



Video Solution on Website:-

<https://physicsaholics.com/home/courseDetails/74>

Video Solution on YouTube:-

<https://youtu.be/dMSNM8qa8g0>

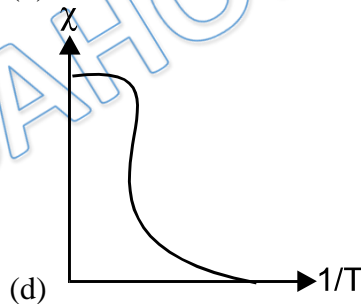
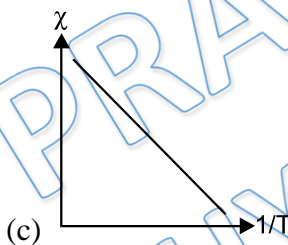
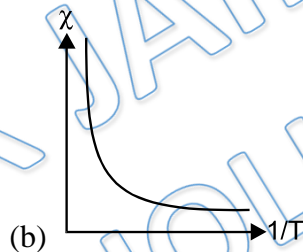
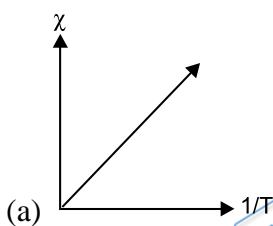
Written Solution on Website:-

<https://physicsaholics.com/note/notesDetalis/56>

Q 1. Materials suitable for permanent magnet, must have which of the following properties?

- (a) High retentivity low coercivity and high permeability
- (b) Low retentivity low coercivity and low permeability
- (c) Low retentivity high coercivity and low permeability
- (d) High retentivity high coercivity and high permeability

Q 2. The correct curve between  $\chi$  and  $\frac{1}{T}$  for paramagnetic magnetic is



Q 3. The core of an electromagnet is made of soft iron, because –

- (a) the susceptibility of soft iron is very high
- (b) coercivity of soft iron is very low
- (c) both of these
- (d) attracts some substances and repels others

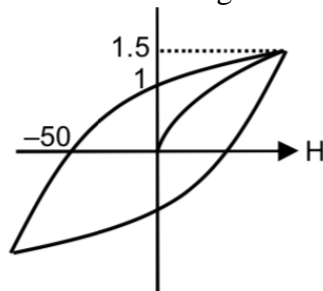
Q 4. A paramagnetic material has  $10^{28}$  atoms/ $m^3$ . Its magnetic susceptibility at temperature 350K is  $2.8 \times 10^{-4}$ . Its susceptibility at 300K is:

- (a)  $2.672 \times 10^{-4}$
- (b)  $3.726 \times 10^{-4}$
- (c)  $3.267 \times 10^{-4}$
- (d)  $4.172 \times 10^{-4}$

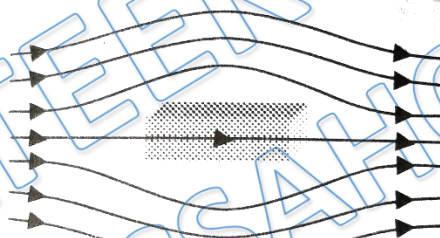
Q 5. At a temperature of 30 °C, the susceptibility of a ferromagnetic material is found to be  $\chi$ . its susceptibility at 333 °C is

- (a)  $\chi$
- (b)  $0.5\chi$
- (c)  $2\chi$
- (d)  $11.1\chi$

- Q 6. The hysteresis curve for a material is shown in the figure. Then for the material retentivity, coercivity and saturation magnetization respectively will be:



- (a) 50 A/m, 1 T, 1.5 T  
 (b) 1.5 T, 50 A/m, 1 T  
 (c) 1 T, 50 A/m, 1.5 T  
 (d) 50 A/m, 1.5 T, 1 T
- Q 7. The hysteresis cycle for the material of a permanent magnet is  
 (a) Short and wide (b) tall and narrow  
 (c) tall and wide (d) short and narrow
- Q 8. The given figure represents a material which is



- (a) Paramagnetic  
 (b) Diamagnetic  
 (c) Ferromagnetic  
 (d) None of these
- Q 9. At curie temperature, in ferromagnetic materials  
 (a) the atomic dipoles get aligned  
 (b) the atomic dipoles lose alignment  
 (c) magnetism is zero  
 (d) none of these
- Q 10. The area enclosed by a hysteresis loop is a measure of  
 (a) retentivity (b) susceptibility  
 (c) permeability (d) energy loss per cycle



## Answer Key

<b>Q.1 d</b>	<b>Q.2 a</b>	<b>Q.3 c</b>	<b>Q.4 c</b>	<b>Q.5 b</b>
<b>Q.6 c</b>	<b>Q.7 c</b>	<b>Q.8 b</b>	<b>Q.9 b</b>	<b>Q.10 d</b>

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