



Participant ID	
Participant Name	
Test Center Name	
Test Date	29/09/2024
Test Time	1:30 PM - 3:30 PM
Subject	Junior Engineering Assistant IV Mechanical

Section : Subject Knowledge

Q.1 In hydrodynamic bearing, when the shaft begins to rotate in clockwise direction:

- Ans A. the journal climbs the left side of the bearing without metal to metal contact
 B. the journal climbs the right side of the bearing without metal to metal contact
 C. the journal is at the centre of the bearing
 D. the journal sinks down to the bottom of the bearing

Question ID : 630680963385
Option 1 ID : 6306803778104
Option 2 ID : 6306803778103
Option 3 ID : 6306803778106
Option 4 ID : 6306803778105
Status : Answered
Chosen Option : A

Q.2 A relief valve is used to _____.

- Ans A. change the direction of rotation of a hydraulic motor
 B. regulate the rate of flow in a circuit
 C. regulate the maximum pressure in a circuit or a part of a circuit
 D. alter the speed of an actuator

Question ID : 630680971033
Option 1 ID : 6306803808374
Option 2 ID : 6306803808372
Option 3 ID : 6306803808371
Option 4 ID : 6306803808373
Status : Answered
Chosen Option : C

Q.3 Which of the following pumps has a definite amount of discharge?

- Ans A. Self-priming pump
 B. Jet pump
 C. Non-positive displacement
 D. Positive displacement

Question ID : 630680961507
Option 1 ID : 6306803770224
Option 2 ID : 6306803770223
Option 3 ID : 6306803770222
Option 4 ID : 6306803770221
Status : Answered
Chosen Option : D

Q.4 In a mechanical seal, the stationary seal face is generally made of which material to ensure durability?

- Ans A. Plastic
 B. Silicon carbide
 C. Wood
 D. Rubber

Question ID : 630680962076
 Option 1 ID : 6306803772496
 Option 2 ID : 6306803772494
 Option 3 ID : 6306803772495
 Option 4 ID : 6306803772493
 Status : Answered
 Chosen Option : B

Q.5 Which of the following statements is true about pressure head?

- Ans A. It is the vertical height of the free surface above any point in a liquid either in dynamic motion or in rest.
 B. It is the vertical height of the free surface above any point in a liquid in dynamic motion.
 C. It can be expressed as pressure per unit liquid density.
 D. It is the vertical height of the free surface above any point in a liquid at rest.

Question ID : 630680982768
 Option 1 ID : 6306803855009
 Option 2 ID : 6306803855007
 Option 3 ID : 6306803855010
 Option 4 ID : 6306803855008
 Status : Answered
 Chosen Option : D

Q.6 In MS Excel, when the cell A13 is referred, then A represents which of the following?

- Ans A. Range
 B. Column
 C. Row
 D. Row and column

Question ID : 630680772630
 Option 1 ID : 6306803028514
 Option 2 ID : 6306803028513
 Option 3 ID : 6306803028512
 Option 4 ID : 6306803028515
 Status : Answered
 Chosen Option : C

Q.7 Which of the following is an analogue of Fourier's law of heat conduction?

- Ans A. Hooke's Law
 B. Newton's Law of cooling
 C. Fick's Law of diffusion
 D. Planck's Radiation Law

Question ID : 630680205759
 Option 1 ID : 630680797850
 Option 2 ID : 630680797847
 Option 3 ID : 630680797848
 Option 4 ID : 630680797849
 Status : Answered
 Chosen Option : B

Q.8 If the permissible tensile stress (σ) for the material of the band brake is known, then the maximum tension in the band is given by:
 where w = Width of the band, and t = thickness of the band

- Ans A. $\sigma.w.t$
 B. $\sigma.\sqrt{w.t}$
 C. $\sigma.t^2$
 D. $\sigma.w^2$

Question ID : 630680227835
 Option 1 ID : 630680884018
 Option 2 ID : 630680884017
 Option 3 ID : 630680884016
 Option 4 ID : 630680884015
 Status : Answered
 Chosen Option : A

Q.9 Which of the following statements is NOT correct about hole and shaft basis systems?

- Ans A. In the hole basis system, the hole is kept constant and the size of the shaft varies.
- B. The shaft basis system is most commonly used.
- C. In the shaft basis system, the upper deviation of the shaft is zero.
- D. In the hole basis system, the low limit of the hole is the same as the basic size.

Question ID : 630680379011
 Option 1 ID : 6306801477091
 Option 2 ID : 6306801477093
 Option 3 ID : 6306801477092
 Option 4 ID : 6306801477094
 Status : Answered
 Chosen Option : B

Q.10 A critical path indicates:

- Ans A. the total project completion time
- B. the shortest possible time to accomplish a job
- C. the base cost to finish a project
- D. the maximum cost to complete a project

Question ID : 630680340963
 Option 1 ID : 6306801326295
 Option 2 ID : 6306801326293
 Option 3 ID : 6306801326294
 Option 4 ID : 6306801326296
 Status : Answered
 Chosen Option : B

Q.11 Which of the following is the most suitable reason for negative slip?

- Ans A. Short suction pipe and engine running at high speed
- B. Long suction pipe and long delivery head
- C. High delivery head and pipe carrying very viscous fluid
- D. Long suction pipe and low delivery head

Question ID : 630680991304
 Option 1 ID : 6306803889538
 Option 2 ID : 6306803889537
 Option 3 ID : 6306803889539
 Option 4 ID : 6306803889536
 Status : Answered
 Chosen Option : A

Q.12 Uniform wear theory is more approximately used in _____.

- Ans A. neither new clutches nor old clutches
- B. only old clutches
- C. both old and new clutches
- D. only new clutches

Question ID : 630680616669
 Option 1 ID : 6306802412939
 Option 2 ID : 6306802412937
 Option 3 ID : 6306802412938
 Option 4 ID : 6306802412936
 Status : Answered
 Chosen Option : B

Q.13 15 bar बॉयलर के दाब को कम करने के लिए एक सुरक्षा वाल्व की आवश्यकता होती है। यदि बॉयलर का अधिकतम स्वीकार्य कार्य दाब 8 bar है और सुरक्षा वाल्व को अधिकतम स्वीकार्य कार्य दाब के 110% पर खोलना चाहिए, तो 3 bar के पश्च दाब को ध्यान में रखते हुए, सुरक्षा वाल्व को किस दाब पर स्थापित किया जाना चाहिए?

