Reg. No. : ☐☐☐☐☐☐☐☐☐☐

Question Paper Code: 98766

B.E./B.Tech. DEGREE EXAMINATION, MAY 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 Φ50 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-App   (15)

12. (a) Compute the limit dimensions for an interference fit on the hole   CO2-App   (15)
         basis system for a basic size of 20mm diameter, with a negative
         clearance of 0.100mm, tolerance on the hole0.025mm and tolerance
         on the shaft 0.050mm, explain with neat sketch

<div align="center">Or</div>

     (b) Briefly explain the different types of Fits with neat sketch   CO2-U   (15)

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