

B.C.A. 5th Semester Exam., 2018

GRAPHICS AND MULTIMEDIA

Time : 3 hours

Full Marks : 60

Instructions:

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **SEVEN** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. **1** and **2** is compulsory.

1. Answer the following questions (any six) :

$$2 \times 6 = 12$$

- (a) Why should we do transformation?
- (b) What is the purpose of splines?
- (c) What is random scan?
- (d) Define animation.
- (e) What is the use of virtual reality?
- (f) What is view port?
- (g) Define morphing.
- (h) Define text clipping.
- (i) What is non-uniform clipping?
- (j) What is meant by resolution?

2. Answer any three of the following :

- (a) Explain window to view port transformation.
- (b) Explain about authoring in multimedia.
- (c) Explain what is video on demand.
- (d) List the uses of line clipping and text clipping.
- (e) Explain how to manage resources during multimedia transmission.

3. Derive transformation matrix for 2D transformations, translation, scaling and rotation. <https://www.akubihar.com>

4. Discuss any two visible surface detection methods.

5. Describe Bresenham's line drawing procedure for lines with slopes > 1 . Use the procedure to scan convert a line with end points at $\{(2, 5), (5, 10)\}$

6. Explain about how audio and video used in multimedia.

7. Discuss in detail about Bezier curves and surfaces.

(Turn Over)