TCSiON CAE

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	PC22125 MECHANICAL ENGINEERING AEE 2212
Subject Name :	PC22125 MECHANICAL ENGINEERING AEE2212
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 630680218946 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What will be the least force that will move a body of weight "W" and which is resting on a horizontal plane if the angle of friction is "X"?

Options :

1. ✖ WsinX
2. ✖ WcosX
3. ✔ WtanX
4. ✖ WcotX

Question Number : 2 Question Id : 630680218947 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The screw in a screw jack is subjected to _____.

Options :

1. ✖ only torsional moment
2. ✖ only compressive force

3. ✖ only torsional moment and compressive force
4. ✔ torsional moment, compressive force and bending moment

Question Number : 3 Question Id : 630680218948 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

What condition has to be satisfied for a truss to be statistically determinate?

Note: here "m" refers to the number of members, "J" refers to the number of joints, "r" refers to the number of reaction.

Options :

1. ✖ $m = 2j + r$
2. ✔ $j = 0.5(m + r)$
3. ✖ $r = 2j + m$
4. ✖ $m = j - 2r$

Question Number : 4 Question Id : 630680218949 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A pebble in thrown upwards vertically and in 10 sec it returns to the ground. Find the initial velocity of projection.

Options :

1. ✔ 49.05 m/s
2. ✖ 39.43 m/s
3. ✖ 47.36 m/s
4. ✖ 35 m/s

Question Number : 5 Question Id : 630680218950 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A ball with velocity V and mass m is made to strike another ball of the same mass. The balls are made of perfectly elastic material. The velocity of both the balls after impact will be:

Options :

1. ✖ 0
2. ✖ V
3. ✔ V/2
4. ✖ V/4

Question Number : 6 Question Id : 630680218951 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Two balls A and B move with a velocity of 40 m/s and 20 m/s in the same direction. Both the balls are inelastic spheres and have mass of 10 kg. Determine the loss in kinetic energy in joules when they collide.

Options :

1. ✖ 500
2. ✖ 100
3. ✖ 50
4. ✔ 1000

Question Number : 7 Question Id : 630680218952 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The ratio of the limiting frictional force and the normal reaction is referred to as the coefficient of static friction.
B) For bodies in motion the frictional force developed is less than the limiting frictional force.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 8 Question Id : 630680218953 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Newton's second law approach to kinetics involves inertial forces and involves an equilibrium state of moving particles.
B) D' Alembert's principle approach to kinetics is a dynamic equilibrium equation.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 9 Question Id : 630680218954 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) The magnitude of angle of repose and angle of friction have the same value.
B) Angle of repose is independent of the weight of the body.
C) Frictional force generated between two rubbing surfaces is independent of the area of contact.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✖ Only A and C are true
4. ✔ A, B and C are true

Question Number : 10 Question Id : 630680218955 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Truss	1) Newton's second law
B) Inertia	2) Ns
C) Momentum	3) Statically determinate
D) Impulse	4) Newton's first law

Options :

1. ✖ A-2, B-4, C-1, D-3
2. ✖ A-3, B-1, C-4, D-2
3. ✔ A-3, B-4, C-1, D-2
4. ✖ A-3, B-2, C-1, D-4

Question Number : 11 Question Id : 630680218956 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the correct pairs:

A) Friction – independent of load

B) Friction – increases with increase in temperature

C) Coefficient Kinetic friction – less than coefficient of static friction

D) Work by force - $F \times s \cos\theta$, where F is the force and s is the displacement

Options :

1. ✔ C, D
2. ✖ A, B, D
3. ✖ A, B, C
4. ✖ A, B

Question Number : 12 Question Id : 630680218957 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the order of deficient truss, perfect Truss, Redundant Truss:

A) $m + 3 < 2j$

B) $m + 3 = 2j$

C) $m + 3 > 2j$ where "m " is the member and "j " is the joint.

Options :

1. ✖ C, B, A
2. ✖ C, A, B
3. ✖ B, A, C
4. ✔ A, B, C

Question Number : 13 Question Id : 630680218958 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

Arrange the following belts on the basis of the distances between the two pulley from the longest to the shortest:

A) V-belt
B) Flat belt
C) Circular belt

Options :

1. ✖ A, B, C
2. ✔ C, B, A
3. ✖ B, A, C
4. ✖ C, A, B

Question Number : 14 Question Id : 630680218959 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A steel rod of 10 mm diameter and 3.14 m long is subjected to an axial pull of 10 N. Determine the elongation of the rod if the elastic modulus is $10^2 N/mm^2$.

Options :

1. ✖ .02 m
2. ✖ 0.4 m
3. ✖ 0.04 m

4. ✔ 0.004 m

Question Number : 15 Question Id : 630680218960 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In case of thin cylindrical shells which of the following will have a greater value if the force, thickness and diameter are constant?

Options :

1. ✔ Circumferential Stress
2. ✖ Longitudinal Stress
3. ✖ Maximum Shear Stress
4. ✖ Both A and B

Question Number : 16 Question Id : 630680218961 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Moment of inertia of a solid sphere of radius with the axis of rotation along it diameter is _____.

Options :

1. ✖ $(MR^2)/2$
2. ✖ MR^2
3. ✔ $2/5\ (MR^2)$
4. ✖ $2/3\ (MR^2)$

Question Number : 17 Question Id : 630680218962 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Column whose length is more the thirty times its least lateral dimension is classified as a _____.

Options :

1. ✖ short column
2. ✖ medium column
3. ✔ long column
4. ✖ can be long or short

Question Number : 18 Question Id : 630680218963 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The ratio of young's modulus of a material to its density is called as _____.

Options :

1. ✖ engineering stress
2. ✖ true strain
3. ✖ strain modulus
4. ✔ specific stiffness

Question Number : 19 Question Id : 630680218964 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A rebound or dynamic hardness is used to measure hardness of the material in which of the following hardness tests?

