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Subject Name & Code : CAD/CAM (PEME604A)

Exam Name : Q2

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? [B]
A) All of the mentioned B) Data Blogger C) None of the mentioned D) Digital Blogger
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. NC contouring is an example of [A]
A) continuous path positioning B) point-to-point positioning C) absolute positioning D) incremental positioning
6. Computer will perform the data processing functions in [B]
A) NC B) CNC C) DNC D) None of the mentioned
7. The linking of computer with a communication system is called [A]
A) networking B) pairing C) interlocking D) assembling
8. 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
9. 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

10. The matrix representation for scaling in homogeneous coordinates is [A]
A) $P' = S \cdot P$ B) $P' = R \cdot P$ C) $P' = dx + dy$ D) $P' = S^* S$

11. The two-dimensional rotation equation in the matrix form is [C]
A) $P' = T + P$ B) $P' = S \cdot P$ C) $P' = R \cdot P$ D) $P' = dx + dy$

12. 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

13. -----is a rigid body transformation that moves objects without deformation. [C]
A) Rotation B) Scaling C) Translation D) All of the mentioned

14. The following cell formation technique is based on Component shape and design? [C]
A) Production flow analysis B) Component flow analysis C) Composite component D) Simulation

15. 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

16. The rotation axis that is perpendicular to the xy plane and passes through the pivot point is known as [A]
A) Rotation B) Translation C) Scaling D) Shearing

17. 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

18. Shearing is also termed as [D]
A) Selecting B) Sorting C) Scaling D) Skewing

19. Two successive translations are [D]
A) Multiplicative B) Inverse C) Subtractive D) Additive

20. Transpose of a column matrix is [C]

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

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

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

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

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

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

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

The shape of Bezier curve is controlled by [A]

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

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

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

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

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

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

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

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

For 3D modeling of automobile body styling, which of the following is a preferred technique? [C]

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

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

31. 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

32. 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

33. 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

34. Bitmap is a collection of _____ that describes an image. [A]
A) pixels B) algorithms C) bits D) colors

35. How many axes do 3D graphics consist of? [B]
A) Two axes B) Three axes C) Five axes D) One axis

36. 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

37. 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) None of the mentioned

38. 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

39. Life-cycle engineering is also called [A]
A) green design B) expensive design C) easy design D) None of the mentioned

40. Sustainable manufacturing is required for [D]
A) conserving resources B) proper maintenance C) reuse D) All of the mentioned

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

A) ICG

B) GCI

C) GIF

D) IFG

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

A) 2

B) 3

C) 4

D) 5

43. 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

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

A) Simple model

B) Composite model

C) Isometric model

D) Solid model

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

A) 2D wire frame model

B) 5 wire frame model

C) 3D wire frame model

D) Solid model

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

A) 2D wire frame model

B) 3d surface modelling

C) Isometric model

D) Solid modelling

47. The wire frame entities are _____ [C]

A) Plane surface

B) Ruled surface

C) Tabulated surface

D) Polygons

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

A) Analytic entities

B) Synthetic entities

C) Analytic and Synthetic entities

D) Basic entities

49. 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

50. Cellular manufacturing is also known as _____. [D]

A) cellurrar Manufacturing Technology

B) Manufacturing Technology

C) Production Technology

D) Group Technology

51. In Opitz system, 2nd digit indicates [B]

A) Type and Shape

B) External shape and external shape elements

C) External plane surface finishing

D) Auxiliary hole and gear teeth

52. Which layout is mostly used for the batch type of production? [B]
A) Product layout B) Process layout C) In line layout D) None of the mentioned

53. From the following in which type of GT code chain-type structure is used? [A]
A) Poly code B) Hybrid code C) Mono code D) None of the mentioned

54. Which system uses computers at lower-level strategies? [A]
A) Variant CAPP B) Generative CAPP C) Hybrid CAPP D) All of the mentioned

55. CAPP is called _____. [C]
A) Computer Aided Product Processing B) Computer Alternate Product Processing C) Computer Aided Processing Planning D) Computer Alternate Processing Planning

56. The following type of layout is preferred for low volume production of non-standard products [B]
A) Product layout B) Process layout C) Fixed-position layout D) GT layout

57. Which of the following is not a design attribute? [D]
A) Major dimensions B) Length/diameter ratio C) Tolerances D) Machine tools

58. A Vibrating Transducer is used in which type of Piezometer. [C]
A) Hydraulic B) Pneumatic C) Electric D) None of the mentioned

59. The degree of reproducibility of a measurement by a sensor is called as _____. [D]
A) Sensitivity B) Range C) Resolution D) Precision

60. In which layout manufacturing is done according to machine arrangement? [C]
A) GT layout B) Product layout C) Process layout D) Hybrid layout

