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Question Paper Code: 93206

B.E./B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Computer Science Engineering

19UCS306 - COMPUTER ORGANIZATION

(Regulation 2015)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The addressing mode used in an instruction of the form ADD X, Y is _____ CO1- R
(a) Absolute (b) indirect (c) index (d) none of these
2. The ALU makes use of _____ to store the intermediate results CO1- R
(a) Accumulators (b) Registers (c) Heap (d) Stack
3. The 2s compliment form (Use 6 bit word) of the number 1010 is. CO2- U
(a) 11100 (b) 110110 (c) 110111 (d) 1011
4. In Booth Multiplication algorithm, operates strings of 0's in the multiplier requires no _____ but just shifting. CO2- U
(a) subtraction (b) multiplication. (c) addition. (d) division
5. The pipeline operates on a stream of instruction by overlapping the phases of instruction cycle is. CO3- R
(a) Arithmetic pipeline (b) Instruction pipeline
(c) Parallel pipeline (d) Multiple pipeline
6. Which one is not benefit of multiprocessors? CO4- R
(a) Multiple independent jobs can be made to operate in parallel
(b) A single job can be partitioned into multiple parallel tasks
(c) Multiple jobs can be made to operate in serial
(d) All are benefits

7. Associative memory is a _____. CO5- R
 (a) very cheap memory (b) Content addressable memory
 (c) Pointer addressable memory (d) Slow memory.
8. Memory which is electrically erasable is _____. CO5- R
 (a) EBROM (b) EEPROM
 (c) ROM. (d) PROM.
9. DMA the data transfer is controlled by CO6- R
 (a) Microprocessor (b) RAM (c) Memory (d) I/O devices
10. The return address from the interrupt-service routine is stored on the _____ CO6- R
 (a) System heap (b) Processor register (c) Processor stack (d) Memory

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Write a sequence of instructions that will compute the value of CO1-App (8)
 $y = x^2 + 2x + 3$ for a given x using
 • Three-address instructions
 • Two-address instructions
 • One-address instructions
12. Multiply given signed 2's complement numbers using booth's CO2 - App (8)
 recoding,
 A=110101(multiplicand) B=011011(multiplier).
13. Explain in detail about superscalar Operation. CO3- U (8)
14. Discuss the steps involved in the address translation of virtual memory CO5-U (8)
 with necessary block diagram.
15. Discuss in detail about bus arbitration techniques in DMA. CO5- U (8)