Options :

1. ✖ Mohs Hardness Test
2. ✔ Scleroscope Test
3. ✖ Vickers Hardness Test
4. ✖ Rockwell Hardness Test

Question Number : 20 Question Id : 630680218965 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Concrete has a Poisson' ratio of 0.2.
B) Steel is more elastic than rubber.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 21 Question Id : 630680218966 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The relation between effective length and actual length for a column hinged on one end and fixed on the other is Le = L where Le is effective length and L is the actual length.
B) Euler's formula is valid for only long columns which fail by buckling.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 22 Question Id : 630680218967 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) The point on the beam where the bending moment changes it sign is called as the point of contraflexure.
B) If shear force in the shear force diagram acquires a zero value it indicates that the bending moment curve will acquire the lowest value at that section.
C) While deriving shear stress equation shearing stress is assumed to be uniform across the width of the cross section.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✔ Only A and C are true
4. ✖ A, B and C are true

Question Number : 23 Question Id : 630680218968 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Engineering stress	1) ratio of change in dimension to original dimension.
B) True stress	2) ratio of change in instantaneous elongation to instantaneous dimensions.
C) Engineering strain	3) ratio of load to initial area of cross section.
D) True Strain	4) ratio of load to instantaneous cross sectional area.

Options :

1. ✔ A)-3, B)-4, C)-1, D)-2
2. ✖ A)-3, B)-2, C)-1, D)-4
3. ✖ A)-4, B)-2, C)-3, D)-1
4. ✖ A)-4, B)-2, C)-1, D)-3

Question Number : 24 Question Id : 630680218969 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the correct pairs:

A) Circumferential stress in thin walled cylinder :: Hoop stress
B) In thin walled cylinder longitudinal stress :: half of circumferential stress
C) Pure torsion in a shaft :: Longitudinal and circumferential shear stress
D) Stress at the centre of a solid shaft :: 0

Options :

1. ✖ A, B
2. ✖ A, D
3. ✖ A, B, D
4. ✔ A, B, C, D

Question Number : 25 Question Id : 630680218970 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the increasing order of the Poisson's ratio:

A) Rubber
B) Glass
C) Steel
D) Cork

Options :

1. ✖ B, C, D, A
2. ✔ D, B, C, A
3. ✖ D, A, C, B
4. ✖ C, B, A, D

Question Number : 26 Question Id : 630680218971 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in order of Increasing tensile strength:

A) Carbon Fiber
B) Aluminium
C) Stainless Steel
D) Polypropylene

Options :

1. ✖ D, A, C, B
2. ✖ A, D, C, B

3. ✔ D, B, C, A
4. ✖ C, B, A, D

Question Number : 27 Question Id : 630680218972 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a single slider crank mechanism there are _____.

Options :

1. ✔ One sliding pair and three turning pairs
2. ✖ Two sliding pair and two turning pair
3. ✖ Three sliding pair and 1 turning pair
4. ✖ All are turning pairs.

Question Number : 28 Question Id : 630680218973 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A circular disc rolls on a horizontal surface. The disc rolls without any slipping and the centre of the disc has a velocity of V. The velocity at the point of contact between the object and the floor is _____.

Options :

1. ✔ zero
2. ✖ same as the velocity at the centre
3. ✖ of the same magnitude but in the opposite direction.
4. ✖ cannot be determined

Question Number : 29 Question Id : 630680218974 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Over an interval what is the correlation between the displacement of the slider and the crank angle?

Options :

1. ✖ Directly proportional to square root
2. ✖ Inversely proportional
3. ✔ Linear
4. ✖ Quadratic

Question Number : 30 Question Id : 630680218975 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A spur gear has 30 teeth which are rotating at 300 rpm. Determine the circular pitch of the gear if the module of the gear is 3?

Options :

1. ✖ 6.28
2. ✖ 7.51
3. ✔ 9.42
4. ✖ 8.57

Question Number : 31 Question Id : 630680218976 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If the maximum speed of the flywheel in 600 rpm. Find the coefficient of fluctuation of the flywheel if the minimum speed of the flywheel is 200 rpm.

Options :

1. ✖ 1.2
2. ✔ 1
3. ✖ 1.1

4. ✖ 1.3

Question Number : 32 Question Id : 630680218977 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The inward force acting on the rotating balls of a governor running at steady speed is known as _____.

Options :

1. ✔ Controlling Force
2. ✖ Frictional Force
3. ✖ Tension
4. ✖ Centrifugal Force

Question Number : 33 Question Id : 630680218978 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When the equilibrium speed of a governor is constant (i.e. range of speed is zero) for all radii of rotation of the balls within the working range, neglecting friction then governor is _____.

Options :

1. ✖ Hunting
2. ✖ Sensitive
3. ✔ Isochronous
4. ✖ Powerful

Question Number : 34 Question Id : 630680218979 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Two rigid links have no linear velocity relative to each other at the instantaneous centre.
B) The number of instantaneous centres in a constrained kinematic chain should never be equal to the number of possible combination of two links.

Options :

1. ✔ Only A is true
2. ✖ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 35 Question Id : 630680218980 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Flywheel does not maintain a constant speed.
B) Governor keeps the mean speed of the engine within certain limits.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 36 Question Id : 630680218981 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) If three bodies move relative to each other, they have three instantaneous centres and lie on a straight line.
B) The centripetal component of acceleration in a mechanism is parallel to the velocity of the particle at a given instant.
C) Hart's mechanism is a mechanism with lower pairs.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✔ Only A and C are true
4. ✖ A,B and C are true

Question Number : 37 Question Id : 630680218982 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) Porter governor is a dead weight governor.
B) If the range of speed of the governor is 0 then it is called an isochronous governor.
C) The reciprocating masses can only be partially balanced.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✖ Only A and C are true
4. ✔ A, B and C are true

Question Number : 38 Question Id : 630680218983 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Springs in series	1) $K_s = K1 + K2$
B) Springs in parallel	2) $(1/2\,\pi)\,(\sqrt{k/m})$
C) Circular frequency	3) $K_s = 1/K1 + 1/K2$
D) Natural frequency	4) $\sqrt{k/m}$

Options :

1. ✔ A-3, B-1, C-4, D-2
2. ✖ A-2, B-1, C-4, D-3
3. ✖ A-4, B-1, C-2, D-3
4. ✖ A-2, B-4, C-3, D-1

Question Number : 39 Question Id : 630680218984 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the correct pairs:

A) Maximum Principle Stress Theory :: Ductile Materials
B) Maximum Shear Stress Theory :: Brittle Material
C) Distortion Energy Theory :: Ductile Material
D) Ductile Materials :: Typically have same tensile and compressive strength.

