

BANKURA UNIVERSITY

B. Sc. (HONOURS) FIRST SEMESTER EXAMINATIONS, 2021

Subject: Computer Science

Course ID: 51517

Course Title: Digital Image Processing

Full Marks: 25

Time: 1 Hr. 15 min

The figures in the margin indicate full marks

Answer all the questions.

UNIT I

1. Answer *any five* of the following questions: (1 × 5 = 5)

- a) Define image.
- b) Define blur of an image.
- c) Define gradient of an image.
- d) What is median filter?
- e) Define compression.
- f) Define wavelet
- g) What is sharpening?
- h) Define morphology.

UNIT II

2. Answer *any two* of the following questions: (5 × 2 = 10)

- a) Explain image negative transformation.
- b) Write short note on CMYK color model.
- c) Write the drawback of inverse filtering.
- d) Write the properties of digital image processing.

UNIT III

3. Answer *any one* of the following questions:

(10 × 1 = 10)

- a) What is the purpose of image restoration? Explain the model of image degradation and restoration process using suitable block diagram **(3 + 7)**
- b) Explain discrete cosine transform and write its application.
Define image segmentation. **(8+2)**

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