Roll No. ....

Question Booklet Number

O. M. R. Serial No.

B. C. A. (Fourth Semester) EXAMINATION, 2022-23

COMPUTER GRAPHICS AND MULTIMEDIA APPLICATIONS

Paper Code
B C A 4 0 1 N

Questions Booklet
Series

A

Time : 1:30 Hours]

[Maximum Marks : 75

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.

2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.

3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

(Remaining instructions on the last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।

2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।

3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(शेष निर्देश अन्तिम पृष्ठ पर)

(Only for Rough Work)

1. The graphics can be :

(A) Drawing

(B) Photograph, movies

(C) Simulation

(D) All of these

2. Computer graphics was first used by :

(A) William Fetter in 1960

(B) James Fetter in 1969

(C) James Gosling in 1991

(D) John Taylor in 1980

3. The components of interactive computer graphics are :

(A) A light pen

(B) Display unit

(C) Bank of switches

(D) All of these

4. Personal computer became powerful during the late :

(A) 1960

(B) 1970

(C) 1980

(D) 1950

5. Which of the following is not the pattern of line ?

(A) Dotted line

(B) Dashed line

(C) Dark line

(D) All of the above

6. Which environment has been one of the most accepted tool for computer graphics in business and graphics design studios ?

(A) graphics

(B) Macintosh

(C) quake

(D) multimedia

7. Graphics is one of the .... major key element in design of multimedia application.

(A) Five

(B) Three

(C) Four

(D) Eight

8. Three dimensional graphics become popular in games designing , multimedia and animation during the late :

(A) 1960

(B) 1970

(C) 1980

(D) 1990

9. The quake, one of the first fully 3D games was released in year :

(A) 1996

(B) 1976

(C) 1986

(D) 1999

10. Types of computer graphics are :

(A) Vector and raster

(B) Scalar and raster

(C) Vector and scalar

(D) None of the above

11. Vector graphics is composed of :

(A) Pixels

(B) Paths

(C) Palette

(D) None of the above

12. Raster graphics are composed of :

(A) Pixels

(B) Paths

(C) Palette

(D) None of the above

13. Raster images are more commonly called :

(A) Pix map

(B) bitmap

(C) Both (A) and (B)

(D) None of the above

14. Pixel can be arranged in a regular :

(A) One-dimensional grid

(B) Two-dimensional grid

(C) Three-dimensional grid

(D) None of the above

15. The brightness of each pixel is :

(A) Compatible

(B) Incompatible

(C) Both (A) and (B)

(D) None of the above

16. Each pixel has .... basic color components.

(A) Two or three

(B) One or two

(C) Three or four

(D) None of the above

17. The quantity of an image depends on :

    (A) No. of pixels used by image

    (B) No. of lines used by image

    (C) No. of resolutions used by image

    (D) None of the above

18. Higher the number of pixels, ...
    the image quality.

    (A) Bad

    (B) Better

    (C) Smaller

    (D) None of above

19. A palette can be defined as a finite set of
    colors for managing the :

    (A) Analog images

    (B) Digital images

    (C) Both (A) and (B)

    (D) None of the above

20. Display card are :

    (A) VGA

    (B) EGA

    (C) Both (A) and (B)

    (D) None of above

21. Display card is used for the purpose
    of :

    (A) Sending graphics data to input unit

    (B) Sending graphics data to output
        unit

    (C) Receiving graphics data from
        output unit

    (D) None of the above

22. Several graphics image file formats
    that are used by most of graphics system
    are :

    (A) GIF

    (B) JPEG

    (C) TIFF

    (D) All of these

23. The GIF format is much ....to
    be downloadedor uploaded over the
    www.

    (A) Slower

    (B) Faster

    (C) Medium

    (D) None of the above

24. Once a file is saved in JPEG format, some data is lost :

(A) Temporarily

(B) Permanently

(C) Both (A) and (B)

(D) None of the above

25. EPS image file format is used for :

(A) Vector graphics

(B) Bitmap

(C) Both (A) and (B)

(D) None of the above

26. TIFF (tagged image file format) are used for :

(A) Vector graphics

(B) Bitmap

(C) Both (A) and (B)

