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Council for Technical Education and Vocational Training

Office of the Controller of Examinations

Sanothimi, Bhaktapur

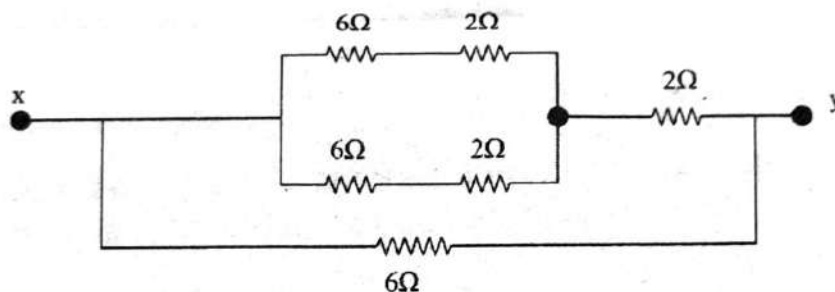
Regular/Back Exam-2077, Chaitra

Program:	Diploma in Computer/IT Engineering	Full Marks: 80
Year/Part:	I/II (2018, 2013, 2008)	Pass Marks: 32
Subject:	Electrical Engineering	Time: 3 hrs

Candidates are required to give their answers in their own words as far as practicable.  
The figures in the margin indicate full marks.

**Attempt Any Five questions.**

1. a) Define the terms: [2+2+2+2=8]
  - i) Magnetic field
  - ii) Magnetic flux
  - iii) Magnetic field intensity
  - iv) Magnetic permeability
- b) Define electric current and voltage. Explain the active and passive electric component. [4+4=8]
2. a) State and Explain the Ohm's law. Calculate the equivalent resistance of the network given in figure. [4+4=8]



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- b) Explain Faraday's Law of Electromagnetic Induction with necessary diagram. [8]
3. a) Explain the generation process of Cc. Define the term Average value and RMS value. [4+2+2=8]
- b) State and Explain the superposition theorem with necessary diagram and example. [8]
4. a) Explain the construction and working principle of single phase transformer. [8]
- b) Explain the construction and working principle of three phase induction motor. [8]

Cont.....

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5. a) Explain the construction and chemical reaction during charging and discharging of Lead acid cell. [8]  
b) Explain the star and Delta Connection of 3-phase source and Load Circuit in brief. [8]
6. **Write short notes on : (Any Four)** [4x4=16]  
a) Norton's Theorem                      b) Hysteresis Loop  
c) Capacitance                              d) J-operator  
e) Electric power and energy              f) Dry cell

**Good Luck !**

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