SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
(AUTONOMOUS)
(Approved by AICTE, New Delhi & Affiliated to JNTUA, Anantapuramu)
(Accredited by NBA & Accredited by NAAC with 'A' Grade)
(An ISO 9001:2008 Certified Institution)
Siddharth Nagar, Narayanavanam Road, PUTTUR-517 583
QUESTION BANK

Subject with Code: CIM (18ME3001)	**Course & Branch: M. Tech(CAD &M)**
Sem : I-Sem	**Regulation: R18**

UNIT-I

1. Explain the functions of CAD/CAM in automation.

2. Discuss the ten points related to automation strategies with examples.

3. (a) What is meant by line balancing?

   (b) Define the term product life cycle.

4. Explain the automation strategies followed for upgrading the manufacturing processes.

5. What are the various line balancing methods? Explain any one method clearly.

6. What are the various methods of automation applied for upgrading the industry and also explain its merits, demerits and applications.

7. Explain the fundamentals of Automated Flow Lines.

8. What is work part transfer mechanism? And describe its types.

9. What is lean production? What does worker involvement mean?

10. Describe briefly the manual assembly line

UNIT-II

1. Describe about the economic analysis of an NC machine with suitable example.

2. Explain NC punched tape and tape coding format in detail.

3. (a) With a neat sketch explain the basic components of NC system

   (b) List out applications of numerical control system.

4. Explain the basic components of NC system with neat sketch.

5. (a)What are the commonly used input media in NC programming? Describe briefly.

   (b)Explain the binary and BCD systems of tape coding.

6. (a) Explain in detail about basic components of a NC system.

   (b) Explain applications of NC system.

7. Explain the various features of computer numerical control systems.

8. What is manual data input of the NC part program?

9. Explain manual NC part programming.

10. Briefly describe NC coordinate system.

UNIT-III

1. Explain the configuration of CNC machine control unit and its features

2. Explain the general configuration of DNC system unit and its features

3. Explain the various types of machine cells and layouts in cellular manufacturing.

4. Explain the various features of computer numerical control systems.

5. Explain three different types of parts classification and coding systems of group technology

6. Explain the components of CNC.

7. What is meant by machine cell? State the benefits of GT?

8. With the help of block diagram, explain the general configuration of a CNC system.

9. Discuss DCLASS and MCLASS coding systems.

10. Explain the two types of DNC system with neat sketch

UNIT-IV

1. What are the basic components of flexible manufacturing systems? Explain.

2. What are the various layouts of flexible manufacturing systems? Explain its benefits.

3. Explain the components and functions of FMS

4. What are the advantages of FMS?

5. Draw the various types of layouts used in flexible manufacturing systems. Also discuss about various equipment's used in a typical FMS configuration

6. In detail discuss the types of material handling systems used in FMS environment

7. What is meant by machine cell? State the benefits of GT?

8. Explain the types of material handling and storage systems used in FMS

9. What are the three capabilities that a manufacturing system must possess in order to be flexible?

10. What are the types of FMS? Explain them.

UNIT-V

1. What are the various types of computer aided process planning methods? Explain.

2. Explain the general configuration of an adaptive control system and its benefits.

3. Explain the configuration of computer process control system and its features.

4. Explain about material requirement planning system.

5. Explain the configuration of computer process monitoring system and its features.

6. Explain retrieval type process planning systems with suitable example.

7. Explain Generative Computer aided process planning approach in detail.

8. Discuss about the benefits of adaptive control in machining technology.

9. What is adaptive control? Explain its role in computer integrated manufacturing.

10. Discuss the various modules of MRP and state what is capacity planning?

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