K24U 0832

Reg. No. : .....

Name : .....

IV Semester B.C.A. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2024
(2019 to 2022 Admissions)
Core Course
4B09BCA : COMPUTER ORGANIZATION

Time : 3 Hours Max. Marks : 40

PART – A
(Short Answer)

Answer **all** questions. **(6×1=6)**

1. What is the purpose of control memory address register ?
2. What is immediate addressing mode ?
3. What is the primary focus of CISC processors ?
4. What are the main components involved in the strobe method of data transfer ?
5. What is meant by cache hit rate ?
6. What is page replacement ?

PART – B
(Short Essay)

Answer **any six** questions. **(6×2=12)**

7. Write a short note on micro programmed control.
8. Explain the phases of instruction cycle in the computer organization.
9. Define the purpose of various buses in computer architecture.
10. What are the features of the hardwired control ?

P.T.O.

11. Explain instruction set architecture and its components.
12. What is meant by locality of reference ?
13. Differentiate between synchronous and asynchronous bus.
14. Write a short note on :
    a) Magnetic disk drive
    b) Optical drives.

PART – C
(Essay)

Answer **any four** questions. **(4×3=12)**

15. Compare and contrast between DMA and I/O processors.
16. Discuss the strobe method of data transfer, highlight its key principles.
17. Explain various addressing modes.
18. What is meant by virtual memory management ?
19. List the characteristics of RISC architecture.
20. Explain hardware interrupts in detail.

PART – D
(Long Essay)

Answer **any two** questions. **(2×5=10)**

21. Explain the various registers used in a computer.
22. Describe asynchronous data transfer in detail.
23. Differentiate between SRAM and DRAM.
24. Explain the different modes of I/O data transfer.

K23U 1076

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(2019 Admission Onwards)

Core Course

4B09BCA : COMPUTER ORGANIZATION

Time : 3 Hours Max. Marks : 40

PART – A

(Short Answer)

Answer **all** questions. **(6×1=6)**

1. What is the use of the Instruction Register (IR) ?
2. Describe two address instructions.
3. What is Micro Programmed Control ?
4. Describe the property of the locality of reference.
5. Describe write-through and write-back caching.
6. Describe the Page Replacement Algorithm.

PART – B

(Short Essay)

Answer **any six** questions. **(6×2=12)**

7. Define Memory Reference Instructions and give example.
8. Write notes on the central processing unit.
9. Write short notes on Peripheral Devices.

P.T.O.

10. Describe Asynchronous Data Transfer.

11. Explain the significance of memory page table in a virtual memory system.

12. What is the significance of memory hierarchy design in increasing system performance ?

13. What are the different parallel processing mechanisms in a uniprocessor system ?

14. Describe the pipeline stall.

PART – C

(Essay)

Answer **any four** questions. **(4×3=12)**

15. Write short notes on Bus organization.

16. Explain interrupts.

17. Explain general register organization.

18. Describe instruction formats.

19. What is DMA ?

20. Explain instruction pipelining.

PART – D

(Long Essay)

Answer **any two** questions. **(2×5=10)**

21. Explain different addressing modes.

22. Explain the Input Output processor and different modes of data transfer.

23. Explain virtual memory management.

24. Explain the characteristics and interconnection structure of multiprocessor systems.

K22U 1511

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Core Course
4B09BCA : COMPUTER ORGANIZATION

Time : 3 Hours

Max. Marks : 40

PART – A
(**Short Answer**)

Answer **all** questions. **(6×1=6)**

1. What is the purpose of a programming language ?
2. Convert the expression (A+B)*C to RPN.
3. What is parallel processing ?
4. Define hit ratio.
5. Define Content Addressable Memory.
6. Expand VLSI.

PART – B
(**Short Essay**)

Answer **any 6** questions. **(6×2=12)**

7. Define a three state gate.
8. What is the purpose of BUN instruction ?
9. Write note on synchronous and asynchronous serial transmission.
10. Explain the necessity of DMA.
11. List the address sequence capabilities required in control memory.
12. What are the physical forms available for establishing an interconnection network ?
13. Differentiate RAM and ROM.
14. Write note on virtual memory.

P.T.O.

PART – C
(Essay)

Answer **any 4** questions. **(4×3=12)**

15. Write note on stored program organization.
16. Explain about conditional branching with diagram.
17. Explain in detail about instruction pipeline.
18. Write note on daisy chaining priority interrupt.
19. Explain about the role of crossbar switch in interconnection structures.
20. Explain about register stack organization.

PART – D
(Long Essay)

Answer **any 2** questions. **(2×5=10)**

21. Explain in detail about instruction formats.
22. Explain in detail about the different types of addressing modes.
23. Explain about the cache memory mapping techniques.
24. Explain the techniques used in Asynchronous data transfer.

K21U 1075

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IV Semester B.C.A. Degree CBCSS (OBE) Regular Examination, April 2021
(2019 Admission Only)
CORE COURSE
4B09BCA : Computer Organization

Time : 3 Hours Max. Marks : 40

PART – A
Short Answer

Answer **all** questions : **(6×1=6)**

1. The symbolic notation used to describe the microoperation transfers register transfer among registers is called a
2. Define stack.
3. What is the use of cache memory ?
4. Expand RAM and ROM.
5. What is a Multiprocessor System ?
6. Write note on parallel Processing.

PART – B
Short Essay

Answer **any 6** questions : **(6×2=12)**

7. Define Read and Write operation of a basic computer system.
8. What is an instruction code ?
9. List the address sequence capabilities required in control memory.
10. Write note on Flynn's classification.

P.T.O.

11. What are the types of commands that an interface may receive ?

12. What is the basic principle of two-wire handshaking ?

13. Explain the time shared common bus organization of interconnection network.

14. Write note on the benefits of multiprocessing.

PART – C
Essay

Answer **any 4** questions : **(4×3=12)**

15. Explain the method of constructing a common bus system with multiplexers.

16. Write note on Subroutine call and Return.

17. Explain about Pipelining.

18. Explain in detail about I/O bus and interface modules.

19. Write note on Magnetic Disk.

20. Explain about the role of crossbar switch in interconnection structures.

PART – D
Long Essay

Answer **any 2** questions : **(2×5=10)**

21. Explain about the Computer Registers and common bus system.

22. Explain in detail about the design of a control unit with neat sketch.

23. Explain the techniques used in Asynchronous data transfer.

24. Define main memory. Explain about the main memory classification.