

AMIETE – ET/CS/IT {New Scheme}

Time: 3 Hours

December 2016

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. A variable declared in a function can be used in main
(A) True (B) False
(C) True if it is declared static (D) None of these
- b. Which is valid C expression?
(A) int my_num = 100,000; (B) int \$my_num = 100000;
(C) int my_num = 1000; (D) All of these
- c. ASCII stands for
(A) American Standard Code for Information Interchange
(B) American Scientific Code for International Interchange
(C) American Standard Code for Intelligence Interchange
(D) American Scientific Code for Information Interchange
- d. NIC stands for
(A) Network Internal Card
(B) Network Interconnection Channel
(C) Network Interface Card
(D) None of these
- e. Which of the following loops will definitely execute atleast once even if the condition is not satisfied?
(A) for (B) While
(C) do-while (D) None of these
- f. In the “if-else” statement “else” is optional
(A) True (B) False
(C) Depends on the condition (D) None of these

- g. Which of the following will increase an integer variable "i" by 1?
(A) i++; (B) i+=1;
(C) i=i+1; (D) All of these
- h. If z is a float variable, z=4/2 will return a value
(A) 1.5 (B) 2.0
(C) 0 (D) None of these
- i. What is the value of !0?
(A) 1 (B) 0
(C) -1 (D) -5
- j. To avoid the repetition of same code we are using
(A) Array (B) Break statement
(C) Function (D) All of these

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

- Q.2** a. Write the basic characteristic of different generation of computers? (6)
- b. Why output devices are important for a computer? Explain most commonly used output devices. (5)
- c. Write the difference between system software and application software with example? (5)
- Q.3** a. What is an operating system? What are the different resources of an operating system? (2+2)
- b. Distinguish between Timesharing and multi-user operating system with proper example of each type. (4)
- c. What is the value of the 2's-complement number represented by the hexadecimal number FFFFFFF9? (4)
- d. Convert the following number from hexadecimal to decimal (41A.EF9) (4)
- Q.4** a. Draw a flow chart for finding biggest of three numbers. (5)
- b. Write down the salient features of C language. (5)
- c. Briefly explain different steps for program development. (6)
- Q.5** a. What is token in C language? What are the different types of tokens are used in C language? (2+2)
- b. Explain different types of C constants with example. (6)
- c. Briefly explain different storage classes. (6)

- Q.6** a. Write a C Program to convert days into months and days . (5)
- b. What is an operator and operand? Explain unary, binary & ternary operators with an example. (5)
- c. What is a type cast? Explain different type cast techniques with example. (6)
- Q.7** a. Write a C program using user defined function to add two numbers without using arithmetic operators. (5)
- b. What is Recursion? Write a C program to generate Fibonacci series using recursion. (1+5)
- c. “Value of actual parameter can be changed by formal parameter during function call” justify the statement with an example. (5)
- Q.8** a. With a flow chart explain the syntax of switch case. (6)
- b. Write a C program to delete an element from the specified location. (5)
- c. Explain the following with their syntax & examples: (5)
- (i) Goto statement
- (ii) continue statement
- Q.9** a. Write a C program to check if a String is a Palindrome without using the Built-in Function. (6)
- b. Write a C program to find the multiplication of two matrices of 2x3 and 3x4 dimensions. (6)
- c. Write a c program to convert a lower case character to upper case character. (4)