Unit 3 - Week 1 :

Course outline

How does an NPTEL online course work?

Week 0 :

Week 1 :

- Lecture 1 : Introduction-I (unit?unit=6&lesson=7)
- Lecture 2 : Introduction-II (unit?unit=6&lesson=8)
- Lecture 3 : Introduction-III (unit?unit=6&lesson=9)
- Lecture 4 : Introduction-IV (unit?unit=6&lesson=10)
- Lecture 5 : Introduction-V (unit?unit=6&lesson=11)

Assignment 1

Assignment not submitted **Due date: 2020-09-30, 23:59 IST.**

1) ***1 point***

Which one of the following characteristics of a system makes is necessary to have a complex system made of both hardware and software, as opposed to having an entirely hardware system?

a. High reliability requirement of the system
b. Low development cost of the system
c. Easy to change the system to meet changing customer requirements
d. Low operating cost

- ○ a.
- ○ b.
- ◉ c.
- ○ d.

2) ***1 point***

Which one of the following is **not** a factor contributing to the software crisis?

a. Larger problems
b. Poor project management
c. Lack of adequate training in software engineering
d. Low reliability of the hardware platforms

- ○ a.
- ○ b.
- ○ c.

Lecture Material For Week 1 (unit?unit=6&lesson=12)
Quiz : Assignment 1 (assessment?name=149)
Feedback Form For Week 1 (unit?unit=6&lesson=13)
Week 2 :
Week 3 :
Download Videos
Assignment Detailed Solution
Text Transcripts

◉ d.

3) ***1 point***

Which one of the following types of software development most closely resembles the exploratory style of software development?

a. First specify the software, then design the test cases, then develop the software, and keep on modifying it until it passes all the test cases
b. First specify the system, then develop the software, and finally test the developed software
c. First develop the software, then test it, and then keep on modifying the software until it passes all the test cases
d. Keep on specifying a little, designing a little, and testing a little until the full software is developed

◉ a.
○ b.
○ c.
○ d.

4) ***1 point***

Which one of the following is FALSE about developing software by deploying the exploratory style?

a. Difficult to use exploratory style in team development environment
b. For moderate-sized project, exploratory style leads to high cost and project delays
c. Development toy projects such as introductory B.Tech laboratory assignments using exploratory style, leads to poor quality software and unreasonably large development time.
d. Development of large projects using the exploratory style, often leads to project failure

○ a.
○ b.
◉ c.
○ d.

5) ***1 point***

While using the exploratory development style, the effort required to develop a software grows exponentially with the size of the software. Which one of the following is a possible reason behind it?

a. Testing effort increases exponentially
b. Code size becomes exponentially large
c. As the number of independent variables in the program increases, it quickly exceeds the grasping power of an individual.
d. As the size a program increases, it becomes very difficult to correct compilation errors.

○ a.
○ b.
○ c.
◉ d.

6) *1 point*

Which one of the following is not justified by the magic number 7?

a. Number of independent variables in a function should not exceed 7.
b. A function should not call more than 7 functions
c. A function should not be called by more than 7 functions
d. Number of decision statements in a function should not exceed 7.

○ a.
○ b.
○ c.
◉ d.

7) *1 point*

Which one of the following is not a factor explaining why software development using a high-level programming language takes less time and effort as compared to development of the same software using an assembly language?

a. Using a high-level language, it is easier to write structured programs as compared to writing the same software using assembly language.
b. When software is developed using high-level language, reuse of code is easier
c. When software is developed using high-level language, testing the full software is easier
d. When software is developed using high-level language, when any test case fails during testing, debugging the software is easier

○ a.
◉ b.
○ c.
○ d.

8) *1 point*

Which one of the following statements concerning the principles of abstraction and decomposition is false?

a. A geographical map is an abstraction of a country
b. Organization of the contents of a book into chapters is an example of application of the decomposition technique
c. Model building is an application of the principle of abstraction
d. For a given system, only a single and a unique model can be constructed

○ a.
○ b.
○ c.
◉ d.

9) *1 point*

Which one of the following is FALSE concerning a software project?

a. A job is a repetition of a set of well-defined and well understood tasks with very little uncertainty.
b. An exploration is a set of tasks whose outcome is uncertain
c. A project consists of a mixture of jobs and explorations
d. A software development project consists of a set of jobs

- (●) a.
- ( ) b.
- ( ) c.
- ( ) d.

10) ***1 point***

Which one of the following statements concerning software projects is false?

a. Software projects for developing software for the horizontal market, essentially develop packaged software
b. Software projects developing software for the vertical market, essentially develop packaged software
c. Custom software is developed as per the requirements of a specific user or a set of users
d. Custom software projects essentially develop the required software from scratch

- ( ) a.
- ( ) b.
- (●) c.
- ( ) d.

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers