

Digital Image Processing TYBSc CS Sem VI

1. In moving from 3-dimensional world to the 2-dimensional image, we lose dimension.
 - A. Three
 - B. Two
 - C. Zero
 - D. One
2. The electromagnetic spectrum can be expressed in terms of wavelength and _____.
 - A. Power
 - B. Speed
 - C. Frequency
 - D. Sound
3. Inside the choroid of an eye, is the retina which is composed of _____ types of photoreceptors.
 - A. Three
 - B. Four
 - C. Two
 - D. Six
4. _____ connecting the retina leave the eyeball through the optic nerve bundle.
 - A. Nerves
 - B. Iris
 - C. Sclera
 - D. Rods
5. The region from which optic nerve leaves the eyeball which has no rods and cones is known as _____.
 - A. Iris
 - B. Diaphragm
 - C. Blind spot
 - D. Retina

6. The human eye is a complex system and the images that we perceive are equally_____.
- A. Simpler
 - B. Blurr
 - C. Clear
 - D. Complex
7. The human eye possesses a _____sensitivity to high and low spatial frequencies.
- A. Lower
 - B. Higher
 - C. Weak
 - D. Medium
8. When we look at a picture, we do not look at each point but the _____as a whole.
- A. Pixel
 - B. All points
 - C. Image
 - D. view
9. Image processing deals with the _____ of images.
- A. Addition
 - B. Viewing
 - C. Discarding
 - D. Manipulation
10. The general aim of image acquisition is to transform an optical image into an array of _____data which could be later manipulated on a computer.
- A. Numerical
 - B. Spatial
 - C. Physical
 - D. Logical
11. Image acquisition is achieved by suitable_____.
- A. Printer
 - B. Cameras
 - C. Computer
 - D. RAM
12. The resistance of _____materials drop in the presence of light due to the generation of free charge carriers.
- A. Photoconductive
 - B. Photovoltaic
 - C. Scotopic

D. Conductive

13. _____ devices consists of semiconductor junctions.

- A. Conductive
- B. Photovoltaic
- C. Photoconductive
- D. Scotopic

14. The technology used in solid-state imaging sensors is based principally on _____ devices.

- A. Charged
- B. Sensitive
- C. Electric
- D. charge-coupled

15. In line arrays a single line of _____ pixels are clocked out into the parallel output register.

- A. CCD
- B. GCD
- C. LCD
- D. Coloured

16. To get a two-dimensional image we need to mechanically move the array over the entire _____.

- A. Device
- B. Camera
- C. Image
- D. Scene

17. The cameras are interfaced to a _____ where the processing algorithms are written.

- A. Computer
- B. Memory
- C. Hard disk
- D. Printer

18. A frame buffer memory can be upto _____.

- A. 3 MB
- B. 5 MB.
- C. 10 MB
- D. 7 MB

19. In frame grabber card each image is stored as a matrix where each value of the matrix represents the _____ at that point.
- A. grey level
 - B. pixel value
 - C. colour value
 - D. pixels
20. Processing of digital images involve procedures that are usually expressed in _____ form due to which most image processing functions are implemented in software.
- A. Logarithmic
 - B. Algorithmic
 - C. logical
 - D. numerical
21. A _____ device produces and shows a visual form of numerical values stored in a computer as an image array.
- A. Colour
 - B. Printing
 - C. Audio
 - D. Display
22. Any erasable raster graphics display can be used as a _____ unit with an image processing system.
- A. Audio
 - B. Display
 - C. Processing
 - D. Picture
23. The raster devices convert image data into a _____ frame.
- A. Audio
 - B. Image
 - C. Video
 - D. Continuous
24. The image sequence from the camera is coded into as concise a representation as possible for transmission over the _____.
- A. Channel
 - B. Cable
 - C. Air
 - D. Light
25. NTSE, PAL, and SECAM are the three major _____ systems used in various parts of the world.

- A. Decoding
- B. Coding
- C. Processing
- D. Visual

26. Coding is influenced by the type of channel used to carry the _____ signals.

- A. Digital
- B. Audio
- C. Image
- D. Analog

27. The camera, the display device and _____ all have non-unity gammas.

- A. Eye
- B. Head
- C. Hand
- D. Face

28. In monochrome images we only have _____ pixels and no other shades of grey.

- A. Black and white
- B. Blue
- C. Red
- D. RGB

29. Each pixel in grey scale image can have value ranging from _____.

- A. 0 to 8
- B. 0 to 3
- C. 0 to 255
- D. 0 to 32

30. Colour images are based on the fact that a variety of colours can be generated by mixing the _____ primary colours in proper proportion.

- A. Two
- B. Three
- C. Five
- D. Four

31. In colour images each pixel composed of RGB values and each of these colours required _____ bits for its representation.

