
g. A block is enclosed with a pair of

- (A) {} (B) ()
(C) [] (D) <>

h. One-dimensional array is known as

- (A) vector (B) table
(C) matrix (D) an array of arrays

i. How many main() functions can be defined in a 'C' program?

- (A) 1 (B) 2
(C) 3 (D) any no of times

j. The declaration float *a[5]; is

- (A) an ordinary array (B) a pointer to an array
(C) an array of pointer (D) pointer to array element
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PART A

Answer any TWO questions. Each question carries 16 marks.

- Q.2** a. What is computer? List and explain some important characteristics of a computer. (6)
- b. Convert the following numbers into binary numbers
(i) $(174.50)_{10}$ (ii) $(DF2 - 7C)_{16}$
(iii) $(477.75)_8$ (6)
- c. Convert binary number $(111111011.101)_2$ into hexadecimal number and decimal number. (4)
- Q.3** a. What is a printer? Explain the commonly used types of printers. (8)
- b. Define operating system. What facilities are provided by an operating system to a user? (5)
- c. Write a short note on Java. (3)
- Q.4** a. What is a microprocessor? What is the purpose of the address and data bus of a microprocessor? (7)
- b. Write short note on the following:-
(i) Electronic mail
(ii) FTP
(iii) The World Wide Web. (3×3)

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

- Q.5** a. Name and describe the four basic data types in 'C'. (6)
- b. Describe the use of conditional operator to form conditional expressions. How is a conditional expression evaluated? (6)
- c. What is the purpose of the *getchar* function? How is it used within a 'C' program? (4)
- Q.6** a. Write a loop that will calculate the sum of every third integer, beginning with $i = 2$. (i.e. calculate the sum $2+5+8+11+\dots$) for all value of i that are less than 100. Write the loop in three different ways
(i) using a *while* statement
(ii) using a *do-while* statement
(iii) using a *for* statement. (6)
- b. Write the syntax of switch case structure. (4)
- c. What is the purpose of the break statement? Within which control statements can the break statement be included? (6)
- Q.7** a. What is array initialization? What happens if the number of values in the initializer is less than the size of array? (4)
- b. Write a program which adds two given matrices. (8)
- c. What is string? Differentiate between *gets()* and *scanf()* using *%s* conversion specification. (4)
- Q.8** a. What is a function? What is the basic difference between a user defined function and a built in function? (4)
- b. Write a program that calculates the power of x raised to y (x^y) using recursion. (8)
- c. What are the advantages and disadvantages of call by value? (4)
- Q.9** a. What is a pointer variable? How do you declare a pointer variable? (4)
- b. Write a program that accesses the array element using pointer variable. (6)
- c. What is meant by file opening? How is a file closed? (4)
- d. What is FILE? (2)