

1. What does CVIP stand for?

- a) Computer Vision and Information Processing
- b) Computer Vision and Image Processing
- c) Computer Visual Intelligence Processing
- d) Computer View and Image Perception

View answer

Answer: b) Computer Vision and Image Processing

2. Which of the following is NOT a fundamental task of computer vision?

- a) Object recognition
- b) Image compression
- c) Scene understanding
- d) Motion estimation

View answer

Answer: b) Image compression

3. In the history of CVIP, which decade saw significant advancements in pattern recognition techniques?

- a) 1950s
- b) 1960s
- c) 1970s
- d) 1980s

View answer

Answer: c) 1970s

4. What is a primary goal of image filtering in CVIP?

- a) To reduce noise
- b) To increase image resolution
- c) To change the color space
- d) To compress the image

View answer

Answer: a) To reduce noise

5. Which image representation stores color information as intensity values for red, green, and blue channels?

- a) RGB
- b) HSV
- c) CMYK
- d) YCbCr

View answer

Answer: a) RGB

6. Which statistical measure is used to represent the average brightness of an image?

- a) Mean
- b) Median
- c) Mode

d) Standard deviation

View answer

Answer: a) Mean

7. What is the purpose of labeling in recognition methodology?

- a) To classify objects into predefined categories
- b) To assign unique identifiers to connected regions in an image
- c) To extract features from images
- d) To perform clustering of similar objects

View answer

Answer: b) To assign unique identifiers to connected regions in an image

8. Which morphological operation involves expanding the boundaries of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: a) Dilation

9. What is the primary objective of thinning in morphological image processing?

- a) To remove noise from the image

- b) To make objects thinner while preserving their connectivity
- c) To expand the boundaries of objects
- d) To close small gaps in objects

View answer

Answer: b) To make objects thinner while preserving their connectivity

10. Which morphological operation involves shrinking the boundaries of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: b) Erosion

11. Which transformation is used to find specific patterns in binary images, such as locating edges or corners?

- a) Hit-or-Miss transformation
- b) Dilation
- c) Erosion
- d) Opening

View answer

Answer: a) Hit-or-Miss transformation

12. In CVIP, what does the term “grouping” refer to?

- a) Identifying individual objects within a scene
- b) Labeling connected regions in an image
- c) Recognizing patterns or structures formed by multiple objects
- d) Extracting features from images

View answer

Answer: c) Recognizing patterns or structures formed by multiple objects

13. Which morphological operation is typically used to remove small objects from the foreground of an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening

14. Which CV model is inspired by the organization and function of the human visual system?

- a) Statistical models
- b) Geometric models
- c) Biological models
- d) Physical models

View answer

Answer: c) Biological models

15. What does the "H" in HSV color space represent?

- a) Hue
- b) High
- c) Highlight
- d) Hybrid

View answer

Answer: a) Hue

16. Which morphological operation is used to fill gaps in the contours of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: d) Closing

17. Which technique is commonly used for extracting features from images in CVIP?

- a) Histogram equalization
- b) Fourier transform
- c) Edge detection
- d) Low-pass filtering

View answer

Answer: c) Edge detection

18. In image processing, what does the term “erosion” refer to?

- a) Expanding the boundaries of objects
- b) Shrinking the boundaries of objects
- c) Enhancing the contrast of an image
- d) Removing noise from an image

View answer

Answer: b) Shrinking the boundaries of objects

19. Which of the following is a morphological operation used to remove small holes in the foreground of an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: d) Closing

20. Which statistical measure represents the most frequently occurring pixel intensity in an image?

- a) Mean

- b) Median
- c) Mode
- d) Standard deviation

View answer

Answer: c) Mode

21. Which morphological operation is the dual of dilation?

- a) Erosion
- b) Opening
- c) Closing
- d) Hit-or-Miss transformation

View answer

Answer: a) Erosion

22. What is the primary purpose of image conditioning in CVIP?

- a) To enhance the visual appearance of images
- b) To prepare images for further processing or analysis
- c) To reduce the size of images
- d) To convert images to a different color space

View answer

Answer: b) To prepare images for further processing or analysis

23. Which morphological operation is used to remove small objects from the background of an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening

24. What is the main advantage of using morphological operations in image processing?

- a) They are computationally expensive
- b) They are sensitive to noise
- c) They preserve object boundaries
- d) They require a large amount of memory

View answer

Answer: c) They preserve object boundaries

25. Which morphological operation is used to remove noise from the edges of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: b) Erosion

