

System Fundamentals

Model Paper

Question 01

- 1) What is a computing paradigm and explain three(03) different computing paradigms briefly.
- 2) Why we choose transistors in new era rather than using vacuum tubes?
- 3) What are the two types of transistors and explain the difference between them.
- 4) Explain how transistor works as a gate.
- 5) What are universal gates?
- 6) What are exclusive gates?
- 7) Complete the given table using appropriate answers.

	Exclusive -OR	Exclusive-NOR
Boolean Expression		
Symbol		
Truth table		

Question 02

- 1) Explain Von Neumann Architecture briefly.
- 2) What is a microprocessor? Describe the characteristics of microprocessors.
- 3) Define below terms and write a small, short note about each,
 - a) ISA
 - b) RISC
 - c) CISC
 - d) Microarchitecture
- 4) Explain how computer programs can be convert into an machine language.
- 5) Explain the difference between compiler and Interpreter.
- 6) Choose the programming languages that belong to the compiler and interpreter separately.
 - a) C
 - b) Java
 - c) PHP
 - d) Visual Basic
 - e) Pascal
 - f) Python
 - g) C#