- Ans A. 8 bar
- B. 10 bar
- C. 8.8 bar
- D. 9 bar

Question ID : 630680963456
 Option 1 ID : 6306803778383
 Option 2 ID : 6306803778386
 Option 3 ID : 6306803778384
 Option 4 ID : 6306803778385
 Status : Answered
 Chosen Option : C

Q.14 Which of the following options allows the user to configure the orientation of slides in MS PowerPoint?

Ans A. Slide Orientation

- B. Slide Master
 C. Slide Size
 D. Slide Layout

Question ID : 630680745736
Option 1 ID : 6306802923120
Option 2 ID : 6306802923122
Option 3 ID : 6306802923121
Option 4 ID : 6306802923119
Status : Answered
Chosen Option : D

Q.15 As per the principle, whenever there is a relative displacement between a set of conductors and a magnetic field, an EMF is induced on the sets of the conductor. Which of the following dynamometers work on this principle?

Ans A. Eddy current dynamometer

- B. Prony brake dynamometer
 C. Torsion dynamometer
 D. Rope brake dynamometer

Question ID : 630680227847
Option 1 ID : 630680884064
Option 2 ID : 630680884063
Option 3 ID : 630680884066
Option 4 ID : 630680884065
Status : Answered
Chosen Option : A

Q.16 Inconel is a super alloy with excellent corrosion resistance. Which of the following statements about Inconel is correct?

Ans A. It is Nickel-Chromium based super alloy.

- B. It is an alloy steel with chromium percentage more than 11%.
 C. It is a type of carbon steel with very high percentage of carbon.
 D. It is Nickel-Copper based super alloy.

Question ID : 630680191516
Option 1 ID : 630680742685
Option 2 ID : 630680742688
Option 3 ID : 630680742687
Option 4 ID : 630680742686
Status : Answered
Chosen Option : A

Q.17 Polygon law of forces is _____ method for determination of resultant of coplanar _____ forces.

Ans A. graphical; concurrent

- B. graphical; collinear
 C. graphical; non-concurrent
 D. analytical; concurrent

Question ID : 630680394557
Option 1 ID : 6306801538514
Option 2 ID : 6306801538517
Option 3 ID : 6306801538515
Option 4 ID : 6306801538516
Status : Answered
Chosen Option : A

Q.18 The steam jet refrigeration system uses the principle of boiling water below 100°C if:

Ans A. No relation with pressure

- B. the pressure on the surface is reduced below atmospheric pressure
 C. the pressure on the surface is above atmospheric pressure
 D. the pressure on the surface is equal to atmospheric pressure

Question ID : 630680219905
Option 1 ID : 630680853502
Option 2 ID : 630680853499
Option 3 ID : 630680853500
Option 4 ID : 630680853501
Status : Answered
Chosen Option : B

Q.19 What is the name of the process in which the deposition of thick coatings of hard, wear-resistant materials is done on a worn or new component surface?

- Ans A. Hard facing
 B. Physical vapour deposition
 C. Carburizing
 D. Chemical vapour deposition

Question ID : 630680191523
Option 1 ID : 630680742715
Option 2 ID : 630680742714
Option 3 ID : 630680742716
Option 4 ID : 630680742713
Status : Answered
Chosen Option : B

Q.20 Identify the grinding machine used for grinding a flat surface.

- Ans A. Swing-Frame grinder
 B. Internal grinder
 C. Surface grinder
 D. Centreless grinder

Question ID : 630680205067
Option 1 ID : 630680795133
Option 2 ID : 630680795134
Option 3 ID : 630680795132
Option 4 ID : 630680795131
Status : Answered
Chosen Option : C

Q.21 In open die forging, a process that thins out sections of the forging using a convex shaped die is called:

- Ans A. bottoming
 B. fullering
 C. cogging
 D. edging

Question ID : 630680403959
Option 1 ID : 6306801575325
Option 2 ID : 6306801575323
Option 3 ID : 6306801575324
Option 4 ID : 6306801575322
Status : Answered
Chosen Option : C

Q.22 Von Karman momentum equation for boundary layer flow is used to find the frictional drag on smooth plate for:

- Ans A. both laminar and turbulent boundary layer
 B. viscous sublayer only
 C. turbulent boundary layer only
 D. laminar boundary layer only

Question ID : 630680405874
Option 1 ID : 6306801582626
Option 2 ID : 6306801582627
Option 3 ID : 6306801582625
Option 4 ID : 6306801582624
Status : Answered
Chosen Option : C

Q.23 Which kind of steam turbine is the most frequently found in large-scale power plants?

- Ans A. Impulse turbine
 B. Pelton turbine
 C. Reaction turbine
 D. Kaplan turbine

Question ID : 630680959446
Option 1 ID : 6306803761571
Option 2 ID : 6306803761573
Option 3 ID : 6306803761572
Option 4 ID : 6306803761570
Status : Answered
Chosen Option : B

Q.24 Which of the following is a non-renewable source of energy?

- Ans A. Wind energy
 B. Natural gas
 C. Timber
 D. Solar energy

Question ID : 630680348159
Option 1 ID : 6306801354926
Option 2 ID : 6306801354927
Option 3 ID : 6306801354928
Option 4 ID : 6306801354925
Status : Answered
Chosen Option : C

Q.25 What is the primary sign that a column in rotary equipment requires maintenance?

- Ans A. Increased throughput
 B. Decreased pressure drop
 C. Reduced separation efficiency
 D. Lower operating temperature

Question ID : 630680961328
Option 1 ID : 6306803769481
Option 2 ID : 6306803769482
Option 3 ID : 6306803769484
Option 4 ID : 6306803769483
Status : Answered
Chosen Option : B

Q.26 What happens if the reflux ratio in a distillation column used in rotating machinery is increased?

- Ans A. Separation efficiency decreases.
 B. The distillate's purity reduces.
 C. Column height lowers.
 D. Energy consumption increases.

