

**ISTQB**

**Foundation Certificate  
In  
Software Testing**

**SAMPLE PAPER 1a**

**Time allowed: 1 hour**

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1.	<p><b>When what is visible to end-users is a deviation from the specified or expected behaviour, this is called</b></p> <ul style="list-style-type: none"> <li>a) an error</li> <li>b) a fault</li> <li>c) a failure</li> <li>d) a defect</li> <li>e) a mistake</li> </ul>
2.	<p><b>Regression testing should be performed</b></p> <ul style="list-style-type: none"> <li>v) every week</li> <li>w) after the software has changed</li> <li>x) as often as possible</li> <li>y) when the environment has changed</li> <li>z) when the project manager says</li> </ul> <ul style="list-style-type: none"> <li>a) v &amp; w are true, x – z are false</li> <li>b) w, x &amp; y are true, v &amp; z are false</li> <li>c) w &amp; y are true, v, x &amp; z are false</li> <li>d) w is true, v, x, y and z are false</li> <li>e) All of the above are true</li> </ul>
3.	<p><b>IEEE 829 test plan documentation standard contains all of the following except</b></p> <ul style="list-style-type: none"> <li>a) test items</li> <li>b) test deliverables</li> <li>c) test tasks</li> <li>d) test environment</li> <li>e) test specification</li> </ul>
4.	<p><b>Testing should be stopped when</b></p> <ul style="list-style-type: none"> <li>a) all the planned tests have been run</li> <li>b) time has run out</li> <li>c) all faults have been fixed correctly</li> <li>d) both a) and c)</li> <li>e) it depends on the risks for the system being tested</li> </ul>

5.	<p><b>Order numbers on a stock control system can range between 10000 and 99999 inclusive. Which of the following inputs might be a result of designing tests for only valid equivalence classes and valid boundaries?</b></p> <ul style="list-style-type: none"> <li>a) 1000, 50000, 99999</li> <li>b) 9999, 50000, 100000</li> <li>c) 10000, 50000, 99999</li> <li>d) 10000, 99999</li> <li>e) 9999, 10000, 50000, 99999, 100000</li> </ul>
6.	<p><b>Consider the following statements about early test design:</b></p> <ul style="list-style-type: none"> <li>i. early test design can prevent fault multiplication</li> <li>ii. faults found during early test design are more expensive to fix</li> <li>iii. early test design can find faults</li> <li>iv. early test design can cause changes to the requirements</li> <li>v. early test design takes more effort</li> </ul> <ul style="list-style-type: none"> <li>a) i, iii &amp; iv are true. ii &amp; v are false</li> <li>b) iii is true, i, ii, iv, &amp; v are false</li> <li>c) iii &amp; iv are true. i, ii &amp; v are false</li> <li>d) i, iii, iv &amp; v are true, ii is false</li> <li>e) i &amp; iii are true, ii, iv &amp; v are false</li> </ul>
7.	<p><b>Non-functional system testing includes:</b></p> <ul style="list-style-type: none"> <li>a) testing to see where the system does not function correctly</li> <li>b) testing quality attributes of the system including performance and usability</li> <li>c) gaining user approval for the system</li> <li>d) testing a system feature using only the software required for that function</li> <li>e) testing for functions that should not exist</li> </ul>
8.	<p><b>Which of the following is NOT part of configuration management?</b></p> <ul style="list-style-type: none"> <li>a) status accounting of configuration items</li> <li>b) auditing conformance to ISO 9000</li> <li>c) identification of test versions</li> <li>d) record of changes to documentation over time</li> <li>e) controlled library access</li> </ul>

