# SMART TEST SERIES

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| Name: | | Subject: | Physics-12 |
|---|---|---|---|
| Roll # : | | Unit(s): | 12, |
| Class: | Inter Part-II | Test: | Type 1 - MCQs Test - Marks=20 |
| Date: | | Time: | |

**Q.1 Four possible answers A, B, C & D to each question are given. Circle the correct one. (20x1=20)**

1 The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r$ = 2.1 between the charges then the force become equal to:
(A) 42 N (B) 88.2 N (C) 20 N (D) 2 N

2 If $F_1$ and $F_2$ are the magnetic forces acting on $\alpha$-particle and electron respectively, when moving perpendicular to the magnetic field then:
(A) $F_1 = F_2$ (B) $F_1 > F_2$ (C) $F_1 < F_2$ (D) $F_1 = 4F_2$

3 If the distance between two charges is halved and charges are also doubled, then force between them will be:
(A) Two time (B) Four time (C) Eight time (D) Sixteen time

4 What is the force on a proton placed between two parallel plates containing equal positive charges?
(A) Zero (B) $2.6 \times 10^{-19}$ N (C) $9\times 10^{-19}$ N (D) $5 \times 10^{-19}$ N

5 The electric field created by positive charge is:
(A) Radially inward (B) Zero (C) Circular (D) Radially outward

6 The force on an electron in a field of $1 \times 10^{8}$ $NC^{-1}$ will be:
(A) $1.6 \times 10^{-8}$ N (B) $1.6 \times 10^{-11}$ N (C) $1.6 \times 10^{-19}$ N (D) $1.6 \times 10^{-27}$ N

7 The toner of printer is given:
(A) Positive charge (B) Negative charge (C) Neutral (D) First positive than negative

8 Which one is photo conductor?
(A) Copper (B) Selenium (C) Mercury (D) Aluminium

9 In case of photocopier, a special dry , black powder called toner is given by:
(A) Positive charge (B) Negative charge (C) Neutral (D) First positive than negative

10 A changing electric flux creates:
(A) Electric fields (B) Gravitational (C) Magnetic field (D) Electric Charge

11 Electric flux is maximum, when angle between and surface area is:
(A) $0^o$ (B) $90^o$ (C) $180^o$ (D) $45^o$

12 Electric intensity inside the hollow sphere is:
(A) $\frac{\sigma}{\varepsilon_o}$ (B) $\frac{\sigma}{2\varepsilon_o}$ (C) $\frac{1}{\varepsilon_o}$ (D) Zero

13 Intensity of field inside a hollow charged sphere will be:
(A) negative (B) Unaffected (C) Zero (D) Maximum

14 The relation "$-\frac{\Delta V}{\Delta r}$" represents:
(A) Electric potential (B) Electric energy (C) Potential barrier (D) Potential gradient

15 If charged body is moved against the electric field, it will gain:
(A) P.E (B) K.E (C) Mechanical energy (D) Electrical potential energy

16 The force on Neutron due to a field of $10^2$N/C is:
(A) $1.6 \times 10^{-17}N$ (B) $1.6 \times 10^{-19}N$ (C) Zero (D) $1.6 \times 10^{-21}N$

17 Coulomb/volt is called:
(A) Farad (B) Ampere (C) Joule (D) Henry

18 The net charge on a capacitor (each plate having magnitude of charge of charge q) is:
(A) Infinity (B) 2 q (C) q/2 (D) Zero

19 Due to polarization, electric field E.
(A) Increases (B) Decreases (C) First increases then decreases (D) Remian same

20 If time constant inRC series circuit is small, then capacitor is charged or discharged:
(A) Slowly (B) Rapidly (C) At constant rate (D) Intermittently