JAG-003-1273002 Seat No. _____

M. Sc. (ECI) (Sem. III) (CBCS)
(W.E.F. 2016) Examination

November – 2019

Paper - 10 : Fundamentals of Communication Electronics

Faculty Code : 003
Subject Code : 1273002

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer the following questions in brief : (any **seven**) **14**

1. What is a demodulation ?
2. What is power measurement in electronic communication ?
3. Draw the block diagram of an electronic communication system.
4. Give Expression for power gain in dB ?
5. Define frequency stability of an oscillator.
6. What is a piezoelectric effect ?
7. Write about Amplitude Modulation.
8. What is Percent modulation ?
9. What is the significance of carrier wave in modulation ?
10. Write about the bandwidth in communication.

2 Attempt any two of the following questions : **14**

1. Draw and explain AM super heterodyne receiver block diagram. **7**
2. Write a note on balanced bridge modulator. **7**
3. Write a note on Noise Factor and Noise Figure. **7**

3 Answer the following questions. **14**

1. Draw and explain block diagram of a Low-level AM DSBFC transmitter. **7**
2. Explain PLL loop operation in detail. **7**

OR

3 Answer the following questions. **14**

1. Write a note on Low-Level AM modulator. **7**
2. Write a note on principles of amplitude modulation. **7**

4 Answer the following questions. **14**

1. Draw and explain Colpitts oscillator. **7**
2. Draw and explain the circuit operation of medium power AM modulator. **7**

5 Answer any two of the following questions : **14**

1. Draw and explain simplified block diagram of an AM receiver. **7**
2. Explain sensitivity, dynamic range and fidelity of receiver. **7**
3. Write a note on Modulation and Demodulation in communication system. **7**
4. Explain bandwidth and information capacity of communication system. **7**
