



Register Number:

B.E DEGREE EXAMINATIONS: NOV2015

(Regulation 2009)

Seventh Semester

ELECTRICAL AND ELECTRONICS ENGINEERING

EEE323: Computer Aided Design of Electrical Machines

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. AUTOCAD Software run is
 - a) Windows Platform
 - b) Linux Platform
 - c) Mac Platform
 - d) Matlab tools.
2. AUTOCAD supported file format is
 - a) Dwg
 - b) txt
 - c) dwf
 - d) Doc
3. Factory cost include
 - a) Prime cost + Factory expenses
 - b) Factory cost + Administrative cost
 - c) Direct material cost + labour cost
 - d) manufacturing cost + ceiling expenses
4. Full load power factor of induction motor is
 - a) ≥ 0.85
 - b) ≥ 0.45
 - c) ≤ 0.85
 - d) ≤ 0.45
5. Length of Air gap in induction machine is
 - a) $\geq 1\text{mm}$
 - b) $\geq 2\text{mm}$
 - c) $\geq 4\text{mm}$
 - d) $\geq 5\text{mm}$
6. The default work area in AutoCAD is
 - a) 12 x 9
 - b) 12 x 6
 - c) 9 x 12
 - d) 6 x 12
7. The UCS icon represents the intersection of the
 - a) X Axis
 - b) Y Axis
 - c) Z Axis
 - d) XYZ Axis

8. In AC machine B_{av} lies between
- | | |
|---------------------------------|---------------------------------|
| a) 0.3 to 0.6 wb/m ² | b) 0.4 to 0.8 wb/m ² |
| c) 6 to 12 wb/m ² | d) 0.6 to 1.7 wb/m ² |
9. What will be the insertion scale while selecting length type at decimal
- | | |
|----------|---------|
| a) Meter | b) inch |
| c) foot | d) Kg |
10. How many color combination in AutoCAD software?
- | | |
|--------|--------|
| a) 256 | b) 128 |
| c) 64 | d) 32 |

PART B (10 x 2 = 20 Marks)

11. List the advantages of implementing computer aided design of electrical machines?
12. What is meant by design analysis approach?
13. Give the aim and importance of cost estimation.
14. How the costs classified?
15. Distinguish between inkjet and laser printer.
16. Write operating principle of a joy stick.
17. Mention the importance of fixing the drawing size.
18. Give the latest development in plotters.
19. Why the TRIM command used in AUTOCAD?
20. What is the use of FILL command in AUTOCAD?

PART C (5 x 14 = 70 Marks)

21. a) Describe branching and iterative procedure in CAD.
- (OR)**
- b) Explain the design procedure for a rotating electrical machine in analysis and synthesis approaches through flow charts.
22. a) Describe cost estimation and non linear programming approach.
- (OR)**
- b) What do you mean by optimum design of 3 ϕ induction machine? Discuss the constraint functions normally used in induction machines.
23. a) Describe modern components used in various applications in computer aided drawing.

(OR)

b) Draw and explain the flow chart for design of three phase induction machine in detail.

24. a) (i) Explain the various parts of the AutoCAD windows. (7)

(ii) How grid and snap codes work together in AutoCAD. (7)

(OR)

b) Describe 3D drawing and erasing facilities in AutoCAD.

25. a) Explain the linking of BASIC with AutoCAD.

(OR)

b) Explain the various methods used to involve the AutoCAD commands to start a drawing.
