# Report on

# E-GOVERNANCE

# IN

# EXAMINATION

Approved by BOM vide agenda no 8.9 (G) on 20th October, 2022

**Registrar**
**Quantum University**

DIRECTOR
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# E-GOVERNANCE IN EXAMINATION

E-Governance initiative has been taken by Quantum University regarding Examinations considering a student's point of view. Traditional examinations were designed for times when there were few students enrolled in the university and fewer courses were taught. Information and Communication Technologies (ICT) are now being used to enhance examination processes to become more efficient and competitive.

The University is currently in the process of computerizing all administrative and service functions, including admissions and examinations, through in-house development. Due to the increased number of students and courses, the examination system has become more complex and burdensome, resulting in various inefficiencies in handling examinations. To address these issues, Quantum University has developed an integrated computerized examination management system for some processes.
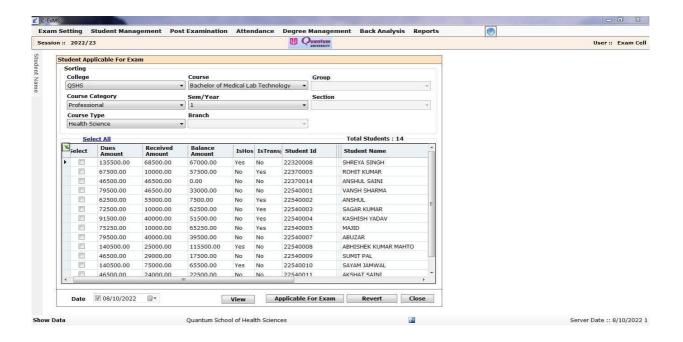
Transparency, Reliability, and Efficiency can be achieved in university examinations by using ICT. Under the Quantum University Examination E-Governance system, the following features have been developed:

1. **Student Exam Application Management -** The e-governance system of application management helps the examination administration to receive online applications for examination. It records data like Student Applicable for ESE, Uploading Study Material, Uploading Assignments, Entering Assignment marks, etc.

2. **Students Admit Card & Attendance Management -** This system manages the data related to admit cards, attendance, award lists, and verification letters for students.

3. **To Maintain Secrecy & Confidentiality -** The University's examination system provides security to the Answer Book Code Generation and Answer Book Code Label Generation processes.

4. **Award List & Examination Analysis -** This system helps maintain the award list of the ESE and calculate grade details by using standard deviation.

5. **Online Internal & External Quiz Management -** Quantum University's Examination E-Governance system includes Online Exam Schedule, MCQ Quiz Schedule, MCQ Question Paper Upload, and Online Exam Shift Creation.

6. **Automatic Question Bank & Question Paper Generation -** An Automated System helps generate question papers quickly, randomly, and securely. It saves time and effort of the Faculty, teachers, or mentors as they can use it to generate question papers instantly.
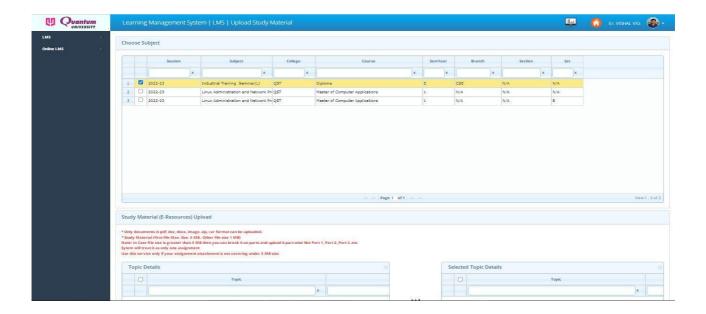
## 1. Student Exam Application Management

