

PHYSICS, CHEMISTRY & MATHEMATICS

Pattern - CPT-1

QP Code:

Test - 2

Time Allotted: 3 Hours

Maximum Marks: 183

- Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.
- You are not allowed to leave the Examination Hall before the end of the test.

INSTRUCTIONS

Caution: Question Paper CODE as given above MUST be correctly marked in the answer OMR sheet before attempting the paper. Wrong CODE or no CODE will give wrong results.

A. General Instructions

1. Attempt ALL the questions. Answers have to be marked on the OMR sheets.
2. This question paper contains **Three Sections**.
3. **Section-I** is Physics, **Section-II** is Chemistry and **Section-III** is Mathematics.
4. All the section can be filled in **PART-A** of OMR.
5. Rough spaces are provided for rough work inside the question paper. No additional sheets will be provided for rough work.
6. Blank Papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.

B. Filling of OMR Sheet

1. Ensure matching of OMR sheet with the Question paper before you start marking your answers on OMR sheet.
2. On the OMR sheet, darken the appropriate bubble with **Blue/Black Ball Point Pen** for each character of your Enrolment No. and write in ink your Name, Test Centre and other details at the designated places.
3. OMR sheet contains alphabets, numerals & special characters for marking answers.

C. Marking Scheme For Only One Part.

- (i) **Part-A (01-07)** – Contains seven (07) multiple choice questions which have **One or More** correct answer.
Full Marks: +4 If only the bubble(s) corresponding to all the correct options(s) is (are) darkened.
Partial Marks: +1 For darkening a bubble corresponding to **each correct option**, provided NO incorrect option is darkened.
Zero Marks: 0 If none of the bubbles is darkened.
Negative Marks: -1 In all other cases.
For example, if **(A), (C) and (D)** are all the correct options for a question, darkening all these three will result in **+4 marks**; darkening only **(A) and (D)** will result in **+2 marks**; and darkening **(A) and (B)** will result in **-1 marks**, as a wrong option is also darkened.
- (ii) **Part-A (08-14)** – Contains seven (07) multiple choice questions which have ONLY ONE CORRECT answer
Each question carries **+3 marks** for correct answer and **-1 marks** for wrong answer.
- (iii) **Part-A (15-18)** - This section contains Two paragraphs. Based on each paragraph, there are Two multiple choice questions. Each question has only one correct answer and carries **+3 marks** for the correct answer and **-1 marks** for wrong answer.

Name of the Candidate : _____

Batch : _____ Date of Examination : _____

Enrolment Number : _____

BATCHES – (2022) B & C Lot

SECTION-1 : PHYSICS

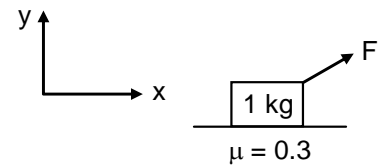
PART – A

(Multi Correct Choice Type)

This section contains 7 **multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONE OR MORE** may be correct.

1. A force $\vec{F} = \hat{i} + 4\hat{j}$ acts on block shown. The force of friction acting on the block is:

- (A) $-\hat{i}$
 (B) $-1.8\hat{i}$
 (C) $-2.4\hat{i}$
 (D) $-3\hat{i}$



1. **A**

2. Which of the following are correct?

- (A) A parachutist of weight W strikes the ground with his legs and comes to rest with an upward acceleration of magnitude $3g$. Force exerted on him by ground during landing is $4W$.
 (B) Two massless spring balances are hung vertically in series from a fixed point and a mass M kg is attached to the lower end of the lower spring balance. Each spring balance reads M kgf
 (C) A rough vertical board has an acceleration a along the horizontal direction so that a block of mass m pressing against its vertical side does not fall. The coefficient of friction between the block and the board is greater than g/a .
 (D) A man is standing at a weighing machine. If man jumps away from it the reading of the weighing machine first increases and then decreases to zero.

