

PGT Physics

Q 1). Which Indian state is planning to launch a massive jungle safari project in the Aravalli Hills, aimed at promoting eco-tourism and sustainable development?

- (A) Rajasthan
- (B) Gujarat
- (C) Madhya Pradesh
- (D) Haryana

Correct Answer: (D)

Q 2). Prime Minister Modi had accorded a ceremonial welcome during his recent visit to Croatia at _____.

- (A) St. Mark's Church
- (B) Croatian Parliament
- (C) Banski Dvori Palace
- (D) Zagreb City Hall

Correct Answer: (C)

Q 3). Which of the following countries were recently elected to serve as a non-permanent member of the UN Security Council for a two-year term starting in January 2026?

1. Bahrain, Colombia, Latvia
2. Indonesia, Sri Lanka, Vietnam
3. Liberia, The Democratic Republic of Congo

- (A) 1, 2 & 3
- (B) 1 & 3
- (C) Only 2
- (D) 1 & 2

Correct Answer: (B)

Q 4). "How many characters are there in the story?" This question is of _____ level as per the revised Bloom's Taxonomy.

- (A) remembering
- (B) evaluation
- (C) understanding
- (D) application

Correct Answer: (A)

Q 5). Which of the following is an example of positive reinforcement as per child psychology?

- (A) Giving a child a time-out for misbehavior.
- (B) Praising a child for completing homework.
- (C) Removing TV privileges for poor grades.
- (D) Ignoring a child's tantrum.

Correct Answer: (B)

Q 6). As per NEP 2020, what is the proposed bagless period for students in Grades 6-8 in a year?

- (A) 5 days
- (B) 10 days
- (C) 15 days
- (D) 20 days

Correct Answer: (B)

Q 7). $1 \mu m / 1 fm = \underline{\hspace{2cm}}$

- (A) 10^9
- (B) 10^{-9}
- (C) 10^{15}
- (D) 10^6

Correct Answer: (A)

Q 8). The restoring force per unit area is known as .

- (A) Strain
- (B) Pressure
- (C) Torque
- (D) Stress

Correct Answer: (D)

Q 9). In spherical mirror, if the position of the concave mirror is between C and F, position of image will lie at which place from the following?

- (A) Beyond C
- (B) At focus F
- (C) Between F and C
- (D) Behind the mirror

Correct Answer: (A)

Q 10). “The rate of change of momentum of a body is directly proportional to the applied force and takes place in the direction in which the force acts” is known as .

- (A) Newton’s second law of motion
- (B) Newton’s third law of motion
- (C) Universal gravitational law
- (D) Newton’s first law of motion

Correct Answer: (A)

Q 11). Which is the dimensional formula of “Activity of the Radioactive Sample”?

- (A) $M^0 L^0 T^{-1}$
- (B) $M^1 L^0 T^{-1}$
- (C) $M^{-1} L^0 T^0$
- (D) $M^{-1} L^0 T^1$

Correct Answer: (A)

Q 12). As temperature increases the coefficient of viscosity (η) will of a Liquid _____.

- (A) decrease
- (B) increase
- (C) remain constant
- (D) become unstable

Correct Answer: (A)

Q 13). The wavelength lies in Paschen, Brackett, and Pfund series are in which region of EM spectrum?

- (A) Infrared
- (B) Ultraviolet
- (C) Visible
- (D) X-Ray

Correct Answer: (A)

Q 14). What is the result of adding two equal and opposite vectors A?

- (A) $2A$
- (B) $-2A$
- (C) A^2
- (D) 0

Correct Answer: (D)

Q 15). Viscosity is property of which of the following?

- (i) Liquids
 - (ii) Solids
 - (iii) Gas
- (A) (i) only
 - (B) (i) and (ii)
 - (C) (ii) and (iii)
 - (D) (i) and (iii)

Correct Answer: (D)

Q 16). Which of the following statement is true about Kepler's Law of Periods?

- (A) The cube of the period of any planet is proportional to the square of the semi major axis of its orbit.
- (B) The square of the period of any planet is proportional to the cube of the semi major axis of its orbit.
- (C) The period of any planet is proportional to the cube of the semi major axis of its orbit.
- (D) The square of the period of any planet is proportional to the square of the semi major axis of its orbit.

Correct Answer: (B)

Q 17). A body of weight W_1 is suspended from the ceiling of a room through a chain of weight W_2 . The ceiling pulls the chain by force ____.

- (A) W_1
- (B) W_2
- (C) $W_1 + W_2$
- (D) $\frac{W_1 + W_2}{2}$

Correct Answer: (C)

Q 18). Which of the following have same lattice structure but not intrinsic semiconductor?

- (A) Si
- (B) Ge
- (C) C
- (D) Ga

Correct Answer: (C)

Q 19). Suppose the resistance of a copper wire is 1.05Ω at 20°C . Find the resistance at 100°C . (Temperature Coefficients of Resistivity 0.00393)

- (A) 1.78Ω
- (B) 2.28Ω
- (C) 1.0Ω
- (D) 1.38Ω

Correct Answer: (D)

Q 20). **Read the following passage carefully and answer the question:**

The spectral series of hydrogen atom were accounted for by Bohr using the relation

$$\frac{1}{\lambda} = R_H \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right)$$

where, R = Rydberg constant = $1.097 \times 10^7 \text{ m}^{-1}$

Lyman series is obtained when an electron jumps to first orbit from any subsequent orbit. Similarly, Balmer series is obtained when an electron jumps to 2^{nd} orbit from any subsequent orbit. Paschen series is obtained when an electron jumps to 3^{rd} orbit from any subsequent orbit. Whereas Lyman series in U.V. region, Balmer series is in visible region and Paschen series lies in infrared region. Series limit is obtained when $n_2 = \infty$.

The wavelength of first spectral line of Lyman series is

- (A) $1215.4 \times 10^{-10} \text{ m}$
- (B) $1215.4 \times 10^{-10} \text{ cm}$
- (C) $1215.4 \times 10^{-8} \text{ m}$
- (D) $1215.4 \times 10^{-8} \text{ mm}$

Correct Answer: (A)