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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2021

B.Tech VII Semester

COURSE CODE: 18B1WEC847

MAX. MARKS: 35

COURSE NAME: Medical Image Processing

COURSE CREDITS: 03

MAX. TIME: 2 Hours

Note: All questions are compulsory. Carrying a mobile phone during examinations will be treated as a case of unfair means.

Q1. Explain why it is required to determine texture features from the images? Explain the steps to determine Local Binary pattern for any image. **CO3**

[5]

Q2. For the following image determine the GLCM matrix considering orientation at 0 degrees. Determine the values of contrast and ASM. On the basis of contrast and ASM values obtained, comment if there exists any better way to describe the image quantitatively.

I=

1	3	2	1
1	3	2	1
1	3	2	1
1	3	2	1
1	3	2	1
1	3	3	1

CO2

[5]

Q3. Write a short note on the following:

- Contrast Stretching
- Supervised Learning and Unsupervised Learning
- Learning Rate
- Functional and Anatomical images

CO1 &3

[8]

Q4. (a) Write down the advantages and disadvantages of CAT scan, MRI scan and PET scan.

(b) What are the steps involved in CAD system? Explain each step.

CO1 &4

[5]

Q5. Discuss how Brovey transform based fusion method is different from HIS- transform based fusion method. What are the limitations of IHS and Brovey transform based methods?

CO2 [5]

Q6. With proper flow diagram explain DWT based fusion method.

CO2 [5]

Q7. Using K means clustering algorithm form two clusters for given data.

CO3 [2]