



DEPARTMENT OF MECHANICAL ENGINEERING

Course Code & Name : **23GET102 BASIC CIVIL AND MECHANICAL ENGINEERING**

Course Faculty : Mr. C. Subramanian

Question Bank

Unit III Overview of Mechanical Engineering

Part A (2 Marks Questions)

S.No	Question	Bloom's Level	GATE/Company Reference
1	Define pattern and mention its types used in foundry.	Remember	GATE 2018 ME
2	What is the function of core in casting?	Understand	GATE 2015 ME
3	Differentiate between ferrous and non-ferrous casting alloys.	Understand	-
4	List any four defects commonly found in castings.	Remember	ISRO 2019
5	Define welding and list any two types of welding.	Remember	GATE 2016 ME
6	What is the difference between arc welding and gas welding?	Understand	BHEL 2018
7	Mention any two advantages of 3D printing over conventional manufacturing.	Apply	GATE 2021 ME
8	Define additive manufacturing.	Remember	-
9	What is a lathe? Mention its main parts.	Remember	GATE 2014 ME
10	Differentiate between engine lathe and turret lathe.	Understand	ONGC 2017
11	Define automation in mechanical systems.	Remember	GATE 2020 (Production & Industrial Engg.)
12	Mention any two advantages of automation in manufacturing.	Understand	TATA Steel 2019
13	List any two interdisciplinary areas in mechanical engineering.	Remember	-
14	Explain the concept of mechatronics in	Apply	GATE 2019 ME

S.No	Question	Bloom's Level	GATE/Company Reference
	mechanical engineering.		
15	What is CNC? Give its full form.	Remember	GATE 2017 ME

PART B & C - DESCRIPTIVE / ANALYTICAL QUESTIONS

S.No	Question	Bloom's Level	GATE/Company Question / Year
1	Explain the steps involved in sand casting with neat sketches.	Understand	GATE ME 2018
2	Discuss the different types of welding processes. Compare TIG and MIG welding.	Apply	GATE ME 2019
3	Explain the advantages, limitations, and applications of 3D printing in manufacturing.	Analyze	BOSCH 2020
4	With a neat sketch, describe the construction and working of an engine lathe.	Understand	GATE ME 2015
5	Compare conventional machining with CNC and 3D printing techniques.	Analyze	Siemens 2021
6	Explain various levels of automation and their significance in modern manufacturing.	Apply	GATE PI 2020
7	Discuss the interdisciplinary role of mechanical engineering in biomedical and aerospace applications.	Evaluate	DRDO 2021
8	Describe in detail the working of MIG welding. State its advantages and disadvantages.	Apply	GATE ME 2016
9	Explain the integration of robotics and AI in mechanical automation systems.	Analyze	Tesla Motors 2022
10	Write short notes on (a) Mechatronics (b) Flexible Manufacturing System (FMS).	Understand	ISRO 2020