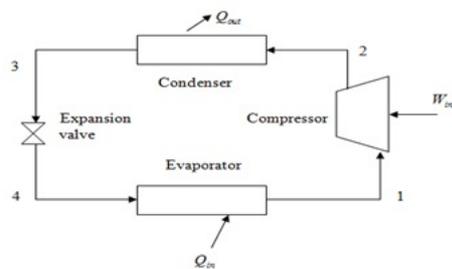
Question ID : 630680961298
Option 1 ID : 6306803769332
Option 2 ID : 6306803769329
Option 3 ID : 6306803769331
Option 4 ID : 6306803769330
Status : Answered
Chosen Option : B

Q.27 When the spark is advanced in an internal combustion engine, the work output is less, as:

- Ans A. frictional losses increase
 B. the peak pressure is low
 C. additional work is required to compress the burning gas
 D. the peak temperature is low

Question ID : 630680348121
Option 1 ID : 6306801354773
Option 2 ID : 6306801354776
Option 3 ID : 6306801354774
Option 4 ID : 6306801354775
Status : Answered
Chosen Option : C

Q.28 The given figure shows the flow diagram of _____.



- Ans A. vapour compression system
 B. cascade refrigeration system
 C. vapour absorption system
 D. aircraft refrigeration system

Question ID : 630680332163
 Option 1 ID : 6306801292098
 Option 2 ID : 6306801292100
 Option 3 ID : 6306801292097
 Option 4 ID : 6306801292099
 Status : Answered
 Chosen Option : A

Q.29 Which of the following is a demerit of closed-cycle gas turbines over open-cycle gas turbines?

- Ans A. Requirement for use of a very large air heater
 B. Improved heat transmission
 C. Greater output
 D. Higher thermal efficiency

Question ID : 630680181663
 Option 1 ID : 630680703895
 Option 2 ID : 630680703896
 Option 3 ID : 630680703897
 Option 4 ID : 630680703894
 Status : Answered
 Chosen Option : A

Q.30 Which of the following components of a wet sump lubricating system prevents foreign particles from entering the oil circulating system?

- Ans A. Oil pump
 B. Strainer
 C. Breather
 D. Regulator

Question ID : 630680348110
 Option 1 ID : 6306801354731
 Option 2 ID : 6306801354732
 Option 3 ID : 6306801354729
 Option 4 ID : 6306801354730
 Status : Answered
 Chosen Option : B

Q.31 Two concentric cylinders of radius R_1 and R_2 ($R_1 > R_2$) are placed in a closed insulated room. The radiation view factor of the inner cylinder with respect to the outer cylinder will be equal to _____.

- Ans A. 1
 B. 0
 C. $1 - (R_2/R_1)$
 D. R_2/R_1

Question ID : 630680205425
 Option 1 ID : 630680796529
 Option 2 ID : 630680796528
 Option 3 ID : 630680796530
 Option 4 ID : 630680796527
 Status : Answered
 Chosen Option : A

Q.32 When a beam is subjected to pure bending, the reciprocal of the radius of curvature is known as:

- Ans A. moment of inertia of section
 B. curvature of section
 C. section modulus
 D. flexural rigidity

Question ID : 630680504435
 Option 1 ID : 6306801971304
 Option 2 ID : 6306801971302
 Option 3 ID : 6306801971301
 Option 4 ID : 6306801971303
 Status : Answered
 Chosen Option : B

Q.33 The symbol shown below indicates:



- Ans A. combined activities of operation and transportation
 B. combined activities of operation and inspection
 C. combined activities of inspection and delay
 D. combined activities of transportation and inspection

Question ID : 630680340969
 Option 1 ID : 6306801326318
 Option 2 ID : 6306801326317
 Option 3 ID : 6306801326320
 Option 4 ID : 6306801326319
 Status : Answered
 Chosen Option : B

Q.34 What does choking in centrifugal compressor mean?

- Ans A. There is no flow of air through it.
 B. There is a reduction in mass flow rate of air through it with increase in pressure ratio.
 C. Mass flow rate of air no longer increases with decrease in pressure ratio.
 D. It denotes increased inclination of the chord with air stream.

Question ID : 630680970824
 Option 1 ID : 6306803807555
 Option 2 ID : 6306803807557
 Option 3 ID : 6306803807556
 Option 4 ID : 6306803807558
 Status : Answered
 Chosen Option : B

Q.35 The coefficient of fluctuation of energy in a flywheel is the:

- Ans A. ratio of max fluctuation of energy and min fluctuation of energy
 B. product of max fluctuation of energy and min fluctuation of energy
 C. ratio of max fluctuation of energy and work done per cycle
 D. product of max fluctuation of energy and work done per cycle

Question ID : 630680603585
 Option 1 ID : 6306802361813
 Option 2 ID : 6306802361812
 Option 3 ID : 6306802361815
 Option 4 ID : 6306802361814
 Status : Answered
 Chosen Option : C

Q.36 For a centrifugal pump, a manometric head is given by _____.

- Ans A. the vertical height of the centre line of the centrifugal pump and water surface in the tank to which water is to be delivered
 B. the head against which a centrifugal pump has to work
 C. the vertical height of the centre line of the centrifugal pump above the water surface in the tank from which water is to be lifted
 D. the sum of suction head and delivery head

Question ID : 630680966618
 Option 1 ID : 6306803790937
 Option 2 ID : 6306803790939
 Option 3 ID : 6306803790936
 Option 4 ID : 6306803790938
 Status : Answered
 Chosen Option : B

Q.37 What is a boiler's fusible plug's primary purpose?

- Ans A. Extract air from the boiler
 B. Reduce risk to boiler explosion as a result of low water
 C. Warm the feed water
 D. Regulate the steam pressure

Question ID : 630680959706
Option 1 ID : 6306803762687
Option 2 ID : 6306803762685
Option 3 ID : 6306803762688
Option 4 ID : 6306803762686
Status : Answered
Chosen Option : B

Q.38 Which of the following is a reason for minor losses in pipes?

