1

A test manager creates a cross-project test strategy as a part of the test handbook for a software development department.
Following aspects could be described:

1) Organisational testing goals
2) How to manage project- and product risk
3) Breakdown of testing to test phases and test levels
4) Test process improvement activities

Which of the following aspects should be described in the test strategy?

A 2 and 3
B 1, 2 and 4
C 2 and 4
D 1, 3 and 4

2

Test activities are an integral part of different software development models. Which two of the following test activities are the most cost efficient ones?

A Coverage analysis of the software requirement specification
B Review of the software architecture
C Review of the integration test plan
D Coverage analysis of the code
E Review of acceptance test plan
F Coverage analysis of detailed requirements
G Review of the software requirement specification

3

Quality costs are to be subdivided into different categories. Which of the following costs will be assigned to the "preventive costs" category?

A Review costs of software requirement specifications
B Costs of test preparation activities
C Training costs of the development team for improving formal specification methods
D Correction costs of failures identified during software usage

4

In a safety relevant project environment during testing a requirement coverage of 100% has been achieved. As a test manager you are responsible for monitoring remaining product risks. Which of the following metrics are most helpful for this task?

A Tested requirements without known failures / tested requirements with known failures
B Number of successfully executed test cases with highest priority / total number of executed test cases
C Number of found critical failures / number of all found failures
D Number of tested safety relevant requirements without open failures / total number of tested safety relevant requirements

5

The IEEE 829 standard describes software documentation. As a test leader one of your tasks is to select the contents of the test plan. Which two of the following contents should be described in a test plan in case of a bigger project?

A Test conditions
B Test process metrics
C Test approach and test levels
D Software attributes and functions to be tested
E Detailed schedule

6

You are a test manager in a project. The second test cycle of a system test is finished. A test report has been created and contains following quantitative statements:

● 100 defects found, 50 of them are corrected and accepted after re-testing (state closed).

Following table contains the previous effort for testing and correcting:

Activity	Effort (per person days)
Test preparation and execution	30
Defect localization (debugging)	10
Defect correction	8
Independent retesting	3

Average costs for 1 person day: 1000 Euro.

How high are the quality costs considering four categories:
- preventive costs
- defect exposure costs
- costs of internal failures
- costs of external failures

A 1. defect exposure costs: 40'000 EUR
       2. costs of internal failures: 11'000 EUR

B 1 defect exposure costs: 30'000 EUR
       2. costs of internal failures: 21'000 EUR

C 1. defect exposure costs: 40'000 EUR
       2. costs of internal failures: 8'000 EUR
       3. costs of external failures: 3'000 EUR

D 1. defect exposure costs: 30'000 EUR
       2. costs of internal failures: 18'000 EUR
   3. costs of external failures: 3'000 EUR

7

A test policy is to be created for an IT organisation that describes the company's test philosophy. Which two aspects should be included in the test policy?

A Definition of the test strategy for the whole organisation
B Test design techniques that will be applied in the organization
C Test activities on different test levels
D Quality goals of the organization influenced by testing
E A technique for evaluation of test effectivity and the test efficiency

