

Adabistan-e-Soophia

Code: 2072

Test No.: 3

Paper: Physics

Name: _____

Class: X Sec: _____

Syllabus: Ch. 14, 15

Question Numbers	1	2	3			Total	Grade	%age
Maximum Marks	09	22	09			40		
Marks Obtained								

Remarks: _____

A	B	C	D	Write Correct option	A	B	C	D	Write Correct option	A	B	C	D	Write Correct option			
1	A	B	C	D		7	A	B	C	D		13	A	B	C	D	
2	A	B	C	D		8	A	B	C	D		14	A	B	C	D	
3	A	B	C	D		9	A	B	C	D		15	A	B	C	D	
4	A	B	C	D		10	A	B	C	D		16	A	B	C	D	
5	A	B	C	D		11	A	B	C	D		17	A	B	C	D	
6	A	B	C	D		12	A	B	C	D		18	A	B	C	D	

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more times result in zero mark in that question.

Q.1	Questions	(A)	(B)	(C)	(D)
1.	An electric current in conductor is due to flow of:	Positive ion	Negative ion	Positive charges	Free electrons
2.	What is the voltage across a $6\ \Omega$ resistor when $3A$ of current passes through it?	2V	9 V	18 V	36 V
3.	What happens to the intensity or the brightness of the lamps connected in series as more and more lamps to be added?	Increases	Decreases	Remain same	Cannot be predicated
4.	Why should a household appliance be connected in parallel with the voltage source?	To increase the resistance of the circuit	To decrease the resistance of the circuit	To provide each appliance the same voltage to power source	To provide each appliance the same current as power source
5.	Electric potential and e.m.f:	Are the same term	Are different terms	Have different units	Both (B) & (C)
6.	When we double the voltage in a simple electric circuit, we double the:	Current	Power	Resistance	Both (B) & (C)
7.	If we double both the current the voltage in a circuit while keeping its resistance constant, the power:	Remain unchanged	Half	Double	Quadruples
8.	What is the power rating of a lamp connected to a $12\ V$ source when it carries $2.5\ A$?	$4.8\ w$	$14.5\ w$	$30\ w$	$60\ w$

9.	The combine resistance of two identical resistors connected in series is $8\ \Omega$ the combine resistance in parallel will be:	$2\ \Omega$	$4\ \Omega$	$8\ \Omega$	$12\ \Omega$
10.	Which statement is true about the magnetic pole?	Unlike poles repel	Like poles attracts	Magnetic pole don't effect each other	A single magnetic pole doesn't exist
11.	What is the direction of magnetic field lines inside a bar magnet?	From north pole to south pole	From south pole to north pole	From side to side	These are no magnetic lines
12.	The presence of magnetic field can be detected by a:	Small mass	Stationary positive charges	Stationary negative charges	Magnetic compass
13.	The direction of induced e.m.f in a circuit is in accordance with the conservation of:	Mass	Charges	Momentum	Energy
14.	The step-up transformer:	Increase the input current	Increase the input voltage	Has more turns in primary coil	Has less turns in secondary coil
15.	The turn ratio of transformer is 10. It means:	$I_s = 10 I_p$	$N_s = \frac{N_p}{10}$	$N_s = 10 N_p$	$V_s = \frac{V_p}{10}$
16.	Relay work on the principle of:	Electro-magnetic induction	Lens's Law	Both (A) & (B)	None
17.	$1\ Kwh =$	$2.6\ MJ$	$3.6\ MJ$	$6.6\ MJ$	None
18.	If the length of copper wire is $1m$ and ist diameter $2mm$, then find the resistance of copper wire. When $\delta = 1.69 \times 10^{-8}\ \Omega m$	$5.4 \times 10^2\ \Omega$	$5.3 \times 10^{-8}\ \Omega$	$5.4 \times 10^{-3}\ \Omega$	None

(Section - I)

2. Write short answers to the following questions.

(11×2=22)

- i. Define and explain the term electric current.
- ii. What do we mean by term *e. m. f*? Is it really a force?
- iii. Define resistance and its units.
- iv. Determine the equivalent resistance of series combination of the resistors.
- v. What do you understand by term mutual induction?
- vi. Describe the simple experiment to demonstrate the changing magnetic field can induce *e. m. f* in a circuit.
- vii. What is transformer?
- viii. Differentiate between step-up and step-down transformer.
- ix. Define Ohm's Law.
- x. Differentiate between Ohm's and Non-Ohm's materials.
- xi. At what condition the resistance of conductor will be equal to the specific resistance of conductor?

(Section - II)

Note: Give detailed answers of the following questions.

(4+5=09)

3. a) Explain the parallel combination of resistors and calculate the equivalent resistance of circuit. (4)
- b) A transformer designed to convert the voltage from 240 V A.C mains to 12 V, has 4000 turns on the primary coil. How many turns should be on the secondary coil of the transformer were 100 % efficient, what current would flow through primary coil when current through secondary coil is 0.4 A? (5)