- Ans A. Cohesive effect of the fluid
 B. Change in the velocity of the flowing fluid
 C. Friction in the flowing fluid
 D. Change in the density of the flowing fluid

Question ID : 630680981854
Option 1 ID : 6306803851339
Option 2 ID : 6306803851337
Option 3 ID : 6306803851336
Option 4 ID : 6306803851338
Status : Answered
Chosen Option : B

Q.39 Which of the following is a benefit of using dry gas seals over traditional oil-lubricated seals in rotary equipment?

- Ans A. Reduced maintenance requirements
 B. Increased vibration tolerance
 C. Higher operational temperature range
 D. Lower initial cost

Question ID : 630680962154
Option 1 ID : 6306803772807
Option 2 ID : 6306803772808
Option 3 ID : 6306803772806
Option 4 ID : 6306803772805
Status : Answered
Chosen Option : C

Q.40 Which of the following describes a gas turbine's main function in a system for producing electricity?

- Ans A. Generating mechanical power
 B. Lowering emissions
 C. Compressing air
 D. Producing heat

Question ID : 630680959374
Option 1 ID : 6306803761281
Option 2 ID : 6306803761282
Option 3 ID : 6306803761283
Option 4 ID : 6306803761280
Status : Answered
Chosen Option : A

Q.41 In a Rankine cycle, a pump is used to pressurise the water received from the:

- Ans A. turbine
 B. condenser
 C. evaporator
 D. steam generator

Question ID : 630680403964
Option 1 ID : 6306801575343
Option 2 ID : 6306801575344
Option 3 ID : 6306801575345
Option 4 ID : 6306801575342
Status : Answered
Chosen Option : B

Q.42 A thin-walled spherical shell is subjected to an internal pressure. If the diameter of the shell is increased by 10% and the thickness is reduced by 10%, with the internal pressure remaining same the percentage change in circumferential (hoop) stress is _____.

- Ans A. 18
 B. 10
 C. 0
 D. 22

Question ID : 630680504457
Option 1 ID : 6306801971390
Option 2 ID : 6306801971391
Option 3 ID : 6306801971389
Option 4 ID : 6306801971392
Status : Answered
Chosen Option : A

Q.43 A homogeneous wall of area A and thickness t has left and right hand surface temperatures of 10 °C and 30 °C, respectively. What will be the temperature at the one-fourth distance from the lower temperature wall?

- Ans A. 12.5 °C
 B. 15 °C
 C. 20 °C
 D. Data insufficient

Question ID : 630680205738
Option 1 ID : 630680797763
Option 2 ID : 630680797764
Option 3 ID : 630680797765
Option 4 ID : 630680797766
Status : Answered
Chosen Option : D

Q.44 Which of the following is known as UDL?

- Ans A. Load acting over some area, uniformly varied along the axis of beam
 B. Load acting over a point
 C. Load acting over some area, uniformly distributed along the axis of beam
 D. Concentrated load

Question ID : 630680504397
Option 1 ID : 6306801971152
Option 2 ID : 6306801971149
Option 3 ID : 6306801971151
Option 4 ID : 6306801971150
Status : Answered
Chosen Option : C

Q.45 The maximum tension allowed to a belt drive during power transmission is 360 kN. Then for maximum power transmission, centrifugal tension must be equal to:

- Ans A. 120 kN-m
 B. 120 kN
 C. 180 kN-m
 D. 360 kN

Question ID : 630680509143
Option 1 ID : 6306801989867
Option 2 ID : 6306801989869
Option 3 ID : 6306801989870
Option 4 ID : 6306801989868
Status : Answered
Chosen Option : A

Q.46 _____ is used to mount the cutting tool in a milling machine.

- Ans A. Arbor
 B. Spindle
 C. Saddle
 D. Table

Question ID : 630680504604
Option 1 ID : 6306801971979
Option 2 ID : 6306801971980
Option 3 ID : 6306801971977
Option 4 ID : 6306801971978
Status : Answered
Chosen Option : A

Q.47 Which of the following is a compound machine?

- Ans A. Wheel
 B. Scissor
 C. Lever
 D. Pulley

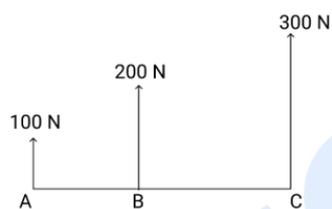
Question ID : 630680394588
 Option 1 ID : 6306801538641
 Option 2 ID : 6306801538638
 Option 3 ID : 6306801538639
 Option 4 ID : 6306801538640
 Status : Answered
 Chosen Option : A

Q.48 Which of the following lubricant properties is required to be high?

- Ans A. Flash point
 B. Chemical reactivity
 C. Oxidation ability
 D. Viscosity

Question ID : 630680219888
 Option 1 ID : 630680853431
 Option 2 ID : 630680853432
 Option 3 ID : 630680853434
 Option 4 ID : 630680853433
 Status : Answered
 Chosen Option : A

Q.49 Three like parallel forces 100 N, 200 N and 300 N are acting at points A, B and C, respectively, on a straight line ABC. What will be the resultant of these forces?



- Ans A. 400 N
 B. 500 N
 C. 600 N
 D. 300 N

Question ID : 630680393886
 Option 1 ID : 6306801535856
 Option 2 ID : 6306801535855
 Option 3 ID : 6306801535854
 Option 4 ID : 6306801535857
 Status : Answered
 Chosen Option : C

Q.50 On principal planes, shear stresses are _____.

- Ans A. unity
 B. minimum
 C. maximum
 D. zero

Question ID : 630680217944
 Option 1 ID : 630680845686
 Option 2 ID : 630680845685
 Option 3 ID : 630680845684
 Option 4 ID : 630680845683
 Status : Answered
 Chosen Option : D

Q.51 Which of the following processes is also known as Parkerizing?

- Ans A. A process of placing a thin Phosphate coating
 B. A process of placing a thin Silver Iodide coating
 C. A process of placing a thin Zink coating
 D. A process of cleaning rusted metal surfaces

Question ID : 630680191513
Option 1 ID : 630680742673
Option 2 ID : 630680742675
Option 3 ID : 630680742674
Option 4 ID : 630680742676
Status : Answered
Chosen Option : A

Q.52 Which of the following cutting fluids is used for high carbon steel cutting tools?