### 1.1 Student Applicable for ESE

The data of students who have applied for or are applying for the End Semester Examination i.e. ESE is recorded in the LMS system of the university. In the Excel file maintained by the administration, details about the student's course, semester, college, etc, are entered. When sorting a student, the balance amount, received amount, and due amount are shown on the Excel file.
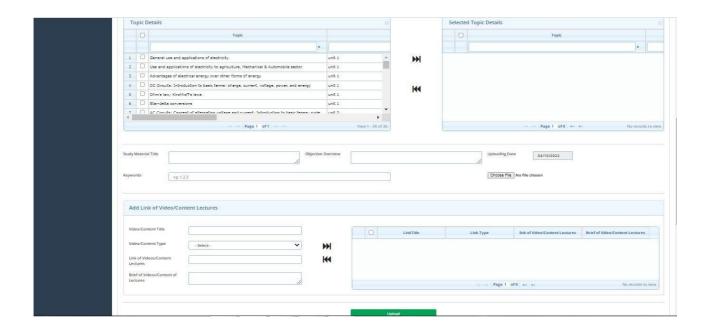


### 1.2 Upload Study Material-1

LMS system is easy for the subject teachers to upload the study material. They are E-study materials that can be viewed and downloaded by students. The study material helps students to learn by themselves.
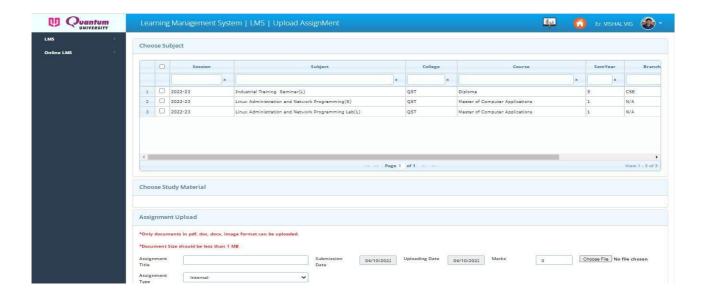
## 1.3 Upload Study Material-2

The faculty or the teacher has to enter the topic details and the units of the syllabus accordingly. They need to enter the study material title, and objective overview, upload files if any, and also have the facility to add video content lectures link for the student's convenience.
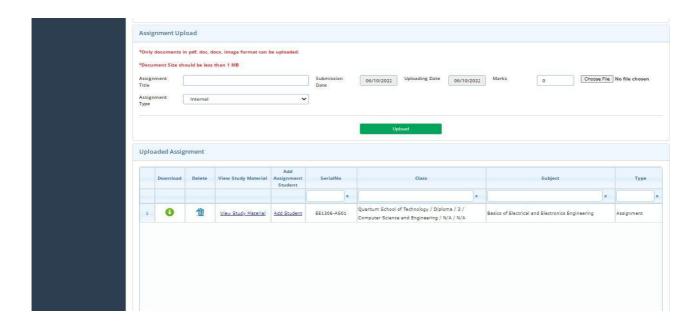


## 1.4 Upload Assignment-1

LMS system gives access to students to view and upload their assignments on time. First, they have to fill in the details like session, course, college, subject, etc, and then add the details regarding the assignment like assignment title, and assignment type, select the submission date, and uploading date, and upload their assignment file by clicking on Choose a file option.
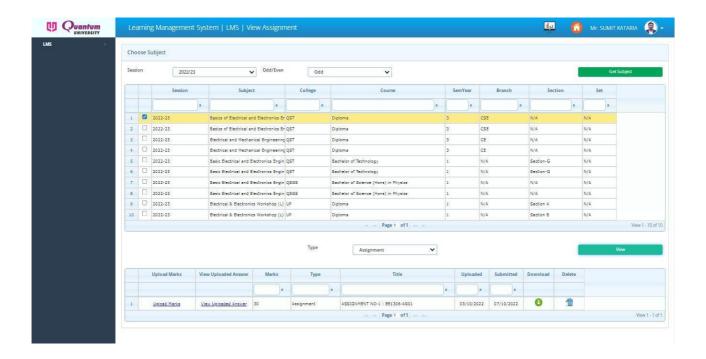
## 1.5 Upload Assignment-2

