

AAFAQ ACADEMY – KASUR

Paper: Physics

Chapter (13)1
CURRENT ELECTRICITY

Class: F.Sc. Part – II

Name: _____ Roll No: (in words) _____

EVENING GROUP OBJECTIVE TYPE

Total Marks: 11

Paper Code: _____

Total Time: 10 Minutes

NOTE: Write your Roll No. in space provided. Using lead pencil will result in loss of marks.

Q.No.1: You have four choices for each objective type question as A,B,C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

Sr. No.	QUESTION	A	B	C	D
1.	Which equation is used to define resistance?	$V = IR$	$H = I^2 R t$	$P = I^2 R$	$\rho = \frac{RA}{L}$
2.	A resistance R is placed in parallel with an other resistance of 40Ω , their equivalent resistance is 24Ω , the value of R is	20Ω	40Ω	60Ω	80Ω
3.	The product of resistivity and conductivity is	Resistance	Conductance	Zero	One
4.	Maximum power is delivered to a load when	$r = R$	$r > R$	$r < R$	None of these
5.	SI units of temperature coefficient of resistivity of a material is	$^{\circ}C$	K	$\Omega \cdot m$	None of these
6.	A potentiometer can be used to	Find emf	Compare emf of two cells	Find internal resistance of cell	All of these
7.	The conductance of a conductor increases when	Temperature increases	Temperature decreases	Length increases	None of these
8.	Which one of the following is the unit of potential gradient?	$V \cdot m$	$V \cdot A^{-1}$	$V \cdot m^{-1}$	$V \cdot A^{-2}$
9.	If the resistor is traversed in the opposite direction of current, then the potential change is	Negative	Zero	Constant	Positive
10.	The resistivity decreases with increase in temperature in	Silver	Silicon	Copper	Gold
11.	The potentiometer wire is made up of	Aluminium	Steel	Manganin	Copper

SUBJECTIVE TYPE

Total Marks: 18

Time Allowed: 0 Hours 50 Minutes

SECTION – I (SHORT QUESTIONS)

2. Attempt any FIVE questions. (5 × 2 = 10) Marks

- i. Explain why the terminal potential difference of a battery decreases when the current drawn from it is increased?
- ii. Why does the resistances of the conductor rise with temperature?
- iii. Do bends in a wire affect its electrical resistance? Explain.
- iv. Describe a circuit which will give a continuously varying potential?
- v. What are the difficulties in testing whether the filament of a lighted bulb obeys Ohm's law?
- vi. A potential difference is applied across the ends of a copper wire. What is the effect on the drift velocity of free electrons by; (a) Increasing the potential difference. (b) Decreasing the length and the temperature of the wire.
- vii. Explain why the terminal potential difference of a battery decreases when current drawn from it is increased?

SECTION – II (ESSAY TYPE) Attempt given question

3. Do as directed...

- i. What is Wheatstone bridge? Describe how we can determine unknown resistance by using bridge circuit? (5)
- ii. Calculate the terminal potential difference of each of cells in circuit as shown. (3)

AAFAQ ACADEMY – KASUR

Paper: Physics

Chapter (13)1
CURRENT ELECTRICITY

Class: F.Sc. Part – II

Name: _____ Roll No: (in words) _____

EVENING GROUP

SECTION – III (Practical)

4. (a) Write answer of TWO questions. (2×2=4)
- The resistance of which part of galvanometer is measured in half deflection method?
 - Why galvanometer shows half deflection when both keys are closed?
 - What is meant by shunt?
4. (b) Write procedure to determine the resistance of voltmeter by graph method. (3)
- (c) Answer the following questions on the basis of graph drawn between temperature (T) and resistance (R). (4)
- What you conclude from the graph?
 - Find the slope of the graph.

Good Luck
Ch. Khalid Mahmood Ashraf