

2025

INFORMATION TECHNOLOGY

(Discipline Specific Core)

Paper Name: Computer Application in Printing and Graphics

Paper Code: BIT-DSC-145

Full Marks: 45

Time: Two Hours

(The figures in the margin indicate full marks for the questions)

Answer in English

1. **Answer the following questions :** **1x4=4**
 - a) What is pixel ?
 - b) Write the name of any two video formats.
 - c) Which operating system use JPEG file format ?
 - d) In the context of printing, what does the term "CMYK" stand for ?

2. **Answer any three of the following questions :** **2x3=6**
 - a) What are the key difference between 2D and 3D animation ?
 - b) Write the difference between RGB and CMYK colour scheme.
 - c) What is the purpose of bleeds in print design ?
 - d) Write name of three key elements of graphic design.

3. **Answer any three of the following questions :** **5x3=15**
 - a) What is image processing ? Write benefits of image processing.

- b) What is animation ? Explain different types of animation.
- c) What is rendering ? Explain different types of rendering.
- d) Write the use of web file format. Explain any three web file formats.
- e) Explain the transformation technique in animation. How is it used to animate characters and objects ?

4. Answer any two of the following questions : 10x2=20

- a) What is compression ? What are the different compression techniques used in CODEC ?
- b) Compare the features and applications of popular audio and video file formats (e.g., MP3, WAV, MP4, AVI, WebM). Explain how these formats differ in terms of quality, compression methods, and usage scenarios for different media types.
- c) Explain the differences between raster graphics and vector graphics. Discuss their advantages, disadvantages and use cases in various industries such as web design, print and animation.
