**INDIAN SCHOOL AL WADI AL KABIR**

Unit Test 2025-26

 **SUB: Computer Science (083)**

**ANSWER KEY**

CLASS: XI Max. Mark: 30

|  |
| --- |
|  |
|  | **Question** |  |
| **Q. No.** | **SECTION - A** | **Marks** |
| 1 | b. Compiler | 1 |
| 2 | b. Utility Software | 1 |
|  3 | 1. !=
 | 1 |
| 4 | 1. @book
2. book#
 | 1 |
| 5 | d. Explicit type casting | 1 |
|  6 | c. a b c=20,30,40  | 1 |
| 7 | 1. expression
 | 1 |
| 8 | c. (AB)’+ C’ | 1 |
| 9 | 1. is
 | 1 |
| 10 | 1. print(“Hi”, sep=”$”, 5)
 | 1 |
|  | **SECTION – B** |  |
| 11 | 8$2#18 | 2 |
| 12 | Prove the following expressions using Truth Table.(a+b)’ = a’ . b’

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a | b | a+b | (a+b)’ | a’ | b’ | a’.b’ |
| 0 | 0 | 0 | **1** | 1 | 1 | **1** |
| 0 | 1 | 1 | **0** | 1 | 0 | **0** |
| 1 | 0 | 1 | **0** | 0 | 1 | **0** |
| 1 | 1 | 1 | **0** | 0 | 0 | **0** |

x + x’y = x + y

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | y | x’ | x’y | x+x’y | x+y |
| 0 | 0 | 1 | 0 | **0** | **0** |
| 0 | 1 | 1 | 1 | **1** | **1** |
| 1 | 0 | 0 | 0 | **1** | **1** |
| 1 | 1 | 0 | 0 | **1** | **1** |

 | 2 |
| 13 | Explain the basic components of a computer system using a block diagramA computer system primarily comprises of a central processing unit, memory, input/output devices, and storage devices. All these components function together as a single unit to deliver the desired output.  CPU-It is the electronic circuitry of a computer that carries out the actual processing and is usually referred to as the brain of the computer. ALU performs all the arithmetic and logic operations that need to be done as per the instruction in a program. CU controls sequential instruction execution, interprets instructions and guides data flow through the computer’s memoryThe devices through which control signals are sent to a computer are termed as input devices.The device that receives data from a computer system for display, physical production, etc., is called output device. | 2 |
|  |  **SECTION - C** |  |
| 14 |  Do the following:i. (8FD9)16 = (107731) 8ii. (876)10 = (1101101100) 2iii. (456) 8 = (302) 10 | 3 |
| 15 | 1. Evaluate the following Expressions:
2. 543.0
3. False

b. Find the output of the following code:b c | 3 |
|  | **SECTION - D** |  |
| 16 | n=int(input("enter the number :"))if n%2!=0: if n%10==7: print("odd no. ending with 7") else: print("odd no. not ending with 7")else: print("not an odd no")a=int(input("enter the first coefficient"))b=int(input("enter the second coefficient"))c=int(input("enter the third coefficient"))d=b\*\*2-4\*a\*cif d>0: r1=(-b+d\*\*0.5)/(2\*a) r2=(-b-d\*\*0.5)/(2\*a) print("the roots are : ", r1 ,r2)elif d==0: r1=-b/(2\*a) r2=r1 print("The roots are :", r1,r2)else: print("Roots are imaginary") | 4 |
| 17 | d=int(input("enter the distance"))if d<=20: fare=d\*20elif d<=40: fare=400+(d-20)\*15elif d<=90: fare=700+(d-40)\*10else: fare=1200+(d-90)\*6 print(fare)a=int(input("enter the first side"))b=int(input("enter the second side"))c=int(input("enter the third side"))if a==b==c: print("Equilateral triangle")elif a==b!=c or a==c!=b or b==c!=a: print("Isosceles triangle") else: print("scalene triangle") | 4 |