REPORT OF THE COMMISSION FOR REFORMS IN EXAMINATION IN THE UNIVERSITIES AND HIGHER EDUCATION INSTITUTIONS OF KERALA

Prof.(Dr.) C.T. Aravindakumar
Pro Vice-Chancellor,Mahatma Gandhi University
Chairman of the Commission

DEPARTMENT OF HIGHER EDUCATION

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Foreword

The higher education system in India has grown tremendously since Independence in terms of the number of Universities and Colleges. We have more than 1000 Universities and around 50,000 colleges in our country. There are 23 Universities and over 1300 affiliated colleges in our State itself. This overwhelming number of institutions with the diverse programmes of study indeed enhanced the opportunities for higher education to the youth of the country. It is highlighted that the quality of higher education in our State is in a comfortable position on a National level as reflected in the NIRF Ranking where four of our Universities and 20 colleges are within the first 100. At the same time, the Outcome-Based Education (OBE) framework, adopted globally to bring-in higher-order learning and professional skills for students, is still far from implementation in most of our Universities. The need to lay emphasis on cognitive skills and learning outcomes in higher education, particularly in our country, has been a widely discussed topic for many decades. It is also noted that a highly centralised evaluation system, as being practised in most of the Universities in our country, will in no way address this important issue. Absence of a serious attempt to improve the summative assessment processes is yet another problem which deteriorates the evaluation protocols over the years. These facts necessitate a paradigm shift in the traditional way of approaching curriculum design, education delivery and assessment.

An efficient evaluation protocol plays a pivotal role in the quality of education. It is beyond doubt that reforms in the evaluation system are very critical in the improvement of the quality of higher education in our state. In this context, the main task of the commission was to review the entire evaluation system practised in all the Universities of the State and suggest an effective and viable evaluation protocol based on emerging technologies which are currently practised in other institutions within and outside the country. The major challenge was to evolve workable recommendations based on the prevailing conditions of the state and concerns of the students as well as the public. We have also interacted with the other two commissions, the Commission for Reforms in Higher Education System and the Kerala State University Law Reforms Commission, before finalising the report.

I, along with my colleagues in the commission, are very hopeful that this Report will be useful for all the Universities in our state for formulating radical changes in their evaluation protocols, and thus making the service delivery more effective. I place on record the enormous support and cooperation received from the Government of Kerala and the Kerala State Higher Education Council for successfully executing the task. The positive response and constructive suggestions from the authorities, teachers, employees and students of various Universities, as well as from the public helped considerably in formulating several of these recommendations.

20-06-2022
Thiruvananthapuram

Prof. (Dr) C.T Aravindakumar
Chairman

Members of the Commission

Prof.(Dr.) C.T. Aravindakumar — **Chairman**
Pro Vice-Chancellor, Mahatma Gandhi University

Dr. K.S. Anil Kumar — **Member**
Registrar, University of Kerala

Dr. A. Praveen — **Member**
Registrar, APJ Abdul Kalam Technological University

Dr. Joshy C.L. — **Member**
(Former Registrar, University of Calicut)
Associate Professor & HOD
Department of Chemistry
St. Thomas College (Autonomous), Thrissur

Officers of the Commission

Dr. Shefeeque V. Research Officer Kerala State Higher Education Council	**Coordinator**
Mr. Dileep Kumar R.	**Senior Research Officer**
Mr. Arun S.S.	**Junior Research Officer**

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Prof. (Dr) C.T Aravindakumar
Chairman

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Preface

India's projected population is about 1.52 billion by 2036 and is expected to be the most populous nation by 2032[1]. The nation would be encountering diverse problems and would have to employ its immense human resources to become self-reliant and construct solutions to those problems. Transformation to a knowledge society is the need of the hour, when the society becomes enlightened, socially conscious, knowledgeable and skilled. This development can be brought about only by radical reforms to the higher education system. This is particularly relevant since India is a nation with an enchanting percentage of youths. University and College education should be realigned to rise up to challenges to provide a creative, multidisciplinary and highly skilled workforce for nation building. Since Independence, the higher education system in India has shown tremendous growth in the number of Universities and Colleges. The country which had a mere 20 Universities and 516 colleges during 1947-48 has now more than 1000 Universities and around 50,000 colleges. In spite of this GER in India is only 27.1[2] which is significantly low compared to many developing Asian countries.

Modern University system in India was established to function as examining universities and thus colleges were affiliated to Universities. Travancore University, established in 1937, was later reconstituted as the University of Kerala after the Integration of princely states to the Union of India and came into being on 30th August 1957. Over the last six decades, many more Universities were established for enriching the higher education in our state. Kerala now has 23 Universities, out of which the Kannur University, University of Calicut, Mahatma Gandhi University, University of Kerala, APJ Abdulkalam

[1] Final report of the technical group constituted by the National Commission on Population (NCP) under the Ministry of Health and Family Welfare on population projections dated July 2020.

[2] AISHE 2019-20

Technological University and Kerala University of Health Sciences are affiliating Universities. There are 1348 colleges in our state affiliated to these Universities.

The increase in the number of affiliated institutions and the introduction of diverse programmes of study by the Universities have provided increased opportunities for higher education to the youth of Kerala. This is evidenced by the fact that GER in Kerala is 38 as against the All India GER of 27.1[2]. At the same time, this figure is much lower compared to our neighbouring state, Tamilnadu (51.4)[3]. The increase in the number of students and programmes has increased the workload of the Universities many fold. Universities often falter in conducting examinations on time and publishing results due to the increased workload. These universities continue to function as examining universities in the conventional way initiated decades back. Introduction of emerging disciplines of study as well as changing global scenarios demand frequent additions and modifications to curriculum and syllabus and the employment of more robust and reliable pedagogy for teaching-learning processes. The system has to adapt to the demand from the student community for more freedom of choice and mobility. Assessment methodologies have to be redesigned and wherever possible technological interventions have to be made for time-lined execution of processes and academic plans.

The undergraduate (UG) programmes offered by the Universities in Kerala were restructured under the Choice Based Credit Semester System in 2009. Direct grading was introduced for valuation of the external and internal examinations. Later direct grading was discontinued for UG programmes and indirect grading was introduced in 2014. Very recently, higher education imbibed the concepts of OBE shifting the focus from *what is taught to what is learned.*

[2] AISHE 2019-20

[3] AISHE 2019-20

In spite of all these innovations and changes in the curriculum and teaching-learning process, the assessment procedures remained the same over the decades. All the major Universities across the globe have evolved standards for assessment based on the concept that "The teacher who offers the course shall be the assessor of the student for an effective assessment".

The current system of conducting end of the term examinations exerts tremendous pressure on the affiliating universities due to the increasing number of students. Simultaneous conduct of examinations, valuation and publication of results are the major challenges faced by these Universities. Students are also overburdened with examinations. Technological interventions and effective use of ICT enabled services have to be ensured to support this massive exercise performed by the Universities. Steps to reduce the number of examinations have also to be explored.

This study, undertaken by the Examination Reform Commission, has been initiated to provide suggestions and starting points in this direction. Major affiliating universities in Kerala under the department of Higher Education, Government of Kerala, were the subjects of study. This report is based on the findings from the experience of these Universities and is equally applicable to all higher education institutions in the state.

The commission reviewed the present state of examinations in universities and HEIs of Kerala. Other matters under the specific purview of the commission were the review of curricula and the proposed changes in the curricula to formulate examinations in agreement with them; ensuring a system of maintenance of records from registration to transfer certificate and issuing of Marks / Grades card and certificates in a system like DigiLocker; reviewing the present modes of conduct of examination, evaluation and result and propose changes; proposing the necessary changes in the structure of question papers and strategies of testing according to changes in

curriculum; proposing measures to ensure the agreement of Academic Calendar and Examination Calendar; proposing a system and time-line for a complete automation of the entire examination system; and proposing a system for the training of teaching and non teaching staff for the smooth conduct of examination. In addition, the commission may put forward new suggestions for an effective and contemporary evaluation system based on emerging technologies, which are currently practised in other institutions within and outside the country.

The commission held discussions with the other two commissions (the Commission for Reforms in Higher Education System and the Kerala State University Law Reforms Commission) before finalising on the proposals for reforms in Examinations in Higher Education Institutions in our state.

Initially, the data relating to various parameters of the examination system prevalent in various Universities were collected through a well structured questionnaire. The commission had extensive meetings with representatives of the stakeholders of Higher Education Institutions. The meetings were held at the State level and also at the Universities for interaction with authorities, teachers, officials and students. The general public was invited to submit suggestions online also. Several sittings of the commission were held from December 2021. The commission also conducted several online review meetings and discussions to update the documentation process as well as to assess the progress of the work. Meetings were held with the IT team leaders of the Universities to assess the level of automation implemented, specifically in the conduct of examinations and for hearing their suggestions and proposals for the implementation of an ERP system. Many organisations, members of the teaching faculty, the general public and student community had submitted documents during the sittings of the commission at various places. A number of suggestions and apprehensions on the current system

and procedures on the conduct of examinations and publication of results were also received online. The commission has examined all the suggestions/representations and complaints received.

The commission reviewed several earlier reports on reforms in examinations including Guidelines for ICT in Education Policies and Master Plan UNESCO 2022, Report on Examination Reforms in State Universities - KSHEC – 2021, Evaluation Reforms in HEIs in India - Working Paper – UGC-2019, Examinations Reforms Policy - AICTE - 2018, NAAC Report on Case Studies 2015, Report on Examination Reforms-KSHEC-2011, Examination Reforms in India - UNESCO - 1979 etc.

The Report on Examination Reforms by the Prof. Jacob Tharu Committee (2011) submitted recommendations for implementation in curriculum design, transactions and assessment. It recommended regular training to teachers in curriculum design, syllabus preparation as well as evaluation strategies with special attention to continuous internal assessment techniques and also proposed that each University should establish procedures for such training and workshops. Proposals were given for restructuring the pattern of question papers and establishing a question bank. The committee recommended to install procedures for managing malpractice at the examinations and to establish facilities for counselling students as part of students' welfare initiatives. Prof. N J Rao commission (2021) has recommended specific proposals for implementing the Prof. Jacob Tharu Commission report, through the implementation of concepts of Outcome Based Education. Prof. Rao has recommended proposals in the Systemic, Curricula, Technology and Assessment domains, in tune with the recommendations in the UGC report on Examination reforms. The commission observed that the Universities failed to devise concrete procedures for implementing recommendations in these reports. Therefore

even though the Universities began to offer restructured undergraduate programmes under the CBCS, major recommendations that should have been implemented simultaneously - for example OBE, continuous internal assessment, question bank etc.- were left out.

