

	P.E.S. COLLEGE OF ENGINEERING (AN AUTONOMOUS INSTITUTE) CHH. SAMBHAJINAGAR-431002 Summer Examination – 2026 Course: F.Y.B.Tech. Branch :F.Y.B. TechSemester : I Subject Code & Name: BTPESA205T Fundamentals of Mechanical Engineering Max Marks: 30 Date:08/08/2026 Duration: 2 Hr.		
	MARKING SCHEME		Marks
Q. 1	Solve Any five of the following.		2X5=10
A)	State First Law of Thermodynamics.	Statement of First Law.- 02 Mark	2
B)	Define thermodynamic system. State the types of thermodynamic system.	thermodynamic system Definition - 01 Mark Types - 01 Mark	2
C)	Enlist the different parts of I.C. Engine. And state which are the parts common to both petrol and diesel engine.	List of different parts of I.C. Engine – 01 Mark parts common to both petrol and diesel engine – 01 Mark	2
D)	What is the function of steam turbine? Explain its working principle.	function of steam turbine- 01 Mark working principle-01 Mark	2
E)	Explain the working principle of gas turbine. Also state its applications.	working principle of gas turbine- 01 Mark its applications - 01 Mark	2
F)	State the functions of boiler. Give its Classification.	functions of boiler- 01 Mark its Classification- 01 Mark	2
G)	Explain the difference between Renewable and Non-Renewable Sources of energy.	Difference- 02 Marks	2
Q.2	Solve Any Two of the following.		10
A)	State working principle of coupling with neat sketch.	working principle of coupling- 03 marks neat sketch- 02 marks	5
B)	State and explain the function of the brakes. What are its types?	function of the brakes -02 Marks its types - 03 Marks	5
C)	Define fluid. Explain various types of fluids.	Definition of fluid - 01 mark Explanation of various types of fluids- 04 marks	5
Q. 3	Solve Any Two of the following.		10
A)	Explain the concept of measurement. Describe force and torque measurement.	concept of measurement -01 Mark force and torque measurement - 04 Marks	5
B)	Write short notes on: (i) Casting Process, (ii) Welding Process	(i) 2.5 Marks (ii) 2.5 marks	5
C)	Explain the construction of Milling Machine with neat sketch.	Neat sketch- 02 Marks Construction write up- 03 Marks	5