coefficient of friction and angle of contact

(ii) Maximum tension in the belt is the product of maximum stress and cross sectional area of belt

(iii) The effect of centrifugal force increase the tension on both tight as well as slack sides

(A) Only (i) and (iii)

(B) Only (ii) and (iii)

(C) Only (i) and (ii)

(D) All of the above (i), (ii) and (iii)

67. Which of the following statement is/are correct about Bushed bearings?

(i) It is an improved solid bearing

(ii) The outside of the bush is a driving fit in the hole of the casting

(iii) For shafts transmitting high power the frictional force itself hold the bush in position

(A) Only (i) and (iii)

(B) Only (ii) and (iii)

(C) Only (i) and (ii)

(D) All of the above (i), (ii) and (iii)

68. What is the material of the bush used in bush bearing?

(A) Gun metal (B) Steel

(C) Bronze (D) Lead

69. Which one of the following is used to hold the bush in position for shafts transmitting high power?

(A) Feather key (B) Frictional force

(C) Grub screws (D) Woodruff key

70. Which of the following is a flexible coupling?

(A) Oldham coupling (B) Muff coupling

(C) Flange coupling (D) Clamp coupling

71. Which of the following is NOT a good location for centrifugal pump?

(A) Location with sufficient vertical space should be available

(B) Wet place

(C) Location with easy access for inspection and operation

(D) Close to the source of water

72. In a submersible pump:

(A) Both motor and pump is submerged in water

(B) The motor is fixed in ground and pump in water

(C) Both motor and pump is placed in the ground

(D) The motor is fixed in water and pump in ground

73. Which part of a centrifugal pump is a wheel or a disc mounted on the drive shaft and provided with a number of curved vanes or blades?

(A) Casting (B) Suction pipe

(C) Impeller (D) Bearing

74. Water hammer pipe is due to:

(A) Improper operation (B) Sudden change in velocity

(C) Improper design (D) Sudden change in area

75. What are all the components of submersible pump that are suspended in the water?

(A) Electrical wire only (B) Pump Only

(C) Motor only (D) Both pump and motor

76. Impeller is the components of:

(A) Reciprocating pump (B) Centrifugal pump

(C) Propeller pump (D) Jet pump

77. The slip of reciprocating pump is expressed as:

(A) The sum of actual discharge and theoretical discharge

(B) The ratio of actual to the theoretical discharge

(C) The difference between actual discharge and theoretical discharge

(D) The product of actual discharge and theoretical discharge

78. Centrifugal pumps transfer energy from:

(A) Rotor to fluid (B) Rotor to draft

(C) Draft to rotor (D) Fluid to rotor

79. In reciprocating pump air vessels are used to:

(A) Increase delivery head (B) Reduce suction head

(C) Reduce acceleration head (D) Smoothen the flow

80. What will be the theoretical discharge of a double acting reciprocating pump? (stroke length = 250 mm, bore = 150 mm and crank speed = 60 rpm).

(A) 8 liters/s
(B) 2.2 liters/s
(C) 4.4 liters/s
(D) 8.8 liters/s

81. What is the primary function of a check valve in a submersible pump system?

(A) To regulate the water pressure
(B) To prevent water backflow into the well
(C) To filter out debris and sediment
(D) To control the pump's motor speed

82. Which of the following is NOT a key component of a submersible pump?

(A) Impeller
(B) Volute Casing
(C) Discharge Pipe
(D) Foot Valve

83. What is cavitation in a centrifugal pump?

(A) The formation and collapse of vapour bubbles in the pump
(B) The build-up of sediment and debris in the impeller
(C) The excessive wear and tear of the pump's bearings
(D) The overheating of the pump's motor due to continuous operation

84. Which material is commonly used for manufacturing centrifugal pumps due to its high tensile strength and abrasion resistance?

(A) Bronze
(B) Cast Iron
(C) Alloy Steel
(D) Composite Materials

85. During the reconditioning of a centrifugal pump, which component is typically inspected for wear and tear and may require replacement?

(A) Delivery Valve
(B) Pump Casing
(C) Mechanical Seal
(D) Suction Pipe

86. What type of valve is specifically designed to allow flow in one direction only?

(A) Gate Valve
(B) Ball Valve
(C) Globe Valve
(D) Check Valve

87. Which of the following is an advantage of using PTFE (polytetrafluoroethylene) as a gasket material for pumps handling corrosive fluids?

(A) High impact resistance
(B) Excellent electrical conductivity
(C) High temperature and corrosion resistance
(D) Low cost and easy availability

88. What type of pump is particularly well-suited for handling viscous fluids and slurries with suspended solids?

(A) Centrifugal Pump
(B) Progressive Cavity Pump
(C) Submersible Pump
(D) Turbine Pump

89. Which of the following is a crucial step in the installation of a submersible pump?

(A) Priming the pump before submerging it
(B) Ensuring the pump is submerged below the water level
(C) Installing the pump above ground level for easy access
(D) Connecting the pump directly to the power source without a control box

90. Which type of gland is commonly used to prevent leakage in pumps handling corrosive fluids?

(A) Packing Gland
(B) Mechanical Seal
(C) O-ring Seal
(D) Lip Seal

91. Which of the following types of ropes has highest strength to weight ratio?

(A) Manila rope
(B) Polypropylene rope
(C) Nylon rope
(D) HMPE rope

92. The bowline knot is known as the "king of knots" because:

(A) It is the strongest knot
(B) It is easy to tie and untie after being loaded
(C) It can be used to join two ropes
(D) It is resistant to wear and tear

93. In a pulley block system, the mechanical advantage is determined by:

(A) The diameter of the pulleys
(B) The number of pulleys supporting the load
(C) The length of the rope used
(D) The type of material of the rope

94. In which of the following conditions is a Woodruff key least suitable?

(A) Applications involving high-torque loads

(B) Situations requiring precise alignment

(C) Shafts with tapered ends

(D) Light-duty applications with low torque

95. Which of the following motors is preferred for variable-speed applications?

(A) Single-phase induction motor

(B) Synchronous motor

(C) Universal motor

(D) Three-phase induction motor with VFD

96. ———— are keys which are made integral with the shaft and fitted in the keyways broached in the hub.

(A) Gib head key (B) Woodruff key

(C) Splines (D) Kennedy key

97. The number of poles in a three-phase induction motor operating at a synchronous speed of 1200 RPM and a supply frequency of 60 Hz is:

(A) 2 (B) 4

(C) 6 (D) 8

98. Power factor is defined as the ratio of:

(A) Active power to apparent power

(B) Apparent power to reactive power

(C) Active power to reactive power

(D) Apparent power to active power

99. In a no-load test of an induction motor, the measured input power mainly accounts for:

(A) Core loss, windage and frictional losses

(B) Output power

(C) Rotor copper losses

(D) Stator copper losses

100. ———— is when an electromechanical energy meter records energy without any load connected or power is not being used.

(A) Speed error (B) Phase error

(C) Creeping error (D) Scale error

———————

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK