JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2023

M.Tech-I Semester (ECE)

COURSE CODE (CREDITS): 21M1WEC135 (3)   MAX. MARKS: 35

COURSE NAME: Signal Processing for IoT

COURSE INSTRUCTORS: Dr. Shruti Jain   MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

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

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1. Explain Sita :

    i.   the various ways that IoT networks connect.

    ii.   WSN is the wireless technology system for enabling IoT networks. **[5, CO1]**

2. Explain Gayatri the following process :

    i.   steps for condition monitoring system.

    ii.   framework of the fault detection procedure.   **[5, CO2]**

3.

    i.   Explain what structural health monitoring, or SHM, is? Use the Internet of Things (IoT) to explain SHM.

    ii.   SHM with IoT can help improving security and safety.   **[5, CO2]**

4. Describe every block in Figure 1. What does it explain?   **[5, CO3]**

5. The detection of EEG abnormalities is a challenging task because of the high complexity. Justify.   **[5, CO3]**

6. The "Neuro-Thing," an Internet of Medical Things device, detects seizures quickly and precisely. How?   **[5, CO4]**

7. Draw the different topological structures of protein complex structure   [5, CO4]

   i.   Clique, Star, Linear, Ring

   ii.   Hybrid of Clique and Ring

   iii. Clique with Tail

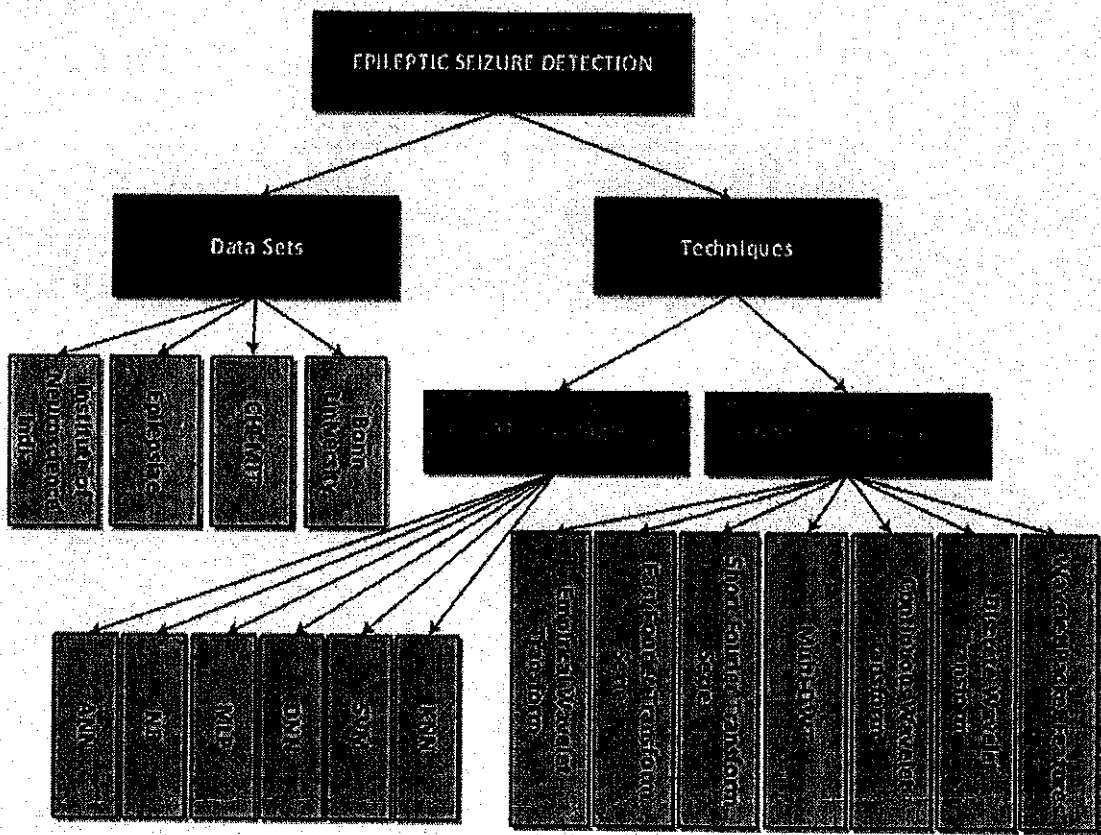   iv.   Star with Tail

   v.   Hybrid of Clique, Star, and Ring

Fig 1