

Setting Up Online CATs and Exams

FOR LECTURERS AND SCHOOL ADMINISTRATORS · lms.tangaza.ac.ke

Building timed CATs and exams on the LMS, and what can honestly be done about students switching tabs.

?? New here? Build the question bank first (Part 1), then the quiz. Parts 2 to 4 are the settings every CAT needs. Part 5 is the one people ask about most, and the one with the most misunderstanding around it.

A CAT on the LMS is a **Quiz** activity. Moodle's quiz is capable of running a serious timed assessment, but it runs inside a web browser on a device the University does not control — and that single fact shapes everything below.

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? The words used here

Quiz	The activity type used for a CAT, test or exam.
Attempt	One student's run through the quiz. For a CAT, allow exactly one.
Question bank	A store of questions belonging to the unit, separate from any quiz. Questions live here and are used by quizzes.
Random question	A slot that pulls a different question from a bank category for each student.
Override	A change to dates, time limit or attempts for one student or group, without touching the quiz for everyone else.
Safe Exam Browser (SEB)	A separate application students install that locks down their computer during the exam.

? Part 1 · Build the question bank first

Resist the temptation to type questions straight into the quiz. Questions built in the unit's question bank can be reused, randomised and shared with a co-lecturer; questions typed into a quiz are stuck there.

1. Open the unit and go to **More ? Question bank**.
2. Create a **category** per topic: *Week 1–3 Concepts*, *Case Analysis*, and so on.
3. Add questions into the right category.
4. Aim for **three to four times** as many questions per category as any one student will see. Ten slots drawn from forty questions means two students beside each other share very few items.

This is the single most effective integrity measure available to you, and it needs no software, no lockdown and no cooperation from the student's device.

? Part 2 · Timing

In the quiz settings, open **Timing**.

Setting	Set to	Notes
Open the quiz	The exact start time	Enable the checkbox, or it is ignored.
Close the quiz	Start time + time limit + a small buffer	A 45-minute CAT opening at 10:00 should usually close around 11:00, not 10:45 — late starters and reconnections need the room.
Time limit	e.g. 45 minutes	The countdown starts when the student starts, not at the open time.
When time expires	<i>Open attempts are submitted automatically</i>	The other options lose student work. Use this one.

Then in **Grade**, set **Attempts allowed = 1**.

?? Open and close times are not the same as the time limit. A student who starts at 10:40 on a 45-minute quiz that closes at 11:00 gets 20 minutes, not 45. Make the close time late enough to hold a full attempt for anyone starting near the end — or tell students plainly that the last start time is 10:15.

? Part 3 · Layout and navigation

Under **Layout**:

- **New page ? Every question**. Each answer is saved as the student moves on, so a dropped connection costs one question rather than the paper.
- **Navigation method ? Sequential** if you do not want students moving back and forth. Be deliberate: sequential prevents skipping and returning, which some students rely on legitimately.

One question per page is worth doing on every CAT, regardless of anything else in this guide. On an unreliable connection it is the difference between losing one answer and losing forty minutes of work.

? Part 4 · Making copying difficult

Under **Question behaviour**, set **Shuffle within questions** to Yes so answer options appear in a different order for each student.

Then build the quiz from **random questions** rather than fixed ones: in the quiz, **Add ? a random question**, choose the bank category, and repeat for each slot. Every student receives a different paper drawn from the same bank, at the same difficulty.

Under **Review options**, uncheck everything in the *Immediately after the attempt* and *Later, while the quiz is still open* columns except the mark. If students can see correct answers while their classmates are still sitting the CAT, the paper is public within minutes.

? Part 5 · Stopping tab switching — what works and what does not

? No setting in Moodle can prevent a student from switching tabs. Anyone who tells you otherwise is describing a deterrent. The browser does not give a website the power to control the rest of the device, and this is by design.

What is actually available, in ascending order of strength:

Option	Where	What it really does
Full screen pop-up with some JavaScript security	Extra restrictions on attempts ? Browser security	Opens the quiz in a stripped-down pop-up window and blocks right-click and copy/paste. A visible signal that the rules are different. Defeated by Alt-Tab, a second device, or disabling JavaScript.
Require password	Extra restrictions on attempts	Stops anyone starting before you read the password out. Does nothing once the attempt is running.
Require network address	Extra restrictions on attempts	Restricts the quiz to an IP range — the computer lab. Genuinely strong, but only for supervised on-campus sittings.
Safe Exam Browser	Its own section in the quiz settings	Real lockdown: no other tabs, applications, screenshots or virtual machines. Requires the student to install the SEB application first.

