Ideas to test an alarm clock in 30 minutes

Assuming that this is the only question put in forth of us and we cannot get any more information on the mission like time required to run tests, how much money we could spend on testing, who the product end users are, is it a handheld alarm clock or a digital one, etc. This would be our generic approach considering that the alarm clock is a physical device with only 2 buttons one for the snooze and one for the stop as displayed in the picture below.

What kind of test techniques could I use to test an alarm clock?

- Functional testing
- Domain testing
- Performance tests
- Usability tests
- Maintainability tests
- Interoperability tests

Let's now think on some of the test ideas for each of these test techniques

Functional tests:

- Does the clock in the alarm clock work?
- Does the alarm clock ring at the specified time?
- Does the alarm stop when pressed stop?
- Does the snooze work?

Domain tests:

- Does the alarm ring before the specified time?
- Does the alarm continue to ring after the specified time?
- If the alarm continues to ring after the specified time how long will it ring?
- Does the alarm stop on pressing the stop button once?
- What happens when snooze and stop button are pressed at the same time?
- What happens when the time in the clock is changed after the alarm is set?

- What happens when battery is removed and put back again during alarm time. Will the alarm still ring?

Performance tests:

- Is there a delay for the alarm to ring from the specified time?
- What happens if the alarm is set for every 10 minutes continuously for 8 hours?
- Does the alarm clock drain the battery faster?
- Does the alarm ring when the battery is low?
- The stop button for alarm will be pressed many times a stress test on the button?

Usability tests:

- How easy is it to set the alarm?
- How loud is the ticking noise of the alarm clock?
- How easy is it for the user to identify the 2 buttons?
- How easy is it to press 2 buttons?
- Is the sound of the alarm good enough to wake a normal user?
- If the user is able to see the time clearly in dim light?
- The alarm clock is easier to keep beside the bed, occupies less space, and is light in weight?
- What is the Resistance power when fallen by mistake on the ground?
- How easy is it to open the battery and replace the batteries?
- What happens when positive and negative terminals are interchanged?
- How easy is it to unpack the alarm clock from the box?
- Does the minute, seconds, hour hands touch each other or collide if clock is placed in different angles?

Interoperability tests:

- Do the available alarm stands in the market hold the alarm clock?
- Does the alarm clock use third party rechargeable batteries?

Maintainability:

- How easy is it to maintain the alarm clock? Are the spares readily available?
- What happens to those batteries if the alarm is not used for a long time?