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Name......................................

Reg. No....................................

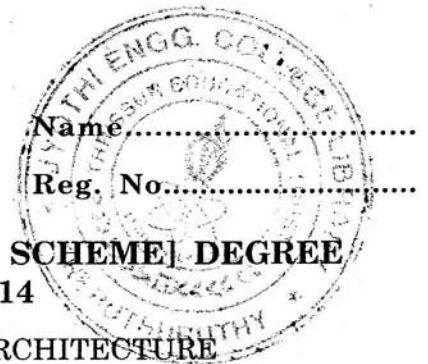## FIFTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, NOVEMBER 2014

AI 09 504—COMPUTER ORGANIZATION AND ARCHITECTURE

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.
Each question carries 2 marks.

1. Define an opcode.

2. What is a virtual memory ?

3. What are the types of displays ?

4. What is Arithmetic pipeline ?

5. What is Register Gating ?

(5 × 2 = 10 marks)

Part B

Answer any four questions.
Each question carries 5 marks.

1. Briefly discuss about shift registers.

2. Explain the programmed I/O Data transfer.

3. What are interrupts ? State the sequence of operations performed by the CPU when an interrupt is detected.

4. Write short notes on Flat Panel Displays.

5. Explain about linear pipelining.

6. Explain the process of communication with remote terminal.

(4 × 5 = 20 marks)

Part C

Answer all questions.
Each question carries 10 marks.

1. (a) With block diagram, explain the functional units and their operations of computer hardware.

Or

(b) Describe in detail the different addressing modes available with suitable examples.

Turn over

2. (a) Give the organization of a floating point arithmetic unit and explain its operation.

Or

(b) Draw the memory hierarchy. Explain the significance of each type of memory hierarchy.

3. (a) Describe with a neat sketch, magnetic tape systems.

Or

(b) Briefly discuss about :

(i) CD-ROM systems.   (5 marks)

(ii) Online storage.   (5 marks)

4. (a) Briefly explain the different types of parallel processors.

Or

(b) Write short notes on :

(i) Instruction pipelines.   (5 marks)

(ii) Arithmetic pipelines.   (5 marks)

[4 × 10 = 40 marks]