

Time: 2 Hours

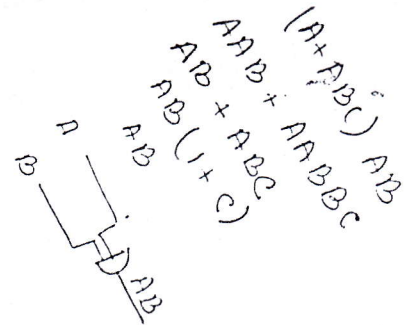
Full Marks: 50

(Answer any 4 questions taking 2 questions from each group)

Part:A

1. a) Write the definition of statement and expression with example of C programming language. 5
 b) Name 10 keywords 2.5
 c) Explain how character data type ranges the value from -128 to +127? 5
2. a) Convert decimal 1057 to its corresponding binary and octal 3.5+3
 b) Assume a=5, b=7, c=2, d='B'. Find out the value of followings: 2*3
 i) (a<b<c) ii) (a<b) && (c>1) || (d<'b') iii) x=(b==5 || d==65)?a:c
3. a) Simplify $X=(A+ABC)AB$ And draw the block diagram using gate symbol. 4
 b) Write a program to calculate the 10 prime number from given number. 4.5
 c) Describe the output that will be generated by the following C program. 4

```
#include <stdio.h>
void main()
{
    int i=0, y=0;
    for (i=1; i<=10; i++)
    {
        if(i%2==1)
            y+=i;
        else
            y--;
        printf("%d", y);
        break;
    }
    printf("\n y=%d", y);
}
```



Part:B

4. a) Mention all types of unary operator. Give an example of size of with output. 3+1.5
 b) Find the output of the following C code: 4
- ```
#include <stdio.h>
main()
{
 int i;
 for(i=1; i<=10; i++)
 {
 if(i%6==0)
 break;
 }
 printf("%d\n", i);
}
```
- Handwritten output for the above code: 1 2 3 4 5 6 7 8 9 10. The output is 6, as the loop breaks when i=6.
5. a) Write a C program to get the output as below (use iteration logic): 4
- ```
12
13 14
14 15 16
```
5. a) Subtract 1000011 from 100011 using 1's complement method. 2
 b) Write a program that will calculate odd numbers from 10 mixed numbers. 3
 c) Define the output of the following C code: 3.5
- ```
#include <stdio.h>
void main()
{
 float i = 5, j=5.5, k;
 k=(int)j*2;
 printf("%.2f", k);
}
```
6. a) Write a program for any number whose output is such as (5 is not fixed): 4
- ```
0+5=5
1+4=5
2+3=5
3+2=5
4+1=5
5+0=5
```
6. a) Write the syntax of the switch statement. 2.5
 b) Write a program to display the binary-weight series 1+2+4+8+16.....+1024. Also show the sum of this series. 6
 c) Rewrite the following code using while statement. 4
- ```
for(i = 0; i < 20; i++)
{
 if(i%3 == 0)
 printf("%d", i);
}
```
- Handwritten code for the above question: `#include <stdio.h>`