The Global Education Development Agenda reflected in SDG4 of 2030[4] accepted by our country in 2015 seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." Advancements in technology and artificial intelligence have resulted in increased demand for skilled human resources having a multidisciplinary knowledge base. Exploration of newer technologies to produce clean energy, reduce pollution and ensure preservation and judicious use of natural resources, management of infectious diseases would also need humans with interdisciplinary skills and knowledge.

Policies are being implemented at the national and state level to expedite advancements for augmenting human resources to ensure that our country meets the goals of sustainable development.

Radical changes and reforms are needed in the areas of content designing, delivery, assessment and grading of learners to realise the dream of having an education system in our country that is second to none by 2040. The national policy envisages to develop a system having teachers empowered with knowledge as well as better social status and with better norms for quality control and accountability, so that students across the country irrespective of their location or social status receive quality education and achieve economic and social inclusiveness, equality and mobility.

[4] https://www.unesco.org/en/education/education2030-sdg4

Glossary of terms

Assessment is the process of collecting, recording, scoring, describing and interpreting information about learning.

Certificate/ Diploma/ Degree is a title/ qualification awarded after satisfactory completion of and achievement in a programme.

Course Learning Outcomes are the outcomes/ knowledge whichever student is expected to gain at the end of completion of each course (subject).

Credit is the unit of measure of course work. Each course may be allotted credits in proportion to the time expected to be devoted by the student for that course.

Course is a basic unit of education and/or training. A course or collection of courses forms a programme of study.

Cumulative Grade Point Average (CGPA) is the weighted average of the grade points obtained in all courses registered by the student across semesters.

Difficulty Index (of a question) is a measure of the proportion of examinees who answered the question correctly.

Disaster recovery (DR) is an organisation's ability to respond to and recover from an event that negatively affects business operations. The goal of DR methods is to enable the organisation to regain use of critical systems and IT infrastructure as soon as possible after a disaster occurs.

Examination is a quantitative measure of learners' performance and is usually held at the end of the academic session or semester.

External examination is an examination conducted by the Higher Education Institution (HEI) at the end of a term.

Fair Assessment is assessment which does not give advantage or disadvantage to any student.

False Numbering is the process of assigning a number to an answer script for masking the identity of the answer script before sending for valuation.

Grade Point is the numeric weightage attached to each letter grade.

Grade Point Average (GPA) is a system of calculating academic achievement based on an average,calculated by multiplying the numerical grade Jx›int received in each course by the number of credits.

Graduate Attributes (GAs) is a set of individually assessable outcomes that are indicative of the graduate's potential to acquire competencies in that programme.

Identity Masking of answer scripts are done by masking the register number of candidates from the answer scripts sent for valuation.

Internal examinations are done for the continuous internal assessment of students as prescribed by the regulations of the programme.

Learning Outcome Based Education is the adherence to student-centered learning approach to measure student's performance based on a predetermined set of outcomes.

Letter Grade is the index of performance resulting from the transformation of actual marks / grades obtained by a student in a course.

Moderation of assessment is an organised procedure which ensures use of valid assessment material and consistent application of criteria, to provide fair academic judgement and reliable outcome in the form of marks or grades.

Outcomes are the intended results of education in higher educational institutions: What students are supposed to know and be able to do.

Programme is a collection of courses in which a student enrolls and which contributes to meeting the requirements for the awarding of one or more Certificates/ Diplomas/ Degrees.

Programme Education Objectives (PEO) are broad statements that described what graduates are expected to attend within few years of graduation

Programme Learning Outcomes (PLO) represent the knowledge, skills and attitudes a student should at the end of the programme.

Question Bank is a repository of quality questions on a subject.

Readmission is granted by the HEI as per regulations to enable a student to complete his study after break.

Re-evaluation means rechecking of an already valued and graded answer script

Registration is the process through which students select courses to be taken during a semester or module.

Result is defined as the outcome of an assessment/ evaluation which may be expressed in different forms such as marks, letter grade, GPA, etc.

Reliable Assessment ensures consistency in the assessment made by the same and/or other assessors with respect to the same learning outcome for a course or a programme.

Semester Grade Point Average (SGPA) quantifies the performance of a student in a given semester.

Student is a person admitted and registered under University regulations.

Syllabus is an outline of topics covered in any academic course.

Transcript is the certified copy of a student's educational record.

1. Introduction

Universities and other Higher Education Institutions (HEIs) in our country cater to the higher education aspirations of more than 142 million students in the age group 18-23 years. Our state has a population of 29 lakh in this age group. As reported in the All India Survey of Higher Education 2019-20 (AISHE), there are 1043 Universities, 42343 regular colleges and 11779 stand alone institutions in our country. The state of Kerala has 23 Universities and 1348 colleges. Further, Kerala has a Gross Enrolment Ratio (GER) of 38% as against all India GER of 27.1%.

Universities in Kerala conduct a wide range of academic programmes at the Undergraduate (UG) and Postgraduate (PG) levels. Examinations are conducted at regular intervals by the Universities to assess the learner and hence to arrive at a final grading of each student at the end of the programme. Examinations have been recognized as a quality control mechanism enforcing minimum standards for Students as well as Teachers and administrators. It helps to ascertain whether the learning objectives are being attained. It also helps in diagnosing teaching methods and to improve instructional techniques. Effective examinations should also motivate students towards achieving higher objectives.

Assessment of learners in our Universities comprise Internal Assessments and External Assessments. Internal Assessments are carried out by teachers at the college of study during the teaching process and external examinations are conducted at the end of the term by the University. Both these examinations are conducted as per the regulations of the programme published by the University. Internal Examinations are conducted throughout the term and consist of components such as written examinations, assignment, seminars, viva, project etc. The components for internal assessment are prescribed in the regulations for the programme.

The commission has observed that smooth functioning of the examination process in our Universities are hindered by the large number of external examinations conducted in a year. The pre-examination and post-examination processes for conducting these examinations effectively and publishing results in time are the major challenges in the examination processes of all Universities. Most of the procedures adopted by the Universities in performing these tasks are complex and unscientific. Even though efforts to implement Information and Communication Technology (ICT) based support systems in the conduct of examinations have been initiated by the Universities, lack of complete re-engineering and scientific restructuring of the processes involved have resulted in software supported operating modules that fail to deliver the expected objectives of automation - precision, speed and transparency.

It has also been observed that even though the programmes are run in the Choice Based Credit and Semester (CBCS) system, the evaluation part is not adequately designed. The implementation of Outcome Based Education (OBE) is not complete since the evaluation system practised is not restructured and therefore does not correspond to the methodologies recommended for evaluation for assessing whether learning outcomes as defined in the syllabus has been attained.

The commission has also observed that the academic calendar published by the Universities and the actual schedule of examinations often fail to match. Many reasons are attributed for this mismatch which has been found to have cascading effects on the timely conduct of examinations and publication of results.

Many of the hurdles in conducting examinations and publishing their results on time can be overcome by streamlining the existing processes and following

a schedule of events by the Universities. Our Universities have started this process by forming teams which include policy makers, authorities, teachers and non-academic personnel for bringing out reforms in the atomic modules of the various processes in the conduct of examinations which would definitely make substantial progress in their performance.

2. Review on Examination system in our Universities

Four of the Universities in Kerala and 20 colleges (19 Arts and Science colleges and one engineering college) have been ranked within 100 in the National Institutional Ranking Framework (NIRF) ranking 2021[5]. This suggests that the Academic content and delivery of our Universities are commendable. In spite of the high achievements in Academics and Research, the majority of affiliating Universities in Kerala fall much behind in public perception. The commission finds that in NIRF Ranking, the academic perception is pegged at around 20 for most of our universities which has to be improved. Unsatisfactory service delivery is one of the major reasons for this situation.

The Universities were asked to respond to a questionnaire for preparing a comparative view on the data relating to the conduct of examinations. Data from these Universities - University of Kerala, Mahatma Gandhi University, University of Calicut, Kannur University, Sree Sankaracharya University of Sanskrit, Thunchath Ezhuthachan Malayalam University and Cochin University of Science and Technology were collected for analysis. The status in APJ Abdul Kalam Technological University is different as the entire examination system is incorporated into a software supported Student Life Cycle Management System.

Some of the major affiliating Universities in Kerala conduct more than 150 undergraduate programmes and an equal number of post graduate

[5] https://www.nirfindia.org/2021/UniversityRanking.html

programmes. The number of question papers for External examinations prepared by the major affiliating universities -Kerala, Calicut, Mahatma Gandhi University and the APJ Abdulkalam Technological University- in an academic year is more than 12000. The increased student intake in a variety of programmes, the large number of examinations and the absence of an integrated system for managing this huge data is a major reason for delay in the conduct of examinations and timely publication of results.

3. Present Scenario

Consequent to the introduction of the semester system for programmes which were earlier being conducted in the annual mode culminated in doubling of the term end examinations. All procedures and processes were to be conducted at the end of every semester. The introduction of a large number of programmes in the UG stream also increased the examination workload of Universities. The semester system was introduced with a view to reinvent the pedagogy with newer methodologies for curriculum transactions and to enhance the analytical and higher order skills of the students with the teaching-learning process to deliver deeper learning in the frontier areas in various disciplines of study. The commission finds that this did not happen and the learning process was made less intensive. The anticipated improvement in assessment methodologies and introduction of newer analytical methods for assessment also did not find a way to the restructured UG curriculum. It is also observed that even though the programmes are run in the CBCS system, the evaluation part is not adequately designed. The implementation of OBE is not complete since the evaluation system practiced is not restructured and therefore does not correspond to the methodologies recommended for evaluation for assessing whether learning outcomes as defined in the syllabus has been attained. Even though the principles of outcome based education

and the need for introducing the same has been stressed during the restructuring, OBE in the affiliating universities was not implemented fully and functionally. Thus Universities continued to conduct examinations and assessments in the conventional methodology. Since the number of programmes and the assessments (both Internal and External) increased substantially, they always found it difficult to deliver services to students as published in the Academic or Examination Calendar, resulting in resentment among students as well as the general public.