9.	<p><b>Which of the following is the main purpose of the integration strategy for integration testing in the small?</b></p> <ul style="list-style-type: none"> <li>a) to ensure that all of the small modules are tested adequately</li> <li>b) to ensure that the system interfaces to other systems and networks</li> <li>c) to specify which modules to combine when, and how many at once</li> <li>d) to ensure that the integration testing can be performed by a small team</li> <li>e) to specify how the software should be divided into modules</li> </ul>
10.	<p><b>What is the purpose of test completion criteria in a test plan?</b></p> <ul style="list-style-type: none"> <li>a) to know when a specific test has finished its execution</li> <li>b) to ensure that the test case specification is complete</li> <li>c) to set the criteria used in generating test inputs</li> <li>d) to know when test planning is complete</li> <li>e) to plan when to stop testing</li> </ul>
11.	<p><b>Consider the following statements</b></p> <ul style="list-style-type: none"> <li>i. an incident may be closed without being fixed.</li> <li>ii. incidents may not be raised against documentation.</li> <li>iii. the final stage of incident tracking is fixing.</li> <li>iv. the incident record does not include information on test environments.</li> <li>v. incidents should be raised when someone other than the author of the software performs the test.</li> </ul> <ul style="list-style-type: none"> <li>a) ii and v are true, i, iii and iv are false</li> <li>b) i and v are true, ii, iii and iv are false</li> <li>c) i, iv and v are true, ii and iii are false</li> <li>d) i and ii are true, iii, iv and v are false</li> <li>e) i is true, ii, iii, iv and v are false</li> </ul>

<p>12.</p>	<p><b>Given the following code, which is true about the minimum number of test cases required for full statement and branch coverage</b></p> <pre> Read P Read Q IF P+Q &gt; 100 THEN   Print "Large" ENDIF IF P &gt; 50 THEN   Print "P Large" ENDIF </pre> <p>a) 1 test for statement coverage, 3 for branch coverage  b) 1 test for statement coverage, 2 for branch coverage  c) 1 test for statement coverage, 1 for branch coverage  d) 2 tests for statement coverage, 3 for branch coverage  e) 2 tests for statement coverage, 2 for branch coverage</p>
<p>13.</p>	<p><b>Consider the following statements:</b></p> <p>i. 100% statement coverage guarantees 100% branch coverage.  ii. 100% branch coverage guarantees 100% statement coverage.  iii. 100% branch coverage guarantees 100% decision coverage.  iv. 100% decision coverage guarantees 100% branch coverage.  v. 100% statement coverage guarantees 100% decision coverage.</p> <p>a) ii is True, i, iii, iv &amp; v are False  b) i is True, ii, iii, iv &amp; v are False  c) i &amp; v are True, ii, iii &amp; iv are False  d) ii &amp; iii are True, i, iv &amp; v are False  e) ii, iii &amp; iv are True, i &amp; v are False</p>
<p>14.</p>	<p><b>Functional system testing is</b></p> <p>a) testing that the system functions with other systems  b) testing by users to check that the system will perform business functions  c) testing that the components that comprise the system function together  d) testing the end to end functionality of the system as a whole  e) testing the system performs functions within specified response times</p>

15.	<p><b>Incidents would not be raised against</b></p> <ul style="list-style-type: none"> <li>a) requirements</li> <li>b) documentation</li> <li>c) on-line help</li> <li>d) test cases</li> <li>e) improvements suggested by users</li> </ul>
16.	<p><b>Which of the following items would not come under Configuration Management?</b></p> <ul style="list-style-type: none"> <li>a) software</li> <li>b) operating systems</li> <li>c) test documentation</li> <li>d) live data</li> <li>e) user requirement documents</li> </ul>
17.	<p><b>Maintenance testing is</b></p> <ul style="list-style-type: none"> <li>a) updating tests when the software has changed</li> <li>b) testing very old systems</li> <li>c) testing a system that has been changed</li> <li>d) testing by users to ensure that the system meets a business need</li> <li>e) testing to maintain business advantage</li> </ul>
18.	<p><b>What can static analysis NOT find?</b></p> <ul style="list-style-type: none"> <li>a) the use of a variable before it has been defined</li> <li>b) unreachable (“dead”) code</li> <li>c) whether the value stored in a variable is correct</li> <li>d) the re-definition of a variable before it has been used</li> <li>e) array bound violations</li> </ul>
19.	<p><b>Which of the following techniques is NOT a black box technique?</b></p> <ul style="list-style-type: none"> <li>a) equivalence partitioning</li> <li>b) state transition testing</li> <li>c) LCSAJ</li> <li>d) syntax testing</li> <li>e) boundary value analysis</li> </ul>

