Change Password

Home

Candidate Details

Application Number:

Candidate's Name:

Claimed Answer Key List

B TECH - Physics Section A

B TECH - Physics Section A

B TECH - Physics Section A

BTECH - Physics Section A

B TECH - Physics Section A

B TECH - Physics Section A

B TECH - Physics Section A

B TECH - Physics Section A

B TECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

BTECH - Physics Section A

B TECH - Physics Section **B**

BTECH - Physics Section B

■ TECH - Physics Section ■

BTECH - Chemistry Section A

BTECH - Chemistry Section A Objective

B TECH - Chemistry Section A Objective

BTECH - Chemistry Section A Objective

BTECH - Chemistry Section A Objective

BTECH - Chemistry Section B Numerical

BTECH - Chemistry Section B Numerical

B TECH - Chemistry Section B Numerical

BTECH - Chemistry Section B Numerical

BTECH - Chemistry Section B

B TECH - Mathematics

B TECH - Mathematics

BTECH - Mathematics

B TECH - Mathematics

B TECH - Mathematics

Section A

Section B

Disclaimer:

Objective

Numerical

Numerical

Numerical

Numerical

Numerical

Numerical

Objective

Numerical

Claimed Answer Key List Upload Document:

Claimed Answer Key ListUpload Document

BTECH - Chemistry Section A

Father's Name:

Paper

Logout

QuestionID Correct Option(s)/

7155051621 7155054864

7155051622 7155054867

7155051623 | 7155054870

7155051624 7155054875

7155051625 | 7155054878

7155051626 7155054883

7155051627 | 7155054888

7155051628 7155054889

7155051629 7155054893

7155051630 7155054900

7155051631 | 7155054902

7155051632 7155054906

7155051633 7155054910

7155051634 7155054914

7155051635 7155054918

7155051636 7155054921

7155051637 7155054926

7155051638 7155054930

7155051639 7155054934

7155051640 7155054937

7155051641 2

7155051642 30

7155051643 8

7155051644 | 68

7155051645 | 1

7155051646 6

7155051647 4

7155051648 5

7155051649 1

7155051650 400

7155051651 7155054953

7155051652 7155054957

7155051653 7155054962

7155051654 7155054963

7155051655 7155054970

7155051656 7155054972

7155051657 7155054976

7155051658 7155054979

7155051659 7155054985

7155051660 7155054987

7155051661 7155054992

7155051662 7155054998

7155051663 7155055001

7155051664 7155055004

7155051665 7155055008

7155051666 7155055014

7155051667 7155055015

7155051668 7155055020

7155051669 7155055024

7155051670 7155055027

7155051671 2

7155051672 5

7155051674 4

7155051675 3

7155051676 2

7155051677 2

7155051678 5

7155051679 12

7155051680 3

7155051681 7155055042

7155051682 7155055046

7155051683 7155055051

7155051684 7155055054

7155051685 7155055060

7155051686 | 7155055062

7155051687 | 7155055068

7155051688 | 7155055071

7155051689 7155055074

7155051690 7155055079

7155051691 7155055084

7155051692 7155055086

7155051693 7155055090

7155051694 7155055094

7155051695 7155055097

7155051696 7155055102

7155051697 7155055108

7155051698 7155055110

7155051699 7155055116

7155051700 | 7155055118

7155051701 45

7155051702 6860

7155051703 7

7155051704 3

7155051705 3

7155051706 20

7155051707 | 31

7155051708 18

7155051709 9

7155051710 25

This site is designed, developed and hosted by CNR Division, NIC and the contents are provided by NTA. For any

Choose file No file chosen

In case the candidates want to submit documents in support of challenge of answer key, they should upload the PDF file.

Submit Your Claims

7155051673 925

Answers

Register Query

Question

Objective

Numer cal

Numerical

Numerical

Numerical

Numerical

Numerical

Numerical

Numerical

Numerical

Numerical

Objective

Type

JEE(Main) 2023 Session 1

Challenges regarding Answer Key

Roll Number:

Date of Birth:

Mother's Name:

7155054861

7155054865

7155054869

7155054873

7155054877

7155054881

7155054885

7155054889

7155054893

7155054897

7155054901

7155054905

7155054909

7155054913

7155054917

7155054921

7155054925

7155054929

7155054933

7155054937

7155054951

7155054955

7155054959

7155054963

7155054967

7155054971

7155054975

7155054979

7155054983

7155054987

7155054991

7155054995

7155054999

7155055003

7155055007

7155055011

7155055015

7155055019

7155055023

7155055027

Option(s) ID for Challenge

7155054862

7155054866

7155054870

7155054874

7155054878

7155054882

7155054886

7155054890

7155054894

7155054898

7155054902

7155054906

7155054910

7155054914

7155054918

7155054922

7155054926

7155054930

7155054934

7155054938

7155054952

7155054956

7155054960

7155054964

7155054968

7155054972

7155054976

7155054980

7155054984

7155054988

7155054992

7155054996

7155055000

7155055004

7155055008

7155055012

7155055016

7155055020

7155055024

7155055028

7155055042

7155055046

7155055050

7155055054

7155055058

7155055062

7155055066

7155055070

7155055074

7155055078

7155055082

7155055086

7155055090

7155055094

7155055098

7155055102

7155055106

7155055110

7155055114

7155055118

7155055041

7155055045

7155055049

7155055053

7155055057

7155055061

7155055065

7155055069

7155055073

7155055077

7155055081

7155055085

7155055089

7155055093

7155055097

7155055101

7155055105

7155055109

7155055113

7155055117

7155055043

7155055047

7155055051

7155055055

7155055059

7155055063

7155055067

7155055071

7155055075

7155055079

7155055083

7155055087

7155055091

7155055095

7155055099

7155055103

7155055107

7155055111

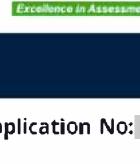
7155055115

7155055119

Name:

ष्ट्रीय परीक्षा एजेंसी

	राष
	Na



7155054864

7155054868

7155054872

7155054876

7155054880

7155054884

7155054888

7155054892

7155054896

7155054900

7155054904

7155054908

7155054912

7155054916

7155054920

7155054924

7155054928

7155054932

7155054936

7155054940

7155054954

7155054958

7155054962

7155054966

7155054970

7155054974

7155054978

7155054982

7155054986

7155054990

7155054994

7155054998

7155055002

7155055006

7155055010

7155055014

7155055018

7155055022

7155055026

7155055030

7155055044

7155055048

7155055052

7155055056

7155055060

7155055064

7155055068

7155055072

7155055076

7155055080

7155055084

7155055088

7155055092

7155055096

7155055100

7155055104

7155055108

7155055112

7155055116

7155055120

एनआईसी

None of These



- ational Testing Agency **Application No:**

30-01-2006

7155054863

7155054867

7155054871

7155054875

7155054879

7155054883

7155054887

7155054891

7155054895

7155054899

7155054903

7155054907

7155054911

7155054915

7155054919

7155054923

7155054927

7155054931

7155054935

7155054939

7155054953

7155054957

7155054961

7155054965

7155054969

7155054973

7155054977

7155054981

7155054985

7155054989

7155054993

7155054997

7155055001

7155055005

7155055009

7155055013

7155055017

7155055021

7155055025

7155055029

JEE 2023 Session-1 24th Jan to 1st Feb 2023

Application No	
Candidate Name	
Roll No	
Test Date	25/01/2023
Test Time	3:00 PM - 6:00 PM
Subject	ВТЕСН

