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Subject Name & Code : CAD/CAM (PEME604A)   Exam Name : Q1

1. CAD/CAM is the relationship between   [C]

   A) science and engineering   B) manufacturing and marketing   C) design and manufacturing   D) design and marketing

2. What is stand alone data acquisition systems often called?   [A]

   A) Data logger   B) Data Blogger   C) Data Blog   D) Digital Terminal

3. The nerve center or brain of any computer system is known as   [A]

   A) CPU   B) Storage device   C) ALU   D) Monitor

4. The software that performs the data entry, design, analysis, drafting and manufacturing functions is known as   [C]

   A) operating software   B) graphics software   C) application software   D) programming software

5. Computer will perform the data processing functions in   [B]

   A) NC   B) CNC   C) DNC   D) None of the mentioned

6. The linking of computer with a communication system is called   [A]

   A) networking   B) pairing   C) interlocking   D) assembling

7. Which coordinate system is a device-dependent coordinate system?   [D]

   A) World Coordinate System   B) Model Coordinate System   C) User Coordinate System   D) Screen Coordinate System

8. Which two disciplines are tied by a common database?   [B]

   A) documentation and geometric modeling   B) CAD and CAM   C) drafting and documentation   D) none of the mentioned

9. The matrix representation for scaling in homogeneous coordinates is   [A]

A) P'=S*P   B) P'=R*P   C) P'=dx+dy   D) P'=S*S

10. The two-dimensional rotation equation in the matrix form is   [C]

A) P'=T+P   B) P'=S*P   C) P'=R*P   D) P'=dx+dy

11. In Coordinates, a points in n-dimensional space is represent by(n+1) coordinates.   [B]

A) Scaling   B) Homogeneous   C) Inverse transformation   D) 3D Transformation

12. -------is a rigid body transformation that moves objects without deformation.   [C]

A) Rotation   B) Scaling   C) Translation   D) All of the mentioned

13. The basic geometric transformations are   [D]

A) Translation   B) Rotation   C) Scaling   D) All of the mentioned

14. To generate a rotation , we must specify   [A]

A) Rotation angle θ   B) Distances dx and dy   C) Rotation distance   D) All of the mentioned

15. The rotation axis that is perpendicular to the xy plane and passes through the pivot pointis known as   [A]

A) Rotation   B) Translation   C) Scaling   D) Shearing

16. An ellipse can also be rotated about its center coordinates by rotating   [B]

A) End points   B) Major and minor axes   C) Only a   D) None of the mentioned

17. Shearing is also termed as   [D]

A) Selecting   B) Sorting   C) Scaling   D) Skewing

18. Two successive translations are   [D]

A) Multiplicative   B) Inverse   C) Subtractive   D) Additive

19. Transpose of a column matrix is   [C]

A) Zero matrix   B) Identity matrix   C) Row matrix   D) Diagonal matrix

20. In the following geometric primitives. which is not a solid entity of CSG modelling: [C]

A) Box   B) Cone   C) Cylinder   D) Circle

21. Which of the following is not an analytical entity?   [C]

A) Line   B) Circle   C) Spline   D) Parabola

22. Which of the following is not a synthetic entity?   [A]

A) Hyperbola   B) Bezier curve   C) B-spline curve   D) Cubic spline curve

23. The shape of Bezier curve is controlled by   [A]

A) Control points   B) Knots   C) End points   D) All the mentioned

24. The degree of the Bezier curve with n control points is   [A]

A) n + 1   B) n - 1   C) n   D) 2n

25. From the following, which is an axisymmetric surface?   [C]

A) Plane Surface   B) Ruled Surface   C) Surface of Revolution   D) All of the mentioned

26. B-rep and C-Rep are the methods of   [A]

A) Solid model   B) Surface model   C) Wireframe model   D) none of the mentioned

27. The data representation of CSG objects is represented by   [A]

A) a binary tree   B) a boolean operation   C) a primitive   D) none of the mentioned

