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Q1. Volt
Q2. (b) a volt is a joule per coulomb.
Q3. (a) p.d. stands for potential difference.
(b) Voltmeter is used to measure p.d.
Q4. Electric potential at a point is 1 volt means 1 joule of work is done in moving 1 unit positive charge from infinity to that point.
Q5. Potential difference = 1 V
Charge moved = 1C
Work done = Potential difference x Charge moved
= 1 x 1 = 1 J
Q6. Volt
Q7. Given,
Potential difference = 12 V,Charge moved = 2 C
We know that,
Work done= p.d. x charge moved
= 12 x 2
= 24 joules.
Q8. Coulomb
Q9. One coulomb of charge is that quantity of charge which exerts a force of 9×10^9 Newton on an equal charge is placed at a distance of 1 m from it.
Q10. (a) volts; voltmeter; parallel
(b) conductor; insulator
Q11. Conductors:- Those substances through which electricity can flow are known as conductors. E.g., Copper, silver etc.
Insulators:- Those substances through which electricity cannot flow are known as insulators. E.g., Plastic, cotton etc.
Q12. Conductor: Silver, Copper, Aluminum, Nichrome, Graphite, Mercury, Manganin.
Insulators: Sulphur, Cotton, Air, Paper, Porcelain, Mica, Bakelite, Polythene.
Q13. The electric potential (or potential) at a point in an electric field is defined as the work done in moving a unit positive charge from infinity to that point.
Unit of electric potential is volt.
Q14. (a) Potential difference = Work done/Charge moved.
(b) V1=220 V, V2=230V, Charge moved=4C
Thus, the potential difference= V2- V1 =230-220
=10.
We know that,
Work done = Potential difference x Charge moved
= 10 x 4
Work done = 40 joules
Q15. (a) Voltmeter
(b) Given : Potential difference=12V, Charge moved=1C
We know that,
Work done = Potential difference x charge moved
= 12 x 1 = 12 joules
Since work done on each coulomb of charge is 12 joules, the energy given to each coulomb of charge is also 12 joules.

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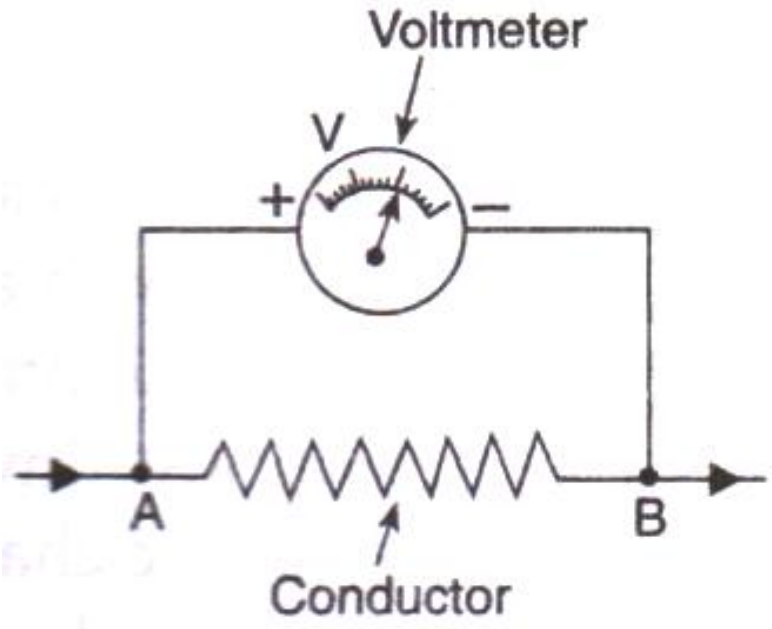
Q16. (a) Potential difference between two points in an electric circuit is defined as the amount of work done in moving a unit charge from one
point to the other point.
(b) The potential difference between two points is 1 volt means 1 joule of work is done in moving 1 coulomb of electric charge from one point to the other.
(c) Given: Work done = 250J, Charge moved = 20C.
we know that,Potential difference = Work done/Charge moved
=250/20=12.5
(d) A voltmeter is a device which is used to measure the potential difference between two points in an electric circuit. Voltmeter is always connected in parallel across the two points where the potential difference is to be measured.



(e) Voltmeter has a high resistance so that it takes a negligible current from the circuit.
Q22. (a) If three cells of 2 volt each are connected in series to make a battery, then the total potential difference between terminals of the battery will be 6V.
(b) (i) Given: p.d. = 2V, Charge moved = 1C
We know that
Work done = p.d. x charge moved
= 2 x 1
Work done = 2 joules
(ii) Given: p.d. = 6V, Charge moved = 1C
Work done = p.d. x charge moved
= 6 x1
Work done = 6 joule.
Q23. Copper has free electrons that are loosely held by the nuclei of the atoms. These free electrons result in conduction of electricity. The electrons present in rubber are strongly held by the nuclei of its atoms. So, rubber does not have free electrons to conduct electricity.

********** END **********