61. The following type of layout is preferred to manufacture a standard product in large quantity [A]
A) Product layout B) Process layout C) Fixed-position layout D) U-postion lay out

62. In ship manufacturing, the type of layout preferred is [C]
A) Fixed-position layout B) None of the mentioned C) GT layout D) Process layout

63. Sound to electrical energy transducer: [A]
A) 1. Microphone B) AFR C) 3. Tactile sensor D) 4. Pellistor

64. The payment made to the following is cost of direct labour. [A]
A) Machinist B) Supervisor C) Inspector D) Sweeper

65. Quality Management in software engineering is also known as _____. [A]
A) SQA B) SQM C) SQI D) SQA and SQM

66. Quality in software can be looked at in terms of user satisfaction which includes [D]
A) A compliant product B) Good quality output C) Delivery within budget and schedule D) All of the mentioned

67. Inspections and testing are _____ kinds of Quality Costs. [D]
A) Prevention B) Internal Failure C) External Failure D) Appraisal

68. Non-conformance to software requirements is known as _____. [C]
A) Software availability B) Software reliability C) Software failure D) None of the mentioned

69. what is the full form of AGV? [A]
A) Automatic Guided Vehicle B) Automated Gas Vehicle C) Automated Guided Vehicle D) None of the mentioned

70. What is full form of CIM? [C]
A) Computer interface manufacturing B) Computer integrated method C) Computer integrated manufacturing D) Computer integral manufacturing

71. CIM relies on [B]
A) Open loop system B) Closed loop system C) Direct loop system D) None of the mentioned

72. CAPP stand for [B]

A) Computer aided product planning B) Computer aided process planning C) Computer aided productive planning D) Computer aided product process

73. The repeatability of NC machine depends on [B]
A) control loop errors B) mechanical errors C) electrical errors D) None of the mentioned

74. 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

75. Which is not CAM software? [C]
A) Creo Parametric B) Unigraphics NX C) Autocad D) Powermill

76. An example of a transfer line is an automobile-production facility is which type of system? [A]
A) Mass production B) Batch production C) Job shop production D) None of the mentioned

77. Inventory is necessary for which type of manufacturing system? [D]
A) To manage B) To adjust C) To order D) To stock

78. Just-in-Time was successfully implemented by [A]
A) Toyota B) Honda C) Suzuki D) Volkswagen

79. _____ is the interface between product development and manufacturing system development [A]
A) Process planning B) Layout planning C) Line balancing D) Product planning

80. The purchase order lead time is multiplied to the number of units sold per unit of time to calculate [D]
A) economic order quantity B) carrying cost C) break even analysis D) B reorder point

81. If purchase order lead time is 35 minutes and number of units sold per time is 400 units, then reorder point will be [A]
A) 14000 units B) 14500 units C) 15000 units D) 15500 units

82. Another name for process plan is [A]
A) Route sheet B) Standard sheet C) Program sheet D) None of the mentioned

83. What does ERP stand for?
A) Expanse research project B) . Enterprise research planning C) B Enterprise resource planning D) Expanse resource project [C]

84. QIP stands for –
A) Quality improvement program B) Quality imparts process C) Quality import procedure D) None of the mentioned [A]

85. Quality management is a method for –
A) Design B) Testing C) System D) Logic [A]

86. CMM stands for –
A) Capability maturity model B) Capability management model C) Calibre measuring mode D) Capability measuring model [A]

87. How a system is used to check the surface finish of a surface by CAI?
A) As a mirror B) As a lens C) As a black body D) As a grey body [A]

88. Which of the following is used for automatic inspection?
A) Universal probes B) Hydrolysis probes C) Electronic probes D) Mechanical probes [A]

89. What is another name of computer aided inspection?
A) Computer aided machining B) Visionary machining C) Machine vision D) Visionary inspection [C]

90. Which of the following is mounted on a robot arm for inspecting complicated surfaces?
A) Vision sensor B) Proximity sensor C) Heat sensor D) Touch sensor [A]

91. What is included in the quality assessment in TQM?
A) Strategic quality planning B) Management of process quality C) Quality and operational results D) Information and analysis [B]