2. **ABCD**

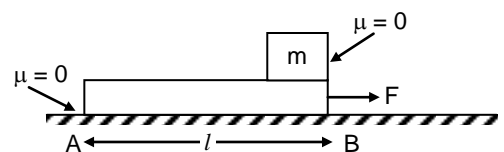
3. In the figure, a small block is kept on M , then

- (A) The acceleration of m w.r.t. ground is $\frac{F}{m}$
 (B) The acceleration of m w.r.t. ground is zero
 (C) The time taken by m to separate from M is

$$\sqrt{\frac{2\ell m}{F}}$$

- (D) The time taken by m to separate from M is

$$\sqrt{\frac{2\ell M}{F}}$$

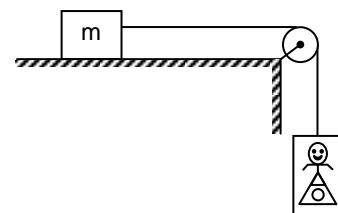


3. **BD**

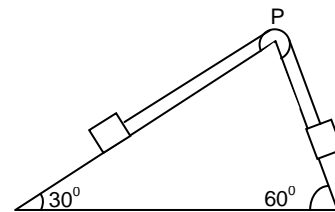
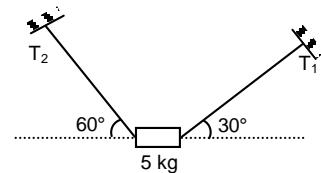
4. In the figure, a man of true mass M is standing on a weighing machine placed in a cabin. The cabin is joined by a string with a body of mass m . Assuming no friction, and negligible mass of cabin and weighing machine, the measured mass of man is (normal force between the man and the machine is proportional to the mass)

- (A) Measured mass of man is $\frac{Mm}{(M+m)}$

- (B) Acceleration of man is $\frac{mg}{(M+m)}$



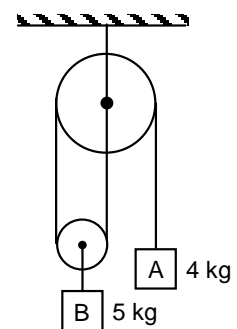
- (C) Acceleration of man is $\frac{Mg}{(M+m)}$
- (D) Measured mass of man is M .
4. **AC**
5. The force exerted by the floor of an elevator on the foot of a person standing there is more than the weight of the person if the elevator is
 (A) going up and slowing down (B) going up and speeding up
 (C) going down and slowing down (D) going down and speeding up.
5. **BC**
6. A body of mass 5 kg is suspended by the strings making angles 60° and 30° with the horizontal as shown in the figure ($g = 10 \text{ ms}^{-2}$). Then
 (A) $T_1 = 25 \text{ N}$
 (B) $T_2 = 25 \text{ N}$
 (C) $T_1 = 25\sqrt{3} \text{ N}$
 (D) $T_2 = 25\sqrt{3} \text{ N}$
6. **AD**
7. Two blocks of masses $m_1 = 3 \text{ kg}$ and $m_2 = \frac{1}{\sqrt{3}} \text{ kg}$ are connected by a light inextensible string which passes over a smooth pulley. The blocks rest on the inclined smooth planes of a wedge and the pulley is fixed to the top of the wedge. The planes of the wedge supporting m_1 and m_2 are inclined at 30° and 60° respectively, with the horizontal. then
 (A) acceleration of masses will be 2.79 m/s^2
 (B) tension in the string will be 4.2 N
 (C) acceleration of masses will be 2.39 m/s^2
 (D) tension in the string will be 6.6 N
7. **AD**



(Single Correct Choice Type)

This section contains **7 multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONLY ONE is correct**.

