

B.TECH SEM – VII (2007 COURSE) (BIOMEDICAL ENGG.) :
WINTER - 2017

SUBJECT : BIOMEDICAL SOFTWARE SYSTEMS

Day : **Friday**
Date : **12/01/2018**

W-2017-2623

Time : **02.30 PM TO 05.30 PM**
Max. Marks : **80**

N.B.:

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in the **SEPARATE** answer books.
- 3) Draw neat and labeled diagrams **WHEREVER** necessary.
- 4) Figures to the right indicate **FULL** marks.
- 5) Assume suitable data if necessary.

SECTION – I

- Q.1** a) What are the scripts and function files in MATLAB? [05]
b) Why the command button is called action performer? Give one example. [05]
c) How the subVIs are created in LabVIEW? [04]
- Q.2** a) What is the use of wavelet analysis? Explain the following commands with example. [07]
i) DETCOEF ii) WAVEDEC iii) APPCOEF.
- b) What are the advanced data objects in MATLAB? [06]
- Q.3** a) Explain various loop statements in VB with example. [07]
b) What do you mean by controls/tools in VB? Give any five controls with example. [06]
- Q.4** Write notes on: [13]
a) Components of VI
b) Importance of case structure in LabVIEW

SECTION – II

- Q.5** a) What are the usages of DAQmx? [04]
b) List the window functions available in MATLAB. How one is different than other? [05]
c) How DWT is useful in removing 50Hz noise signal from ECG waveform? [05]
- Q.6** a) List the specifications in order to design FIR filter and elaborate all the terms. [06]
b) What are the syntaxes for FIR filter design if one has to include cut off frequencies, tapings and window functions? [07]
- Q.7** a) What is measurement and automation explorer in LabVIEW? When it is used? [06]
b) List and explain the data types used in LabVIEW. [07]
- Q.8** a) What are the advantages of compression techniques in biomedical field? [07]
b) Write short notes on Reconstruction of ECG signal. [06]

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