**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 – 2015 (old)**
**IT4301 - Software Testing**

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| Instructions for Candidates: | No. of questions  : 05 |
| Answer four (04) questions. | No. of pages       : 02 |
| All questions carry equal marks | Time                   : 2 hours |

**01**                                                                                       **(Total 25 marks)**

   i.    What is software testing?                                                                (03 marks)

  ii.    List four (04) reasons for failures in software.                                   (04 marks)

 iii.    Differentiate dynamic software verification with static verification.        (06 marks)

 iv.    Give three (03) static testing techniques and three (03) dynamic testing techniques.

(06 marks)

  v.    "Defect testing and debugging are distinct processes." Do you agree with the statement?

Briefly explain your answer.                                                           (06 marks)

**02**                                                                                       **(Total 25 marks)**

   i.    What is a software inspection?                                                       (04 marks)

  ii.    List three (03) roles involved with software inspection process.        (03 marks)

 iii.    Briefly explain the stages in software inspection process.                 (08 marks)

 iv.    What is an inspection checklist? Briefly explain with an example.        (04marks)

  v.    State the importance of requirements inspection in software development process?

(06 marks)

**03**                                                         **(Total 25 marks)**

i.    What is a test case?                                           (04 marks)

ii.   What is meant by pre conditions and post conditions and exceptional cases in a test case? Explain giving example for each.                            (09 marks)

iii.  Imagine you are developing an e-mail log in functionality. Users can log in to the system by entering their user name and password. The remember me check box is provided to store cookies and automatically log in next time. If a user didn't log in to the system more than 100 days the account will be expired.

       a.  List four (04) scenarios where a log in can be unsuccessful.      (04 marks)

       b.  Design a test case to the successful login scenario.        (08 marks)

**04**                                                          **(Total 25 marks)**

i.    What is mean by risk management in a software development project?     (03 marks)

ii.   List four (04) types of risks associated with software projects?        (04 marks)

iii.  What are the main phases of risk management process? List the activities carried out under each phase.                                   (12 marks)

iv.  V Model and Iterative development are two types of software development process models. Briefly describe the testing challenges of each, V model and Iterative software development model?                                  (06 marks)

**05**                                                           **(Total 25 marks)**

Write short notes on the followings,

i.    Software quality

ii.   Control flow testing

iii.  Iterative software development

iv.  Software reviews

**v.**    Acceptance testing                                             **(05 x 05marks)**