

## Question Bank (G-scheme)

Name of subject: **ADVANCED INDUSTRIAL ELECTRONICS** Unit Test: **II**  
Subject code: **17542** Course: **IE**

Semester: **V**

### Chapter 4 Modern manufacturing Machines (16 marks)

#### 3 marks

1. Name four non-traditional machining. State its importance in industry.
2. State the advantages & disadvantages of EDM.
3. State the properties of dielectric fluid used in EDM.
4. How parity checking is done in ISO & EIA codes. Explain ISO & EIA codes used for NC programming.
5. Describe in details Computer Integrated Manufacturing.
6. Differentiate between NC and CNC.

#### 4 marks

7. State the various types of electrodes used in EDM with their functions.
8. Describe basic operation of EDM with EDM set up.
9. State essential functions of spark generator in EDM set up
10. Draw a neat diagram of wire cut EDM & describe its operation.
11. Describe the methods of listing the coordinates of point in the NC/CNC machine
12. Draw the block diagram of CNC system. Describe its operation.
13. Explain the steps involved in manual part programming.
14. What is part programming? Explain the use of G00 & M08 codes in detail.
15. State and explain computer aided part programming
16. State use of following APT. Statement with example.
  - (i) APT motion statement
  - (ii) APT Geometric statement
  - (iii) APT auxiliary statement
  - (iv) APT termination statement
17. What is DNC? State its demerits

### Chapter 5 RF Heating (18 marks)

#### 3 marks

18. Describe principle of dielectric heating. Give four applications.
19. Comparison between induction heating and dielectric heating.
20. What is microwave heating? Give two applications of it.

#### 4 marks

21. State two applications of induction heating. Describe surface hardening.
22. Draw a neat diagram of wire cut EDM. Describe its operation. State two advantage of EDM
23. Draw and explain the circuit of high frequency power source used for induction heating.

24. Give expression for the current density for induction heating. State effect of various parameters on heating. State frequency range for operation.
25. What are the factors on which heat generated in the work piece depends? Which heating technique is preferred for food processing? Describe its operation.