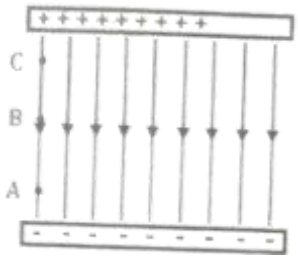
Muftstudy.com

1ST YEAR ENTRY TEST SESSION

NAME:				ROLL NO:		TIME:	35: MIN
SUB:	Physics	Date:				CLASS:	1st Year
SYLLABUS	Chp. 9 (Electrostatics and Current Electricity) Entry Test MCQs			T. MARKS	21	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x21=21)

1. **If the distance is double between two charges, then coulombs force become:**
   (A) Doubled (B) Half (C) Reduced 4 times (D) Remains same
2. **The electric field strength at position $\vec{r}$ (4 î + 3 ĵ) m caused by a point charge of 5 μC placed at origin is:**
   (A) 1240 î + 1280 ĵ NC^{-1} (B) 1440 î + 1080 ĵ Vm^{-1}
   (C) 1440 î + 1080 ĵ Nm^{-1} (D) 1220 î + 1080 ĵ $Nm^{-2}C^{-2}$
3. **Coulombs law is given by the formula $F = Kq_1 q_2/r^2$. The magnetic of k having the unit of Nm^2C^{-2} for free space is equal to:**
   (A) 9×10^7 (B) 6×10^7 (C) 10×10^9 (D) 9×10^9
4. **Force experienced per unit positive test charge at a point in an electric field is the definition of:**
   (A) Electric potential energy (B) Electric field energy
   (C) Electric potential (D) Electric field
5. **If a charge particle is placed one by one at point A, B and C then at which point it will experience a large force:**

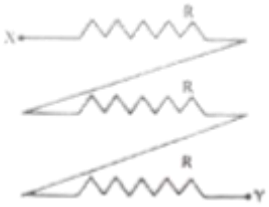


   (A) At point "A" (B) At point "C" (C) At point "B" (D) Same at all points
6. **The force of repulsion between two charge is considered as:**
   (A) -Ve (B) +Ve (C) May be +ve or -ve (D) Cant' be predicted
7. **A 2 farad capacitor is charged to 100 V and then discharge through 10 kΩ resistance. What is the total energy dissipated in the resistance?**
   (A) 2 KJ (B) 200 KJ (C) 10 KJ (D) 2 KJ
8. **A thermistor with negative temperature co-efficient is placed in a furnace. When temperature of furnace increase the resistance:**
   (A) Decreases (B) Increases (C) Remain same (D) Not effect
9. **A constant current of 1 ampere flows in an electrical component over a period of 5 seconds. The total charge flowing through the component over this duration is:**
   (A) 5 Ampere (B) 10 Ampere (C) 15 Ampere (D) 20 Ampere
10. **Three resistance each having value 'R' are connected as shown in figure. What is the equivalent resistance between 'X' and 'Y'?**

Muftstudy.com

1ST YEAR ENTRY TEST SESSION

NAME:			ROLL NO:		TIME:	35: MIN
SUB:	Physics	Date:			CLASS:	1st Year
SYLLABUS	Chp. 9 (Electrostatics and Current Electricity) Entry Test MCQs		T. MARKS	21	OBT. M	

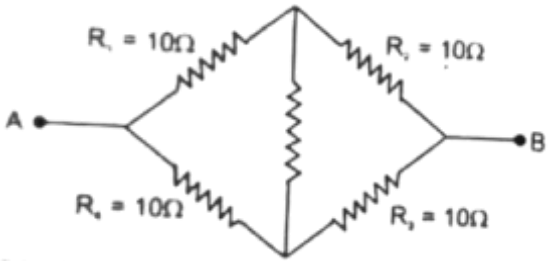


(A) R (B) R/3 (C) 3R (D) R^3

11. 2 x 10^6 electrons pass through a conductor in 1 ms. Find electric current flowing through conductor:

