

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**M.Sc. Winter, 2019-20 Examination**

**Semester: 3**  
**Subject Code: 11204204**  
**Subject Name: ELECTRONIC COMMUNICATION-I**

**Date: 03/12/2019**  
**Time: 02:00 pm to 04:30 pm**  
**Total Marks: 60**

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type(Each of 04 marks) (08)**  
 (a) Write a note on line parameters.  
 (b) Explain a line of cascaded T sections.
- Q.1. B) Answer the following questions (Any two) (04)**  
 (a) Short note(Each of 02 marks) (04)  
 1. State the formula of wavelength and velocity of propagation.  
 2. Write down the formula for velocity of propagation.  
 (b) Write a note on standing waves. (04)  
 (c) Write a note on parameters of the open wire line and coaxial line at HF. (04)
- Q.2. A) Answer the following questions. (04)**  
 (a) Short note. (Each of 02 marks) (04)  
 1. Write applications of satellite communications.  
 2. Explain sky wave signal strength.  
 (b) Short note: General picture of ionosphere. (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
 (a) Short note. (Each of 01 marks) (03)  
 1. State Kepler's first law.  
 2. Define geostationary orbit.  
 3. Define ground waves.  
 (b) Discuss refraction and reflection of sky waves. (03)  
 (c) Write propagation characteristics of radio waves of different frequency. (03)
- Q.3. A) Essay type (Each of 04 marks) (08)**  
 (a) Write a note on pulse modulation  
 (b) Explain Phasing method.
- Q.3. B) Answer the following questions (Any two) (04)**  
 (a) Short note (Each of 02 marks) (04)  
 1. Define pulse modulation.  
 3. Explain Slope detector in short.  
 (b) Write a note on frequency spectrum of AM mode. (04)  
 (c) Write a note on phase modulation. (04)
- Q.4. A) Answer the following questions. (04)**  
 (a) Short note. (Each of 02 marks) (04)  
 1. Define Phase shift keying  
 2. Draw the Eye diagram.  
 (b) Write a note on Asynchronous transmission. (04)
- Q.4. B) Answer the following questions (Any two) (03)**  
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)  
 1. Write the full form of ASK.  
 2. Write the full form of FSK  
 3. Write the full form of MSK  
 (b) Explain Continuous Phase Frequency shift keying (CPFSK). (03)  
 (c) Explain carrier recovery systems. (03)