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प्रश्नपुस्तिका क्रमांक
Question Booklet No.

O.M.R. Serial No. | | | | | | | | |

प्रश्नपुस्तिका सीरीज
Question Booklet Series
B

BCA (Fourth Semester) Examination, July-2022

BCA-401(N)

Computer Graphics and Multimedia Application

Time : 1:30 Hours **Maximum Marks-100**

जब तक कहा न जाय, इस प्रश्नपुस्तिका को न खोलें

निर्देश : –

1. परीक्षार्थी अपने अनुक्रमांक, विषय एवं प्रश्नपुस्तिका की सीरीज का विवरण यथास्थान सही– सही भरें, अन्यथा मूल्यांकन में किसी भी प्रकार की विसंगति की दशा में उसकी जिम्मेदारी स्वयं परीक्षार्थी की होगी।
2. **इस प्रश्नपुस्तिका में 100 प्रश्न हैं, जिनमे से केवल 75 प्रश्नों के उत्तर परीक्षार्थियों द्वारा दिये जाने है। प्रत्येक प्रश्न के चार वैकल्पिक उत्तर प्रश्न के नीचे दिये गये हैं। इन चारों में से केवल एक ही उत्तर सही है। जिस उत्तर को आप सही या सबसे उचित समझते हैं, अपने उत्तर पत्रक (O.M.R. ANSWER SHEET) में उसके अक्षर वाले वृत्त को काले या नीले बाल प्वांइट पेन से पूरा भर दें। यदि किसी परीक्षार्थी द्वारा किसी प्रश्न का एक से अधिक उत्तर दिया जाता है, तो उसे गलत उत्तर माना जायेगा।**
3. प्रत्येक प्रश्न के अंक समान हैं। आप के जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
4. सभी उत्तर केवल ओ०एम०आर० उत्तर पत्रक **(O.M.R. ANSWER SHEET)** पर ही दिये जाने हैं। उत्तर पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
5. ओ०एम०आर० उत्तर पत्रक **(O.M.R. ANSWER SHEET)** पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाय।
6. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी ओ०एम०आर० शीट उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें।
7. निगेटिव मार्किंग नहीं है।

महत्वपूर्ण : – **प्रश्नपुस्तिका खोलने पर प्रथमतः जॉच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभॉति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्ष निरीक्षक को दिखाकर उसी सीरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।**

1. Reflection of a point about x-axis, followed by a counter clockwise rotation of 90o, is equivalent to reflection about the line :

(A) x = -y

(B) y = -x

(C) x = y

(D) x + y = 1

2. How many homogeneous representation are possible for one point (x, y) ?

(A) 1

(B) 0

(C) 2

(D) Infinite

3. A 2D rotation is applied to an object by :

(A) Repositioning it along with the straight line path

(B) Repositioning it along with circular path

(C) Only (B)

(D) None of these

4. An ellipse can also be rotated about its center coordinates by rotating :

(A) End points

(B) Major and minor axes

(C) Only (A)

(D) None of these

5. The 2D scaling equation in the matrix form is :

(A) P'=P+T

(B) P'=S*P

(C) P'=P*R

(D) P'=R+S

6. Scaling of a polygon is done by computing :

(A) The product of (x, y) of each vertex

(B) (x, y) of end points

(C) Center coordinates

(D) Only (A)

7. If the scaling factor values Sx and Sy<1 then :

(A) It reduces the size

(B) It increases the size

(C) It stunts the size

(D) None

8. What is the use of homogeneous coordinates and matrix representation ?

(A) To treat all 3 transformations in a consistent way

(B) To scale

(C) To rotating

(D) To shear the object

9. The general homogeneous coordinates representations can also be written as :

(A) (h.x ,h.y ,h.z)

(B) (h.x ,h.y ,h)

(C) (x, y, h.z)

(D) (h , x , y)

10. The process of removal of hidden surfaces is termed as :

(A) Clipping

(B) Copying

(C) Culling

(D) Shorting

11. Which of the following can be first used to test for overlap of a curve with the clipping window ?

(A) Edges of the curve

(B) The centre of the curve

(C) The boundary rectangle for the curve

(D) Tangents to the curve

12. The B spline curve has a :

(A) First order continuity

(B) Second order continuity

(C) Zero order continuity

(D) None of these

13. The Bezier curve is smoother than the hermit cubic spline because it has _____ order derivatives.

(A) Lower

(B) Higher

(C) Lower and Higher both

(D) None of them

14. In the Bezier curve, the curve is always _____ to first and last segments of the polygons.

(A) Normal

(B) Parallel

(C) Tangent

(D) All of these

15. _____curves allows local control of the curve.

