

1. Given PN sequence 00,11, 01, 10, 00, 10, 11, 10, 00, 01, 00 generated for (frequency hopping spread spectrum) FHSS, and given the input binary data to the M( = 2)FSK –0,1,1,1, 0,0,1,1, 1,1,0,1, 1,0,0,0, 0,0,1,1 ; Illustrate with pictures slow-frequency-hop spread spectrum (where  $T_c = 2 T_s$ ) and fast-frequency-hop spread spectrum (where  $T_s = 2 T_c$ ).

2. Draw the graphs showing the nature of normalized load, delay and power with respect to normalized load for the Ideal Network Utilization.

3. Draw the figure showing Frequency Division Multiplexing and Time Division Multiplexing with time and frequency being two axes.

4. In Statistical Multiplexing given capacity = 5000 bps and input has maximum 10 sources, each source has the rate of 1000bps. Complete the following table

<i><b>Input</b></i>	<i><b>Output</b></i>	<i><b>Backlog</b></i>
6		
9		
3		
7		
2		
2		
2		
3		
4		
6		
1		
10		
7		
5		
8		
3		
6		
2		
9		
5		