- Ans A. Mixed oil
 B. Soluble oil
 C. Straight oil
 D. Water

Question ID : 630680211301
Option 1 ID : 630680819351
Option 2 ID : 630680819354
Option 3 ID : 630680819352
Option 4 ID : 630680819353
Status : Answered
Chosen Option : B

Q.53 Which of the following factors should NOT be considered for the selection of the factor of safety?

- Ans A. Uncertainty about material properties
 B. External appearance of the product
 C. Failure may result in costly repairs
 D. Possibility of injury due to the failure of the designed part

Question ID : 630680217938
Option 1 ID : 630680845661
Option 2 ID : 630680845662
Option 3 ID : 630680845660
Option 4 ID : 630680845659
Status : Answered
Chosen Option : B

Q.54 Which of the following types of liquid is appropriate for sight glasses?

- Ans A. Corrosive liquid
 B. Clean liquid
 C. Dirty liquid
 D. Viscous liquid

Question ID : 630680379087
Option 1 ID : 6306801477398
Option 2 ID : 6306801477395
Option 3 ID : 6306801477396
Option 4 ID : 6306801477397
Status : Answered
Chosen Option : D

Q.55 The molecular structure of the straight-run gasoline is changed by _____.

- Ans A. reforming
 B. blending
 C. boiling
 D. refining

Question ID : 630680382386
Option 1 ID : 6306801490459
Option 2 ID : 6306801490462
Option 3 ID : 6306801490460
Option 4 ID : 6306801490461
Status : Answered
Chosen Option : C

Q.56 Which of the following is NOT true about Magnalium?

- Ans A. It is an alloy of aluminium, copper and magnesium.
 B. It contains 60% to 70% aluminium.
 C. It does not contain carbon.
 D. It contains magnesium as the second prime constituent.

Question ID : 630680198758
Option 1 ID : 630680770991
Option 2 ID : 630680770992
Option 3 ID : 630680770994
Option 4 ID : 630680770993
Status : Answered
Chosen Option : C

Q.57 In case of a double-acting reciprocating compressor, the compressor supplies the refrigerant of volume:

- Ans A. equal to that in case of a single-acting compressor
 B. more than that in case of a single-acting compressor
 C. very less than that in case of a single-acting compressor
 D. less than that in case of a single-acting compressor

Question ID : 630680506394
Option 1 ID : 6306801979090
Option 2 ID : 6306801979089
Option 3 ID : 6306801979092
Option 4 ID : 6306801979091
Status : Answered
Chosen Option : B

Q.58 If an application bearing is subjected to radial as well as axial load, which type of rolling contact bearing can serve the purpose?

- Ans A. Thrust ball
 B. Cylindrical roller
 C. Needle roller
 D. Tapered roller

Question ID : 630680963351
Option 1 ID : 6306803777969
Option 2 ID : 6306803777967
Option 3 ID : 6306803777968
Option 4 ID : 6306803777970
Status : Answered
Chosen Option : D

Q.59 Dry gas seals operate by creating a thin film of gas between the seal faces. This film is maintained by:

- Ans A. thermal expansion
 B. centrifugal force
 C. magnetic attraction
 D. hydrodynamic pressure

Question ID : 630680962161
Option 1 ID : 6306803772844
Option 2 ID : 6306803772841
Option 3 ID : 6306803772843
Option 4 ID : 6306803772842
Status : Answered
Chosen Option : D

Q.60 Identify the term used to designate a process by which a zinc coating is produced on iron or low-carbon steel by immersion in a molten bath of zinc.

- Ans A. Anodising
 B. Galvanising
 C. Parkerising
 D. Calorising

Question ID : 630680205064
Option 1 ID : 630680795120
Option 2 ID : 630680795119
Option 3 ID : 630680795122
Option 4 ID : 630680795121
Status : Answered
Chosen Option : B

Q.61 The Indian IT Act is also known as:

- Ans A. Indian Travel Act, 2000
 B. Information Technology Act, 2000
 C. Indian Transfer Act, 2000
 D. International Travel Act, 2000

Question ID : 630680767118
Option 1 ID : 6306803006754
Option 2 ID : 6306803006755
Option 3 ID : 6306803006756
Option 4 ID : 6306803006753
Status : Answered
Chosen Option : B

Q.62 Which of the following tools is NOT used in Total Quality Management (TQM)?

- Ans A. Scatter diagram
 B. Queuing model
 C. Control chart
 D. Histogram

Question ID : 630680340959
Option 1 ID : 6306801326277
Option 2 ID : 6306801326280
Option 3 ID : 6306801326279
Option 4 ID : 6306801326278
Status : Answered
Chosen Option : B

Q.63 The purpose of the lock-out/tag-out procedure is to:

- Ans A. identify personal items to avoid theft
 B. slow down the work so that technicians are less stressed
 C. improve productivity on the job
 D. secure harmful energy sources so as to prevent injury

Question ID : 630680340947
Option 1 ID : 6306801326232
Option 2 ID : 6306801326231
Option 3 ID : 6306801326229
Option 4 ID : 6306801326230
Status : Answered
Chosen Option : D

Q.64 Which of the following methods is NOT used for fatigue testing?

- Ans A. RR Moore test
 B. Bend test
 C. Rotating beam test
 D. Shore scleroscope test

Question ID : 630680198746
Option 1 ID : 630680770944
Option 2 ID : 630680770943
Option 3 ID : 630680770945
Option 4 ID : 630680770946
Status : Answered
Chosen Option : D

Q.65 Which type of mechanical seal is typically used in applications where the pump handles hazardous or toxic fluids?

- Ans A. Balanced seal
 B. Pusher seal
 C. Bellows seal
 D. Cartridge seal

Question ID : 630680962095
Option 1 ID : 6306803772572
Option 2 ID : 6306803772569
Option 3 ID : 6306803772570
Option 4 ID : 6306803772571
Status : Answered
Chosen Option : B

Q.66 An opaque plain surface has irradiation, radiosity and emissive power as 25, 18 and 15 W/m^2 , respectively. What is the emissivity of a given surface?

