



**Sardar Patel Institute of Technology**  
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India  
(Autonomous College Affiliated to University of Mumbai)

**MSE Examination**

Max. Marks: 30

October 2023

Duration: 1hr.

Class: B.E. (VII) Computer + IT

Course Code:

Name of the Course: Digital Image Processing (DIP)

**Instructions:**

- (1) All questions are compulsory.
- (2) Assume appropriate data if necessary but justify the same.
- (3) Try to be precise in your answers in order to maximize your points.
- (4) Draw neat labelled diagrams.

Q. No.	Questions	Max Marks	CO
Q 1. (a)	Illustrate digital image representation.	04	1
(b)	Classify the image types OR Compare Brightness and Contrast	04	1
Q2.	Differentiate between a high-pass filter and a low-pass filter?	04	2
Q.3	Construct the image of your choice and apply the low pass filter on it, by assuming (i) zero padding and (ii) without zero padding. Comment on the output images in both the cases.	08	5



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Q. 4

Consider the following image  
Draw the histogram and based on histogram, segment the following image  
into two regions.

128	128	128	64	64	32	32	8
64	64	128	128	128	8	32	32
32	8	64	128	128	64	64	64
8	128	128	64	64	8	64	64
128	64	64	64	128	128	8	8
64	64	64	128	128	128	32	32
8	128	64	64	64	128	128	128
8	8	64	64	128	128	64	64

10

5