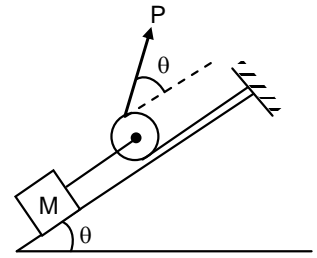
8. The acceleration of the blocks (A) and (B) respectively in situation shown in the figure is: (pulleys & strings are massless)
- (A) $\frac{2g}{7}$ downward, $\frac{g}{7}$ upward
- (B) $\frac{2g}{3}$ downward, $\frac{g}{3}$ upward
- (C) $\frac{10g}{13}$ downward, $\frac{5g}{13}$ upward
- (D) none of these



8. **A**

9. What should be the minimum force P to be applied to the string so that block of mass m just begins to move up the frictionless plane?

- (A) $Mg \tan\left(\frac{\theta}{2}\right)$ (B) $\frac{Mg \cot \theta}{2}$
 (C) $\frac{Mg \cos \theta}{1 + \sin \theta}$ (D) none of these



9. **A**

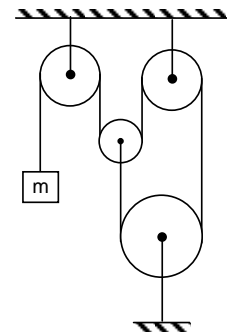
10. A spring of force constant k is cut into two pieces such that one piece is double the length of the other. Then the long piece will have a force constant of

- (A) $\left(\frac{2}{3}\right)k$ (B) $\left(\frac{3}{2}\right)k$ (C) $3k$ (D) $6k$

10. **B**

11. If the string & all the pulleys are ideal, acceleration of mass m is

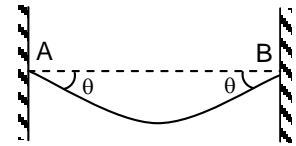
- (A) $\frac{g}{2}$
 (B) 0
 (C) g
 (D) dependent on m



11. **C**

12. A flexible chain of weight W hangs between two fixed points A and B which are at the same horizontal level. The inclination of the chain with the horizontal at both the points of support is θ . What is the tension of the chain at the mid point?

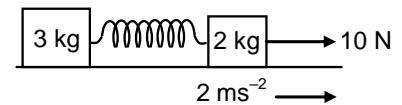
- (A) $\frac{W}{2} \cdot \operatorname{cosec} \theta$ (B) $\frac{W}{2} \cdot \tan \theta$ (C) $\frac{W}{2} \cdot \cot \theta$ (D) none of these



12. **C**

13. Find the acceleration of 3 kg mass when acceleration of 2 kg mass is 2 ms^{-2} as shown in figure.

- (A) 3 ms^{-2} (B) 2 ms^{-2}
 (C) 0.5 ms^{-2} (D) zero



13. **B**

14. A block of mass 2 kg slides down an incline plane of inclination 30° . The coefficient of friction between block and plane is 0.5 . The contact force between block and plank is:

- (A) 20 Nt (B) $10\sqrt{3} \text{ Nt}$ (C) $5\sqrt{7} \text{ Nt}$ (D) $5\sqrt{15} \text{ Nt}$

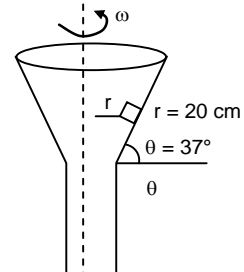
14. **D**

(Paragraph Type)

This section contains **2 paragraphs**. Based upon the paragraphs **2 multiple choice questions** have to be answered. Each of these questions has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

Paragraph for Question no. 15 to 16

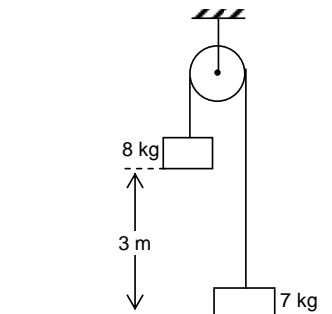
A very small cube of mass 2 kg is placed on the surface of a funnel as shown in figure. The funnel is rotating about its vertical axis of symmetry with angular velocity ' ω '. The wall of funnel makes an angle 37° with horizontal. The distance of cube from the axis of rotation is 20 cm and friction coefficient is μ . (Take $g = 10 \text{ m/s}^2$)



