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GUJARAT TECHNOLOGICAL UNIVERSITY BE (SPFU) - SEMESTER-I-II (SPFU) - EXAMINATION - SUMMER 2017 **Subject Code: ENG001** Date: 09/06/2017 **Subject Name: ENGINEERING SYSTEM** Time:02:30 PM to 05:00 PM **Total Marks: 70 Instructions:** 1. Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. Q.1 (a) Explain importance of earthing. 07 Explain classification of bridges. 07 0.2 Explain active power, reactive power & apparent power with units. 07 (a) Enlist the selection criteria for construction of bridge site. **(b) 07** 0.3 What is transducer? Explain types of transducers. 07 (a) Explain the difference between FUSE and MCB. **(b)** 07 0.4 Draw the communication system, block diagram and explain each block in 07 detail **(b)** Explain illumination with its unit. Explain Laws of illumination. **07 Q.5** Explain feedback phenomenon in details with necessary block diagram. 07 What is Refrigerant? Discuss properties of good refrigerant 07 **(b) Q.6** (a) Explain with neat sketch the working of a vapor compression refrigeration **07** system. What is capacitor and capacitance? Also derive equation of energy store for **(b) 07** capacitor. **Q.7** Write the unit of current, inductance, capacitance and potential difference. **07** What is the value of form factor?

Explain importance of digital signal processing. What are the applications of

digital signal processing?

07