

**Uva Wellassa University of Sri Lanka**  
**Faculty of Science and Technology**  
**Department of Science and Technology**  
**300 Level 2<sup>nd</sup> Semester Examination – Dec. 2017/Jan. 2018**  
**SCT 372-2 Computer Aided Design & Manufacturing**



**Instructions to candidates**

**Duration:** Two (02) hours

**Number of questions:** Three(03)- Two(02) essay questions, One(01) Practical question

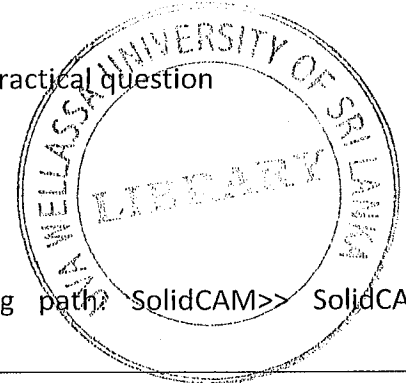
**Mark allocation:** 100 Marks

**Answer all questions**

All dimensions are in mm

Computers will be provided with the relevant software.

Make sure that the solidCAM file is saved internally. Setting path> SolidCAM>> SolidCAM Setting>>CAM-Part>> Internal



1.
  - a. Compare the terms CAD and CAM. State advantages of using CAD/CAM in industrial designs.

(10 marks)
  - b. State five usages of CAD/CAM in the industry.

(05 marks)
  - c. Draw a diagram of a product life cycle and discuss its major stages. Discuss at which point manufacturers should need to think about changing their products.

(10 marks)
  
2.
  - a. Differentiate between sequential engineering and concurrent engineering in terms of cost, number of changes and suitability to modern industry.

(08 marks)
  - b. State steps of engineering design process.

(05 marks)
  - c. Write the G-Code program for the following part shown in Figure 01 considering the points given below.
    - a. Use the given points as the part coordinate zero point
    - b. Thickness of the part is 10 mm and you have given 10 mm metal sheet to cut the part
    - c. Only one run is needed to cut a line
    - d. Use absolute coordinate system

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