

AMIETE – ET/CS/IT (Current & New Scheme)

Time: 3 Hours

June 2018

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. 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)

- a. How many bits is a kilobyte?
(A) 8192 (B) 1024
(C) 8000 (D) 1000
- b. Computer or system peripherals that receives data from processing unit are called
(A) Receiver (B) Output devices
(C) Analogue devices (D) Preprinted documents
- c. Process of reading data from permanent store and writing it to computer's main store is called
(A) Saving data (B) Writing data
(C) Loading data (D) Reading data
- d. Memory that is called a read write memory is
(A) EPROM (B) Registers
(C) ROM (D) RAM
- e. Communication between a computer and a keyboard involves _____ transmission
(A) Automatic (B) Full-duplex
(C) Half-duplex (D) Simplex
- f. MS-DOS was developed in
(A) 1991 (B) 1971
(C) 1984 (D) 1961

- g. When double is converted to float, the value is?
(A) Truncated (B) Depends on the compiler
(C) Rounded (D) Depends on the standard
- h. The keyword 'break' cannot be simply used within
(A) if-else (B) do-while
(C) while (D) for
- i. Structures can be used to
(A) have pointers to structures (B) hold different data types
(C) assign to one another (D) All of the above
- j. Size of void pointer is
(A) 2 Byte (B) 1 Byte
(C) 4 Byte (D) 8 Byte

Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

- Q.2** a. Write the advantages and disadvantages of the different computer generations. (8)
b. Write the difference between impact and non impact printer. (4)
c. What do you mean by pointing input device? Write some examples of such devices. (4)
- Q.3** a. Write a note on components of motherboard. (4)
b. What is an operating system? Write the characteristic of an operating system. (2+6)
c. Explain the General Structure of CPU. (4)
- Q.4** a. Explain the basic structure of a C program. (8)
b. What are the program development steps? (4)
c. What is the difference between Unix system and DOS system? (4)
- Q.5** a. What are C tokens? Explain all its types with example. (1+6)
b. Write the properties of all storage classes used in C language. (6)
c. What is a formatted and unformatted I/O function? Give an example for each type. (3)

- Q.6** a. Write a C program to swap two numbers without using the third variable and without using addition and subtraction operator. (4)
- b. What is type casting? Explain all type of types castings with an example. (2+6)
- c. Write a C program to accept a number and display it in reverse order. (4)

- Q.7** a. Write the difference between recursion and iteration. (4)
- b. Write a C program to pass an array as a function parameter and find the sum of the array elements. (6)
- c. What is a user define function? Mention some advantages. (2+4)

- Q.8** a. What is Entry Controlled and Exit Controlled loops in C language? (4)
- b. What are the differences between break and continue statements in C language? (4)
- c. Write a C program to read the mark of a subject and generate the following grades using switch statement. (8)

Mark of a subject	80-100	60-70	50-59	40-49	39-0
Grade (based on 10)	Honors	1st Division	2nd Division	3rd Division	Failed

- Q.9** a. Write a C program to find whether the given string is present in the main string or not. (8)
- b. Write a C program to remove duplicate elements from a given array. (8)