BCA Fifth Semester Examination, Dec-2018

FIRST PAPER

Computer Graphics

Paper Code:- 5611

Time Allowed: Three Hours **Maximum Marks.70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2)All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions. Each question carries 1 mark. 10x1= 10

(Words limit up to 20 words each)

a) What is Computer Graphics?

b) What is Aspect Ratio?

c) Define PHIGS.

d) What is Flood-filling Algorithm?

e) What do you mean by Scaling?

f) What is Transformation? Mention its types.

g) Define Area Subdivision Method?

h) Give an example for curve clipping.

i) What do you mean by Polygon Clipping?

j) What is Digital Image Processing?

k) Define Quantization.

l) What are the steps to get reflected image through an arbitrary line?

2. Answer all the questions. Each question carries 5 marks. 4x5 = 20

(Words limit up to 50 words each)

a) Explain color model RGB. Compare it with HSV.

b) Differentiate between circle and ellipse drawing algorithms.

c) Write notes on the following:

(i) Cyrus-beck algorithm

(ii) Window and viewport.

d) Write short notes on the following:

(i) Image compression

(ii) Resolution.

P.T.O.

Part-II

Unit-I

3. Differentiate between Random Scan Displays and Raster Scan Displays with suitable examples. **10**

OR

Describe the functionalities of Refresh Cathode Ray Tube with suitable diagram. **10**

Unit-II

4. Write and explain Bresenham's line drawing algorithm and trace the algorithm for the given points(2,1) to (10,12) . **10**

OR

Write short notes on the following:

(i) Three-dimensional transformation

(ii) Area filling algorithm. **10**

Unit-III

5. Explain two dimensional viewing pipeline in detail. **10**

OR

Explain Cohen-Sutherland algorithm with suitable example. **10**

Unit-IV

6. How to capture and store a digital image? Discuss any two file formats for storage of a digital image. **10**

OR

Write short notes on the following: **10**

(i) Digital image processing

(ii) Image enhancement.

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