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Reg. No. :

Code No. : 7928

Sub. Code : HCAM 34

M.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2015.

Third Semester

Computer Applications

MICRO PROCESSORS AND ITS APPLICATIONS

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which one of the following is world's first microprocessor?

- (a) Intel 4004 (b) Intel 4096
(c) Intel 8086 (d) None of the above

2. Which one of the following tasks are performed by a micro processor

- (a) Data transfer
(b) Arithmetic and logic operations
(c) Both a and b
(d) None

3. What are the buses used inside the 8086 micro processor?

- (a) Address, data and control bus
(b) Data bus, address bus
(c) Control bus
(d) None of the above

4. The amount of time allowed for memory or I/O to read the data is

- (a) Write timing (b) Read/write timing
(c) Read timing (d) Ready timing

5. The DMA controller does not support

- (a) I/O to memory transfer
(b) Memory to I/O transfer
(c) memory to memory transfer
(d) All the above



6. Expansion of PIC
- (a) Portable interrupt controller
 - (b) Pared interrupt controller
 - (c) Power interrupt controller
 - (d) Programmable interrupt controller
7. Which type of microprocessor addresses 16M bytes of physical memory and 1G bytes of virtual memory by using its memory-management system?
- (a) 80286
 - (b) 8086
 - (c) 80186
 - (d) 80188
8. The number of physical address **bit** generated by the MMU (in 80286 micro processor) is
- (a) 32
 - (b) 24
 - (c) 64
 - (d) None
9. Which bus system supports 32- or 64-bit transfers between the personal computer and memory or I/O at rates of 33 MHz.
- (a) ISA
 - (b) PCI
 - (c) USB
 - (d) None

10. Expansion of ISA
- (a) Industry standard architecture
 - (b) International standard architecture
 - (c) Interrupt standard architecture
 - (d) Industry structure architecture

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer not to exceed 250 words.

11. (a) Describe the evolution of micro processors.

Or

- (b) Write short notes on interrupts.

12. (a) Explain 8086 signal description.

Or

- (b) Illustrate system bus timing of 8086 micro processor.

13. (a) Elaborate the concept of memory interfacing.

Or

- (b) Discuss about interrupt controller.



14. (a) Draw the internal architecture of Intel 80286 micro processor.

Or

- (b) Explain real address mode with an example.

15. (a) Write short notes on different bus standards.

Or

- (b) Explain platform architecture in detail.

SECTION C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer not to exceed 600 words.

16. (a) Describe in detail about different addressing modes.

Or

- (b) Write brief notes on assembly language programming.

17. (a) Briefly explain the system design using 8086.

Or

- (b) Discuss in detail about minimum and maximum mode of 8086 microprocessor.

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18. (a) Elaborate DMA controller.

Or

- (b) Describe in detail about parallel communication interface.

19. (a) Illustrate the concept of protected virtual address mode.

Or

- (b) Write brief notes on architectural features and register organization of i386 and i486 processor.

20. (a) Briefly explain PCI bus structure.

Or

- (b) Describe in detail about universal serial bus.

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