Options :

1. ✖ A, B
2. ✖ B, C
3. ✔ C, D
4. ✖ A, B, D

Question Number : 40 Question Id : 630680218985 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following values obtained from a bar in tension test in chronological order.

A) Elastic Limit B) Ultimate Tensile Strength C) Proportional Limit D) Yield Strength

Options :

1. ✔ C, A, D, B
2. ✖ C, D, A, B
3. ✖ A, D, C, B
4. ✖ B, A, C, D

Question Number : 41 Question Id : 630680218986 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the line in the SN curve that fits the failure points of test data in the best possible way to the worst possible way?

A) Goodman
B) Gerber
C) Soderberg

Options :

1. ✖ A, B, C
2. ✔ B, A, C
3. ✖ B, C, A
4. ✖ C, A, B

Question Number : 42 Question Id : 630680218987 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is an example of Non-Newtonian fluid?

Options :

1. ✖ glycerol
2. ✖ water suspension of clay
3. ✔ blood
4. ✖ crude oil

Question Number : 43 Question Id : 630680218988 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a submerged body, if the weight of the body is equal to the buoyant force and the centre of buoyancy is below the centre of gravity then the body is said to be in _____.

Options :

1. ✖ Stable equilibrium
2. ✔ Unstable equilibrium
3. ✖ Neutral equilibrium
4. ✖ Cannot be determined

Question Number : 44 Question Id : 630680218989 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If a submerged unstable body is given an angular displacement in the clockwise direction then the couple constituted by the weight and buoyant force will be in the _____.

Options :

1. ✔ clockwise direction

2. ✖ anticlockwise direction
3. ✖ clockwise and anticlockwise direction
4. ✖ cannot be determined

Question Number : 45 Question Id : 630680218990 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For a floating body if the position of the metacentre is above the centre of gravity then the body is in _____.

Options :

1. ✔ Stable equilibrium
2. ✖ Unstable equilibrium
3. ✖ Neutral equilibrium
4. ✖ Cannot be determined

Question Number : 46 Question Id : 630680218991 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Water flowing through a pipe having an inlet diameter of 20 cm with a velocity of 10 m/s. The outlet diameter if the pipe is 100 cm. Find the discharge through the pipe and the velocity of water at the outlet.

Options :

1. ✖ $0.214\ m^3/s, 0.4\ m/s$
2. ✔ $0.314\ m^3/s, 0.4\ m/s$
3. ✖ $0.314\ m^3/s, 0.6\ m/s$
4. ✖ $0.414\ m^3/s, 0.8\ m/s$

Question Number : 47 Question Id : 630680218992 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The value of eddy viscosity for a laminar flow is _____.

Options :

1. ✖ Infinity
2. ✔ 0
3. ✖ 1
4. ✖ 0.5

Question Number : 48 Question Id : 630680218993 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The product of kinematic viscosity and density is dynamic viscosity.
B) Viscosity of liquids increases with increase in temperature.

Options :

1. ✔ Only A is true
2. ✖ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 49 Question Id : 630680218994 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Uniform flow is the type of flow in which the fluid characteristics like velocity, pressure, density etc. do not change with time at a point.
B) Steady flow is the type of flow in which the velocity at a given time does not change with respect to space.

Options :

1. ✔ Only A is true
2. ✖ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 50 Question Id : 630680218995 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) For a single stage impulse steam turbine the blade efficiency is given by the ratio of the work done on the blade to the energy supplied to the blade.
B) Blade speed ratio is the ratio of blade speed to the enthalpy.
C) The point about which a floating body starts oscillating when the body is tilted by a small angle is called the metacentre.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✔ Only A and C are true
4. ✖ A, B and C are true

Question Number : 51 Question Id : 630680218996 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

Match the following fluid properties to its units:

A) Density	1) N/m
B) Surface Tension	2) kg/m^3
C) Viscosity	3) m^2/s
D) Kinematic Viscosity	4) N/m^3
E) Specific Weight	5) Ns/m^2

Options :

1. ✖ A-5, B-3, C-2, D-1, E-4
2. ✔ A-2, B-1, C-5, D-3, E-4
3. ✖ A-5, B-1, C-2, D-3, E-4
4. ✖ A-2, B-4, C-5, D-1, E-3

Question Number : 52 Question Id : 630680218997 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the correct pairs:

A) Mach number :: Compressible flow
B) Reynolds number :: Flow through a pipe
C) Nusselt number :: Boundary layer flow
D) Free surface flow :: Weber number

Options :

1. ✖ A, B, D
2. ✖ A, B, C
3. ✔ A, C, D
4. ✖ B, C, D

Question Number : 53 Question Id : 630680218998 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the increasing order of stability:

A) Metacentre above the centre of gravity.
B) Metacentre below the centre of gravity.
C) Metacentre at the centre of gravity.

Options :

1. ✔ B, C, A
2. ✖ A, B, C
3. ✖ C, A, B
4. ✖ B, A, C

Question Number : 54 Question Id : 630680218999 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the increasing order of the coefficient of discharge.

A) Nozzle B) Venturimeter C) Orifice meter

Options :

1. ✔ B, C, A
2. ✖ A, B, C
3. ✖ C, A, B
4. ✖ B, A, C

Question Number : 55 Question Id : 630680219000 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Thermal diffusivity is the ratio of _____.

Options :

1. ✖ thermal conductivity and specific heat
2. ✖ specific heat and density
3. ✔ thermal conductivity and thermal capacity
4. ✖ thermal capacity and thermal conductivity

Question Number : 56 Question Id : 630680219001 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A very long bar of 0.1 m diameter extends horizontally from a heated wall at 125°C. The ambient temperature is maintained at 25°C. The value of convective heat transfer coefficient 10 W/ m^2 °C. Take thermal conductivity of the rod at 400 W/m°C. Find the heat loss.

Options :

1. ✔ 314
2. ✖ 310
3. ✖ 366
4. ✖ 300

Question Number : 57 Question Id : 630680219002 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is an assumption in Fourier's law?