Section: Physics Section A

According to law of equipartition of energy the molar specific heat of a diatomic gas at constant volume where the molecule has one additional vibrational mode is:-

Options

Question Type : MCQ

Question ID: 7155051623 Option 1 ID: 7155054872 Option 2 ID: 7155054869 Option 3 ID: 7155054871 Option 4 ID: 7155054870 Status: Answered

Chosen Option: 4

- The light rays from an object have been reflected towards an observer from a standard flat mirror, the image observed by the observer are:-
 - A. Real
 - B. Erect
 - C. Smaller in size then object
 - D. Laterally inverted

Choose the most appropriate answer from the options given below:

Options 1. A, C, and D Only

- 2. A and D Only
- 3. B and D Only
- 4. B and C Only

Question Type: MCQ

Question ID: 7155051629 Option 1 ID: 7155054896 Option 2 ID: 7155054894 Option 3 ID: 7155054893 Option 4 ID: 7155054895

> Not Attempted and Status: Marked For Review

Q.3 A particle executes simple harmonic motion between x = -A and x = +A. If time taken by particle to go from x = 0 to $\frac{A}{2}$ is 2 s; then time taken by particle in going from $x = \frac{A}{2}$ to A is

Options 1. 3 S

2.1.5 s

3. 2 s

4. 4 s

Question Type : MCQ

Question ID: 7155051624 Option 1 ID: 7155054874 Option 2 ID: 7155054873 Option 3 ID: 7155054876

Option 4 ID: 7155054875

Not Attempted and Status:

Marked For Review

Chosen Option : --

Match List I with List II

į.	LIST I	(n n)	LIST II
A.	Isothermal Process	I.	Work done by the gas decreases internal energy
В.	Adiabatic Process	II.	No change in internal energy
C.	Isochoric Process	III.	The heat absorbed goes partly to increase internal energy and partly to do work
D.	Isobaric Process	IV.	No work is done on or by the gas

Choose the correct answer from the options given below:

Options 1. A-II, B-I, C-IV, D-III

2. A-I, B-II, C-IV, D-III

3. A-II, B-I, C-III, D-IV

4 A-I, B-II, C-III, D-IV

Question Type : MCQ

Question ID: 7155051622

Option 1 ID: 7155054867

Option 2 ID: 7155054868 Option 3 ID: 7155054865

Option 4 ID: 7155054866

Status: Answered

Chosen Option: 2

The resistance of a wire is 5Ω . It's new resistance in ohm if stretched to 5 times of it's original Q.5 length will be:

Options 1. 5

2.625

3.125

4.25

Question Type: MCQ

Question ID: 7155051633

Option 1 ID: 7155054911

Option 2 ID: 7155054912

Option 3 ID: 7155054910

Option 4 ID: 7155054909 Status: Answered

Consider a block kept on an inclined plane (inclined at 45°) as shown in the figure. If the force required to just push it up the incline is 2 times the force required to just prevent it from sliding down, the coefficient of friction between the block and inclined plane (μ) is equal to :



Options 1. 0.50

2.0.33

3.0.60

4.0.25

Question Type: MCQ

Question ID: 7155051638 Option 1 ID: 7155054931 Option 2 ID: 7155054930 Option 3 ID: 7155054932 Option 4 ID: 7155054929

Status: Not Answered

Chosen Option: --

Q.7 Match List I with List II

	LIST I	LIST II		
A.	Young's Modulus (Y)	I.	$[M L^{-1} T^{-1}]$	
B.	Co-efficient of Viscosity (η)	II.	$[M L^2 T^{-1}]$	
C.	Planck's Constant (h)	III.	$[M L^{-1} T^{-2}]$	
D.	Work Function (φ)	IV.	$[M L^2 T^{-2}]$	

Choose the correct answer from the options given below:

Options 1. A-II, B-III, C-IV, D-I

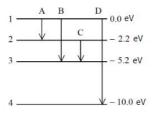
- 2. A-I, B-III, C-IV, D-II
- 3. A-III, B-I, C-II, D-IV
- 4. A-I, B-II, C-III, D-IV

Question Type: MCQ

Question ID: 7155051621 Option 1 ID: 7155054861 Option 2 ID: 7155054863 Option 3 ID: 7155054864 Option 4 ID: 7155054862

Status : Answered

- 02/02/2023, 22:11
 - The energy levels of an atom is shown in figure.



Which one of these transitions will result in the emission of a photon of wavelength 124.1nm?

Given (h = $6.62 \times 10^{-34} \text{ Js}$)

Options 1. (

- 2. **B**
- 3. A
- 4. D

Question Type: MCQ

Question ID: 7155051627 Option 1 ID: 7155054887 Option 2 ID: 7155054886 Option 3 ID: 7155054885

Option 4 ID: 7155054888 Status: Answered

Chosen Option: 4

Given below are two statements: Q.9

Statement I: Stopping potential in photoelectric effect does not depend on the power of the light

Statement II: For a given metal, the maximum kinetic energy of the photoelectron depends on the wavelength of the incident light.

In the light of above statements, choose the most appropriate answer from the options given below

- Options 1. Both Statement I and Statement II are incorrect
 - 2. Statement **I** is incorrect but statement **II** is correct
 - 3. Both Statement I and statement II are correct
 - 4 Statement I is correct but statement II is incorrect

Question Type: MCQ

Question ID: 7155051628 Option 1 ID: 7155054890 Option 2 ID: 7155054892

Option 3 ID: 7155054889 Option 4 ID: 7155054891 Status: Answered

Chosen Option: 3

Q.10 A wire of length 1m moving with velocity 8 m/s at right angles to a magnetic field of 2T. The magnitude of induced emf, between the ends of wire will be

Options 1. 16 V

- 2.8 V
- 3.12 V
- 4. 20 V

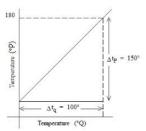
Question Type : MCQ

Question ID: 7155051631 Option 1 ID: 7155054902 Option 2 ID: 7155054904

Option 3 ID: 7155054903 Option 4 ID: 7155054901

Status: Answered

Q.11 The graph between two temperature scales P and Q is shown in the figure. Between upper fixed point and lower fixed point there are 150 equal divisions of scale P and 100 divisions on scale Q. The relationship for conversion between the two scales is given by:-



Options

1.
$$\frac{t_Q}{100} = \frac{t_P - 30}{150}$$

$$2 \cdot \frac{t_Q}{150} = \frac{t_P - 180}{100}$$

$$3. \frac{t_P}{100} = \frac{t_Q - 180}{150}$$

$$4. \frac{t_P}{180} - \frac{t_Q - 40}{100}$$

4.
$$\frac{t_p}{180} - \frac{t_Q - 40}{100}$$

Question Type: MCQ

Question ID: 7155051635 Option 1 ID: 7155054918 Option 2 ID: 7155054917 Option 3 ID: 7155054919

Option 4 ID: 7155054920 Status: Answered

Chosen Option: 1

- Q.12 Every planet revolves around the sun in an elliptical orbit:-
 - A. The force acting on a planet is inversely proportional to square of distance from sun.
 - B. Force acting on planet is inversely proportional to product of the masses of the planet and the
 - C. The Centripetal force acting on the planet is directed away from the sun.
 - D. The square of time period of revolution of planet around sun is directly proportional to cube of semi-major axis of elliptical orbit.