28. For 3D modeling of automobile body styling, which of the following is a preferredtechnique?   [C]

A) Constructive Solid Geometry B) Pure Primitive Instancing   C) Boundary Representation   D) Spatial Occupancy Enumeration

29. Which of the following is a Computer Graphics type?   [A]

A) Raster and Vector   B) Raster and Scalar   C) Scalar only   D) All of the mentioned

30. Which of the following plane is used for 2D transformations?   [B]

A) Three-dimensional plane   B) Two-dimensional plane   C) One-dimensional plane   D) Four-dimensional Plane

31. Which of the following is the purpose for using clipping in computer graphics?   [D]

A) copying   B) zooming   C) adding graphics   D) removing objects and lines

32. In a graphical system, an array of pixels in the picture are stored in which of the following locations?   [C]

A) Frame buffer   B) Processor   C) Memory   D) All of the mentioned

33. Bitmap is a collection of _____ that describes an image.   [A]

A) pixels   B) algorithms   C) bits   D) colors

34. How many axes do 3D graphics consist of?   [B]

A) Two axes   B) Three axes   C) Five axes   D) One axis

35. Which of the following is the most commonly used boundary representation for a 3-dimensional graphics object?   [D]

A) Volume polygon   B) System polygon   C) Data polygon   D) Surface polygon

36. Which of the following is used for 3D positioning and modeling, animation, and other application?   [C]

A) Spac ball   B) Trackball   C) Space ball   D) All of the mentioned

37. Control loop unit of M.U is always   [A]

A) a hardware unit   B) a software unit   C) a control unit   D) none of the mentioned

38. Modem CAD systems are based on: [A]

A) ICG   B) GCI   C) GIF   D) IFG

39. The functionality areas of CAD application can be grouped into _____ categories.   [C]

A) 2   B) 3   C) 4   D) 5

40. The model which is created by using basic entities of two dimensioning is called _____   [B]

A) Surface model   B) Wire frame model   C) Solid model   D) Isometric model

41. Types of models which is commonly used are _____   [D]

A) Simple model   B) Composite model   C) Isometric model   D) Solid model

42. In which of the types of wire frame model is used for drawing flat objects?   [A]

A) 2D wire frame model   B) 2.5 wire frame model   C) 3D wire frame model   D) Solid model

43. Geometric models which is commonly used are _____   [D]

A) 2D wire frame model   B) 3d surface modelling   C) Isometric model   D) Solid modelling

44. The wire frame entities are _____   [C]

A) Plane surface   B) Ruled surface   C) Tabulated surface   D) Polygons

45. The surface model is created by using _____   [C]

A) Analytic entities   B) Synthetic entities   C) Analytic and Synthetic entities D) Basic entities

46. What is the basic part of the surface model on which the surface is to be drawn?   [D]

A) Ruled   B) Ruler   C) Size   D) Mesh

47. _____ command gives an array of object in 3D modeling   [C]

A) Extrude   B) Revolve   C) Pattern   D) All of the mentioned

48. To create a hollow part, which of the following command would be most efficient   [C]

A) Extrude   B) Sweep   C) Shell   D) Revolve

49. For 3D modeling of automobile body styling, which of the following is a preferredtechnique   [C]

A) Constructive Solid Geometry   B) Pure Primitive Instancing   C) Boundary Representation   D) Spatial Occupancy Enumeration

50. Which of the following code will give point to point movement?   [A]

A) G00   B) G01   C) G56   D) G94

51. Which of the following code will give circular interpolation in Counterclockwise direction?   [D]

A) G00   B) G56   C) G69   D) G03

52. code will produce dwell for a specified time?   [D]

A) G18   B) G65   C) G45   D) G04

53. Which of the following code is used to specify feed per minute in milling and drilling?   [D]

A) G69   B) G10   C) G00   D) G94

54. The use of computers to control the operation of the production process is known as   [C]

A) CAD   B) CAE   C) CAM   D) CAQ

55. Which is a type of manufacturing system?   [D]

A) Continuous or discrete   B) Variety and volume   C) Raw material to the final product   D) All of the mentioned