The students can upload their assignments according to their subjects one by one via the LMS system. After logging in through their ids they can enter the details and upload the assignments following the same steps as above.
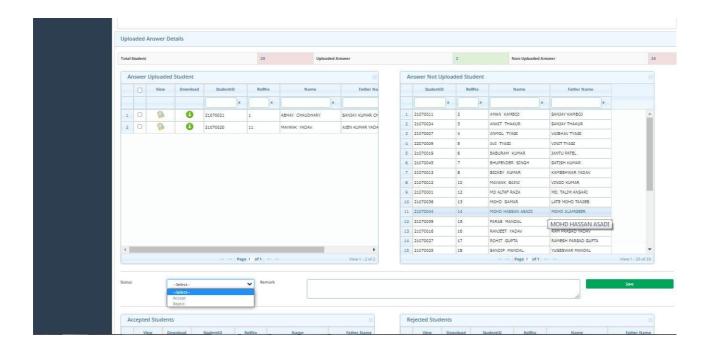


## 1.6 View Assignment

Students can view the assignments assigned to them by logging in through their ids. The assignments can also be viewed by the teachers after they have uploaded them to the software.
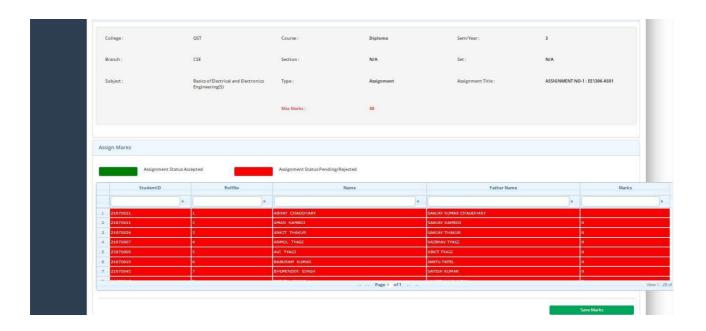
## 1.7 View Uploaded Answer

The teachers can check the list of the students who have submitted their assignments and can view their uploaded answers. The list of Answer Uploaded Students will appear on the left side whereas Answer Not Uploaded Students will appear on the right side.
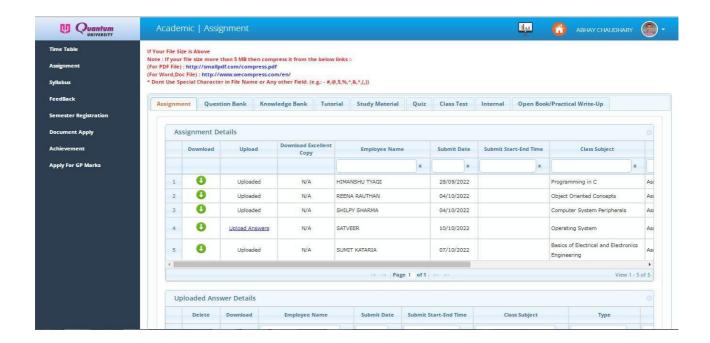


## 1.8 Enter Marks for Uploaded Assignments

After the faculty has viewed the assignments submitted by the students, they can go through them one by one and enter marks for the uploaded assignments. The assignment status is shown in two color bars – green which means assignment approved and red which means assignment rejected/pending.
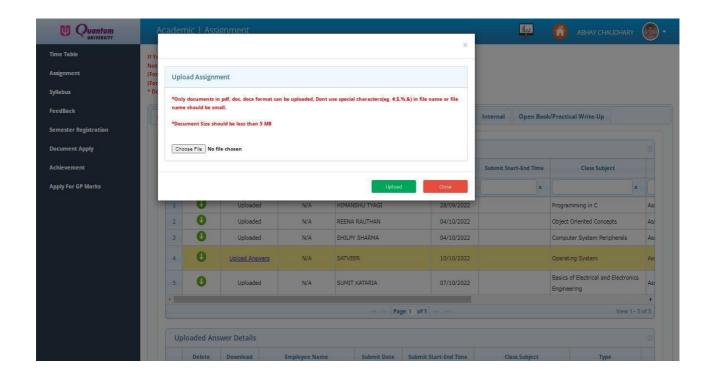


## 1.9 Assignment View on Student Login

Students can view their assignments by logging in through their ids. They can go to the Assignment section and check for any assignment updates by their faculty.



