



**PART – B**

- 5 a. Explain message flow diagram for call release by mobile initiated. (08 Marks)  
b. With a neat block diagram, explain GSM – GPRS with protocol stack. (08 Marks)  
c. Discuss the message flow between MS and BS, listing the primitives. (04 Marks)
- 6 a. What are the security algorithms used in GSM? Explain them briefly. (08 Marks)  
b. With neat diagrams, explain the different types of SIM cards used in GSM. (06 Marks)  
c. With a neat call flow diagram, explain token based unique challenge in GSM. (06 Marks)
- 7 a. Explain the spectral efficiency of wireless system with proper expressions. (08 Marks)  
b. Derive an expression for received signal strength of a base station receiver with diagram. (06 Marks)  
c. What are the models used in modeling framework for a cellular/PCS network? (06 Marks)
- 8 a. What are the five TMN layers in M3010? Explain the pertinent three TMN layers. (08 Marks)  
b. With a neat diagram explain the NM architecture and interfaces. (08 Marks)  
c. Write short note on OSI systems management. (04 Marks)

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