(A) Analytical

(B) Hermite cubic spline

(C) Bezier

(D) B – spline

16. In Bezier curve, the curve follows :

(A) The control points

(B) The shape of the defining polygon

(C) The defining points

(D) All of the above

17. In Bezier curve, _____ of polygon actually lie on the curve.

(A) Only the first control points

(B) Only the last control points

(C) Only the first and last control points

(D) All the control points

18. The number of control points can be added or subtracted :

(A) In Bezier curve

(B) In B – spline curve

(C) In cubic spline curve

(D) All of these

19. The degree of the curve is independent of the number of control points in _____.

(A) Hermite cubic spline curve

(B) Bezier curve

(C) B – spline curve

(D) Hyperbola

20. The type of spline curve is :

(A) Open spline

(B) Closed spline

(C) Both (A) & (B)

(D) None of these

21. Cubic spline are :

(A) Simple to corporate

(B) Provides continuity to curves

(C) Both (A) & (B)

(D) None of these

22. A spline can be defined as :

(A) Curved strip

(B) A smooth curve is drawn using a pencil

(C) A flexible strip used to generate a smooth curve through a designated set of points

(D) All of these

23. An _____ can be considered as an extension of spherical surface.

(A) Bezier

(B) Ellipsoid

(C) Shearing

(D) All of these

24. By which more complex objects can be constructed :

(A) Quadratic surfaces

(B) Bezier curve

(C) Composite transformation

(D) None of these

25. The Bezier curve obtained from the four control points called :

(A) Square Bezier curve

(B) Cubic Bezier curve

(C) Hectare Bezier curve

(D) Rectangle Bezier curve

26. The representations for surface modeling include :

(A) Polygon mesh

(B) Parametric surfaces

(C) Quadratic surfaces

(D) All of these

27. If two curve segments join together the curve has :

(A) G 1 continuity

(B) G 0 continuity

(C) G 2continuity

(D) G 3 continuity

28. Spline curve can be either :

(A) Bezier curve

(B) B – spline

(C) Both (A) & (B)

(D) None of these

29. Which of the following is not a synthetic entity ?

(A) Hyperbola

(B) Bezier curve

(C) B – spline curve

(D) Cubic curve

30. When the curve passes through all the data points, then the curve is known as ?

(A) Approximation curve

(B) Pitch curve

(C) Data curve

(D) Interpolant curve

31. The major contents of multimedia services _____.

(A) Multimedia hardware

(B) Operating system

(C) Multimedia software

(D) None of these

32. The multimedia disadvantages is :

(A) Lost of cyberspace

(B) Individualized

(C) Engrossing deep involvement

(D) None of these

33. The example of multimedia capture device _____.

(A) Camera

(B) Microphone

(C) Audio recorder

(D) All of these

34. The application in entertainment are :

(A) Satellite

(B) Televisions

(C) Internet

(D) All of these

35. The combination of text, graphics art, sound, animation and video delivered by computer or other electronic devices are called :

