Physicsaholics

DPP – 7 (Current Electricity)

Video Solution on Website:- https://physicsaholics.com/home/courseDetails/55

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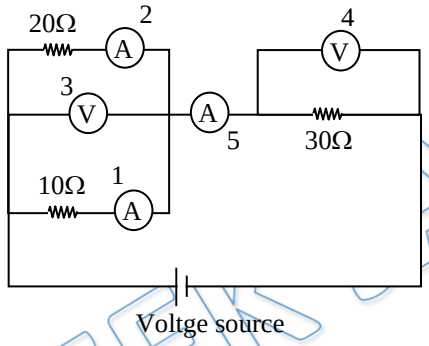
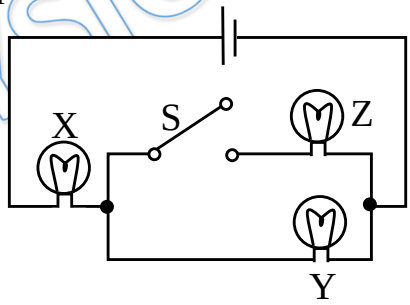
Written Solution on Website:- https://physicsaholics.com/note/notesDetalis/52

Q 1. If all meters are ideal and reading of voltmeter 3 is 6V. Power supplied by voltage source is -



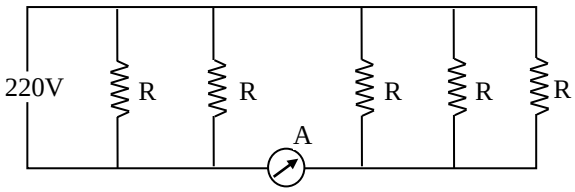
(A) 10 Watt (B) 38 Watt
(C) 20 Watt (D) 30 Watt

Q 2. If X, Y, and Z in figure are identical lamps, which of the following changes to the brightnesses of the lamps occur when switch S is closed?



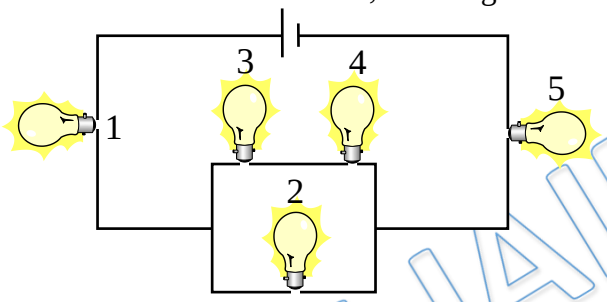
(A) X stays the same, Y decreases (C) X increases, Y stays the same
(B) X increases, Y decreases (D) X decreases, Y increases

Q 3. Five identical lamps each resistance R = 1100ohm are connected to 220V as shown in fig. The reading of ideal ammeter (A) is -



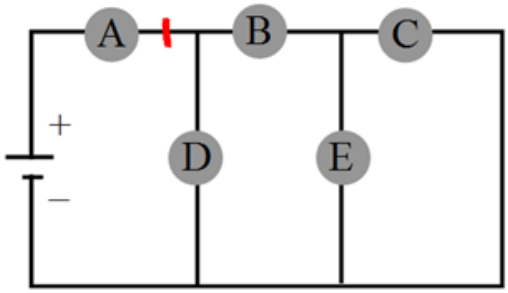
(A) 1/5 Amp. (B) 2/5 Amp.
(C) 3 /5 Amp (D) 1 Amp.

Q 4. All bulbs in figure below are identical which, bulbs light most brightly-



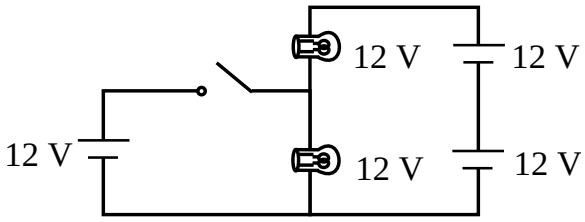
(A) 1 only (B) 2 only
(C) 3 and 4 only (D) 1 and 5

Q 5. In the circuit diagram shown in figure, a fuse bulb can cause all other bulbs to go out. Identify the bulb –



