

**Govt. women Engineering college , Ajmer**

**I Mid-Term 2017-2018**

**VIII Sem(IT)**

**Subject: Software Testing and Validation**

**Time: 1 hour**

**Max Marks:20**

1. Explain difference between Verification and validation? (5)
2. Difference between white box and black box testing. Also explain grey box testing. (5)
3. What is alpha and beta testing? Explain. (5)
4. Explain Acceptance testing. (5)

**Ans1: Verification and Validation:**

- **Verification** is a static practice of verifying documents, design, code and program.  
**Validation** is a dynamic mechanism of validating and testing the actual product.
- **Verification** does not involve executing the code.  
**Validation** always involves executing the code.
- **Verification** is human based checking of documents and files and **Validation** It is computer based execution of program.
- **Verification** uses methods like inspections, reviews, walkthroughs, and Desk-checking etc.  
**Validation** uses methods like black box (functional) testing, gray box testing, and white box (structural) testing etc.
- **Verification** is to check whether the software conforms to specifications.

**Validation** is to check whether software meets the customer expectations and requirements.

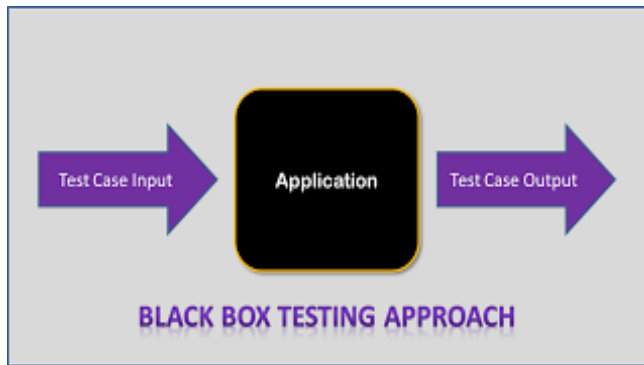
**Ans2:**

**What is Black Box Testing?**

Crudely put, when the tester has no idea of the internal working of the system which he is testing, that approach is called black box testing.

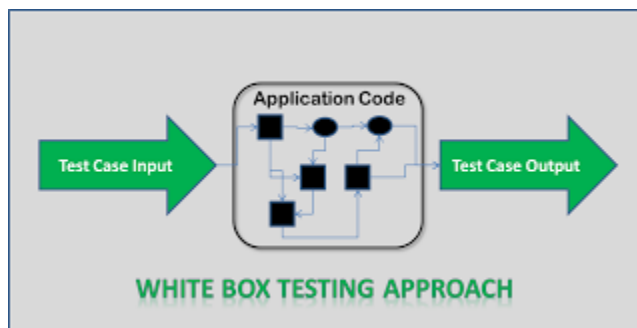
In this case, the system under test is viewed as a “black box”.

Requirements Document or Functional Specification Document forms the basis of this testing, which requires the user to understand the processes within the software.



### What is White Box Testing?

In white box testing methodology, the tester has the knowledge of the internals of a system and knows how the system is implemented. The tester uses this knowledge to develop test cases that will examine the control flow, information flow, data flow, exception and error handling as well as coding practices of the system.



### Grey Box Testing:

can be contrasted with black box testing, a scenario in which the tester has no knowledge or access to the internal workings of a program, or white box testing, a scenario in which the internal particulars are fully known. Gray box testing is commonly used in penetration tests.

**Ans3:**

**What is Alpha Testing?**

Alpha testing is a type of acceptance testing; performed to identify all possible issues/bugs before releasing the product to everyday users or public. The focus of this testing is to simulate real users by using black box and white box techniques. The aim is to carry out the tasks that a typical user might perform. Alpha testing is carried out in a lab environment and usually the testers are internal employees of the organization. To put it as simple as possible, this kind of testing is called alpha only because it is done early on, near the end of the development of the software, and before Beta Testing.

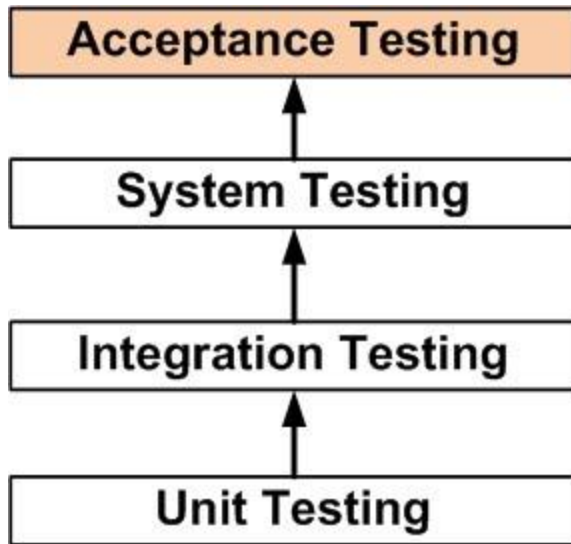
### **What is Beta Testing?**

Beta Testing of a product is performed by "real users" of the software application in a "real environment" and can be considered as a form of external User Acceptance Testing. Beta version of the software is released to a limited number of end-users of the product to obtain feedback on the product quality. Beta testing reduces product failure risks and provides increased quality of the product through customer validation. It is the final test before shipping a product to the customers. Direct feedback from customers is a major advantage of Beta Testing. This testing helps to tests the product in real time environment.

### **Ans4:**

#### **Acceptance Testing:**

ACCEPTANCE TESTING is a level of software testing where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.



**Method-** but is rather Usually, Black Box Testing method is used in Acceptance Testing. Testing does not normally follow a strict procedure and is not scripted ad-hoc.

**Acceptance Test Plan:**

Prepare, Review, Rework, Baseline

**Acceptance Test Cases/Checklist:**

Prepare, Review, baseline rework,