Options :

1. ✖ Conduction takes place under unsteady state conditions
2. ✖ Temperature profile is non linear
3. ✔ Internal heat generation is not considered
4. ✖ The heat flow is bidirectional

Question Number : 58 Question Id : 630680219003 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following number is related to the natural convection of heat transfer?

Options :

1. ✖ Stanton Number
2. ✔ Grashoff Number
3. ✖ Reynolds Number
4. ✖ Peclet Number

Question Number : 59 Question Id : 630680219004 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following defines the reciprocity theorem in heat transfer?

Options :

1. ✖ F12 = F21
2. ✔ F12A1 = F21A2
3. ✖ F12A2 = F21A1
4. ✖ F21 = F12A1

Question Number : 60 Question Id : 630680219005 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

When T1 = T2, in a heat exchanger. Where T1 is the temperature difference between the two single phase fluid streams on one end and T2 is the difference between the two single phase fluid streams on the other end. This special case can be observed in which heat exchanger?

Options :

1. ✔ counter flow heat exchanger
2. ✖ condenser
3. ✖ parallel flow heat exchanger
4. ✖ evaporator

Question Number : 61 Question Id : 630680219006 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The radiation emitted by a black body is dependent of the direction.
B) A black body emits maximum amount of thermal radiations at all wavelength at any specified temperature.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true

4. ✖ Neither A and B are true

Question Number : 62 Question Id : 630680219007 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) LMTD of a counterflow heat exchanger is always greater than the LMTD of a parallel flow heat exchanger.
B) Effectiveness of a heat exchanger is the ratio of actual heat transfer rate to the maximum possible heat transfer rate.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A and B are true

Question Number : 63 Question Id : 630680219008 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) The thermal conductivity of gas increases with the increase in temperature.
B) Thermal conductivity depends essentially upon the moisture content and density of the material.
C) In the case of steady state on dimension heat conduction through a hollow cylinder the temperature distribution is logarithmic.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✖ Only A and C are true
4. ✔ A, B and C are true

Question Number : 64 Question Id : 630680219009 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) In an infinitely long fin if the parameter $M = \sqrt{(hp/ka)}$ increases, the other parameter remaining constant, then the temperature drop along the length will be steeper.

B) In cylindrical bodies for insulation to be properly effective in restricting heat transmission, the outer radius must be greater than or equal to the critical radius.

C) The response of a thermocouple is the time required for the thermocouple to attain the source temperature.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✖ Only A and C are true
4. ✔ A, B and C are true

Question Number : 65 Question Id : 630680219010 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match the following:

1) Critical Reynolds number for a sphere	A) R $e^{1/2}$ and R $e^{0.8}$
2) Critical Reynolds number for a parallel plate	B) 0.6
3) Free correction modulus	C)1000
4) Nusselt number in laminar and turbulent flows	D) 1
5) For laminar flow, Prandtl number must be more than	E) p^2 β g Cp/μ k

Options :

1. ✖ 1-C, 2-D, 3-B, 4-A, 5-E
2. ✔ 1-D, 2-C, 3-E, 4-A, 5-B
3. ✖ 1-A, 2-C, 3-E, 4-D, 5-B
4. ✖ 1-A, 2-B, 3-E, 4-D, 5-C

Question Number : 66 Question Id : 630680219011 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Select the correct pairs:

A) In a boundary layer formed by uniform flow past a flat plate :: the pressure gradient in the x direction is 0.

B) In a boundary layer formed by uniform flow past a flat plate :: the pressure gradient in the Y direction is negligible.

C) The convective heat transfer coefficient in laminar flow over a flat plate :: mostly decreases if a denser fluid is used.

D) Laminar flow :: $10^4 < GbPr < 10^{11}$

Options :

1. ✔ A, B
2. ✖ A, B, C,
3. ✖ B, C, D
4. ✖ A, C

Question Number : 67 Question Id : 630680219012 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the decreasing order of thermal conductivity:

A) Aluminium B) Air C) Diamond D) Copper E) Steel

Options :

1. ✖ B, A, E, C, D
2. ✖ C, E, D, A, B
3. ✔ B, E, A, D, C
4. ✖ A, E, D, C, B

Question Number : 68 Question Id : 630680219013 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The amount of heat transferred to freeze unit mass of liquid to solid _____.

Options :

1. ✖ Latent heat of vaporisation
2. ✖ Heat Capacity
3. ✖ Specific Heat
4. ✔ Latent heat of fusion

Question Number : 69 Question Id : 630680219014 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following diagram is called a phase diagram? Here "P" is pressure, "T" is temperature, "V" is the volume.

Options :

1. ✖ T-V diagram
2. ✖ P-V diagram
3. ✔ P-T diagram
4. ✖ P-V-T surface

Question Number : 70 Question Id : 630680219015 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Specific heat of incompressible substances depend on _____.

Options :

1. ✖ Pressure only
2. ✖ Pressure and Volume only
3. ✖ Pressure and Temperature only
4. ✔ Temperature only

Question Number : 71 Question Id : 630680219016 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For which of the following processes the internal energy becomes equal to the heat transferred $(\Delta U = Q)$?

Options :

1. ✖ Isobaric process
2. ✔ Isochoric process
3. ✖ Adiabatic process
4. ✖ Isothermal process

Question Number : 72 Question Id : 630680219017 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

A Carnot engine absorbs heat from a reservoir. It absorbs 373.15J of heat at the temperature of normal boiling point of water. The heat rejected at a reservoir which is maintained at the temperature of the triple point of water. Find the heat rejected and work done.

Options :

1. ✖ Heat rejected = 373.15J, Work done = 100J
2. ✖ Heat rejected = 273.16J, Work done = 50J
3. ✖ Heat rejected = 0J, Work done = 100J
4. ✔ Heat rejected = 273.16, Work done = 100J

Question Number : 73 Question Id : 630680219018 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

For which of the following system internal energy is used exclusively for doing work as per the first law of thermodynamics?

Options :

1. ✖ Isochoric System
2. ✖ Isothermal System
3. ✔ Adiabatic System
4. ✖ Isolated System

Question Number : 74 Question Id : 630680219019 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

If value of Joule Thomson coefficient is less than 0 during a constant enthalpy process then _____.

