1) Define computer vision
2) Application of computer vision
3) Low level, mid level and high level computer vision. Feature extraction
4) What do you mean by digital image processing [The sequence] Imp
5) Components of image processing system
6) Describe the image formation system.
7) 8-connected & 4 connected pixel → Short notes
8) Spacial Resolution, Grey level resolution
9) RGB and CMY model.
10) Describe various stages of image processing.
11) What do you mean by radiometry in image processing.
12) Types of geometric transformation including 3D.
13) Image restoration, Image segmentation, morphology, Spacial sampling, Shearing
14) Imag enhancement
15) Histogram - definition, necessity, stretching, linear stretching, numericals.
equalization, diff bet stretching and equalization, numerical
16) Describe the way to remove periodic noise from an image [fourier transformation]
17) Discrete Fourier Transformation. Inverse DFT. (Define and formula)
18) Major filter categories: Low pass, High pass, Band pass, Band Stop.
19) What do you mean by edge detection? Describe steps involved.

2) Canny Edge Detection. (All there is to know!)

2) LOG!! Hough

1) Explain K-means clustering
2) Difference betⁿ K-means and KNN
3) Limitations of K-means
4) Difference between Euclidian distance Manhattan distance
5) Numericals on K-means
6) What is clustering? Give examples of clustering to solve real life problems
7) What is the mixture in gaussian model. PCA
8) What makes the distance measurement of K-medoid better than K-means? When the segmentation is used over clustering.
9) Relationship betⁿ K-means and PCA
10) What is a centroid point in K-means? Does centroid initialisation effect K-means algorithm
11) advantages and disadvantages of K-means algorithm. What are the challenges associated with K-means clustering
12) Numerical on K-medoid
13) What is supervised learning, unsupervised and semi-supervised? [describe with proper example of algorithm]
14) Write difference betwen supervised, unsupervised and semi supervised.
15) Explain the neural network
16) Diff. betⁿ biological and artificial neural network.
17) What is activation function
18) Is ANN similar to standard computer? Explain
19) Short note → Feed forward network, Feed back network
20) Describe advantages of ANN. How is ANN useful in making a machine intelligent
21) Why is KNN a non parametric algorithm
22) What is space and time complexity of KNN? Is feature scaling required for KNN.
23) Advantages, disadvantage and application of KNN
24) Numerical on Hough transform
25) SIFT
26) Greedy Snake algorithm

27) Regularisation theory

28) Stereo vision

29) What is background substraction method. Applications of it

30) Necessity of background modeling

31) motion estimation