The commission observed several factors that contributed to the delay in providing quality time bound services to the student community as well as in the conduct and result declaration of the examinations. All students admitted to various programmes in the University are required to produce their qualifying certificates and relevant documents for verification to the University. Originals of certificates are submitted to the University by students (through the colleges of study in case of regular students and students themselves in case of other modes). Registration to examinations are either delayed or withheld pending the verification of certificates.

All Universities follow a centralised system for administering examinations and conducting valuation. Absence of the timely availability of reliable data is found to create bottlenecks in the flow of procedures for the conduct of examinations, valuation and publication of results. These include data on registered students, centres of examinations and teachers.

The format and nature of answer books provided to the students is not conducive for efficient management of their transport to the centres of valuation, storage and retrieval. Identity masking before valuation is currently done using manual false numbering which involves bringing all the answer scripts to a centralised facility and requires a lot of manpower which

could be used in more productive environments. The practice of manual false numbering for masking the identity of answer scripts currently employed by many universities is found to be heavily dependent on human resources and consume more time.

Marks / grades from valuation camps are currently processed for results after the different stages of mark / grade entry, verification and approval after marks / grades awarded by the examiners and scrutinized by the chief examiners are transcribed to marks / grades card and submitted for entry. These processes, the commission observed, create delay in processing and publication of results. Streamlining the process and appropriate technology intervention could reduce the time drastically.

The commission also observed that there are recurring instances of answer scripts going missing before and after valuation. The missing scripts, even though very small in number, are a hindrance in completing the processes of the examination on time. This also invites negative perception of the system by the stakeholders.

It is also observed that the award of moderation of marks / grades follows a philosophy that negates the intention of improving academic quality in HEIs as envisaged by the UGC. The moderation process has to be integrated with the assessment system.

More than 70% of students are availing the benefit of grace marks / grades. The process in the award of grace marks / grades is a major concern for the timely publication of results and issue of mark lists / grade cards to students. The commission has observed the absence of a well defined and structured policy related to the award of moderation and grace marks / grades. It is also

observed that the policy for awarding grace marks / grades differs from University to University in the state which is undesirable.

Students who are admitted in the Persons with Disability (PwD) category are awarded grace marks / grades. These students are taught and evaluated along with the regular students. The commission also observed that there is no uniform nature in awarding grace marks / grades to students in the PwD category.

The commission observed that the academic calendar published by the Universities and the actual schedule of examinations does not match. Many reasons are attributed for this mismatch which has been found to have cascading effects on the timely conduct of examinations and publication of results. The commission also observed that staggered examinations are a result of incompatibility of the Examination Calendar with the Academic Calendar. This creates a heavy burden on the resources -including human resources- of the Universities already reeling under great pressure due to the large number of examinations. Delayed valuations and delayed revaluations result in delay in the conduct of further examinations, a vicious circle which demands great effort and more resources in order to reduce the severity of the problem.

More importantly, the commission found that Universities in Kerala are yet to implement an effective curriculum. The grading system followed by the Universities in Kerala are not uniform. The swing from direct grading to indirect grading and the implementation of a non-uniform grading pattern has already dented the automation initiatives to a large extent. It was also observed that the frequent changes in rules and regulations are creating ambiguity and confusion among the implementing officers, the result of which is the reluctance of these officers to exercise the powers

granted/delegated to them and thereby delaying service delivery.

Universities in Kerala had initiated implementation of automation of various tasks about a decade back. The commission observed that processes automated in the Universities reside as standalone modules in many instances. It was also found that most of the Universities have automated existing procedures. Automation without reengineering of processes would not yield quality improvement. It was also observed that many universities do not have a proper disaster recovery (DR) mechanism. Universities are yet to make specific policies on data management including storage, network and DR. The absence of a comprehensive management information system supported by necessary infrastructure and resources, and implemented through Enterprise Resource Planning (ERP) techniques is pronounced in the Universities of Kerala.

The situation is also not very different in universities where technology has been introduced for management of examinations. This is mainly due to partial automation and lack of complete re-engineering of the processes involved.

The commission is of the view that the system has to be revamped to make the procedures in conduct of examinations more teacher-centric and thus regain the confidence of the student community.

4. Recommendations

4.1 Adoption of Outcome Based Education

In the present examination system, testing of memory occupies a dominant place. The recall of factual knowledge, though essential to any examination, is only one of several major abilities to be demonstrated by the graduates.

The assessment process must also test higher level skills viz. ability to apply knowledge, solve complex problems, analyse, synthesise and design. Further, professional skills like the ability to communicate, work in teams, and lifelong learning have become important elements for employability of the graduates. It is important that the examinations also give appropriate weightage to the assessment of these higher-level skills and professional competencies. The challenge of assessing higher order abilities and professional skills through the traditional examination system is to be addressed. Several educational experiences and assessment opportunities may be identified to overcome the challenges.

The very base of implementation of OBE is the continuous evaluation pattern. Students can be fairly assessed only by their teachers who could truly comprehend the learning abilities and intellectual strengths of a student to capture the subject content in its full spirit. In this context, the commission feels that continuous evaluation needs to be brought in and hence teachers must be given responsibility of evaluating their students. This means that the entire evaluation process must be carried out by the teachers in affiliated colleges/centres of study. Only the curriculum related aspects and the award of degree will be the responsibility of Universities.

Curriculum statement should be exhaustive with details on the domain, presentation, instructional and learning strategies of the topic of study. Curriculum and regulations shall be framed by the respective University. Guidelines shall be published and followed in curriculum design and preparation of syllabus. Syllabus and Assessment Strategies are to be ideally developed by the respective colleges. Defining learning outcomes is the stepping stone to definition and implementation of effective assessment strategies. Assessment strategies shall be defined in the syllabus for each course and be published. All Assessment methodologies are to be dependent

on the Learning Outcomes prescribed for the course and programme. They are to act as quality control mechanisms for Teachers, students and administrators. Novel assessment methodologies shall be defined for each course based on their specific learning outcomes[6]. All Universities shall implement Outcome Based Education (OBE) from the next academic year onwards. A suggested strategy for implementing OBE is given in Annexure I.

Each University should establish a curriculum development centre to offer extensive training to teachers on all aspects of implementing outcome based education - from curriculum design to assessment.

4.2 Grading System

The Commission recommends that all Universities follow a Uniform grading pattern. It is ideal that Universities may follow the 10 point scale grading prescribed by the UGC for all UG as well as PG programmes. Hence, it is proposed that the Direct Grading System recommended by the UGC may be followed for all UG and PG programmes. This shall be equally applicable for Ph.D course work.

4.3 Admission Process

The Commission is of the view that reforms in Examinations should start with streamlining of the Admission Process. Admission process should be organised in a systematic way.

All Universities enrol students through a Centralised Admission Process. The present system of centralised admission process is proven to be efficient. This process usually begins during the month of April/May. However the process normally gets completed only during October. This is mainly attributed to the delay in completion of the admission processes for professional programmes.

[6] For details, refer Report on Examination Reforms in State Universities, KSHEC 2021

It is generally felt that the Admission Process to UG and PG programmes should be completed by June/July. This would enable the Universities to complete the instructional hours as per the curriculum and conducting examinations as published in the Examination Calendar.

Admissions to UG and PG programmes offered by all Universities may be completed by the month of July every year.

4.4 Common Entrance Examination (CEE) for PG programmes

The admission to all PG programmes in affiliated colleges and some of the University Statutory Departments are now based on marks / grades or marks / grades calculated from grade acquired by students. A common entrance examination is being conducted in all the major Higher Education Institutions in our country for PG admissions. There are always discrepancies in the evaluation process from one university to another. The grading pattern may also differ. The non-reliance on marks/ grades for admission to higher studies would automatically enhance the quality of evaluation of UG programmes and thereby reduce the variance in awarding marks / grades in internal as well as external examinations.

The commission is of the view that admissions to postgraduate programmes in our Universities (University departments as well as affiliated colleges) shall be made based on a Common Entrance Examination. Since each University offers a unique set of post graduate programmes it would be better that each University holds its own entrance examination for admission to postgraduate programmes to its affiliated colleges as well as teaching departments. In this way, a student can get multiple opportunities for admission to different Universities. The calendar for such examinations must be decided by the Universities in consultation among themselves. A national level notification of

such CEE be issued to attract students from other states.
There should be an independent centre to be established by each university to manage admissions of international students.

4.5 Eligibility for Admission to a programme

The rigidity in eligibility criteria for admission to programmes need to be reviewed in order to provide adequate freedom to the learner in choosing a programme of study. Eligibility for admission to programmes has to be made more liberal. UGC directions and guidelines regarding eligibility for admission may be followed by the Universities.

4.6 Unique Student ID

It is proposed that every student admitted to our Universities be provided with a Unique Student ID (USID). The USID could be fruitfully employed for implementing better student mobility as well as a host of other student friendly initiatives. It is proposed that the USID may be linked to AADHAR. The Unique ID may be linked to a temporary register number also. All relevant personal and academic details of the student shall be verified and necessary documents including academic credentials shall be linked to the Unique ID. Every student admitted to the University education system in the state for the first time may be issued a Unique ID in a format mutually agreed by the Universities and the ID shall be linked to a temporary register number. The ID shall be issued when the applicant gets registered as a bona-fide student of the University on completion of the admission process. The authenticity of the data shall be the responsibility of the university concerned and the custodianship of such data shall rest with the University concerned. The student data shall be validated by the University concerned.

