

B.TECH. SEM -VII BIO MEDICAL 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT: ELECTIVE – I SOFTWARE TOOLS FOR BIO SIGNAL ANALYSIS

Day **Friday**
Date **19/01/2018**

W-2017-2328

Time: **02.30 PM TO 05.30 PM**
Max Marks: **60**

N.B. :

- 1) All questions are **COMPULSORY**
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.

Q.1 What is the importance of overlay plot in MATLAB? Explain different ways of generating overlay plot in MATLAB. **(10)**

OR

- Q.1 a)** What is script file in MATLAB? Develop a script file to calculate factorial of any number. **(05)**
- b)** List various toolboxes in MATLAB with its function. **(05)**

Q.2 Write and describe the control flow and loop statements in VB with example of each. **(10)**

OR

Q.2 Describe all the controls in VB used to design the project **(10)**

Q.3 Explain following array function with respect to LABVIEW **(10)**

- i) Array size
- ii) Index array
- iii) Build array
- iv) Initialize array
- v) Array subset

OR

Q.3 Write short note on :

- a)** LabVIEW development environment **(05)**
- b)** Feedback node in LabVIEW **(05)**

Q.4 Explain measurement and automation explorer with the help of diagrammatic representation **(10)**

OR

Q.4 Explain with neat diagram AI start VI. Also give function of each command used in it. **(10)**

Q.5 Where FIR filters are used? List parts of FIR filters. Design and explain basic window method. **(10)**

OR

Q.5 Explain linear phase FIR filters using:

- a)** hamming window **(05)**
- b)** rectangle window **(05)**

Q.6 Explain standard ECG waveform and give the importance of QRS complex in ECG signal. How the QRS complex is detected using MATLAB function? **(10)**

OR

Q.6 What is the disadvantage of 60 Hz noise signal if present in ECG signal? How it is recovered? What are the methods of noise removal from the signal? **(10)**

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