Choose the correct answer from the options given below:

Options 1. B and C only

- 2. A and C Only
- 3. A and D only
- 4. C and D only

Question Type: MCQ

Question ID: 7155051637 Option 1 ID: 7155054927

Option 2 ID: 7155054925 Option 3 ID: 7155054926 Option 4 ID: 7155054928

Status: Answered

Q.13 Match List I with List II

	LIST I	LIST II		
A.	Troposphere	I.	Approximate 65-75 km over Earth's surface	
			Approximate 300 km over Earth's surface	
C.	F ₂ - Part of Thermosphere	III.	Approximate 10 km over Earth's surface	
D.	D- Part of Stratosphere	IV.	Approximate 100 km over Earth's surface	

Choose the correct answer from the options given below:

Options 1. A-I, B-IV, C-III, D-II

- 2. A-III, B-IV, C-II, D-I
- 3. A-III, B-II, C-I, D-IV
- 4 A-I, B-II, C-IV, D-III

Question Type: MCQ

Question ID: 7155051625 Option 1 ID: 7155054879 Option 2 ID: 7155054878 Option 3 ID: 7155054877 Option 4 ID: 7155054880 Status: Answered

Chosen Option: 2

Q.14 A body of mass is taken from earth surface to the height h equal to twice the radius of earth (R_e) , the increase in potential energy will be:

(g = acceleration due to gravity on the surface of Earth)

Options 1. 3 mgR_e

$$2.\frac{1}{3}mgR_e$$

$$3.\frac{1}{2}mgR_{e}$$

$$4.\frac{2}{3}mgR_{\epsilon}$$

Question Type : MCQ

Question ID: 7155051636 Option 1 ID: 7155054924 Option 2 ID: 7155054923 Option 3 ID: 7155054922 Option 4 ID: 7155054921 Status: Answered

Q.15 For a moving coil galvanometer, the deflection in the coil is 0.05 rad when a current of 10 mA is passed through it. If the torsional constant of suspension wire is $4.0 \times 10^{-5} \, \mathrm{N} \, \mathrm{m} \, \mathrm{rad}^{-1}$, the magnetic field is 0.01T and the number of turns in the coil is 200, the area of each turn (in cm^2) is :

Options 1. 1.0

- 2.2.0
- 3.1.5
- 4.0.5

Question Type: MCQ

Question ID: 7155051632 Option 1 ID: 7155054906 Option 2 ID: 7155054908 Option 3 ID: 7155054907 Option 4 ID: 7155054905

Status: Answered Chosen Option: 1

Q.16 Statement I: When a Si sample is doped with Boron, it becomes P type and when doped by Arsenic it becomes N-type semi conductor such that P-type has excess holes and N-type has excess

Statement II: When such P-type and N-type semi-conductors, are fused to make a junction, a current will automatically flow which can be detected with an externally connected ammeter.

In the light of above statements, choose the most appropriate answer from the options given below

Options 1. Both Statement I and Statement II are incorrect

- 2. Both Statement I and statement II are correct
- 3. Statement I is incorrect but statement II is correct
- 4. Statement I is correct but statement II is incorrect

Question Type : MCQ

Question ID: 7155051626 Option 1 ID: 7155054882 Option 2 ID: 7155054881

Option 3 ID: 7155054884 Option 4 ID: 7155054883

Status: Answered

Chosen Option: 2

Q.17 A point charge of 10 µC is placed at the origin. At what location on the X-axis should a point charge of 40 μ C be placed so that the net electric field is zero at x = 2cm on the X-axis?

Options 1. $\chi = -4$ cm

- 2. x = 8 cm
- 3. x = 6 cm
- 4. x = 4 cm

Question Type : MCQ

Question ID: 7155051634 Option 1 ID: 7155054916

Option 2 ID: 7155054915 Option 3 ID: 7155054914

Option 4 ID: **7155054913** Status: Answered

Q.18 The distance travelled by a particle is related to time t as $x = 4t^2$. The velocity of the particle at t=5s

Options 1. 20ms⁻¹

- ^{2.} 40ms⁻¹
- $^{3.}\,8ms^{-1}$
- 4. 25ms⁻¹

Question Type : MCQ

Question ID: 7155051639 Option 1 ID: 7155054935 Option 2 ID: 7155054934

Option 3 ID: **7155054933** Option 4 ID: 7155054936

Status : Answered

Chosen Option: 2

Q.19 Two objects are projected with same velocity 'u' however at different angles α and β with the horizontal. If $\alpha + \beta = 90^{\circ}$, the ratio of horizontal range of the first object to the 2nd object will be:

Options 1. 1:1

- 2.1:2
- 3. 2:1
- 4.4:1

Question Type : MCQ

Question ID: 7155051640 Option 1 ID: 7155054937

Option 2 ID: 7155054940

Option 3 ID: **7155054938** Option 4 ID: 7155054939

Status: Answered

Q.20 Match List I with List II

	LIST I	LIST II		
A.	Gauss's Law in Electrostatics	I.	$\oint \vec{E} \cdot d\vec{l} = -\frac{d\phi_B}{dt}$	
В.	Faraday's Law	II.	$\oint \vec{B} \cdot d\vec{A} = 0$	
C.	Gauss's Law in Magnetism	III.	$\oint \vec{B} \cdot d\vec{l} = \mu_0 i_c + \mu_0 \in \frac{d\phi_E}{dt}$	
D.	Ampere-Maxwell Law	IV.	$\oint \vec{E} \cdot d\vec{s} = \frac{q}{\epsilon_0}$	

Choose the correct answer from the options given below:

Options 1. A-II, B-III, C-IV, D-I

- 2. A-I, B-II, C-III, D-IV
- 3. A-III, B-IV, C-I, D-II
- 4. A-IV, B-I, C-II, D-III

Question Type: MCQ

Question ID: 7155051630 Option 1 ID: 7155054898 Option 2 ID: 7155054897 Option 3 ID: 7155054899 Option 4 ID: 7155054900 Status: Answered

Chosen Option: 4

Section: Physics Section B

A series LCR circuit is connected to an AC source of 220 V, 50 Hz. The circuit contains a resistance R = 80 Ω , an inductor of inductive reactance X_L = 70 Ω , and a capacitor of capacitive reactance

 $X_C = 130\Omega$. The power factor of circuit is $\frac{x}{10}$. The value of x is:

Given --Answer:

Question Type : SA

Question ID: 7155051643 Status: Not Answered

Two long parallel wires carrying currents 8A and 15A in opposite directions are placed at a distance Q.22 of 7cm from each other. A point P is at equidistant from both the wires such that the lines joining the point P to the wires are perpendicular to each other. The magnitude of magnetic field at P is

 $\times 10^{-6}$ T.

