U18CH052

S. V. National Institute of Technology, Surat
B.Tech-I End semester Examinations Nov-Dec-2018
Sub: Fundamentals of Computers & Programming(CO100)

34/50

Maximum Marks : 50 **Date: 28th November, 2018** **Time: 8:30AM to 11:30AM**

Q1 **Answer the following (Show necessary steps):** **08**

1. Calculate the 8's and 7's complement of $(6217)_8$
2. $(5B8)_{16}$ $(6457)_8 = (?)_2 = (?)_{10}$
3. $(21X)_7 + (1Y5)_7 = (362)_7$ then X=?, Y=?
4. Calculate $(57)_{10}$-$(25)_{10}$ using 2's complement method.

Q2 **Answer the following (Any Seven):** **14**

1. What is an operating system? Describe in brief various tasks of an operating system.
2. Define network topology. Explain tree topology with merits and demerits.
3. Explain in brief various phases of C program development environment.
4. Explain the classification of computers according to data handling.
5. Differentiate between SRAM and DRAM.
6. Explain in brief: Different types of ROM.
7. Define multiprocessor systems. Explain two popular architectural approaches to build multiprocessor systems.
8. Explain in brief the following terms: BCD, ASCII, and EBCDIC.

Q3 **Draw a flowchart to check whether the given number is prime or not?** **02**

Q4 **Answer the following with respect to C programming language (Any Four):** **12**

1. Explain different kinds of type conversion with example.
2. What is an Enum? Explain it with example.
3. What are identifiers, constants and keywords? Explain them with examples.
4. What is function parameter? Explain different types of parameters in C functions with example.
5. Differentiate between structure and union with example.

Q5 **Write C programs for the following:**

1. Write a program to count and display the total number of positive, negative and zero numbers in array. Enter the numbers into an array during run time. **03**
2. Write a program using switch-case statement and user defined functions to delete a number from an array (i) by using position of a number and (ii) by using value of a number. **05**
3. Write a program to add two numbers using call by reference. **02**

Q6 **Find output of the following C programs:** **04**

a.
```
#include<stdio.h>
int main()
{
  int a = 5, *b, c;
  b = &a;
  printf("%d", a * *b * a + *b);
  return 0;
}
```

b.
```
#include<stdio.h>
int main()
{
   int a = 0;
   while (a < 5) {
      printf("%d\\n", a++);
   }
return 0;
}
```

c.
```
#include<stdio.h>
int main()
{
  int x = 30, y = 25, z = 20, w = 10;
  printf("%d ", x * y / z - w);
  printf("%d", x * y / (z - w));
  return 0;
}
```

d.
```
#include <stdio.h>
 int main()
{
   int c = 4;
   c = c++ + ~++c;
   printf("%d", c);
   return 0;
}
```

U18CH052

Computer Engineering Department, S.V.N.I.T., Surat.
Mid Semester Examinations, September 2018
B Tech I (Div. F to J) – 1st Semester
Course : CO100(Fundamentals of Computers & Programming)

Date: 26th September, 2018 **Time: 09:00 hrs to 10:30 hrs** **Max Marks: 30**

Instructions: (1) Write your B Tech Admission No/Roll No and other required details clearly on your question paper, answer book and supplementary. (2) Assume any necessary data by giving proper justifications. (3) Be precise and clear in answering the questions. (4) Figure to the right indicates full marks of the respective question.

Q.1 Answer the following:

1. Draw flowchart for the programming construct: *while loop*, *do-while* loop, *else-if* ladder, and *switch-case* statement. 02
2. Differentiate between 2nd and 3rd generation of computers. 03
3. Explain in brief: BIOS and ASCII 02
4. Fill in the following blanks: 03
   a) A register that keeps track of next instruction to be executed is called a PC
   b) _____ is a type of processor architecture that utilizes a small, highly optimized set of instructions.
   c) The speed of computer is calculated in _____
5. Do as directed showing appropriate steps for calculations: 06
   a) $(4235)_8 - (1756)_8 = (?)_8 = (?)_{16}$
   b) $(11101.10111)_2 + (100101.101)_2 + (1111101.11111)_2 = (?)_{10} = (?)_{16}$
   c) Perform $(20.25)_{10} - (27.50)_{10}$ using 2's complement.

Q.2 Answer the following (With respect to C programming language):

1. Write a C program to arrange the numbers stored in array in such a way that array will have odd numbers appear first followed by even numbers without taking an extra array. e.g., if an array contains numbers -[10 21 33 4 35 86 17 8 9], then output is:- [21 33 35 17 9 10 4 86 8]. 04
2. Write a C program to print the following pattern **(Any One)**: 04

(a)

```
S
S V
S V N
S V N I
S V N I T
S V N I
S V N
S V
S
```

(b)

```
S V N I *
S V N * T
S V * I T
S * N I T
* V N I T
```

3. Enlist various data types of C with their size (in bytes) and format specifier. 03
4. Find the output of the following: 03

(a)

```
#include<stdio.h>
#include<conio.h>
int main()
{
int n;
for(n = 7;n != 0;n--)
   printf("n= %d", n--);
getchar();
return 0;
}
```

(b)

```
#include<staio.h>
#include<conio.h>
int main()
{
int z, x=6, y= -20, a=6,
b=3;
z= x++ - --y*b/a;
printf("%d",z);
return 0;
}
```

(c)

```
#include<stdio.h>
#include<conio.h>
#define scanf "%s SVNIT Surat"
int main()
{
printf(scanf, scanf);
getchar();
return 0;
}
```

Sardar Vallabhbhai National Institute of Technology, Surat

B.Tech I (Sem I)

Mid Semester Examination

English & Communication Skills HSF 111

Date: 29/09/2018 Time – 11 am to 12.30 pm MM 30

Q1. Answer the following question: - (12 marks)

Assuming you are a final year student of SVNIT, write your resume incorporating the following words: -

achieved, demonstrated, interacted, determined, formulated

performed, generated, synthesised, strengthened, collaborated

Q2. Answer any one of the following questions: - (8 marks)

a) As a B.Tech first year student of SVNIT, write a cover letter which you will send along with your résumé' to apply for internship in the company of your choice.

b) Write a Complain Letter complaining about the damaged laptops and printers delivered to your office by HP computers co Limited Mumbai. Also ask for replacement or compensation.

Q3. Answer any two of the following questions. (200 words each) (3x2 marks)

a) Discuss Oculesics and Haptics as part of non- verbal communication.

b) State the differences between written and oral communication.

c) Initiate a group discussion on the topic "All that glitters is not gold".

Q4. Give one-word answer for the following questions. (4 marks)

a) Talking to yourself in order to build confidence is an example of which level of communication? Intrapersonal

b) Mr Bhatia got angry and shouted at all his colleagues in today's meeting. This is an example of which cause of interpersonal barrier to communication. Emotional burst

c) Memorandum or memo is an example of which medium of communication? Technical

d) Sending a periodic report every fortnightly to your boss is an example of which flow of communication. Vertical Upward