Options :

1. ✔ the temperature increases
2. ✖ the temperature decreases
3. ✖ temperature remains constant
4. ✖ temperature increases then decreases

Question Number : 75 Question Id : 630680219020 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Heat and work can be stored in the system.
B) Heat transfer is the energy interaction due to temperature difference only and all other energy interactions may be termed as work transfer.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 76 Question Id : 630680219021 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Superheated vapour has lower pressure than saturated vapour at a given temperature.
B) Superheated vapour has higher specific volumes than saturated vapour at a given pressure or temperature.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 77 Question Id : 630680219022 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A)The complete conversion of low grade energy into high grade energy in a cycle is impossible. While the complete conversion of high grade energy into low grade energy is possible.
B)Work is termed as low-grade energy.
C)Heat is termed as high-grade energy.

Options :

1. ✔ Only A is true
2. ✖ A and B are true
3. ✖ A, B, and C are True
4. ✖ Neither A, B or C are true.

Question Number : 78 Question Id : 630680219023 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Adiabatic reversible expansion	1) constant enthalpy
B) Isochoric process	2) Q = W
C) Throttling process	3) Q = 0
D) Isothermal process	4) Work done is 0

Options :

1. ✖ A-3, B-1, C-4, D-2
2. ✔ A-3, B-4, C-1, D-2
3. ✖ A-3, B-2, C-1, D-4
4. ✖ A-4, B-3, C-2, D-1

Question Number : 79 Question Id : 630680219024 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Select the correct pairs:

A) Zeroth Law of thermodynamic :: concept of temperature.
B) First law of thermodynamics :: concept of internal energy.
C) Second law of thermodynamic :: concept of heat flow.
D) Reversible Adiabatic process :: entropy change of the surrounding will be zero.

Options :

1. ✔ A, B, C, D
2. ✖ A, B, C
3. ✖ A, B, D
4. ✖ A, D, C

Question Number : 80 Question Id : 630680219025 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the Carnot cycle in chronological order:

A) Reversible adiabatic compression
B) Reversible isothermal compression
C) Reversible isothermal expansion
D) Reversible adiabatic expansion

Options :

1. ✖ D, B, A, C
2. ✖ B, A, C, D
3. ✖ A, D, C, B
4. ✔ C, D, B, A

Question Number : 81 Question Id : 630680219026 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following defines the compression ratio of an internal combustion engine?
Here "Vs" is the swept volume and "Vc" is the clearance volume.

Options :

1. ✖ Vs / (Vs + Vc)
2. ✖ Vs / Vc
3. ✔ (Vc + Vs) / Vc
4. ✖ Vc / Vs

Question Number : 82 Question Id : 630680219027 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Compression ratio of diesel engine is _____.

Options :

1. ✖ 6 to 10
2. ✔ 15 to 25
3. ✖ 35 to 40
4. ✖ 1 to 10

Question Number : 83 Question Id : 630680219028 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

At higher loads in CI engines, the break-specific fuel consumption _____.

Options :

1. ✖ decreases
2. ✔ increases
3. ✖ remains same
4. ✖ increases and decreases

Question Number : 84 Question Id : 630680219029 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which type of compressor is used for large displacement and low condensing pressure?

Options :

1. ✔ centrifugal compressor
2. ✖ axial flow compressor
3. ✖ reciprocating compressor
4. ✖ scroll compressor

Question Number : 85 Question Id : 630680219030 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following methods increases the efficiency of the Rankine cycle?

Options :

1. ✖ Increasing the condenser pressure
2. ✖ Super-cooling of steam
3. ✔ Regenerative feed water heating
4. ✖ Decreasing the boiler pressure

Question Number : 86 Question Id : 630680219031 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The ratio of brake work done to the indicated work done is known as _____.

Options :

1. ✖ indicated thermal efficiency
2. ✖ brake thermal efficiency
3. ✖ relative efficiency
4. ✔ mechanical efficiency

Question Number : 87 Question Id : 630680219032 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Internal combustion engines work in an open cycle.
B) One of the assumptions of an air standard cycle is that one of the processes that make up the cycle is irreversible

Options :

1. ✔ Only A is true
2. ✖ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 88 Question Id : 630680219033 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) In an SI engine the air-fuel ratio remains close to the stoichiometric value from no load to full load.
B) There can be no preignition in a CI engine.
C) In CI engines by increasing inlet air pressure the knocking tendency decreases.

Options :

1. ✖ Only A and C is true
2. ✖ Only B and C is true
3. ✖ Both A and B are true
4. ✔ All are true

Question Number : 89 Question Id : 630680219034 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0
Correct Marks : 2 Wrong Marks : 0

Consider the following pair of combustion chambers for SI engines:

1) T-head Type	A) One valve in the cylinder head and the other in cylinder block.
2) L-Head Type	B) Used in early stage of engine development.
3) I-Head Type	C) Two valves on the same side of the cylinder and operated by single camshaft.
4) F-head Type	D) Also known as overhead valve.

Options :

1. ✔ 1-B, 2-C, 3-D, 4-A
2. ✖ 1-A, 2-C, 3-D, 4-B
3. ✖ 1-B, 2-D, 3-C, 4-A
4. ✖ 1-A, 2-D, 3-B, 4-C

Question Number : 90 Question Id : 630680219035 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

Select the correct pairs in stages of combustion in SI engines:

A) Stage 1 :: chemical process
B) Stage 2 :: Pressure constant
C) Stage 2 :: The rate of pressure rise is proportional to the rate of heat release.
D) Stage 3 :: flame velocity increases.
E) Stage 3 :: starts when maximum pressure is reached

Options :

1. ✖ A, B, C, D
2. ✖ A, B, D, E
3. ✔ A, C, E

4. ✖ C, D, E

Question Number : 91 Question Id : 630680219036 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following as per the steps followed in Morse test:

A) Calculate Total Indicated power of engine
B) Frictional power of engine and mechanical efficiency
C) Calculate I.P. of the engine.
D) Engine is allowed to run at constant speed and brake power is calculated.
E) The first cylinder is cut off by short circuiting spark plug and brake power is calculated.