(Given: $\sqrt{2} = 1.4$)

Given --Answer:

Question Type : SA

Question ID: 7155051644 Status: Not Answered

Question Type : SA

Question ID : **7155051650**Status : **Not Answered**

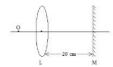
Q.28 Two cells are connected between points A and B as shown. Cell 1 has emf of 12 V and internal resistance of 3Ω . Cell 2 has emf of 6V and internal resistance of 6Ω . An external resistor R of 4Ω is connected across A and B. The current flowing through R will be ______A.

$$\bigcap_{A} \frac{|12 \text{ V}_{Cell 1}|}{|13\Omega|} \bigcap_{GCell 2} B$$

Given --Answer :

Question Type : **SA**Question ID : **7155051645**Status : **Not Answered**

Q.29 An object is placed on the principal axis of convex lens of focal length 10cm as shown. A plane mirror is placed on the other side of lens at a distance of 20 cm. The image produced by the plane mirror is 5cm inside the mirror. The distance of the object from the lens is _____ cm.



Given --Answer :

Question Type : SA

Question ID : 7155051642

Status : Not Answered

Q.30 A spherical drop of liquid splits into 1000 identical spherical drops. If u_i is the surface energy of the original drop and u_f is the total surface energy of the resulting drops, the (ignoring evaporation),

$$\frac{u_f}{u_i} = \left(\frac{10}{x}\right)$$
. Then value of x is _____

Given --Answer :

Question Type : **SA**Question ID : **7155051649**Status : **Not Answered**

Section: Chemistry Section A

Q.31 Potassium dichromate acts as a strong oxidizing agent in acidic solution. During this process, the oxidation state changes from

Options 1.
$$+6$$
 to $+3$

$$2. + 6 \text{ to} + 2$$

$$3. + 3 \text{ to} + 1$$

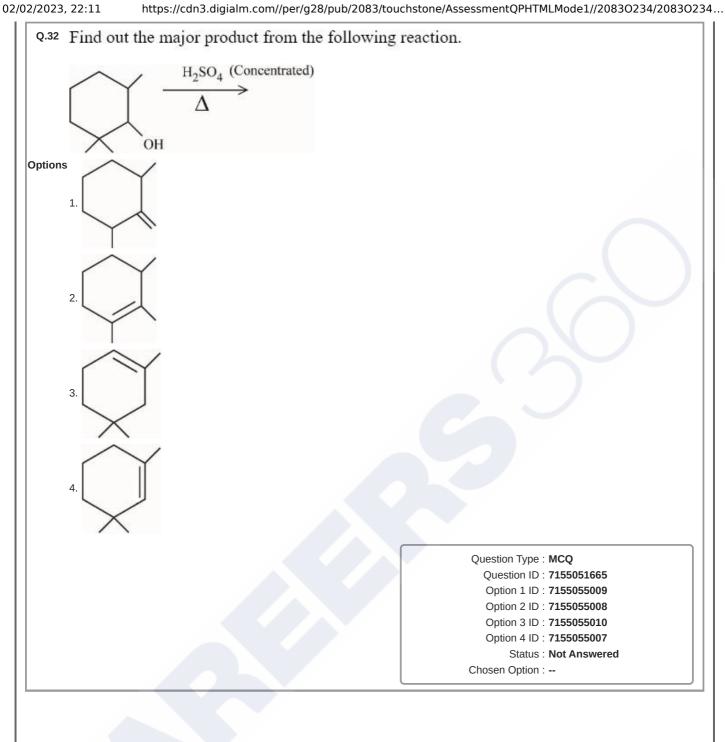
$$4. + 2 \text{ to} + 1$$

Question Type : $\boldsymbol{\mathsf{MCQ}}$

Question ID : **7155051659** Option 1 ID : **7155054985** Option 2 ID : **7155054986**

Option 3 ID: **7155054983** Option 4 ID: **7155054984**

Status : Not Attempted and Marked For Review



Q.33 Match List I with List II

LIST I Coordination entity			LIST II				
		Wavelength of light absorbed in nm					
A.	[CoCl(NH ₃) ₅] ²⁺	I.	310				
B.	[Co(NH ₃) ₆] ³⁺	II.	475				
C.	[Co(CN) ₆] ³⁻	III.	535				
D.	[Cu(H ₂ O) ₄] ²⁺	IV.	600				

Choose the correct answer from the options given below:

Options 1. A-II, B-III, C-IV, D-I

- 2. A-IV, B-I, C-III, D-II
- 3. A-III, B-I, C-II, D-IV
- 4. A-III, B-II, C-I, D-IV

Question Type: MCQ

Question ID: 7155051660 Option 1 ID: 7155054988 Option 2 ID: 7155054989 Option 3 ID: 7155054990 Option 4 ID: 7155054987 Status: Answered

Chosen Option: 4

Q.34 Statement I: Dipole moment is a vector quantity and by convention it is depicted by a small arrow with tail on the negative centre and head pointing towards the positive centre.

Statement II: The crossed arrow of the dipole moment symbolizes the direction of the shift of charges in the molecules.

In the light of the above statements, choose the most appropriate answer from the options given

Options 1. Both Statement I and Statement II are correct

- 2. Statement I is correct but Statement II is incorrect
- 3. Both Statement I and Statement II are incorrect
- 4. Statement I is incorrect but Statement II is correct

Question Type : MCQ

Question ID: 7155051652 Option 1 ID: 7155054955 Option 2 ID: 7155054957 Option 3 ID: 7155054956 Option 4 ID: 7155054958

> Not Attempted and Status : Marked For Review

Q.35 Which one among the following metals is the weakest reducing agent?

Options 1. Rb

- 2. Li
- 3. K
- 4. Na

Question Type: MCQ

Question ID: 7155051657 Option 1 ID: 7155054978 Option 2 ID: 7155054975 Option 3 ID: 7155054977 Option 4 ID: 7155054976

Status: Answered

Chosen Option: 1

Q.36 Match List I with List II

LIST I		(1) (6)	LIST II
A.	Cobalt catalyst	I.	(H ₂ + Cl ₂) production
B.	Syngas	II.	Water gas production
C.	Nickel catalyst	III.	Coal gasification
D.	Brine solution	IV.	Methanol production

Choose the correct answer from the options given below:

Options 1. A-IV, B-III, C-II, D-I

- 2. A-II, B-III, C-IV, D-I
- 3. A-IV, B-III, C-I, D-II
- 4. A-IV, B-I, C-II, D-III

Question Type: MCQ

Question ID: 7155051656 Option 1 ID: 7155054972

Option 2 ID: 7155054973 Option 3 ID: 7155054974

Option 4 ID: 7155054971

Status : Not Attempted and Marked For Review

Chosen Option: --

Q.37 Which of the following represents the correct order of metallic character of the given elements?

Options 1. Be < Si < K < Mg

- 2. $K \le Mg \le Be \le Si$
- 3. Be \leq Si \leq Mg \leq K
- 4. $Si \le Be \le Mg \le K$

Question Type : MCQ

Question ID: 7155051654

Option 1 ID: 7155054966 Option 2 ID: 7155054964

Option 3 ID: 7155054965 Option 4 ID: 7155054963

Status: Not Answered

Q.38 Given below are two statements:

Statement I: In froth floatation method a rotating paddle agitates the mixture to drive air out of it.

