

# TALEEMI DUNYA

## Test Syllabus: Unit # 6

St. Name		Test	PHYSICS	T. Marks	30	Time	60 Min
F.Name		Class	12 <sup>th</sup>	T. Code	U#6	T. Date	

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that Question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question. **6.**

1	Example of ductile substance is:						
(a)	Glass	(b)	Wood	(c)	Lead	(d)	Oxygen
2	The Young's Modulus of Mercury is:						
(a)	$70 \times 10^9 \text{ Nm}^{-2}$	(b)	$15 \times 10^9 \text{ Nm}^{-2}$	(c)	Zero	(d)	$91 \times 10^9 \text{ Nm}^{-2}$
3	Conductors have conductivities of the order of:						
(a)	$10^3 (\Omega\text{m})^{-1}$	(b)	$10^7 (\Omega\text{m})^{-1}$	(c)	$10^5 (\Omega\text{m})^{-1}$	(d)	$10^9 (\Omega\text{m})^{-1}$
4	Which type of impurity is to be added to a pure semi-conductor crystal to provide holes?						
(a)	Monovalent	(b)	Trivalent	(c)	Tetravalent	(d)	Pentavalent
5	In p-type substances, the minority carriers are:						
(a)	Electrons	(b)	Protons	(c)	Holes	(d)	Neutrons
6	A solid having regular arrangement of molecules throughout its structure is called:						
(a)	Amorphous solid	(b)	Polymeric solid	(c)	Glassy solid	(d)	Crystalline solid

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### Q.2 Write short answers of the following questions.

(8x2=16)

1. What is difference in elasticity and plasticity?
2. Define ultimate tensile strength (UTS) and fracture stress.
3. Define modulus of elasticity. Show that unit of modulus of elasticity and stresses are same.
4. What are ductile materials, Give its two examples.
5. Which is more elastic, steel or rubber? Why?
6. Differentiate between insulators and conductors.
7. Define the Curie temperature.
8. Where are squids? Explain.

### Q.3 Write long answers of the following questions.

(4+4=8)

- (a) What is meant of strain energy? How can it be determined from the force extension graph?
- (b) A cylindrical copper wire and cylindrical steel wire each of length 1.5 m and diameter 2.0 mm Are joined at one end to form a composite wire 3.0 m long. The wire is loaded until its length Becomes 3.003 m. Calculate the strain in copper and steel wires and the force applied to the wire. (Young's modulus of copper is  $1.2 \times 10^{11}$  Pa and for steel is  $2.0 \times 10^{11}$  ).