

<b>P.E.S. COLLEGE OF ENGINEERING</b> (AN AUTONOMOUS INSTITUTE) <b>CHH. SAMBAJINAGAR-431002</b> <b>Regular Winter Examination – 2025</b> <b>Course: F.Y.M. Tech.                      Branch : Adv. Manu. &amp;Mech. Sys. Design                      Semester : I</b> <b>Subject Code &amp; Name:                      MTPESAMSD101T                      ( Advanced Methods in Engineering Design)</b> <b>Max Marks: 60                                      Date:                                      Duration: 3 Hr.</b>			
		MARKING SCHEME	Marks
<b>Q. 1</b>	<b>Solve Any one of the following.</b>		
<b>A)</b>	Explain the Traditional Design Process in product design & creative techniques in brief.	1)Traditional Design Process – 06 2)Listing & explanation of creative techniques -06	<b>12</b>
<b>B)</b>	List down the Various Design Models & explain in brief Shigley Model	1)Design Model Listing -06 2) explain brief Shigley Model-06	<b>12</b>
<b>Q.2</b>	<b>Solve Any one of the following.</b>		
<b>A)</b>	Explain in brief Importance of Standardization in Design & Types of Standards used in Design.	1)Explain Importance of Standardization in Design-06 2) Types of Standards in Design-06	<b>12</b>
<b>B)</b>	Explain in brief the use of Concept generation, Selection & testing in new product development .	Explanation in new product development 1) Concept generation -04 2) Selection-04 3) testing -04	<b>12</b>
<b>Q. 3</b>	<b>Solve Any one of the following.</b>		
<b>A)</b>	Explain in brief design for forging & casting .	Explanation in brief design for 1)Forging -06 2)casting . -06	<b>12</b>
<b>B)</b>	Explain in details the design process for plastic, ceramic & wood .	Explanation design process for 1)plastic,-04 2) ceramic -04 3) wood .-04	<b>12</b>
<b>Q.4</b>	<b>Solve Any one of the following.</b>		
<b>A)</b>	Write short noted on 1) Adhesive wear 2) Abrasive wear.3) Corrosion wear.	1) Adhesive wear-04 2) Abrasive wear.-04 3) Corrosion wear -04.	<b>12</b>
<b>B)</b>	Explain in brief the concept of residual stresses, stress concentration & factors to reduce the stress concentration.	Explanation 1)residual stresses, -04 2)stress concentration -04 3)factors to reduce the stress concentration. -04	<b>12</b>
<b>Q. 5</b>	<b>Solve Any one of the following.</b>		
<b>A)</b>	Explain the role of Material & process selection in value engineering.	Explanation 1)role of Material selection in value engineering. -06 2) Process selection in value engineering. -06	<b>12</b>
<b>B)</b>	Explain in details effect of surface geometry, mating surface & oil film in product design & life.	Explanation 1)effect of surface geometry- 04 2)mating surface-04 3)oil film – 04 in product design	<b>12</b>
*** End ***			

