WEST BENGAL STATE UNIVERSITY

B.A./B.Sc. Honours 2nd Semester Examination, 2020

CMAACOR04T-COMPUTER APPLICATION (CC4)

COMPUTER SYSTEM ARCHITECTURE

Time Allotted: 2 Hours | Full Marks: 50

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

GROUP-A

1. **Answer any *five* questions from the following:** 2×5 = 10

   (a) When a floating point number is said to be normalised?

   (b) What digital function should be used to convert the octal code to binary code?

   (c) Differentiate between SISD, SIMD and MIMD.

   (d) What do you mean by Cache Coherence?

   (e) Discuss advantages of associative memory.

   (f) What is Asynchronous data transfer?

   (g) Subtract $(11)_2$ from $(110)_2$.

GROUP-B

Answer any *four* questions from the following 10×4 = 40

2. (a) Differentiate between Combinational Circuit and Sequential Circuit with example. 5+3+2

   (b) What are the different types of Computer Registers?

   (c) What do you mean by instruction format?

3. (a) What do you mean by addressing mode? 2+4+4

   (b) What are the various types of addressing modes?

   (c) Explain their advantages and disadvantages.

4. (a) What are the different techniques of data transfer? 3+3+4

   (b) Discuss their relative merits and demerits.

   (c) Discuss SISD in computer architecture.

5. (a) Define DMA. 2+2+6
   (b) What is Daisy Chaining?
   (c) Distinguish between RISC and CISC.

6. Write short notes on any ***two*** from the following: 5+5
   (a) Hardwired vs. micro programmed control unit
   (b) Floating point representation with example
   (c) Magnetic disk.

7. (a) Explain instruction cycle using a flow chart. 6+2+2
   (b) Find the BCD equivalent of $(56)_{10}$.
   (c) What do you mean by Micro-operations?

8. (a) Explain Booth's Multiplication Algorithm with example. 8+2
   (b) Define interrupts.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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