

DiplETE – ET/CS (Current & New Scheme)

Time: 3 Hours

JUNE 2017

Max. Marks: 100

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q. 1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions, selecting TWO questions from part A and THREE questions from part B. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q.1 Choose the correct or the best alternative in the following: (2×10)

- The set of rules that define the logic of problem in simple English is known as:
(A) flow chart (B) program
(C) algorithm (D) language
- Which symbol of flowchart represents a decision point in a program:
(A) Diamond shaped (B) oval shaped
(C) rectangular shaped (D) circle shaped
- A character variable at a time, stores
(A) 1 Character (B) 8 Character
(C) 256 Character (D) None of these
- A do-while loop is useful when we want that the within the loop must be executed,
(A) only once (B) at least once
(C) more than once (D) None of these
- Which of the following statement is used to take control to the beginning of the loop?
(A) Exit (B) Break
(C) Continue (D) None of these
- What will happen if you put too few elements in an array when you initialize it?
(A) Nothing
(B) Possible system malfunction
(C) Error message from the compiler
(D) Unused elements will be filled with 0's or garbage
- If an integer is to be entered through the keyboard, which function would you use?
(A) scanf() (B) gets()
(C) getch() (D) getchar()

Code: DE53/DC53/DE103/DC103

Subject: COMPUTER FUNDAMENTALS & C PROGRAMMING

- h. Which of the following are token in C
 (A) Keywords (B) Variables
 (C) Constants (D) All of these
- i. The FILE structure is defined in which of the files
 (A) sdlib.h (B) stdio.c
 (C) io.h (D) stdio.h
- j. Which of the following is NOT a character constants
 (A) 'Thank you' (B) 'Enter value of P,N,R'
 (C) '25.35 (D) All of these

PART A**Answer any TWO questions. Each question carries 16 marks.**

- Q.2** a. Clearly draw organization of a computer and explain it. (4)
 b. Write down the characteristics of computers. (4)
 c. Convert the following –
 (i) $(0.8125)_{10}$ to binary (D6C4)₁₆ to decimal
 (ii) $(38)_{10}$ to binary $(44)_{10}$ to Hexadecimal (2x4)
- Q.3** a. Explain MICR and OMR. (4)
 b. Explain assembly and high level Language with suitable example and syntax. (4+4)
 c. Write the features of Unix operating system. (4)
- Q.4** a. Draw and explain internal structure of a microprocessor. (8)
 b. Explain
 (i) Internet (ii) Wireless LAN (4+4)

PART B**Answer any THREE questions. Each question carries 16 marks.**

- Q.5** a. What is the need of trigraph characters? Explain. (4)
 b. Explain :- (3x4)
 (i) Arithmetic Operators (ii) Logical Operators (iii) Relation Operators
- Q.6** a. Explain switch-case with help of a suitable example (8)
 b. Write a program to find out whether a given number is prime or not. (8)
- Q.7** a. Write a program to add two 3x3 matrices. (8)
 b. Explain following string handling functions:- (2x4)
 (i) Strcat() (ii) Strcmp() (iii) Strcpy() (iv) Strlen()
- Q.8** Explain following functions :- (4x4)
 (i) No argument and No return value (ii) Arguments but no return value
 (iii) Arguments with return value (iv) No argument but returns a value
- Q.9** a. How a pointer is used in array? Explain with suitable example. (4+4)
 b. Explain :- (4+4)
 (i) Opening a file (ii) Closing a file