

Computer Based Examination System

Exported On *	2023/11/06 10:13:36
Title *	Question Paper Answer Key
OES Exam *	GPSC06202313 / Lecturer in Mechanical Engineering / Completed / 2023-11-05

1	<b>Question Description</b>	For the same maximum pressure and temperature
	<b>A</b>	Otto cycle is more efficient than Diesel Cycle
	<b>B</b>	Diesel Cycle is more efficient than Otto cycle
	<b>C</b>	Dual cycle is more efficient than Otto and Diesel Cycle
	<b>D</b>	Dual cycle has the same efficiency of Otto and Diesel Cycle
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

2	<b>Question Description</b>	When thickness of insulation exceeds critical thickness of insulation
	<b>A</b>	Heat transfer rate decreases
	<b>B</b>	Heat transfer rate increases
	<b>C</b>	Heat transfer remains a constant
	<b>D</b>	Cannot be determined
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

3	<b>Question Description</b>	For an underdamped harmonic oscillator, resonance ____
	<b>A</b>	Occurs when excitation frequency is greater than the underdamped natural frequency
	<b>B</b>	Never occurs
	<b>C</b>	Occurs when excitation frequency is lesser than the underdamped natural frequency
	<b>D</b>	Occurs when excitation frequency is equal to the underdamped natural frequency
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

4

**Question Description**

The inverse Laplace transform of  $\frac{1}{(s^2+s)}$  is

A.  $1 + e^t$

B.  $1 - e^t$

C.  $1 - e^{-t}$

D.  $1 + e^{-t}$

A

A

B

B

C

C

D

D

E

None of the above

**Correct Answer**

D

**Marks**

1

5	<b>Question Description</b>	Centre of buoyancy is
	<b>A</b>	The point of intersection of buoyant force and the centre line of the body
	<b>B</b>	Centre of gravity of the body
	<b>C</b>	Centroid of the displaced volume of fluid
	<b>D</b>	Mid-point between the centre of gravity and meta centre.
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

6	<b>Question Description</b>	The relationship between Young's modulus (E), Modulus of rigidity (C) and Bulk modulus (K) is given by
	<b>A</b>	$E=9CK/(C+3K)$
	<b>B</b>	$E=9CK/(2C+3K)$
	<b>C</b>	$E=9CK/(3C+K)$
	<b>D</b>	$E=9CK/(C-3K)$
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

7	<b>Question Description</b>	For a given heat flow and for the same thickness, the temperature drop across the material will be maximum for
	<b>A</b>	Copper
	<b>B</b>	Steel
	<b>C</b>	Glass wool
	<b>D</b>	Refractory brick
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

8	<b>Question Description</b>	Time series analysis assumes that
	<b>A</b>	Random error terms are normally distributed
	<b>B</b>	There are dependable correlations between the variable to be forecast and other independent variables
	<b>C</b>	The data does not exhibit a trend
	<b>D</b>	Past patterns in the variable to be forecast will continue unchanged into the future
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

9	<b>Question Description</b>	The combined centre of rotation and translation may be assumed to be a motion of pure rotation about some centre which goes on changing from time to time. This centre is known as ____
	<b>A</b>	Instantaneous centre
	<b>B</b>	Shear centre
	<b>C</b>	Meta centre
	<b>D</b>	Gravitational centre
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

10	<b>Question Description</b>	The subcooling in a refrigeration cycle
	<b>A</b>	Increases COP
	<b>B</b>	Reduces cooling
	<b>C</b>	Increases work of compression
	<b>D</b>	Reduces condenser size
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

11

<b>Question Description</b>	A rod 3 m long is heated from 10°C to 90°C. Find the expansion of rod. Take Young's modulus = $1.0 \times 10^5$ MN/m <sup>2</sup> and coefficient of thermal expansion = 0.000012 per degree centigrade.
<b>A</b>	0.168 cm
<b>B</b>	0.208 cm
<b>C</b>	0.288 cm
<b>D</b>	0.348 cm
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

