M.E. First Semester (Electrical (Electrical Power System)) (F.T.)

13303 : Digital Signal Processing : 1 SEPS 5

P. Pages : 1 | AU - 3260

Time : Three Hours | Max. Marks : 80

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Notes : 1. All question carry equal marks.
2. Answer **two** question from Section A and **two** question from Section B.
3. Due credit will be given to neatness and adequate dimensions.
4. Illustrate your answer necessary with the help of neat sketches.
5. Use of pen Blue/Black ink/refill only for writing book.

SECTION – A

1. a) Explain in detail the following terms : **10**
i) Natural and Random signals.
ii) Even and Odd signals.
iii) Causal and Non-causal systems.
iv) Linear and Non-linear systems.

b) Explain the important properties of CFT. **10**

2. a) What is DSP? Explain the systematic way how DSP is better than ASP. **10**

b) State and prove sampling theorem. **10**

3. a) Explain with suitable example DIT algorithm for FFT design. **12**

b) Explain the various steps of Analog filter design. **8**

SECTION – B

4. a) Explain the importance of multirate DSP in signal processing? Explain the multirate DSP Algorithms in brief. **10**

b) Explain the process of sampling rate conversion using I/D. **10**

5. a) Explain the design of FFT processor in detail. **10**

b) Explain the architecture of any General purpose DSP processor. **10**

6. a) How DSP processor is better than a simple μ processor? Explain in detail. **10**

b) Explain the architectural features of any TMS320XX processor. **10**

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