

Unit - 1

- Q.1 Explain the different Generations of computers highlighting the improvements in them.
- Q.2 What are the different types of computers? Explain features of each of them.
- Q.3 Differentiate between :
- 1) Analog computers and Digital computers.
 - 2) Desktop Computers and Notebooks/Laptops.
 - 3) Super computers and Mainframe computers.
- Q.4 Write a short note on 1) Memory/Storage Unit 2) PDA's 3) CPU 4) USB Flash drives
- Q.5 What is a Micro computer? What are the reasons for its popularity? What are the types of Micro computers?
- Q.6 Convert the following decimal numbers to binary numbers.
- | | | |
|--------------------------|----------------------------|--------------------------|
| a) (425) ₁₀ | c) (765.625) ₁₀ | e) (67.25) ₁₀ |
| b) (99.25) ₁₀ | d) (325) ₁₀ | f) (49.50) ₁₀ |
- Q.7 Convert the following binary numbers to decimal numbers.
- | | | |
|----------------------------|------------------------------|-----------------------------|
| a) (110011) ₂ | d) (110110.101) ₂ | g) (101010101) ₂ |
| b) (11101) ₂ | e) (10) ₂ | h) (101.110) ₂ |
| c) (01010101) ₂ | f) (1101) ₂ | i) (11110.10) ₂ |
- Q.8 Find 1's complement and 2's complement for the following binary numbers.
- | | | | |
|----------|-----------|----------|-----------|
| a) 10111 | b) 101010 | c) 11111 | d) 110011 |
|----------|-----------|----------|-----------|
- Q.9 Carry out the binary addition for the following binary numbers.
- | | | |
|------------------|------------------|------------------|
| a) 11011 + 10101 | c) 10101 + 11111 | e) 11011 + 10111 |
| b) 11111 + 00110 | d) 10001 + 01110 | f) 10101 + 01110 |

Unit - 2

- Q.1 What is software? What are the different types of software?
- Q.2 What do you mean by operating system? What are the different functions of an operating system?
- Q.3 Write a short note on: 1) Interpreter 2) Compiler 3) Assembler
- Q.4 What do you mean by Application software? What are the different types of application software? Give example.
- Q.5 Define the term algorithm. Explain different types of algorithms. Also write good qualities of Algorithm
- Q.6 What do you mean by flowchart? Explain the usage of different symbols with their functions.
- Q.7 Write algorithm, and draw flowchart for each of the following:
- a) Addition of two numbers.
 - b) Input principal amount (P), number of years (N) and rate of interest (R). Calculate and display Simple interest.
 - c) Input a number and check if it is divisible by 5 or 7.
 - d) Input a purchase amount, if purchase amount is greater than 20,000 then give discount of 10% otherwise 5%. Calculate and display discount and net amount.
 - e) Display 1 to 10 natural numbers.
 - f) Display all even numbers from 1 to 100
 - g) Display table of 9.
- Q.8 Discuss the applications of computer to:
- | | | |
|--------------|---------------------|------------------|
| ✓ Billing | ✓ Accounting | ✓ Advertising |
| ✓ E-Commerce | ✓ Inventory Control | ✓ Sales Analysis |
- Q.9 Explain Project Management and MIS.

Unit - 3

- Q.1 What is Character set in C? What are the rules for naming the identifiers?
Q.2 What is an escape sequence? What is its purpose?
Q.3 What is a constants? What are different types of constants? Explain with example.
Q.4 Write a short note on :
1) Storage classes 3) Data types 5) Unary Operators
2) Header files 4) Keywords 6) Increment & Decrement operators
- Q.5 Explain printf(), scanf(), clrscr(), getch(), puts(), and getchar() functions in C.
Q.6 Write a C program for each of the following:
a) Calculate area of triangle
b) Input a number and check it is even or odd number.
c) Input a character and check it is vowel or consonant.
d) Input 5 subject marks of student. Calculate and display total marks, percentage and result.
e) Input Salesman name & sales amount. Check if the sales amount is greater than or exceeds 50,000/- then commission of 5% is given to the salesman. Display Name, Sales amount & commission of the salesman.
f) Display odd numbers from 50 to 1.
- Q.7 Give the output of the following C-program:
1) #include<stdio.h>
void main()
{ char i='A';
printf("%c\n", i);
printf("%4c\n", i);
printf("%-4c\n", i);
printf("%04c\n", i);
}
2) #include<stdio.h>
void main()
{ int x=10, y=15, z=300, t;
z%=--y;
t=4*x--;
printf("%d %d %d %d \n", x,y,z,t);
}
3) #include<stdio.h>
void main()
{ int t=400, m=200;
float x=125.8, y=35.76;
printf("%8d %8d \n", t, m);
printf("%+10.3f %10.3f \n", x, y);
}
4) #include<stdio.h>
void main()
{ char x = '&';
float y = 21344.627;
printf("%3c%+5.2f\n", x, y);
printf("%-4c%-7.0f\n", x, y);
}
- Q.8 Give the difference between the following 1) int and char 2) float and double 3) ++i and i++
Q.9 Describe any two shorthand operators in C. What is the meaning of Auto conversion in C?

Unit - 4

- Q.1 Explain if .. else and nested if .. else condition statements with its format and example.
Q.2 Write short note on :
1) break statement
2) continue statement
3) switch() case
4) Loops : while(), do .. while(), and for()
- Q.3 Explain logical operators in detail with example.
Q.4 Write a C program for each of the following:
a) Display 1 to 50 natural numbers
b) Display all even numbers from 1 to 200
c) Display table of 3.

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Q.5 Write a C program for each of the following:

- 1) Write the program input purchase amount code for 5 customers. If purchase amount exceeds 25000 then discount of 15% is given else discount is less than 15000 then 5% discount is given and if it is between 15000 and 25000 then 10% discount is given. Print code, purchase amount, discount & net amount of all 5 customers.
- 2) $2 + 4 + 6 + \dots + 10$
- 3) $2 + 5 + 8 + \dots + 302$

Q.6 Write the C program for the following series

- 1) $1/2 + 2/3 + 3/4 + \dots + 9/10$
- 2) $1/1^2 + 1/2^2 + 1/3^2 + \dots + 1/20^2$
- 3) $2^2/5^2 + 3^2/6^2 + 4^2/7^2 + \dots + 32^2/35^2$
- 4) $S = 1 + (1 + 2) + (1 + 2 + 3) + (1 + 2 + 3 + 4) + \dots$ upto 10 terms.

Q.7 1) Write a C-program to input employee name, basic salary and type (1-Permanent, 2-Temporary) and calculate the DA and HRA as follows:

	<i>Permanent</i>	<i>Temporary</i>
DA	40%	25%
HRA	20%	10%

Display the total salary which includes the basic salary, DA and HRA.

2) Write a C-program to calculate and display the sum of
 $1 + 2 + 3 + \dots + 20$

Q.8 Display the table of 5 in the format of

```

5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
. . .
. . .
. . .
5 * 10 = 50
    
```

Q.9 Write a C-program to input sales value. Calculate sales tax as per the following :

<i>Sales</i>	<i>Sales Tax</i>
Upto Rs. 5,000	5% of sales
Between Rs. 5,000 and upto Rs. 9,000	10% of sales
Over Rs. 9,000	12% of sales

Display sales tax.

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