- Ans
- A. 0.88
 - B. 0.75
 - C. 0.94
 - D. 0.7

Question ID : 630680205430
 Option 1 ID : 630680796548
 Option 2 ID : 630680796549
 Option 3 ID : 630680796550
 Option 4 ID : 630680796547
 Status : Answered
 Chosen Option : A

Q.67 The fatigue strength of a material does NOT depend on which of the following factors?

- Ans
- A. Size
 - B. Temperature
 - C. Surface finish
 - D. Modulus of elasticity

Question ID : 630680217956
 Option 1 ID : 630680845732
 Option 2 ID : 630680845733
 Option 3 ID : 630680845731
 Option 4 ID : 630680845734
 Status : Answered
 Chosen Option : D

Q.68 Which of the following is a Dirichlet Boundary condition for heat conduction?

- Ans
- A. Insulated boundary condition
 - B. Specified temperature boundary condition
 - C. Specified heat flux boundary condition
 - D. Constant temperature convective boundary condition

Question ID : 630680205733
 Option 1 ID : 630680797743
 Option 2 ID : 630680797745
 Option 3 ID : 630680797746
 Option 4 ID : 630680797744
 Status : Answered
 Chosen Option : C

Q.69 Which of the following is NOT an edition of the Windows operating system?

- Ans
- A. Windows XP
 - B. Windows 10
 - C. Windows 11
 - D. Windows Office

Question ID : 630680751392
 Option 1 ID : 6306802944996
 Option 2 ID : 6306802944994
 Option 3 ID : 6306802944995
 Option 4 ID : 6306802944997
 Status : Answered
 Chosen Option : D

Q.70 In which of the following turbines does all the pressure drops occur in the nozzle and there is no pressure drop of steam passing through the blades?

- Ans
- A. Impulse turbine
 - B. Kaplan turbine
 - C. Reaction turbine
 - D. Impulse-reaction turbine

Question ID : 630680403994
 Option 1 ID : 6306801575463
 Option 2 ID : 6306801575465
 Option 3 ID : 6306801575462
 Option 4 ID : 6306801575464
 Status : Answered
 Chosen Option : A

Q.71 What element from the list below is NOT taken into account when inspecting the threads?

- Ans A. Major diameter
 B. Effective diameter
 C. Minor diameter
 D. Functional diameter

Question ID : 630680379126
Option 1 ID : 6306801477551
Option 2 ID : 6306801477553
Option 3 ID : 6306801477552
Option 4 ID : 6306801477554
Status : Answered
Chosen Option : D

Q.72 Fourier's law is _____.

- Ans A. a scalar expression indicating that the heat flow rate is in the direction of increasing temperature
 B. a vector expression indicating that the heat flow rate is in the direction of increasing temperature
 C. a vector expression indicating that the heat flow rate is in the direction of decreasing temperature
 D. a scalar expression indicating that the heat flow rate is in the direction of decreasing temperature

Question ID : 630680205537
Option 1 ID : 630680796970
Option 2 ID : 630680796969
Option 3 ID : 630680796967
Option 4 ID : 630680796968
Status : Answered
Chosen Option : D

Q.73 SI unit of acceleration is _____.

- Ans A. Cm/min²
 B. Cm/s²
 C. m/s²
 D. m/min²

Question ID : 630680332148
Option 1 ID : 6306801292040
Option 2 ID : 6306801292039
Option 3 ID : 6306801292037
Option 4 ID : 6306801292038
Status : Answered
Chosen Option : C

Q.74 A line shaft is supported between bearings with one overhung pulley. The pulley on the line shaft is 1.0 m in diameter and has belt tensions as 5.4 kN and 1.8 kN vertical. What is the torque transmitted by the shaft?

- Ans A. 5400 Nm
 B. 1800 Nm
 C. 3600 Nm
 D. 900 Nm

Question ID : 630680217987
Option 1 ID : 630680845855
Option 2 ID : 630680845857
Option 3 ID : 630680845856
Option 4 ID : 630680845858
Status : Answered
Chosen Option : B

Q.75 For which of the following reasons are mechanical strain gauges NOT suitable in case of dynamic strains?

- Ans A. Large working space
 B. Inertia and frictional effects
 C. More gauge length
 D. Robust instrument

Question ID : 630680378998
Option 1 ID : 6306801477042
Option 2 ID : 6306801477041
Option 3 ID : 6306801477039
Option 4 ID : 6306801477040
Status : Answered
Chosen Option : B

Q.76 एक कॉस्मेटिक उत्पाद 12% की छूट पर उपलब्ध है। यदि दुकानदार ₹1936 लेता है, तो उसका अंकित मूल्य (₹ में) ज्ञात कीजिए।

- Ans
- A. 2205
 - B. 2200
 - C. 2212
 - D. 2215

Question ID : 630680948614
 Option 1 ID : 6306803719228
 Option 2 ID : 6306803719228
 Option 3 ID : 6306803719230
 Option 4 ID : 6306803719231
 Status : Answered
 Chosen Option : B

Q.77 आकाश अकेले एक कार्य को 14 दिनों में पूरा कर सकता है और प्रकाश उसी कार्य को अकेले 8 दिनों में पूरा कर सकता है। उन्होंने एक साथ कार्य करना शुरू किया, लेकिन आकाश को कार्य पूरा होने से 4 दिन पहले कार्य छोड़ना पड़ा। कार्य कितने दिनों में पूरा होगा?

- Ans
- A. $6\frac{6}{11}$ दिन
 - B. $6\frac{9}{11}$ दिन
 - C. $6\frac{11}{11}$ दिन
 - D. $6\frac{7}{11}$ दिन

Question ID : 630680900488
 Option 1 ID : 6306803527720
 Option 2 ID : 6306803527718
 Option 3 ID : 6306803527719
 Option 4 ID : 6306803527717
 Status : Answered
 Chosen Option : A

Q.78 एक लड़का 13 km/h की चाल से स्कूल जाता है। वह 7 km/h की चाल से वापस आता है। उसे स्कूल जाने और स्कूल से वापस आने में कुल 3 घंटे लगते हैं। उसके घर और स्कूल के बीच की दूरी (km में) ज्ञात कीजिए।

- Ans
- A. 13.6
 - B. 13.9
 - C. 13.5
 - D. 13.7

Question ID : 630680948641
 Option 1 ID : 6306803719336
 Option 2 ID : 6306803719339
 Option 3 ID : 6306803719338
 Option 4 ID : 6306803719337
 Status : Answered
 Chosen Option : A

