

Time: 3 HRS

Max. Marks: 80

- N.B.:** 1) Question No.1 is **compulsory**.  
 2) Attempt any **three** from the remaining **five** questions.  
 3) Figures to the right indicate full marks

- |     |                                                                          |           |
|-----|--------------------------------------------------------------------------|-----------|
| Q.1 | Write a short note on <b>any four</b>                                    | <b>20</b> |
|     | a) Quantization                                                          |           |
|     | b) High pass filtering                                                   |           |
|     | c) Discrete Cosine Transform                                             |           |
|     | d) Homomorphic filter.                                                   |           |
| Q.2 | a) Describe Camera working principles in image processing.               | <b>10</b> |
|     | b) Explain histogram processing in detail.                               | <b>10</b> |
| Q.3 | a) Explain Vehicle Number Plate Detection and Recognition techniques     | <b>10</b> |
|     | b) Describe Vidicon and Digital Camera working principles Brightness.    | <b>10</b> |
| Q.4 | a) Explain Fri-Chen Filter in detail.                                    | <b>10</b> |
|     | b) What is meant by wavelet based image compression? Explain.            | <b>10</b> |
| Q.5 | a) Explain Thresholding Region based segmentation Chain codes in detail. | <b>10</b> |
|     | b) Describe Object Detection using Correlation Principle.                | <b>10</b> |
| Q.6 | a) Discuss about classification of image compression schemes             | <b>10</b> |
|     | b) Explain divide and conquer approach in detail.                        | <b>10</b> |