

# Examination Cover Sheet

<b>COURSE:</b> ELEC	<b>NUMBER:</b> 273	<b>SECTION(S):</b> D, R	
<b>EXAMINATION:</b> <input type="checkbox"/> <b>FINAL</b> <input type="checkbox"/> <b>ALTERNATE</b> <input type="checkbox"/> <b>DEFERRED</b> <input checked="" type="checkbox"/> <b>MID TERM</b> <b>VERSION:</b> _____	<b>DATE:</b> October 22, 2016	<b>TIME: 15:00-16:15</b>  <b>Exam Length: 75 minutes</b>	<b>PAGES: 3</b> Including cover
<b>INSTRUCTOR(S):</b> Dr. R. Raut, Dr. C. Trueman		<b>DIVISION:</b>	
<b>MATERIALS ALLOWED:</b> <input checked="" type="checkbox"/> Booklets <input type="checkbox"/> IBM (Scantron) <input type="checkbox"/> Blue <input type="checkbox"/> Green <input type="checkbox"/> Printed Translation Dictionary Other _____ <input checked="" type="checkbox"/> Calculator <input checked="" type="checkbox"/> ENCS Approved <input type="checkbox"/> Other _____		<b>INSTRUCTIONS:</b> <input checked="" type="checkbox"/> Return all <input type="checkbox"/> Answer on Exam <input type="checkbox"/> Open book <input type="checkbox"/> Crib sheet Details _____	

**Please print your name, I.D. number and section in the appropriate spaces below.**

**STUDENT NAME:** \_\_\_\_\_

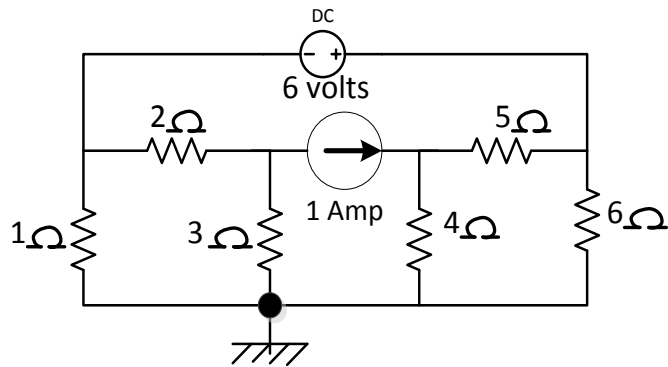
**I.D. NO.** \_\_\_\_\_ **SECTION:** \_\_\_\_\_

**SPECIAL INSTRUCTIONS:**

**Answer ALL questions**

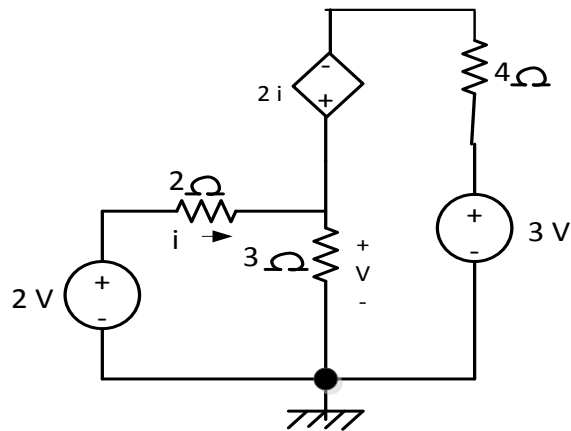
**Q.1:** In Fig.1

- (i) Choose a set of three node voltages. Use the datum node shown in figure.
- (ii) Write a set of three nodal equations.
- (iii) Arrange your equations into a 3 by 3 matrix.



**Figure 1:**

**Q.2:** In Fig.2, find the value of the voltage  $v$  using Superposition Theorem.



**Figure 2:**

**Q.3:** In Fig.3 find  $V_o$  using mesh analysis.

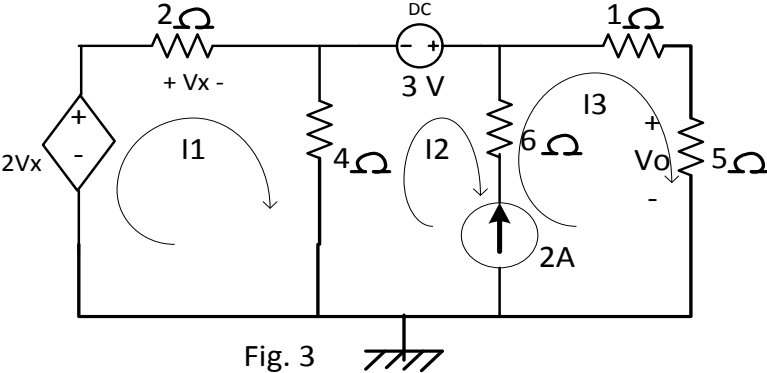


Fig. 3

**Q.4:** In Fig.4, find the value of  $R_L$  which will draw the largest possible amount of power from the voltage source of 3 volts.

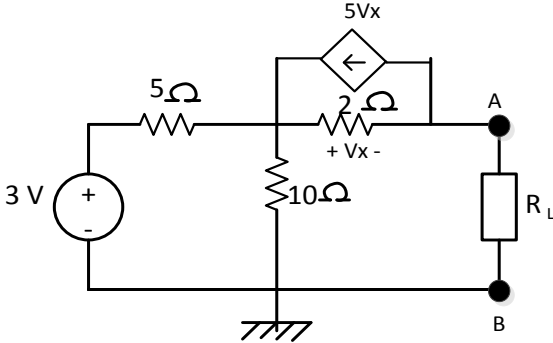


Fig. 4