(A) Multimedia

(B) Hyper media

(C) Visual media

(D) None

36. The people when weave multimedia into meaningful tapestries are called :

(A) Programmers

(B) Multimedia developers

(C) Software engineers

(D) Multimedia engineers

37. One of the disadvantages of multimedia :

(A) Cost

(B) Adaptability

(C) Usability

(D) Relativity

38. To receive signal, a translator is needed to decode signal and encode it again at a :

(A) High quality

(B) Lower quality

(C) Same quality

(D) Bad quality

39. How many step process for creating a 3D animation are required ?

(A) 2

(B) 3

(C) 4

(D) 5

40. Which files creates a perfect reproduction of the original images ?

(A) Shockwave

(B) Nx view

(C) GIF

(D) JPG

41. The text colour in presentation should contrast with the color of :

(A) CPU

(B) Frame

(C) Stack

(D) Background

42. Which of the following is a technique to blend two or more images to form a new image ?

(A) Modeling

(B) Morphing

(C) Animating

(D) Warping

43. How many attributes control the characteristics of sound ?

(A) 5

(B) 4

(C) 3

(D) 2

44. Moving picture experts group (MPEG) is used to compress :

(A) Frames

(B) Images

(C) Audio

(D) Video

45. MMS stands for :

(A) Multimedia system

(B) Multimedia messaging system

(C) Multimedia messaging services

(D) Multimedia services

46. JPEG stands for :

(A) Joint Photo Experts Group

(B) Joint Photographic Experts Group

(C) Joint Processor Experts Group

(D) Joint Photographic Expression Group

47. A good example of hypermedia file :

(A) The internet

(B) Level 1 video disc

(C) Audiotape

(D) Videotape

48. A multimedia file :

(A) Is same as any other regular file

(B) Must be accessed at specific rate

(C) Stored on remote server can't be delivered to its client

(D) None of these

49. Which one of the following is the property of multimedia system ?

(A) High storage

(B) High data rates

(C) Both (A) & (B)

(D) None of these

50. Video file format is :

(A) Tiff

(B) AVI

(C) WAV

(D) Both (A) & (B)

51. Interactive computer graphics uses various kind of input devices such as :

(A) Mouse

(B) Graphic tablet

(C) Joystick

(D) All of the above

52. Input functions are used for :

(A) Control the data flow from these interactive devices

(B) Process the data flow from these interactive devices

(C) Both (A) & (B)

(D) None of these

53. A graphics package contains :

(A) No. of housekeeping task such as cleaning a display screen

(B) No. of housekeeping task such as initializing parameters

(C) Both (A) & (B)

(D) None of the above

54. The interactive computer graphics involves_____ way communication between computer the user.

(A) One

(B) Two

(C) Three

(D) Four

55. Interactive computer graphics enables a user to customize the graphics is :

(A) Computer way

(B) His own way

(C) Both (A) & (B)

(D) None of the above

56. User can make any change on image with the use of :

(A) Non interactive graphics

(B) Interactive graphics

(C) Both (A) & (B)

(D) None of these

57. The application area of computer graphics are :

(A) Political

(B) Education and textbook

(C) CAD and entertainment

(D) All of these

58. How many components of interactive computer graphics are :

(A) One

(B) Two

(C) Three

(D) Four

59. What are the components of interactive computer graphics ?

(A) A digital memory or frame buffer

(B) A television monitor

(C) An interface or display controller

(D) All of these

60. CAD means :

(A) Car aided design

(B) Computer art design

(C) Computer aided design

(D) None of these

61. What are the criteria for good line drawing ?

(A) Line should be drawn rapidly

(B) Line should be appearing straight & terminated accurately

(C) Line should have constant density

(D) All of these

62. Which of the following is not a graphical software ?

(A) Corel draw

(B) MAYA

(C) Flash

(D) None of these

63. GIS stand for :

(A) Geographical information system

(B) Graphical information system

(C) Graphical interaction system

(D) None of these

64. The devices which converts the electrical energy into light is called :

(A) Liquid crystal displays

(B) Non emitters

(C) Plasma panels

(D) Emitters

65. The process of digitizing a given picture definition into a set of pixel intensity for storage in the frame buffer is called :

(A) Rasterization

(B) Encoding

(C) Scan conversion

(D) True color system

66. Aspect ratio means :

(A) Number of pixels

(B) Ratio of vertical points to horizontal points

(C) Ratio of horizontal points to vertical points

(D) Both (B) & (C)

67. The number of pixels stored in the frame buffer of a graphics system is known as :

(A) Resolution

(B) Depth

(C) Resolution

(D) Only (A)

68. The quality of picture obtained from a device depends on_____.

(A) Dot size

(B) Number of dots per inch

(C) Number of lines per inch

(D) All of these

69. Part of display processor :

(A) Display file memory

(B) Display generator

(C) Display console

(D) All of these

70. _____ is not a common bitmap based file type extension.

