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## School of Engineering

B.TECH Electronics and Communication Engineering in Artificial Intelligence and Machine  
Mid Term Examination - May 2024

Duration : 90 Minutes  
Max Marks : 50

### Sem IV - G2UA401B - Integrated Circuits

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Relate the significance of 3dB. K2 (2)
- 2) Define and explain in brief the function of comparator. K1 (3)
- 3) Explain the working of Precision Rectifier using Op-Amp K2 (4)
- 4) Illustrate the various performance parameters of multiplier IC. K2 (6)
- 5) What are the important building blocks of PLL? Explain its working. K3 (6)
- 6) Construct the circuit diagram of inverting Adder using op-amp with circuit analysis. K3 (9)
- 7) Compare the ideal and practical characteristics of IC741 K4 (8)
- 8) Examine the working of differentiator. K4 (12)

**OR**

Compare the performance of inverting and non-inverting operational amplifier configurations. K4 (12)