4.7 Student Portal

All universities shall implement a student portal. The portal shall be equipped with tools and services that would enable the student to plan and prepare for curricular, non-curricular and extracurricular activities during the period of study. The portal should act as an effective means of communication between students and the University. All relevant details of the student - personal and educational - shall be collected, verified and scanned documents uploaded to the system at the time of registration. The student shall be added as a portal user and credentials issued for logging in to the portal. The portal shall be replete with the academic requirements expected of the student, the curriculum, syllabus and academic calendar. All information required for the planning and execution towards successful completion of studies by the student shall be made available in the portal.

The university should be a facilitator for the student. In this aspect, Universities may designate officials at the Assistant level to be student facilitator for a number of students (which has to be decided by the University concerned). The designated official shall be the single point of contact in the University assisting the students in availing services pertaining to the programme of study.

4.8 Ensuring completion of study after Semester Break

UGC stipulates students to complete their course of study within N+2 years of admission to a programme where N is the normal period for the completion of a programme in years. Under exceptional circumstances, conforming to the rules and regulations laid out by the University, a student may be allowed another year for completion of the programme. However the total extension time granted shall not be more than 3 years.

Normally students are able to complete their programme of study after necessary readmission procedures when the scheme of study has not changed. In case the scheme to which the student got admitted is changed, the readmission procedure has to take into account the changes in regulation and credit requirements in the new scheme. In such situations, it is proposed that the application for readmission be considered by the BOS concerned. The BOS shall recommend necessary academic transactions to be completed by the student under the current scheme (standing regulations) for completing the programme including acquiring additional credits or undergoing bridge courses. It is therefore proposed that the maximum allowed period of completion of a programme shall be N+2+1. If a student fails to complete the programme within this period, he/she will be given permission to complete the programme by transferring the credits to the new scheme. BOS shall give the necessary direction to the student for acquiring the additional credits required for which the examination can be conducted by the University. In such cases, the University may evolve a mechanism for awarding internal marks / grades since the student is not permitted to attend regular classes.

4.9 Academic Credits Transfer

A student may be allowed to transfer credits earned at an HEI to a new HEI for continuing the same programme or a similar programme of study at the new HEI. Credit transfer mechanisms could be implemented in more than one way. Credits acquired at the parent HEI could be wholly accepted and transferred to continue studies at the new HEI. Credit transfers could also be implemented through the requirement that Bridge Courses/Additional Courses be taken up by the student.

It is proposed that HEIs in Kerala implement mechanisms for credit transfer for the benefit of students opting to migrate to a new HEI for continuing studies. The need for such a mechanism would prove to be more helpful in crisis situations where students are forced to make changes to their learning environment due to factors beyond their control. The University shall designate an appropriate academic body to decide on the mode and extent of transfer of credits acquired by the student. The decision on transfer of credits may be taken within the shortest time period by the HEI.

4.10 Evaluation Protocols

The evaluation protocols defined for OBE shall be followed. It would be successful only if the evaluation of a student is conducted by the teachers who interact with the student over the course period. This system is currently being practised in statutory departments and centres of the majority of the Universities in our state. This is an effective system practised all over the world. This concept is, of course, a drastic change from the present centralised examination system conducted by the Universities for the students of affiliated colleges in our state. Most of the Universities now follow an internal to external examination ratio of 20:80 in affiliated colleges, where the entire external examinations are conducted by the Universities through a written examination. An immediate pronounced shift in the ongoing examination pattern may not be practical and may result in confusion among the students and the public. In this context, a gradual changeover to an evaluation system that is fully internal is recommended. A complete shift can be brought in only after instilling confidence in students and the academic fraternity.

The following suggestions are proposed.

(i) Currently examinations are conducted in the External (End-Semester) and Internal (as part of Continuous Internal Assessment) modes. External (End-Semester) Examinations are conducted by the University and Internal examinations are conducted by colleges as part of the continuous internal evaluation of students. On the basis of the recommendation for implementing OBE, the commission proposes enhancement in the weightage of Internal components to at least 40% for UG as well as PG programmes.

(ii) The internal examination shall be conducted in the respective colleges through a summative and formative assessment mode. Out of this 40% internal assessment, 50% shall be made through written tests. Half of such examinations may have MCQ components to test the students' higher order thinking skills. Written examinations shall consist of mostly short answer questions. The remaining 50% shall be assessed by employing a minimum of 3 different assessment methodologies. One of the components shall be decided by the department concerned and should be published at the start of the semester for the information of students and the other 2 components may be defined and directed by the BOS. The BOS may decide the weightage for the three components depending on the learning outcomes and the nature of the courses.

(iii) Classroom Attendance shall not be an assessment criteria and as such the practice of awarding weightage for classroom attendance shall be discontinued.

(iv) The result of the internal assessment shall be published at least 2 weeks before the commencement of the End semester examination.

(v) Documents relating to the Internal Assessments shall be kept in the respective colleges for a minimum period of 6 months and shall be made available for review by the University. The University shall formulate a mechanism for reviewing the Internal Assessment methodologies employed by the colleges (10-20% of colleges). The system shall not recommend punitive actions, but act as a reconciliation procedure for assisting teachers in calibrating their valuation and grading. Serious flaws, if any, shall be reported to the University.

(vi) Universities shall implement a three-tier grievance redress mechanism for solving any grievances related to internal assessments. Tier-1 at the Department Level would consist of a committee headed by the Head of the Department concerned, a senior Faculty Member of the department, the faculty student advisor for the programme. Tier-2 would be at the College Level, with the Principal as the Chairperson, the College Level Student Advisor, HOD of the Department concerned and College Union Chairperson or a Student Representative as members. Tier-3 or the University Level committee shall be chaired by the Convener of the SSC on Examinations with the Student Syndicate Member/ University Union Chairperson and the Controller of Examinations (Convenor) as members. Escalation to higher levels shall be only on the basis of recommendations of the lower levels. Any complaints received from a student shall be attended to and resolved within 10 working days and in the case of the entire three-tiers, a maximum of 30 working days. Universities shall deduce a mechanism to randomly check the quality of question papers and the assessment methodologies.

(vii) The commission proposes that valuation of certain specified end-semester examinations conducted by the University shall be done at the colleges as detailed below.

Duration of the programme	**Valuation of the following end-semester examinations may be conducted in colleges**
1 (One) Year	None - Valuation shall be conducted by the University
2 (Two) Years	Semester 1 (one) & 3 (three)
3 (Three) Years	Semester 1 (one) & 2 (two)
4 (Four) Years and above	Semester 1 (one), 2(two), 5 (five) & 6(six)

The question papers for these examinations shall be provided by the University. 10-20% of the valued answer scripts shall be revalued randomly by the Chairman / Board of Examiners appointed by the University. Universities shall appoint Board of Examiners based on the number of papers to be evaluated in each subject in different colleges. Valued Answer scripts shall be kept in the custody of the Chief Superintendent for 6 months and these shall be transferred to the University after the completion of the revaluation processes.

(viii) Universities shall implement a system to regularly monitor the external (End Semester) and internal (continuous internal assessment) examinations conducted at the colleges. Mechanism to check large variance in internal and external marks / grades shall also be put in place. Instances where the variation in marks / grades secured by a candidate in Internal Assessment and External Examinations for a course of study exceeds 50% shall be scrutinised

by the University. The Chairman / Board of Examiners for the subject concerned shall report on the marks/grades awarded for Continuous Internal Assessment to the candidate(s) after scrutiny of the related documents and records at the college of study. If the Board of Examiners reports that marks/grades have been awarded against the guidelines issued by the University, the report may be placed before the Syndicate for appropriate action. This procedure should be completed within 15 days of publication of results of the examination.

(ix) The duration of end semester examinations conducted by Universities may be fixed depending on the credit component of the courses. Courses with 4 credits and above shall be assessed at the end semester external examinations of duration 3 hours. Similarly a 3 credit course requires only 2.5 hours , and 2 credit for 2 hrs and for 1 credit courses 1.5 hours. Students shall be given a cool off time of maximum 15 minutes at all external end-semester written examinations.

(x) All the Practical and Project work evaluations shall be done internally through continuous assessment mode. Since the purpose of Practical courses is to acquire the necessary skill in the respective field, examinations can be avoided for such courses. The students must be evaluated for each practical on a daily basis. 40% weightage can be awarded through this continuous assessment. Remaining 60% weightage shall be awarded by an external examiner based on the submission of all related documents including records (20%) and performance at a viva-voce examination (40%). The evaluation and viva-voce shall be conducted at the end of the semester by an external examiner appointed by the college and the details shall be intimated to the University. In the case of Project course, a Board of Examiners constituted by the college involving one or two external experts

shall assess the quality of work along with a viva-voce examination. The final evaluation shall be the responsibility of this Board of Examiners. The details of the constitution of the Board of Examiners shall be intimated to the University.

(xi) There shall be no minimum for a pass in Internal Assessment. However Universities shall fix a minimum for a pass in the end-semester examination as well as for aggregate pass (combined internal and external) for the course(s) of study.

4.11 Save A Year (SAY) Examination

The commission proposes that candidates who have cleared all previous semester examinations but fail in not more than 2 courses in either or both of the last two semesters of the programme (End semester examinations of the final year) may be administered SAY Examination within 3 months after the publication of results of the final semester of the programme. The results of the examination may be published within 30 days of completion of the examinations.

4.12 Examination Calendar

All activities related to Examinations shall strictly follow the Examination Calendar published at the beginning of each academic year. The calendar shall conform to the Academic Calendar published by the University. Postponement of examinations may be eliminated, unless in situations of a natural disaster. The University shall keep a record of the postponement of examinations stating appropriate reasons. The calendar shall be published every year before 31st May.

4.13 Registration of Students

The course/Exam registration shall be completed by the students at the beginning of the semester. Registration of students for examination has also to be completed along with this at the beginning of a semester. It shall be the responsibility of the colleges to verify the eligibility criteria and authenticity of credentials submitted by the student for admission. Transfer Certificate may not be insisted on for admission to a programme of study. Certificates and Data Verification of students admitted to the programmes shall be completed by the colleges within 30 days of closure of admissions. Digital copies of all relevant documents and credentials of the student shall be made available to the University. This is equally applicable to students admitted to autonomous colleges.

