**Computer Science XI**

**SET 1**

Full Marks: 75 Pass Marks: 30

**Group A**

Attempt any **three** questions [3X10=30]

1. What is operating system? Explain various types of operating systems

known to you. [2+8]

1. Define program, programming and programmer. Describe various types of language translators. [3+7]
2. What is logical gate? Explain any four types of logical gates with truth table, logical symbol and Venn diagram. [2+8]
3. What is memory? Explain all memories in detail. [2+8]

**Group B**

Attempt any nine question. [9X5=45]

1. What do you mean by the generations of computer? Differentiate between third and fourth generation of computers. [1+4]
2. Differentiate between minicomputer and mainframe computer. [5]
3. What is booting? Describe the types of computer booting. [5]
4. Write short notes: [2.5+2.5]

* Touch pad
* Light pen

1. What is bus system? Explain different types of buses in computer system. [2+3]
2. Solve the followings: [5]

* Convert (2405)10 into base 8
* Subtract (100011)2 from (101111)2 using 1’s complement.

1. What is error? Explain the various types of programming errors. [2+3]
2. What is flowchart? Write any one example of flowchart and algorithm. [2+3]
3. What do you mean by spreadsheet? Discuss the different features about spreadsheet. [2+3]
4. Explain the functions of web server and DNS. [5]

Or

Define function and syntax of <A> tag, <IMG> and <OBJECT> tags with examples. [5]

**SET 2**

Full Marks: 75 Pass Marks: 30

**Group A**

Attempt any **three** questions [3X10=30]

1. What do you mean by operating system? Write the major functions of operating system in brief. [2+8]
2. Define Computer architecture. Explain logical components of computer system with diagram. [2+8]
3. What is software? Explain low level programming language and high level programming language in detail. [2+8]
4. State and prove Universal gate using truth table and Venn diagram. [10]

**Group B**

Attempt any **nine** questions [9X5=45]

1. Explain the major achievements and expectations made from fifth generation of computers. [5]
2. What is logic Gate? Differentiate between AND and NOR gate. [5]
3. Solve the followings: [2.5+2.5]

* Convert (456.45)8 into base 10
* Subtract 1010 and 1011 using 2’s complement

1. Write short notes:

* MICR
* Plotter

1. Define backup storage. Explain why hard disk is more reliable than floppy disk. [1+4]
2. Differentiate between multiprogramming OS and multiprocessing OS. [5]
3. Define syntax and semantics. Write the different between compiler and interpreter. [2+3]
4. What is algorithm? Write flowchart and algorithm to check the given number is odd or even. [2+3]
5. What is word processor? Write the functions of thesaurus and mail merge. [2+3]

Or

What is cell addressing and explain different types of cell addressing used in Spreadsheet. [2+3]

1. Differentiate between impact printers and non-impact printers. [5]
2. Explain the functions of web server and DNS. [5]

Or

What is tag in html? Write the functions of <p>, <h1> and <sub> tags. [2+3]

**SET 3**

Attempt any **three** questions [3X10=30]

1. What is output unit? Describe various categories of impact printers and non-impact printers with respective merits and demerits. [2+8]
2. What do you mean by Boolean algebra? Explain the symbol, algebraic expression, truth table and Venn diagram of AND, OR, XOR and XNOR.

[4+6]

1. What is computer system? Explain the major applications of computer system. [2+8]
2. a. Define the terms: data, instruction and information. Also difference between hardcopy and softcopy information. [3+2]

b. Define home page and follow page. Design a webpage using html codes to insert an image. [2+3]

**Group B**

Attempt any **nine** questions [9X5=45]

1. Distinguish between IBM computer and Apple Macintosh computer. [5]
2. Differentiate between XOR and XNOR grates [5]
3. Solve the following [2.5+2.5]
   * + - Convert (234.85)10 into binary system
       - Convert (2019)10 into base 4 number system
4. What is cache in computer system? Explain the uses of cache in computer.
5. Write short notes: [2.5+2.5]

* Email
* ENIAC

1. Differentiate between CRT monitor and LCD Monitor. [3+2]
2. Write a flowchart to calculate the factorial of a number. [2.5+2.5]
3. Differentiate between SRAM and DRAM [5]
4. Differentiate between CUI and GUI. [5]
5. What is web page? Explain the major features of web page. [2+3]

**SET 4**

Attempt any **three** questions [3X10=30]

1. "An Operating system is an interface between human operators and machine." Justify your answer. [10]
2. Define program, programmer and programming language and also differentiate between low level and high level programming languages. [3+7]
3. What is memory? Classify and explain the importance of various types of memories. [2+8]
4. a. What is open source operating system? Write notes about UNIX operating system. [2+3]

b. Differentiate between serial and parallel port? How are they different from USB port? [3+2]

**Group B**

Attempt any **nine** questions [9X5=45]

1. Explain the contribution of Charles Babbage in the history of computer. [5]
2. Differentiate between microcomputer and minicomputer. [5]
3. Define logical gate. Write the t-table, logical symbol and v-diagram for XOR gate. [2+3]
4. Solve the followings: [2.5+2.5]

* Convert (ABC)16 into base 8
* Convert (905)10 into BCD

1. Is there any difference between CPU & microprocessor? Write functions of CPU. [1+1+3]
2. Write short notes: [2.5+2.5]

* ASCII
* Compiler

1. What is utility software? Explain the use of various utility software. [2+3]
2. What is open source software? Write merits and demerits of such software. [2+3]
3. Write flowchart and pseudo code to display multiplication table of 5. [2+3]
4. Explain the popular internet services: www and messing service. [2+3]

**SET 5**

Attempt any **three** questions [3X10=30]

1. Draw a well-labeled diagram of typical architecture of a computer system and explain the main function of Control Unit and ALU. [4+3+3]

2. a. What is an operating system? Explain any three functions of an operating system. [2+3]

b. What is cell addressing? And explain different types of cell addressing used in spreadsheet. [2+3]

3. a. The ‘GUI’ environment is much more user-friendly why? [5]

b. Explain the following html tags: <A> and <INPUT>. [2.5+2.5]

4. a. Define flow-chart and pseudo-code. Explain their significance in programming. [2+3]

b. Write a pseudo-code to accept any three numbers and output the largest among them. [5]

**Group – B**

Attempt any **nine** questions [9X5=45]

5. Classify the computers according to their generation based on the technology used. [5]

6. Differentiate between analog and digital computer, explain with examples. [5]

7. What do you mean by number system? Why do digital computers use binary numbers for their operation? [2+3]

8. Convert these numbers [2.5+2.5]

a. (11011)2 = (?)10 b. (126)10 = (?)2

OR Perform following operations

c. 1011 – 1001 d. 1110 + 1110

9. State and prove the De Morgan’s theorem. [2+3]

10. Write short notes on: [2.5+2.5]

a. IDE b. SCSI

11. What are DTP features in MS-Word? Write three features of Presentation Packages. [2+3]

12. Differentiate between system software and application software. [5]

13. Write an algorithm and a flow chart to print the word “Hello” ten times using loop. [5]

14. What are uses of Internet? Write any five search engine name. [2+3]

Or

What is e-mail? Write the merit and demerit of email. [2+3]