12

<b>Question Description</b>	Slack Time in PERT analysis
<b>A</b>	Can never be greater than zero
<b>B</b>	Is always zero for critical activities
<b>C</b>	Can never be less than zero
<b>D</b>	Is minimum for critical events
<b>E</b>	None of the above
<b>Correct Answer</b>	D
<b>Marks</b>	1

13	<b>Question Description</b>	The ratio of the Schmidt Number and Prandtl Number is termed as ____
	<b>A</b>	Peclet Number
	<b>B</b>	Sherwood Number
	<b>C</b>	Lewis Number
	<b>D</b>	Nusselt Number
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

14	<b>Question Description</b>	Differential equation $\frac{d^2x}{dt^2} + 10\frac{dx}{dt} + 25x = 0$ will have the solution in the form  A. $(C_1 + C_2t)e^{-5t}$ B. $C_1e^{-2t}$ C. $C_1e^{-5t} + C_2e^{5t}$ D. $C_1e^{-2t} + C_2e^{2t}$
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<b>A</b>	A
<b>B</b>	B
<b>C</b>	C
<b>D</b>	D
<b>E</b>	None of the above
<b>Correct Answer</b>	A
<b>Marks</b>	1

15

<b>Question Description</b>	Interfering float is the difference between
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<b>A</b>	Total float and independent float
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<b>B</b>	Total float and free float
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<b>C</b>	Free float and independent float
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<b>D</b>	Independent float and free float
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<b>E</b>	None of the above
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<b>Correct Answer</b>	B
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<b>Marks</b>	1
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## Question Description

A mass of 'M' is attached to a spring whose upper end is fixed. The mass and stiffness of the spring are 'm' and 'k' respectively. The natural frequency of the spring mass system would be\_\_

A.  $f_n = \frac{1}{2\pi} \sqrt{\frac{k}{m+M}}$

B.  $f_n = \frac{1}{2\pi} \sqrt{\frac{3k}{m+3M}}$

C.  $f_n = \frac{1}{2\pi} \sqrt{\frac{2k}{m+M}}$

D.  $f_n = \frac{1}{2\pi} \sqrt{\frac{k}{m+2M}}$

A

A

B

B

C

C

D

D

E

None of the above

Correct Answer

B

Marks

1

17	<b>Question Description</b>	Eigen Vectors of a real symmetric matrix corresponding to different eigen values are
	<b>A</b>	Orthogonal
	<b>B</b>	Singular
	<b>C</b>	Non-singular
	<b>D</b>	all of these
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

18	<b>Question Description</b>	A thick cylinder is subjected to an internal pressure of 60 MPa. If the hoop stress on the outer surface is 150 MPa, then the hoop stress on the internal surface is
	<b>A</b>	105 MPa
	<b>B</b>	180 MPa
	<b>C</b>	210 MPa
	<b>D</b>	135 MPa
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

19

<b>Question Description</b>	In radiative heat transfer, a gray surface is one
<b>A</b>	Which appears grey to the eye
<b>B</b>	Whose emissivity is independent of wavelength
<b>C</b>	Whose reflectivity is zero
<b>D</b>	Which appears equally bright in all directions
<b>E</b>	None of the above
<b>Correct Answer</b>	B
<b>Marks</b>	1

20

<b>Question Description</b>	In Carnot cycle, the algebraic sum of entropy changes for the cycle is
<b>A</b>	Positive
<b>B</b>	Negative
<b>C</b>	Zero
<b>D</b>	Cannot be determined
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

21

**Question Description**

Bending Moment  $M$  and Torque  $T$  are applied on a solid circular shaft. If the maximum bending stress equals the maximum shear stress developed, then  $M$  is equal to

A.  $\frac{T}{2}$

B.  $T$

C.  $2T$

D.  $4T$

**A**

A

**B**

B

**C**

C

**D**

D

**E**

None of the above

**Correct Answer**

A

**Marks**

1

22

**Question Description**

The equation of motion for a vibrating system with viscous damping 'c', spring stiffness 'k' and inertial mass 'm' is  $m\ddot{x}(t)+c\dot{x}(t)+kx(t)=0$ . If the roots of this equation are real, then the system will be