8

After finishing a system test following diagram shows the total number of found (blue) and not yet corrected (red) failures. Some of the still open failures are classified as "critical". All test cases have already been executed.
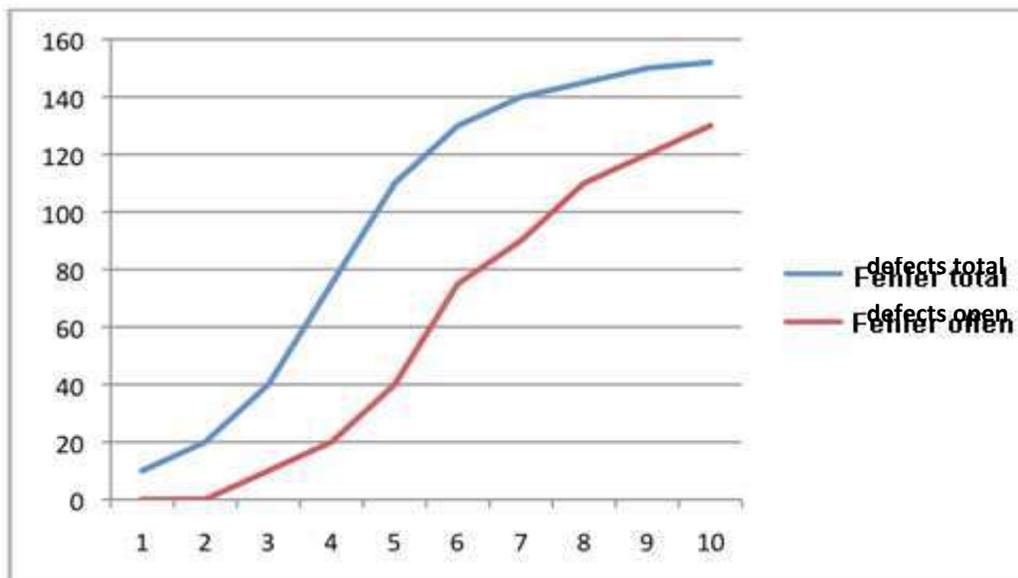
Based only on this diagram what is the most reasonable action?

A Repeated execution of system tests to verify defect corrections
B Executing a user acceptance test to verify correctness of implemented business processes
C Testing safety relevant requirements as a part of a regulatory acceptance test
D Operational acceptance testing to verify operational requirements

9

You are a test manager in a development project. After finishing development your application was successfully transferred to the operating phase. But suprisingly on the 7. day a defect cluster was identified.
After the root cause identification you should conduct a "lessons learned" session.
Which question should be answered in order to have the most benefit for the company?

A Is there any quality assurance measure to find the failure earlier?
B Who is the developer that caused this problem?
C Is a test process improvement program necessary? If yes, with which priority?
D Who is responsible for the testers who did not find this defect?

10

Which three of the following factors have a direct influence on likelihood (also called technical risk) of a failure?

A Potential size of loss
B Priority of the requirements
C New development methodology
D Missing solution opportunities for the given problem
E Team conflicts
F Size of the company
G Education level and experience of the development team

11

Which of the following statements about the general aspects of standards is the most appropriate one?

A Standards are mostly temporary fashions, they fast become less important.
B Standards are always useful and they should be applied in each case.
C There are different categories of standards. E.g. international standards, national standards, company specific standards., etc.
D Standards have an advantage of being always consistent among each other.

12

Which of following statements about the differences between TMMi, TPI, STEP and CTP is the most appropriate one?

A CTP provides a detailed list of concrete improvement actions. Other methods contain no such measures.
B TPI, TMMi and CTP are international standards in contrast to STEP.
C TPI and TMMi are based on process levels. STEP and CTP are based on core domains.
D TMMi and TPI provide a mandatory way to improve test processes (improvements have a defined sequence) in contrast to STEP and CTP.

13

You are requested to give a support as a test expert for the control board of an IT department of 300 colleagues. Goal is to restructure and optimize testing activities within development process.
Until now all the quality assurance activities had been done by the project members. A project mostly consists of several developers, a project leader and sometimes an end user, or a business analyst. End user, or business analyst should communicate and take care of business aspects. Due to lack of resources requirements got poor documented in several cases.
Each project use agile project management techniques for the project's organization and to manage the tasks.
Nevertheless software will not be delivered in a defined version as a package in any single iteration, but rather each modul will be integrated separately and at different times. That had caused critical problems time and again in the past.
Consequence was a costly rollback. A stable reference configuration (baseline) had been almost never achieved. IT department already disposes of some testers. Nevertheless they are available very scanty, they can not be assigned to each project.
Exploratory testing will be mostly done, whereas created documents can not be further used.
Department board is ready to increase test resources to put improvement proposals into practice. As a first step they decided to make a clear guideline about the test approaches to be used.
Which of following classes of approaches is different from the ones used until now and makes an improvement to the above described situation?

