

AAFAQ ACADEMY – KASUR

Paper: Physics

Chapter (15)

Class: F.Sc. Part – II

ELECTROMAGNETIC INDUCTION

Name: _____ Roll No: (in words) _____

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.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					

SUBJECTIVE TYPE

Total Marks: 29

Time Allowed: 0 Hours 50 Minutes

SECTION – I (SHORT QUESTIONS)

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

- i. How would you position a flat loop of wire in a changing magnetic field so that there is no emf in the loop?
- ii. When an electric motor, such as an electric drill, is being used, does it also act as a generator? If so what is the consequence of this?
- iii. A square loop of wire is moving through a uniform magnetic field. The normal to the loop is oriented parallel to the magnetic field. Is an emf induced in the loop? Give a reason for your answer.
- iv. Can an electric motor be used to drive an electric generator with the output from the generator being used to operate the motor?
- v. Show that ε and $\frac{\Delta\phi}{\Delta t}$ have the same units.
- vi. Is it possible to change both the area of the loop and the magnetic field passing through the loop and still not have an induced emf in the loop?
- vii. A wire is covered with a carpet, how would you find that a current is flowing through it? When the primary of a transformer is connected to a a.c mains the current in it (a) is very small if the secondary circuit is open, but (b) increase when the secondary circuit is closed. Explain these fact.

SECTION – II (ESSAY TYPE) Attempt given question

3. Do as directed...

- i. (5)
- ii. r (3)

SECTION – III (Practical)

4. (a) Write answer of TWO questions. (2 × 2 = 4)

- i. a
- ii. c
- iii. v
- iv. b

4. (b) Write procedure to determine the resistance of voltmeter by graph method. (3)

(OR)

Write procedure to find the unknown high resistance by using neon flash lamp. (3)

4. (c) Answer the following questions on the basis of graph drawn between potential difference (V) and charge (Q). (4)

- i. What you conclude from the graph?
- ii. Find the capacitance of capacitor from the graph.

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Good Luck

Ch. Khalid Mahmood Ashraf