20.	<p><b>Beta testing is:</b></p> <ul style="list-style-type: none"> <li>a) performed by customers at their own site</li> <li>b) performed by customers at the software developer's site</li> <li>c) performed by an Independent Test Team</li> <li>d) useful to test bespoke software</li> <li>e) performed as early as possible in the lifecycle</li> </ul>
21.	<p><b>Given the following types of tool, which tools would typically be used by developers, and which by an independent system test team?</b></p> <ul style="list-style-type: none"> <li>i. static analysis</li> <li>ii. performance testing</li> <li>iii. test management</li> <li>iv. dynamic analysis</li> <li>v. test running</li> <li>vi. test data preparation</li> </ul> <ul style="list-style-type: none"> <li>a) developers would typically use i, iv and vi; test team ii, iii and v</li> <li>b) developers would typically use i and iv, test team ii, iii, v and vi</li> <li>c) developers would typically use i, ii, iii and iv; test team v and vi</li> <li>d) developers would typically use ii, iv and vi; test team i, iii and v</li> <li>e) developers would typically use i, iii, iv and v; test team ii and vi</li> </ul>
22.	<p><b>The main focus of acceptance testing is</b></p> <ul style="list-style-type: none"> <li>a) finding faults in the system</li> <li>b) ensuring that the system is acceptable to all users</li> <li>c) testing the system with other systems</li> <li>d) testing from a business perspective</li> <li>e) testing by an independent test team</li> </ul>
23.	<p><b>Which of the following statements about the component testing standard is FALSE?</b></p> <ul style="list-style-type: none"> <li>a) black box design techniques all have an associated measurement technique.</li> <li>b) white box design techniques all have an associated measurement technique.</li> <li>c) cyclomatic complexity is not a test measurement technique</li> <li>d) black box measurement techniques all have an associated test design technique.</li> <li>e) white box measurement techniques all have an associated test design technique.</li> </ul>

24.	<p><b>Which of the following statements is NOT true?</b></p> <ul style="list-style-type: none"> <li>a) inspection is the most formal review process</li> <li>b) inspections should be led by a trained leader</li> <li>c) managers can perform inspections on management documents</li> <li>d) inspection is appropriate even when there are no written documents</li> <li>e) inspection compares documents with predecessor (source) documents</li> </ul>
25.	<p><b>A typical commercial test execution tool would be able to perform all of the following, EXCEPT:</b></p> <ul style="list-style-type: none"> <li>a) generating expected outputs</li> <li>b) replaying inputs according to a programmed script</li> <li>c) comparison of expected outcomes with actual outcomes</li> <li>d) recording test inputs</li> <li>e) reading test values from a data file</li> </ul>
26.	<p><b>The difference between re-testing and regression testing is:</b></p> <ul style="list-style-type: none"> <li>a) re-testing is running a test again; regression testing looks for unexpected side-effects</li> <li>b) re-testing looks for unexpected side-effects; regression testing is repeating those tests</li> <li>c) re-testing is done after faults are fixed; regression testing is done earlier</li> <li>d) re-testing uses different environments, regression testing uses the same environment</li> <li>e) re-testing is done by developers, regression testing is done by independent testers</li> </ul>
27.	<p><b>Expected results are:</b></p> <ul style="list-style-type: none"> <li>a) only important in system testing</li> <li>b) only used in component testing</li> <li>c) never specified in advance</li> <li>d) most useful when specified in advance</li> <li>e) derived from the code</li> </ul>
28.	<p><b>What type of review requires formal entry and exit criteria, including metrics:</b></p> <ul style="list-style-type: none"> <li>a) informal review</li> <li>b) walkthrough</li> <li>c) inspection</li> <li>d) management review</li> <li>e) post project review</li> </ul>



29.	<p><b>Which of the following uses Impact Analysis most?</b></p> <ul style="list-style-type: none"> <li>a) component testing</li> <li>b) integration testing in the small</li> <li>c) non-functional system testing</li> <li>d) user acceptance testing</li> <li>e) maintenance testing</li> </ul>
30.	<p><b>What is NOT included in typical costs for an inspection process?</b></p> <ul style="list-style-type: none"> <li>a) training in the inspection process</li> <li>b) setting up forms and databases</li> <li>c) analysing metrics and improving processes</li> <li>d) writing the documents to be inspected</li> <li>e) time spent on the document outside the meeting</li> </ul>
31.	<p><b>Which of the following is NOT a valid test objective:</b></p> <ul style="list-style-type: none"> <li>a) to show that the software meets its requirement</li> <li>b) to find faults in the software</li> <li>c) to prove that the software has no faults</li> <li>d) to give confidence in the software</li> <li>e) to find performance problems</li> </ul>
32.	<p><b>Which expression best matches the following characteristics and review processes:</b></p> <ul style="list-style-type: none"> <li>1. led by the author</li> <li>2. undocumented</li> <li>3. no management participation</li> <li>4. led by a trained moderator or leader</li> <li>5. uses entry and exit criteria</li> </ul> <ul style="list-style-type: none"> <li>s) inspection</li> <li>t) peer review</li> <li>u) informal review</li> <li>v) walkthrough</li> </ul> <ul style="list-style-type: none"> <li>a) s = 4, t = 3, u = 2 and 5, v = 1</li> <li>b) s = 4 and 5, t = 3, u = 2, v = 1</li> <li>c) s = 1 and 5, t = 3, u = 2, v = 4</li> <li>d) s = 5, t = 4, u = 3, v = 1 and 2</li> <li>e) s = 4 and 5, t = 1, u = 2, v = 3</li> </ul>

