

Roll No :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

SP-727

M.Sc. (Final) Examination, 2021 INFORMATION TECHNOLOGY

Paper - MIT-204 (Computer Graphics)

Time : 1½ Hours]

[Maximum Marks : 50

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

Section-B

(Marks : 3 × 5 = 15)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 3 marks.

(खण्ड-ब)

(अंक : 3 × 5 = 15)

नोट :- सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 3 अंक का है।

Section-C

(Marks : 5 × 3 = 15)

Note :- Answer any *three* questions out of five (Answer limit 500 words). Each question carries 5 marks.

(खण्ड-स)

(अंक : 5 × 3 = 15)

नोट :- पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

BI-361

(1)

SP-727 P.T.O.

Section–A

2 each

1. (i) What do you mean by Frame Buffer ?
- (ii) Give any *two* output devices of Computer Graphics.
- (iii) What is the meaning of scan conversion ?
- (iv) What is the major demerit and DDA algorithm ?
- (v) What is the main disadvantage of using homogeneous coordinates.
- (vi) Write the transformation matrix for translation in 2-D.
- (vii) What do you mean by De Bezier curves ?
- (viii) What do you understand by parametric continuity ?
- (ix) What do you mean by solid modelling ?
- (x) What do you mean by graphical kernel system ?

Section–B

3 each

2. Explain the working of CRT.

Or

Describe the concept of interactive and passive graphics.

3. Describe the circle drawing algorithm.

Or

Differentiate between flood fill and boundary fill algorithms.

4. Write the 2-D translation matrix using homogeneous coordinate system, when translation in x -direction is 3 and translation in y -direction is 5.

Or

Explain any Line clipping algorithm.

5. Give an example of composite transformations involving rotation and scaling, in 3-D.

Or

Explain the concept of B-spline curves.

6. Explain any tool of graphics in GUI concept.

Or

Describe the Boolean set operations for solid modelling.

Section–C

5 each

7. Differentiate between raster and random scan display in detail.
8. Explain any line drawing algorithm in detail.
9. Explain window to view port transformations with suitable example.
10. Write the short notes on each of the following :
- (a) Projection
 - (b) Translation in 3-D
11. How do you represent object vertices, edges and surfaces in modelling ?