## 1.10 Upload Assignment Response from Student Side
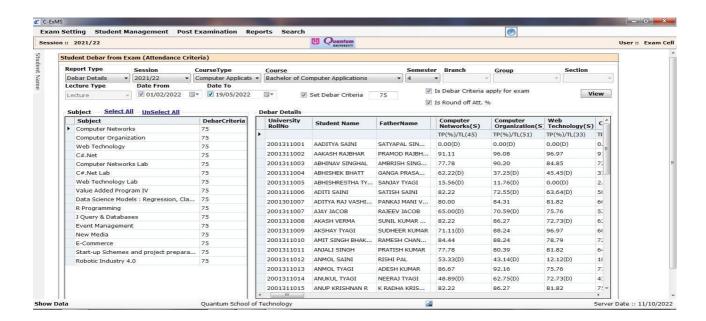
Post working on the assignments provided, the students can upload them by choosing the file and uploading it.



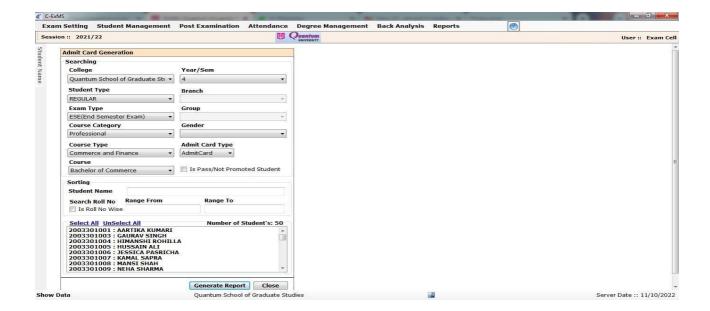## 2. Student's Admit Card & Attendance Management

## 2.1 Student Debarred from ESE

The students who are debarred from the ESE exam, their attendance criteria are recorded by maintaining the details like Report type, session, course type, lecture type, date from, date to, etc. Debarred students are listed with their id number, name, father's name, and subjects they attended.
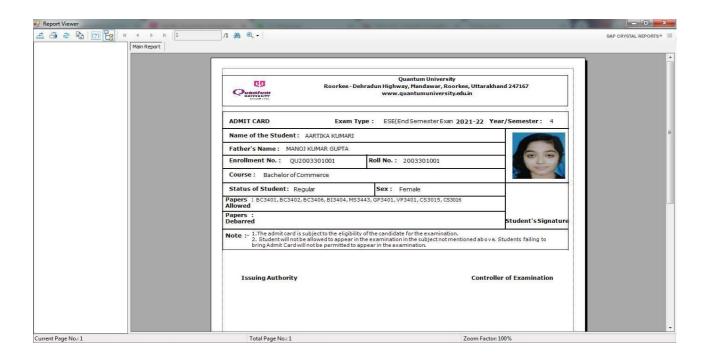


## 2.2 Admit Card & Verification Letter Generation

Admit cards are generated in the name of the students who have taken admission to the university. While generating the admit card, details of the student are entered like name, course category, college, semester, student type, exam type, gender, admit card type, and so on.
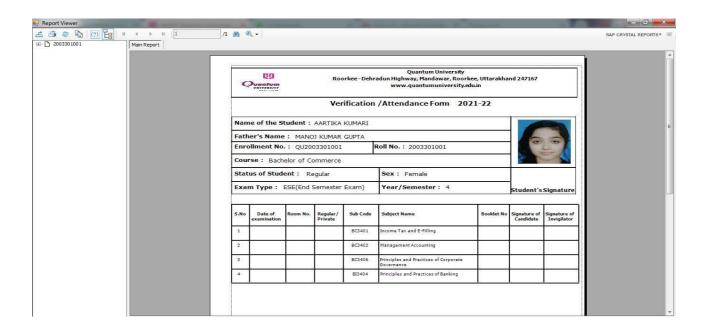