**A**

Overdamped

**B**

Underdamped

**C**

Critically damped

**D**

All of the above

**E**

None of the above

**Correct Answer**

A

**Marks**

1

23	<b>Question Description</b>	Two metallic blocks having masses in the ratio 2:3 are made to slide down a frictionless inclined plane starting initially from the rest position. When these blocks reach the bottom of the inclined plane, they will have their kinetic energies in the ratio __
	<b>A</b>	3:5
	<b>B</b>	3:2
	<b>C</b>	7:4
	<b>D</b>	2:3
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

24	<b>Question Description</b>	When a fluid is in motion, the pressure at a point is the same in all directions. Then the fluid is ____
	<b>A</b>	Real fluid
	<b>B</b>	Newtonian fluid
	<b>C</b>	Ideal fluid
	<b>D</b>	Non-Newtonian fluid
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

25	<b>Question Description</b>	When a wire is stretched to double in length, the longitudinal strain produced in it is
	<b>A</b>	0.5
	<b>B</b>	1.0
	<b>C</b>	1.5
	<b>D</b>	2
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

26	<b>Question Description</b>	In a spring-mass system, if the mass of the system is doubled with spring stiffness halved, the natural frequency of vibration__
	<b>A</b>	Remains unchanged
	<b>B</b>	Is doubled
	<b>C</b>	Is halved
	<b>D</b>	Is quadrupled
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

27	<b>Question Description</b>	Stress concentration in cyclic loading is more serious in
	<b>A</b>	Brittle materials
	<b>B</b>	Ductile materials
	<b>C</b>	Equally serious in Brittle and Ductile materials
	<b>D</b>	Depends on other factors
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

28	<b>Question Description</b>	Carnot engine is irreversible due to
	<b>A</b>	Friction between moving parts
	<b>B</b>	Losses from working fluid in transit
	<b>C</b>	High speed
	<b>D</b>	Both A and B
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

29

<b>Question Description</b>	The Economic Order Quantity is derived using
<b>A</b>	Differential Calculus
<b>B</b>	Integral Calculus
<b>C</b>	Vector Calculus
<b>D</b>	Multivariate Analysis
<b>E</b>	None of the above
<b>Correct Answer</b>	A
<b>Marks</b>	1

30

**Question Description**

For a forced vibration system, vibration isolation is possible when

A.  $\frac{\omega}{\omega_n} = 1$

B.  $\frac{\omega}{\omega_n} < 1$

C.  $\frac{\omega}{\omega_n} < \sqrt{2}$

D.  $\frac{\omega}{\omega_n} > \sqrt{2}$

A

A

B

B

C

C

D

D

E

None of the above

**Correct Answer**

D

**Marks**

1

31	<b>Question Description</b>	Determine the difference in elevations between the water surfaces in the two tanks which are connected by an horizontal pipe of diameter 300mm and length 400m. The rate of flow through the pipe is 300 litres per second. Consider all the losses and $f=0.008$
	<b>A</b>	40.5 m
	<b>B</b>	50.5 m
	<b>C</b>	60.5m
	<b>D</b>	70.5m
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

32	<b>Question Description</b>	Under Torsion, brittle materials generally fail
	<b>A</b>	Along a plane perpendicular to its longitudinal axis
	<b>B</b>	In the direction of maximum tension
	<b>C</b>	Along surfaces forming a $45^0$ angle with the longitudinal axis
	<b>D</b>	Not in a specific manner.
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

33

<b>Question Description</b>	Ratio of diameters of two shafts joined in series is 2. If the two shafts have the same material and the same length the ratio of their angles of twist is
<b>A</b>	2
<b>B</b>	4
<b>C</b>	8
<b>D</b>	16
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

34

<b>Question Description</b>	In a vibration isolation system if the ratio of frequencies is greater than 1, then the phase difference between the transmitted force and the disturbing force is__
<b>A</b>	$0^\circ$
<b>B</b>	$90^\circ$
<b>C</b>	$180^\circ$
<b>D</b>	$270^\circ$
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

35

<b>Question Description</b>	The entropy of an isolated system can never _____
<b>A</b>	Increase
<b>B</b>	Decrease
<b>C</b>	Be zero
<b>D</b>	All of the above
<b>E</b>	None of the above
<b>Correct Answer</b>	B
<b>Marks</b>	1