56. In CNC machine tool, the part program entered into the computer memory   [B]

A) A. can be used only once   B) can be used again and again   C) can be used again but it has to be modified every time   D) cannot say

57. positoin Sensors used in measurement systems are ____   [C]

A) porximity sensors   B) velocity sensors   C) optical encoders   D) poentioo meters

58. _____ looks like a TV screen and is used to display information.   [D]

A) a. CPU   B) ALU   C) MU   D) VDU

59. _____ is the smallest unit of memory in a computer.   [A]

A) a. Bit   B) Byte   C) Word   D) ROM

60. Which of the following are positive directions?   [D]

A) OX' and OY'   B) OX and OY'   C) OX' and OY   D) OX and OY

61. Why is coordinate geometry used?   [B]

A) To find square root of a number   B) To locate a point in a plane precisely   C) To create different shapes   D) To multiply numbers

62. Which of the following is the default coordinate system?   [B]

   A) User Coordinate System   B) World Coordinate System   C) Screen Coordinate System   D) none of the mentioned

63. A raster system has a resolution of 1024 × 1024 and a refresh rate of 60 Hz, then the time required to display a pixel _____ nanoseconds.   [B]

   A) 1.589   B) 15.89   C) 158.9   D) 1589

64. Which of the following is an optional section of IGES format?   [B]

   A) Start section   B) Global section   C) Terminate section   D) Flag section

65. A system that automates the drafting process with interactive computer graphics is called   [B]

   A) Computer Aided Engineering (CAE)   B) Computer Aided Design (CA   C) Computer Aided Manufacturing (CAM)   D) Computer Aided Instruction (CAI)

66. In a DNC system   [A]

   A) many machine tools can be controlled simultaneously   B) only a single machine tool can be controlled   C) NC machine cannot be controlled   D) none of the mentioned

67. Point-to-point systems are used for _____.   [A]

   A) reaming   B) parting   C) grooving   D) facing

68. The control loop unit of M.U is always   [A]

   A) a hardware unit   B) a software unit   C) a control unit   D) a drive unit

69. The repeatability of the NC machine depends on   [B]

   A) control loop errors   B) mechanical errors   C) electrical errors   D) electronics errors

70. A typical punched card used in IBM systems has _____ columns.   [B]

   A) 70   B) 80   C) 85   D) 90

71. _____of motion is always the axis of the main spindle of the machine.   [A]

   A) Z-axis   B) Y-axis   C) X-axis   D) none of the mentioned

72. Drives used in Stepper motors are suitable only for which types of machines?   [A]

A) Light duty   B) Medium duty   C) Heavy duty   D) Ultra heavy duty

73. G-codes are also known as   [A]

A) preparatory codes   B) spindle speed codes   C) tool selection codes   D) miscellaneous codes

74. Which of the following code is used to give cutter offset compensation, left of a part surface? [B]

A) G40   B) G41   C) G42   D) G50

75. The system environment in a mainframe computer consists of   [D]

A) central processing   B) storage devices   C) printers and plotters   D) both a&B

76. Which of the following code is used to specify coolant on?   [B]

A) M05   B) M08   C) M09   D) M02

77. The PLC of automation is found in   [B]

A) CNC machine tools   B) automatic transfer machines   C) DNC machining system   D) machine tools with electrohydraulic positioning and contr

78. PLC stands for: [B]

A) Pressure Load Control   B) Programmable Logic Controller   C) Pneumatic Logic Capstan   D) Pressure Loss Chamber

79. How is the speed of operation of the conventional relay system compared to digital controllers? [A]

A) Very slow   B) Very fast   C) Same   D) Almost similar

80. The correct sequence of operations in production planning and control is: [A]

A) Routing-Scheduling-Dispatching-Follow up   B) Scheduling-Routing- Dispatching-Follow up   C) Dispatching-Routing-Scheduling-Follow up   D) Routing-Scheduling-Follow up-Dispatching

