

K. J. Somaiya College of Engineering, Mumbai-77

(Autonomous College Affiliated to University of Mumbai)

Semester: July 2014 - November 2014

Max. Marks: 40

Duration: 1hr.15 min.

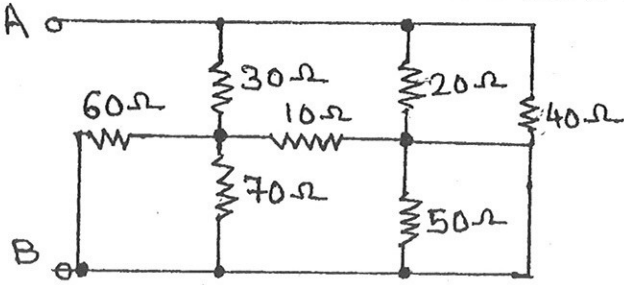
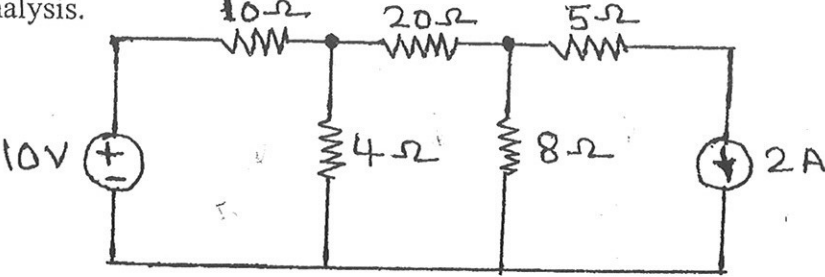
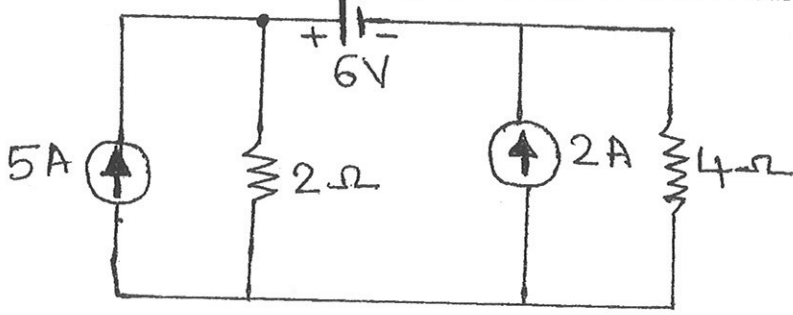
Class: FE

Semester: I

Branch: Group A(COMP/IT/MECH(Div-I))

Test1

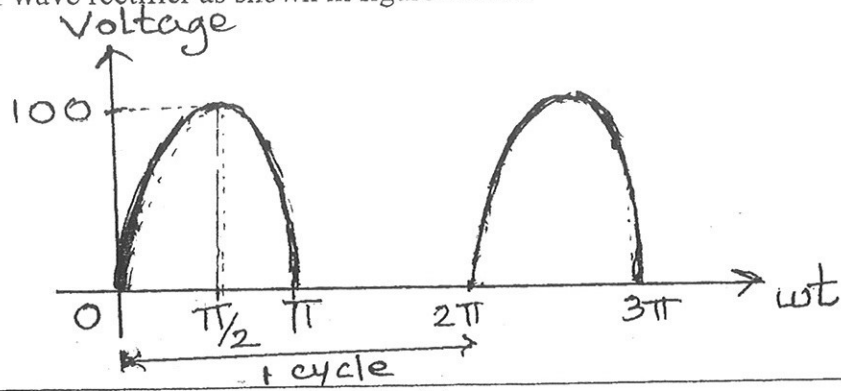
Name of the Course: Basic Electrical and Electronics Engineering

Question No.		Max. Marks
Q1 (a)	<p>Find the total resistance between terminals A and B in circuit shown below.</p> 	05
Q1 (b)	<p>What is the purpose of electrical Earthing?</p> <p>OR</p> <p>What is Circuit breaker?</p>	03
Q1 (c)	<p>List the typical ratings of an electrical switch.</p>	02
Q2 (a)	<p>Find the power dissipated in the 20 Ω resistor of the circuit shown below by using nodal analysis.</p> 	07
Q2 (b)	<p>Define the following terms. Also specify their value for a sinusoidal signal. 1. Form Factor 2. Crest Factor</p>	03
Q3 (a)	<p>By source transformation find current in 4 Ω resistor in the circuit shown below.</p> 	03

Q3 (b)

Calculate the average value, effective value and form factor of the output voltage wave of a half wave rectifier as shown in figure below.

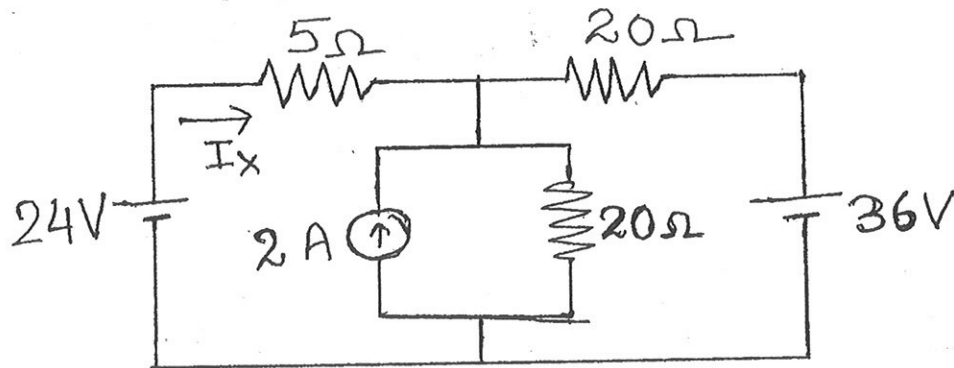
07



Q4

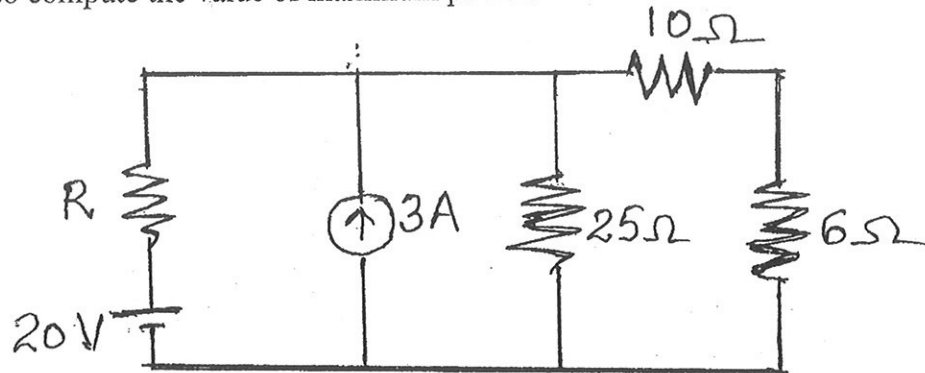
Find the current  $I_x$  using Superposition principle

10



OR

Calculate the value of  $R$  that will absorb maximum power from the circuit given below. Also compute the value of maximum power.



end