Options :

1. ✖ D, E, A, C, B
2. ✔ D, E, C, A, B
3. ✖ A, C, D, E, B
4. ✖ A, E, D, C, A

Question Number : 92 Question Id : 630680219037 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following processes of Otto cycle in chronological order:

A) Isentropic Expansion
B) Constant-Volume heat rejection
C) Isentropic Compression
D) Constant-Volume heat addition

Options :

1. ✖ B, D, A, C
2. ✖ C, A, D, B
3. ✔ C, D, A, B
4. ✖ A, D, C, B

Question Number : 93 Question Id : 630680219038 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In vapour compression cycle, what will be the change in the refrigeration effect when the vapour is first superheated after compression and then undercooled before throttling?

Options :

1. ✖ Refrigeration effect decreases
2. ✔ Refrigeration effect increases
3. ✖ Refrigeration effect may increase or decrease
4. ✖ No change

Question Number : 94 Question Id : 630680219039 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If regeneration and reheating are incorporated into a gas turbine cycle, _____.

Options :

1. ✖ only the mean temperature of heat addition decreases
2. ✖ the turbine work decreases
3. ✔ the power output and thermal efficiency increases
4. ✖ it has no effect

Question Number : 95 Question Id : 630680219040 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

The horizontal lines on a physchrometric chart represents:

Options :

1. ✖ wet bulb temperature
2. ✔ constant humidity ratio
3. ✖ enthalpy
4. ✖ relative humidity

Question Number : 96 Question Id : 630680219041 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0
Correct Marks : 2 Wrong Marks : 0

The humidity ratio of atmospheric air at 760 mm of mercury is 0.01 kg/kg of dry air. What is the partial vapour pressure of water in Pa?

Options :

1. ✔ 12.4
2. ✖ 17.4
3. ✖ 18
4. ✖ 19

Question Number : 97 Question Id : 630680219042 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

Which of the following is the speed ratio of the Pelton Wheel?

Options :

1. ✖ 0.54 - 0.6
2. ✖ 0.6 - 0.68
3. ✔ 0.43 - 0.48
4. ✖ 0.3 - 0.4

Question Number : 98 Question Id : 630680219043 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

In an impulse reaction turbine stage, the heat drops in the fixed and moving blades are 29.5 kJ/kg and 20.5 kJ/kg respectively. The degree of the reaction for the stage will be _____.

Options :

1. ✖ 0.31
2. ✔ 0.41
3. ✖ 0.51
4. ✖ 0.61

Question Number : 99 Question Id : 630680219044 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) In reaction turbine, the fluid is partially expanded in the fixed blades and the remaining expansion takes place in the moving blades.
B) Relative velocity increases in the fixed blade.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 100 Question Id : 630680219045 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) Bell Coleman cycle works on reverse Brayton cycle.
B) Bell Coleman cycle has two isentropic and two constant pressure processes.
C) The working fluid of a bell Coleman cycle is air.

Options :

1. ✖ Only A and B are true
2. ✖ Only B and C are true
3. ✖ Only A and C are true
4. ✔ All are true

Question Number : 101 Question Id : 630680219046 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

If unsaturated air is passed through a spray of continuously recirculated water, match the following statements. (Where Tw is the water sprayed temperature, DPT-Dew Point Temperature, DBT-Dry Bulb Temperature, WBT - Wet Bulb Temperature.)

A) Cooling and dehumidification	1) Tw = WBT
B) Adiabatic saturation	2) Tw < DPT
C) Sensible cooling	3) Tw > DPT
D) Sensible heating	4) DPT < Tw < DBT

Options :

1. ✔ A-2, B-1, C-4, D-3
2. ✖ A-2, B-4, C-1, D-3
3. ✖ A-3, B-1, C-4, D-2
4. ✖ A-1, B-2, C-4, D-3

Question Number : 102 Question Id : 630680219047 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find the correct pair(s):

A) The psychometric chart is plotted for :: pressure equal to 760 mm Hg.
B) Constant wbt line :: adiabatic saturation process
C) Constant wbt line :: coincides with constant enthalpy line
D) Heating and humidification of air :: winter air conditioning

Options :

1. ✖ Only A
2. ✖ Only A, B
3. ✖ Only A, B, C
4. ✔ A, B, C, D

Question Number : 103 Question Id : 630680219048 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following turbines in the increasing order of head.

A) Pelton B) Kaplan C) Francis

Options :

1. ✖ A < B < C
2. ✖ A < C < B
3. ✔ B < C < A
4. ✖ C < A < B

Question Number : 104 Question Id : 630680219049 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is a line defect?

Options :

1. ✖ Frankel Imperfection
2. ✖ Schottky Imperfection
3. ✔ Screw Dislocation
4. ✖ Interstitialcy

Question Number : 105 Question Id : 630680219050 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The transformation product of a very slow cooling rate obtained in the conventional annealing process is _____.

Options :

1. ✔ Coarse Pearlite
2. ✖ Fine Pearlite
3. ✖ Bainite
4. ✖ Martensite

Question Number : 106 Question Id : 630680219051 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following types of pattern is used to create a casting of large size and is to be produced in a short time?

Options :

1. ✖ Loose piece pattern
2. ✔ Sweep pattern
3. ✖ Shell pattern
4. ✖ Skeleton pattern

Question Number : 107 Question Id : 630680219052 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following prevents debris from entering into the main casting cavity?

Options :

1. ✖ Sprue
2. ✖ Down gate
3. ✖ riser
4. ✔ Skim bob

Question Number : 108 Question Id : 630680219053 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The crystal structure of Nickel is _____.

Options :

1. ✔ FCC
2. ✖ BCC
3. ✖ HCP

4. ✖ Amorphous

Question Number : 109 Question Id : 630680219054 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following patterns is used when there is some portion which is structurally weak and will break due to the ramming force?