(A) ODT

(B) TIFF

(C) PNG

(D) PCX

71. DTP means :

(A) Drawing text picture

(B) Desktop publishing

(C) Dask town publishing

(D) None of these

72. PCBs can be drawn using the computer graphics :

(A) In very efficient way

(B) In a shorter time

(C) In larger time

(D) Both (A) & (B)

73. A display controller serves to pass the contents of :

(A) Frame buffer to monitor

(B) Monitor to frame buffer

(C) Both (A) & (B)

(D) None of these

74. The image is passed repeatedly to the monitor in order to maintain a steady picture on the screen :

(A) 25 times a second

(B) 30 times a second

(C) 30 or more times a second

(D) None of these

75. The display controller converts 0s or 1s into :

(A) Tv monitors

(B) Video signal

(C) Electrical signal

(D) None of these

76. The image can be transmitted to the display point by:

(A) Line

(B) Points

(C) Segments

(D) All of these

77. A basic interactive picture construction techniques are :

(A) Positioning and pointing constraints

(B) G n d, gravity field, rubber band method

(C) Sketching, dragging, inking and pointing

(D) All of these

78. The movement of different attributes of image would make the image dynamic and such a dynamic effect is termed as :

(A) Pictures

(B) Animation

(C) Pointing

(D) All of these

79. On raster system, lines are plotted with :

(A) Lines

(B) Dots

(C) Pixels

(D) All of these

80. Which algorithm is faster method for calculating pixel position ?

(A) Bresenham's line algorithm

(B) Parallel line algorithm

(C) Midpoint algorithm

(D) DDA line algorithm

81. The disadvantage of line DDA is :

(A) Time consuming

(B) Faster

(C) Neither (A) & (B)

(D) None of the above

82. An accurate and efficient raster line generating algorithm is :

(A) DDA algorithm

(B) Mid point algorithm

(C) Parallel line algorithm

(D) Bresenham's line algorithm

83. In Bresenham's, if the distance d1<d2 then decision parameter Pk is :

(A) Positive

(B) Equal

(C) Negative

(D) Both (A) & (B)

84. The mapping a world window in world coordinates system to viewport are called :

(A) Transformation viewing

(B) Viewport

(C) Clipping window

(D) Screen coordinate system

85. Coordinates of window are known as :

(A) Screen coordinates

(B) World coordinates

(C) Device coordinates

(D) Cartesian coordinates

86. coordinates of viewport are known as :

(A) World coordinates

(B) Polar coordinates

(C) Screen coordinates

(D) Cartesian coordinates

87. The region against which an object is to clipped is called as :

(A) Clipping

(B) Clipping region

(C) Clip window

(D) None of them

88. If extended line proceeds from the outside to the inside of the corresponding boundary line it is denoted :

(A) Ph=0

(B) Ph>0

(C) Ph<0

(D) None of them

89. If extended line proceeds from inside to the outside of the corresponding boundary line it is denoted as :

(A) Ph=0

(B) Ph>0

(C) Ph<0

(D) None of them

90. The second grid in DVST is called as :

(A) Phosphor

(B) Storage grid

(C) Collector

(D) None

91. The term "transform" means :

(A) Change

(B) Increase

(C) No change

(D) All of these

92. Scaling transformation is said to be homogeneous :

(A) Sx>Sy

(B) Sx<Sy

(C) Sx=Sy

(D) None of them

93. The direction of a positive angle of rotation is chosen in accordance to the :

(A) Right hand rule

(B) Left hand rule

(C) Origin

(D) None of them

94. The basic geometric transformations are :

(A) Rotation

(B) Reflection

(C) Shear

(D) All of these

95. In 2D translation, a point (x, y) can move to the new position (x', y') by using the equation :

(A) x'= x + tx & y' =y + ty

(B) x'= x+ tx & y'=y + ty

(C) x'= x+ ty & y'=y + ty

(D) None of the above

96. Translation factor (tx, ty) is called as :

(A) Translation vector

(B) Shift vector

(C) Both (A) & (B)

(D) None of these

97. To change the position of circle or ellipse we translate :

(A) Center coordinates

(B) Center coordinates and redraws the figure in he new location

(C) Outline coordinates

(D) All of these

98. Positive values for the rotation angle defines :

(A) Counter clockwise rotations about the endpoints

(B) Counter clockwise translations about the pivot points

(C) Counter clockwise rotations about the pivot points

(D) Clockwise rotations about the pivot points

99. A transformation that slants the shape of objects :

(A) Rotation

(B) Shear

(C) Reflection

(D) Translation

100. For reducing the size of the object we set both scale factor :

(A) Less than 0

(B) Greater than 1

(C) Equals to 1

(D) In between 0 & 1

******

Rough Work / रफ कार्य

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