26. Which statistical measure represents the spread of pixel intensities in an image?

- a) Mean
- b) Median
- c) Mode
- d) Standard deviation

View answer

Answer: d) Standard deviation

27. In CVIP, what does the term “matching” refer to?

- a) Finding correspondences between features in different images
- b) Adjusting the brightness and contrast of an image
- c) Detecting edges in an image
- d) Removing noise from an image

View answer

Answer: a) Finding correspondences between features in different images

28. Which morphological operation is used to remove small protrusions from the foreground of an image?

- a) Dilation
- b) Erosion

- c) Opening
- d) Closing

View answer

Answer: c) Opening

29. Which of the following is NOT a common application of computer vision?

- a) Autonomous vehicles
- b) Medical image analysis
- c) Weather prediction
- d) Object recognition

View answer

Answer: c) Weather prediction

30. What is the primary goal of image segmentation in CVIP?

- a) To enhance image resolution
- b) To identify individual objects or regions of interest in an image
- c) To reduce noise in an image
- d) To change the color space of an image

View answer

Answer: b) To identify individual objects or regions of interest in an image

31. Which morphological operation is used to remove isolated pixels or small clusters from an

image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening

32. Which CV model represents objects as geometric shapes and their spatial relationships?

- a) Statistical models
- b) Geometric models
- c) Biological models
- d) Physical models

View answer

Answer: b) Geometric models

33. What is the primary purpose of region growing in image processing?

- a) To reduce noise in an image
- b) To merge adjacent regions with similar properties
- c) To detect edges in an image
- d) To change the color space of an image

View answer

Answer: b) To merge adjacent regions with similar properties

34. Which morphological operation is used to remove small gaps between objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: d) Closing

35. Which of the following is NOT a common method for image representation?

- a) Binary representation
- b) Histogram representation
- c) Wavelet representation
- d) Vector representation

View answer

Answer: b) Histogram representation

36. In CVIP, what does the term “extracting” refer to?

- a) Selecting relevant features from an image
- b) Segmenting an image into distinct regions
- c) Detecting edges in an image
- d) Adjusting the brightness and contrast of an image

View answer

Answer: a) Selecting relevant features from an image

37. Which morphological operation is used to remove small holes or gaps in objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: d) Closing

38. Which morphological operation is used to remove small objects from the edges of larger objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: b) Erosion

39. What is the primary purpose of thinning in morphological image processing?

- a) To remove noise from the image
- b) To make objects thinner while preserving their connectivity

- c) To expand the boundaries of objects
- d) To close small gaps in objects

View answer

Answer: b) To make objects thinner while preserving their connectivity

40. Which statistical measure represents the middle value of a sorted list of pixel intensities?

- a) Mean
- b) Median
- c) Mode
- d) Standard deviation

View answer

Answer: b) Median

41. Which morphological operation is used to remove small protrusions from the foreground of an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening

42. Which morphological operation is used to remove noise from the edges of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: b) Erosion

43. In CVIP, what does the term “labeling” refer to?

- a) Finding correspondences between features in different images
- b) Assigning unique identifiers to connected regions in an image
- c) Detecting edges in an image
- d) Removing noise from an image

View answer

Answer: b) Assigning unique identifiers to connected regions in an image

44. Which morphological operation is used to fill gaps in the contours of objects in an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: d) Closing

45. Which morphological operation is typically used to remove small objects from the foreground of an image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening

46. What is the primary purpose of image conditioning in CVIP?

- a) To enhance the visual appearance of images
- b) To prepare images for further processing or analysis
- c) To reduce the size of images
- d) To convert images to a different color space

View answer

Answer: b) To prepare images for further processing or analysis

47. Which morphological operation is used to remove small objects from the background of an image?

- a) Dilation
- b) Erosion

- c) Opening
- d) Closing

View answer

Answer: c) Opening

48. Which of the following is NOT a common application of computer vision?

- a) Autonomous vehicles
- b) Medical image analysis
- c) Weather prediction
- d) Object recognition

View answer

Answer: c) Weather prediction

49. What is the primary goal of image segmentation in CVIP?

- a) To enhance image resolution
- b) To identify individual objects or regions of interest in an image
- c) To reduce noise in an image
- d) To change the color space of an image

View answer

Answer: b) To identify individual objects or regions of interest in an image

50. Which morphological operation is used to remove isolated pixels or small clusters from an

image?

- a) Dilation
- b) Erosion
- c) Opening
- d) Closing

View answer

Answer: c) Opening