81. nternal state sensors are used for measuring _____ of the end effector.   [B]

A) Rabota   B) Robota   C) Rebota   D) Ribota

82. The abbreviation WCS stands for _____   [A]

A) Position
B) Position & Velocity
C) Velocity & Acceleration
D) Position, Velocity & Acceleration

83. Which type of coordinate system is used in AutoCAD?   [C]

A) Windows Coordinate System
B) Wide Coordinate system
C) World Coordinate System
D) World CAD system

84. The position and orientation of the UCS origin is controlled by _____   [B]

A) 2-Dimensional
B) 3-Dimensional
C) 1-Dimensional
D) User dependent

85. universal cooridinate system stands for   [A]

A) UCS command
B) UCSICON command
C) VIEW command
D) MOVE command

86. A line with a tapering width can be easily created by using the _____ tool.   [D]

A) circle
B) eclipse
C) line
D) polyline

87. The UCS icon represents the intersection of the _____.   [D]

A) X axis
B) Y axis
C) Z axis
D) All of the mentioned

88. Computer used in CAD/CAM are   [D]

A) super computers
B) (simple computers
C) (analog computers
D) (digital computers

89. The integration of CAD and CAM is called   [D]

A) Computer Aided Design
B) (Computer Aided Engineering
C) (CAE/CAM
D) (Computer Integrated Manufacturing

90. The speed at which the monitor accepts data is called   [D]

A) response time
B) (scanning
C) (interlacing
D) (bandwidth

91. Feed is measured in units of _____.   [A]

A) length/revolution
B) degree/revolution
C) length
D) degree

92. The _____ form the basis for surface models.   [A]

A) surface model   B) solid model   C) wire frame model   D) isometric model

93. The surface which is not to be drawn by the surface model drawn by _____   [C]

A) Surface model   B) Wire frame model   C) Solid model   D) Isometric model

94. B-rep and C-Rep are the methods of _____ .   [A]

A) solid modeling   B) surface modeling   C) wireframe modeling   D) 2D modeling

95. From the following, which method is also called as the Building Block Approach?   [A]

A) Cellular Decomposition   B) surface modeling   C) wireframe modeling   D) 2D modeling

96. _____ is an extension of the wireframe model with additional face information adde   [D]

A) CSG   B) Spatial Occupancy Enumeration   C) Generalized Sweeps   D) Constructive Solid Geometry

97. Which of the following uses a number of two-dimensional profiles for generating a three-dimensional object?   [B]

A) Tweaking   B) B-rep   C) Loft   D) none of the mentioned

98. Which of the following is a file extension used for a 3D model?   [C]

A) .dxf   B) Lofting   C) Filleting   D) none of the mentioned

99. The software that is used to control the computer's work flow, organize its data and perform house keeping functions is known as   [A]

A) operating software   B) graphics software   C) application software   D) programming software

100. The life cycle of a product includes   [D]

A) extraction of natural resources   B) processing of raw materials   C) manufacturing of products   D) all of the mentioned

101. The acronym PLC stands for: [B]

A) Pressure Load Control   B) Programmable Logic Controller   C) Pneumatic Logic Capstan   D) Pressure Loss Chamber

102. Which of the following is not a part of Five M's?   [C]

A) Material   B) Machine   C) Motion   D) Method

103. Which of the following is true for 'Routing'?   [D]

A) It is the flow of work in the plant
B) Route sheets include a list of machine tools that are to be followed
C) It depends upon material handling facilities
D) All of the mentioned

104. The bill of material does not consist of   [D]

A) Part number
B) Specifications of part
C) Name of the part
D) Price of the part

105. Several machine tools can be controlled by a central computer in   [C]

A) NC
B) CNC
C) DNC
D) CCNC

106. NC contouring is an example of   [A]

A) continuous path positioning
B) point-to-point positioning
C) absolute positioning
D) incremental positioning

