



NBX-003-015404 Seat No. _____

M. Sc. (Electronics) (Sem. IV) (CBCS) Examination

April / May - 2017

Digital Signal Processing : Paper - XVI

Faculty Code : 003

Subject Code : 015404

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All question carry equal marks,
(2) Figures on right hand side indicate marks.

1 Answer the following in brief : **14**

- (1) What are the major classification of signals?
- (2) What are singularity functions?
- (3) What are the major classification of signals?
- (4) What are an aperiodic signals?
- (5) What are odd signals?
- (6) What is energy signal?
- (7) What is power signal?

2 Answer any **two** : **14**

- (1) Write note on advantage of DSP over ASP.
- (2) Explain in brief: various dimensions of real life signals
- (3) Explain in brief: LTI System.

3 Answer the following : **14**

- (1) What is meant by sampling? State the sampling theorem.
- (2) With a block diagram explain the process of analog-to-digital conversion,

OR

- 3** Answer the following : **14**
- (1) Define Fourier transform pair,
 - (2) Point out the difference between continuous Fourier transform and discrete Fourier transform. Justify.
- 4** Answer the following : (any **two**) **14**
- (1) Explain z-transform.
 - (2) When is a system said to be linear?
 - (3) Explain convolution.
- 5** Answer the following : (any **two**) **14**
- (1) What is an FIR system?
 - (2) What is an IIR system?
 - (3) Define any two properties of DFT.