
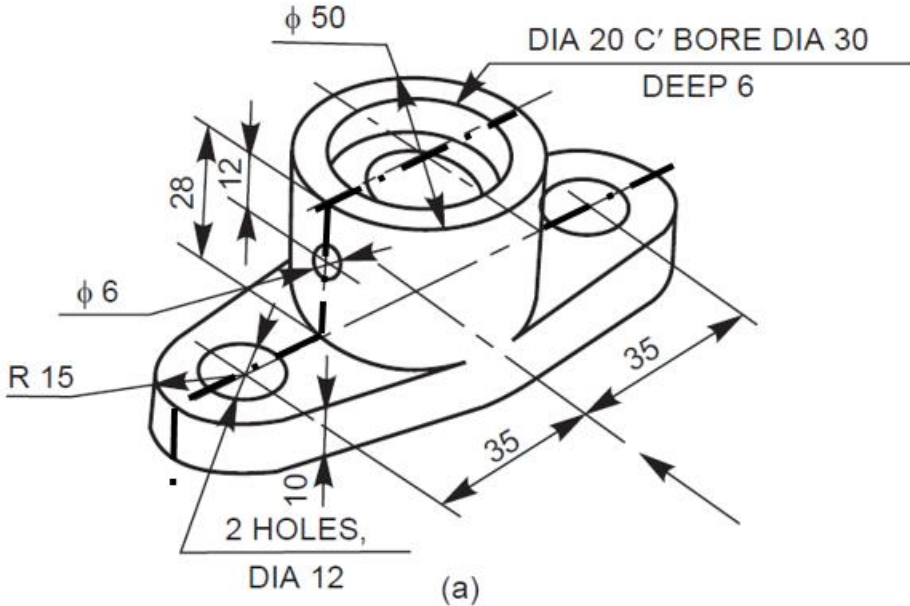


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Course: Auto Mfg Assembly Dwg Program: B.Tech ADE Course Code: MEAD2005		Semester: 3rd Time : 03 hrs. Max. Marks: 100	
Instructions: Attempt all questions. Assume appropriate data if required.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Explain the uses of couplings.	4	CO1
Q 2	Describe different types of thread profiles.	4	CO1
Q 3	Describe the different types of keys.	4	CO1
Q 4	Explain the advantages of welded joints over riveted joints.	4	CO1
Q 5	Describe different types of belts used in pulleys.	4	CO1
SECTION B (4Qx10M= 40 Marks)			
Q 6	A medium force fit on a 75 mm shaft requires a hole tolerance and shaft tolerance each equal to .225 mm and a maximum interference of 0.0375 mm. Determine the proper hole and shaft dimension with the basis hole standard.	10	CO3
Q 7	Explain the different types of jigs and fixtures.	10	CO1
Q 8	Draw neat sketches and their symbols of the following welded joints a. Butt joint b. Lap joint c. Tee joint d. Corner joint e. Edge joint	10	CO2
Q 9	Explain expansion joints for pipes. OR Describe the advantages and applications of PVC pipes	10	CO1
SECTION-C (2Qx20M=40 Marks)			

<p>Q 10</p>	<p>Figure shows the isometric view of a shaft support. Draw the full sectional front view and top view. Show major dimensions.</p>  <p>The diagram shows an isometric view of a shaft support. It consists of a cylindrical shaft with an outer diameter of 50 and an inner diameter of 30. The bore is 6 units deep. There are two holes in the shaft, each with a diameter of 6 and a depth of 12. The holes are offset from the centerline by 28 units. The shaft has a radius of 15. The shaft is supported by a base with two holes, each with a diameter of 12 and an offset of 35 units from the centerline. The base has a thickness of 10.</p>	<p>20</p>	<p>CO3</p>
<p>Q 11</p>	<p>Describe the significance and application of foundation bolts. Sketch neatly, giving proportionate dimensions of the following, (a) Rag foundation bolt (b) Lewis foundation bolt</p> <p style="text-align: center;">OR</p> <p>Describe the following with neat sketch, (a) Universal coupling (b) Oldham coupling also specify their application.</p>	<p>20</p>	<p>CO2</p>