107. Code for Coolant on   [A]

A) M08
B) M09
C) M18
D) M30

108. Part-programming mistakes can be avoided in   [C]

A) NC
B) CNC
C) both NC and CNC
D) none of the mentioned

109. CNC machining centers do not include operations like _____.   [C]

A) milling
B) boring
C) welding
D) tapping

110. Which one of the following is not the advantage of the CNC machine?   [D]

A) Reduce inspection time
B) Reduces tooling time
C) Higher rate of production
D) Higher initial cost

111. n machining of a workpiece, the material is removed by_____.   [C]

A) drilling action
B) melting action
C) shearing acting
D) using brittleness of the material

112. Following is not an operating system software   [D]

A) Windows
B) UNIX
C) VAX/VMS
D) IDEAS

113. The process of copying data from a memory location is called   [B]

A) reading

B) writing

C) controlling

D) hand shaking

114. A standard punch tape is _____ mm wide. [B]

A) 20

B) 25

C) 27

D) 30

115. Which of the following is a type of tape reader? [D]

A) Optical or photo-electrical tape reader

B) Pneumatic tape readers

C) Magnetic tape reader

D) All of the mentioned

116. Which of the following programs is not a popular desktop publishing program? [C]

A) Adobe PageMaker

B) Microsoft Publisher

C) Lotus AmiPro

D) QuarkXPress

117. Raster images are also known as : [A]

A) Bitmap images

B) Vector images

C) Clip art images

D) Multimedia images

118. Designs are periodically modified to [D]

A) improve product performance

B) strive for zero-based rejection and waste

C) make products easier and faster to manufacture

D) all of the mentioned

119. What is the full form of IoT? [A]

A) Internet of Technology

B) Incorporate of Things

C) Internet of Things

D) Incorporate of Technology

120. Code for Return to R point in canned cycle [D]

A) G91

B) G28

C) G99

D) G98

121. NC machine depends on [B]

A) control loop errors

B) mechanical errors

C) electrical errors

D) none of the mentioned

122. During the execution of a CNC part program block NO20 GO2 X45.0 Y25.0 R5.0 the type of tool motion will be [A]

A) circular Interpolation – clockwise

B) circular Interpolation – counterclockwise

C) linear Interpolation

D) rapid feed

123. Life-cycle engineering is also called [A]

A) green design

B) expensive design

C) easy design

D) none of the mentioned

124. For generating Coons patch we require   [C]

A) A set of grid points on surface

B) A set of control points

C) Four bounding curves defining surface

D) Two bounding curves and a set of grid control points

125. In a point-to-point type of NC system   [B]

A) Control of position and velocity of the tool is essential

B) Control of only position of the tool is sufficient

C) Control of only velocity of the tool is sufficient

D) Neither position nor velocity need to be controlled

126. Thumbwheels are usually mounted on: [B]

A) Keyboard

B) Monitor

C) CPU

D) Mouse

127. The screen is scanned from left to right, top to bottom all the time to generate graphics by: [A]

A) Raster scans

B) Random scan

C) Vector scan

D) Stoke writing

128. Color raster display uses three electron guns, namely: [A]

A) Red, green and blue

B) Red, green and yellow

C) White, blue and black

D) Red, black and white

129. In the following geometric modelling techniques, which cannot be used for finite element analysis: [D]

A) Wireframe modelling

B) Surface modelling

C) Solid modelling

D) None of the mentioned

130. The curve that follows a convex hull property is: [B]

A) Cubic spline

B) B-spline

C) Bezier curve

D) none of the mentioned

131. The degree of the B-spline with varying knot vectors: [A]

A) Increases with knot vectors

B) Decreases with knot vectors

C) Remains constant

D) none of the mentioned

132. The tensor product technique constraints surfaces by two curves.   [C]

A) Adding

B) Subtraction

C) Multiplying

D) Dividing

133. Which of the following code is used to return to a reference point?   [B]

A) G23

B) G28

C) G14

D) G19