4.14 Hall Tickets

Hall Tickets shall be made available for download through the student portal. The student shall be admitted to the examination hall on production of a print of the downloaded hall ticket and another identity proof in original. The documents to be submitted as ID proofs shall be decided and published by the University. Attestation of the downloaded hall ticket shall not be made mandatory for admission to the exam hall. The downloaded Hall ticket shall have a clear imprint of the photograph and signature of the student.

4.15 Digital Transmission of Question Papers

Question papers for examinations shall be transmitted digitally to the centres of examination. The procedure for digital transmission shall employ industry level security standards and protocols based on the prevailing IT act. All Universities shall maintain a record of transmission of Question Papers.

4.16 Registering Attendance of candidates at Examinations

Student attendance at examinations shall be recorded and transmitted digitally from the examination hall on the date of examination itself.

4.17 Reducing Malpractices at Examinations

Universities shall publish and enforce guidelines and protocols for reducing malpractices at examinations. In case of suspected malpractice at an examination, the Identity of the student should be kept confidential by the college authorities. The invigilator must explain to the student the formalities with utmost care. The student shall be allowed to complete the examination in a new answer sheet provided by the invigilator. If the student is found guilty, punishment if any, shall be decided by the University as per regulations and statutes. In this context, the commission is of the view that archaic guidelines for punishment should be revised and implemented at the earliest.

Malpractices at the centres of examination shall be reported on the same day with relevant documents. The Chief Superintendent shall make a preliminary report and submit the same digitally to the University. All the relevant documents and evidence (including CCTV footage)shall be kept in the safe custody of the college and submitted to the University on demand. The case shall be finalised and disposed of within 45 days.

Each centre of Examination shall be equipped with digital surveillance systems (with a backup for at least 3 months) in the examination halls. Awareness campaigns may be conducted to prevent the students from getting involved in malpractices.

4.18 Counselling Centre

The Commission received a large number of complaints from students and parents on the difficulties faced by them in preparing for examinations and have requested adequate steps for alleviating them. The students have complaints of great mental stress while preparing for and appearing at the examinations. The Commission recommends that all HEIs shall have a well equipped counselling centre and the services of a counsellor shall be made available. The UGC directives on establishing counselling centres for students in all HEIs shall be complied. The UGC has conceived the counselling system[7] to be unique, interactive and target-oriented. Students, Teachers, Parents and Administrators shall be involved in the process. UGC also recommends a Teacher-Counsellor who would act as guardian to a batch of students (25 students) during their course period.

4.19 Question Bank

Teaching and Evaluation are complementary aspects of the learning process. Integration of teaching and evaluation can be implemented by instituting Question Bank System. Universities are increasingly offering diverse programmes. The syllabi of programmes are also revised regularly. The increase in student enrolment and the increase in the number of examinations demand streamlining the workload, ensuring quality of examinations and fair assessment processes. Question Bank System would help to eliminate repetition of questions and ensure balance of questions based on learning outcomes and difficulty level. The establishment of a question bank system would also reduce the administrative overload involved in the process. The involvement of many experts from different institutions will lead to setting of papers of good quality as teachers with known expertise

[7] https://www.ugc.ac.in/pdfnews/3618465_UGC_letter_reg_Students_Safety_09032018.pdf

on a particular unit/ module can set questions only on the said topic/ module. Question Bank could also hold the answer key to questions at the time of framing individual questions, which would greatly help the pre-evaluation board in finalising the scheme of valuation of the question paper (QP). This will enable the University to publish the scheme of the question paper immediately after publication of results for the benefit of students applying for scrutiny/revaluation of their answer scripts.

A good and reasonable examination question paper must consist of questions of various difficulty levels to accommodate the different capabilities of students. Bloom's taxonomy framework helps the faculty to set examination papers that are well balanced, testing the different cognitive skills without a tilt towards a tough or easy paper perception. If the present examination questions are more focused towards lower cognitive skills, conscious efforts need to be made to bring in application skills or higher cognitive skills in the assessment. It is recommended that an upper limit needs to be stipulated for lower order skills (for example, no more than 50% weightage for knowledge-oriented questions) at the institution/ University level. It is important to note that, as the nature of every course is different, the weightage for different cognitive levels in the question papers can also vary from course to course.

The Question Bank System has to be implemented in all Universities which should adhere to the outcomes expected of the learning process.

The mapping of questions to the defined course outcomes can be achieved through the process of identifying Competencies and Performance Indicators (PI). For each programme Outcome, competencies that would generally require different assessment measures have to be defined which should serve as an intermediate step to the creation of measurable indicators. For each of the competencies identified, define performance

Indicators (PIs) that are explicit statements of expectations of the student learning. They can act as measuring tools in assessment to understand the extent of attainment of outcomes. They can also be designed to determine the appropriate achievement level or competency of each indicator so that instructors can target and students can achieve the acceptable level of proficiency. Once the above process is completed for the programme, the assessment of COs for all the courses is designed by connecting assessment questions (used in various assessment tools) to the PIs. By following this process, where examination questions map with PIs, we get clarity and better resolution for the assessment of COs and POs.

It is necessary to design question papers to test higher order abilities and skills. Application of Bloom's taxonomy framework to create an optimal structure of examination papers to test the different cognitive skills is suggested. Bloom's Taxonomy provides an important framework to not only design curriculum and teaching methodologies but also to design appropriate examination questions belonging to various cognitive levels.

Question papers (QP) are the basic unit of external examinations. Preparation of Question papers needs to be decentralised. This can be accomplished by instituting Question Bank. The Question Bank System essentially involves four entities.

1. A large group of QP setters preparing questions for the course concerned, based on extensive unambiguous written guidelines.
2. A group of QP editors/scrutinizers who approve the questions with possible modifications and classified based on guidelines and syllabus of the course concerned.
3. QP Integrators who can use the available questions from the bank and generate QP required for the course according to the guidelines and pattern specified in the syllabus.

4. The above process ends with the generation of one or more question papers. The final selection can be made by the Controller of Examinations.

The above processes shall be automated and the Digital Question Bank system implemented.

At least 20% questions should be added to the question bank every year. Universities may consider involving the student community also in the preparation of questions for possible inclusion to the question bank. The question papers shall be periodically reviewed by the Boards of Studies.

4.20 Teacher Management System

A Teachers' Portal shall be implemented by the Universities. All Teachers in higher educational institutions across the state shall be provided with a Unique Teacher ID (UTID). The UTID shall be linked to AADHAR. The portal shall provide the tools and services for performing the Academic and Non-Academic activities. It shall be mandatory for the teacher to update the courses assigned for teaching. The introduction of Unique Teacher ID mapping to courses shall help in the planning of valuation and assignment of teachers to valuation.

4.21 Evaluation

There shall be a pre-evaluation meeting of the Board of Examiners of the subject concerned. The pre-valuation boards shall finalise the scheme and mode of valuation of each question paper.

The Commission proposes to introduce on-screen evaluation for speedy declaration of results.Implementing on-screen evaluation requires digitising the answer scripts and forwarding the digital answer scripts to the examiners.

Universities may explore various protocols for scanning answer sheets, wherever possible. There are examples now available with some Universities outside our state where the entire answer scripts are scanned just after the examination. In such cases high speed scanner systems may be deployed in all examination centres. Alternatively, Universities may also consider mechanisms to scan the papers by students themselves from the examination hall using mobile phones. The security and technology aspects for implementing these technologies must be worked out.

Conventional valuation systems in the Universities need to be reengineered. Evaluation without false numbering for masking identity of answer scripts may also be considered. If needed, Barcodes or QR codes may be implemented for more efficient management of answers scripts. Introduction of such technologies should also take into account the retrieval system of answer scripts for the purpose of revaluation.

There shall be provisions for the examiners to directly upload the marks / grades of the valued answer scripts to the University web portal. Development and deployment of a mobile application for submission of marks / grades may be considered. Universities shall re-engineer the rest of the processes so that the results can be declared within a short time frame after incorporating the moderation and / or grace marks / grades, if applicable. Meeting of the Boards of Examiners shall be conducted online and data regarding examinations shall be presented to the board for analysis and recommendations.

4.22 Moderation of Marks / Grades

Moderation of marks / grades at examinations with a view to increase numbers of pass or courses in examinations may be avoided. All Universities should formulate a moderation policy which is implemented across all programmes and courses. Moderation mechanism should address the

difference in individual judgments of evaluators. It should also try to ensure uniformity in the levels of achievement for a course as per the system of marks/grades adopted across different institutions of study. Even though UGC suggests the application of moderation to both Internal and External examinations, the commission is of the view that moderation be awarded to end semester examinations only.

4.23 Grace Marks / Grades

Double benefit of grace marks / grades currently available to students shall be avoided. Benefit of grace marks / grades shall be limited to the exam only and further grace marks / grades shall not be considered to arrive at the index marks for ranking purposes for admission to higher programmes. Universities shall form a uniform policy for award of grace marks / grades and frame regulations for the award of grace marks / grades. A common framework for awarding grace marks / grades in all the Universities in the state may also be considered.

4.24 Declaration of Results

It is undebatable that timely publication of results and its preciseness is crucial to the credibility and reputation of the HEI. Results of all the examinations shall be declared and published within a period of 30 days from the last date of the examination. Results shall be made available to the students immediately on publication through the student portal. The University should implement a mechanism for easy verification of results presented by a student.

A suggested time flow of the major events is given in Annexure II

4.25 Audit of Examination Processes and Data Analysis

The Universities shall implement a mechanism to periodically audit - preferably every two years - the whole process of examinations. Report on the audit with comments of the Controller of Examinations shall be placed before the Syndicate for deliberations and further directions. The audit should help for continuous improvement in the administration of examinations. The data on examinations should be analysed using appropriate software mechanisms to provide reports that are insightful and would help to plan and implement academic initiatives for a better teaching-learning process.

4.26 Academic Credentials Management

Printed mark / grade lists including provisional degree certificates, if provided, shall be made available to the students within 15 days of publication of results. Degree certificates shall be made available to eligible students within a period of 30 days of publication of results. It is ideal to have Degree certificates having printed on it the mode of study. If the candidate has undergone regular study in a college, the name of the college of study may also be recorded in the Degree Certificate. However, a final decision on this matter may be taken by the Universities considering the practical difficulties in implementing the same.