Statement II: Iron pyrites are generally avoided for extraction of iron due to environmental reasons.

In the light of the above statements, choose the correct answer from the options given below:

Options 1. Both Statement I and Statement II are false

- Statement I is true but Statement II is false
- 3. Both Statement I and Statement II are true
- 4. Statement I is false but Statement II is true

Question Type: MCQ

Question ID: 7155051655 Option 1 ID: 7155054968 Option 2 ID: 7155054969 Option 3 ID: 7155054967 Option 4 ID: 7155054970

> Not Attempted and Marked For Review

Chosen Option: --

Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason Q.39

Assertion A: The alkali metals and their salts impart characteristic colour to reducing flame.

Reason R: Alkali metals can be detected using flame tests.

In the light of the above statements, choose the most appropriate answer from the options given

Options 1. A is not correct but R is correct

Both A and R are correct and R is the correct explanation of A

Both A and R are correct but R is NOT the correct explanation of A

4. A is correct but R is not correct

Question Type : MCQ

Question ID: 7155051662 Option 1 ID: 7155054998 Option 2 ID: 7155054995 Option 3 ID: 7155054996 Option 4 ID: 7155054997 Status: Answered

Q.40 Match List I with List II

	LIST I (Name of polymer)		LIST II (Uses)
A.	Glyptal	I.	Flexible pipes
B.	Neoprene	II.	Synthetic wool
C.	Acrilan	III.	Paints and Lacquers
D.	LDP	IV.	Gaskets

Choose the correct answer from the options given below:

Options 1. A-III, B-II, C-IV, D-I

- 2. A-III, B-IV, C-II, D-I
- 3. A-III, B-I, C-IV, D-II
- 4. A-III, B-IV, C-I, D-II

Question Type : MCQ

Question ID: 7155051669

Option 1 ID: 7155055026

Option 2 ID: 7155055024

Option 3 ID: 7155055025

Option 4 ID: 7155055023

Status: Answered

Chosen Option: 2

Q.41 What is the mass ratio of ethylene glycol ($C_2H_6O_2$, molar mass = 62 g/mol) required for making $500~{\rm g}$ of $0.25~{\rm molal}$ aqueous solution and $250~{\rm mL}$ of $0.25~{\rm molal}$ aqueous solution?

Options 1. 3:1

- 2.1:2
- 3. 2:1
- 4.1:1

Question Type: MCQ

Question ID: 7155051651

Option 1 ID: 7155054954

Option 2 ID: 7155054951

Option 3 ID: 7155054953

Option 4 ID: 7155054952

Status: Answered

Q.42 Match List I with List II

9.0	LIST I (Amines)		IST II (pK _b)
A.	Aniline	I.	3.25
B.	Ethanamine	II.	3.00
C.	N-Ethylethanamine	III.	9.38
D.	N, N-Diethylethanamine	IV.	3.29

Choose the correct answer from the options given below:

Options 1. A-III, B-IV, C-II, D-I

- 2. A-III, B-II, C-I, D-IV
- 3. A-III, B-II, C-IV, D-I
- 4 A-I, B-IV, C-II, D-III

Question Type : MCQ

Question ID: 7155051667

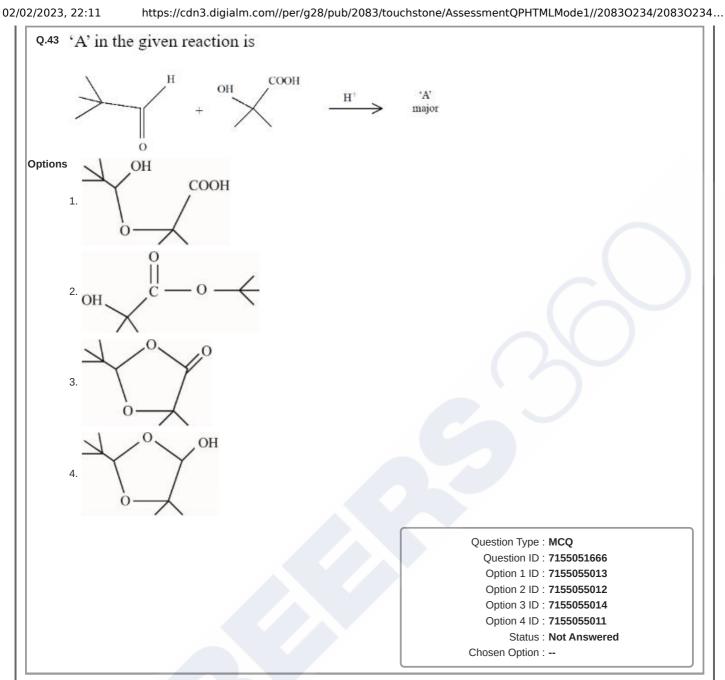
Option 1 ID: 7155055015

Option 2 ID: 7155055016

Option 3 ID: 7155055017

Option 4 ID: 7155055018

Status: Answered



Q.44 Match List I with List II

7.	LIST I	8	LIST II
	Isomeric pairs	-	Type of isomers
A.	Propanamine and N-Methylethanamine	I.	Metamers
B.	Hexan-2-one and Hexan-3-one	II.	Positional isomers
C.	Ethanamide and Hydroxyethanimine	III.	Functional isomers
D.	o-nitrophenol and p-nitrophenol	IV.	Tautomers

Choose the correct answer from the options given below:

Options 1. A-III, B-I, C-IV, D-II

- 2. A-III, B-IV, C-I, D-II
- 3. A-IV, B-III, C-I, D-II
- 4. A-II, B-III, C-I, D-IV

Question Type: MCQ

Question ID: 7155051664 Option 1 ID: 7155055004 Option 2 ID: 7155055003 Option 3 ID: 7155055005 Option 4 ID: 7155055006

Status: Answered

Chosen Option: 1

Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason Q.45

Assertion A: Carbon forms two important oxides - CO and CO2. CO is neutral whereas CO2 is acidic in nature

Reason R: CO2 can combine with water in a limited way to form carbonic acid, while CO is sparingly soluble in water

In the light of the above statements, choose the most appropriate answer from the options given

Options 1

Both A and R are correct and R is the correct explanation of A

Both A and R are correct but R is NOT the correct explanation of A

- 3. A is not correct but R is correct
- 4. A is correct but R is not correct

Question Type: MCQ

Question ID: 7155051658 Option 1 ID: 7155054979 Option 2 ID: 7155054980 Option 3 ID: 7155054982 Option 4 ID: 7155054981 Status: Answered

Q.46 The isomeric deuterated bromide with molecular formula C₄H₈DBr having two chiral carbon atoms

Options 1. 2 - Bromo - 1 - deutero - 2 - methylpropane

- 2. 2 Bromo 3 deuterobutane
- 3. 2 Bromo 1 deuterobutane
- 4. 2 Bromo 2 deuterobutane

Question Type : MCQ

Question ID: 7155051668 Option 1 ID: 7155055021 Option 2 ID: 7155055020 Option 3 ID: 7155055019 Option 4 ID: 7155055022