- A. 5
- B. 32
- C. 16
- D. 8

32. The technique to achieve an illusion of grey levels from only black and white levels is called_____.
- A. Grey scale
 - B. Colour
 - C. half-toning
 - D. monochrome
33. A _____is a structure which defines how information is stored in the file and how that information is stored on the monitor.
- A. Folder
 - B. Pixel
 - C. file format
 - D. image
34. Which one of these is not a image file format
- A. GIF
 - B. DFT
 - C. BMP
 - D. JPEG
35. JPEG images are compressed images which occupy _____space.
- A. Huge
 - B. Little
 - C. no
 - D. Long
36. The image data format specifies the order in which _____values are stored in the image data section.
- A. Variable
 - B. Attribute
 - C. Signal
 - D. Pixel
37. The basic requirement of the image processing is that images obtained be in the _____format.
- A. Analog
 - B. Physical
 - C. Logical
 - D. Digital
38. Sampling determines the _____resolution of the digitize image and depends on the mega pixels o the camera.
- A. Spatial
 - B. Logical

- C. Physical
- D. Compact

39. Higher the spatial resolution of the image, _____ is the sampling rate.

- A. Weaker
- B. Smaller
- C. Greater
- D. Negotiable

40. Each element of the image data matrix is called a_____.

- A. Point
- B. Pixels
- C. Dot
- D. Pic

41. If we have 8 bits to represent grey levels, we will have ____grey levels.

- A. 8
- B. 16
- C. 512
- D. 256

42. The number of pixels per unit length is known as _____of the displaying device.

- A. Matrix
- B. Resolution
- C. Capacity
- D. Quality

43. _____domain techniques are all about working in a Fourier domain.

- A. Frequency
- B. Spatial
- C. Resolution
- D. Point

44. White light when passed through a prism, gets split into different colours known as_____.

- A. Resolution
- B. Matrix
- C. Spectrum
- D. Intensity

45. Fourier transform is nothing but a _____prism.

- A. Algebraic
- B. Geometrical
- C. Light

D. Mathematical

46. The _____ and their amplitudes are what is seen from the Fourier spectrum.

- A. Frequencies
- B. Velocity
- C. Lights
- D. wavelength

47. For 2 –dimensional functions of images we need to define a ____ Fourier transform.

- A. 3D
- B. 2D
- C. 1D
- D. Discrete

48. _____ ensures that we get specific frequencies, which is known as Discrete Fourier Transform.

- A. Sampling
- B. Segmentation
- C. Discretization
- D. Acquisition

49. The term _____ domain means working in the given space.

- A. Frequency
- B. Spatial
- C. Subjective
- D. Wavelength

50. In point processing, we work with _____ pixels.

- A. Two
- B. Three
- C. Single
- D. Five

51. The idea behind contrast stretching is to increase the _____ of the images by making the dark portions darker and the bright portions brighter.

- A. Intensity
- B. Contrast
- C. Pixels
- D. Size

52. Grey level slicing is also known as _____ slicing.

- A. Intensity

- B. Threshold
- C. Contrast
- D. Pixel

53. Non-linearities encountered during image capturing, printing and displaying can be corrected using _____ correction.

- A. Gamma
- B. Theta
- C. Beta
- D. Log

54. The _____ can be used to improve the dynamic range of an image.

- A. Digital negative
- B. power law transformation
- C. grey level slicing
- D. thresholding

55. In images, regions where the grey level changes slowly are ____ frequency areas.

- A. High
- B. Medium
- C. Weak
- D. Low

56. Low pass filtering implies removing the edges while high pass filtering implies removing the_____.

- A. Background
- B. Lines
- C. Picture
- D. Points

57. The principle sources of noise in a digital image arise during _____ acquisition and during transmission.

- A. Audio
- B. Pixel
- C. Image
- D. Video

58. _____ noise arise in an image due to factors such as circuit noise, sensor noise, poor illumination and high temperature.

- A. Gamma
- B. Rayleigh
- C. Uniform
- D. Gaussian

59. Bigger the averaging mask _____ is the blurring.
- A. More
 - B. Less
 - C. average
 - D. medium
60. In median filtering, the grey level of the centre pixel is replaced by the _____ value of the neighbourhood.
- A. High
 - B. Low
 - C. Median
 - D. Fixed
61. When we only want to remove the noise without disturbing the _____, we use median filter.
- A. Pixels
 - B. Edges
 - C. Lines
 - D. Noise
62. _____ filtering eliminates the low frequency regions while retaining or enhancing the high frequency components.
- A. High pass
 - B. Low pass
 - C. Median
 - D. High boost
63. The sum of the coefficients of the high pass mask has to be equal to _____.
- A. Five
 - B. Negative one
 - C. Zero
 - D. One
64. In _____ filtering, we pass some of the background along with the high frequency content.
- A. Low pass
 - B. High pass
 - C. High boost
 - D. Median

