

P P SAVANI UNIVERSITY

First Semester of B. Tech. Examination

May 2019

SECE1010 Basics of Computer & Programming

24.05.2019, Friday

Time: 12:30 p.m. To 3:00 p.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

Q - 1 Fill in the Blanks. (Any Five)

[05]

(i) The speed of computer is calculated in _____.

(ii) The memory that resides inside the processor is called _____.

(iii) 1 KB = _____ bytes.

A program that translates the assembly language code into machine language code is known as _____.

(v) The language translator that translates the program written in high-level language into its corresponding machine code is called _____.

(vi) Two types of memory are _____ and _____.

(vii) Diamond Symbol in flowchart is used for _____.

Q - 2 (a) Draw a block diagram to illustrate the basic organization of a computer system and explain the functions of various units of a computer system. [05]

Q - 2 (b) Differentiate between Static RAM and Dynamic RAM. [05]

OR

Q - 2 (a) Draw the flowchart to print greater number out of given two numbers. [05]

Q - 2 (b) What do you understand by CPU? Describe various units of the CPU in detail. [05]

(a) What are registers? Enlist five registers with their functions. [05]

Q - 3 (b) What is ROM? Differentiate EPROM and EEPROM. [05]

OR

Q - 3 (a) List out various applications of computers. [05]

Q - 3 (b) Explain the types of operating system. [05]

Q - 4 Attempt any one. [05]

(i) Explain the different data types available in C programming language.

(ii) What is a constant? Explain the usage of constants in C programming language.

SECTION - II

Q - 1 Answer the following questions. (Any Five) [05]

- (i) What is the size of the array initialized as: `int a[]={1, 2, 3, 4}`?
- (ii) Is it valid to use for loop as shown below? Justify your answer.

```
for(;;)
```

(iii) Write the output of the following c code:

```
printf("The world is very beautiful:\n\nThe value is %5.2f", 54.7865)
```

(iv) In `do....while()`, loop body is executed minimum zero times. State if it is True or False.

(v) If `char str[] = "India"`, what is the output of `printf("%d", strlen(str))`?

(vi) What is the output of following line of c code written in `main()`?

```
printf("%d", a=5*6.5/2);
```

(vii) Write the output for the following C code:

```
void main()
{
    int a = 10;
    printf("%u", sizeof(float(a)));
}
```

Q - 2 (a) Explain while loop in C language with a suitable programming example. [05]

Q - 2 (b) Write a program to count number of digit in a given number. Hint: if given number is 4567 then number of digits is 4. [05]

OR

Q - 2 (a) What is an array? How to declare the array in C programming language? Show with proper example. [05]

Q - 2 (b) Write the syntax and use of `strlen()` and `strcat()`. [05]

Q - 3 (a) Write a program to read 10 numbers in the array and print the sum of all values. [05]

Q - 3 (b) Explain `if()...else if()....else` statement with example. [05]

OR

Q - 3 (a) Explain different types of operator in C programming language. [05]

Q - 3 (b) Write a program using ternary operator to find the greatest number out of given three numbers. [05]

Q - 4 Attempt any one. [05]

(i) What is a function? Write a function to add two integer numbers.

(ii) Create a structure to store the information of a book and show its use in `main()`.
