Question: 1 What is OpenCV primarily used for?
Option A: Data analysis
Option B: Image and video processing
Option C: Web development
Option D: Database management
Answer: B

Question: 2 What is the default color format in OpenCV?
Option A: RGB
Option B: BGR
Option C: CMYK
Option D: HSV
Answer: B

Question: 3 Which function is used to read an image in OpenCV?
Option A: cv2.imageRead()
Option B: cv2.imread()
Option C: cv2.readimage()
Option D: cv2.read()
Answer: B

Question: 4 What does OpenCV stand for?
Option A: Open Computational Vision
Option B: Optical Computer Vision
Option C: OpenSource Computer Vision Library
Option D: Open Community Vision
Answer: C

Question: 5 Which of the following is NOT a supported image format in OpenCV?
Option A: PNG
Option B: JPEG
Option C: GIF
Option D: BMP
Answer: C

Question: 6 How do you display an image in OpenCV?
Option A: cv2.imshow("window_name", image)
Option B: cv2.display("window_name", image)
Option C: cv2.show(image, "window_name")
Option D: cv2.open(image)
Answer: A

Question: 7 Which of the following is used to release all OpenCV windows?
Option A: cv2.closeAllWindows()

Option B: cv2.destroyAllWindows()
Option C: cv2.closeWindows()
Option D: cv2.quitWindows()
Answer: B

Question: 8 In OpenCV, what does the function cv2.waitKey(0) do?
Option A: Waits for a key press indefinitely
Option B: Closes all windows
Option C: Saves the image
Option D: Applies a transformation
Answer: A

Question: 9 Which of the following functions is used to resize an image in OpenCV?
Option A: cv2.transform()
Option B: cv2.resize()
Option C: cv2.changeSize()
Option D: cv2.scale()
Answer: B

Question: 10 Which function is used to convert an image from one color space to another?
Option A: cv2.colorConvert()
Option B: cv2.cvtColor()
Option C: cv2.changeColor()
Option D: cv2.convertColor()
Answer: B

Question: 11 What does cv2.GaussianBlur() do?
Option A: Reduces noise and smooth an image
Option B: Increases image sharpness
Option C: Converts the image to grayscale
Option D: Detects edges in the image
Answer: A

Question: 12 What does the cv2.threshold() function do?
Option A: Blurs the image
Option B: Converts an image to binary
Option C: Converts an image to grayscale
Option D: Rotates the image
Answer: B

Question: 13 Which function is used to detect edges in OpenCV?
Option A: cv2.Canny()
Option B: cv2.Threshold()
Option C: cv2.EdgeDetection()

Option D: cv2.FindEdges()
Answer: A

Question: 14 What is the role of the kernel in convolution operations?
Option A: It determines the structure of the image
Option B: It acts as a filter applied over the image
Option C: It resizes the image
Option D: It rotates the image
Answer: B

Question: 15 Which filter is best for edge detection?
Option A: Gaussian Filter
Option B: Median Filter
Option C: Laplacian Filter
Option D: Bilateral Filter
Answer: C

Question: 16 Which function in OpenCV is used to perform image dilation?
Option A: cv2.expand()
Option B: cv2.dilate()
Option C: cv2.enlarge()
Option D: cv2.widen()
Answer: B

Question: 17 Which OpenCV function detects corners in an image?
Option A: cv2.Canny()
Option B: cv2.cornerHarris()
Option C: cv2.HoughLines()
Option D: cv2.detectEdges()
Answer: B

Question: 18 Which function is used to draw a rectangle on an image?
Option A: cv2.rectangle()
Option B: cv2.box()
Option C: cv2.drawRect()
Option D: cv2.square()
Answer: A

Question: 19 Which function is used to detect faces in OpenCV?
Option A: cv2.detectFace()
Option B: cv2.CascadeClassifier()
Option C: cv2.HaarCascade()
Option D: cv2.findFace()
Answer: B

Question: 20 Which OpenCV module supports deep learning?
Option A: cv2.deepNN()
Option B: cv2.ml()
Option C: cv2.dnn()
Option D: cv2.deepLearning()
Answer: C

Question: 21 What is the purpose of cv2.findContours()?
Option A: Detects edges
Option B: Finds object boundaries
Option C: Smooths the image
Option D: Rotates an image
Answer: B
Question: 22 Which function is used to read a video in OpenCV?
Option A: cv2.VideoRead()
Option B: cv2.VideoCapture()
Option C: cv2.readVideo()
Option D: cv2.openVideo()

Answer: B
Question: 23 What is the primary advantage of using a GPU with OpenCV?
Option A: Better image quality
Option B: Faster computation
Option C: Less memory usage
Option D: Simpler coding
Answer: B

Question: 24 What is YOLO used for?
Option A: Face detection
Option B: Real-time object detection
Option C: Color filtering
Option D: Image segmentation
Answer: B

Question: 25 What is the function of cv2.dnn.blobFromImage()?
Option A: Converts an image into a format suitable for deep learning models
Option B: Detects objects in an image
Option C: Performs edge detection
Option D: Segments an image
Answer: A

Question: 26 Which algorithm is commonly used for face detection in OpenCV?
Option A: K-Means

Option B: CNN
Option C: Haar Cascades
Option D: Mean Shift
Answer: C

Question: 27 Which OpenCV function is used for keypoint detection?
Option A: cv2.SIFT()
Option B: cv2.detectKeypoints()
Option C: cv2.FeatureDetect()
Option D: cv2.findKeypoints()
Answer: A