65. High pass= Original – _____
- A. Low pass
 - B. High boost
 - C. Median
 - D. High pass
66. The process of restoring some of the background into the high passed image is known as _____masking.
- A. Filtered
 - B. High boost
 - C. Background
 - D. Unsharp
67. Zooming by replication can be implemented on the computer by using a _____mask.
- A. Filtering
 - B. Interpolation
 - C. High boost
 - D. Replication
68. _____of images provide a global description of the appearance of an image.
- A. Graph
 - B. Histogram
 - C. Copy
 - D. Mask
69. Histogram of an image can be plotted in _____ways.
- A. Three
 - B. Four
 - C. Two
 - D. Five
70. _____is the science of form and structure.
- A. Enhancement
 - B. Sampling
 - C. Morphology
 - D. Segmentation
71. In image processing, morphology is used as a tool for extracting image components that are useful in representing regions and_____.
- A. Pixels

- B. Lines
- C. Objects
- D. Shapes

72. There are two different types of operations that are widely used in image processing are_____.

- A. Arithmetic and logical
- B. Addition and subtraction
- C. Multiplication and division
- D. Primary and secondary

73. Image _____are used to correct grey level shading that result from non uniformities in illumination.

- A. Addition
- B. Multiplication
- C. Division
- D. Both B and C

74. Logic operations actually apply only to _____images.

- A. Colour
- B. Grey level
- C. Binary
- D. Static

75. Two sets of operations that are fundamental to image morphology are dilation and_____.

- A. Addition
- B. Erosion
- C. Multiplication
- D. Subtraction

76. In dilation, the number of pixels added depends on the _____and shape of the structuring element.

- A. Location
- B. Volume
- C. Memory
- D. Size

77. Erosion _____the number of pixels from the object boundary.

- A. Adds
- B. Reduces
- C. Multiplies
- D. Doubles

78. We use _____ operator to perform colour image sharpening.
- A. Laplacian
 - B. Arithmetic
 - C. Logical
 - D. Logarithmic
79. In HSI, H stands for _____, S stands for Saturation and I stands for Intensity.
- A. High
 - B. Hue
 - C. Human
 - D. Huge
80. _____ gives us the degree to which pure colour is diluted by white light.
- A. Hue
 - B. Intensity
 - C. Saturation
 - D. Illumination
81. An essential part of dilation and erosion operation is the _____.
- A. Pixel
 - B. Array
 - C. Structuring element
 - D. Object
82. The centre pixel of the structuring element is called _____ and it identifies the pixel which is being processed.
- A. Origin
 - B. Array
 - C. Arc
 - D. Object
83. Morphological _____ of an image is basically an erosion followed by dilation using the same structuring element.
- A) Closing
 - B) Opening
 - C) Addition
 - D) Structuring
84. Morphological _____ of an image is basically dilation followed by erosion using the same structuring element.

- A) Opening
- B) Closing
- C) Sampling
- D) Structuring

85. _____ generally tends to fuse narrow breaks and eliminates small holes.

- A) Sampling
- B) Addition
- C) Opening
- D) Closing

86. Cones divide the visible portion of the electromagnetic spectrum into three bands viz., _____.

- A. Red yellow green
- B. Red green blue
- C. Red pink green
- D. Red green white

87. _____ are representations of the discontinuities of the intensity function.

- A. Points
- B. Edges
- C. Lines
- D. Objects

88. The first derivative at any point in an image is obtained by using the _____ of the gradient at that point.

- A. Magnitude
- B. Grey level
- C. Pixel value
- D. Frequency

89. For a set of given pixels, the _____ checks if these points lie on a straight line and if yes, it draws a line joining all these points.

- A. Hough transform
- B. Local processing
- C. Sobel operator
- D. Prewitts operator

90. _____ is the procedure in which pixels are grouped into larger regions based on some predefined condition.

- A. Region growing

- B. Split and merge
- C. Region merging
- D. Region splitting

91. _____ starts with the whole image as one big region and splits this region into four quadrants.

- A. Region growing
- B. Split and merge
- C. Region merging
- D. Region splitting

92. The two different categories of data compression algorithm are _____

- A. Lossy and lossless
- B. Primary and secondary
- C. Analog and digital
- D. Static and dynamic

93. _____ algorithm eliminates redundant as well as irrelevant information and thus permit only an approximate reconstruction of an image.

- A. Lossless
- B. Lossy
- C. Static
- D. Segmentation

94. Lossless data compression algorithms fall into two broad categories :

- A. Dictionary based and statistical coding
- B. Objective and subjective
- C. Primary and secondary
- D. Encoding and decoding based

95. Which of the following is not a type of image redundancies

- A. Inter-pixel
- B. Coding
- C. Designing
- D. Psycho-visual

96. The quantizer block reduces _____ redundancies.

- A. Inter-pixel

- B. Coding**
- C. Designing**
- D. Psycho-visual**

97. The forward transform that is used in JPEG is _____.

- A. DFT
- B. DCT
- C. Sine
- D. Hadamard

98. The most commonly used transform coding is _____.

- A. JPEG
- B. BMP
- C. TIFF
- D. DFT

99. Huffman coding is a loss-less statistical method that finds a variable length code with _____redundancy.

- A. Maximum
- B. Average
- C. Minimum
- D. Visual

100. _____ coding reduces the quantization but also reduces the false contouring.

- A. IGS
- B. Run-length
- C. Arithmetic
- D. JPEG