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Question Paper Code: 98766

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

One credit

Mechanical Engineering

19UME866- Limits, Fits And Tolerances

(Regulations 2019)

(Common to All branches)

Duration: 1.30 minutes

Maximum: 50 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1. Distinguish between basic size and actual size CO1- U
2. What is tolerance explain CO1- U
3. What is zero line CO1- U
4. How many tolerance grade are there as per Indian standards for basic size CO1- U
(i) Upto 500mm, (ii) above 500mm to 3150mm
5. Explain the meaning $\Phi 50 H6$ CO1- U
6. Explain the upper deviation and lower deviation CO2- U
7. What is fundamental deviation CO2- U
8. What are the symbols used for fundamental deviation for the shaft and hole CO2- U
9. What is zero line CO2- U
10. What is mean by fit CO2- U

PART – B (2 x 15= 30 Marks)

11. (a) Explain the terminology of basic size deviations, limits and tolerances CO1-U (15)
- Or
- (b) Compute the IT tolerance of diameter of 40mm with tolerance grade 5 using empirical formula CO1-U (15)

12. (a) Compute the limit dimensions for an interference fit on the hole basis system for a basic size of 20mm diameter, with a negative clearance of 0.100mm, tolerance on the hole 0.025mm and tolerance on the shaft 0.050mm, explain with neat sketch CO2-U (15)
- Or
- (b) Briefly explain the different types of Fits with neat sketch CO2-U (15)