4.27 DigiLocker/ Academic Depository

All Universities shall make available digitally authenticated copies of mark / grade lists, degree certificates through the DigiLocker. Universities in Kerala should make coordinated efforts to provide credentials of their students in the DigiLocker.

4.28 e-Services for Students

The student should be able to apply for all the services online though the student portal. The entire students' services shall be made online. The online services should be complete with integrated fee payment systems. Necessary provisions should also be incorporated for enabling the student to track the status of services requested. All other documents shall be digitally authenticated and made available to the student through the student portal. The University shall publish the turnaround time for the requested services on their websites.

4.29 Revaluation

Revaluation of answer scripts for all semesters shall be managed by the University, including scripts valued at the colleges.Scheme of evaluation of each question paper shall be published in the website along with the publication of results of an examination.

On Screen evaluation shall be implemented for revaluation. Students shall apply for scrutiny of applications in the first phase of revaluation. Such students shall be provided with a scanned digital copy of the answer script. If the student desires for revaluation after scrutinising his/her answer script with the published scheme of the question paper, he/she may apply for revaluation of the script. The designated examiner shall be granted access to the digitised copy of the script and shall perform on-screen evaluation of the script.

It is proposed that, in situations where the marks of the candidate (Weighted Grade Points (WGP) in the case of direct graded answer papers) awarded on revaluation exceeds by 20%, the answer paper shall be further scrutinised and valued by a third examiner. The student shall be awarded the average of the best two as the final marks / WGP. The result of revaluation on individual

answer scripts shall be published immediately on receipt of marks/grades and approval by the competent authority.

The Universities may implement a mechanism to enable the students to submit their feedback on examinations, the analysis of which could be used to have a perception on the quality and structure of the question paper.

4.30 Revaluation of Continuous Internal Assessments

There shall be no provision for revaluation of continuous internal assessments. However, the process of continuous internal assessments is to be subjected to the monitoring mechanism devised by the University. Also, the three tier grievance redress mechanism, proposed for complaints regarding continuous internal assessment, can address any kind of grievances.

4.31 Revaluation of End Semester Examination

The answer script shall be retrieved within 10 days of the last date for application for revaluation. The answer script for revaluation shall be scanned for transmission to the examiner. The examiner shall have the facility to make on screen marking and submitting marks / grades to the University. The scanned answer script shall be made available to the student through the student portal. Results of revaluation shall be published within 30 days of the last date for application for revaluation. The revised mark / grade lists shall also be made available to the student through the student portal as well as the academic depository. This revaluation process is applicable for both the end semester examinations conducted by the University as well as by the colleges. It shall be the responsibility of colleges to coordinate the scanning process in the case of end semester examinations valued at the colleges. However, the expense related to this process may be supported by the University.

4.32 Equipping Colleges

In the light of the above suggestions, it is very necessary that the affiliated colleges must be equipped with all the infrastructural facilities for the speedy implementation of different procedures connected with the conduct of examinations, uploading various data, valuation of internal and end-semester examinations and other related jobs. It shall be the duty of the respective colleges to ensure the availability of appropriate digital devices and an efficient internet connectivity. Colleges shall frame a mechanism to judiciously conduct both the formative and summative evaluations for the internal component. The two college level redressal mechanisms must be formulated with utmost care. An error-free valuation of end-semester examinations, wherever applicable, shall be the responsibility of the colleges. A mechanism to constantly interact with the University needs to be worked out. The various digital infrastructures must be developed in consultation with the University. It is also of importance that the colleges shall make students aware of the evaluation protocols from time to time. Since the answer sheets and other relevant documents of the internal examination have to be kept in colleges for 6 months, a separate storage facility must also be maintained.

4.33 Training Centre for Curriculum Development and Evaluation

Universities shall establish a well equipped training centre for curriculum development and evaluation. Regular training sessions shall be conducted by the centre for the benefit of Teachers and Administrative personnel on all aspects of Academic and Examination responsibilities of the University. Periodic training for selected personnel designated as master trainers (from the Academic, Administrative and Student community from affiliated colleges) shall also be conducted by the centre on specific topics, eg. Awareness against Malpractice, Grace Marks / grades, enhanced facilities to

Pwd etc. Induction programmes to new teachers as well as non-teaching staff of the University could be conducted at the centre.

4.34 Expediting the process of evaluation of Doctoral theses

The commission observed an unprecedented delay in the completion of the thesis evaluation process in most of the Universities. In certain cases, this goes up to more than 12 months. It is proposed that a reasonable time of 3 months be introduced by all Universities for thesis evaluation. The Research Supervisor shall prepare a list of 12 examiners (or required number) for valuation of the thesis after communicating with the prospective examiners and obtaining their consent for valuation. Inclusion of reputed international experts in the panel would provide more value to the review process.

The list of examiners prepared by the Research Supervisor shall be forwarded to the University for further processing. The list shall also be accompanied by a statement from the Research Supervisor that the examiners in the list have consented to evaluate the thesis. The examiner prioritised as 1 will be designated as the Chairperson for the thesis evaluation. The Doctoral Thesis shall be submitted (preferably electronically) to the first three examiners. Reminders should be sent at the end of 30 days and again after 45 days. If a valuation report is not obtained after 60 days, the examiner shall be informed accordingly and the thesis should be submitted to the next examiner in the list for valuation. Alternatively, it is suggested that the thesis may be sent to four evaluators for review. In that case after receiving three positive reports, the viva-voce can be recommended. In any circumstances, the Universities shall ensure that the valuation of the doctoral thesis is completed within a period of 90 days. The Research Scholar should be made aware of the status of thesis evaluation through the Research Scholars' Portal.

4.35 Statutory Departments and Centres (Teaching centres) in Universities and Non-affiliating Universities in the State

The Commission recommends the following proposals specific to the Teaching departments and Centres and the Universities which are non-affiliating in nature, in addition to the other recommendations.

4.35.1 Assessment

Teaching departments in various universities are presently following Continuous Evaluation having Internal and External Components designed by the teachers of the Department. However there are some Universities which are yet to adopt the system. Hence it is recommended to implement the system of continuous internal evaluation in all the statutory departments of Universities.

All the Practical and Project works evaluations shall be done internally through continuous assessment mode. 40% weightage can be awarded through the continuous assessment. Remaining 60% weightage shall be awarded based on the submission of all related documents including records (20%) and performance at a viva-voce examination (40%). In the case of Project course, a Board of Examiners constituted by the department/centre involving one or two external experts shall assess the quality of work along with a viva-voce examination. The final evaluation shall be the responsibility of this Board of Examiners.

4.35.2 Assessment Audit

The appropriate body responsible for framing the regulations of programmes in the statutory departments/centres shall formulate a mechanism for periodically auditing the assessment processes followed in

the statutory departments. This would involve the quality of question papers, pattern and scheme of valuation. The audit shall also analyse the results of examinations and present a report to the University.

4.35.3 Complete digitization

It is recommended that a complete digitization of the student management cycle be introduced.

4.36 Training for SC/ST students

The Higher Education system in our state is striving hard for including marginalised sections of the society. Reservation in seats are scrupulously followed by all the HEIs in the state. Scheduled Castes and Scheduled Tribes are communities that require more support in navigating the curriculum and achieving the learning objectives for successful completion of the programme.

In this context it is proposed that candidates from these communities entering the university system as first generation learners have to be mentored and trained in the aspects of different assessment methodologies prescribed for the programme, to enable them to present themselves and perform with confidence in the evaluation procedures - continuous internal assessment as well as external examinations.

SC/ST Cells in the institutions where the student is undergoing the programme, should implement training programmes as proposed with support from the Universities.

4.37 Building a Robust Crisis Resilient System for uninterrupted Teaching- Learning process

ICT can provide new and more flexible ways to access quality teaching, learning content and other educational resources. It also enables a teaching and learning process that is location independent for both the teachers and the students. From the conventional view point of the teacher being a monopolistic holder of knowledge, ICT has transformed the role of teacher to become an enabler in a more learner-centred education system by acquiring new skills and competencies.

Availability of various online resources and digital tools helps the teachers and learners to modify existing resources and either create or co-create diverse products and tools to support the learning need. Another major advantage is to explore the possibility of personalised tutoring based on the data capture facility on the learning abilities of the students and creating evidence based teaching modules for varied learning levels. In addition, the Government needs to develop policies and systems to guarantee the secure, appropriate and ethical use of data, safeguarding privacy and confidentiality of personally identifiable information.

Educational Management Information System (EMIS) with enhanced AI capabilities for the analysis of Big Data can provide timely, systematic and quality evidence for the monitoring and evaluation of various aspects of student learning. Thus the education system for tomorrow is expected to have high resilience to withstand the uncertainties, like natural hazards and epidemics, and ensure an unhindered learning process besides addressing the specific needs of the learning population.

Various countries like Japan, Korea and Singapore have been continuously evolving the ICT approaches in their educational systems and are also

successful in preparing Higher Education Master Plans for 20 years ahead from now.

The commission proposes that Universities shall evolve and implement such long term policies that have inclusive characteristics, considering the heterogeneity in the learning groups in our circumstances and ensure the advantages of access the society had enjoyed in meeting the higher education aspirations. The inclusion of digital technologies shall be a priority area in all the future academic planning processes of the Universities.

4.38 Promoting Digital Inclusion

According to the 'Digital in India' report by the Internet and Mobile Association of India (IAMAI) our state is among the top states in Internet Penetration. The state has been striving to provide access to the Internet for everyone. In 2019 Kerala announced its decision to have Internet Access to be declared as a basic human right. The K-FON initiative by the Government is a confident stride in the right direction. The efforts of the government and its benefits have to be reaped by higher education institutions. Universities have to develop their education policies and master plan based on Digital inclusiveness.