## 2.3 Admit Card

The admit card picture below shows the details of the student of the university including the Student's Name, Course, Roll No, Exam Type, etc.
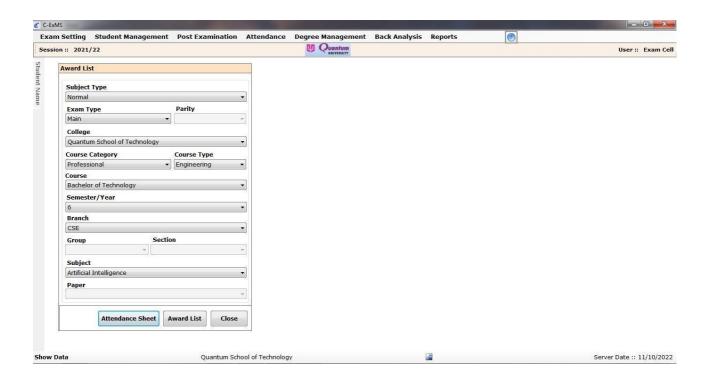


## 2.4 Verification Letter

Students' verification forms contain information such as their Name, Subject Code, Subject, Roll Number, Enrollment Number, Signature of the candidate, Signature of the Invigilator, etc. The verification form is also known as the subject examination attendance form.



## 2.5 Attendance Sheet and Award List Generation

The attendance sheet or award list can be created easily by entering the details such as Subject, Subject Type, College, Sem, Course Category, and Paper.
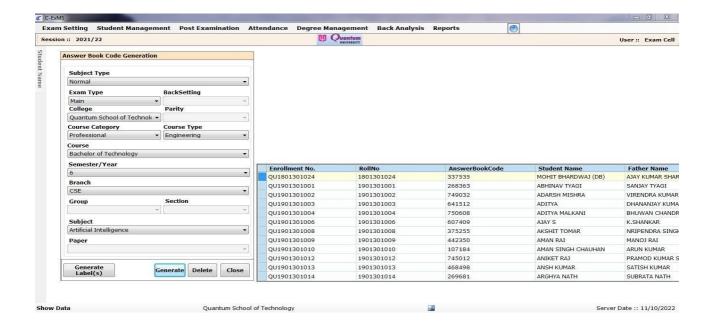


## 2.6 Attendance Sheet of ESE

In the attendance sheet of ESE, Students' Names, Roll Numbers, Signatures, Subjects, and Course details are recorded.

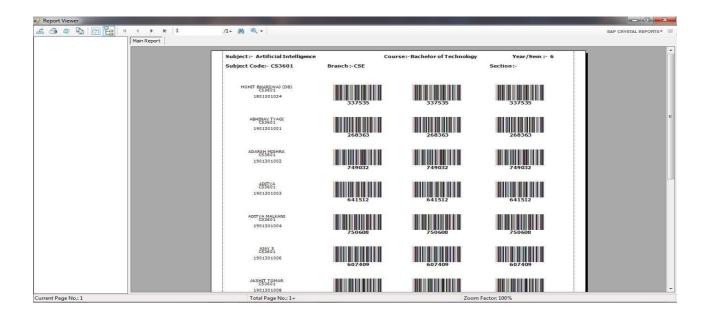## 3. To Maintain Secrecy and Confidentiality

### 3.1 Answer Book Code Generation

The answer book code is generated by entering a few details of the student like course type, subject type, exam type, semester, branch, etc. Once you have filled in all the information, click on the generate button that will further display the answer book codes of the students.
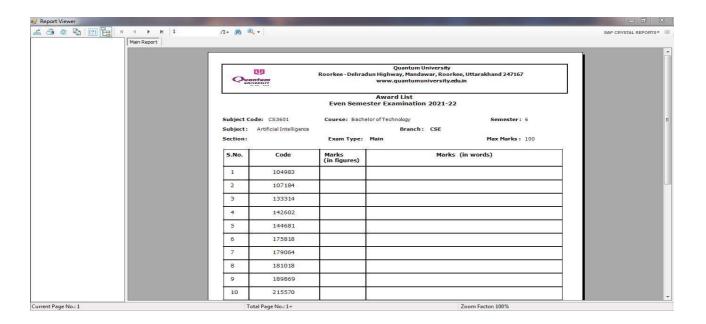


