

**SECTION-A**

Note:

- 1) Attempting all MCQs is compulsory. This paper along with the OMR sheet must be returned to the superintendent after due time.
- 2) Fill the circle (A) (B) (C) (D), which one is correct with blue or black ball in separate OMR Sheet like
- 3) If more than one circle in the OMR sheet is filled then no credit will be given to such answer.

I.i. Slip rings are part of.

- (A) DC motor       AC generator      (C) Magnet      (D) Transformer

ii. What is the number of neutrons in the plutonium  ${}_{92}^{242}\text{Pu}$ .

- (A) 92       242      (C) 150      (D) 134

iii. Electric (or) electromagnetic representations of data (or) information is termed as.

- (A) Transmission       Signal      (C) Software      (D) Computer

iv. A step up transformer increases.

- (A) Current      (B) Power       Voltage      (D) Energy

v. When the current through a wire is 2.0A and voltage across its ends is 3.0V, then resistance.

- 1.5  $\Omega$       (B) 2.5  $\Omega$       (C) 6  $\Omega$       (D) 4  $\Omega$

vi. The time rate at which the charge flows through the area is defined as.

- (A) Voltage      (B) Electricity       Current      (D) Magnet

vii. The value of coulomb constant  $K_c$  depends on:

- (A) Value of charges       Material medium      (C) Separation of charges      (D) All of these

viii. The overall magnification of a microscope is the product of the magnification produced by \_\_\_\_\_ lens.

- 2      (B) 3      (C) 5      (D) 6

ix. A convex lense with focal length 8cm has the power of lens.

- (A) 2.05 D      (B) 4.00 D       12.5 D      (D) 16.0 D

x. The speed of sound in dry air is 331 m/s and for each 1<sup>o</sup>c rise in temperature it increases by.

- (A) 0.5 m/s       0.6 m/s      (C) 0.8 m/s      (D) 1 m/s

xi. Which of the given affect the period of mass spring system.

- (A) Mass      (B) Length      (C) Spring Constant       Both mass & Spring constant

xii. If the pendulum completes exactly 12 cycles in 2 min, what is the frequency of pendulum?

- (A) 6 HZ      (B) 10 HZ       0.10 HZ      (D) 0.17 HZ