15. The friction force acting between the block and surface (if $\mu = 0.3$) of funnel at $\omega = 5 \text{ rad/s}$ is
 (A) 6.6 N (B) 4 N
 (C) 2.2 N (D) zero
15. **B**
16. For what value of ω , there would be no frictional force acting between the surfaces:
 (A) 5 rad/sec (B) $\sqrt{\frac{75}{2}}$ rad/sec
 (C) $\sqrt{6}$ rad/sec (D) $\sqrt{40}$ rad/sec
16. **B**

Paragraph for Question no. 17 to 18

Two masses $m_1 = 8 \text{ kg}$ and $m_2 = 7 \text{ kg}$ are suspended by a weightless inextensible string passing over a frictionless pulley. m_2 is touching the ground when m_1 is kept at a height of 3 m above the ground with string tight. Mass 8 kg is released which will move down while mass 7 kg will move up. Take $g = 10 \text{ ms}^{-2}$



17. What will be velocity of 7 kg mass when 8 kg mass just touches the ground?
 (A) $\frac{2}{3} \text{ ms}^{-1}$ (B) 2 ms^{-1}
 (C) 3 ms^{-1} (D) $\frac{4}{3} \text{ ms}^{-1}$
17. **B**
18. Mass 7 kg will again stop after covering total distance
 (A) 3 m (B) 4 m
 (C) 3.2 m (D) 3.4 m
18. **C**

SECTION-2 : CHEMISTRY

PART – A

(Multi Correct Choice Type)

This section contains 7 **multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONE OR MORE** may be correct.

1. Select the correct statement(s) regarding $3P_y$ orbital :
 - (A) Total no. of nodes are 2
 - (B) Number of maxima in the curve $4\pi r^2 R^2$ vs r is one
 - (C) Quantum no. n, l and m for orbital may be 3, 1, -1 respectively
 - (D) The magnetic quantum number may have a positive value
1. ACD
2. In which of the following species the bonds are non-directional?
 - (A) NCl_3
 - (B) RbCl
 - (C) BeCl_2
 - (D) BCl_3
2. B
3. The ground state orbital angular momentum of which of the following electron(s) is/are equal to $\frac{h}{\sqrt{2\pi}}$?
 - (A) Valence electron of sodium
 - (B) The unpaired electron of fluorine
 - (C) The K-electron of hydrogen
 - (D) The highest energetic electron of aluminium
3. BD
4. Which of the following molecules have linear shapes?
 - (A) BeCl_2
 - (B) XeF_2
 - (C) SiO_2
 - (D) N_3^-
4. **ABCD**
5. Incorrect statement(s) regarding molecule $\text{SOF}_2(\text{CH}_3)_2$ is/are
 - (A) molecule has zero dipole moment
 - (B) F atoms occupy axial positions
 - (C) Bond angle $\text{CH}_3\text{-S-CH}_3$ is less than 120°
 - (D) CH_3 is bulky group so it will occupy axial position which has longer bond length than equatorial position.
5. AD
6. In which of the following compounds B-F bond length is shortest?
 - (A) BF_4^-
 - (B) BF_3
 - (C) $\text{H}_3\text{N} \rightarrow \text{BF}_3$
 - (D) $(\text{SiH}_3)_3\text{N} \rightarrow \text{BF}_3$
6. B
7. According to molecular orbital theory for O_2^+ :
 - (A) bond order is less than O_2 and O_2^+ is paramagnetic
 - (B) bond order is more than O_2 and O_2^+ is paramagnetic
 - (C) bond order is less than O_2 and O_2^+ is diamagnetic
 - (D) bond order is more than O_2 and O_2^+ is diamagnetic
7. B

(Single Correct Choice Type)

This section contains **7 multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONLY ONE is correct**.