### 3.2 Answer Book Code Label Generation

The screenshot below shows the answer book codes generated for the students.
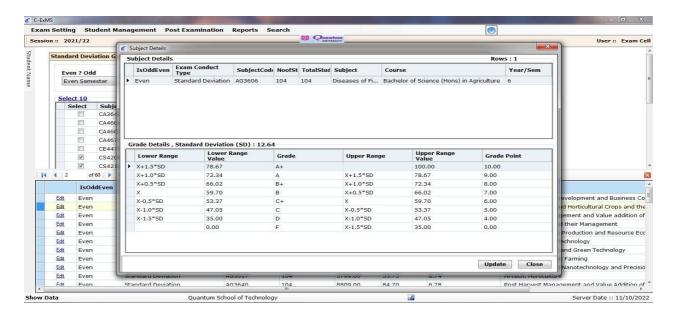
## 4. Award List & Examination Analysis

### 4.1 Award List of ESE

Semester wise Award List is created by the administration which keeps the record of the students regarding their Subject Code, Roll No, Enrollment No, Semester, and also includes the marks received by the students in their subjects.
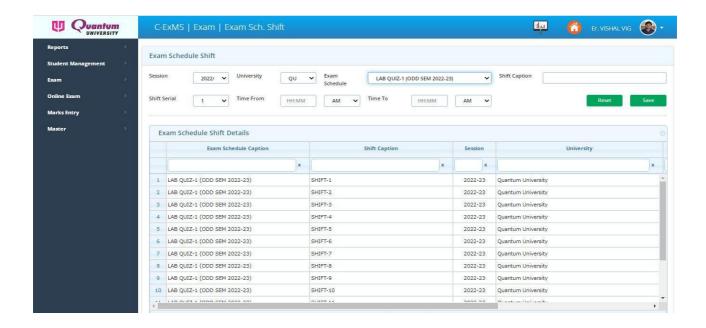


### 4.2 Standard Deviation

During the calculation of the standard deviation, subject details like subject code, course, semester, odd/even semester, and total students are entered. Below is a grid displaying the Lower Range, Lower Range Value, Grade, Upper Grade, Upper Range Value, Grade Points, etc.

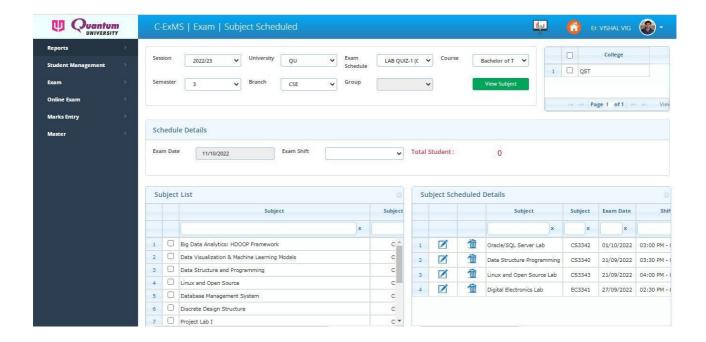# 5 Online Internal & External Quiz Management

## 5.1 Online Exam Shift Creation

The Examination administration creates an online shift by feeding in details such as Session, Shift Caption, Exam Schedule, Shift Serial, Time From, and Time To.
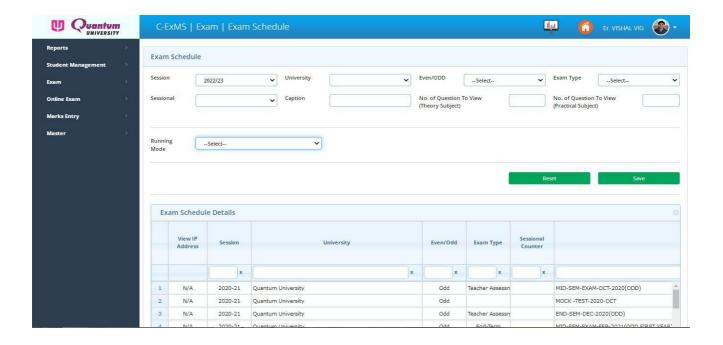


## 5.2 Online Exam Subject Schedule

During the creation of an online exam subject schedule, the following details are entered: Subject Details, Subject List, Subject Scheduled Details, Course, Sem, College, Branch.

