PART – A

Note: Implement the following Computer Networks concepts using C/C++

1. Write a program for distance vector algorithm to find suitable path for transmission.

```
#include<stdio.h>
#include<stdlib.h>

int a[8][8],n;

void floyd()
{
  int i,j,k;

  for(k=1;k<=n;k++)
  {
    for(i=1;i<=n;i++)
    {
      for(j=1;j<=n;j++)
      {
        a[i][j]=min(a[i][j],a[i][k]+a[k][j]);
      }
    }
  }
}

int min(int a,int b)
{
  return a<b?a:b;
}

int main()
{
  int i,j;

  printf("\n Enter the no of routers:");
  scanf("%d",&n);

  printf("\n Enter the distance matrix values\n");
  for(i=1;i<=n;i++)
    for(j=1;j<=n;j++)
```

```
    {
      scanf("%d",&a[i][j]);

         if(a[i][j]==0)
          a[i][j]=999;

      if(i==j) a[i][j]=0;
    }

  floyd();

  printf("\n Distance Vector Matrix \n"); for(i=1;i<=n;i++)
  {
    for(j=1;j<=n;j++)
    {
      printf(" %2d",a[i][j]);
    }
    printf("\n");
  }
}
```

Output:
Enter the number of routers:4 Enter the
distance matrix values

0	999	3	999
2	0	999	999
999	7	0	1
6	999	999	0

Distance Vector Matrix is

0	10	3	4
2	0	5	6
7	7	0	1
6	16	9	0