6.5.1: Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of – Incremental improvements made for the preceding five years with regard to quality (in case of first cycle) Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)

IQAC functions as per the guidelines of UGC and works for institutionalizing the quality assurance strategies. The following two recommendations given by NAAC during Cycle 2 visit were implemented through IQAC initiatives and have been described below.

- Institute to maximize its autonomy in curriculum design and examination reforms
- Utilization of e-Resources and MOOC courses for blended teaching-learning

Institute to maximize its autonomy in curriculum design and examination reforms

Office of Controller of Examinations has taken several initiatives to ensure fair conduct of Examinations.

Precautions are being taken to minimize any error during Question Paper setting, External Review, conduct of examination, collection of answer books, dummy number allotment, valuation, result processing, issue of mark statements and degree certificates.

The Institution has initiated following Reforms:

- Integration of IT in all examination processes.
- Issue of Hall ticket with photograph and printed examination schedule with hall and seat number.
- Addition of security features (Water mark, invisible logo etc.) in statement of marks and grade sheet.
- System based Random Dummy number generation for End semester Answer scripts.
- Implementation of Co-creation mode of question paper setting.
- Implemented relative grading from 2021 batch onwards.
- Automatic question paper generation for internal tests.
- Bloom's Model is introduced as major component in question papers
- Fool Proof Security system is adopted by using electronic gadgets to rule out the chances of Question Paper Leakage.

Utilization of E-resources and MOOC Courses for Blended Teaching Learning

MCET – Learning Management System facilitates wide source of digital resources for most of the offered courses. MS Teams platform is used to conduct online classes and resource sharing since May 2020. The system was made functional from first year to final year students.

Content Delivery (Theory)

- Live and Recorded Sessions are conducted through MS Teams with inquiz and scripts
- Doubt Clarification Session for each Unit
- Collaborative/Active Learning Activities such as Brain Storming, Tutorial class, Group Discussion using Breakout Room
- Poll Questions during live session
- Gamification Quiz
- Team wise discussion/debate
- Analytical Classes using Digital pad for problem solving

Content Delivery (Practical)

- Programming Virtual Lab (eLearning@mcet Moodle with Jobe Server, Hacker rank)
- Conduct programming Labs such as Python, C, C++, Java, SQL
- Simulation-based labs for Circuit/Core Stream students (https://www.vlab.co.in/)

Assessments

- Internal Assessments are conducted through MS Teams
- Marks/Rubrics based Evaluation of Assignments with grade book
- Laboratory-Cycle Test (eLearning@mcet Moodle and MS Teams)
- End Semester Exam (eProctoring Portal -Examly)

Online Courses & Interactive presentation tools

- Online Software courses (IITB Spoken Tutorial Courses)
- Online courses as Credit Transfer in Curriculum (NPTEL Courses)
- Other online Courses (IITB, Coursera, Udemy, Edx etc)
- Mentimeter – Engage students during the class.
- Build interactive presentations using the presentation builder.
- Collect polls, data and opinions using smart devices.
- Get insights with trends and data export.

MOOC resources were used to offer programming based courses. In Python Programming Laboratory course, the experiments were conducted using online compiler/ eLearning@mcet Moodle. The students can write the source code in the browser and verify the results. Faculty can run test cases to review the program.