36

<b>Question Description</b>	In a cam mechanism with reciprocating roller follower, the follower has constant acceleration in case of__
<b>A</b>	Cycloidal motion
<b>B</b>	Simple harmonic motion
<b>C</b>	Parabolic motion
<b>D</b>	3-4-5 polynomial motion
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

37	<b>Question Description</b>	The cyclical component of time-series data is usually estimated using
	<b>A</b>	Linear regression analysis
	<b>B</b>	Moving average analysis
	<b>C</b>	Exponential smoothing
	<b>D</b>	Qualitative methods
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

38	<b>Question Description</b>	The most accurate analogy developed to directly relate heat transfer coefficients, mass transfer coefficients and friction factors is ____
	<b>A</b>	Reynolds analogy
	<b>B</b>	Chilton-Colburn J factor analogy
	<b>C</b>	Prandtl-Taylor analogy
	<b>D</b>	all of the above
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

39	<b>Question Description</b>	The product of buoyancy force and inertia force divided by the square of viscous forces yields.
	<b>A</b>	Reynolds Number
	<b>B</b>	Grashof Number
	<b>C</b>	Stanton Number
	<b>D</b>	Peclet Number
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

40	<b>Question Description</b>	A railway wagon moving with a speed of 1.5m/s is brought to rest by bumper consisting of two springs. Mass of wagon is 100kg. The springs are compressed by 125mm. Calculate the maximum force acting on each spring.
	<b>A</b>	1200 N
	<b>B</b>	1500 N
	<b>C</b>	1800 N
	<b>D</b>	2200 N
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

41

**Question Description**

Eigen value of the matrix  $\begin{bmatrix} 3 & -1 & -1 \\ -1 & 3 & -1 \\ -1 & -1 & 3 \end{bmatrix}$  are

**A**

1,1,1

**B**

1,1,2

**C**

1,4,4

**D**

1,2,4

**E**

None of the above

**Correct Answer**

C

**Marks**

1

42

<b>Question Description</b>	The ability of a material to absorb energy when elastically deformed and to return it when unloaded is called.
<b>A</b>	Elasticity
<b>B</b>	Resilience
<b>C</b>	Plasticity
<b>D</b>	Strain Resistance
<b>E</b>	None of the above
<b>Correct Answer</b>	B
<b>Marks</b>	1

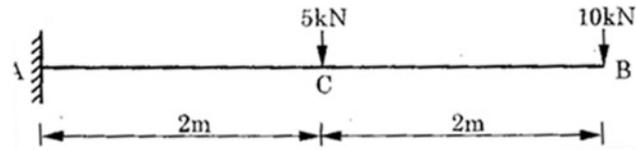
43

<b>Question Description</b>	The slope at the free end of a cantilever of length 1m is $1^0$ (one degree) . If the cantilever carries a uniformly distributed load over the whole length , then the deflection at the free end will be
<b>A</b>	1 cm
<b>B</b>	1.309 cm
<b>C</b>	1.599 cm
<b>D</b>	2.618 cm
<b>E</b>	None of the above
<b>Correct Answer</b>	B
<b>Marks</b>	1

44

**Question Description**

In the figure the maximum shear force will be



A	15 kN
B	10 kN
C	5 kN
D	30 kN
E	None of the above
<b>Correct Answer</b>	A
<b>Marks</b>	1

45

**Question Description**

A particle starts from rest with a constant acceleration ' $\alpha$ ' m/s<sup>2</sup> and after some time it decelerates at a uniform rate of  $\beta$  m/s<sup>2</sup> till it comes to rest. If the total time between the positions of rest is ' $t$ ', then the maximum velocity acquired by the particle is \_\_

