	Harcourt Butler Technical University Kanpur		MID SEM EXAM
Branch	**MCA**	Program	**MCA**
Course Name	**Digital Image Processing**	Semester	**IV**
Course Code	**ECA-576**	Year	**(F Year) 2023-24**
Time:	**1.00 Hr**	Maximum Marks	**15**
Knowledge Level (KL)	**K1:** Remembering	**K3:** Applying	**K5:** Evaluating
	K2: Understanding	**K4:** Analyzing	**K6:** Creating

Note: Answer All Questions.

Q. No	Questions	Marks	COs	KL
1.	What is Sampling and Quantization? Explain briefly.	4	CO1	K1
2.	What are adaptive and non-adaptive interpolation algorithms? Name one of each type.	4	CO1	K2
3.	For the following 3 bit image apply appropriate contrast stretching, starting the reason of using the algorithm used: 	0	0	1	1	 	1	0	3	1	 	2	2	5	6	 	2	2	6	2		7	CO2	K3

Course Outcomes	**CO1**	Apply sampling and quantization technique for conversion of an analog image into digital form	
	CO2	Enhance the image using various types of filtering, segmentation and edge detection techniques	
	CO3	Analyze and interpret the effects of high pass and low pass filter in an image.	
	CO4	Restore the image in the presence of noise by using modern restoration software	
	CO5	Use the techniques of morphological image processing, image registration and image recognition.	

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