

University of Toronto  
Faculty of Applied Science and Engineering  
APS112 and APS113 Engineering Strategies and Practice  
Quiz #2 April 11, 2017

This is a 50-minute quiz. The quiz is closed book and closed notes. The quiz has a total of 32 questions, worth 47 marks. The questions are divided between two booklets.

Question Booklet #2 – Short-Answer Question Booklet

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There are 3 short-answer questions, worth 18 marks in total. These must be answered in the spaces provided in this Short-Answer Question Booklet. This question booklet, with your name and UTOR Email filled in, must be returned with the multiple-choice answer sheet slipped inside. Do not separate any pages. Do not write on the QR code at the top of the pages. We are not looking for long paragraph answers. Use short sentences or bullet points.

30. (6 MARKS) Using appropriate line types, draw a multiview representation of the widget in Figure 1. Include dimensioning lines. Instead of actual dimensions, which you don't have, use variables (EG. X cm)

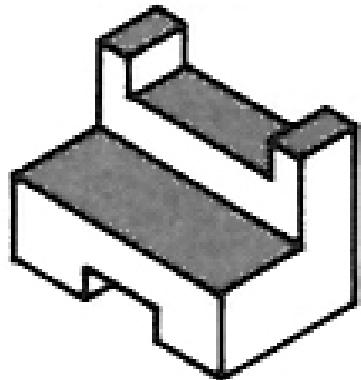


Figure 1: 3D widget

31. a. (4 MARKS) List and explain four criteria for a design to be eligible for a utility patent.

b. (1 MARK) In one sentence explain how the patent system promotes innovation.

c. (1 MARK) In one sentence explain how the patent system hinders innovation.

32.a. (1 MARK) What is the relationship between Consequence – Severity – Hazard – Risk?

b. (1 MARK) What is the relationship between Risk – Safety?

c. (1 MARK) In engineering terms, what is an Accident?

d. (3 MARKS) In three or fewer sentences concisely describe a real world situation, then identify the Hazard and Consequence for this specific situation.

Hazard	
Consequence	