Status: Answered

Chosen Option: 4

Q.47 When the hydrogen ion concentration [H⁺] changes by a factor of 1000, the value of pH of the solution

Options 1. decreases by 2 units

- 2. increases by 2 units
- 3. decreases by 3 units
- 4. increases by 1000 units

Question Type: MCQ

Question ID: 7155051653
Option 1 ID: 7155054959
Option 2 ID: 7155054962
Option 3 ID: 7155054961
Option 4 ID: 7155054960

Status: Answered

Chosen Option: 3

Q.48 A chloride salt solution acidified with dil.HNO₃ gives a curdy white precipitate, [A], on addition of AgNO₃. [A] on treatment with NH₄OH gives a clear solution, B.
A and B are respectively

Options 1. $H[AgCl_3] \& [Ag(NH_3)_2]Cl$

- 2. AgCl & [Ag(NH₃)₂]Cl
- 3. $H[AgCl_3] \& (NH_4)[Ag(OH)_2]$
- 4. AgCl & (NH₄)[Ag(OH)₂]

Question Type: MCQ

Question ID : 7155051663 Option 1 ID : 7155055000 Option 2 ID : 7155055001 Option 3 ID : 7155055002 Option 4 ID : 7155054999

Status : Not Attempted and Marked For Review

- A. Ammonium salts produce haze in atmosphere. Q.49
 - B. Ozone gets produced when atmospheric oxygen reacts with chlorine radicals.
 - C. Polychlorinated biphenyls act as cleansing solvents.
 - D. 'Blue baby' syndrome occurs due to the presence of excess of sulphate ions in water.

Choose the correct answer from the options given below:

Options 1. A and D only

- 2. B and C only
- 3. A, B and C only
- 4. A and C only

Question Type: MCQ

Question ID: 7155051661 Option 1 ID: 7155054991 Option 2 ID: 7155054994 Option 3 ID: 7155054993 Option 4 ID: 7155054992

Status: Answered

Chosen Option: 1

Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason Q.50

Assertion A: Butylated hydroxy anisole when added to butter increases its shelf life.

Reason R: Butylated hydroxy anisole is more reactive towards oxygen than food.

In the light of the above statements, choose the most appropriate answer from the options given below

Options 1. A is not correct but R is correct

Both A and R are correct but R is NOT the correct explanation of A

Both A and R are correct and R is the correct explanation of A

4. A is correct but R is not correct

Question Type: MCQ

Question ID: 7155051670 Option 1 ID: 7155055030 Option 2 ID: 7155055028 Option 3 ID: 7155055027 Option 4 ID: 7155055029 Status: Not Answered

Chosen Option: --

Section: Chemistry Section B

Q.51 Number of hydrogen atoms per molecule of a hydrocarbon A having 85.8 % carbon is (Given: Molar mass of $A = 84 \text{ g mol}^{-1}$)

Given 12 Answer:

Question Type: SA

Question ID: 7155051679 Status: Answered

Question ID: 7155051673 Status: Not Answered

Q.56	The number of given orbitals which have electron density along the axis is _
	$p_x, p_y, p_z, d_{xy}, d_{yz}, d_{zz}, d_{z^2}, d_{z^2}, d_{z^2}$

Given --Answer :

Question Type : SA

Question ID : 7155051672

Status : Not Attempted and Marked For Review

- Q.57 The number of incorrect statement/s from the following is/are _
 - A. Water vapours are adsorbed by anhydrous calcium chloride.
 - B. There is a decrease in surface energy during adsorption.
 - C. As the adsorption proceeds, ΔH becomes more and more negative.
 - D. Adsorption is accompanied by decrease in entropy of the system.

Given --Answer :

Question Type : SA

Question ID : 7155051677

Status : Not Answered

Q.58 Number of compounds giving (i) red colouration with ceric ammonium nitrate and also (ii) positive iodoform test from the following is _____

$$O$$
 CH_3 OH ,

Given --Answer :

Question Type : SA

Question ID: 7155051680

Status : Not Attempted and Marked For Review

Q.59
$$Pt(s)|H_2(g)(1 bar)|H^+(aq)(1 M)||M^{3+}(aq), M^+(aq)|Pt(s)$$

The E_{cell} for the given cell is 0.1115 V at 298 K when $\frac{M^+(aq)}{M^{3+}(aq)} = 10^a$

The value of a is

Given: $E_{M}^{\theta_{3}^{3+}/M^{+}} = 0.2 \text{ V}$

$$\frac{2.303RT}{F} = 0.059V$$

Given 8.28 Answer:

Question Type : SA

Question ID : **7155051675** Status : **Answered** Q.60 A first order reaction has the rate constant, $k = 4.6 \times 10^{-3} \text{ s}^{-1}$. The number of **correct** statement/s from the following is/are_

Given: log 3 = 0.48

- A. Reaction completes in 1000 s.
- B. The reaction has a half-life of 500 s.
- C. The time required for 10% completion is 25 times the time required for 90% completion.
- D. The degree of dissociation is equal to $(1 e^{-kt})$
- E. The rate and the rate constant have the same unit.

Given --Answer:

Question Type : SA

Question ID: 7155051676

Not Attempted and Status:

Marked For Review

Section: Mathematics Section A

Q.61 The number of numbers, strictly between 5000 and 10000 can be formed using the digits 1,3,5,7,9 without repetition, is

Options 1. 12

- 2.120
- 3.6
- 4.72

Question Type : MCQ

Question ID: 7155051686

Option 1 ID: 7155055063

Option 2 ID: 7155055064

Option 3 ID: 7155055061 Option 4 ID: 7155055062

Status: Not Answered

Let
$$A = \begin{bmatrix} \frac{1}{\sqrt{10}} & \frac{3}{\sqrt{10}} \\ \frac{-3}{\sqrt{10}} & \frac{1}{\sqrt{10}} \end{bmatrix}$$
 and $B = \begin{bmatrix} 1 & -i \\ 0 & 1 \end{bmatrix}$, where $i = \sqrt{-1}$.

If $M = A^TB A$, then the inverse of the matrix $AM^{2023}A^T$ is

Options
$$\begin{bmatrix} 1 & -2023i \\ 0 & 1 \end{bmatrix}$$

2. $\begin{bmatrix} 1 & 2023i \\ 0 & 1 \end{bmatrix}$

3. $\begin{bmatrix} 1 & 0 \\ 2023i & 1 \end{bmatrix}$

4. $\begin{bmatrix} 1 & 0 \\ -2023i & 1 \end{bmatrix}$

Question Type: MCQ

Question ID: 7155051684

Option 1 ID: 7155055053 Option 2 ID: 7155055054

Option 3 ID: 7155055055

Option 4 ID: 7155055056

Status: Not Answered

Chosen Option: --

Q.63 Let T and C respectively be the transverse and conjugate axes of the hyperbola $16x^2 - y^2 + 64x + 4y$ +44 = 0. Then the area of the region above the parabola $x^2 = y + 4$, below the transverse axis T and on the right of the conjugate axis C is:

1.
$$4\sqrt{6} + \frac{44}{3}$$

2.
$$4\sqrt{6} - \frac{28}{3}$$

$$2.4\sqrt{6} - \frac{28}{3}$$
$$3.4\sqrt{6} - \frac{44}{3}$$

4.
$$4\sqrt{6} + \frac{28}{3}$$

Question Type: MCQ

Question ID: 7155051694

Option 1 ID: 7155055096

Option 2 ID: 7155055093

Option 3 ID: 7155055095

Option 4 ID: 7155055094

Status: Not Answered

Q.64 Let $f(x) = 2x^n + \lambda$, $\lambda \in \mathbb{R}$, $n \in \mathbb{N}$, and f(4) = 133, f(5) = 255. Then the sum of all the positive integer divisors of (f(3) - f(2)) is

Options 1. 61

- 2.58
- 3.59
- 4.60

Question Type: MCQ

Question ID: 7155051688

Option 1 ID: 7155055072

Option 2 ID: 7155055069

Option 3 ID: 7155055070

Option 4 ID: 7155055071 Status: Not Answered

Chosen Option: --

Q.65 Let A, B, C be 3 × 3 matrices such that A is symmetric and B and C are skew-symmetric.

