Reg. No. : | | | | | | | | | | |

Question Paper Code: 31383

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

Third Semester

Information Technology

01UIT303 – COMPUTER ORGANIZATION

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is program counter?
2. List the various commonly used condition code flags.
3. What is ripple carry adder?
4. Write the add/subtract rule for floating point numbers.
5. What is hardwired control?
6. What are the various stages in a pipeline execution?
7. What is EPROM? Give its advantages.
8. List the various examples for secondary storage devices.
9. What is memory-mapped I/O?
10. What is SCSI?

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Describe the basic functional units of a computer. (10)

(ii) Compare RISC and CISC. (6)

Or

(b) (i) Explain the various address modes with suitable examples. (10)

(ii) Write a note on big-endian and little-endian assignments. (6)

12. (a) (i) Explain the booth's multiplication algorithm with an example. (10)

(ii) Give the IEEE standard floating point format for single-precision and double precision number. (6)

Or

(b) Draw and explain the logic circuit for implementing the restoring division. Also illustrate the above division algorithm for 8÷3. (16)

13. (a) Explain the micro-programmed control unit with neat diagram. Also state its advantages and disadvantages. (16)

Or

(b) Describe the various techniques for handling instruction hazards. (16)

14. (a) (i) What are the various mapping mechanisms used in cache memory? Explain. (12)

(ii) State the differences between Static RAM and Dynamic RAM. (4)

Or

(b) Explain the virtual memory address translation mechanisms. (16)

15. (a) (i) Explain the working of direct memory access. (10)

(ii) Briefly describe the vectored interrupts. (6)

Or

(b) (i) Write a note Universal Serial Bus (USB). (8)

(ii) Compare the features of i3, i5 and i7 processors. (8)