A Dynamic, or heuristic approaches.
B Analytical approaches.
C Model-based approaches.
D Process- or standard-based approaches.

14

FISEC has taken over real estate company REA. Your task is to integrate REA test team into FISEC.
As a preparation to yearly employee evaluation you consider how you could keep and increase motivation within the team. Which three of following motivation methods is most appropriate?

A You write an article about the importance of testing in the company and publish it on the intranet.
B You offer the possibility to each test team member to participate on a Foundation Level course within one year.
C You write an article about the tester that found most errors and publish it on the intranet.
D You set the bonus criteria based on the evaluation of yearly customer satisfaction and usability survey.
E You allow participation for each team member on a professional conference
F You award a bonus for the tester that could find most errors.
G You crititize individual tester for miskates

15

You are a test manager for FISEC, a French-speaking. Several system documentations are written in French. You could not have applied a specialist for test automation until now. Meanwhile you have been instructed by IT management of FISEC to work out an alternative solution for automated regression tests on system level. You have two years inclusive necessary trainings and potential takeover to the test team. You have analyzed several alternatives and selected four ones to present them to the IT management. Which of the following options is most promising?

A Outsourcing of test automation based on the offer of AsiaTest, an asian company, which has specialists in capture-replay automation tools. They offer that in addition to execute regression tests and doing maintenance tasks they can also provide trainings.
B A company offers a capture-replay tool for test automation that should be easy to use. This company would train two test team members in three months then the company would create regression test suite.
C Insourcing test automation based on an offer of local company WeTe. It has specialists in capture-replay automation tools on system test level. Additionally WeTe offers trainings on test automation methods and tools.
D Internal offers from development side of FISEC. By using a component test suite, CppUnit as a test automation tool regression test suite would be transformed. A developer of the development team has a lot of experiences with unit test automation and he also offers to provide trainins.

16

You are the new test manager for trade company GlobalTrade. This company has three sales channel:

1. 80 specialized dealers
2. Online Webshop
3. Paper catalog. There is a call center to accept orders via phone.

Online webshop has been developed and tested by company ABC (component and integration test). Contract of 500'000 EUR has already been signed. Costs of delay in delivery: EUR 10'000 pro month. There is a plan exists to extend online webshop by company ABC. Project duration is planned for 12 months. GlobalTrade's IT department develops XML based data interface to other systems: a) stock and delivery system, b) finance and accounting.
Plan is based on a growth of 20% for each sales channel in next three years. Risks are analyzed and displayed as below:

Risk ID	Description	Probability	Damage (1000 EUR)	Risk classification number
A	Server of online webshop will not be	20%	100	20

	able to manage of growth >60%			
B	ABC does not know GlobalTrade systems. This can cause delay due to several errors and restest.	30	60	
C	ABC does not know GlobalTrade systems. Errors on the field can occur.	10	100-200	

Which <u>three</u> of following measures are applicable for mitigation of risk "A"?

A Executing regular functional testing
B Creation and testing an emergency plan for system failure
C Executing stress tests
D Executing technical reviews of the system architecture
E   Executing compliance tests
F   Executing performance tests
G Executing load tests

17

A software solution will be developed for a call center of a bank that accepts stock orders. As a test manager you should give reasons for the costs of testing. Which two of following cost factors belong to category "costs of prevention"?

A Follow-up costs of impossibility of accepting orders by phone
B Training costs of project members
C Debugging and bug removal costs
D Costs of development and introduction of programming conventions
E Test management tool costs

18

Which of following statements regarding risk identification is most appropriate?

A Risks that have not been not detected during risk identification should be considered indeed
B Opportunities for risk identification are among others: workshops and checklists
training costs of project members
C During risk identification hundreds of risks should be considered
D During risk identification some measures should be defined immediately (the sooner the better)