(D) None of the above

27. EPS means :

(A) Entire post script

(B) Entire post scale

(C) Encapsulated post script

(D) None of the above

28. DDA stands for :

(A) Direct differential analyzer

(B) Data differential analyzer

(C) Direct difference analyzer

(D) Digital differential analyzer

29. The process of repositioning an object along a circular path is called :

(A) Translation

(B) Rotation

(C) Scaling

(D) None of the above

30. Which of the following is must be specified to generate a rotation ?

(A) Rotational distance

(B) Rotation angle

(C) Co-ordinates

(D) None of the above

31. Which of the following transformations is used for altering the object's size ?

(A) Translation

(B) Scaling

(C) Rotation

(D) None of the above

32. Two-dimensional color models are :

   (A) RGB and CMKY

   (B) RBG and CYMK

   (C) RGB and CMYK

   (D) None of the above

33. RGB models are used for :

   (A) Computer display

   (B) Printing

   (C) Painting

   (D) None of the above

34. CMYK models are used for :

   (A) Computer display

   (B) Printing

   (C) Painting

   (D) None of the above

35. The intersection of three primary RGB color produces :

   (A) White color

   (B) Black color

   (C) Magenta color

   (D) Blue color

36. The intersection of primary CMYK color produces :

   (A) White color

   (B) Black color

   (C) Cyan color

   (D) Magenta color

37. The RGB model displays a much .... percentage of the visible band as compared to CMYK.

   (A) Lesser

   (B) Larger

   (C) Medium

   (D) None of the above

38. The Cohen-Sutherland algorithm divides the two-dimensional space in how many regions ?

   (A) 4

   (B) 8

   (C) 9

   (D) 23

39. Each bit represents :

   (A) One color

   (B) Two colors

   (C) Three colors

   (D) None of the above

40. RGB true color model has .... color depth.

(A) 24 bit

(B) 32 bit

(C) 64 bit

(D) None of the above

41. Which one of the following is the most commonly used and basic input device ?

(A) Mouse

(B) Printer

(C) Scanner

(D) Keyboard

42. Grey scale images have a maximum color depth of :

(A) 8 bit

(B) 16 bit

(C) 24 bit

(D) 32 bit

43. Graphics with limited features is known as :

(A) Active graphics

(B) Passive graphics

(C) Grayscale image

(D) None of the above

44. Computer of present time have much higher memory and .... storage capacity.

(A) much smaller

(B) much bigger

(C) much slower

(D) None of the above

45. CRT means :

(A) Common ray tube

(B) Cathode ray tube

(C) Common ray tube

(D) None of the above

46. Refresh CRT consists of :

(A) Glass wrapper

(B) The phosphor viewing surface

(C) The electron gun assembly

(D) All of the above

47. The amount of time the phosphor produce light orshine is controlled by chemical composition of the phosphor. This is known as :

(A) Persistence

(B) Resistance

(C) Generators

(D) None of the above

48. The electron beam in a color picture tube is refreshed .... times in a second to make video realistic.

(A) 15

(B) 25

(C) 35

(D) 45

49. DUST means :

(A) Direct view storage tube

(B) Domain view storage tube

(C) Direct view store tube

(D) None of the above

50. DUST is rarely used today as part of :

(A) Input device

(B) Output device

(C) Display systems

(D) None of the above

51. In DUST, is there refresh buffer ?

(A) Yes

(B) No

(C) Both (A) and (B)

(D) None of the above

52. The electron beam in DUST is designed to draw directly to :

(A) Phosphor

(B) Storage mesh

(C) Glass

(D) None of the above

53. The second grid in DUST is called :

(A) Phosphor

(B) Storage mesh

(C) Collector

(D) None of the above

54. Clipping in computer graphics is primarily used for :

(A) zooming

(B) copying

(C) removing objects and lines

(D) All of the above

55. Shadow mask method is used in :

(A) Raster scan system

(B) Random scan system

(C) Both (A) and (B)

(D) None of the above

56. Interactive graphics is useful in :

(A) Training pilots

(B) Computer aided design

(C) Process control

(D) All of these

57. The origin of computer graphics was developed in :

(A) 1950

(B) 1960

(C) 1970

(D) 1990

58. The term business graphics came into use in late :

(A) 1950

(B) 1960

(C) 1970

(D) 1990

59. Computer graphics is used in many DTP software as :

(A) Photoshop

(B) Paint brush

(C) Both (A) and (B)

(D) None of the above

60. Any CRT based display must be refreshing at least .... times a second.

(A) 20

(B) 30

(C) 40

(D) 10

61. The standardization is needed :

(A) To make application programs more portable

(B) To increase their utility

(C) To allow them to use in different application environment

(D) All of these

62. GKS stands for :

(A) Graphics kernel system

(B) Graphics kernel stands

(C) Generic kernel system

(D) None of the above

63. GKS was developed by the :

(A) International standards organization

(B) National standard organization

(C) Both (A) and (B)

(D) None of the above

64. The resolution of raster scan display is :

   (A) Low

   (B) High

   (C) Medium

   (D) None

65. Random scan systems are designed for :

   (A) Line drawing application

   (B) Pixel drawing application

   (C) Color drawing application

   (D) None of the above

66. Solid pattern in random scan display is
   .... to fill.

   (A) Difficult

   (B) Easy

   (C) Not fill

   (D) None of the above

67. Raster scan is .... expensive than
   random scan.

   (A) More

   (B) Less

   (C) Both (A) and (B)

