



AX-563 Seat No. _____
B. C. A. (Sem. II) Examination
April / May - 2003
Programming Language - I

Time : Hours] _____

[Total Marks : _____

- Instructions :
- (i) There are five questions Q. 1 is compulsory
 - (ii) Figures on the right indicate marks for the questions.
 - (iii) Answer each new question (Q. 1, Q. 2) on a new page.
 - (iv) Do not intermix the options.
 - (v) Mention your options clearly.

Q1. Answer in brief

[10]

- (1) List out commonly used escape sequences.
- (2) Explain conditional operator.
- (3) What is type casting?
- (4) Differentiate between signed and unsigned integer.
- (5) What is keyword? Give any 3 keywords.
- (6) Give the difference between = and ==.
- (7) What is a global variable? How do you define global variable.
- (8) Explain extern storage class.
- (9) How many values can function return?
- (10) If an array is declared as char s[10][100]; what is referred to by s[5] ?

Q-2.

A. What are the different data types in 'C'? Describe any three. [4]

OR

A. Explain for... loop. Explain comma (,) operator in for loop.

B. Explain call by value and call by reference with respect to functions and give appropriate examples for that. [5]

C. Write a recursive function to print first n numbers of fibonacci series. [6]

OR

C. Write a program to calculate compound interest
(formula $i = p (1 + r)^d - p$ where i = interest, p = principal, r = rate of interest)

Q-3.

A. What is an array? How can we initialize array within its declaration? [4]

OR

A. What are the differences between array and structure. Explain with examples.

B. What is escape sequence? Explain standard escape sequences in C with proper examples. [5]

C. Write a program in 'C' to input a decimal number from the keyboard & convert it into binary number. [6]

OR

C. Write a program in 'C' to print first n prime numbers.

Q-4.

A. What is a storage class? Describe various storage classes in brief. [4]

OR

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[Contd...

A. Rewrite the following code, removing errors if any, and then show the output:

```
I. #include<stdio.h>
void main()
{
    int i = 1;
    switch( i )
    {
        default : printf("Hello!");
        case 1 : printf(" how");
        case 2 : printf(" are");
        case 3 : printf(" you?");
    }
}
```

```
ii. #include<stdio.h>
void increment()
{
    static int s=0;
    auto int a=0;
    a++;
    s++;
    printf("s=%d\n",s);
    printf("a=%d\n",a);
}
void main()
{
    increment();
    increment();
    increment();
}
```

B. Given the following information, what will be the result of the statements?

Variable Name	Address	Contents
P	2568	222
Q	4284	2568
R	6666	4284
A[0]	8120	232
A[10]	8355	2658
X	2658	9035

1. **R =
2. *(&Q) =
3. &(*R) =
4. *(&A[10]) =
5. (Q == *P) Is it True/False?

C. Use following structure book(book_id, title, price)
Take pointer to the structure and using that pointer variable input value of the member variables of student and print it out in proper format.

OR

C. Write a 'C' program that inter changes the values of two variables using functions.

Q-5.

A. Explain stream. Explain fopen() and fclose() functions with example

B. Write a 'C' program to copy one file to another, replacing all lowercase characters with their uppercase equivalents

OR

B. Write a 'C' program to display all the comments from a 'C' program file.