Universities need to evolve policies and strategies to overcome the barriers that exist in acquiring digital capabilities in order to ensure an all-inclusive approach in the digitally enabled teaching learning process. The Universities may achieve the goals by

- Ensuring accessible Information and Communication Technologies and evolving technological solutions towards development of accessible technologies for the learners.
- Development and incorporation of various assistive technologies: supporting the development of ICT that assists people with disabilities in the digital world;

- Imparting Skills and digital skills to the learners in order to empower them to avoid getting marginalised and social exclusion, including in career growth.
- Ensuring social and economic inclusion by increasing the participation rate of disadvantaged students and those facing hardship through special inclusion projects/schemes.

4.39 Inclusion of Persons with Disabilities (PwD)

15% of the world's population live with disabilities and they are the world's largest minority. In our country, out of the total population of PwD, 16% are in the 20-29 age group and 17% are in the 10-19 age group. According to AISHE 2019-20, nearly one lakh students under PwD category were enrolled in various HEIs in India. Universities in our state had admitted 3710 students during the period, of which 1735 were women. These students undergo various programmes offered by Universities and are taught and assessed in more or less the same manner as students without any disabilities. A national policy on PwD has been promulgated by the GoI. The UGC has directed Universities for strict compliance of the Guidelines for the Conduct of Written Examinations issued by the Ministry of Social Justice and Empowerment, GoI.

Accordingly, Universities shall

1. Form of a uniform policy. The recent judgement of the State Disability Commissioner under Section 80(2) of the RPwD Act, 2016 on the award of grace marks / grades shall be considered while drafting the policy.

2. Allot scribe on request by the student. It is suggested that a maximum of two scribes from a panel of persons submitted by the student be allotted. The qualification of the scribes shall not be more than the qualification required for sitting at the examination.

3. Explore the possibility of administering examinations using assistive technologies preferred by the student - like Braille, Computer, Voice recorder etc..

4. Make sure that all affiliated colleges and centres are equipped with the minimum assistive technology and other infrastructure including an examination hall in the ground floor of the building for conducting examinations of students in the PwD category.

5. Simplify the procedure for allocation of scribes to the student.

6. Decide and publish Assistive Technology devices that are allowed at the examination hall for students in the PwD category

7. Explore the possibility of conducting separate examinations for these students in the near future so that these students are assessed with methodologies suited to bring out the best from them and be graded accordingly. This may be considered since as per AISHE 2019-20, more than three thousand students have enrolled in our Universities in the PwD Category.

8. Ensure that all affiliated colleges have a Disability Students Support Officer, and an apex office at the University.

9. Collect detailed data on students having any kind of disability as published in the RPwD Act 2016 at the time of Centralised Admission Process which could assist the University in the planning and conduct of Assessments - both internal and external.

10. Consider development of Assistive Technologies and Learner-Centred AI tools for supporting students who are PwD

The commission proposes that Universities in Kerala shall conduct extensive review on the facilities granted to students under various categories of PwD as notified in the RPwD Act 2016 in the processes of Admission, Teaching-Learning, methodologies for Assessment and Evaluation (including written examinations) and other support to students who are PwD and formulate regulations for the same. The review shall specifically address the following three levels of barriers listed in the UNESCO report 2022,

1. High Impact - Low Connectivity

2. Medium Impact - Insufficient accessibility of platforms and learning materials compounded by lack of competency to conduct programmes requiring special assistance.

3. Low Impact - Lack of 1:1 pedagogical assistance/technical support.

4.40 Changes and Modifications to Curriculum/Regulations

The Commission observed that sudden changes in regulations are brought and implemented by the Universities without giving sufficient time for hassle free implementation. The commission is convinced that such practices derail the examination processes and timely publication of results. Therefore it is proposed that changes to regulations/scheme/curricula etc. shall be implemented only for the new admissions from the ensuing academic year. This is even more important when processes in Universities are re-engineered and completely transformed to digital platforms.

4.41 University Resource Planning System (URP)

A centralised and integrated management system that coordinates various functional units of the University and HEIs is indispensable. e-Governance solutions implemented in many of our Universities manage independent

departments and are not designed to coordinate with the other departments. The lack of inter departmental process flow automation creates hurdles in administrative workflows and prevents informed decision making. Isolated software solutions implemented in our Universities cater to immediate needs of the departments concerned but create data replication and affect data integrity, thereby inhibiting data-driven decisions. These inherent drawbacks translate to poor service delivery that is slow and non-transparent. The APJ Abdul Kalam Technological University has adopted an effective student e-governance system incorporating all Stake holders - students, faculty and Colleges. The commission proposes that a complete University Resource Planning System (URP) based on ERP shall be developed and implemented for all activities involving academic /examination /administration /finance /planning components. The software modules currently implemented in various Universities, if documented and tested before implementation, must be integrated into this new system, if they are found to be compatible.

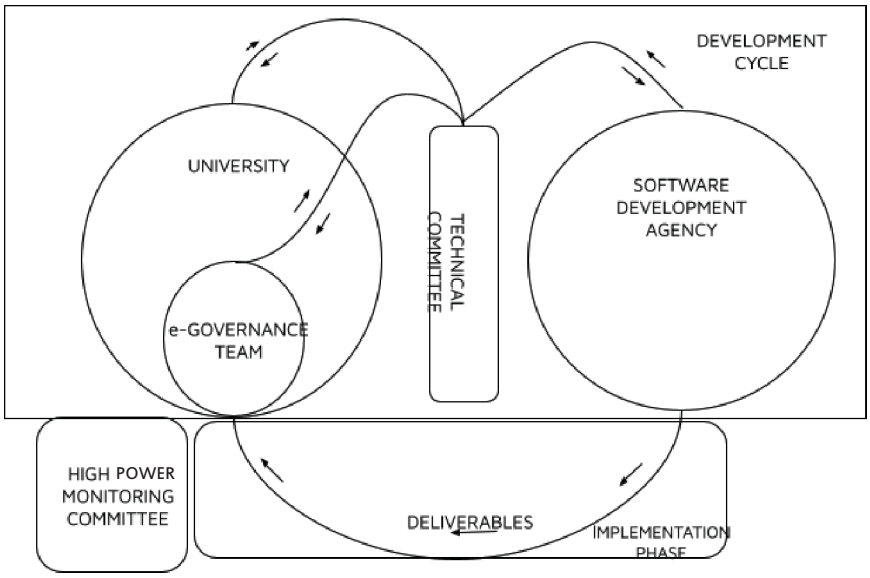


Figure 1: Schematic Representation of the proposed URP System

A high power monitoring committee to oversee the developmental activities for the timely execution must be framed. The monitoring committee would assist the state government in identifying a competent Software Developing Agency for developing the URP. A Technical committee shall be constituted for interacting with the agency developing and integrating the system. Directors of the e-Governance centres of all the Universities shall be members of the committee. The Technical committee will interact with the Software Developing Agency and the e-Governance team of Universities to determine the extent of automation, new requirements and will formulate the requirements for development. The development of the software shall be undertaken by the identified agency with close collaboration with the e-Governance team. Every University should have a full fledged e-Governance Centre, with qualified personnel on regular appointment, who shall be responsible for implementing the URP.

The Technical Committee must review the progress of sanctioned work and implementation plan regularly. It is also proposed that the e-Governance Team under the Technical Committee shall deal with technical aspects of the URP projects of the Universities. The high power monitoring committee shall supervise the development and implementation of the University Resource Planning System. The success of the implementation of the URP depends on identifying a competent agency and the establishment of resourceful e-Governance Centres in the Universities and their coordinated efforts.

Specific details of the proposed URP is given in the Annexure - III.

5. Proposals in Brief - English

1. All Universities shall implement Outcome Based Education (OBE) from the next academic year onwards. Curriculum statement should be exhaustive with details on the domain, presentation and instructional and learning strategies of the topic of study. Curriculum and regulations shall be framed by the respective University. Syllabus and Assessment Strategies are to be ideally developed by the respective colleges. All Assessment methodologies are to be dependent on the Learning Outcomes prescribed for the course and programme. They are to act as quality control mechanisms for teachers, students and administrators. Novel assessment methodologies shall be defined for each course based on their specific learning outcomes.

2. All Universities should establish a curriculum development center to offer extensive training to teachers on all aspects of implementing Outcome Based Education - from curriculum design to assessment.

3. All Universities shall follow a Uniform grading pattern. It is ideal that Universities may follow the 10 point scale grading prescribed by the UGC for all UG as well as PG programmes. Hence, it is proposed that the Direct Grading System recommended by the UGC may be followed for all UG and PG programmes. This shall be equally applicable for Ph.D course work.

4. All Universities enroll students through the Centralized Admission Process which has been proven to be an efficient system for admission. Admission process to UG and PG programmes shall be completed by June/July.

5. Admissions to postgraduate programmes in our Universities (University departments as well as affiliated colleges) should be conducted through entrance examinations with national level notification. Entrance examinations may be conducted by each university, the dates of which may be fixed after mutual consultations.

6. Eligibility for admission to programmes has to be made more liberal. UGC directions and guidelines regarding eligibility for admission may be followed by the universities. Transfer Certificate may not be insisted on for admission to a programme of study.

7. Every student admitted to the university shall be provided with a Unique Student ID (USID). The USID could be fruitfully employed for implementing better student mobility as well as a host of other student friendly initiatives.

8. All universities shall implement a student portal which shall be equipped with tools and services that would enable the student to plan and prepare for curricular, non-curricular and extracurricular activities during the period of study. The portal would also act as an effective means of communication between students and the University.

9. Effective mechanism for ensuring completion of study after semester break and or scheme change is proposed. The Board of Studies (BOS) shall recommend necessary academic transactions to be completed by the student under the current scheme (standing regulations) for completing the programme including acquiring additional credits or undergoing bridge courses.

10. Universities shall implement a uniform and effective mechanism for academic credits transfer to ensure mobility of students.

11. On the basis of the recommendation for implementing OBE, weightage of Internal components be enhanced to at least 40% for UG as well as PG programmes.

12. The internal examination shall be conducted in the respective colleges through a summative and formative assessment mode. Out of this 40% internal assessment, 50% shall be made through written tests. Half of such examinations may have MCQ components to test

the students' higher order thinking skills. Written examinations shall consist of mostly short answer questions. The remaining 50% shall be assessed by employing a minimum of 3 different assessment methodologies. One of the components shall be decided by the department concerned and should be published at the start of the semester for the information of students and the other 2 components may be defined and directed by the BOS. The BOS may decide the weightage for the three components depending on the learning outcomes and the nature of the courses

13. Classroom Attendance shall not be an assessment criteria and as such the practice of awarding weightage for attendance shall be discontinued.