92. What is the least count of a micrometer?
A) 0.01 mm B) 0.02 mm C) 0.1 mm D) 0.2 mm [A]

93. Rotation about Z-axis is called [C]

A) a-axis	B) b-axis	C) c-axis	D) None of the mentioned
Displacement Sensors			[C]
A) Inductive Proximity Sensors	B) Capacitive Elements	C) Potentiometer	D) Optical Encoders
Industrial control circuits are designed to			[D]
A) switching	B) sequencing	C) process control	D) All of the mentioned
Simulation in manufacturing refers			[A]
A) mimicing the real behaviour	B) presenting the process	C) imagination of process	D) making the process
The PLC is used in _____.			[D]
A) machine tools	B) automated assembly equipment	C) molding and extrusion machines	D) All of the mentioned
What is the full form of IoT?			[A]
A) Internet of Things	B) Idea of Things	C) Integration of Things	D) Institute of Things
Which country government introduced the Industry 4.0 concept?			[C]
A) United States of America	B) France	C) Germany	D) Great Britain
Mechanization is...			[B]
A) when a human operates a machine	B) using machines to do work instead of humans	C) installing machines into the human body	D) advancing machine technology
This company was the first to utilize a robotics system in its production line			[C]
A) Ford Motor Co	B) Volkswagen	C) General Motors	D) Toyota
When Industry 4.0 starts?			[C]
A) 2007	B) 2010	C) 2013	D) 2016
Which is/are part of the automation pyramid of a smart factory?			[D]
A) Control	B) ERP	C) Manufacturing Execution System	D) All of the mentioned

104. Flipkart is looking at robotics to improve efficiency in [C]
A) production B) delivery C) warehouses D) None of the mentioned

105. Which one of the below is not a function of a SCADA system? [D]
A) Monitor, gather and process data B) Interact with machines and devices C) Record events into a log file D) Trigger the invoicing process in the ERP system.

106. In the Digital Age (3rd Industrial Revolution) what two major inventions changed production and paved the way to Automation [C]
A) Model Control Systems B) Switches and Relays C) Programmable Logic Controllers (PLC) D) Process Automation

107. Which of the following functions of Production Planning and Control is related to the timetable of activities? [A]
A) Scheduling B) Dispatching C) Expediting D) Routing

108. Which of the following processes is not a part of the Production Planning and Control system? [A]
A) Integration of processes B) Routing C) Expediting and follow up D) All of the mentioned

109. The objectives of Production Planning and Control are _____. [D]
A) Timely delivery of goods and services B) Improving customer satisfaction C) Coordinating with multiple departments to ensure that the production process is on track D) All of the mentioned

110. Production Planning and Control function is crucial for ensuring cost savings and efficiency in _____. [B]
A) Planning B) Production C) Promotion D) None of the mentioned

111. The control activity in Production Planning and Control is performed _____ of the plan. [B]
A) Before execution B) After execution C) During execution D) None of the mentioned

112. Regulating the production process to ensure an orderly flow of materials is the objective of _____. [B]
A) Production planning B) Production control C) Production audit D) None of the mentioned

113. Production control within a company depends on _____. [D]

A) Nature of production activities within the organisation B) Nature of the organisation C) Size of the organisation D) All of the mentioned

114. _____ is responsible for the order of processing each activity under Production Planning and Control. [B]

A) Loading B) Sequencing C) Routing D) Scheduling

115. Procurement cycle time calculates the total duration for _____. [D]

A) Inspecting the purchased components B) Receiving raw materials C) Inspection of raw materials D) All of the mentioned

116. Material Requirement Planning (MRP) is a computerised system to plan the requirements for _____. [D]

A) Finished goods B) Raw materials C) Work in progress D) All of the mentioned

117. The process of Production Planning and Control starts with _____. [C]

A) Expediting B) Scheduling C) Estimating D) Routing

118. The machines used for mass production are _____. [D]

A) Special purpose B) General-purpose C) Manually operated D) Semi-automatic

119. The purpose of preparing a master schedule is to oversee _____. [D]

A) Multi-product batch production B) Single product batch production C) Single product continuous production D) Assembly product continuous production

120. _____ is the probability of a product operating efficiently within an estimated time frame. [A]

A) Reliability B) Durability C) Serviceability D) Performance

121. _____ is the probability of rejecting a lot that has an acceptable quality level. [A]

A) Producer's risk B) Consumer's risk C) None of the mentioned D) All of the mentioned

122. The process of dealing with production orders to initiate operations under the Production Planning and Control starts with _____. [B]