8. The decreasing values of bond angles from NH_3 (106°) to SbH_3 (101°) down group-15 of the periodic table is due to
 (A) Decreasing lp-bp repulsion (B) Decreasing electronegativity
 (C) Increasing bp-bp repulsions (D) Increasing p-orbital character in sp^3
8. D
9. The electronegativity difference between N and F is greater than that between N and H yet the dipole moment of NH_3 (1.5D) is larger than that of NF_3 (0.2D). This is because
 (A) In NH_3 the atomic dipole and bond dipole are in the opposite directions whereas in NF_3 these are in the same direction.
 (B) In NH_3 as well as in NF_3 the atomic dipole and bond dipole are in the same direction
 (C) In NH_3 the atomic dipole and bond dipole are in the same direction whereas in NF_3 these are in opposite directions
 (D) In NH_3 as well as NF_3 the atomic dipole and bond dipole are in opposite directions
9. C
10. The accelerating potential that must be imparted to proton beam to give a wavelength 5 pm.
 (A) 32.8 V (B) 3.28 V
 (C) 328 V (D) 0.328 V
10. A
11. Which of the following is paramagnetic?
 (A) O_2^- (B) CN^-
 (C) CO (D) NO^+
11. A
12. If the radius of 3rd Bohr's Orbit of H-atom is 476 pm, then the radius of 4th Bohr's orbit of H atom would be
 (A) $476 \times \frac{4}{3}$ pm (B) $476 \times \frac{16}{9}$ pm
 (C) $476 \times \frac{3}{4}$ pm (D) 476×9 pm
12. B
13. If uncertainty in position and momentum are equal, then uncertainty in velocity is :
 (A) $\sqrt{\frac{h}{2\pi}}$ (B) $\frac{1}{m} \sqrt{\frac{h}{\pi}}$
 (C) $\sqrt{\frac{h}{\pi}}$ (D) $\frac{1}{2m} \sqrt{\frac{h}{\pi}}$
13. D
14. Which of the following pairs of species have identical shapes?
 (A) NO_2^+ and NO_2^- (B) PCl_5 and BrF_5
 (C) XeF_4 and ICl_4^- (D) TeCl_4 and XeO_4
14. C

(Paragraph Type)

This section contains **2 paragraphs**. Based upon the paragraphs **2 multiple choice questions** have to be answered. Each of these questions has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

Paragraph for Question no. 15 to 16

Read the paragraph carefully and answer the following questions:

When electron jumps from higher orbit (n_2) to lower orbital (n_1), then energy is radiated in the form of electromagnetic radiation and these radiations are used to record the emission spectrum.

$$\Delta E = E_{n_2} - E_{n_1} = 13.6 z^2 \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right) \text{ eV/atom}$$

This equation was also used by Rydberg to calculate the wave number of a particular line in the spectrum.

$$\bar{\nu} = \frac{1}{\lambda} = RZ^2 \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right) \text{ m}^{-1}$$

Where $R = 1.1 \times 10^7 \text{ m}^{-1}$ (Rydberg constant)

15. The ratio of wavelength of first line to that of second line of paschen series of H-atom is
 (A) 256: 175 (B) 175 : 256
 (C) 15:16 (D) 16:15
15. A
16. Calculate the energy emitted when electrons of 1 g atom of hydrogen undergo transition giving the spectral line of lowest energy in visible region of its atomic spectra
 (A) $18.3 \times 10^4 \text{ J}$ (B) $90 \times 10^3 \text{ J}$
 (C) $60 \times 10^4 \text{ J}$ (D) $37.3 \times 10^4 \text{ J}$
16. A

Paragraph for Question no. 17 to 18

PCl_5 is an unstable compound due to which it liberates chlorine gas on heating. When crystallized from the saturated solution, the crystal contains $[\text{PCl}_4]^+$, $[\text{PCl}_6]^-$ and Cl^- ions. These ions are stable due to their structure or electron configuration. In molten state PCl_5 conducts electricity due to movement of the ions.

Answer the following questions on the basis of above write up.

