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SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2021 (CUCBCSS-UG)

CC17U BCS6 B16b - MICROPROCESSOR AND APPLICATIONS

(Computer Science – Elective) (2018 Admission - Regular)

Time: Three Hours Maximum: 80 Marks

Part A

Answer all questions. Each question carries 1 mark

- 1. What are the two internal functional unit of the 8086 microprocessor?
- 2. Define the term word length.
- 3. What is the function of address bus?
- 4. What is application of a DMA?
- 5. What is DWORD? How can it be declared?
- 6. What is tri-state logic?
- 7. List general purpose registers.
- 8. Expand BIOS.
- 9. What is pipelining?
- 10. How physical address is generated in 8086?

 $(10 \times 1 = 10 \text{ Marks})$

Part B

Answer *all* questions. Each question carries 3 marks.

- 11. What is key debouncing?
- 12. Explain the purpose of pointer and index register.
- 13. What is meant by register indirect addressing in 8086? Give example.
- 14. Define Assembler directives.
- 15. Write the basic functions of Intel 8259 PIC.

 $(5 \times 3 = 15 \text{ Marks})$

Part C

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

- 16. Describe 8086 DOS interrupts.
- 17. Write a note on different operating modes of 8255.
- 18. List and explain data control directives of 8086 assembly language.
- 19. Draw the bit pattern for 8086 flag register and explain the significance of each bit.

- 20. Explain any four assemble directives.
- 21. Give a functional description of the 8212 programmable I/O port.
- 22. List and explain the control transfer instructions of 8086.
- 23. What are segment registers? Explain the purpose of them.

 $(5 \times 5 = 25 \text{ Marks})$

Part D

Answer any three questions. Each question carries 10 marks

- 24. Give short note on the architecture and features of the Intel 80286 microprocessor.
- 25. Describe minimum mode and maximum mode configuration of the 8086 microprocessor.
- 26. What is macro? What are its advantages? How can you define and use macros in 8086 assembly language?
- 27. Describe 8253 programmable interval timer.
- 28. Explain the functional unit of 8086 with block diagram.

 $(3 \times 10 = 30 \text{ Marks})$
