

**U.G. 2nd Semester Examination - 2020**

**COMPUTER SCIENCE**

[PROGRAMME]

Course Code : CMSP/CC-L-201B-T

[OLD SYLLABUS]

Full Marks : 40 Time : 2½ Hours

*The figures in the right-hand margin indicate marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**GROUP-A**

1. Answer any **five** of the following questions:

2×5=10

- What do you mean by logical and physical address space?
- Convert (1000111) this number into its decimal equivalent.
- What are the major components of CPU?
- Convert the  $(35)_2$  to its binary equivalent.
- What is three address instructions?
- Differentiate between CPU and I/O processors.

[Turn over]

- What do you mean by addressing modes?
- What do you mean by start bit, character bit and stop bit in serial asynchronous transfer?

**GROUP-B**

Answer any **two** of the following questions: 5×2=10

- Briefly explain about DMA controller. 5
- What is an interrupt? What are its types? Draw and explain the working of interrupt cycle. 2+1+2=5
- What is an Instruction cycle? Draw and explain flowchart for instruction cycle. 2+3=5
- Explain De-Morgan's Theorems and prove these Theorems using Truth table. 2+3=5

**GROUP-C**

Answer any **two** of the following questions: 10×2=20

- What do you understand by cache memory? Explain the direct mapping concept used in cache memory with examples. 2+8=10
- What is addressing modes? Explain various addressing modes with their advantages and disadvantages. 2+8=10
- What do you mean by locality of reference? Differentiate in detail between RISC and CISC architecture. 2+8=10

9. Write short notes on any **two** of the following:

5×2=10

- a) Types of buses
- b) Memory hierarchy
- c) Computer registers

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