

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE (SPFU) - SEMESTER-I-II (SPFU) - EXAMINATION – SUMMER 2017

Subject Code: ENG005

Date: 03/06/2017

Subject Name: LINEAR ELECTRICAL NETWORKS

Time:02:30 PM to 05:00 PM

Total Marks: 70

Instructions:

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Explain transformation of delta connected network into star connected network. **07**
(b) Explain Norton's theorem. **07**
- Q.2** (a) Explain loop, node, path, network and circuit. **07**
(b) Explain Series resonance condition with concept of Q-factor. **07**
- Q.3** (a) Explain the time domain behavior of one port passive network. **07**
(b) What is Laplace transform? Explain importance and applications of Laplace transform. **07**
- Q.4** (a) Explain hybrid parameters. **07**
(b) Explain series and parallel connection. Also compare them. **07**
- Q.5** (a) Explain Thevenin's theorem. **07**
(b) Explain pole-zero construction of RLC series circuit. **07**
- Q.6** (a) Explain necessary conditions for Transfer Function. **07**
(b) Explain Superposition theorem. **07**
- Q.7** (a) Explain maximum power transfer theorem. Also discuss its advantages and disadvantages. **07**
(b) Explain Kirchhoff's current and voltage law. **07**