Consider the statements

(S1) $A^{13} B^{26} - B^{26} A^{13}$ is symmetric

(S2) $A^{26} C^{13} - C^{13} A^{26}$ is symmetric

Then,

Options 1. Only S2 is true

- 2. Both S1 and S2 are false
- 3. Both S1 and S2 are true
- 4. Only S1 is true

Question Type: MCQ

Question ID: 7155051685

Option 1 ID: 7155055060

Option 2 ID: 7155055059

Option 3 ID: 7155055057 Option 4 ID: 7155055058

Status : Not Attempted and Marked For Review

Chosen Option: --

Q.66 The shortest distance between the lines x + 1 = 2y = -12z and x = y + 2 = 6z - 6 is

Options 1. 2

Question Type: MCQ

Question ID: 7155051695

Option 1 ID: 7155055097

Option 2 ID: 7155055098

Option 3 ID: 7155055099

Option 4 ID: **7155055100**

Status: Answered

Q.67 Let $\vec{a} = -\hat{i} - \hat{j} + \hat{k}$, $\vec{a} \cdot \vec{b} = 1$ and $\vec{a} \times \vec{b} = \hat{i} - \hat{j}$.

Then $\vec{a} - 6\vec{b}$ is equal to

Options 1. $3(\hat{i} + \hat{j} - \hat{k})$

 $2.3(\hat{i}-\hat{j}-\hat{k})$

 $3.3(\hat{i}+\hat{j}+\hat{k})$

4. $3(\hat{i}-\hat{j}+\hat{k})$

Question Type: MCQ

Chosen Option: 3

Question ID: 7155051697

Option 1 ID: 7155055105

Option 2 ID: 7155055107

Option 3 ID: 7155055108

Option 4 ID: 7155055106

Status : Answered

Q.68

If the function $f(x) = \begin{cases} (1+|\cos x|)\frac{\lambda}{|\cos x|} &, & 0 < x < \frac{\pi}{2} \\ \mu &, & x = \frac{\pi}{2} \\ \frac{\cot 6x}{e^{\cot 4x}} &, & \frac{\pi}{2} < x < \pi \end{cases}$

is continuous at $x = \frac{\pi}{2}$, then $9\lambda + 6\log_e \mu + \mu^6 - e^{6\lambda}$ is equal to

Options 1. 8

 $2.2e^{4}+8$

3.10

4.11

Question Type: MCQ

Question ID: 7155051689

Option 1 ID: 7155055073

Option 2 ID: 7155055076

Option 3 ID: 7155055074 Option 4 ID: 7155055075

Status: Not Answered

The integral $16 \int_{1}^{2} \frac{dx}{x^3 (x^2 + 2)^2}$ is equal to

Options 1.
$$\frac{11}{6} + \log_e 4$$

2.
$$\frac{11}{12} - \log_e 4$$

3.
$$\frac{11}{12} + \log_e 4$$

4.
$$\frac{11}{6} - \log_e 4$$

Question Type : MCQ

Question ID: **7155051691**Option 1 ID: **7155055083**Option 2 ID: **7155055082**Option 3 ID: **7155055081**

Option 4 ID: **7155055084**Status: Not Answered

Chosen Option : --

Q.70 The equations of two sides of a variable triangle are x = 0 and y = 3, and its third side is a tangent to the parabola $y^2 = 6x$. The locus of its circumcentre is:

Options 1. $4y^2 - 18y - 3x - 18 = 0$

$$2. 4y^2 - 18y + 3x + 18 = 0$$

$$3. 4y^2 + 18y + 3x + 18 = 0$$

$$4.4y^2 - 18y - 3x + 18 = 0$$

Question Type : MCQ

Question ID : **7155051693** Option 1 ID : **7155055092**

Option 2 ID: **7155055090** Option 3 ID: **7155055089**

Option 4 ID : **7155055091**

Status : Not Answered

Chosen Option : --

Q.71 Let Δ , $\nabla \in \{\Lambda, V\}$ be such that $(p \to q) \Delta (p \nabla q)$ is a tautology. Then

Options 1. $\Delta = \Lambda$, $\nabla = \Lambda$

2.
$$\Delta = V$$
, $\nabla = \Lambda$

3.
$$\Delta = \Lambda$$
, $\nabla = V$

4.
$$\Delta = V$$
, $\nabla = V$

Question Type: MCQ

Question ID: 7155051700

Option 1 ID: 7155055117

Option 2 ID: **7155055120**

Option 3 ID: **7155055119**

Option 4 ID : 7155055118

Status : Answered

Q.72 The foot of perpendicular of the point (2, 0, 5) on the line $\frac{x+1}{2} = \frac{y-1}{5} = \frac{z+1}{5}$ is (α, β, γ) . Then, which of the following is NOT correct?

Options

$$1.\frac{\alpha\beta}{\gamma} = \frac{4}{15}$$

2.
$$\frac{\gamma}{\alpha} = \frac{5}{8}$$
3. $\frac{\beta}{\gamma} = -5$
4. $\frac{\alpha}{\beta} = -8$

$$3. \frac{\beta}{\gamma} = -5$$

$$a \cdot \frac{\alpha}{\beta} = -8$$

Question Type : MCQ

Question ID: 7155051696 Option 1 ID: 7155055104 Option 2 ID: 7155055103 Option 3 ID: 7155055102

Option 4 ID: 7155055101 Status: Not Answered

Chosen Option: --

Q.73 Let $f: \mathbb{R} \to \mathbb{R}$ be a function defined by

 $f(x) = log_{\sqrt{m}} \{ \sqrt{2}(\sin x - \cos x) + m - 2 \}$, for some m, such that the range of f is [0, 2]. Then the value

Options 1. 5

2. 3

3. 4

4. 2

Question Type : MCQ

Question ID: 7155051681

Option 1 ID: 7155055042 Option 2 ID: 7155055044

Option 3 ID: 7155055041

Option 4 ID: 7155055043

Status: Not Answered

Q.74 If the four points, whose position vectors are $3\hat{\imath} - 4\hat{\jmath} + 2\hat{k}$, $\hat{\imath} + 2\hat{\jmath} - \hat{k}$, $-2\hat{\imath} - \hat{\jmath} + 3\hat{k}$ and $5\hat{\imath} - 2\alpha\hat{\jmath} + 4\hat{k}$ are coplanar, then α is equal to

