ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END-SEMESTER EXAMINATION: JANUARY 2021** (Academic Session: 2020 – 21)		
Name of the Program: (Example: B. Sc./BBA/MA/B.Tech.)	B.Tech	**Semester:** (I/III/ V/ VII/IX)	V
Paper Title :	Elective IV-Electrical Engineering Materials	**Paper Code:**	**EEE44109**
Maximum Marks :	40	**Time duration:**	3 hours
Total No of questions:	08	**Total No of Pages:**	01
(Any other information for the student may be mentioned here)			

PART– A

Answer all the five Questions

1. **5** X 1 = 5
   a. What is semiconductor?
   b. Explain the V-I characteristics of P.V. module?
   c. Explain the factors that ca effect the resistivity of a materials.
   d. What is thermo electric effect?
   e. What are the characteristics of magnetic materials?

PART– B

(Short Answer Type Question)

Answer any three questions (out of 4 questions) 3 X 5= 15

2. What s energy band width and explain how this band width can effect the conduction?
3. What is Hall Effect and explain how it is related to semiconductor conduction?
4. Explain the equation for electron motion with necessary diagram.
5. What is hysteresis loop and explain how his loop modification can affect magnetism of materials?

Group C

(Answer any two questions)

$2 \times 10 = 20$

6. A copper conductor has a resistance of 15.5 Ohm at 0°C. Find its percentage conductivity at 16°C. Assume the temperature coefficient of copper as 0.00428 per °C at 0°C.
7. Write a short note on Fuse and its different types.
8. The lead material works as superconductor at a temperature of T_c = 7.26K. If the constant characteristics of the lead material at 0K is $H_o = 8X10^5$ A/m. Calculate the magnetic field in the lead at 5K.