

## T03/T05/T06/T07/T34/TES032/EE/2016

**Time : 3 Hours**

**Marks : 80**

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**Instructions :**

1. All Questions are Compulsory.
  2. Each Sub-question carry 5 marks.
  3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
  4. Question paper of 80 Marks, it will be converted in to your programme structure marks.
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1. Solve any **four** sub-questions.
  - a) Draw and explain capacitor connected in series. 5
  - b) Define Inductance and explain concept of Inductive reactance. 5
  - c) Explain voltage and current relationship in a capacitive circuit. 5
  - d) Explain power in pure capacitive and inductive circuit. 5
  - e) Explain quality of capacitor and inductor. 5
  
2. Solve any **four** sub-questions.
  - a) Draw and explain R-C series circuit. 5
  - b) Explain computation of reactive power in R-L series circuit. 5
  - c) Define : 5
    - i) Impedance
    - ii) Total voltage
    - iii) Total current
    - iv) Power factor
    - v) Angle theta in R-L series circuit
  - d) Explain computation of apparent power in R-C series circuit. 5
  - e) Explain voltage drop across inductor in R-L series circuit. 5

3. Solve any **four** sub-questions.
- a) Draw and explain R-C parallel circuit. 5
  - b) Compute various circuit values in R-C parallel circuit. 5
  - c) Draw and explain RLC series circuit. 5
  - d) Compute various circuit values in R-L parallel circuit. 5
  - e) Draw and explain R-L parallel circuit. 5
4. Solve any **four** sub-questions.
- a) Compare low pass and band pass filter. 5
  - b) Write short note on parallel resonant circuit. 5
  - c) Explain Band rejection filter. 5
  - d) Write short note on broad band tuning. 5
  - e) Explain Pi type filter. 5

