21101924

Reg. No................................

Name....................................

B.C.A. DEGREE (C.B.C.S.) EXAMINATION, AUGUST 2021

Third Semester

Bachelor of Computer Application

Core Course : CA 3CR T01—MICROPROCESSOR AND PC HARDWARE

(2017 Admission onwards)

Time : Three Hours   Maximum Marks : 80

Part A

Answer any **ten** *questions.*
Each question carries 2 *marks.*

1. What is the function of program counter in 8085 microprocessor ?

2. What is trap interrupt and its significance ?

3. What are the types of addressing mode in 8085 microprocessor ?

4. What are the flags available in 8085 processor ?

5. Specify the size of data, address, memory word and memory capacity of 8085 microprocessor.

6. State the functions of BIOS.

7. Mention the types of RAM Packages.

8. Describe the use of address bus, data bus, and control bus.

9. Write any four features of PCI bus.

10. Write any two features each of FAT32 and NTFS File System.

11. What is USB ?

12. List the features of SIMMs.

$(10 \times 2 = 20)$

Part B

Answer any **six** *questions.*
Each question carries 5 *marks.*

13. Draw and explain the timing diagram of memory write cycle with example.

14. Explain the following instructions with suitable example of each :

   (i) LXI.   (ii) STA.

   (iii) SHLD.   (iv) LDAX.

   (v) CMP.

Turn over

15. Explain the sequence of events during the execution of the CALL instruction by 8085 processor with the help of neat timing diagram.

16. Write short note on vectored interrupts of 8085 microprocessor.

17. Discuss the primary functions of the motherboard and list out their various form factors.

18. Write a note on expanded memory.

19. Write briefly about tracks, sectors and cylinders in hard disk.

20. Write a note on system buses.

21. Define co-processor and explain about math co-processor.

$(6 \times 5 = 30)$

Part C

Answer any **two** *questions.*
Each question carries 15 *marks.*

22. With the help of pin diagram explain the operations of 8085 microprocessor.

23. Explain the operations carried out when 8085 executes the instructions :

    (i)   MOV A, M   (ii)   XCHG.

    (iii) DAD B.   (iv)   DAA.

24. Discuss the various components of a motherboard with the help of a diagram.

25. Explain the Hard disk operations and Hard disk drive installation procedure in detail.

$(2 \times 15 = 30)$