Question: 28 What is the function of ORB in OpenCV?
Option A: Object Recognition
Option B: Feature detection and matching
Option C: Image compression
Option D: Edge detection
Answer: B
Question: 29 Which function is used to apply a perspective transformation to an image?
Option A: cv2.warpAffine()
Option B: cv2.perspectiveTransform()
Option C: cv2.imageWarp()
Option D: cv2.transformPerspective()
Answer: B

Question: 30 What is the main advantage of using a Background Subtractor in OpenCV?
Option A: Removes foreground objects
Option B: Removes background to detect moving objects
Option C: Enhances colors in an image
Option D: Performs template matching
Answer: B

Question: 31 Which function is used to draw contours on an image in OpenCV?
Option A: drawContours()
Option B: contour()
Option C: drawShapes()
Option D: outlineContours()
Answer: A

Question: 32 What is the default color space of images loaded using OpenCV's imread() function?
Option A: RGB
Option B: BGR
Option C: Grayscale

Option D: HSV
Answer: B

Question: 33 Which function is used to apply a median blur to an image in OpenCV?
Option A: medianBlur()
Option B: blurMedian()
Option C: applyMedianBlur()
Option D: medianFilter()
Answer: A

Question: 34 Which function is used to detect faces in an image using pre-trained classifiers in OpenCV?
Option A: detectMultiScale()
Option B: detectFaces()
Option C: findFaces()
Option D: faceDetect()
Answer: A

Question: 35 In OpenCV, which function is used to rotate an image?
Option A: rotateImage()
Option B: getRotationMatrix2D() followed by warpAffine()
Option C: transformRotate()
Option D: rotate()
Answer: B

Question: 36 In OpenCV, which function is used to draw shapes like circles or rectangles on an image?
Option A: drawShape()
Option B: shape()
Option C: draw()
Option D: rectangle() or circle()
Answer: D

Question: 37 Which function is used to apply a mask to an image?
Option A: cv2.applyMask()
Option B: cv2.bitwise_and()
Option C: cv2.maskFilter()
Option D: cv2.imageMask()
Answer: B

Question: 38 What is the primary difference between cv2.SIFT() and cv2.ORB()?
Option A: ORB is faster and free, while SIFT is patented
Option B: SIFT is better for real-time applications

Option C: ORB detects only circular objects
Option D: SIFT is optimized for color images
Answer: A

Question: 39 What is the function of cv2.VideoWriter()?
Option A: Reads video frames
Option B: Writes video frames to a file
Option C: Converts images into video
Option D: Edits video brightness

Answer: B
Question: 40 Which function is used to find connected components in an image?
Option A: cv2.findContours()
Option B: cv2.connectedComponents()
Option C: cv2.getComponents()
Option D: cv2.detectRegions()
Answer: B

Question: 41 In an OpenCV-based autonomous driving project, you need to identify road lanes. Which algorithm would be most effective for detecting lanes in real-time from a camera feed?
Option A: Hough Line Transform
Option B: Canny edge detection
Option C: Gaussian filtering
Option D: Image dilation
Answer: A

Question: 42 When applying object recognition in a video stream, which of the following OpenCV methods allows you to match keypoints between two images for robust feature matching?
Option A: Background subtraction
Option B: SIFT (Scale-Invariant Feature Transform)
Option C: Histogram equalization
Option D: Image stitching
Answer: B

Question: 43 You need to enhance the quality of a low-light image using OpenCV. Which of the following methods would help you achieve better visibility of details in the image?
Option A: Histogram equalization
Option B: Using a Sobel filter
Option C: Convolution with Gaussian blur
Option D: Morphological operations
Answer: A

Question: 44 In an OpenCV-based real-time video processing application, you need to detect moving objects in a

frame-by-frame manner using background subtraction. Which method would be the most efficient for achieving robust results in a dynamic environment with varying lighting conditions?
Option A: Using a basic image thresholding technique with a fixed value
Option B: Using histogram equalization to enhance contrast before applying background subtraction Option C: Implementing the MOG2 (Mixture of Gaussians) background subtractor
Option D: Utilizing a deep learning-based object detection model in every frame
Answer: C

Question: 45 Which function is used to split an image into its constituent color channels in OpenCV?
Option A: splitChannels()
Option B: divideChannels()
Option C: split()
Option D: separateChannels()
Answer: C

Question: 46 Which function is used to apply the affine transformation to an image in OpenCV?
Option A: warpAffine()
Option B: affineTransform()
Option C: applyAffine()
Option D: transformAffine()
Answer: A

Question: 47 What is the purpose of the getRotationMatrix2D() function in OpenCV?
Option A: To rotate an image
Option B: To get the affine transformation matrix for rotating an image
Option C: To scale an image
Option D: To translate an image
Answer: B

Question: 48 Which function is used to apply a bilateral filter to an image in OpenCV?
Option A: bilateralFilter()
Option B: filterBilateral()
Option C: applyBilateral()
Option D: bilateral()
Answer: A

Question: 49 Which function is used to release the video capture object in OpenCV?
Option A: releaseVideo()
Option B: releaseCapture()
Option C: release()
Option D: stopCapture()
Answer: C

Question: 50 What does the VideoCapture() function in OpenCV do?
Option A: Captures a single image from a camera
Option B: Reads video frames from a video file or camera
Option C: Writes video frames to a file
Option D: Displays video frames in a window
Answer: B