A.  $\frac{\alpha+\beta}{2}t$

B.  $\frac{\alpha-\beta}{\alpha+\beta}t$

C.  $\frac{\alpha\beta}{\alpha+\beta}t$

D.  $\frac{\alpha+\beta}{\alpha-\beta}t$

A

A

B

B

C

C

D

D

E

None of the above

**Correct Answer**

C

**Marks**

1

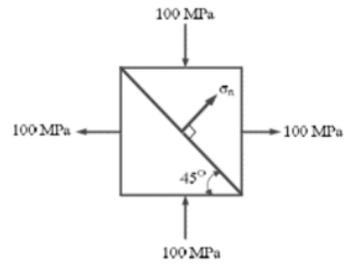
46	<b>Question Description</b>	In gears, interference takes place when
	<b>A</b>	Tip of a tooth of a mating gear digs into the portion between base and root circles
	<b>B</b>	Gears do not move smoothly in the absence of lubrication
	<b>C</b>	Pitch of the gear is not the same
	<b>D</b>	Gear teeth are undercut
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

47	<b>Question Description</b>	In an isothermal process, internal energy
	<b>A</b>	increases
	<b>B</b>	remains constant
	<b>C</b>	decreases
	<b>D</b>	Cannot be determined
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

48

**Question Description**

Two Triangular wedges are glued together as shown in the following figure. The stress acting normal to the interface,  $\sigma_n$  is



- A Zero MPa
- B 100 MPa
- C 50 MPa
- D 60 MPa
- E None of the above

**Correct Answer** A

**Marks** 1

49	<b>Question Description</b>	Which among the following is an assumption of the Hagen Poiseuille equation?
	<b>A</b>	Fluid is uniform
	<b>B</b>	Fluid is compressible
	<b>C</b>	Fluid is turbulent
	<b>D</b>	Fluid is laminar
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

50	<b>Question Description</b>	When a fluid is subjected to resistance, it undergoes a volumetric change due to ____
	<b>A</b>	Cohesion
	<b>B</b>	Strain
	<b>C</b>	Compressibility
	<b>D</b>	Adhesion
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

51

**Comprehension**

Read the following passage and answer the Questions below:

We are men of science and we realize that the whole structure of society rests on habit. With the new organization must therefore grow the new habit that is to support it. To precipitate organic change is merely to court reaction. That is the lesson of all revolutions; and it is one which English socialists, at any rate, have learnt. We think, moreover, that capitalist society is, by its own momentum, travelling towards the goal which we desire.

**Question Description**

From the tone and tenor of the above passage, the speaker appears to be

**A**

a non-capitalist

**B**

a man of science

**C**

an English socialist

**D**

a sociologist

**E**

None of the above

**Correct Answer**

C

**Marks**

1

52

**Comprehension**

Read the following passage and answer the Questions below:

We are men of science and we realize that the whole structure of society rests on habit. With the new organization must therefore grow the new habit that is to support it. To precipitate organic change is merely to court reaction. That is the lesson of all revolutions; and it is one which English socialists, at any rate, have learnt. We think, moreover, that capitalist society is, by its own momentum, travelling towards the goal which we desire.

**Question Description**

It can be surmised from the passage that the phrase “the goal that we desire” implies

**A**

disintegration

**B**

precipitation

**C**

culmination

**D**

defeat

**E**

None of the above

**Correct Answer**

A

**Marks**

1

53

**Comprehension**

Read the following passage and answer the Questions below:

We are men of science and we realize that the whole structure of society rests on habit. With the new organization must therefore grow the new habit that is to support it. To precipitate organic change is merely to court reaction. That is the lesson of all revolutions; and it is one which English socialists, at any rate, have learnt. We think, moreover, that capitalist society is, by its own momentum, travelling towards the goal which we desire.

**Question Description**

“To precipitate organic change is merely to court reaction”. This statement implies that

**A**

Compulsory change leads to chemical response

**B**

Forcefully altering things will causes chemical response

**C**

Hastening change calls for a sharp political response

**D**

Sudden social change only draws an undesirable response

**E**

None of the above

**Correct Answer**

D

**Marks**

1

54

**Comprehension**

Read the following passage and answer the Questions below:

We are men of science and we realize that the whole structure of society rests on habit. With the new organization must therefore grow the new habit that is to support it. To precipitate organic change is merely to court reaction. That is the lesson of all revolutions; and it is one which English socialists, at any rate, have learnt. We think, moreover, that capitalist society is, by its own momentum, travelling towards the goal which we desire.

