

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - V Computer Science & Engineering : WINTER: 2025
SUBJECT: SOFTWARE TESTING & QUALITY ASSURANCE

Day : Monday
Date : 08/12/2025

W-25588-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicates **FULL** marks.
- 3) Draw neat diagram **WHEREVER** necessary.
- 4) Assume suitable data **WHEREVER** necessary.

-
- Q.1** Differentiate between White-Box testing and Black-Box testing. What are the advantages and disadvantages of each approach? (10)
OR
- Q.1** Illustrate and explain the Verification and Validation (V&V) model in software development using a clear diagram. (10)
- Q.2** What are decision tables? Explain effectiveness of decision tables with suitable example. (10)
OR
- Q.2** Describe the Boundary Value Analysis (BVA) technique. How does it help in designing effective test cases for functional testing? Provide an example. (10)
- Q.3** By considering online banking system software perform GUI testing and stress testing. (10)
OR
- Q.3** Describe the essential components of a comprehensive "Defect Report." Why is detailed and accurate defect reporting crucial? (10)
- Q.4** List and explain McCall's quality factors and criteria. (10)
OR
- Q.4** Illustrate and explain the Testing Maturity Model (TMM) using a clear diagram. Describe the different levels of the TMM and their key characteristics. (10)
- Q.5** Write short note on: (10)
a) Fault Tolerance
b) Failure containment
OR
- Q.5** List and explain standards and different methodologies for defect prevention. (10)
- Q.6** Elaborate some of the challenges in automating the testing of GUI portion of an application with example. (10)
OR
- Q.6** Define software automation and explain design & scope of automation in detail. (10)

* * * *