

## **Tutorial Sheet - I**

**Course:** B.Tech (CSE)

**Year/Semester:** I/I    **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks:**

**Time allowed:** 45 Mins.

**Note/Instruction (If any)**

- Q1.** Which memory stores the data permanently? Give some examples.
- Q2.** If you are writing a letter in MSWord, in which memory, contents will be written? If computer is switched off due to power failure, what will happen to the contents of your letter?
- Q3.** If you are going to purchase a computer from a computer shop? What configuration you would like to see in your system? Write answer with justification.
- Q4.** What is BIOS? Which kind of memory is preferred in it, and why?
- Q5.** Write the four examples of application software and system software that you have used in your daily life.
- Q6.** Broadly classify the computer system into two parts. In addition, make a comparison between human body and the computer system, thereby explaining which part performs what function.
- Q7.** In which memory, we save our program? In which memory, programs are executed- RAM or Hard Disk and why?
- Q8.** Write the difference between compiler and Interpreter? Give some examples programming languages of each.
- Q9.** In which generation of computer, microprocessor was introduced?
- Q10.** What do you mean by volatile memory? Give example.
- Q11.** To what temporary area can you store text and other data, and later paste them to another location?
- Q12.** What is the name of science that attempts to produce machines that display the same type of intelligence that humans do? In which generations of computer, it was used?
- Q13.** Which types of computers are used for making server? What are the characteristics of them?
- Q14.** Which types of computers are used in Banking, Railways, and Airlines?
- Q15.** Through which, information travels between components on the mother board?

## **Tutorial Sheet - II**

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**Max. Marks:**

**Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Elaborate the use of all number system in computer.

**Q2.** Perform the following conversion from Decimal to other number as directed-

a)  $(365.55)_{10} = (?)_2$

b)  $(453.65)_{10} = (?)_8$

c)  $(5164.12)_{10} = (?)_{16}$

d)  $(23.65)_{10} = (?)_5$

e)  $(772)_{10} = (?)_7$

**Q3.** Covert the following numbers to decimal number system-

a)  $(325.54)_6 = (?)_{10}$

b)  $(1001010110101.1110101)_2 = (?)_{10}$

c)  $(742.72)_8 = (?)_{10}$

d)  $(AC94.C5)_{16} = (?)_{10}$

**Q4.** Perform the following conversion from Hexadecimal to other number as directed-

$(DB56.CD4)_{16} = (?)_2, (?)_8, (?)_4$

**Q5.** Perform the following conversion from octal to other number as directed-

$(473.42)_8 = (?)_2, (?)_{10}, (?)_{16}, (?)_5$

**Q6.** Find the value of A?

a)  $(23)_{10} = (17)_A$

b)  $(21)_{16} = (41)_A$

c)  $(32)_8 = (101)_A$

## **Tutorial Sheet - III**

<b>Course:</b> B.Tech (CSE)	<b>Year/Semester:</b> I/I	<b>Session:</b> 2017-2018
<b>Subject Name &amp; Code:</b> Fundamentals of Computer & Programming (CSE 1101)		
<b>Max. Marks:</b>	<b>Time allowed:</b> 45 Mins.	
<b>Note/Instruction (If any)</b>		

**Q1.** Solve the following question and design the algorithm and flowchart to demonstrate the steps.

Walking at the rate of 4 kmph a man cover certain distance in 2 hr 45 min. Calculate the time the man will cover the same distance running at a speed of 16.5 kmph.

**Q2.** Calculate bonus given to an employee based on overtime he/she did in a month.

if overtime $\geq$ 10 hours	bonus = 5000,
overtime $\geq$ 5 hours	bonus = 2500 and
overtime $\geq$ 2 hours	bonus = 1000

Design the algorithm and flowchart to calculate the bonus.

**Q3.** Solve the following question and design flowchart and algorithm to demonstrate the steps.

Ram buys a scooter for Rs. 4700 and spends Rs. 800 on its repairing. If he sells the scooter for Rs 6600, what will be his profit percentage?

**Q4.** Design flowchart and algorithm to print the series-

1      2      5      29      866

**Note:** first two terms are fixed. Rest of the terms calculated as squares sum of last two terms.

**Q5.** Design flowchart for following algorithm-

- 1 Start
- 2 Read n
- 3 Set I = 0
- 4 Write I
- 5 I = I + 2
- 6 if (I  $\leq$  n) then goto step 4
- 7 End

**Q6.** Design algorithm and flowchart to print all numbers between m to n that are divisible by 3 and even.

## **Tutorial Sheet - IV**

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**Year/Semester:** I/I

**Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks:**

**Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Code the variable declarations for each of following:

- a) A character variable named option.
- b) An integer variable sum initialized to 0
- c) A floating point variable, product, initialized to 1

**Q2.** Write a program that reads nine integers. Display these numbers by printing three numbers in a line separated by commas.

**Q3.** What are header files and what are its uses in C programming?

**Q4.** What will be the output of following program?

```
#include<stdio.h>
int main()
{ int num=070;
printf(“%d\t%o\t%x”,num,num,num);
}
```

**Q5.** What will be the output of following program?

```
#include <stdio.h>
void main()
{
int x = printf("GLA UNIVERSITY");
printf("%d", x);
}
```

**Q6.** What are library functions? List any four library functions.

**Q7.** What is the meaning of following statement? `printf(“%d”,scanf(“%d%d”,&a,&b));`

**Q8.** What will be the output of following program?

```
#include <stdio.h>
void main()
{
printf(“\nC %% FOR %% PLACEMENT\”);
}
```

**Q9:** What will be the output of following program? Assume integer is of 2 bytes

```
void main(){
int a=32770;
printf(“%d”,a);
}
```

**Q10:** `#include <stdio.h>`

```
int main()
{
float c = 5.0;
printf ("Temperature in Fahrenheit is %.2f", (9/5)*c + 32);
return 0;
}
```

## **Tutorial Sheet - V**

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**Max. Marks:**

**Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Suppose distance between GLA University and Delhi is m km (to be entered by user), by BUS you can reach Delhi in 4 hours. Develop a 'C' program to calculate speed of bus.

**Q2.** In an exam Satyam got 50 marks, Suman got 70 marks and Shyam got 80 marks, Write a 'C' program to find average marks of these three participants.

**Q3.** One day, Mohan called Saurav and Sajal and gave some money to them, later he realized that money that was given to Saurav should be given to Sajal and vice-versa. Develop a 'C' program to help Mohan so that he can rectify his mistake.

**Q4.** One day when I was going for a lunch, suddenly rain started, I was very hungry so started running with speed of 4km/h and it took 3 min to reach mess. Help me to develop a 'C' program to calculate distance travelled by me.

**Q5.** Can two or more escape sequences such as \n and \t be combined in a single line of program code?

**Q6.** What are comments and how do you insert it in a C program?

**Q7.** What is wrong in this statement? scanf("%d",number);

**Q8.** What will be the output?

```
#include <stdio.h>
int main()
{
    if (sizeof(int) > -1)
        printf("Yes");
    else
        printf("No");
    return 0;
}
```

**Q9.** Point out which of the following variable names are invalid:

gross-salary INTEREST , salary of emp , avg. , thereisbookinmysoup

**Q10.** What does the following C statement mean?

```
scanf("%4s", str);
```