Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE (SPFU)- SEMESTER– 1st/ 2nd • EXAMINATION – 2018

Subject Code: ENG005   **Date: 28-05-2018**
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 Star delta transformation with example.   **07**
     (b) Explain Norton's theorem.   **07**
<div align="center">or</div>

     (b) Explain Thevenin's theorem.

Q.2 **(a)** Explain Kirchhoff's current and voltage law.   **07**
     (b) Explain series and parallel connection. Also compare them.   **07**

Q.3 **(a)** What is resistor? How to calculate the resistor value by color code?   **07**
     (b) Explain loop, node, path, network and circuit   **07**
<div align="center">or</div>

Explain series RLC circuit in detail.

Q.4 **(a)** What is mesh analysis? Explain in detail with suitable example   **07**
     (b) Explain the time domain behavior of two port passive network.   **07**

Q.5 **Write a short note** **(any two)**   **14**
(a)   Hybrid parameter
(b)   Superposition theorem
(c)   Maximum power transfer theorem

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