   (D) None of the above

68. Two basic techniques for producing color
   display with a CRT are :

   (A) Shadow mask and random scan

   (B) Beam penetration method and
   shadow mask method

   (C) Random scan and raster scan

   (D) None of above

69. In beam penetration method of
   color CRT, two layers of phosphor
   coated are :

   (A) Red and blue

   (B) Red and green

   (C) Blue and green

   (D) None of the above

70. The process of displaying 3D into a 2D
   display unit is called as :

   (A) Resolution

   (B) Projection

   (C) Rasterization

   (D) Transformation

71. A shadow mask CRT has ....
phosphor color dots at each pixel
position.

(A)   1

(B)   2

(C)   3

(D)   None of the above

72. Which color is produced with the green
and red dots only ?

(A)   Blue

(B)   Yellow

(C)   Magenta

(D)   White

73. Which color is produced with the blue
and red dots ?

(A)   Blue

(B)   Yellow

(C)   Magenta

(D)   White

74. Cyan color is produced when the blue
and green are activated :

(A)   Equally

(B)   Unequally

(C)   Both (A) and (B)

(D)   None of the above

75. Which technique of color CRT is used
for production of realistic image.

(A)   Shadow mask method

(B)   Beam penetration method

(C)   Both (A) and (B)

(D)   None of the above

76. In which method of CRT, convergence
problem occurs ?

(A)   Beam penetration method

(B)   Shadow mask method

(C)   Both (A) and (B)

(D)   None of the above

77. Beam penetration method is used in :

(A)   Random scan system

(B)   Raster scan system

(C)   Both (A) and (B)

(D)   None of the above

78. Shadow mask method is used in :

(A) Random scan system

(B) Raster scan system

(C) Both (A) and (B)

(D) None of the above

79. Graphics data is computed by processor in form of :

(A) Electrical signals

(B) Analog signals

(C) Digital signals

(D) None of the above

80. An example of impact device is :

(A) Electrostatic printer

(B) Inkjet printer

(C) Line printer

(D) Laser printer

81. To generate the characters, which are required ?

(A) Hardware

(B) Software

(C) Both (A) and (B)

(D) None of the above

82. The method which uses array of dots for generating a character is called :

(A) Stoke method

(B) Bitmap method

(C) Star bust method

(D) None of the above

83. The hardware devices contain :

(A) Color printer / black white printer

(B) Plotters

(C) Both (A) and (B)

(D) None of the above

84. An example of black and white laser printer is :

(A) HP 4000

(B) QMS

(C) Both (A) and (B)

(D) None of the above

85. An example of color printer is :

(A) HP 4000

(B) QMS

(C) Both (A) and (B)

(D) None of the above

86. Non impact use various techniques to combine three color pigment .... to produce a range of color patterns.

(A) Cyan, magenta and yellow

(B) Cyan, white and black

(C) Cyan, white and yellow

(D) Black, magenta and yellow

87. Printers produce output by either :

(A) Impact method

(B) Non-impact method

(C) Both (A) and (B)

(D) None of the above

88. What is the name of temporary memory where the graphics data is stored to be displayed on screen ?

(A) RAM

(B) ROM

(C) Frame buffer

(D) None of the above

89. The division of the computer screen into rows and columns that define the no. of pixels to display a picture is called :

(A) Persistence

(B) Resolution

(C) Encapsulated post script

(D) None of the above

90. LCD means :

(A) Liquid crystal displays

(B) Liquid crystal data

(C) Liquid chrome data

(D) None of the above

91. LCD are commonly used in :

(A) Calculators

(B) Portable

(C) Laptop computers

(D) All of these

92. LCD is a/an ....device.

(A) Emissive

(B) Non-emissive

(C) Gas discharge

(D) None of the above

93. Plasma panel is a/an .... device.

   (A)   Emissive

   (B)   Non-emissive

   (C)   Expensive

   (D)   None of the above

94. Plasma device converts :

   (A)   Electrical energy into light

   (B)   Light into electrical energy

   (C)   Light into graphical energy

   (D)   None of the above

95. Plasma panels have .... resolution.

   (A)   High

   (B)   Good

   (C)   Both (A) and (B)

   (D)   Low

96. Plasma panels are also called :

   (A)   Liquid crystal display

   (B)   Gas discharge display

   (C)   Non-emissive display

   (D)   None of the above

97. The basic graphical interactions are :

   (A)   Pointing

   (B)   Positioning

   (C)   Both (A) and (B)

   (D)   None of the above

98. GUI means :

   (A)   Graphical user interface

   (B)   Graphical user interaction

   (C)   Graphics uniform interaction

   (D)   None of the above

99. Which one is the basic input device in GUI ?

   (A)   Mouse

   (B)   Graphics tablet

   (C)   Voice system

   (D)   Touch panel

100. Pen or inkjet plotters use the following devices :

   (A)   Drum

   (B)   Flat bed

   (C)   Both (A) and (B)

   (D)   None of the above

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the correct answer and mark the same in the OMR Answer-Sheet as per the direction :

Example :

Question :

Q. 1 ⒜ ● ⒞ ⒟
Q. 2 ⒜ ⒝ ● ⒟
Q. 3 ⒜ ● ⒞ ⒟

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. : On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is ny discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर— A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छाँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

उदाहरण :

प्रश्न :

प्रश्न 1 ⒜ ● ⒞ ⒟
प्रश्न 2 ⒜ ⒝ ● ⒟
प्रश्न 3 ⒜ ● ⒞ ⒟

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण : प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।