**ESE- All**

Printed Pages: UID No: ……………

Academic year Semester 2021 – 2022

Program Name/Code: Semester: 5th

Subject Title: Fundamentals of Image Processing Subject Code: CSY/ITY-310

Time: 3 Hour Maximum Marks: 60

**Instructions: Attempt all questions**

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| Q. No | Statement | CO mapping |
| **Section A**  5 x 2 = 10 marks | | |
| 1 | Define Image acquisition.. | CO5 |
| 2 | Explain quantization. | CO5 |
| 3 | Define region growing. | CO5 |
| 4 | What is Sobel operator? | CO5 |
| 5 | What is the need of Image Enhancement? | CO5 |
| **Section B**  4 x 5 = 20 marks | | |
| 6 | Differentiate between structural and decision method in patterns. | CO5 |
| 7 | Explain FWT. | CO5 |
| 8 | Explain any one application of image processing. | CO5 |
| 9 | Differentiate between similarity and discontinuity approach. | CO5 |
| **Section C**  3 x 10 = 30 marks | | |
| 10 | There are some relationship exist between pixels.Ellaborate it. | CO5 |
| 11 | Consider the image given below & calculate the output of the pixel(4,4) if smoothing is done using 3x3 neighbourhood using all filters below:-  1) Box Filter  2) Weighted average filter  3)Median filter  4) Minimum filter  5) Maximium filter | CO5 |
| 12 | Brief about image segementation techniques. | CO5 |