SLIATE
SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION
(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology
Second Year, Second Semester Examination – 2014
IT 4102- Software Configuration Management

Instructions for Candidates:	No. of questions: 05
Answer four (04) questions only	No. of pages : 03
	Time : 02hrs

01.

i.   List three advantages of having a good software configuration management process.

(03 marks)

ii. Mention two examples for configuration items. (04 marks)

iii. Configuration activities are given below. Describe any three of them. (06 marks)

    a. Identification

    b. Storage

    c. Change control

    d. Status reporting

iv. Change control is initiated by an event

    a. What is an event? (01 marks)

    b. Give two examples for an event. (02 marks)

v.   Libraries are used to store configuration items. Briefly explain the three libraries.

(09 marks)

(Total 25 marks)

02.

i.   Briefly explain a "Version Control System" (03 marks)

ii. List down three examples for version control systems (03 marks)

iii. State four functions of "Version Control System". (04 marks)

iv. Mention three characteristics of a version control software and briefly explain them.

(09 marks)

v.   A configuration management tool can always be used to store documents. Comment.

(6 marks)

(Total 25 marks)

03.

   i.   What are the problems with manual version control?   (3 Marks)

   ii.   Explain Clint-server model and Distributed model in version control.   (6 Marks)

   iii.   Write short notes for the following terms.

         a. Branching

         b. Trunk

         c. Revision Tag

         d. Revision Numbering

         e. Version Merging   (10 marks)

   iv.   Briefly explain Iterative and Agile development model in configuration management.

                                                            (6 Marks)

                                                    (Total 25 marks)

04.

   i.   Briefly explain the following terms.

         a. Repository

         b. Working copy   (04 marks)

   ii.   Explain the following commands.   (09 marks)

         a. svn --version

         b. svn log

         c. svn status

   iii.   Mala needs to install a version controlling system to start a software project.

         a. Write the command which Mala should use to create a subversion repository
called "ResearchRepository" in C drive of the computer.   (03 marks)

         b. "Research_Details.txt" file is required to add to the previously created repository.
Write the svn command to add this file to "MyProject" folder in the repository.

                                                         (03 marks)

         c. Download the folder "Research_Details.txt" to a new folder called "Working" in
the local machine. Write the svn command required to perform this operation.

                                                          (03 marks)

         d. What command can be used to view the files inside repository "ResearchProject"?

                                                          (03 marks)

                                                        (Total 25 marks)

05.

   i.   When you upload a file to repository subversion increase the revision number. What do you understand by "revision".   (03 marks)

  ii.   How does conflicts occur in version merging?   (03 marks)

 iii.   What is the command to clean up the files after resolving a conflict?   (04 marks)

 iv.   Amila and Priyantha are two IT students. They downloaded the subjects.txt from the repository. Amila inserted her subjects to her subjects.txt file and Priyantha removed some subjects from his subjects.txt file. Amila uploaded the subjects.txt file to the repository.

      a.   What is the command Amila used to upload the file?   (03 marks)

      b.   Priyantha tries to upload his file now, but subversion is not allowing him to upload. Why is that?   (04 marks)

      c.   Write the commands Priyantha has used to resolve the problem and upload his file.   (04 marks)

      d.   Subversion informs Priyantha that Amila has already changed the same set of lines. What suggestions are provided by subversion to Priyantha, to proceed further?   (04 marks)

(Total 25 marks)