

## ECAT Physics Chapter 13 Current Electricity

Sr	Questions	Answers Choice
1	In gases, the charge carriers are:	<p>A. Electrons            B. Positive ions            C. Negative ions            D. Both A and C  <b>E. Both A and B</b></p>
2	The obvious effect/s of current is/are:	<p>A. Heating effect            B. Magnetic effect            C. Chemical effect            D. Both (C) and (B)  <b>E. All of these</b></p>
3	When resistance of a current carrying wire increases due to rise in temperature, the drift velocity of electrons:	<p>A. Decreases            B. Increases            C. Remains the constant            D. Either of these  <b>E. None of these</b></p>
4	A thermistor is a resistor which is:	<p>A. Light Sensitive  <b>B. Heat Sensitive</b>            C. Sound Sensitive            D. All of these            E. None of these</p>
5	The example/s of non-electrical energy to electrical is/are:	<p>A. Chemical energy            B. Mechanical energy            C. ...</p>

family:&quot;, Times New Roman&quot;, &quot;serif&quot;";>Heat energy<o:p></o:p></span></p>  
D. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Both (A) and (B)<o:p></o:p></span></p>  
E. <p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: &quot;Times New Roman&quot;, serif;";>All of these<b><o:p></o:p></b></span></p>

6 An electric field is generated along the wire when:

A. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Its resistance is very high<o:p></o:p></span></p>  
B. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>A constant potential is maintained across the wire<o:p></o:p></span></p>  
C. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Net current through the wire is zero<o:p></o:p></span></p>  
D. <p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: &quot;Times New Roman&quot;, serif;";>A constant potential difference is maintained across the wire<b><o:p></o:p></b></span></p>  
E. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Either (A) or (D)<o:p></o:p></span></p>

7 Most practical application of electricity involve

A. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Charges at the rest<o:p></o:p></span></p>  
B. <p class="MsoNormal" style="text-align:justify"><span style="font-size: 12pt; line-height: 107%; font-family: &quot;Times New Roman&quot;, serif;";>Charges in the motion<b><o:p></o:p></b></span></p>  
C. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Electrons at rest<o:p></o:p></span></p>  
D. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Atoms in motion<o:p></o:p></span></p>  
E. <p class="MsoNormal" style="text-align:justify"><span style="font-size:12.0pt; line-height:107%;font-family:&quot;Times New Roman&quot;, &quot;serif&quot;";>Molecules in motion<o:p></o:p></span></p>

8 An example of photoconductor is:

A. <p class="MsoNormal"><span style="font-size:12.0pt; line-height:107%;font-family: &quot;Times New Roman&quot;, &quot;serif&quot;";>Boron<o:p></o:p></span></p>  
B. <p class="MsoNormal"><span style="font-size:12.0pt; line-height:107%;font-family: &quot;Times New Roman&quot;, &quot;serif&quot;";>Carbon<o:p></o:p></span></p>  
C. <p class="MsoNormal"><span style="font-size:12.0pt; line-height:107%;font-family: &quot;Times New Roman&quot;, &quot;serif&quot;";>Iron<o:p></o:p></span></p>  
D. <p class="MsoNormal"><span style="font-size:12.0pt; line-height:107%;font-family: &quot;Times New Roman&quot;, &quot;serif&quot;";>Aluminum<o:p></o:p></span></p>  
E. <p class="MsoNormal"><span style="font-size:12.0pt; line-height:107%;font-family: &quot;Times New Roman&quot;, &quot;serif&quot;";>Selenium<o:p></o:p></span></p>

A. <p class="MsoNormal"><span style="font-size: 12pt; line-height: 107%; font-family: &quot;Times New

9 The earth's potential and potential at infinity are taken:

- Roman" style="text-align: justify;">Be zero
- A.  $V = 0$   
B.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r}$   
C.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2}$   
D.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r^3}$   
E. Both (A) and (B)

10 In order to have a constant current through wire, the potential difference across its end should:

- A.  $V = 0$   
B.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r}$   
C.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2}$   
D.  $V = \frac{1}{4\pi\epsilon_0} \frac{q}{r^3}$   
E. Both (A) and (B)

11 Kirchoff's first rule is also called:

- A. Loop rule  
B. Thumb rule  
C. Point rule  
D. Right hand rule  
E. None of these

12 The flux through a closed surface depends upon:

- A. Shape of geometry of the closed surface  
B. Charge enclosed  
C. Nature of the medium  
D. Both (A) and (B)  
E. Both (B) and (C)

13	Field lines are closer to each other in the region where the field is:	<p>A. <b>Stronger</b></p> <p>B. <b>Weaker</b></p> <p>C. <b>Much weaker</b></p> <p>D. <b>Absent</b></p> <p>E. <b>None of these</b></p>
14	Two dissimilar metals joined at their ends kept at constant temperature constitute:	<p>A. <b>Cell</b></p> <p>B. <b>Voltmeter</b></p> <p>C. <b>Thermocouple</b></p> <p>D. <b>Potentiometer</b></p> <p>E. <b>None of these</b></p>
15	The emf is measured in:	<p>A. Newton</p> <p>B. Volt</p> <p>C. J/C</p> <p>D. Both A and B</p> <p>E. <b>Both B and C</b></p>
16	When certain area A is held parallel to the field lines, then:	<p>A. <b>No lines cross this area</b></p> <p>B. <b>Maximum lines pass through this area</b></p> <p>C. <b>The number of lines are between zero and maximum</b></p> <p>D. <b>Both (A) and (B) correct</b></p> <p>E. <b>None of these</b></p>
17	The quantity having the same unit as that of emf is:	<p>A. Force</p> <p>B. Energy</p> <p>C. <b>Potential</b></p> <p>D. Current</p> <p>E. Charge</p>
18	The value of resistivity is the least for:	<p>A. Copper</p> <p>B. Aluminium</p> <p>C. Silver</p> <p>D. <b>Tungsten</b></p> <p>E. Iron</p>
		<p>A. <b>Dry writing</b></p> <p>B. <b>Wet</b></p>

19 Xerography means:

- writing
- Poor writing
- Excellent writing
- Both (A) and (B)

20 As the current flows through the wire

- A. It generates heat in the wire
- B. It produces sound in the wire
- C. Resistance of the wire decrease
- D. Voltage across the ends is the increase
- E. None of these