Options

 $\frac{73}{17}$

 $2. -\frac{73}{17}$

3. $\frac{107}{17}$

4. $-\frac{107}{17}$

Question Type : MCQ

Question ID: 7155051698 Option 1 ID: 7155055110 Option 2 ID: 7155055112 Option 3 ID: 7155055109 Option 4 ID: 7155055111

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.75 Let the function $f(x) = 2x^3 + (2p-7)x^2 + 3(2p-9)x - 6$ have a maxima for some value of x < 0 and a minima for some value of x > 0. Then, the set of all values of p is

Options

$$1.\left(-\frac{9}{2}, \frac{9}{2}\right)$$

$$2.\left(0,\frac{9}{2}\right)$$

$$3.\left(-\infty, \frac{9}{2}\right)$$

$$4.\left(\frac{9}{2},\infty\right)$$

Question Type : MCQ

Question ID: 7155051690 Option 1 ID: 7155055078 Option 2 ID: 7155055077 Option 3 ID: 7155055079 Option 4 ID: 7155055080

Status : Not Answered

Q.76 Let z be a complex number such that $\left| \frac{z-2i}{z+i} \right| = 2$, $z \neq -i$. Then z lies on the circle of radius 2 and

centre

Options 1. (0, 2)

- 2. (0, 0)
- 3.(2,0)
- 4.(0,-2)

Question Type : MCQ

Question ID: 7155051683

Option 1 ID: **7155055050**

Option 2 ID: **7155055049** Option 3 ID: **7155055052**

Option 4 ID : **7155055051**

Status : Not Answered

Chosen Option : --

Q.77 Let N be the sum of the numbers appeared when two fair dice are rolled and let the probability that N-2, $\sqrt{3N}$, N+2 are in geometric progression be $\frac{k}{48}$. Then the value of k is

Options 1. 16

- 2. 2
- 3. 4
- 4.8

Question Type : MCQ

Question ID: 7155051699

Option 1 ID: **7155055114**

Option 2 ID: **7155055113**

Option 3 ID: **7155055116** Option 4 ID: **7155055115**

Status: Not Answered

Chosen Option: --

Q.78 The number of functions

 $f: \{1,2,3,4\} \to \{a \in \mathbb{Z} | a| \le 8\}$

satisfying $f(n) + \frac{1}{n} f(n+1) = 1$, $\forall n \in \{1,2,3\}$ is

Options 1. 2

- 2. 3
- 3. 4
- 4. 1

Question Type : MCQ

Question ID : 7155051682

Option 1 ID: 7155055046

Option 2 ID : 7155055047

Option 3 ID: 7155055048

Option 4 ID : **7155055045**

Status : Not Answered

Q.79 Let y = y(t) be a solution of the differential equation

$$\frac{dy}{dt} + \alpha y = \gamma e^{-\beta t}$$

where, $\alpha > 0$, $\beta > 0$ and $\gamma > 0$. Then $\lim_{t \to \infty} y(t)$

Options 1. is ()

- 2. does not exist
- 3. is 1
- 4. is -1

Question Type : MCQ

Question ID: 7155051692

Option 1 ID: 7155055086

Option 2 ID: 7155055088

Option 3 ID: 7155055087

Option 4 ID: 7155055085

Status: Not Answered

Chosen Option: --

Q.80
$$\sum_{k=0}^{6} {}^{51-k}C_3$$
 is equal to

Options
$$_{1.}^{51}C_3 - ^{45}C_3$$

$$^{2.51}C_4 - ^{45}C_4$$

3.
$${}^{52}C_4 - {}^{45}C_4$$

$$4.52C_3 - 45C_3$$

Question Type : MCQ

Question ID: 7155051687

Option 1 ID: 7155055066

Option 2 ID: 7155055065

Option 3 ID: 7155055068

Option 4 ID: 7155055067

Status: Not Answered

Chosen Option: --

Section: Mathematics Section B

Q.81 If
$$\int_{\frac{1}{3}}^{3} |\log_e x| dx = \frac{m}{n} \log_e \left(\frac{n^2}{e}\right)$$
, where m and n are coprime natural numbers, then $m^2 + n^2 - 5$ is equal to

Given --Answer:

Question Type: SA

Question ID: 7155051706 Status: Not Answered

02/	02	1202	3 22	•11

Q.82 Let $a \in \mathbb{R}$ and let α , β be the roots of the equation $x^2 + 60^{\frac{1}{4}}x + \alpha$
--

If $\alpha^4 + \beta^4 = -30$, then the product of all possible values of α is _____

Answer:

Question Type: SA Question ID: 7155051701 Status: Not Answered

If the shortest distance between the line joining the points (1, 2, 3) and (2, 3, 4), and the line $\frac{x-1}{2} = \frac{y+1}{-1} = \frac{z-2}{0}$ is α , then $28\alpha^2$ is equal to ______.

Given --

Answer:

Question Type: SA

Question ID: 7155051708 Status: Not Answered

For the two positive numbers a, b, if a, b and $\frac{1}{18}$ are in a geometric progression, while $\frac{1}{a}$, 10 and $\frac{1}{l}$ are in an arithmetic progression, then 16a + 12b is equal to _____

Given --Answer:

Question Type: SA

Question ID: 7155051704

Status: Not Answered

The remainder when (2023)²⁰²³ is divided by 35 is _____

Given --Answer:

Question Type: SA

Question ID: 7155051703 Status: Not Answered

Suppose Anil's mother wants to give 5 whole fruits to Anil from a basket of 7 red apples, 5 white Q.86 apples and 8 oranges. If in the selected 5 fruits, at least 2 oranges, at least one red apple and at least one white apple must be given, then the number of ways, Anil's mother can offer 5 fruits to Anil is

Given --Answer:

Question Type: SA

Question ID: 7155051702 Status: Not Answered

Points P(-3, 2), Q(9, 10) and R(α, 4) lie on a circle C with PR as its diameter. The tangents to C at the points Q and R intersect at the point S. If S lies on the line 2x - ky = 1, then k is equal to

Given --Answer:

Question Type: SA

Question ID: 7155051705 Status: Not Answered

Q.88	If m and n respectively are the numbers of positive and negative values of θ in the interval $[-\pi, \pi]$ that satisfy the equation $\cos 2\theta \cos \frac{\theta}{2} = \cos 3\theta \cos \frac{9\theta}{2}$, then mn is equal to		
Give			
		Question Type : SA Question ID : 7155051710 Status : Not Answered	
Q.89	25% of the population are smokers. A smoker has 27 times more chances to develop lung cancer than a non smoker. A person is diagnosed with lung cancer and the probability that this person is a smoker is $\frac{k}{10}$. Then the value of k is		
Give nswer			
		Question Type : SA Question ID : 7155051709 Status : Not Answered	
Q.90	A triangle is formed by X-axis, Y-axis and the line $3x + 4y = 60$. Then the number which lie strictly inside the triangle, where a is an integer and b is a multiple of a,		
Give nswer			
		Question Type : SA Question ID : 7155051707 Status : Not Answered	