

Sl. No. 100020



No. of Printed Pages : 2

GS-756

VI Semester B.Voc Examination, May/June - 2019

INFORMATION TECHNOLOGY

602 : Computer Architecture

(CBCS) (F+R) 2018-19 Onwards

Time : 3 Hours

Max. Marks : 70

Instruction : Answers **all** the sections.

SECTION - A

I. Answer **any ten**.

10x2=20

1. What is computer Architecture ?
2. What are logic gates ? List the basic gates.
3. Mention different logic families of IC.
4. Explain SDRAM.
5. Define Parity Bit.
6. Write the BCD equalant of 123.45.
7. Mention different types of control organization.
8. Define program counter.
9. Mention the componants of CPU.
10. What is an interrupt ? List the types of interrupts.
11. Define polling.
12. Give the memory hierarchy.

P.T.O.



SECTION - B

Answer **any 5** of the following.

5x10=50

- 13.** (a) Explain the steps involved in design of the sequential circuits. **5+5**
(b) Explain synchronous binary counter with logic diagram.
- 14.** (a) Discuss error detection and correction codes. **5+5**
(b) Explain any five register reference instructions.
- 15.** (a) With a Block diagram, explain how BSA instruction executes. **5+5**
(b) Explain different addressing modes.
- 16.** (a) Simplify $F(A, B, C, D) = M(1, 3, 7, 11, 15) + D(0, 45)$ using k-map. **5+5**
(b) What is half adder ? Design a half adder using NAND gates.
- 17.** (a) Explain decoder with a neat diagram. **5+5**
(b) Explain parity generator, parity checker.
- 18.** (a) Explain DMA controller. **5+5**
(b) Explain Instruction format types in detail.
- 19.** (a) What is a sub-routine ? Explain call and return instructions. **5+5**
(b) Explain arithmetic logic shift with a neat diagram.
- 20.** (a) Write a note on virtual memory. **5+5**
(b) Write a note on isolated vs memory mapped I/O