Code :

```
pkg load symbolic;
clc;
clear all;
clc;
clear all;
N=1000000;
L=4;
for SNRdb=[0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60];
  SNR=10.^(SNRdb/10);
  display(SNR);
  p=(SNR/(2+SNR)).^0.5;
  display(p);
  q=((1-p)/2).^L;
  %r=((1+p)/2);

  for index=0:1:L-1;
   n=L+index-1;
   display(n);
   k=index;
   display(index);
   n_factorial=factorial(n);
   k_factorial=factorial(k);
   display(k_factorial);
   n_minus_k_factorial=factorial(n-k);

   combi=n_factorial/(k_factorial.* n_minus_k_factorial);
   syms index
   f = combi.*(((1+p)/2).^index);
   V = subs(f, k, 0:3)
   BER = sum(V)
   display(BER);
   %syms index;
   %BER = symsum((combi.*(r.^index)),index,0,3);
   BERdb=10.*log10(BER);
   BERdb_perbit=BERdb/N;
   display(BERdb_perbit);
   %plot(SNRdb,BER,'r');
```

```
    end
    ezplot(BERdb_perbit,[0,60]);
    hold on;

end
xlabel('SNR in Decibel');
ylabel('BER in Decibel per bit');
grid on;
```

Output :