SRI VENKATESWARA COLLEGE OF ENGINEERING

(Autonomous)

Karakambadi Road, TIRUPATI – 517507

Question bank (R23)

Name of the Branch/Course	Mechanical Engineering / B.Tech
Subject	Basic Civil & Mechanical Engineering
Subject Code	ME23AES101
Year & Sem	I & I

01 Mark Questions

	Unit – 1	Marks
1	What are ferrous materials? list any two properties.	1 M
2	Write a short note on smart materials?	1 M
3	State the different forms of energy.	1 M
4	Write any two nonferrous materials.	1 M
5	What is composite material.	1 M
6	Write technologies used in Manufacturing industry.	1 M
7	Write a short note on ceramics?	1 M
8	What are the subdisciplines of mechanical engineering	1 M
9	Write any two roles of mechanical engineers in Automotive industry.	1 M
10	List out types of Engineering materials?	1 M
	Unit – 2	
1	Define Engine. What are various types of engines.	1 M
2	Define casting in manufacturing process.	1 M
3	What are four strokes in petrol engine.	1 M
4	Define the term refrigeration.	1 M
5	Define machining process.	1 M
6	Wite any two forming process.	1 M
7	Draw P-V and T-S diagram of Otto cycle	1 M
8	Write various components in hybrid vehicles.	1 M
9	Draw P-V and T-S diagram of Diesel cycle	1 M
10	Write a short note on Welding process.	1 M

Unit – 3		
1	What are the drives used in mechanical power transmission systems.	1 M
2	What is Turbine?	1 M
3	What is the advantage of nuclear power plant over thermal power plant.	1 M
4	Write the applications of belt drive?	1 M
5	Define the term Robot.	1 M
6	What is air conditioning?	1 M
7	What is function of boiler.	1 M
8	What is meant by chain drive?	1 M
9	What is the power plant? List out any two power plants.	1 M
10	Write about gear drive?	1 M

10 Marks Questions/05 Marks Questions

Unit – 1		Marks
1	Explain the role of Mechanical Engineering in the Aerospace and Marine Sectors?	10 M
2	Explain the concepts that define the role of Mechanical Engineering in Automotive Industry?	10 M
3	Explain the contributions of Mechanical Engineering to the welfare of society?	10 M
4	What is energy? Explain the different types of energy sources?	10 M
5	What are the key roles of Mechanical Engineering in the manufacturing industry?	10 M
6	What are the different types of ferrous metals, explain the basic properties and its applications?	10 M
7	Write a short note on a) Smart materials b) Ceramics.	10 M
8	What is a composite? Write the Properties and applications of composites.	10 M
9	What is a Metal? Write its classification and mention its properties and applications?	10 M

10	Distinguish between the following Ferrous and Non-Ferrous metals.	10 M
Unit – 2		
1	What is mean by casting? explain any one type of casting process with neat sketch.	10 M
2	Define the term welding? explain Metal Arc welding with proper sketch and list its applications.	10 M
3	What are the various CNC elements explain in detail with proper sketch.	10 M
4	a. Explain about the following forming processes. (a) Rolling (b) forging	5 M
	b. Differentiate between the two stroke and four stroke engines.	5 M
5	Briefly explain the 3D Printing process with a neat diagram?	10 M
6	Describe the working and functions of water tube boiler with neat sketch.	10 M
7	Distinguish between CI engines and SI engines	10 M
8	Explain various components and working of Hybrid vehicles with neat sketch.	10 M
9	Explain the working principle of Four stroke S.I engine with a neat sketch	10 M
10	Differentiate between Otto and Diesel cycle ?	10 M
Unit – 3		
1	Briefly explain the elements and working of Hydro Electric Power plant with neat sketch.	10 M
2	Discuss in detail working principle of Nuclear Power plant with neat sketch.	10 M
3	Define the term Robot and explain the different links and joints used in robots with neat sketches.	10 M
4	Explain with neat sketch the working principle of Diesel Engine Power plant. write its advantages and disadvantages.	10 M
5	Give complete note on working principle of a Thermal power plant with neat diagram	10 M

6	a. Explain about the Robot configurations with neat sketches?	7 M
	b. What are the applications of robots	3 M
7	Explain working principle of Steam Power plant with neat sketch. State it's advantages and disadvantages	10 M
8	Distinguish Steam and Nuclear Power plants and their applications.	10 M
9	What is a Gear? Explain various Gear drives with it's applications?	10 M
10	Differentiate between Belt drive, Chain drive and Gear drive with examples?	10 M