

(20518)

Roll No. ....

BCA-IV Sem.

**18016**

**B. C. A. Examination, May 2018**

**Computer Graphics and Multimedia Application**

**(BCA-401)**

**(New)**

*Time : Three Hours*

*[Maximum Marks : 75]*

**Note :** Attempt questions from all Sections as per instructions.

**Section-A**

**(Very Short Answer Questions)**

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words.  $3 \times 5 = 15$

1. What is GUI ? Explain.

2. What is Multimedia ?

3. Write the uses of Computer Graphics ?

4. Define 'Shear' transformation.

5. What is Refresh Rate ?

**Section-B**

**(Short Answer Questions)**

Attempt any *two* questions out of the following three questions. Each question carries  $7\frac{1}{2}$  marks. Short answer is required not exceeding 200 words.  $7\frac{1}{2} \times 2 = 15$

6. Describe about the most commonly used colour models used in Computer Graphics.

7. Describe any method for visible surface detection.

8. What is bit plane ? How bit planes are used to get different colours ?

**Section-C**

**(Detailed Answer Questions)**

Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. Generate an origin centered circle with radius-2 with eight unique points on the circle.
10. Rotate a triangle [(4, 6), (2, 4), (6, 2)] about the vertex (4, 6) by 180° clockwise and find the new vertices.
11. Differentiate between the terms multimedia system and multimedia application, with example.
12. A triangle  $ABC$  is  $A(0, 0)$ ,  $B(4, 0)$  and  $C(0, 4)$ . Find the shearing transformation with  $a = 2$  and  $b = 3$ .

13. Write short notes on any three of the following :

- (a) Projection
- (b) Colour frame buffer
- (c) 2-buffer method
- (d) DDA.