## 5.3 Online MCQ-based Exam Quiz Schedule

An Online MCQ exam quiz is scheduled by entering the following details Course Details, Number of Questions, No of Questions To View(Theory), No of Questions To View (Practical), Exam Type, Caption, etc. The Exam Schedule details are provided in the grid.
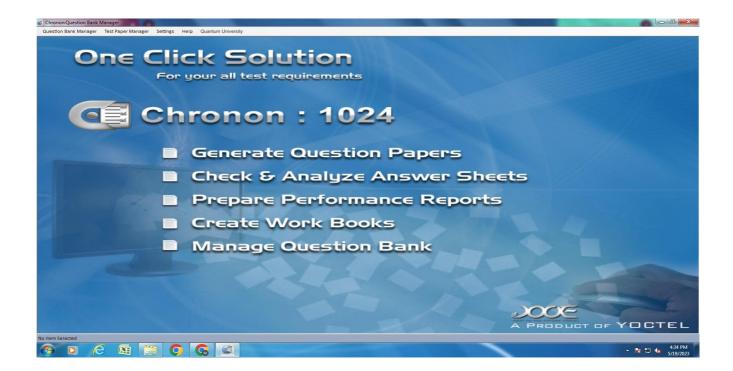


## 5.4 Online MCQ Question Paper Uploading

As soon as the schedule is created, the MCQ question paper is uploaded using the examination system.

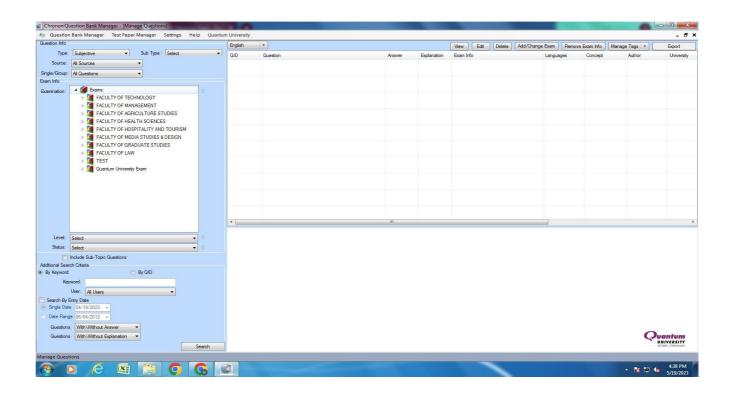## 6 Automatic Question Bank & Question Paper Generation

An Automated process of Question Paper Generation system is used which is fast, randomized, and secure. It helps faculties, teachers, or mentors to generate question papers for their classes.

## 6a - Software being used to generate End Semester Exams Question Papers
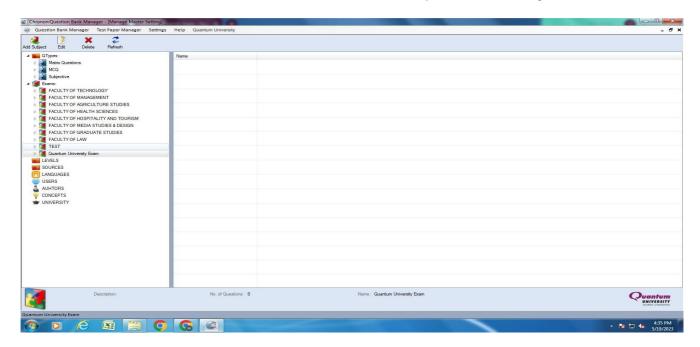
With the Chronon Question Bank Manager software, teachers and staff can effortlessly create customized question papers, efficiently evaluate answer sheets, generate insightful performance reports, and effectively manage the question banks.

