

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2025

B.Tech-VII Semester (ECE)

COURSE CODE (CREDITS): 19B1WEC836 (3)

MAX. MARKS: 25

COURSE NAME: Applied Medical Signal Processing

COURSE INSTRUCTORS: Dr. Nishant Jain

MAX. TIME: 1 Hour 30 Min

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	Draw and describe a CAD system designed for biomedical signal pattern recognition and decision-making?	CO1	5
Q2	Regarding the ECG's QRS complex, what are artifacts, and how does the QRS complex change in cases of bundle branch block?	CO2	4
Q3	What are the differences between filtering in the time domain and the frequency domain, and how does moving average filtering help in removing artifacts from biomedical signals?	CO2	4
Q4	Which types of artifacts can be eliminated through adaptive filtering, and how does adaptive filtering facilitate their removal?	CO2	4
Q5	How does the correlation coefficient assist in identifying the presence of noise within ECG signals?	CO3	4
Q6	In what ways does envelope extraction and analysis contribute to detecting noise in biomedical signals?	CO3	4