	Southeast University **[MMJR]**

Southeast University   **[MMJR]**
Department of Computer Science & Engineering
Final Examination, Summer 2023
Program: B. Sc. in CSE
Course Code: CSE 141.1/141.6, **Course Title:** Computer Fundamental
Date: Wednesday, 18-10-2023, **Time:** 9:30 AM to 11:30 AM

Instructions: Examinees are not allowed to use cell phones or any communication devices in the exam hall.

[N.B. - The figures in the margin indicate full marks and the symbols carry the usual meaning.]

Duration: **2 Hours**   Full Marks: **40**

Answer the following questions.

1.	Using the truth table proves that $AB+BC+C\overline{A} = AB+C\overline{A}$	6
2.	Reduce the given Boolean expression: $A = XY + X(Y+Z) + Y(Y+Z)$	6
3.	Implement the given Boolean expression $A.\overline{B} + C.(A+B.D)$ using only AND/ OR gates	6
4.	A. Subtract $(1010)_2$ from $(1000)_2$ using 1's complement method. B. Subtract $(110)_2$ from $(101)_2$ using 2's complement method. C. 10110.1 divided by 1101	6
5	Draw the flowchart diagram to determine whether a temperature is below or above the freezing point. Algorithm: ● Step 1: Input temperature ● Step 2: If it is less than 32, then print "below freezing point", otherwise print "above freezing point"	6
6.	Write down the output for the following code based on the given values: [If the given codes are executed on the computer what would be the output?] a, b, c = "Red", "Green", "Yellow" print(b) x3 = 12.5 print("Type of x3: ", type(x3)) text = 'Hello Koushik, This is your first python practise' if "Sarker" not in text: print("Yes, 'Sarker' is Not present.") quantity = 3 itemno = 567	10

```python
price = 49.95
myorder = "I want {} pieces of item {} for {} dollars."
print(myorder.format(quantity, itemno, price))
print(11 % 2)
print(4 ** 2)
x1 = 4
x1 *= 2
print(x1)
print(x1 > 3 and x1 < 2)
i=0
while i<6:
  print(i)
  i+=2
for i in range(5):
    print(i, end=" ")
```