

**R16/R15/R13**

Code No: 137AZ/127BD/117BD

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year I Semester Examinations, March - 2021**

**CAD/CAM**

**(R16 – Mechanical Engineering; R15 – Common to ME, AE; R13 – Common to ME, AE)**

**Time: 3 Hours**

**Max. Marks: 75**

**Answer any Five Questions**

**All Questions Carry Equal Marks**

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- 1.a) Draw and explain the product cycle by considering computer aided design and manufacturing.
- b) What are different applications of CAD software? Discuss different software used for CAD. [9+6]
- 2.a) Define CAD. Explain the reasons for adapting CAD in an engineering organization.
- b) What is B-spline curve? State characteristics of B-spline curve and discuss them. [8+7]
- 3.a) Describe about Bicubic surface and discuss the method of generating the curve..
- b) Explain the term C rep modeling with suitable example. [7+8]
- 4.a) What do you understand by Bezier surface? Explain various characteristics of this surface.
- b) Give the parametric representation of a ruled surface and state its applications. [7+8]
- 5.a) Explain different types of DNC system along with their applications.
- b) What are various communication channels in DAPP based posit processor? Explain. [8+7]
- 6.a) Write note on the advantages of applying Group Technology in an industrial set up.
- b) What is MRP? Explain inputs required for MRP and discuss various MRP outputs. [7+8]
- 7.a) List out different types of CMM. State their applications.
- b) Explain contact inspection technique with neat sketch. [8+7]
8. Write NC part program for the part shown in the below shown in figure. All the dimensions are in mm. [15]

