(3 Hours) **Total Marks: 80**

N.B. : 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining five questions.
3) Answer to sub-questions should be grouped together.

1. (a) Explain the difference between black box and white box testing? **(05)**

(b) Differentiate between functional testing and non-functional testing **(05)**

(c) Compare and contrast V model and VV model **(05)**

(d) What is testing? How is debugging different from testing? **(05)**

2. (a) How are reviews useful tool for static analysis. Explain role and responsibilities of people involved in reviews **(10)**

(b) What is incident reporting? Explain incident status model **(10)**

3. (a) Explain data flow anomalies used to reveal defects. Identify the data anomalies in following code **(10)**

```
double Sqrt(double X)
{ double returnValue;
 if (X > 0.0)
  { double W;
 while (ABS(W*W-X) > 0.01)
 {
 W = W - ((W*W-X) / (2.0 * W));
 }
 returnValue = W;
 } else
 {
 returnValue = 0.0;
 }
 return (returnValue);
 }
```

(b) Explain the SQA plan in detail? **(10)**

4. (a) Draw CFG and calculate statement coverage, branch coverage and path coverage for the given code **(10)**

```
main()
{ int P,Q;
Cin>>P;
Cin>> Q;
IF P+Q > 100
cou<< "Large";
If P > 50
Cout<< "P Large";
}
```

(b) Explain the Principles of testing? **(10)**

5. **(a)** Draw and Explain the Architecture for test Automation? **(10)**

   (b) What are the different test tool selection criteria? Give steps required to select a tool. **(10)**

6. **Write short notes on (any four)** **(20)**
   - **(a)** Steps in Measurement
   - **(b)** Software Maintenance Activities
   - **(c)** Five Views of Software Quality
   - **(d)** Testing Object Oriented System
   - **(e)** ISO 9126 characteristics

E3AFBC1130975C09AEED1E67A528F7B9

Q.P. Code: 25541

Total Marks:8o

(3 hours)

N.B (1) Question No l is compulsory.
(2) Attempt any three out of remaining questions.

.

1. Write short notes on any four:
(a) Integration Testing
(b) ISO 9126 quality characteristics
(c) Incident Reporting
(d) Risk Management
(e) Review process

2. (a) What is SQA planning ?
(b) What is defect metrics?

3. (a) What are the different test tool selection criteria? Give steps required to select a tool.
(b) Explain in detail W-Model.

4. (a) Explain the difference between functional and non-functional testing. Explain load testing, performance testing and stress testing.
(b) Explain the test objectives, test environment and test strategies for unit testing.

5. (a) Compare black box testing and white box testing. Explain with the help of an example.
(b) What is State Transition Testing Technique? Draw the transition tree for a Stack.

6. (a) Explain Test Metrics with example
(b) Explain ISO 9000:2000 requirements.

****

Q.P. Code: 25401

Total Marks: 80

(3 Hours)

N.B. : 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining five questions.
3) Answer to sub-questions should be grouped together.

1. (a) ISO 9126 Quality characteristics? **(05)**

(b) What is testing? How is debugging different from testing? **(05)**

(c) Explain the Five Views of Software Quality. **(05)**

(d) Explain the V Model. **(05)**

2. (a) Explain statement coverage and path coverage with the example? **(10)**

(b) What is mean by review? Explain different work steps involved in review process? **(10)**

3. (a) What is Incident Management? Explain Incident reporting and Incident Status Model in detail? **(10)**

(b) Explain the General Principles of testing? **(10)**

4. (a) What are the different test tool selection criteria? Give steps required to select a tool? **(10)**

(b) Explain cause effect graphing and decision table technique with suitable example? **(10)**

5. (a) Draw and Explain the Architecture for test Automation? **(10)**

(b) Explain the test objectives, test environment and test strategies for unit testing **(10)**

6. Write short notes on (any four) **(20)**

(a) OO testing.
(b) ISO 9000:2000 Principles (any 5 principles)
(c) Regression testing
(d) Data flow anomaly
(e) Use case testing.

Q. P. Code: 37519

(3 Hours) Marks: 80

N.B.:
1) Question No.1 iscompulsory.
2) Attempt any three from the remaining five questions.
3) Answer to sub-questions should be grouped together.

1. a) Explain with a neat labeled diagram structure of V Model. **(10)**
b)Explain the various principles of software testing. **(10)**

2 a) Explain the different activities involved in planning a test. **(10)**
b) What is Static testing? Discuss data flow analysis with an example. **(10)**

3 a) Explain equivalence partitioning and boundary value analysis with an example **(10)**
b) What are the different test tool selection criteria? Give steps required to select a tool? **(10)**

4 (a)Explain statement coverage and branch coverage technique with suitable example? **(10)**
(b)Discuss testing of Object oriented systems. **(10)**

5. (a) What are the generic requirements for test tools /frameworks? **(10)**
(b) Explain in detail SQA planning. **(10)**

6. Writeshortnoteson(**anyfour**) **(20)**
a) Testing & debugging
b) System testing
c) ISO 9126 characteristics
d) Reviews
e) Metrics for software maintenance

****

Q. P. Code: 37521

[Total Marks: 80]

(3 Hours)

N.B. : 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining five questions.
3) Answer to sub-questions should be grouped together.

1. (a) Explain in brief the principles of testing **(05)**

(b) Differentiate between functional testing and non-functional testing **(05)**

(c) Compare and contrast V model and VV model **(05)**

(d) What is testing? How is debugging different from testing? **(05)**

2. (a) How are reviews useful tool for static analysis. Explain role and responsibilities of people involved in reviews **(10)**

(b) What is incident reporting? Explain incident status model. **(10)**

3. (a) Explain data flow anomalies used to reveal defects using suitable example **(10)**

(b) List and explain principles of testing. **(10)**

4. (a) Draw CFG and calculate statement coverage, branch coverage and path coverage for the given code **(10)**

```
main()
{ int P,Q;
cin>>P;
cin>> Q;
if P+Q > 100
cout<< "Large";
if P > 50
cout<< "P Large";
}
```

(b) Describe test plan. How are test cases prioritized and what is test Exit criteria **(10)**

5. (a) Discuss the various infrastructure components (TCDB, Defect Repository, and Configuration Management Repository). How would you make these tools operate in unison effectively? **(10)**

(b) What are the different test tool selection criteria? Give steps required to select a tool. **(10)**

6. Write short notes on (**any four**) **(20)**

(a) Steps in Measurement

(b) Software Maintenance Activities

(c) Five Views of Software Quality

(d) Testing Object Oriented System

(e) SQA Plan
