Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Fourth Year SemesterVII

Course Code: **MEC702**and Course Name: **CAD/CAM/CAE**

Time: 1hour Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks.

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| Q1.  | The shape of the Bezier curve is controlled by |
| Option A: | Control points |
| Option B: | Knots  |
| Option C: | End points |
| Option D:  | Start point  |
|  |  |
| Q2. | If a line is drawn between points 1,5 and -3,5 its absolute length is  |
| Option A: | one unit |
| Option B: | four unit |
| Option C: | three unit |
| Option D: | two unit |
|  |  |
| Q3. | Which is not a hidden surface removal algorithm |
| Option A: | Floating horizon algorithm |
| Option B: | Object space algorithm |
| Option C: | Z- buffer algorithm |
| Option D: | Roberts algorithm |
|  |  |
| Q4. | Which is a line removal algorithm |
| Option A: | Z Buffer algorithm |
| Option B: | Depth buffer algorithm |
| Option C: | Painter's algorithm |
| Option D: | Digital differential algorithm |
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| Q5. | What is the full form of UCS |
| Option A: | Universal coordinate system  |
| Option B: | User coordinate system |
| Option C: | Unique coordinate system |
| Option D:  | Uniform coordinate system |
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| Q6. | Transformation is |
| Option A: | used to convert one geometry from one co-ordinate system to other |
| Option B: | used to maintain symmetry |
| Option C: | used to divide geometry |
| Option D:  | used to analyse the object |
|  |  |
| Q7.  | What is Artificial intelligence? |
| Option A: | Putting your intelligence into Computer |
| Option B: | Programming with your own intelligence |
| Option C: | Making a Machine intelligent |
| Option D:  | Playing a Game |
|  |  |
| Q8.  | Which is not a type of transformation  |
| Option A: | Translation  |
| Option B: | Scaling |
| Option C: | Mirror |
| Option D:  | Triangle |
|  |  |
| Q9. | \_\_\_\_\_\_\_\_ system is a computer program designed and developed for helping the user to solve the decision making problems. |
| Option A: | Knowledge base  |
| Option B: | Expert system |
| Option C: | Inference Engine |
| Option D:  | Intelligent Design |
|  |  |
| Q10.  | In which machine we get feedback? |
| Option A: | Lathe machine |
| Option B: | NC machine |
| Option C: | CNC machine |
| Option D:  | Milling machine |
|  |  |
| Q11.  | The preparatory function refers to \_\_\_\_\_\_\_\_. |
| Option A: | G code |
| Option B: | N code |
| Option C: | Fixed block |
| Option D:  | Block address |
|  |  |
| Q12.  | In a CNC program block, N002 GO2 G91 X40 Z40...., G02 and G91 refer to |
| Option A: | Circular interpolation in counterclockwise direction and incremental dimension |
| Option B: | Circular interpolation in counterclockwise direction and absolute dimension |
| Option C: | Circular interpolation in clockwise direction and incremental dimension |
| Option D: | Circular interpolation in clockwise direction and absolute dimension |
|  |  |
| Q13. |  Circular arc on a part profile is being maclined on a vertical CNC milling machine. CNC part program using metric units with absolute dimensions is listed below:N60 G01 X 30 Y 55 Z -5 F50N70 G02 X 50 Y 35 R 20N80 G01 Z 5 |
| Option A: | (40,45) |
| Option B: | (42,60) |
| Option C: | (40,60) |
| Option D:  | (30,35) |
|  |  |
| Q14.  | The advantage of using FEA in Engineering Analysis is  |
| Option A: | Boundary conditions cannot be handled effectively |
| Option B: | Material having different material properties can be analysed |
| Option C: | Increases the cost of the design  |
| Option D:  | Only simple Geometry can be analyzed  |
|  |  |
| Q15. | Kinematic Analysis involves motion and stress analysis of a system |
| Option A: | Stress Analysis |
| Option B: | Motion Analysis |
| Option C: | Deformation Analysis |
| Option D:  | Vibration Analysis |
|  |  |
| Q16.  | The displacement function for 1D, two node linear element in terms of shape function will be  |
| Option A: | u = N1u2+N2u1 |
| Option B: | u = N2u1+N1u2 |
| Option C: | u = N1u1+N2u2 |
| Option D:  | u = N1u1+N1u2 |
|  |  |
| Q17. | In Finite Element Method, assemblage of elements is known as \_\_\_\_.  |
| Option A: | Meshing |
| Option B: | Discretization  |
| Option C: | Convergence  |
| Option D: | Reduction |
|  |  |
| Q18. | During the execution of a CNC part program block NO20 GO2 X45.0 Y25.0 R5.0 the type of tool motion will be |
| Option A: | Circular Interpolation – clockwise |
| Option B: | Circular Interpolation – counterclockwise |
| Option C: | Linear Interpolation |
| Option D:  | Rapid feed |
|  |  |
| Q19.  | Following are the Socio-Techno-Economic aspects of CIM, except |
| Option A: | Technology aspect |
| Option B: | Economic aspect |
| Option C: | Cultural aspect |
| Option D:  | Social aspect |
|  |  |
| Q20. | Which is not a part of computer aided manufacturing planning and control |
| Option A: | Production planning |
| Option B: |  Finance and Accounts |
| Option C: |  Master scheduling |
| Option D: |  Inventory management |
|  |  |
| Q21. | CABF deals with |
| Option A: | Purchase |
| Option B: | Stores  |
| Option C: | Finance and accounts  |
| Option D:  |  Process planning |
|  |  |
| Q22.  | Which of the following RP process uses powders as the starting material?  |
| Option A: | Droplet Deposition Manufacturing |
| Option B: | Fused Deposition Modeling |
| Option C: | Selective Laser Sintering |
| Option D:  | Steriolithography |
|  |  |
| Q23. | Which one of the process is subtractive prototyping? |
| Option A: | 5 axis CNC Milling |
| Option B: |  Fused Deposition Modeling |
| Option C: |  Multi-Jet Modeling  |
| Option D:  | Stereolithography Apparatus |
|  |  |
| Q24.  | Filament is used in which RPT method |
| Option A: | FDM |
| Option B: | SLA |
| Option C: | SLS |
| Option D:  | LOM |
|  |  |
| Q25. | Which is not a problem of stl file format |
| Option A: | missing faces or gaps |
| Option B: | bad edges |
| Option C: | dimensions largely varies  |
| Option D:  | overlapping |