

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

Each answer should not exceed 600 words.

16. (a) Explain computer registers in detail.
Or
(b) Describe instruction cycle.
17. (a) Explain stack organisation in detail.
Or
(b) What is addressing modes? Explain with all its types.
18. (a) Explain Booth multiplication algorithm with an example.
Or
(b) Describe the basic considerations of floating point arithmetic.
19. (a) Explain input-output interface with neat block diagram.
Or
(b) Explain about cache memory.
20. (a) Write short notes on :
(i) Parallel processing
(ii) Pipe lining.
Or
(b) Discuss the principles of
(i) Vector processing
(ii) Inter connections structures.

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Third Semester

Computer Science/Software Engineering – Allied

COMPUTER ARCHITECTURE

(For those who joined in July 2016 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. A group of bits that tells the system to perform a specific operations is known as _____
(a) Instruction code (b) Micro-operation
(c) Accumulator (d) Register
2. _____ holds the address of next instruction
(a) Stack pointer (b) Program counter
(c) Input register (d) Accumulator
3. In which mode the operand is specified in the instruction itself?
(a) Register (b) Implied
(c) Immediate (d) Direct address

4. In instruction format, an address field that designate a _____
 (a) Memory address (b) Processor register
 (c) Effective address (d) (a) or (b)
5. Which of the following is an data transfer instructions?
 (a) Load (b) Add
 (c) AND (d) Clear
6. The sequence counter used in the multiplication algorithm denotes number of bits in the _____
 (a) Multiplicand
 (b) Partial product
 (c) Multiplier
 (d) Double length multiplier
7. In virtual memory, an address used by the programmer is called a _____
 (a) Physical address (b) Virtual address
 (c) Address space (d) Virtual space
8. The memory unit that communicate directly with the CPU is called _____
 (a) Auxiliary memory (b) Main memory
 (c) Secondary storage (d) Virtual memory
9. The unit receiving the data item responds with another control signal to acknowledge the receipt of data is _____
 (a) Strobe control (b) Interfacing
 (c) Handshaking (d) Interrupt

10. Pipelinining organizations is applicable to _____
 (a) Arithmetic (b) Instruction
 (c) Both (a) and (b) (d) None

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) What is control memory? Explain its purposes.
 Or
 (b) What you mean by address sequencing? Discuss.
12. (a) Explain data transfer instructions. Give examples.
 Or
 (b) Describe instructions formats.
13. (a) Describe the hardware implementation of addition and subtraction algorithm.
 Or
 (b) Describe the register configurations of floating point arithmetic.
14. (a) What do you understands about strobe control and hand shacking? Explain.
 Or
 (b) What are the modes of transfer? Discuss.
15. (a) Describe array processor.
 Or
 (b) Explain about multi processors.