17. How many electron(s) is/are present in the valence shell of phosphorus in $[\text{PCl}_4]^+$?
 (A) 6 (B) 7
 (C) 8 (D) 10
17. C
18. What is the hybridization of phosphorus in $[\text{PCl}_6]^-$?
 (A) sp^3d (B) sp^3d^2
 (C) d^2sp^3 (D) sp^3
18. B

SECTION-3 : MATHEMATICS**PART – A****(Multi Correct Choice Type)**

This section contains 7 **multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONE OR MORE** may be correct.

1. If $\cos\theta = -\frac{12}{13}$, and θ lies in third quadrant, then

(A) $\sin\theta = -\frac{5}{13}$	(B) $\sin\theta = \frac{5}{13}$
(C) $\tan\theta = \frac{5}{12}$	(D) $\tan\theta = -\frac{5}{12}$

2. AC

2. For $0 < \theta < \frac{\pi}{2}$, $\tan\theta + \tan 2\theta + \tan 3\theta = 0$ if

(A) $\tan\theta = 0$	(B) $\tan 2\theta = 0$
(C) $\tan 3\theta = 0$	(D) $\tan\theta \tan 2\theta = 2$

2. CD

3. $(\cos\alpha + \cos\beta)^2 + (\sin\alpha + \sin\beta)^2$ equals

(A) $4\sin^2\left(\frac{\alpha-\beta}{2}\right)$	(B) $4\cos^2\left(\frac{\alpha-\beta}{2}\right)$
(C) $2 - 2\cos(\alpha - \beta)$	(D) $2 + 2\cos(\alpha - \beta)$

3. BD

4. If $A + B + C = \pi$, then which of the following is/are correct

(A) $\tan A + \tan B + \tan C = \tan A \cdot \tan B \cdot \tan C$
(B) $\tan A + \tan B + \tan C = \cot A \cdot \cot B \cdot \cot C$
(C) $\cot A \cdot \cot B + \cot B \cdot \cot C + \cot A \cdot \cot C = 1$
(D) $\tan\frac{A}{2} \cdot \tan\frac{B}{2} + \tan\frac{B}{2} \cdot \tan\frac{C}{2} + \tan\frac{A}{2} \cdot \tan\frac{C}{2} = 1$

4. ACD

5. The value of $\left(\frac{\cos A + \cos B}{\sin A - \sin B}\right)^n + \left(\frac{\sin A + \sin B}{\cos A - \cos B}\right)^n$ is

(A) $2\tan^n \frac{A-B}{2}$	(B) $2\cot^n \frac{A-B}{2}$, if n is even
(C) 0, if n is odd	(D) none

5. BC

6. If $f(\theta) = 3\sin\theta - 4\cos\theta + 5$, then which of the following is/are correct?
 (A) Maximum value of $f(\theta)$ is 10 (B) Maximum value of $f(\theta)$ is 5
 (C) Minimum value of $f(\theta)$ is -5 (D) Minimum value of $f(\theta)$ is 0
6. AD
7. If $\sin t + \cos t = \frac{1}{5}$ then $\tan \frac{t}{2}$ is equal to
 (A) -1 (B) $-\frac{1}{3}$
 (C) 2 (D) $-\frac{1}{6}$
7. BC

(Single Correct Choice Type)

This section contains **7 multiple choice questions**. Each question has four choices (A), (B), (C) and (D) out of which **ONLY ONE is correct**.