## 6.1 - Set the different Faculties and departments in the university, plus define various subjects in the departments
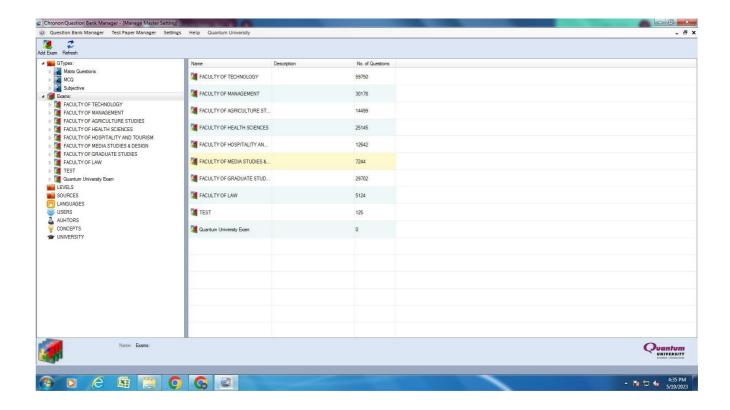
The Manage Question page, as depicted in the screenshot above, provides a complete overview of the question paper details. It offers valuable insights such as the Type of questions, whether they are Subjective or Objective, as well as the Examination category, which encompasses various department exams like technology, graduate studies, agricultural studies, and more. In addition, it includes information about the Subject Type and Level of Exam, so faculty can organize and categorize questions more efficiently.

## 6.2 - Set the various levels of Questions that will be updated in the system
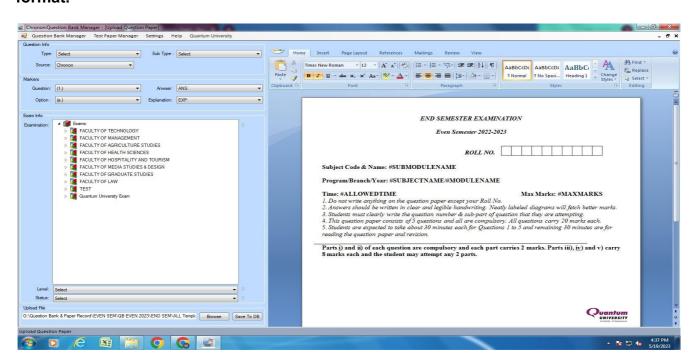


Within the software's Manage Master Setting feature, teachers and staff have access to a range of subcategories that helps in the efficient customization of the question paper. These subcategories include Q-Types, Levels, Exams, Sources, Languages, and more. To create question papers with varying levels of difficulty, teachers simply need to click on the level category. This action enables them to effortlessly generate question papers tailored to different proficiency levels, ensuring a well-rounded assessment that meets the specific needs of their students.

## 6.3 - Upload the questions in the system in the form of a question bank to generate the question papers randomly.
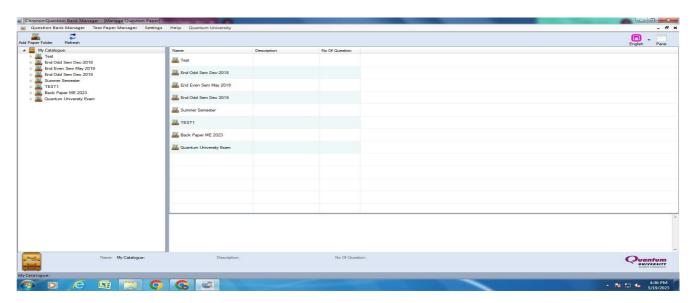
In the Manage Master Setting feature, you will find a category named - 'Exams' which assists teachers in setting department-wise question papers. As depicted in the screenshot above, you can observe that different departments have successfully generated multiple questions within their respective domains. This functionality empowers faculties to upload questions as a form of question bank and effortlessly create customized question papers for the student's convenience.

## 6.4 - Setting the temple of the Question paper to be generated in the required format.

As depicted in the screenshot above, the format of the question paper showcases all the details that were previously inputted by the teachers during the initial steps. This question paper format encompasses elements such as Subject Code, Maximum Marks, Time Allotted, Roll Number, Program, Branch, Year, and more, closely resembling the structure typically seen in semester exams. By ensuring that the format aligns with the requirements of the examination, the software empowers teachers to create question papers that abide by the standard framework expected in academic assessments.

## 6.5 - Generating the Question Papers randomly



In the final step, teachers need to generate the question paper after filling in all the necessary exam and question details. Once the questions are inputted in the required format, teachers can conveniently save the question papers and access them at any time from the designated folder. The screenshot showcases a helpful feature called "My Catalogue," which displays the list of question papers generated by each domain teacher. This functionality facilitates easy browsing and retrieval of question papers, allowing teachers to quickly locate and utilize their previously created assessments whenever needed.