

2021

# COMPUTER SCIENCE (General)

**Paper Code: I-A & B**

**[New Syllabus]**

**(Supplementary)**

**Paper Code: I-A**

Full Marks: 30

Time: Thirty Minutes

Choose the correct answer.  
Each question carries 1.5 marks.

- 1) A process is a \_\_\_\_\_.
  - a. single thread of execution.
  - b. program in the execution
  - c. program in the memory
  - d. task
  
- 2) The word processing feature that catches most random typographical errors and misspellings is known as \_\_\_\_\_.
  - a. Grammar checker
  - b. Spell checker
  - c. Word checker
  - d. None of the these
  
- 3) What is smallest unit of the information?
  - a. A bit
  - b. A byte
  - c. A block
  - d. A nibble
  
- 4) What is the decimal equivalent of the binary number 10111?
  - a. 21
  - b. 39
  - c. 42
  - d. 23

5) What is the term for a temporary storage area that compensates for differences in data rate and data flow between devices?

- a. Buffer
- b. Bus
- c. Channel
- d. Modem

6) How many color dots make up one color pixel on a screen?

- a. 265
- b. 16
- c. 8
- d. 3

7) Which of the following values is the correct value of this hexadecimal code 1F.01B?

- a. 35.0065918
- b. 32.0065918
- c. 31.0065918
- d. 30.0065918

8) Computer address bus is -

- a. Multidirectional
- b. Bidirectional
- c. Unidirectional
- d. None of the above

9) Which of the following circuit is used to store one bit of data?

- a. Flip Flop
- b. Decoder
- c. Encoder
- d. Register

10) Which of the following is a way in which the components of a computer are connected to each other?

- a. Computer parts
- b. Computer architecture
- c. Computer hardware
- d. None of the above

11) Which of the following circuit convert the binary data into a decimal?

- a. Decoder
- b. Encoder
- c. Code converter
- d. Multiplexer

12) The address in the main memory is known as -

- a. Logical address
- b. Physical address
- c. Memory address
- d. None of the above

13) Subtraction in computers is carried out by -

- a. 1's complement
- b. 2's complement
- c. 3's complement
- d. 9's complement

14) Which of the following computer bus connects the CPU to a memory on the system board?

- a. Expansion bus
- b. Width bus
- c. System bus
- d. None of the above

15) A classification of integrated circuits with complexities of 30 to 300 equivalent gates on a single chip is known as?

- a. VLSI
- b. SSI
- c. LSI
- d. MSI

16) The inverter can be classified as

- a. Power Inverter
- b. Voltage source Inverter
- c. Current source Inverter
- d. Both option b and c

17) Temperature variation is a/an

- a. Analog quantity
- b. Digital quantity
- c. Either Analog or Digital quantity
- d. None of these

18) 1's complement of 1011001 is

- a. 0100111
- b. 0101100
- c. 0100110
- d. 0110110

19) 2's complement of 1011011 is

- a. 0100011
- b. 0110101
- c. 0100011
- d. 0100101

20) An overflow is a

- a. User input problem
- b. Hardware problem
- c. Software problem
- d. Input-Output problem

2021

**COMPUTER SCIENCE (General)**

**Paper Code : IB**  
**[New Syllabus]**  
**(Supplementary)**

Full Marks : 70

Time : Two Hours Thirty Minutes

*The figures in the margin indicate full marks.*  
 Answer any *five* questions taking at least *one* from each group.

**Group: A**

- |   |   |
|---|---|
| 1. a) Explain the function of CPU?  | 4 |
| b) What is error detection and correction code?                           | 4 |
| c) State De Morgan's theorem and prove it?                                | 6 |
| 2. a) what is K-map? Show an example by minimizing a term?                | 5 |
| b) what are universal logic gates? Why are they called show?              | 6 |
| c) Convert (10101100) binary number into decimal?                         | 3 |
| 3. a) Discuss any four addressing modes with example?                     | 6 |
| b) Discuss PC, MAR and MBR?   | 5 |
| c) find 2's complement of (1010110)?                                      | 3 |
| 4. a) What is DMA?  | 3 |
| b) What is static and dynamic RAM?  | 4 |
| c) Discuss any two jump and branch instruction each?                      | 7 |
| 5. a) Explain parity checker and generator?                               | 5 |
| b) Discuss Master-slave JK flipflop with circuit diagram and truth-table? | 6 |
| c) What is Counter?   | 3 |
| 6. a) Discuss full subtractor with diagram and truth table?               | 7 |
| b) Draw 16 X 1 MUX using two 8 X 1 MUX?                                   | 4 |
| c) what is shift register?  | 3 |
| 7. a) What is LAN, WAN and MAN?   | 6 |
| b) Discuss any two topologies?  | 4 |
| c) Differentiate CISC and RISC processor?                                 | 4 |