Q.79 If $57.3507 = 5 \times A + \frac{7}{B} + 3 \times C + \frac{5}{D} + 7 \times E$, then the value of $5 \times A + 3 \times B + 6 \times C + D + 3 \times E$ is:

- Ans
- A. 53.603
 - B. 213.003
 - C. 153.6003
 - D. 55.6003

Question ID : 63068076389
 Option 1 ID : 630680295654
 Option 2 ID : 630680295653
 Option 3 ID : 630680295656
 Option 4 ID : 630680295655
 Status : Answered
 Chosen Option : D

Q.80 The HCF of $\frac{2}{3}$, $\frac{8}{9}$, $\frac{64}{81}$ and $\frac{10}{27}$ is:

- Ans
- A. $\frac{18}{81}$
 - B. $\frac{2}{27}$
 - C. $\frac{2}{81}$
 - D. $\frac{2}{3}$

Question ID : 630680137336
 Option 1 ID : 630680531940
 Option 2 ID : 630680531941
 Option 3 ID : 630680531939
 Option 4 ID : 630680531938
 Status : Answered
 Chosen Option : C

Q.81 एक बालिका 30 m भुजा वाले किसी वर्गाकार मैदान के चारों ओर दौड़ने में कितना समय लेगी, यदि वह 8km/h की चाल से दौड़ती हो?

- Ans
- A. 58 sec
 - B. 56 sec
 - C. 55 sec
 - D. 54 sec

Question ID : 630680107415
 Option 1 ID : 630680417027
 Option 2 ID : 630680417026
 Option 3 ID : 630680417025
 Option 4 ID : 630680417024
 Status : Answered
 Chosen Option : D

Q.82 एक कंपनी द्वारा अर्जित किया गया लाभ, कंपनी के तीन साझेदारों के बीच 19 : 10 : 7 के अनुपात में विभाजित किया जाता है। यदि सबसे छोटे और सबसे बड़े हिस्से के बीच ₹17485 का अंतर है, तो कंपनी का कुल लाभ ज्ञात कीजिए।

- Ans
- A. 52403
 - B. 52364
 - C. 52455
 - D. 52501

Question ID : 630680948627
 Option 1 ID : 6306803719281
 Option 2 ID : 6306803719282
 Option 3 ID : 6306803719280
 Option 4 ID : 6306803719283
 Status : Answered
 Chosen Option : C

Q.83 यदि 4, 6, 60, और y समानुपात में हैं, तो y का मान ज्ञात कीजिए।

- Ans
- A. 90
 - B. 80
 - C. 96
 - D. 93

Question ID : 630680948622
 Option 1 ID : 6306803719260
 Option 2 ID : 6306803719263
 Option 3 ID : 6306803719261
 Option 4 ID : 6306803719262
 Status : Answered
 Chosen Option : A

Q.84 एक व्यक्ति अपनी मासिक आय के 20% की बचत करता है। यदि उसकी मासिक आय 30% बढ़ जाती है, तो वह पिछली बचत से 20% अधिक की बचत करता है। उसके व्यय में प्रतिशत वृद्धि क्या होगी?

- Ans
- A. 26
 - B. 42.25
 - C. 39
 - D. 32.5

Question ID : 630680591672
 Option 1 ID : 6306802315157
 Option 2 ID : 6306802315158
 Option 3 ID : 6306802315156
 Option 4 ID : 6306802315155
 Status : Answered
 Chosen Option : D

Q.85 6 संख्याओं का योगफल 612 है। उनका औसत ज्ञात कीजिए।

- Ans
- A. 102
 - B. 101
 - C. 103
 - D. 100

Question ID : 630680551902
 Option 1 ID : 6306802157833
 Option 2 ID : 6306802157834
 Option 3 ID : 6306802157835
 Option 4 ID : 6306802157836
 Status : Answered
 Chosen Option : A

Q.86 एक गांव की 96% जनसंख्या 24120 है। गांव की कुल जनसंख्या कितनी है?

- Ans
- A. 33381
 - B. 26765
 - C. 26061
 - D. 25125

Question ID : 630680573974
 Option 1 ID : 6306802244767
 Option 2 ID : 6306802244766
 Option 3 ID : 6306802244765
 Option 4 ID : 6306802244764
 Status : Answered
 Chosen Option : D

Q.87 नवजोत ने ₹26200 को अर्ध-वार्षिक रूप से चक्रवृद्धित होने वाली 20% वार्षिक ब्याज दर पर 1 वर्ष के लिए निवेश किया। उसके द्वारा प्राप्त मिश्रधन कितना होगा?

- Ans
- A. ₹31448
 - B. ₹31732
 - C. ₹31702
 - D. ₹30891

Question ID : 630680886102
 Option 1 ID : 6306803470095
 Option 2 ID : 6306803470094
 Option 3 ID : 6306803470092
 Option 4 ID : 6306803470093
 Status : Answered
 Chosen Option : C

Q.88 $x^2 + y^2$ का मान ज्ञात कीजिए, दिया गया है कि $x = 3 + \sqrt{4}, y = 3 - \sqrt{4}$ है।

- Ans
- A. 68
 - B. 34
 - C. 26
 - D. 18

Question ID : 630680704976
 Option 1 ID : 6306802761591
 Option 2 ID : 6306802761592
 Option 3 ID : 6306802761590
 Option 4 ID : 6306802761593
 Status : Answered
 Chosen Option : C

Q.89 ₹1200 प्रति सैकड़ा की दर से 100 शरीफा खरीदे गए और ₹800 के लाभ पर बेच दिए गए। प्रति दर्जन शरीफा का विक्रय मूल्य (₹ में) ज्ञात कीजिए।

- Ans
- A. 245
 - B. 235
 - C. 240
 - D. 250

Question ID : 630680907471
 Option 1 ID : 6306803554984
 Option 2 ID : 6306803554983
 Option 3 ID : 6306803554982
 Option 4 ID : 6306803554985
 Status : Answered
 Chosen Option : C

Q.90 कितनी अवधि में (वर्षों में) ₹1800 पर 4% वार्षिक ब्याज दर पर ₹360 का साधारण ब्याज मिलेगा?