**Question Description**

Identify form the options given below, the one which is opposite in meaning to “momentum”

**A**

energy

**B**

lethargy

**C**

impetus

**D**

stimulus

**E**

None of the above

**Correct Answer**

B

**Marks**

1

55

**Comprehension**

Read the following passage and answer the Questions below:

We are men of science and we realize that the whole structure of society rests on habit. With the new organization must therefore grow the new habit that is to support it. To precipitate organic change is merely to court reaction. That is the lesson of all revolutions; and it is one which English socialists, at any rate, have learnt. We think, moreover, that capitalist society is, by its own momentum, travelling towards the goal which we desire.

**Question Description**

From the options provided below, identify the meaning of the term “revolution” that is unsuited to the passage above

**A**

revolt

**B**

rebellion

**C**

rotation

**D**

uprising

**E**

None of the above

**Correct Answer**

C

**Marks**

1

56	<b>Question Description</b>	Which Indian state has approved the formation of a Special Tiger Protection Force?
	<b>A</b>	Arunachal Pradesh
	<b>B</b>	Assam
	<b>C</b>	Nagaland
	<b>D</b>	Sikkim
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

57	<b>Question Description</b>	Which organization has partnered with ISRO for the "Space on Wheels" exhibition?
	<b>A</b>	Indian Institute of Science (IISc)
	<b>B</b>	National Aeronautics and Space Administration (NASA)
	<b>C</b>	Vijnana Bharati (VIBHA)
	<b>D</b>	Atal Innovation Mission (AIM)
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

58	<b>Question Description</b>	Which state in India has recently implemented an e-cabinet system?
	<b>A</b>	Uttarakhand
	<b>B</b>	Uttar Pradesh
	<b>C</b>	Tripura
	<b>D</b>	Arunachal Pradesh
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

59	<b>Question Description</b>	Which of the following police stations is the first women police station in India to be ISO certified?
	<b>A</b>	Bhopal Mahila Thana, Madhya Pradesh
	<b>B</b>	Arwal Women's Police Station, Bihar
	<b>C</b>	Aska Police Station, Odisha
	<b>D</b>	Mahila Thana, Mumbai
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

60	<b>Question Description</b>	Where was the 19-foot tall statue of Dr. B.R. Ambedkar, the principal architect of India's Constitution, unveiled outside India?
	<b>A</b>	New York
	<b>B</b>	Washington
	<b>C</b>	Florida
	<b>D</b>	California
	<b>E</b>	None of the above
	<b>Correct Answer</b>	B
	<b>Marks</b>	1

61	<b>Question Description</b>	Which country participated in the joint army exercise Harimau Shakti with India in October 2023?
	<b>A</b>	Malaysia
	<b>B</b>	Singapore
	<b>C</b>	Indonesia
	<b>D</b>	Bangladesh
	<b>E</b>	None of the above
	<b>Correct Answer</b>	A
	<b>Marks</b>	1

62	<b>Question Description</b>	On what date is National Police Commemoration Day observed in India?
	<b>A</b>	20 October
	<b>B</b>	22 October
	<b>C</b>	21 October
	<b>D</b>	23 October
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

63	<b>Question Description</b>	When is World Cotton Day celebrated?
	<b>A</b>	October 9th
	<b>B</b>	October 8th
	<b>C</b>	October 7th
	<b>D</b>	October 5th
	<b>E</b>	None of the above
	<b>Correct Answer</b>	C
	<b>Marks</b>	1

64	<b>Question Description</b>	Which Indian bowler became the first Indian bowler to pick two five-wicket hauls in ICC ODI World Cups?
	<b>A</b>	Jasprit Bumrah
	<b>B</b>	Ravindra Jadeja
	<b>C</b>	Mohammed Siraj
	<b>D</b>	Mohammed Shami
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

65	<b>Question Description</b>	Who broke the world record in the javelin throw in the F64 category at the 2023 Asian Para Games?
	<b>A</b>	Devendra Jhajharia
	<b>B</b>	Sundar Singh Gurjar
	<b>C</b>	Praveen Kumar
	<b>D</b>	Sumit Antil
	<b>E</b>	None of the above
	<b>Correct Answer</b>	D
	<b>Marks</b>	1

