G 1441

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

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

B.TECH. DEGREE EXAMINATION, MAY 2016

Sixth Semester

Branch : Electronics and Communication Engineering

EC 010 604—COMPUTER ARCHITECTURE AND PARALLEL PROCESSING (EC)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]
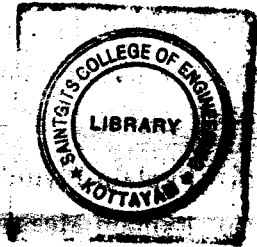
Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 3 marks.

1. Discuss the differences between Architecture and Hardware.

2. What are the different types of division techniques ?

3. What is static RAM ?

4. What are Interconnection networks ?

5. What is SMPS ?

(5 × 3 = 15 marks)

Part B

Answer all questions.
Each question carries 5 marks.

6. Explain stored program concept.

7. Discuss the steps involved in the execution of a complete instruction.

8. Discuss the bus standards.

9. Explain the pipelining hazards.

10. Discuss dual core processors.

(5 × 5 = 25 marks)

Part C

Answer all questions.
Each question carries 12 marks.

11. (a) Explain Assemblers, Linkers and Loaders.

    (b) Discuss the functions of OS.

(8 marks)

(4 marks)

Or

Turn over

12. (a) Explain the concept of pipelining.   (6 marks)

     (b) Explain Multithreading in processors.   (6 marks)

13. (a) Explain Microprogrammed control units.   (8 marks)

     (b) Discuss single bus and multibus organisation.   (4 marks)

Or

14. (a) Explain Booth's algorithm.   (8 marks)

     (b) Explain Fast Adders.   (4 marks)

15. (a) Explain MMU.   (4 marks)

     (b) Explain the different types of memories used in computer.   (8 marks)

Or

16. Explain I/O accessing in detail.

17. (a) Explain the instruction sets for pipelining.   (6 marks)

     (b) Discuss how performance is enhanced by pipelining.   (6 marks)

Or

18. (a) Explain Flynn's classification.   (4 marks)

     (b) Explain Message passing architecture.   (8 marks)

19. Explain the block diagram and architecture of a common PC.

Or

20. Discuss the different types of storage devices.

[5 × 12 = 60 marks]