8. $\cos\left(\frac{\pi}{14}\right) + \cos\left(\frac{3\pi}{14}\right) + \cos\left(\frac{5\pi}{14}\right)$ will be equal to
 (A) $\frac{1}{2}\tan\left(\frac{\pi}{14}\right)$ (B) $\frac{1}{2}\cos\left(\frac{\pi}{14}\right)$
 (C) $\frac{1}{2}\cot\left(\frac{\pi}{14}\right)$ (D) $\frac{1}{2}\sin\left(\frac{\pi}{14}\right)$
8. C
9. The value of $\frac{1}{\cos 290^\circ} + \frac{1}{\sqrt{3}\sin 250^\circ}$ will be
 (A) $\frac{2\sqrt{3}}{3}$ (B) $\frac{4\sqrt{3}}{3}$
 (C) $\sqrt{3}$ (D) 1
9. B
10. If $x \in \left(\pi, \frac{3\pi}{2}\right)$ then $4\cos^2\left(\frac{\pi}{4} - \frac{x}{2}\right) + \sqrt{4\sin^4 x + \sin^2 2x}$ is always equal to
 (A) 1 (B) 2
 (C) -2 (D) 0
10. B
11. If $x = y\cos\frac{2\pi}{3} = z\cos\frac{4\pi}{3}$, then $xy + yz + zx$ is equal to
 (A) -1 (B) 0
 (C) 1 (D) 2
11. B

12.
$$\frac{\operatorname{cosec}(2\pi + \theta) \cdot \cos(2\pi + \theta) \cdot \tan\left(\frac{\pi}{2} + \theta\right)}{\sec\left(\frac{\pi}{2} + \theta\right) \cdot \cos\theta \cdot \cot(\pi + \theta)}$$
 will be equal to
- (A) 1 (B) 2
(C) -2 (D) 0
12. A
13. If $A + B + C = \frac{3\pi}{2}$, then $\cos 2A + \cos 2B + \cos 2C$ is equal to
- (A) $1 - 4 \cos A \cos B \cos C$ (B) $4 \sin A \sin B \sin C$
(C) $1 + 2 \cos A \cos B \cos C$ (D) $1 - 4 \sin A \sin B \sin C$
13. D
14. If $\sec\theta = \sqrt{2}$, and $\frac{3\pi}{2} < \theta < 2\pi$, then the value of $\frac{1 + \tan\theta + \operatorname{cosec}\theta}{1 + \cot\theta - \operatorname{cosec}\theta}$ will be
- (A) 1 (B) -1
(C) -2 (D) 2
14. B

(Paragraph Type)

This section contains **2 paragraphs**. Based upon the paragraphs **2 multiple choice questions** have to be answered. Each of these questions has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct.

Paragraph for Question no. 15 to 16

Measurement of an angle by three ways : First is degree and others are grade and radian.

The relationship between them is
$$\frac{D}{90} = \frac{G}{100} = \frac{2C}{\pi}$$

Using the information given in above passage answer the following

15. 45^0 is equal to
- (A) 50^g (B) 45^g
(C) 40^g (D) 39^g
15. A
16. $\frac{23\pi^c}{4}$ is equal to
- (A) 675^0 (B) 1080^0
(C) 745^0 (D) 1035^0
16. D

Paragraph for Question no. 17 to 18

Increasing product series

$$\begin{aligned} \cos \alpha \cdot \cos 2\alpha \cdot \cos 2^2 \alpha \cdot \cos 2^3 \alpha \cdots \cos 2^{n-1} \alpha &= \frac{\sin 2^n \alpha}{2^n \sin \alpha} \\ &= 1 \text{ if } \alpha = 2k\pi \\ &= -1 \text{ if } \alpha = (2k+1)\pi \end{aligned}$$

Where $k \in \mathbb{I}$ (integer)

17. The value of $\cos \frac{2\pi}{14} \cdot \cos \frac{4\pi}{14} \cdot \cos \frac{8\pi}{14}$ is equal to

(A) $-\frac{1}{8}$

(B) $\frac{1}{8}$

(C) $\frac{1}{16}$

(D) $-\frac{1}{16}$

17. A

18. The value of $8 \sin \frac{\pi}{48} \cdot \cos \frac{\pi}{48} \cdot \cos \frac{\pi}{24} \cdot \cos \frac{\pi}{12}$ is equal to

(A) $\frac{1}{2}$

(B) $\frac{1}{4}$

(C) 1

(D) $\frac{1}{8}$

18. A

ANSWERS

SECTION-1 : PHYSICS

PART – A

SECTION – 2 : CHEMISTRY

PART – A

SECTION – 3 : MATHEMATICS

PART – A