

**UG 3rd Semester Examination 2021**

**Computer Science (Honours)**

**Paper- DC-5**

**(Computer Organization & Architecture)**

**[CBCS]**

**Full Marks: 32**

**Time: Two Hours**

*The figures in the margin indicate full marks.*

**Group-A**

Answer any **six** questions

2×6=12

- 1.(a) Write the main functions of the CPU?
- (b) What is Register Transfer Language?
- (c) Explain Indirect Addressing mode.
- (d) What are the differences between Primary and Secondary Memory?
- (e) Compute 2's complement of  $(1001011)_2$ .
- (f) What is the use of cache memory?
- (g) Define Mask and Selective set micro operation.

**Group-B**

Answer any **two** questions

10×2=20

2. (a) Discuss the role of following registers: AC, PC, MAR, MBR and IR. 5
- (b) What is bus? Discuss 3 types of buses with a diagram. 5
3. (a) Briefly describe the Instruction Cycle with the help of a proper flowchart. 6
- (b) Construct the circuit of a 4 line common bus system using MUX and explain. 4
4. Write short notes on: (any two) 2×5=10
  - (i) Logic micro operation
  - (ii) Tri-state Buffer
  - (iii) Shift micro operation
  - (iv) Cache memory