C. ABDUL HAKEEM COLLEGE (AUTONOMOUS),

MELVISHARAM - 632 509.

SEMESTER EXAMINATIONS, NOVEMBER - 2018

B.C.A.,   SEMESTER III

U15MCA302 / U14MCA302 – COMPUTER ORGANIZATION AND
ARCHITECTURE

Time: Three Hours   Maximum: 75 Marks

SECTION - A (10 X 2 = 20 Marks)

Answer **ALL** Questions.

1. Define computer organization.

2. What is an embedded system?

3. Define transfer rate.

4. What is physical cache?

5. Define memory bank.

6. Define the term 'density'.

7. What are the different techniques of I/O operations?

8. What are the major functions of an I/O module?

9. What categories of data are commonly supported by user-visible registers?

10. What is PSW?

SECTION - B (5 X 5 = 25 Marks)

Answer **ALL** Questions.

11. a) Explain various structural components of a computer.

(Or)

b) Describe the evolution of ARM microprocessors.

12. a) Explain about the memory hierarchy of a computer.

(Or)

b) Explain the elements of cache design.

13. a) Explain about SRAM.

(Or)

b) Write short notes on the magnetic tape.

14. a) Explain the block diagram of an external devices.

(Or)

b) Explain the elements of a machine instruction.

15. a) Explain about instruction cycle.

(Or)

b) Explain the characteristics of Reduced Instruction Set Architectures.

SECTION - C (3 X 10 = 30 Marks)

Answer **ANY THREE** Questions.

16. Explain in detail about the bus interconnection scheme.

17. Explain about the principles of cache memory in detail.

18. Write a detailed note on the magnetic disk with a neat diagram.

19. Explain the direct memory access with a neat diagram.

20. Explain the different stages of instruction pipeline with a neat diagram.

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