134. Which of the following code is used to cancel offset compensation for cutter radius?   [A]

    A) G40   B) G02   C) G42   D) G00

135. Which of the following code is used in programming in absolute coordinates?   [A]

    A) G90   B) G32   C) G92   D) G01

136. Locating devices are classified as   [C]

    A) G24   B) G23   C) G95   D) None of the mentioned

137. Which of the following code is used to specify feed per minute in turning?   [B]

    A) text input device   B) graphic device   C) joystick   D) G23

138. Which of the following element is not used in an automatic control system?   [B]

    A) Final control element   B) Sensor   C) Oscillator   D) none of the mentioned

139. _____ is the distance the tool advances for each revolution of the work.   [A]

    A) feed   B) depth of cut   C) metal removal rate   D) none of the mentioned

140. Which of the following represents the unit of metal removal rate?   [C]

    A) mm/revolution   B) mm*mm/revolution   C) mm*mm*mm/revolution   D) none of the mentioned

141. In CNC systems multiple microprocessors and programmable logic controllers work _____   [A]

    A) in parallel   B) in series   C) one after the other   D) for 80% of the total machining time

142. What is the operation of a machine tool by a series of coded instructions?   [A]

    A) Numerical control   B) Machining control   C) a. Loop system control   D) a. Open loop system control

143. code for Circular interpolation CCW   [A]

    A) G03   B) G02   C) G01   D) G00

144. Which the following code will produce dwell for a specified time?   [D]

A) G18   B) G65   C) G45   D) G04

145. Which of the following code is used to select x y plane in milling?   [B]

A) G18   B) G17   C) G10   D) G04

146. Which of the following code is used to specify feed per revolution in milling and drilling?   [C]

A) G24   B) G23   C) G95   D) None of the mentioned

147. The highest level of automation is found in   [B]

A) CNC machine tools   B) automatic transfer machines   C) DNC machining system   D) machine tools with electrohydraulic positioning and control

148. Which of the following devices do not produce a hard copy?   [C]

A) impact printers   B) plotters   C) CRT terminals   D) non-impact printers

149. IoT devices are naturally vulnerable to _____ threats.   [D]

A) Sensors   B) Heterogeneity   C) Connectivity   D) Security

150. Which of the following code is used to select the XZ plane in milling?   [A]

A) G18   B) G17   C) G10   D) G04

151. Which of the following code is used in thread cutting in turning?   [C]

A) G32   B) G89   C) G20   D) G74

152. Servo motors are suitable only for which types of machines?   [D]

A) Light duty   B) Medium duty   C) Heavy duty   D) Ultra heavy duty

153. What is the function of the GUI(Graphical user interface)?   [D]

A) To control motion and speed   B) Converts program into the action of the driver   C) To record the data from the sensor   D) To understand the position of the tool according to the input program

154. Which microprocessor is a second generation microprocessor among the following?   [A]

A) INTEL 8085   B) INTEL 8086   C) Motorola 68000   D) Motorola 68010

155. The major component of GUI.   [C]

A) Icons   B) Links   C) Window Manager   D) Cells

156. Graphic object composed of patterns of lines, points, circles etc.   [B]

A) CAD   B) Vector   C) Animation   D) Raster

157. Which of the following is the smallest unit of data in a computer?   [A]

A) Bit   B) KB   C) Nibble   D) Byte

158. Sensors used in measurement systems are ____   [A]

A) speed and position sensor   B) amplifier circuits, driving motors and ball   C) numerical control sensors   D) measurement sensors
                                         lead screw

159. The punch tape reader in a CNC machine is ____   [B]

A) feedback system   B) input device   C) program   D) driving system

160. Proximity sensor is a ____ type of position sensor.   [B]

A) contact   B) non-contact   C) eddy current   D) resistive