



DON BOSCO COLLEGE

(Affiliated to the University of Calicut)

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SECOND INTERNAL EXAMINATION OCTOBER 2015

FIFTH SEMESTER B.Sc CS

BCS5B08: COMPUTER ORGANIZATION AND ARCHITECTURE

Time : 3 hours

Total Marks :80

Part -A

Answer all questions

(Each carries 1 mark)

1. If the desired word is found in the cache, then it is called a _____
2. The electronic circuit used to store one bit of information is called _____
3. PSW stands for _____
4. MAR stands for _____
5. A full adder circuit includes _____ number of outputs.
6. _____ Number of JK flip flops are needed for 0-64 up counter.
7. A 1:4 multiplexer includes _____ number of inputs and _____ number of outputs.
8. Cache works on the principle of _____
9. Example for page replacement algorithm is _____
10. The physical address is divided into equal sized groups called _____

(1*10=10 marks)

Part-B

Answer any five

(Each carries 2 marks)

11. What is SR flip flop?
12. What do you mean by ripple carry adder?
13. Write a note on Decoder.
14. Write any 4 memory reference instructions.
15. Write the basic 8 registers and their purpose.
16. Define hit ratio 7 miss ratio.
17. Explain DMA controller.
18. What is polling?



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(2*5=10 marks)

Part-C

Answer any five

(Each carries 4 marks)

19. Explain MMU with diagram.
20. Write a note on page replacement algorithms.
21. Explain instruction execution with neat diagram.
22. What are interrupts? Explain interrupt handling with diagram.
23. Define DMA with diagram. Also explain the working of a DMA controller.
24. Explain stack organization of memory.
25. Explain any 4 addressing modes.

(4*5=20 marks)

Part-D

Answer any five

(Each carries 8 marks)

26. What is virtual memory? Explain the concept with diagrams.
27. Write a note on asynchronous data transfer.
28. What is meant by priority interrupt? Explain different methods.
29. Explain the working of decoder circuit & decade counter.
30. Explain the working of Johnson counter & ring counter.
31. What are the applications of flip-flops? Also explain the working of shift registers.
32. Explain memory hierarchy. Also draw the chip diagram of RAM & ROM. Explain the types of RAM & ROM.

(8 *5=40 marks)