5.1 Why Safe Exam Browser is not a blanket answer at Tangaza

SEB runs on Windows, macOS and iOS. **There is no Android version.** Students sitting a CAT on an Android phone cannot install it, so requiring SEB does not lock those students down — it locks them out.

Since our students sit CATs on a mix of laptops and phones, requiring SEB across the board would exclude part of every class. That makes it a tool for specific, planned, supervised assessments rather than a default.

5.2 The workable policy

Type of assessment	What to use
Routine CATs, any device	Random questions from a large bank, shuffled options, one question per page, tight time limit, browser-security pop-up, review options closed. Accept that lockdown is not available and design the paper accordingly.
High-stakes exams	Sit it in a University lab: SEB plus <i>Require network address</i> plus invigilation. Announce the venue requirement when the exam is scheduled, not the week before.
Take-home or open-book	Do not pretend to lock it down. Set questions where looking things up does not help — application, analysis, and answers specific to the student's own work.

A tight time limit does more real work than any browser restriction. If a student has 90 seconds per question, searching for an answer costs more time than it saves.

? Part 6 · Phones, connections and fairness

- Under **Extra restrictions on attempts**, set **Allow quiz to be attempted offline using the mobile app** to *No*. A timed CAT and offline attempts do not mix.
- Use **Overrides** (in the quiz, **More ? Overrides**) to give extra time to students entitled to it, without changing the quiz for everyone.
- An override is also the correct fix when one student's connection fails mid-attempt — extend their close time or grant a second attempt for that student alone.
- Tell students in advance: one question per page means answers are saved as they go, and if they are disconnected they should sign in again and resume the same attempt.

? Part 7 · On the day

1. Open the quiz yourself a few minutes early and check it looks right.
2. Read out the password, if you set one.
3. Watch **Results** during the sitting — it shows who has started, who is still in progress, and how long each has taken.
4. Handle problems with an override for that student. Do not change the quiz settings mid-sitting; that affects everyone, including those who have finished.
5. After the close time, check for attempts left *In progress* and finish them if your grading needs it.

? CAT setup checklist

#	Check
1	Question bank has at least three times the questions the paper needs
2	Quiz built from random questions, not fixed ones
3	Shuffle within questions is Yes
4	Open and close times set, with room for a late starter
5	Time limit set, and <i>When time expires</i> submits automatically
6	Attempts allowed = 1
7	New page every question
8	Review options closed while the quiz is open
9	Offline attempts in the mobile app set to No
10	Overrides in place for any student entitled to extra time
11	You have sat the quiz yourself as a test student

Point 11 is not optional. Preview it as a student before the class does.

? If something goes wrong

Students report	Cause	Fix
They cannot see the quiz	The activity is hidden, or the open time has not arrived	Check visibility and the Timing dates.
"The quiz is not available"	Password, network-address restriction, or a Restrict access rule	Check Extra restrictions. A network-address rule blocks anyone off campus.
A student lost their connection mid-attempt	Network	They resume the same attempt. Answers up to the last page they submitted are saved. Extend their time with an override if needed.
The timer ran out while a student was answering	Working past the limit	Nothing to fix if <i>submitted automatically</i> is set — the work is captured.
Every student saw the same questions	The quiz uses fixed questions	Rebuild the paper with random questions from a bank category.
Students saw answers immediately	Review options left at default	Close them for <i>Immediately after the attempt</i> and <i>Later, while the quiz is still open</i> .
A student on Android cannot start an SEB quiz	Safe Exam Browser has no Android version	Expected. Reserve SEB for lab-based exams — see Part 5.

??? For ICT staff

Site-level items behind this guide:

- **Safe Exam Browser** must be enabled site-wide before the section appears in quiz settings: *Site administration ? Plugins ? Activity modules ? Quiz ? Safe Exam Browser access rules*. Nothing changes for lecturers until it is on.
- **Quiz defaults** can be set once for the whole site under *Site administration ? Plugins ? Activity modules ? Quiz*, so every new quiz starts with sensible timing, one attempt and closed review options. Cheaper than correcting fifty lecturers.
- **Lab IP ranges** should be documented and given to anyone setting an invigilated exam, for the *Require network address* field.
- **Logs**: a quiz attempt's activity is visible under the attempt itself and in the course logs. Useful when investigating a reported irregularity — but note it records interactions with Moodle, not what the student did in another tab.
- Advise Schools before exam season: SEB has no Android client, so any SEB-based assessment implies a venue with University computers.

? Support

LMS support and training come from the Institute Administrator in your department. Contact ICT for site-level settings, lab IP ranges, Safe Exam Browser, and investigating a suspected irregularity.

Build and preview the CAT at least a day before the sitting. Almost every problem reported on the day is something a five-minute preview would have caught.

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