

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY (VSSUT), ODISHA
Mid Semester Examination May - 2019

COURSE NAME: **B.Tech**

SEMESTER: **2nd Semester**

BRANCH NAME: **Section A, B, C, D, E, F, G**

FULL MARKS: **20**

TIME: **2 Hours**

SUBJECT NAME: **Computer Programming**

Answer **All** Questions.

The figures in the right hand margin indicate Marks. *Symbols carry usual meaning.*

*int x, y. int n, int y.
a = 100, 0*

- Q1. Answer all Questions. [1 × 5]
- a) Fill up the blanks: - CO1
i) $(557.65)_8 = ()_{16} = (16F.D4)_{16}$ ii) $(724.32)_{10} = ()_2 = (1011010100.01)_2$ - CO2
- b) Differentiate between keywords from identifiers? - CO2
- c) Differentiate between entry control and exit control loop structure? - CO2
- d) What will be the output of the code - CO3
i) `#include<stdio.h>`
`void main() {`
`int x = 10, y = 20, res;`
`res=y++ + x++;`
`res+=++y + ++x;`
`printf("\n x=%d Result=%d", x, res);`
`}`
ii) `#include<stdio.h>`
`void main() {`
`int a=0, j=100;`
`if(a=j)`
`printf("first\n"); else printf("second\n");`
`if(a=j,0)`
`printf("first\n"); else printf("second\n");`
`}`
*dry run.
a = 0.
j = 100
a = 100 (7)
first*
- e) What will be the output of the code - CO3
i) `#include<stdio.h>`
`void main() {`
`{`
`int i=3;`
`for(i--; i<7; i=7)`
`printf("%d", i++);`
`}`
ii) `#include<stdio.h>`
`void main() {`
`int i=4;`
`switch(i){`
`default: printf("LAST\n");`
`case 1: printf("FIRST\n");`
`case 2: printf("SECOND\n");`
`case 3: printf("THIRD"); } }`
- Q2. [2.5 x 2]
- a1) Describe the procedure to convert source code in c program to executable code. - CO1
- a2) Draw the flow chart to find the roots of a quadratic equation with proper symbol. - CO1
- OR
- b1) Sketch and describe the block diagram of a computer. - CO1
- b2) What is the difference between Keywords, Identifiers, Constants and Variables? Give examples of each. - CO1
- Q3. [2.5 x 2]
- a1) Describe the use of ternary operator and write a program to find the greatest of three numbers using ternary operator? - CO2
- CO2
- a2) With suitable example discuss the use of logical operators?

OR

b1) Discuss any three bitwise operators? Swap two given number using bitwise operator? - CO2

b2) What are the formatted input output statements available in C? Give suitable example. - CO2

Q4.

[2.5 x 2]

a1) Write a program to calculate gross salary using the following conditions: if basic salary is less than 1500/- , then hra is 10% and da is 90% otherwise hra is 20% and da is 95%, where gross salary is sum of basic salary, hra and da. - CO3

a2) Write a program to check a year is leap year or not. - CO3

OR

b1) Write a program to check whether a number is a palindrome or not. - CO3

b2) Write a C program to print the following pattern. - CO3

```
1
2 2
3 3 3
4 4 4 4
```