

SET
A

Full Marks: 70

Marks: 20

$$1 \times 20 = 20$$

Objective

Choose the correct answer from the following:

- Choose the correct answer from the following.
- Which of the following is not an octal number?
a. 1234
b. 182
c. 4321
d. 555
 - 2's complement of 00000000
a. 00000000
b. 11111111
c. 00001111
d. 11110000
 - The I/O devices and secondary storage units of a computer are called
a. Interface
b. Virtual memory
c. Peripherals
d. None of these.
 - Which of the following is not a part of CPU?
a. ALU
b. Register
c. Control unit
d. RAM
 - Pipelining is a technique of decomposing a ----- process into sub operations.
a. Sequential
b. Parallel
c. Combination of sequential and parallel
d. None of these
 - CMA belongs to -----
a. Implied mode
b. Immediate mode
c. Direct mode
d. None of these.
 - Which of the following register is used for processing purpose?
a. Index register
b. Program Counter
c. Accumulator
d. All of these
 - Which of the following register is used to keep address of the next instruction?
a. Base register
b. Address register
c. Program counter
d. None of these
 - The Gray code for decimal number 5 is
a. 0001
b. 0111

- c. 0101
- d. None of these
10. Which of the followings is a semi random memory?
 - a. RAM
 - b. ROM
 - c. Cache
 - d. Hard disk
11. The program which translate from assembly language to machine is called ----
 - a. Compiler
 - b. Assembler
 - c. Interpreter
 - d. All of these
12. First Mechanical calculator was developed by -----
 - a. Charles Babbage
 - b. Blaise Pascal
 - c. Wilhelm Schickhard
 - d. Gottfried Leibniz
13. ENIAC stands for
 - a. Electrical Numerical Integrator and Calculator
 - b. Electrical Number Integrator and Calculator
 - c. Electronic Numerical Integrator and Calculator
 - d. Electrical Numerical Integrator and Calculus
14. Which of the followings is a permanent type of memory?
 - a. RAM
 - b. Cache Memory
 - c. ROM
 - d. None of these
15. Time needed to position a read/write head to the required track is called
 - a. Latency time
 - b. Seek time
 - c. Access time
 - d. None of these
16. Who is the father of computer?
 - a. Charles Babbage
 - b. Blaise Pascal
 - c. Wilhelm Schickhard
 - d. Gottfried Leibniz
17. Stored programmed concept was proposed by
 - a. Charles Babbage
 - b. Gottfried Leibniz
 - c. Wilhelm Schickhard
 - d. J. Von Neumann
18. Which of the followings is the fastest memory?
 - a. RAM
 - b. ROM
 - c. Cache
 - d. Hard disk
19. 1's Complement of 01111001 is
 - a. 11111000
 - b. 10000000
 - c. 10001111
 - d. 10000110

20. PCI bus stands for

- a. Principal Component Interconnect
- b. Peripheral Common Interconnect
- c. Principal Common Interconnect
- d. Peripheral Component Interconnect

(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What are the essential components of a computer? What is bus? Explain PCI bus structure with diagram. 2+2 + 6=10
2. What is an assembly language? Write an assembly language program to subtract two numbers. 2+8=10
3. What do you mean by addressing mode? Explain direct, indirect, implied and base register addressing mode. 2 +8=10
4. What do you mean by word length of a computer? Discuss the characteristics of RISC and CISC computer. 2+ 8 =10
5. (a) Perform $12 + (-6)$ using 1's and 2's complement. 5 + 5 = 10
(b) Discuss the floating point representation with an example. What is normalization?
6. Explain primary memory, secondary memory and cache memory. What type of memory devices are used in each of these categories of memory? 7+3=10
7. What is DMA scheme of data transfer? Discuss the operating principle. What is burst mode of data transfer and cycle stealing method of data transfer? 3+3+4=10
8. What is multiprocessing? Explain pipelining with example. 2+8=10

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