66

<b>Question Description</b>	Raju walks 20 m to west, turns left and walks 20 m and turns left and walks 20 m and again turns left and walks 20 m. Which is the direction he is facing now?
<b>A</b>	north
<b>B</b>	south
<b>C</b>	east
<b>D</b>	west
<b>E</b>	None of the above
<b>Correct Answer</b>	A
<b>Marks</b>	1

67

**Question Description**

Apply the logic of first two sets of numbers to find the missing number in the third set  
25 (144) 49 , 64 (196) 36 , 4 (?) 81

**A**

100

**B**

121

**C**

169

**D**

129

**E**

None of the above

**Correct Answer**

B

**Marks**

1

68

<b>Question Description</b>	In a company employees and managers are in a ratio 7:3. 70% of the employees and 30% of the managers take lunch in the canteen. What percentage of total workforce take lunch in the canteen?
<b>A</b>	42%
<b>B</b>	60%
<b>C</b>	55%
<b>D</b>	58%
<b>E</b>	None of the above
<b>Correct Answer</b>	D
<b>Marks</b>	1

69

**Question Description**

Capture the pattern in the first series to form the second series in the same order, starting with the given number. Which number will come in place of D

Series I: 5 8 14 26 50

Series II: 7 A B C D

**A**

94

**B**

82

**C**

100

**D**

102

**E**

None of the above

**Correct Answer**

B

**Marks**

1

70

<b>Question Description</b>	Find the odd term from given alternatives.
<b>A</b>	APO
<b>B</b>	AOU
<b>C</b>	IOE
<b>D</b>	EIU
<b>E</b>	None of the above
<b>Correct Answer</b>	A
<b>Marks</b>	1

71

**Question Description**

J \* K means that J is the mother of K, J + K means that J is the father of K, J - K means J is the sister of K. On the basis of this information, select the option which shows that L is the grandfather of K

- a. L + J + M - K
- b. L \* M + N - K
- c. L + N - K
- d. L + M - N - K

**A**

a

**B**

b

**C**

c

**D**

d

**E**

None of the above

**Correct Answer**

A

**Marks**

1

72

<b>Question Description</b>	Jonathan drives to the stadium for watching a football final. At 6.05 pm, one fifth of the way to the stadium, he passes a church. At 6.15 pm, one third of the way to the stadium, he passes a poultry farm. At what time does he reach the stadium?
<b>A</b>	6.45 pm
<b>B</b>	7.00 pm
<b>C</b>	7.05 pm
<b>D</b>	7.10 pm
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

73

<b>Question Description</b>	The price of an petroleum product increases by 25% every odd year and reduces by 20% every even year. By how much percentage, the prices would have risen or fallen after exactly 8 years?
<b>A</b>	price would increase by 15%
<b>B</b>	price would increase by 5%
<b>C</b>	price would decrease by 5%
<b>D</b>	price would remain same
<b>E</b>	None of the above
<b>Correct Answer</b>	D
<b>Marks</b>	1

74

<b>Question Description</b>	At the birthday party, people were asked to guess the number of balloons used for stage decoration. No guess was correct, but the nearest guesses were 171, 177, 186 and 190. The correct number of balloons was one, three, ten and sixteen units from the guesses. How many balloons were used?
<b>A</b>	178
<b>B</b>	191
<b>C</b>	187
<b>D</b>	197
<b>E</b>	None of the above
<b>Correct Answer</b>	C
<b>Marks</b>	1

75

<b>Question Description</b>	New Jerseys are bought for players. If 6 jerseys are given for each player, one player will get only 4 jerseys. Also, if 4 jerseys are given for each player, 30 jerseys will be remaining. How many Jerseys are bought and how many players are there?
<b>A</b>	90 jerseys, 16 players
<b>B</b>	94 jerseys, 16 players
<b>C</b>	90 jerseys, 15 players
<b>D</b>	94 jerseys, 14 players
<b>E</b>	None of the above
<b>Correct Answer</b>	B
<b>Marks</b>	1