



Iqra National University, Peshawar

Department of Computer Science

Spring-2020/Final-Term Examination

Course Title: Modern Telecommunication Systems

Lecturer: Engr. Latif Jan

Total Marks: 50

Time Allowed:

Q 1) a) What is Optical Spectrum? Explain the spectrum according to its wavelengths or frequencies? **(5 marks)**

b) Explain the process of a free space optical communication system? Also make a diagram to illustrate the concept thoroughly. **(4 marks)**

c) Explain the Feeding Method of Parabolic Antenna? Draw the figure to explain the concept. **(2 marks)**

d) What are the important types of Fiber Optic Cables? Explain them in brief.? **(6 marks)**

Q 2) a) Explain the functionality of a microwave receiver? Draw the figure to illustrate the components used in it. **(5 marks)**

b) Name the three important microwave transistors used in microwave communication system. Explain in brief? **(5 marks)**

c) How a one-quarter wavelength microstrip can transform impedances and reactance's? **(4 marks)**

Q 3) a) What are the important types of small signal amplifiers used in microwave devices? Explain each one of them in brief. **(5 marks)**

b) What are the basic elements of a Fiber optic communication system? Explain them diagrammatically? **(5 marks)**

c) How oscillator diodes are different from normal diodes? Explain the concept in brief. **(5 marks)**

d) What is the difference between a Waveguide and a Cavity Resonator? **(4 marks)**

☺ Best of Luck ☺