Options :

1. ✔ Follow Board Pattern
2. ✖ Built-up Pattern
3. ✖ Match Plate Pattern
4. ✖ Lagged Up Pattern

Question Number : 110 Question Id : 630680219055 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The freezing ratio is 0.5, if the volume to surface area ratio is 3 for riser and for casting it is 6.
B) The velocity of metal in meter/second at gate is 2 if a mould has a down sprue length of 0.2 meters. Considering the value of g is 10 m/sec.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 111 Question Id : 630680219056 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) Ledeburite is an eutectoid transformation of austenite and cementite.
B) Peritectic transformation is of no use for the modification of the properties of steel.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 112 Question Id : 630680219057 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) Strain Hardening increases the ductility and plasticity of metals.
B) Face centered cubic materials contain 12 possible slip systems.
C) The value of critically resolved shear stress in single crystals depends on composition and temperature.

Options :

1. ✖ Only A and C is true
2. ✔ Only B and C is true
3. ✖ Both A and B are true
4. ✖ All are true

Question Number : 113 Question Id : 630680219058 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Find all the right pairs:

A) Core print :: locating, positioning and supporting the core
B) Wood pattern :: workability
C) Brass pattern :: cheap
D) Flask :: cope and drag
E) Liquid shrinkage :: riser

Options :

1. ✔ A, B, D, E
2. ✖ A, B, C, E
3. ✖ A, B, C
4. ✖ A, B, D

Question Number : 114 Question Id : 630680219059 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the order of flow of molten metal into the mould:

A) Sprue B) Pouring Basin C) Runner D) Gate

Options :

1. ✖ A, C, D, B
2. ✖ C, A, D, B
3. ✖ D, B, A, C
4. ✔ B, A, C, D

Question Number : 115 Question Id : 630680219060 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the order in which they are formed with the rise in temperature in the iron carbon diagram.

A) Austenite B) Liquid C) Ferrite D) Pearlite

Options :

1. ✖ C, A, D, B
2. ✖ C, D, A, B
3. ✔ D, A, C, B
4. ✖ A, C, D, B

Question Number : 116 Question Id : 630680219061 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Higher rake angle results in _____.

Options :

1. ✖ more cutting force
2. ✖ increased heat dissipation
3. ✔ reduces the metal backup available at the tool rake
4. ✖ strength of the tool tip increases

Question Number : 117 Question Id : 630680219062 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The process of joining similar metals by melting the edges together, without the addition of filler metals is:

Options :

1. ✖ Plasma arc welding
2. ✔ Friction welding

3. ✖ Electroslag welding
4. ✖ Submerged arc welding

Question Number : 118 Question Id : 630680219063 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following processes does not induce compression into the component?

Options :

1. ✖ coining
2. ✖ sizing
3. ✖ ironing
4. ✔ stretch forming

Question Number : 119 Question Id : 630680219064 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In which of the following process, liquid stream of metal is produced by injecting molten metal through a small orifice?

Options :

1. ✖ Shotting
2. ✔ Atomization
3. ✖ Reduction
4. ✖ Electrolysis

Question Number : 120 Question Id : 630680219065 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In a NC program, command that will stay in effect until it is changed or cancelled by some other command are called:

Options :

1. ✔ Modal Commands
2. ✖ Non Modal Commands
3. ✖ Modality Commands
4. ✖ One Shot Commands

Question Number : 121 Question Id : 630680219066 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

On which of the following does the repeatability of NC depend on?

Options :

1. ✔ Mechanical Errors
2. ✖ Electrical Errors
3. ✖ Control Loop Errors
4. ✖ Cannot be determined

Question Number : 122 Question Id : 630680219067 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) In M-code, M06 denoted tool change.
B) M03 is a modal command.

Options :

1. ✖ Only A is true
2. ✖ Only B is true

3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 123 Question Id : 630680219068 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) In rolling process, roll separating force is the product of mean flow stress and projected area.
B) Reducing the size of the roller roll separating force can be increased.

Options :

1. ✔ Only A is true
2. ✖ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 124 Question Id : 630680219069 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) In a four high rolling mill, there are four rolls out of which three are working rolls and one is backup roll.
B) Lancing is an operation of cutting the sheet metal through small lengths and bending the cut portion.
C) Impact extrusion is a variation of indirect extrusion.

Options :

1. ✖ Only A and C is true
2. ✔ Only B and C is true
3. ✖ Both A and B are true
4. ✖ All are true

Question Number : 125 Question Id : 630680219070 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Autogenous Welding	1) Gas metal arc welding
B) Homogenous Welding	2) Plasma arc welding
C) Heterogeneous Welding	3) Laser beam welding

Options :

1. ✖ A-2, B-1, C-3
2. ✖ A-3, B-2, C-1
3. ✔ A-3, B-1, C-2
4. ✖ A-1, B-3, C-2

Question Number : 126 Question Id : 630680219071 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the closed loop system in order:

A) Controller B) Process C) Reference Input D) Feedback Network E) Output

Options :

1. ✔ C, A, B, E, D
2. ✖ B, C, A, D, E

3. ✖ D, A, C, B, E
4. ✖ A, D, C, B, E

Question Number : 127 Question Id : 630680219072 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following G-code in chronological order:

A) Hold B) Acceleration of feed rate C) Rapid transverse D) Cutter compensation positive E) Dwell

Options :

1. ✖ B, C, A, D, E
2. ✔ C, E, A, B, D
3. ✖ D, A, C, B, E
4. ✖ A, D, C, B, E

Question Number : 128 Question Id : 630680219073 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is NOT aggregate planning strategy?

Options :

1. ✖ Level Strategy
2. ✖ Chase Strategy
3. ✖ Hybrid Strategy
4. ✔ Lift Strategy

Question Number : 129 Question Id : 630680219074 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following scheduling is prepared based on the customer demands?

Options :

1. ✖ Backward Scheduling
2. ✔ Forward Scheduling
3. ✖ Finite Loading
4. ✖ Critical Ratio Scheduling

Question Number : 130 Question Id : 630680219075 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The ratio of cost of goods sold to the average inventory is _____.

Options :

1. ✖ Economic order quantity
2. ✔ Inventory turnover ratio
3. ✖ Cost of carrying the inventory
4. ✖ Safety stock

Question Number : 131 Question Id : 630680219076 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following determines the point of ordering the inventory?

Options :

1. ✖ Economic order quantity Model
2. ✖ Fixed order inventory model
3. ✖ Fixed order quantity model

4. ✔ Reorder point

Question Number : 132 Question Id : 630680219077 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In simplex method, if some of the values in the constant column are zero, then the solution becomes _____.

