

## Lecture 1

1) Interoperability, is a software quality factors that belongs to .....

- 1) revision requirements
- 2) **transition requirements**
- 3) operation requirements
- 4) security requirements

2) Quality Factors are.....:

- 1) Functionality, Reliability
- 2) Usability, Efficiency
- 3) Maintainability, Portability
- 4) **All of the mentioned above**

3) Measure for maintainability is.....:

- 1) **MTTC**
- 2) Attacks
- 3) defects per KLOC
- 4) None of the above

4) process of checking that the developer is building the 'right' product .....

- 1) **Validation**
- 2) Verification
- 3) Testing
- 4) None of the above

5) Identify the incorrect testing technique.....:

- 1) Integration testing
- 2) **Collaboration testing**
- 3) System testing
- 4) Unit testing

## Lecture 2

- 1) Measure Complexity by .....
  - 1) Lines-of-code metric
  - 2) McCabe's cyclomatic-complexity metric
  - 3) **a and b**
  - 4) None of the above
- 2) Object-oriented systems require ..... levels of complexity metric.
  - 1) **2**
  - 2) 4
  - 3) 5
  - 4) 1
- 3) ..... is the largest number of hops through an object's super classes, where the starting class is numbered 0.
  - 1) Coupling-between-objects (CBO) metric
  - 2) Number-of-children (NOC) metric
  - 3) **Depth-of-inheritance-tree (DIT) metric**
  - 4) None of the above
- 4) ..... we design test cases by looking at the detail of the implementation of the system to be tested.
  - 1) Black Box Testing
  - 2) **White Box Testing**
  - 3) Grey Box Testing
  - 4) Automated Box Testing
- 5) Basis-path testing technique is Based on the ..... Metric.
  - 1) Lines-of-code metric
  - 2) **Cyclomatic-complexity**
  - 3) All of the above
  - 4) None of the above

### Lecture 3

1. Which of the following view is the view that describes the environment into which the system will be deployed, including processing nodes, network interconnections and disk storage facilities required.

a. The functional view	b. The logical view
c. The process view	d. The deployment view

2. The Main advantages of The Layers pattern are.....

a. Separation Of Concerns	b. High Coupling
c. Reusability	d. A,C Together

3. The basic Layers pattern includes.....

a. Two	b. Three
c. Four	d. Five

4. Use this pattern to separate the presentation from the model. The advantages of this separation are many, including: separation of concerns, ease of testing, Maintainability.

a. MVC Pattern	b. Master-slave pattern
c. Client-server pattern	d. Pipe-filter pattern

5. ....is an approach to build enterprise systems that deliver application functionality either as services to end-user applications or to build other services.

a. REST	b. OOP
c. SOA	d. IEEE

## Lecture 4

### MCQ

1-

```
from flask import Flask
```

```
app = Flask(__name__)
```

```
@app.route("/hello")
```

```
def hello():
```

```
    return "Hello, World!"
```

```
if __name__ == "__main__":
```

```
    app.run()
```

To check the output of this code the link of local address is .....

5) <http://127.0.0.1:5000/hello>

6) <http://127.0.0.1:5000/helo>

7) <http://127.0.0.1/hello>

8) <http://localhost/hello>

2-

```
{
```

```
    "Score": "8",
```

```
    "Name": "Dune",
```

```
}
```

the data is represented in ..... Language.

1) XML

2) JSON

3) YAML

4) CSV

3- ..... is a lightweight web application framework

- 1) Flask
- 2) speedtest
- 3) secrets
- 4) sqlalchemy

## Essay

1- What is the relation between Provider and the service

Answer: the software entity that implements the service

2- What is the Registry ?

Answer: Software entity allows the services and the service providers to be found by consumers