A) Dispatching B) Routing C) Expediting D) Estimating

123. Equipment failure is [A]

A) Availability loss

B) (Performance loss

C) Quality loss

D) (OEE

124. Three Dimensional representation of an object is termed as: [D]

A) Automated drafting

B) (Engineering analysis

C) Geometric Modelling

D) All of the mentioned

125. Which does PLC stand for with respect to machine related manufacturing? [B]

A) Programmed Logic Controller

B) Programmable Logic Controller

C) Programmed Logic Control

D) Programmable Low-key Controller

126. Which software cannot be used for 3D modelling and CAD (Computer aided design)? [D]

A) Creo

B) Ansys

C) Blender

D) Adobe premium pro

127. Who coined the term CAE (Computer aided engineering)? [A]

A) Jerome H. Lemelson

B) Jason Lemon

C) Charles manes

D) Samuel Hunter Christie

128. The motors used in humanoid robots are called as _____ [A]

A) Actuators

B) B-O motors

C) Orientation motors

D) Axis motors

129. Which is not a self driving car? [C]

A) Tesla Model S

B) NEXT TWO

C) Renault duster

D) Nissan LEAF

130. Which of the following processes is involved in CIM series? [A]

A) Decoupled integration

B) Integration

C) Decoupled differentiation

D) Differentiation

131. What is the common language interpreted in the CIM system? [D]

A) Spanish

B) French

C) Italian

D) English

132. 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

133. What does "AI" stand for? [A]

A) Artificial Intelligence

B) Artificial Intellect

C) Automatic intellect

D) Automatic intelligence

134. Microprocessor-based electrical motors are used for ____ [C]
A) prediction of fault in the system B) correction before the fault occurs C) actuation purpose in robots D) providing intelligence

135. Which phase of a mechatronics system consists of hardware designing? [A]
A) Prototyping B) Modelling C) Simulation D) Deployment

136. What is the name for information sent from robot sensors to robot controllers? [C]
A) temperature B) pressure C) feedback D) signal

137. Which of the following terms refers to the use of compressed gasses to drive (power) the robot device? [A]
A) pneumatic B) hydraulic C) piezoelectric D) photosensitive

138. The original LISP machines produced by both LMI and Symbolics were based on research performed at ____ [B]
A) CMU B) MIT C) Stanford University D) RAMD

139. If a robot can alter its own trajectory in response to external conditions, it is considered to be ____ [A]
A) intelligent B) mobile C) open loop D) non-servo

140. One of the leading American robotics centers is the Robotics Institute located at? [A]
A) CMU B) MIT C) RAND D) SRI

141. What is the field of Natural Language Processing (NLP)? [D]
A) Computer Science B) Artificial Intelligence C) Linguistics D) All of the mentioned

142. When was the first attempt of lights-out manufacturing made? [C]
A) 1950 B) 1970 C) 1784 D) 1860

143. In a control system the output of the controller is given to [C]
A) Amplifier B) Sensor C) Final control element D) Comparator

144. What was the original design of Jerome H. Lemelson which he patented for FMS (Flexible manufacturing system)? [D]

A) Robot based system

B) Conveyer

C) Motor based pulley

D) Shredder

145. The following classes of costs are usually involved in inventory decisions except

[B]

A) Cost of ordering

B) Carrying cost

C) Caharging cost

D) None of the mentioned

146. Which types of joints are used when the shafts are inclined?

[A]

A) Universal joint

B) Hinge joint

C) Ball and socket joint

D) Pivot joint

147. Hydraulic drives are used for a robot when

[D]

A) high torque is required

B) high power is required

C) rapid motion of robot arm

D) All of the mentioned

148. The knowledge base of an expert system includes both facts and

[B]

A) theories

B) heuristics

C) algorithms

D) analysis

149. Which of the motions in actuators are preferred?

[A]

A) Rotary

B) Stationary

C) Non-Stationary

D) Translator

150. 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

151. The basic components of robot are:

[D]

A) The mechanical linkage

B) Sensors and controllers

C) User interface and power conversion unit

D) All of the mentioned

152. Properties of workpiece materials are

[D]

A) geometric features of the part

B) production rate and quantity

C) process selection consideration

D) All of the mentioned

153. . State model representation is possible using _____

[D]

A) Physical variables

B) Phase variables

C) Canonical state variables

D) All of the mentioned

154. _____ are used to locate parts precisely on pallets.

[B]

A) Tools	B) Fixtures	C) Load and unload stations	D) Workstations
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155. The capacity to produce parts through alternative workstation sequences is known as _____. [B]

A) Production flexibility	B) Routing flexibility	C) Volume flexibility	D) Expansion flexibility
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156. Sensor effectiveness depends on ____ parameter. [A]

A) Sensitivity	B) Radiation	C) Restively	D) All of the mentioned
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157. LDR sensor is abbreviated as _____. [A]

A) Light Dependent Resistor	B) Light determinant Resistor	C) Luminous Duplicated Resistor	D) None of the mentioned
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158. Reverse car parking system uses ____ type of sensor. [D]

A) Temperature	B) Light	C) IR	D) Proximity
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159. Which of the following are the application of touch sensor? [D]

A) Mobile	B) Laptops	C) Tablets	D) All of the mentioned
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160. Which of the following special symbol allowed in a variable name? [D]

A) * (asterisk)	B) (pipeline)	C) =- (hyphen)	D) _ (underscore)
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