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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech III Year I Semester Supplementary Examinations December-2021**

**CAD/CAM**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

- |          |          |  |           |           |
|----------|----------|--|-----------|-----------|
|          | <b>a</b> | Why should we go for CAD?                    | <b>L1</b> | <b>2M</b> |
| <b>1</b> | <b>b</b> | What are the fundamentals of solid modeling? | <b>L1</b> | <b>2M</b> |
|          | <b>c</b> | List out the main functions of CNC           | <b>L1</b> | <b>2M</b> |
|          | <b>d</b> | Define Group Technology (GT)                 | <b>L1</b> | <b>2M</b> |
|          | <b>e</b> | Explain the functions of shop floor control  | <b>L2</b> | <b>2M</b> |

**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- |          |          |  |           |           |
|----------|----------|--|-----------|-----------|
| <b>2</b> | <b>a</b> | Explain about the CAD tools                      | <b>L2</b> | <b>5M</b> |
|          | <b>b</b> | Discuss the evaluation criteria of CAD standards | <b>L6</b> | <b>5M</b> |

**OR**

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|----------|--|---|-----------|------------|
| <b>3</b> |  | Briefly explain the terms scaling, translation and rotation used in graphics. | <b>L2</b> | <b>10M</b> |
|----------|--|---|-----------|------------|

**UNIT-II**

- |          |  |   |           |            |
|----------|--|---|-----------|------------|
| <b>4</b> |  | Write short notes on the methods of creating solid models | <b>L1</b> | <b>10M</b> |
|----------|--|---|-----------|------------|

**OR**

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|----------|--|--|-----------|------------|
| <b>5</b> |  | Explain in detail the surface modeling and their representation. | <b>L5</b> | <b>10M</b> |
|----------|--|--|-----------|------------|

**UNIT-III**

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|----------|----------|--|-----------|-----------|
| <b>6</b> | <b>a</b> | Differentiate between Manual part programming and Computer assisted part programming | <b>L4</b> | <b>5M</b> |
|          | <b>b</b> | List the advantages and disadvantages of Numerical Control systems                   | <b>L1</b> | <b>5M</b> |

**OR**

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|----------|--|---|-----------|------------|
| <b>7</b> |  | Explain briefly about the Computer Assisted Part Programming with an example. | <b>L5</b> | <b>10M</b> |
|----------|--|---|-----------|------------|

**UNIT-IV**

- |          |          |   |           |           |
|----------|----------|---|-----------|-----------|
| <b>8</b> | <b>a</b> | Write short notes on Part families and manufacturing system | <b>L2</b> | <b>5M</b> |
|          | <b>b</b> | List the advantages of Group Technology                     | <b>L1</b> | <b>5M</b> |

**OR**

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|----------|--|--|-----------|------------|
| <b>9</b> |  | Explain about various contact inspection methods | <b>L2</b> | <b>10M</b> |
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**UNIT-V**

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|-----------|--|--|-----------|------------|
| <b>10</b> |  | What is CAPP? Explain the any one type of CAPP with neat sketches. | <b>L1</b> | <b>10M</b> |
|-----------|--|--|-----------|------------|

**OR**

- |           |  |   |           |            |
|-----------|--|---|-----------|------------|
| <b>11</b> |  | Explain the generative CAPP type of system with a neat sketch | <b>L5</b> | <b>10M</b> |
|-----------|--|---|-----------|------------|

\*\*\*END\*\*\*