

**Subject Code: H6805/R13**

**M. Tech –II Semester Regular/ Supply Examinations, October, 2015**

**DIGITAL SIGNAL PROCESSORS & ARCHITECTURES**

**(Common to SE &SD, SM&FE, GE)**

**Time: 3 Hours**

**Max Marks: 60**

**Answer any FIVE questions**

**All questions carry EQUAL marks**

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1. Explain the significance of Fast Transform techniques. What are the advantages over DFT?
  - b. Find DFT of a sequence  $x(n) = \{0, 1, 1, -1, -1, 0, -1, 1\}$  using DIFFFT algorithm.
2. a. Explain the Sources of error in DSP implementations
  - b. With neat example Explain the procedural steps of Overlap add method
3. a. Explain the features for external interfacing.
  - b. Briefly discuss about the floating point and block floating point formats
4. a. Explain the Data Addressing modes of TMS320C54XX DSPs.
  - b. Explain the Interrupts of TMS320C54XX Processors
5. a. How the shifters are useful in DSP? Explain the functionality of barrel shifter?
  - b. Explain the base architecture of ADSP 2181
6. a. Explain the Bus Architecture of Black fin Processor
  - b. Explain the significance of External bus interfacing signals
7. a. What are the characteristics of analog devices family of DSP devices?
  - b. Briefly discuss about the floating point and block floating point formats
8. Write short notes on the following
  - a. D/A Conversion Errors
  - b. On-Chip Peripherals

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**DIGITAL SIGNAL PROCESSING AND ARCHITECTURE \**  
**(Common to VLSI & ES, ES & VLSI, VLSID & ES, ES & VLSID, VLSI,**  
**VLSID, VLSISD, VLSI&ME, SSP, DIP, CE&SP, IP, C&SP, SP&C, ES,**  
**DS&CE, DECS, E&CE, DECE and CS)**

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