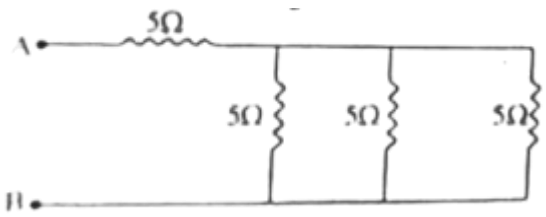
(A) 32 x 10^{-9} A (B) 32 X 10^{-10} A (C) 3.2 X 10^{-10} A (D) 3.2 X 10^{-12} A

12. If the resistance of each resistor is 10 ohm in the following figure, then what will be the effective resistance between points 'A' and 'B':



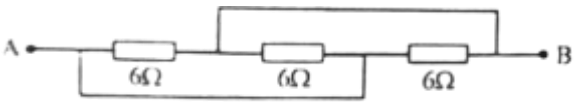
(A) 40 ohm (B) 50 ohm (C) 30 ohm (D) 10 ohm

13. Total resistance between points 'A' and 'B' in the given circuit is:



(A) 5.6 Ω (B) 3.33 Ω (C) 0.33 Ω (D) 6.6 Ω

14. The 6 Ω resistors are connected as shown in the diagram:



What is the resistance between points 'A' and 'B'?

NAME:				ROLL NO:		TIME:	35: MIN
SUB:	Physics	Date:				CLASS:	1st Year
SYLLABUS	Chp. 9 (Electrostatics and Current Electricity) Entry Test MCQs			T. MARKS	21	OBT. M	

(A) 6 Ω (B) 10 Ω (C) 4 Ω (D) 2 Ω

15. If a resister having resistance 'R' is cut into three equal parts, then equivalent of parallel combination is:

(A) $\frac{9}{R}$ (B) $\frac{3}{R}$ (C) $\frac{R}{9}$ (D) $\frac{R}{3}$

16. Which combination of seven identical resistors each of 2Ω gives rise to the resultant or 10/11Ω?

(A) 5 Parallel, 2 series (B) 4 Parallel, 3 series

(C) 3 Parallel, 4 series (D) 2 Parallel, 5 series

17. The resistance of a piece of wire is 12Ω. It is bent to from an equilateral triangle. What is the equivalent resistance between any two corners of the triangle?

(A) 1.3 Ω (B) 2.0 Ω (C) 4.0 Ω (D) 2.7 Ω

18. A torch is rated 2.2 V, A. Calculate the charge passing through the bulb in one second and energy transferred by the passage of each coulomb of charge:

(A) 2.5 C and 0.55 J (B) 0.25 C and 2.2 J (C) 0.25C and 2.2 V (D) 0.25C and 0.55 J

19. Energy consumed by 60 watt bulb in 2 minutes is equal to:

(A) 7.2 Kilo joules (B) 720 Joules (C) 120 Joules (D) 72000 Joules

20. When a potential different is applied across the ends of a uniform wire of length/ and radius r, a current/ flows in the wire. If same potential difference is applied to the ends of another wire of the same material but of length 2I and 2r, the current in the wire is:

(A) $\frac{1}{4}$ (B) 21 (C) 1 (D) $\frac{1}{2}$

21. An 8Ω resistance is connected to a battery with internal resistance draws 1.6 A and if a 30 Ω resistance is connected to the same battery, it draws 0.5 A. What is the current drawn by a 6Ω resistance from this battery?

(A) 2 A (B) 2.2 A (C) 2.5 A (D) None of these

Answer Key											
1	C	**2**	B	**3**	D	**4**	B	**5**	D	**6**	B
7	C	**8**	A	**9**	A	**10**	C	**11**	C	**12**	D
13	D	**14**	D	**15**	C	**16**	D	**17**	D	**18**	B
19	A	**20**	B	**21**	A						