Options :

1. ✖ unbounded solution
2. ✔ degenerate solution
3. ✖ multiple solution
4. ✖ infeasible solution

Question Number : 133 Question Id : 630680219078 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Optimistic time in PERT is the time that estimates the _____.

Options :

1. ✖ possible time required for the completion of the activity under normal circumstances
2. ✖ longest possible time required for the completion of the activity
3. ✔ shortest possible time required for the completion of the activity
4. ✖ does not estimate time

Question Number : 134 Question Id : 630680219079 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) The reorder level is the product of lead time and demand.
B) The time period between two successive orders is called order cycle.

Options :

1. ✖ Only A is true
2. ✖ Only B is true
3. ✔ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 135 Question Id : 630680219080 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) Minimum total costs occur at a point where the ordering cost and the inventory carrying costs are equal.
B) Break even analysis consists of fixed cost, variable cost and sales revenue.
C) Slope of sales line is the ratio of the total sales to the total sales at breakeven point.

Options :

1. ✖ Only A and C is true
2. ✖ Only B and C is true
3. ✖ Both A and B are true
4. ✔ All are true

Question Number : 136 Question Id : 630680219081 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Select the correct pairs in stages of production planning and control in MRP:

A) Pre-planning Stage :: Forecasting

B) Planning stage :: Quality Control
C) Action Stage :: Dispatching
D) Monitoring Stage :: Routing

Options :

1. ✖ A, D
2. ✖ A, B, C
3. ✔ A, C
4. ✖ A, B

Question Number : 137 Question Id : 630680219082 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

As per FSND analysis in inventory management, arrange the following according to their increasing order of their consumption time.

A) Consumption of items is nil.
B) Items consumed for a longer span over a period of more than one year.
C) Items consumed in short span.
D) Items consumes over a period of one year.

Options :

1. ✖ C, B, D, A
2. ✔ C, D, B, A
3. ✖ A, D, B, C
4. ✖ D, C, B, A

Question Number : 138 Question Id : 630680219083 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following inventory costs in the percentages of the value of inventories from highest percentage to the lowest.

A) Depreciation cost B) Cost of storage C) Cost of money D) Pilferage cost

Options :

1. ✔ C, B, D, A
2. ✖ A, D, B, C
3. ✖ B, D, C, A
4. ✖ D, B, A, C

Question Number : 139 Question Id : 630680219084 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

With increase in temperature the hardness of high speed steels _____.

Options :

1. ✖ increases
2. ✔ decreases
3. ✖ not affected by temperature
4. ✖ can increase or decrease

Question Number : 140 Question Id : 630680219085 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The cutting speeds of cemented carbides when compared with high speed steels are _____.

Options :

1. ✖ lower
2. ✔ higher
3. ✖ same
4. ✖ can be higher or lower

Question Number : 141 Question Id : 630680219086 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The locator that is used to prevent the pivoting of the workpiece around the principle location is called:

Options :

1. ✖ conical locator
2. ✖ cylindrical locator
3. ✖ V locator
4. ✔ diamond pin locator

Question Number : 142 Question Id : 630680219087 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

In hole base system the lower deviation of the hole is _____.

Options :

1. ✖ infinity
2. ✔ 0
3. ✖ negative value
4. ✖ positive value

Question Number : 143 Question Id : 630680219088 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

The angle of the beam light with 'the work' for measuring surface finish in microscopic method is at _____.

Options :

1. ✖ 30 degrees
2. ✖ 45 degrees
3. ✔ 60 degrees
4. ✖ 90 degrees

Question Number : 144 Question Id : 630680219089 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is a location tolerance type?

Options :

1. ✔ coaxiality
2. ✖ circular runout
3. ✖ angularity
4. ✖ parallelism

Question Number : 145 Question Id : 630680219090 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of the following is an orientation tolerance type?

Options :

1. ✖ position
2. ✔ perpendicularity
3. ✖ total runout
4. ✖ concentricity

Question Number : 146 Question Id : 630680219091 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Which of these two statement(s) is/are true?

A) For the production of slip gauges and plug gauges IT grades of IT05 to IT10 are used.
B) Snap and ring gauges are used for checking shafts.

Options :

1. ✖ Only A is true
2. ✔ Only B is true
3. ✖ Both A and B are true
4. ✖ Neither A nor B is true

Question Number : 147 Question Id : 630680219092 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

Which of these statement(s) is/are true?

A) Broaching is suitable only for very large volume manufacturing due to the high cost of tooling involved.
B) In broaching cutting speed cannot be high.
C) During the cutting of brittle materials continuous chip are formed.

Options :

1. ✖ Only A and C are true
2. ✖ Only B and C are true
3. ✔ Both A and B are true
4. ✖ All are true

Question Number : 148 Question Id : 630680219093 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Negative Marks Display Text : 0.0

Correct Marks : 2 Wrong Marks : 0

Match the following:

A) Crater wear	1) generally observed in low speed cutting
B) Thermal cracks	2) occurs near the main cutting edge
B) Thermal cracks	3) interrupted cutting operation occurs
D) Notch wear	4) diffusion

Options :

1. ✖ A-4, B-2, C-3, D-1
2. ✖ A-2, B-1, C-3, D-4
3. ✔ A-4, B-3, C-1, D-2
4. ✖ A-2, B-3, C-1, D-4

Question Number : 149 Question Id : 630680219094 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following in the increasing order of machinability:

A) Muntz metal
B) High speed steels
C) Copper
D) Carbides
E) Nickel

Options :

1. ✖ D, A, B, C, E
2. ✔ D, B, E, A, C
3. ✖ A, E, C, B, D

4. ✖ C, E, B, A, D

Question Number : 150 Question Id : 630680219095 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2 Wrong Marks : 0

Arrange the following roughness grade number in the chronological order from surface finish smooth to surface finish rough:

A) N12
B) N7
C) N4
D) N1
E) N6
F) N11
G) N9

Options :

1. ✔ D, C, E, B, G, F, A
2. ✖ D, C, E, A, G, F, B
3. ✖ D, G, E, B, C, F, A
4. ✖ D, C, F, B, G, E, A