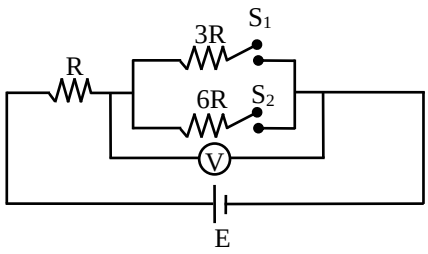
(A) B (B) C
(C) A (D) D or E

Q 6. The light bulbs A & B in the following circuits are identical. When the switch is closed -



(A) Intensity of bulb A increase (C) Intensity of bulb B increase
(B) Intensity of bulb A decrease (D) Nothing changes

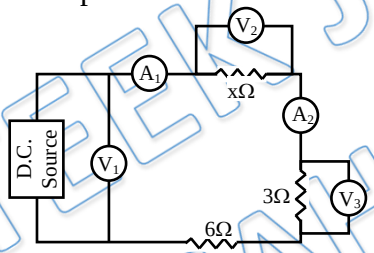
Q 7. In the circuit shown in the figure, reading of voltmeter is V_1 when only S_1 is closed, reading of voltmeter is V_2 when only S_2 is closed and reading of voltmeter is V_3 when both S_1 and S_2 are closed. Then –



(A) $V_3 > V_2 > V_1$ (B) $V_2 > V_1 > V_3$

(C) $V_3 > V_1 > V_2$ (D) $V_1 > V_2 > V_3$

Q 8. In the electric circuit shown in figure, the reading of voltmeter V1 is 26 volt, and the reading of ammeter A1 is 2 ampere. The value of resistance x is –



(A) 2 ohm (B) 4 ohm
(C) 6 ohm (D) 8 ohm

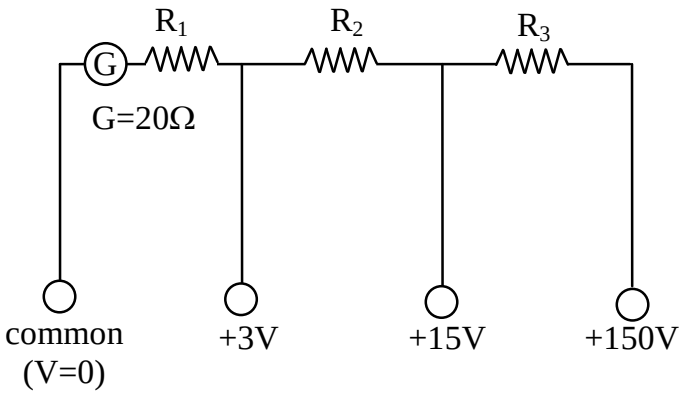
Q 9. A galvanometer of resistance 100 ohm gives a full scale deflection for a current of 10mA. To convert in into an ammeter of one ampere range, required shunt resistance would be:

(A) 10^{-2} ohm (B) 1 ohm
(C) 10^{-1} ohm (D) 10^{-3} ohm

Q 10. The deflection in the galvanometer is reduced from 50 to 20 divisions when it is shunted by a resistance of 12 ohm. The resistance of galvanometer will be -

(A) 18 ohm (B) 24 ohm
(C) 30 ohm (D) 36 ohm

Q 11. Internal electric connections of a multi range voltmeter are shown in the figure. The terminals are marked 3 volt, 5 volt, 150 volt, resistance of the galvanometer is 20 ohm and the value of current is 1 mA for the full scale deflection of the galvanometer. The resistance of R_1 in Kohm



(A) 12 (B) 15
(C) 3 (D) 2.98

Q 12. The resistance of 100 ohm and 200 ohm are connected in series with the 220 V mains. When a voltmeter of 1000 ohm resistance is connected in parallel to 100 ohm, then the reading of voltmeter is –

(A) 68.75 volt (B) 6.87 volt
(C) 587.5 volt (D) 58.75 volt

Q 13. The resistance of a moving coil galvanometer is 20 ohm. It requires 0.01 ampere current for full scale deflection. The value of resistance to convert in into a voltmeter of range 20 volt will be -

(A) 198 ohm (B) 1980 ohm
(C) 20 ohm (D) 0 ohm

Answer Key

Q.1 d	**Q.2 b**	**Q.3 c**	**Q.4 d**	**Q.5 c**
Q.6 d	**Q.7 b**	**Q.8 b**	**Q.9 b**	**Q.10 a**
Q.11 d	**Q.12 a**	**Q.13 b**		