



DEFENSE ACQUISITION UNIVERSITY

TST 102 – FUNDAMENTALS OF TEST AND EVALUATION

160422

Course Learning/Performance Objectives followed by its enabling learning objectives on separate lines if specified.

1	Identify the role of T&E in the acquisition life cycle.
	Identify the purpose of Test and Evaluation (T&E).
	Recognize the typical test and evaluation activities utilized throughout each stage of the acquisition process.
	Arrange the typical test events and products in their correct order.
2	Recognize the importance of T&E.
	Identify the objectives and products of T&E as outlined in Public Law, DoD 5000-series documents and the Defense Acquisition Guidebook.
	Recognize key services/agency requirements governing T&E
	Describe the role of T&E activities with respect to Systems Engineering.
	Recognize how T&E helps to mitigate program risk.
	Recognize key T&E lessons learned and "best practices".
3	Recognize key organizations and factors in T&E management.
	Identify key DoD T&E organizations and their roles.
	Identify key service and agency T&E organizations
	Describe typical roles and responsibilities of key T&E personnel.
	Recognize the impact of ESOH requirements on T&E activities.
	Recognize the ethical responsibilities of T&E personnel
4	Recognize key aspects of identifying T&E requirements.
	Identify key programmatic and JCIDS documents and the roles in the T&E process.
	Define key testing parameters, including KPPs, MOEs, MOSs and MOPs.
	Recognize how key testing parameters, including KPPs, MOEs, MOSs and MOPs, are used.
	Identify the contents of a typical TEMP.
5	Identify steps and major activities in the T&E process.
	Identify the five main steps of the DoD T&E process.
	Recognize key activities within each of the steps of the DoD T&E process.
	Describe how Test Readiness Reviews are used.
	Distinguish between event-driven and schedule-driven testing.
	Recognize how TRLs can be used to support T&E.
6	Recognize key components of and roles in DT&E.
	Identify the focus, main activities and products associated with DT&E.
	Recognize the relationship between T&E and Systems Engineering
	Define the four different types of verification methods commonly used.
	Distinguish between Developmental Testing and Operational Testing
	Distinguish between the contractor's role and the Government's role in DT&E.
	Differentiate between qualification testing and acceptance testing.
7	Identify the requirements and issues associated with LFT&E
	Identify the purpose, statutory requirements, and planning aspects associated with LFT&E.
	Define a "covered system".
	Identify the types of programs requiring LFT&E.
	Distinguish between "susceptibility", "vulnerability" and "lethality".
8	Identify key components of OT&E.
	Identify key organizations involved in OT&E.
	Identify the focus, main activities and products associated with OT&E.
	Differentiate between OT&E and DT&E.
	Distinguish between "operational effectiveness" and "operational suitability".
	Describe the three types of operational testing.
	Recognize the impact of different acquisition approaches on T&E.
Recognize ways developmental and operational testing can be combined.	



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	Recognize the value of Integrated Test
9	Recognize how M&S can be used to support T&E.
	Describe the use of Modeling & Simulation in support of T&E.
	Describe "verification", "validation" and "accreditation" with respect to M&S.
	Identify three classes of simulation.
	Recognize the advantages and disadvantages of using M&S for T&E activities.
10	Recognize key aspects of Software T&E.
	Recognize fundamental techniques used for software testing.
	Describe special testing considerations for software COTS products.
	Recognize typical software development and testing activities.
	Distinguish "white box", "gray box", and "black box" software testing approaches.
	Identify common software deficiency reporting categories used in testing.
	Recognize how "software maturity" can be measured.
	Identify software testing "best practices".
11	Recognize key components of Logistics T&E.
	Describe the purposes and processes encompassed by Logistics T&E.
	Identify the essential elements covered by logistics testing.
	Define the terms "reliability", "maintainability" and "availability".
	Recognize how reliability, maintainability and availability can be measured.
	Define the concept of reliability growth
	Calculate reliability, confidence and test item levels for a given scenario.
12	Recognize special considerations of T&E for COTS, NDI, Joint, and Multiservice testing.
	Identify special testing considerations for COTS and NDI products.
	Distinguish between Joint and Multiservice testing.
13	Identify key aspects of interoperability T&E.
	Recognize key aspects of DoD interoperability testing.
	Describe the role of the JITC.
	Recognize key aspects of "net-centricity".
14	Recognize important considerations of Cybersecurity T&E.
	Recognize the applicability of cybersecurity to DoD acquisition programs..
	Describe the system requirements for cybersecurity.
	Identify roles and responsibilities for implementing cybersecurity.
	Describe the Risk Management Framework.
	Describe the T&E responsibilities for cybersecurity.
15	Identify key aspects of data management in test and evaluation.
	Identify criteria for determining data management requirements.
	Identify contract requirements for data.
	Describe the elements of a test database.
16	Recognize important considerations in developing and documenting a T&E program strategy.
	Recognize how a T&E program strategy is developed.
	Describe key aspects of "robust testing".
	Describe the purpose and format of a TEMP.
	Describe the DoD Major Range and Test Facility Base.
	Describe the threat validation process.
17	Identify key aspects of Test Planning.
	Identify the four stages of testing.
	Describe the key elements of a Test Plan.



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	Recognize how capabilities are translated into test criteria.
	Describe typical test planning metrics.
	Identify guidelines for test management.
	Identify T&E WIPT key members and roles.
	Create an outline Test Plan for a given system.
18	Identify keys aspects of Test Conduct.
	Describe the three main steps in the test conduct process.
	Recognize common test data management issues.
	Identify common data sources and data errors.
	Identify pre-test, during-test and post-test events.
19	Identify key aspects of Analyzing and Evaluating Test Results.
	Identify principles and strategies for data analysis and system evaluation.
	Distinguish between "analysis" and "evaluation".
	Describe basic statistical concepts and their use in T&E.
	Analyze test results from a given program.
20	Identify keys aspects of Reporting Test Results.
	Recognize the objectives of a DoD T&E report.
	Identify the key items which should be included in a test report.
	Identify the major T&E reports required for ACAT I/II programs.
	Given a test report, interpret it.