DEPARTMENT OF MECHANICAL ENGINEERING AY 2025-26 (ODD SEM)				
Date	**07/11/2025**	**CIE 1**	**Max. Marks**	**10+50**
Semester	**III**	**UG**	**Duration**	**110 mins.**
Course	**MATERIALS SCIENCE FOR ENGINEERS (Basket Course)**		**Course Code**	**ME232TB**

QUIZ 1

SL no.	Question	M	BT	CO
1	The type of atomic bond formed by the complete transfer of electrons from one atom to another is called a _____ bond	1	2	1
2	smallest repetitive volume which contains the complete lattice pattern of a crystal is known as_____	1	1	1
3	According to which principle do electrons fill the lowest energy orbitals first before moving to higher energy ones?	1	2	1
4	The energy difference between the valence band and the conduction band in a solid is called the _____.	1	1	1
5	In screw dislocation the Burger vector is _____ to the dislocation line.	1	2	1
6	A defect in the crystal structure where an atom is missing from its lattice position is called a _____ defect.	1	1	1
7	Materials composed of two or more distinct phases combined to achieve superior properties are known as _____.	1	1	1
8	The ability of a material to conduct heat is measured by its _____.	1	1	2
9	The change in dimension of a material per unit change in temperature is known as the _____.	1	2	2
10	The voltage developed between two dissimilar metals when joined and heated at one junction is known as the _____ effect.	1	1	2

TEST 1

SL No.		Questions	M	BT	CO
1	a	Explain the electronic structure of an atom with the help of an energy level diagram.	04	2	1
	b	Describe the types of atomic bonds with suitable examples.	06	2	1
2	a	Calculate the atomic packing factor for Face Centered Cubic system	05	4	1
	b	Differentiate between energy bands in metals, insulators, and semiconductors.	05	2	1
3	a	With the help of sketches discuss the point defects and line defects in solids.	10	3	1
4	a	Explain the classification of materials with examples.	10	2	1
5	a	What is the thermoelectric effect? With a neat sketch explain different Thermoelectric effects.	10	2	2