

C 21122

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS-UG)

Computer Science

BCS 6B17 (03)—MICRO PROCESSOR AND APPLICATIONS

Time : Three Hours

Maximum : 80 Marks

Part A

I Answer all questions :

1. 8086 microprocessor has \_\_\_\_\_ status flags.
2. Temporary storage area in R/W memory is called \_\_\_\_\_.
3. 8086 has \_\_\_\_\_ bit physical address.
4. To set the Iparry flag \_\_\_\_\_ instruction is used.
5. \_\_\_\_\_ directive is used to give a name to some value or symbol.
6. 8255 has \_\_\_\_\_ ports.
7. \_\_\_\_\_ directive is used to identify the start of a procedure.
8. 8212 is a \_\_\_\_\_ IC.
9. 80386 is a \_\_\_\_\_ bit processor.
10. Due to \_\_\_\_\_ architecture more than one instruction can be executed simultaneously in Pentium processor.

(10 × 1 = 10 marks)

Part B

II Answer all questions :

11. What is the function of stack pointer ?
12. Explain the conditional jump in 8086.
13. Explain GLOBAL directive with example.
14. Which are the internal registers in Programmable interrupt controller 8259 ? Explain.
15. Explain mode 1 operation in 8255.

(5 × 2 = 10 marks)

Part C

III Answer any five questions :

16. What is the minimum mode of 8086 ? Give the pin description for minimum mode.
17. Explain the queue and its function in 8086. How does it improve the performance of 8086 ?
18. Write an assembly language program to check whether the given number is odd or even.

Turn over

19. Explain ORG and OFFSET directives with examples.
20. How does the DMA controller 8257 perform direct memory access ?
21. Which are the registers in 80486 ? Explain with diagram.
22. What is meant by virtual 8086 mode ?
23. What is the Importance of flags in microprocessor ? Explain the flag register and different flags in 8086.

(5 × 4 = 20 marks)

#### Part D

IV Answer any *five* questions :

24. Which are the different segments and segment registers in 8086 ? Explain in detail. How does 8086 generate 20-bit physical address ?
25. Explain the addressing modes of 8086 with examples.
26. List the Data Definition directives. Explain each in detail with examples.
27. How does Programmable Interrupt controller 8259 transfer data using interrupt ? Explain with suitable diagram.
28. Draw the architecture of 80186 and explain each unit.
29. Which are the interrupts of 8086 ? Explain in detail.
30. Explain the control word in 8255A. Explain the BSR mode.
31. Explain the pipelining in Pentium processor with schematic diagram.

(5 × 8 = 40 marks)