BE7-R4: SOFTWARE TESTING AND QUALITY MANAGEMENT

NOTE:

1.   There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.
2.   **PART ONE** is to be answered in the **TEAR-OFF ANSWER SHEET** only, attached to the question paper, as per the instructions contained therein. **PART ONE** is **NOT** to be answered in the answer book.
3.   Maximum time allotted for **PART ONE** is **ONE HOUR**. Answer book for **PART TWO** will be supplied at the table when the answer sheet for **PART ONE** is returned. However, candidates, who complete **PART ONE** earlier than one hour, can collect the answer book for **PART TWO** immediately after handing over the answer sheet for **PART ONE**.

TOTAL TIME: 3 HOURS   **TOTAL MARKS: 100**
                                                                   (PART ONE – 40; PART TWO – 60)

PART ONE
(Answer all the questions)

1. **Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the "tear-off" answer sheet attached to the question paper, following instructions therein.** (1x10)

1.1 Product measurements are collected in a software project to analyze the
A) Auditing
B) Reliability
C) Size measurements
D) Enforcement

1.2 Backup and recovery procedures are necessary to
A) Reorganize the disk
B) Control the DBA
C) Handle contingencies like files getting corrupt or becoming irretrievable
D) None of these above

1.3 Data integrity stands for
A) thoroughly validated data
B) data stored in different foiles showing consistency
C) data fields integrated to provide summary
D) none of the above

1.4 System qualities pertains to
A) Reliability
B) efficiency
C) maintainability
D) all of the above

1.5 CAM is used in which industry
A) Automobile
B) Three Wheeler
C) Helicopter
D) All of the above

1.6   Inspections can find all the following except
A)   Variables not defined in the code
B)   How much of the code has been covered
C)   Requirements that have been omitted from the design documents
D)   Spelling and grammar faults in the documents

1.7   Which of the following is not a characteristic for testability?
A)   Operability
B)   Robustness
C)   Simplicity
D)   Observability

1.8   Cyclamate complexity method comes under which testing method.
A)   White Box
B)   Black box
C)   Green box
D)   Yellow box

1.9   Which of these can be successfully tested using loop Testing methodology?
A)   Simple Loops
B)   Nested Loop
C)   Concatenated Loops
D)   All of the above

1.10   A post implement review looks into
A)   goals achieved vis-à-vis targets
B)   user friendliness of the system
C)   realization of cost benefits
D)   all of the above

2. **Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the "tear-off" sheet attached to the question paper, following instructions therein.** **(1x10)**

2.1 Regression testing is a functional testing technique.

2.2 Prepare a test plan activity needs the stockholder's approval before beginning test effort estimation.

2.3 Statement coverage is also known as Basis path coverage.

2.4 Stub I met with in testing of Modules.

2.5 SQL Server is the System Software.

2.6 Acceptance testing will be done by user.

2.7 Char s: ="Anna" is the pseudo code syntax to store data.

2.8 Testing and debugging are factors of the program life cycle.

2.9 Verification is checking whether the system is built right.

2.10 Static tests involve executing software under test.

3. **Match words and phrases in column X with the closest related meaning/ word(s)/phrase(s) in column Y. Enter your selection in the "tear-off" answer sheet attached to the question paper, following instructions therein.** **(1x10)**

	X		Y
3.1	EOQ	**A.**	Beta Test
3.2	Audit trail	**B.**	static tools
3.3	Generalization	**C.**	Scatter plot
3.4	System analyst is	**D.**	Project Activities
3.5	SQL	**E.**	Risk Monitoring
3.6	Gant Chart	**F.**	Query Language
3.7	Effect Diagram	**G.**	Tracking data item
3.8	Two-dimensional graph	**H.**	agent of change
3.9	Risk Management	**I.**	Verification
3.10	Debugging Tools	**J.**	Super classes
		K.	Inventory control
		L.	Test Plan
		M.	run()

4. **Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the "tear-off" answer sheet attached to the question paper, following instructions therein.** (1x10)

A.	Acceptable Quality Level	B.	White box	C.	LINUX
D.	Quality assurance	E.	Comfort	F.	Module
G.	Test plan	H.	Check digit	I.	DTP
J.	Data Dictionary	K.	Static testing technique	L.	MS-Office
M.	An Audit Trail				

4.1   Tracing, of any input record or process, performed on a system back to its original source, is _____.

4.2   "ISO 9000" concerns _____ set up in an organization.

4.3   _____ detects transpositions errors.

4.4   AQL stands for _____.

4.5   _____ testing must precede Unit testing and System testing.

4.6   Ergonomics is concerned with the _____ of the computer operator.

4.7   _____ contains the structure of the database.

4.8   Boundary value analysis techniques is not a _____ technique.

4.9   _____ is a System Software.

4.10 Data flow analysis of the following is a _____.

PART TWO
(Attempt any **FOUR** questions)

5.
a)   Define test planning process and test approaches.
b)   What is the key difference between validate testing goals and acceptance testing goals?
c)   Describe the change control process for a modern software development project.

(5+5+5)

6.
a)   What are the common problems in Software Development Process?
b)   Describe what is a DLL?
c)   How is change control addressed in modern software development projects?

(5+5+5)

7.   Write short notes on any **three** of the followings:
a)   Software Reliability
b)   Unit Testing
c)   CMM
d)   Cyclomatic Complexity Method

(3x5)

8.
a)   What is the meant by Case Tools? Define the Case Tools for System.
b)   Define the role of data processing Auditor.
c)   What is Quality Assurance? Define it factors.

(5+5+5)

9.
a)   What is the Component diagram? State their use?
b)   What is Quality? How is software quality evaluated? Explain.

(7+8)