

**BACHELOR OF COMPUTER APPLICATION
SECOND SEMESTER (REPEAT)
COMPUTER ORGANISATION
BCA-201**

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

1X20=20

Choose the correct answer from the following:

1. Which of the following is not an octal number?
 - a. 1234
 - b. 182
 - c. 4321
 - d. 555
2. 2's complement of 00000000
 - a. 00000000
 - b. 11111111
 - c. 00001111
 - d. 11110000
3. The I/O devices and secondary storage units of a computer are called
 - a. Interface
 - b. Virtual memory
 - c. Peripherals
 - d. None of these.
4. Which of the following is not a part of CPU?
 - a. ALU
 - b. Register
 - c. Control unit
 - d. RAM
5. 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
6. CMA belongs to -----
 - a. Implied mode
 - b. Immediate mode
 - c. Direct mode
 - d. None of these.
7. Which of the following register is used for processing purpose?
 - a. Index register
 - b. Program Counter
 - c. Accumulator
 - d. All of these
8. 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
9. 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]

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| 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.
(b) Discuss the floating point representation with an example. What is normalization? | 5 + 5 = 10 |
| 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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