33.	<p><b>Which of the following is NOT part of system testing?</b></p> <ul style="list-style-type: none"> <li>a) business process-based testing</li> <li>b) performance, load and stress testing</li> <li>c) requirements-based testing</li> <li>d) usability testing</li> <li>e) top-down integration testing</li> </ul>
34.	<p><b>Which statement about expected outcomes is FALSE?</b></p> <ul style="list-style-type: none"> <li>a) expected outcomes are defined by the software's behaviour</li> <li>b) expected outcomes are derived from a specification, not from the code</li> <li>c) expected outcomes include outputs to a screen and changes to files and databases</li> <li>d) expected outcomes should be predicted before a test is run</li> <li>e) expected outcomes may include timing constraints such as response times</li> </ul>
35.	<p><b>The standard that gives definitions of testing terms is</b></p> <ul style="list-style-type: none"> <li>a) ISO/IEC 12207</li> <li>b) BS7925-1</li> <li>c) BS7925-2</li> <li>d) ANSI/IEEE 829</li> <li>e) ANSI/IEEE 729</li> </ul>
36.	<p><b>The cost of fixing a fault:</b></p> <ul style="list-style-type: none"> <li>a) is not important</li> <li>b) increases as we move the product towards live use</li> <li>c) decreases as we move the product towards live use</li> <li>d) is more expensive if found in requirements than functional design</li> <li>e) can never be determined</li> </ul>
37.	<p><b>Which of the following is NOT included in the Test Plan document of the Test Documentation Standard?</b></p> <ul style="list-style-type: none"> <li>a) Test items (i.e. software versions)</li> <li>b) What is not to be tested</li> <li>c) Test environments</li> <li>d) Quality plans</li> <li>e) Schedules and deadlines</li> </ul>

38.	<p><b>Could reviews or inspections be considered part of testing?</b></p> <ul style="list-style-type: none"><li>a) no, because they apply to development documentation</li><li>b) no, because they are normally applied before testing</li><li>c) no, because they do not apply to the test documentation</li><li>d) yes, because both help detect faults and improve quality</li><li>e) yes, because testing includes all non-constructive activities</li></ul>
39.	<p><b>Which of the following is not part of performance testing?</b></p> <ul style="list-style-type: none"><li>a) measuring response times</li><li>b) measuring transaction rates</li><li>c) recovery testing</li><li>d) simulating many users</li><li>e) generating many transactions</li></ul>
40.	<p><b>Error guessing is best used</b></p> <ul style="list-style-type: none"><li>a) as the first approach to deriving test cases</li><li>b) after more formal techniques have been applied</li><li>c) by inexperienced testers</li><li>d) after the system has gone live</li><li>e) only by end users</li></ul>

### List of Answers to the Sample Paper:

- |     |   |     |   |
|-----|---|-----|---|
| 1)  | C | 21) | B |
| 2)  | C | 22) | D |
| 3)  | E | 23) | A |
| 4)  | E | 24) | D |
| 5)  | C | 25) | A |
| 6)  | A | 26) | A |
| 7)  | B | 27) | D |
| 8)  | B | 28) | C |
| 9)  | C | 29) | E |
| 10) | E | 30) | D |
| 11) | B | 31) | C |
| 12) | B | 32) | B |
| 13) | E | 33) | E |
| 14) | D | 34) | A |
| 15) | E | 35) | B |
| 16) | D | 36) | B |
| 17) | C | 37) | D |
| 18) | C | 38) | D |
| 19) | C | 39) | C |
| 20) | A | 40) | B |