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**School of Computing Science and Engineering**

Bachelor of Technology in Computer Science and Engineering

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

**Sem II - G3UB101B - Engineering Design and Prototyping**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) Explain the term digital fabrication. K2 (2)
- 2) What do you mean by orthographic projection? Outline the components required for projection with sketch. K1 (3)
- 3) Summarize the practical applications of surface development in product design. K2 (4)
- 4) Illustrate product development cycle with neat sketch. K2 (6)
- 5) Identify the differences between first angle projection and third angle projection. K3 (6)
- 6) (a) What does CAD stand for, and what is its primary purpose? (b) Identify the differences between 2D and 3D CAD K3 (9)
- 7) List the advantages and limitations of FDM 3D printing. K4 (8)
- 8) Examine the steps involved in slicing of STL file of 3D model, and why is this conversion necessary for 3D printing. K4 (12)

**OR**

Compare multiview drawing and pictorial drawing techniques in engineering and design. Explain the advantages and disadvantages of each approach, and provide specific examples of when it is more appropriate to use one over the other in a real-world design scenario. K4 (12)