- Ans
- A. 5
 - B. 6
 - C. 4
 - D. 10

Question ID : 630680612217
 Option 1 ID : 6306802395600
 Option 2 ID : 6306802395602
 Option 3 ID : 6306802395603
 Option 4 ID : 6306802395601
 Status : Answered
 Chosen Option : A

Section : General Awareness

Q.91 Which statement about the 16th edition of Exercise NOMADIC ELEPHANT is correct?

- Ans
- A. The previous edition was held in India.
 - B. The Indian contingent is from the SIKKIM SCOUTS.
 - C. It takes place from 3rd to 16th July 2024.
 - D. The Mongolian contingent is the 150 Quick Reaction Force Battalion.

Question ID : 630680978694
 Option 1 ID : 6306803838762
 Option 2 ID : 6306803838760
 Option 3 ID : 6306803838759
 Option 4 ID : 6306803838761
 Status : Answered
 Chosen Option : B

Q.92 निम्नलिखित में से किसने राष्ट्रीय बैडमिंटन चैंपियनशिप 2023 में महिला एकल का खिताब जीता?

- Ans
- A. तन्वी लाड
 - B. अनमोल खरब
 - C. स्नेहा पुरी
 - D. पीवी सिंधु

Question ID : 630680943943
 Option 1 ID : 6306803700605
 Option 2 ID : 6306803700603
 Option 3 ID : 6306803700606
 Option 4 ID : 6306803700604
 Status : Answered
 Chosen Option : D

Q.93 भारत में एकल नागरिकता का प्रावधान किस संविधान से लिया गया है ?

- Ans
- A. ब्रिटिश संविधान
 - B. ऑस्ट्रेलिया के संविधान
 - C. कनाडा के संविधान
 - D. US संविधान

Question ID : 630680944410
 Option 1 ID : 6306803702443
 Option 2 ID : 6306803702446
 Option 3 ID : 6306803702444
 Option 4 ID : 6306803702445
 Status : Answered
 Chosen Option : A

Q.94 15 से 18 अप्रैल 2024 तक, कौन-से चीफ ऑफ आर्मी स्टाफ (COAS) उज्बेकिस्तान गणराज्य की यात्रा पर रवाना हुए, जो भारत और उज्बेकिस्तान गणराज्य के बीच रक्षा सहयोग को मजबूत करने में एक महत्वपूर्ण कदम है?

- Ans
- A. लेफ्टिनेंट जनरल उपेन्द्र द्विवेदी
 - B. जनरल सुरजीत सिंह
 - C. जनरल मनोज पांडे
 - D. लेफ्टिनेंट जनरल अशोक वर्मा

Question ID : 630680943971
Option 1 ID : 6306803700716
Option 2 ID : 6306803700717
Option 3 ID : 6306803700715
Option 4 ID : 6306803700718
Status : Answered
Chosen Option : D

Q.95 2011 की जनगणना के अनुसार, भारत में सबसे कम आबादी वाला राज्य, निम्नलिखित में से कौन-सा था?

- Ans
- A. उत्तराखंड
 - B. सिक्किम
 - C. गोवा
 - D. नागालैंड

Question ID : 630680957791
Option 1 ID : 6306803755167
Option 2 ID : 6306803755165
Option 3 ID : 6306803755164
Option 4 ID : 6306803755166
Status : Answered
Chosen Option : B

Q.96 कोसी नदी भारत के निम्नलिखित में से किस राज्य से बहती है?

- Ans
- A. पश्चिम बंगाल
 - B. बिहार
 - C. तेलंगाना
 - D. मध्य प्रदेश

Question ID : 630680957749
Option 1 ID : 6306803754999
Option 2 ID : 6306803754997
Option 3 ID : 6306803754996
Option 4 ID : 6306803754998
Status : Answered
Chosen Option : B

Q.97 वर्ष 2023 के लिए, भ्रष्टाचार बोध सूचकांक (CPI) पर भारत कौन-से स्थान पर था?

- Ans
- A. 100वें
 - B. 93वें
 - C. 97वें
 - D. 85वें

Question ID : 630680978720
Option 1 ID : 6306803838866
Option 2 ID : 6306803838864
Option 3 ID : 6306803838865
Option 4 ID : 6306803838863
Status : Answered
Chosen Option : B

Q.98 भारतीय संविधान के 7वें मौलिक अधिकार को किस संवैधानिक संशोधन के माध्यम से भाग III से निरस्त कर दिया गया था?

- Ans
- A. 44वाँ संशोधन, 1978
 - B. 42वाँ संशोधन, 1976
 - C. 44वाँ संशोधन, 1976
 - D. 42वाँ संशोधन, 1978

Question ID : 630680944408
Option 1 ID : 6306803702438
Option 2 ID : 6306803702435
Option 3 ID : 6306803702437
Option 4 ID : 6306803702436
Status : Answered
Chosen Option : B

Q.99 पुदुचेरी और कराईकल की दक्षिणी बस्तियों में कौन-सी भाषा प्रमुख रूप से प्रचलित है?

- Ans
- A. फ्रेंच
 - B. तेलुगु
 - C. तमिल
 - D. मलयालम

Question ID : 630680945329
Option 1 ID : 6306803706092
Option 2 ID : 6306803706089
Option 3 ID : 6306803706091
Option 4 ID : 6306803706090
Status : Answered
Chosen Option : D

Q.100 भोजन में पोषक तत्वों के संबंध में निम्नलिखित में से कौन-सा/से कथन सही है/हैं?

- A. आवश्यक पोषक तत्वों की लंबे समय तक कमी से होने वाले रोगों को अभावजन्य रोग (deficiency disease) कहा जाता है।
B. विटामिन 'C' की कमी से रिकेट्स होता है।

- Ans
- A. A और B दोनों
 - B. केवल A
 - C. न तो A और न ही B
 - D. केवल B

Question ID : 630680933259
Option 1 ID : 6306803657888
Option 2 ID : 6306803657886
Option 3 ID : 6306803657889
Option 4 ID : 6306803657887
Status : Answered
Chosen Option : B

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