What is the primary goal of image processing?

1. To store images in a database
2. To create images
3. To **manipulate images for specific tasks**
4. To print images on paper

What is the process of increasing the contrast and clarity of an image called?

1. Image acquisition
2. **Image enhancement**
3. Image analysis
4. Image compression

In digital image processing, what does "pixel" stand for?

1. **Picture element**
2. Picture enhancement
3. Picture analysis
4. Picture compression

Which of the following image formats supports lossless compression?

1. JPEG
2. **PNG**
3. GIF
4. BMP

Which spatial domain image enhancement technique is used to emphasize the edges in an image?

1. Histogram equalization
2. Median filtering
3. **Laplacian sharpening**
4. Fourier transform

Which frequency domain technique is commonly used for noise removal in images?

1. Fourier transform
2. Wavelet transform
3. Discrete cosine transform (DCT)
4. **Fast Fourier transform (FFT)**

What is the primary goal of histogram equalization in image processing?

1. To increase image resolution
2. **To enhance image contrast and brightness**
3. To reduce image noise
4. To compress the image file size

Which OpenCV function is commonly used for histogram equalization?

1. cv2.matchHist()
2. **cv2.equalizeHist()**
3. cv2.specifyHist()
4. cv2.histogramEqualize()

Histogram specification is a technique used to:

1. Enhance image contrast
2. Equalize the histogram of an image
3. **Match the histogram of an image to a specified target histogram**
4. Resize an image

Which of the following is NOT a step in histogram specification?

1. Calculating the cumulative distribution function (CDF) of the source image
2. Calculating the cumulative distribution function (CDF) of the target histogram
3. Creating a new image with the specified histogram
4. **Applying Gaussian blur to the image**