|  |  |  |
| --- | --- | --- |
| 1 | 1912002 | ADARSH NIHAAL SINGH |
| 2 | 1912003 | ANEKAR ADITYA RAVIKANT |
| 3 | 1912005 | BANE RUDRAKSHI ANIL |
| 4 | 1912018 | MAKWANA ISHA LALIT |
| 5 | 1912025 | MORE PARTH CHETAN |
| 6 | 1912029 | TANISHK RAO |
| 7 | 1912030 | KUNAPAREDDY SAI CHETANA |
| 8 | 1912033 | ADITI SHAH |
| 9 | 1912034 | ARYAN TANDEL |
| 10 | 1912038 | DURVAS WANJALE |
| 11 | 2022008 | REDKAR TANMAY RAJAS |
| 12 | 2022012 | KUMBHAR SHOBHA RAJARAM |
| 13 | 2022015 | JADHAV BHAVESH BHASKAR |
| 14 | 2022018 | CHAUDHARI VAIBHAVI VIVEK |
| 15 | 2022019 | BADOGE NEHA BAPU |
| 16 | 1912008 | CHARANIA SHAFINA SALIM |
| 17 | 1912011 | DOSHI ASHISH DHIREN |
| 18 | 2022024 | KHOCHARE ARYA SUBODH |
| 19 | 2022027 | UPADHYE ROHAN UDAY |
| 20 | 2022028 | BERDE ASHAY UDAY |
| 21 | 1912042 | SAHIL RAMANE |
| 22 | 1912044 | BHOITE OMKAR MAHENDRA |
| 23 | 1912048 | DIVAKAR AAKASH VASUDEO |
| 24 | 1912052 | KELKAR VEDANT AMOL |
| 25 | 1912054 | KULKARNI MANAS MAHESH |
| 26 | 1912057 | KALWARI MANUSH MAHENDRA |
| 27 | 1912058 | MAHESHWARI MOHIT NIRAJ |
| 28 | 1912061 | PANCHAL PURAAVE BIMAL |
| 29 | 1912065 | PAWASKAR SHUBHAM AJAY |
| 30 | 2022035 | BHANDARE NIKHIL ASHOK |
| 31 | 2022045 | HIREMANI AYUSH DURGAPPA |
| 32 | 1912012 | FARIA VIRAL PRADEEP |
| 33 | 1912017 | LENDAVE PRANAY AGATRAO |

Every student has to attempt 2 questions as per serial number. E.g. Serial number 1 will attempt question 1 and 34 similarly Serial number 2 attempt Question 2 and 35…and so on

1. Explain what is Digital Image
2. Write a short note on Image processing
3. Write a short note on the Origin of image processing
4. Draw and explain a block diagram showing different Steps in Digital Image Processing,
5. Explain different Components used in Digital image processing
6. Write a short note on Elements of Visual Perception
7. Write a short note Image Sensing and Acquisition
8. Explain Image Sampling and Quantization with one solved example
9. Explain Relationships between pixels with suitable example
10. Explain with one example what is Linear and Nonlinear Operations
11. Explain the concept of color images with respect to RGB and HSI (HSV) models
12. Explain different Image Enhancement techniques in Spatial Domain
13. Explain different Image Enhancement techniques in Frequency Domain
14. Explain Point Processing methods Digital Negative and contrast stretching in detail with one suitable example
15. Explain Point Processing methods thresholding and gray level slicing in detail with one suitable example
16. Explain the Point Processing method power law transform with one suitable example
17. Explain Point Processing methods bit plane slicing, and log transform with one suitable example
18. Explain Neighborhood Processing with one suitable example
19. Explain in detail Averaging filters with one suitable example
20. Explain order statistics filters with one suitable example
21. Explain high pass filter in spatial domain with one suitable example
22. Explain the high boost filter with one suitable example
23. Explain applications of image filtering in image restoration
24. Explain in detail Histogram based methods
25. Explain with suitable example Histogram stretching
26. Explain with suitable example histogram equalization.
27. Explain Two Dimensional Transforms with respect to image processing
28. Explain with suitable example 2D Discrete Fourier transform
29. Explain with suitable example Walsh transform
30. Explain with suitable example Hadamard transform
31. Explain with suitable example Cosine transform
32. Explain with suitable example Haar transform
33. Explain with suitable example Slant transform,
34. Explain with a suitable example Discrete Wavelet transform.
35. Explain the concept of Frequency Domain Filtering
36. Explain with suitable example DFT for filtering
37. Draw and explain characteristics of Ideal LPF, HPF, Band reject filter
38. Explain with suitable example Gaussian and Butterworth filters for smoothening and sharpening
39. Explain with suitable example Gaussian filter for smoothening and sharpening
40. Explain with suitable example Butterworth filters for smoothening and sharpening
41. Explain with a suitable example Homomorphic filters.
42. Explain with suitable example image Segmentation
43. Explain with Morphology and Representation
44. Explain with suitable example Segmentation based on discontinuities: Point, line, and edge detection
45. Explain with suitable example Segmentation based on discontinuities: edge linking using Hough transform
46. Explain with suitable example Segmentation based on similarities
47. Explain with suitable example region-based segmentation
48. Explain with suitable example Region growing
49. Explain with suitable example region splitting
50. Explain with suitable example region merging
51. Explain with suitable example split and merge operation
52. Explain with suitable example Segmentation based on thresholding
53. Explain with a suitable example Global and local thresholding.
54. Explain Global processing via graph theoretic approach
55. Explain all Morphological operations
56. Explain with suitable example Dilation
57. Explain with suitable example Image erosion
58. Explain with suitable example Image Opening
59. Explain with suitable example Image Closing
60. Write a short note on Basic Morphological Algorithms.
61. Write a short note on Image Representation
62. Explain with suitable example Chain codes
63. Explain with suitable example polygonal approximations
64. Write a short note on signatures with respect to Image Representation
65. Write a short note on boundary segments with respect to Image Representation
66. Explain with a suitable example of image skeletonization.