14. The result of the internal assessment shall be published at least 2 weeks before the commencement of the end semester examination.

15. The University shall formulate a mechanism for reviewing the Internal Assessment methodologies employed by the colleges (10-20% of colleges). The system shall not recommend punitive actions, but act as a reconciliation procedure for assisting teachers in calibrating their valuation and grading.

16. Universities shall implement a three-tier grievance redress mechanism for solving any grievances related to internal assessments. Tier 1 at the department level, Tier 2 at the College level and Tier 3 at the University Level.

17. Universities shall continue to prepare the Question Papers and conduct term-end external examinations. Valuation of certain term-end external examinations shall be delegated to the colleges themselves. The commission proposes that answer papers of term-end external examinations of semesters 1 and 3 of all two year programmes, answer papers of term-end external examinations of semesters 1 and 2 of all three year programmes and answer papers of

term-end external examinations of semesters 1,2,5 and 6 of all programmes having duration more than 3 years shall be valued internally at the centers of examinations.

18. Universities shall implement a system to regularly monitor the external (End Semester) and internal (continuous internal assessment) examinations conducted at the colleges. Mechanism to check large variance in internal and external marks / grades shall also be put in place.

19. The duration of end semester examinations conducted by universities may be fixed depending on the credit component of the courses. Courses with 4 credits and above shall be assessed at the end semester external examinations of duration 3 hours. Similarly a 3 credit course requires only 2.5 hours , and 2 credit for 2 hrs and for 1 credit courses 1.5 hours.

20. Students should be given a cool off time of maximum 15 minutes at all external end-semester written examinations.

21. All the practical and project works evaluations shall be done internally through continuous assessment mode. Since the purpose of practical courses is to acquire the necessary skill in the respective field, examinations can be avoided for such courses. The students must be evaluated for each practical on a daily basis. The evaluation and viva-voce shall be conducted at the end of the semester by an external examiner appointed by the college and the details shall be intimated to the University. In the case of Project course, a Board of Examiners constituted by the college involving one or two external experts shall assess the quality of work along with a viva-voce examination.

22. There shall be no minimum for a pass in Internal Assessment. However the Universities shall fix a minimum for a pass in the end-semester examination as well as for aggregate pass (combined internal and external) in the course(s).

23. Candidates who have cleared all previous semester examinations but fail in external written examinations of not more than 2 courses at the end semester examinations of the final year (either or both of the last two semesters of the programme) may be administered a special supplementary examination for saving the possible loss of a year. The examination shall be conducted within 3 months after the publication of results of the final semester of the programme.

24. All examination related activities shall strictly follow the Examination Calendar published at the beginning of each academic year in confirmation with the Academic Calendar published by the University.

25. Postponement of examinations may be fully eliminated, except in situations of natural disasters. The University shall keep a record of the postponement of examinations stating appropriate reasons.

26. Certificates and Data Verification of students admitted to the programmes shall be completed by the colleges within 30 days of closure of admissions.

27. The student shall be admitted to the examination hall on production of a print of the hall ticket downloaded from the student portal and another identity proof in original. The documents to be submitted as ID proofs shall be decided and published by the University.

28. Universities shall publish and enforce guidelines and protocols for reducing malpractices at examinations. Each center of Examination shall be equipped with digital surveillance systems (with a backup for at least 3 months) in the examination halls. Awareness campaigns may be conducted to prevent the students from getting involved in malpractices.

29. The Commission recommends that all HEIs shall have a well equipped counselling centre and the services of a counsellor shall be made available. The centre shall function as per the directions of UGC.

30. All Universities shall implement Digital Question Bank and online question paper transmission.

31. All Teachers in higher educational institutions across the state shall be provided with a Unique Teacher ID (UTID). The UTID shall be linked to Aadhar. The portal shall provide the tools and services for performing the Academic and Non-Academic activities. It shall be mandatory for the teacher to update the courses assigned for teaching.

32. Conventional valuation systems in the Universities need to be reengineered. Evaluation without False numbering for masking identity of answer scripts may also be considered. If needed, Barcodes or QR codes may be implemented for more efficient management of answers scripts. There shall be provisions for the examiners to directly upload the marks / grades of the valued answer scripts to the University web portal

33. Moderation of marks/ grades at examinations with a view to increase numbers of pass or courses in examinations may be avoided. All Universities should formulate a moderation policy which is implemented across all programmes and courses.

34. Double benefit of grace marks/ grades currently available to students shall be avoided. Universities shall form a Uniform Policy for award of grace marks / grades and frame regulations for the award of grace marks / grades.

35. Results of all the examinations shall be declared and published within a period of 30 days from the last date of the examination and made available to the students immediately on publication through the student portal.

36. The Universities shall implement a mechanism to periodically audit - preferably every two years - the whole process of examinations. Report on the audit with comments of the Controller of Examinations shall be placed before the Syndicate for deliberations and further directions.

37. Printed mark / grade lists including provisional degree certificates, if provided, shall be made available to the students within 15 days of publication of results. Degree certificates shall be made available to eligible students within a period of 30 days of publication of results. It is ideal to have degree certificates having printed on it the mode of study. If the candidate has undergone regular study in a college, the name of the college of study may also be recorded in the degree certificate.

38. All Universities shall make available digitally authenticated copies of mark / grade lists, degree certificates through the DigiLocker.

39. The student should be able to apply for all the services online though the student portal. The entire students' services shall be made online. The online services should be complete with integrated fee payment systems.

40. On Screen evaluation shall be implemented for revaluation. There shall be provision for scrutiny of the answer script and a scanned copy of the answerbook shall be issued to the student on receipt of application for scrutiny. The result of revaluation on individual answer scripts shall be published immediately on receipt of marks/grades and approval by the competent authority. Results of revaluation shall be published within 30 days of the last date for application.

41. The Universities may implement a mechanism to enable the students to submit their feedback on examinations, the analysis of which could be used to have a perception on the quality and structure of the question paper.

42. Universities shall establish a well equipped training centre for curriculum development and evaluation. Regular training sessions shall be conducted by the center for the benefit of teachers and administrative personnel on all aspects of academic and examination responsibilities of the university.

43. Steps are proposed to expedite the process of valuation of Doctoral Thesis. Universities shall ensure that the valuation of the doctoral thesis is completed within a period of 90 days.The Research Scholar should be made aware of the status of thesis evaluation through the Research Scholars' Portal.

44. The appropriate body responsible for framing the regulations of programmes in the statutory departments/centers shall formulate a mechanism for periodically auditing the assessment processes followed in the statutory departments.

45. Candidates from SC/ST, especially from Scheduled Tribe communities entering the university system as first generation learners have to be handheld and trained in the aspects of different assessment methodologies prescribed for the programme, to enable them to present themselves and perform with confidence in the evaluation procedures - continuous internal assessment as well as external examinations.

46. Universities should build Crisis Resilient Training and Assessment Systems that are less dependent on co-location and synchronicity of teachers and learners, harnessing newer tools of ICT.

47. Universities shall evolve policies and strategies to overcome the barriers that exist in acquiring digital capabilities in order to ensure an all-inclusive approach in digitally enabled teaching learning process.

48. Universities in Kerala shall conduct extensive review on the facilities granted to students under various categories of PwD as notified in the RPwD Act 2016 in the processes of Admission, Teaching-Learning, Methodologies for Assessment and Evaluation (including written examinations) and other support to students who are PwD and formulate regulations for the same

49. Universities shall ensure that changes to regulations / scheme / curricula etc. shall be implemented only for new admissions from the ensuing academic year.

50. A complete University Resource Planning System (URP) based on ERP shall be developed and implemented for all activities involving academic /examination /administration/ finance/planning components.

6. Proposals in Brief – Malayalam

1. അടുത്ത അധ്യയനവർഷം മുതൽ എല്ലാ സർവ്വകലാശാലകളും പഠനലക്ഷ്യത്തെ അടിസ്ഥാനമാക്കിയുള്ള വിദ്യാഭ്യാസ പദ്ധതി (Outcome Based Education - OBE) നടപ്പിലാക്കേണ്ടതാണ്. പഠനവിഷയത്തിന്റെ വ്യാപ്തി, അവതരണം, ബോധന-പഠനതന്ത്രങ്ങൾ എന്നിവയെക്കുറിച്ചുള്ള വിശദാംശങ്ങളോടെ പാഠ്യപദ്ധതി സമഗ്രമായിരിക്കണം. പാഠ്യപദ്ധതിയും ചട്ടങ്ങളും അതത് സർവ്വകലാശാല രൂപീകരിക്കേണ്ടതാണ്. കാലക്രമേണ സിലബസ്സും മൂല്യനിർണ്ണയ തന്ത്രങ്ങളും അതത് കോളേജുകൾ വികസിപ്പിക്കേണ്ടതാണ്. എല്ലാ മൂല്യനിർണ്ണയ രീതികളും കോഴ്സിനും പ്രോഗ്രാമിനുമായി നിർദ്ദേശിച്ചിട്ടുള്ള പഠനലക്ഷ്യങ്ങളെ ആശ്രയിച്ചിരിക്കും. അധ്യാപകർക്കും വിദ്യാർത്ഥികൾക്കും ഭരണനിർവ്വാഹകർക്കും ഗുണനിലവാര നിയന്ത്രണസംവിധാനങ്ങളായി അവ പ്രവർത്തിക്കണം. ഓരോ കോഴ്സിനും അവയുടെ പ്രത്യേക പഠനലക്ഷ്യങ്ങളെ അടിസ്ഥാനമാക്കി നവീനമൂല്യ നിർണ്ണയ രീതികൾ നിർവചിക്കേണ്ടതാണ്.
2. പാഠ്യപദ്ധതി രൂപകല്പന മുതൽ മൂല്യനിർണ്ണയം വരെ - പഠനലക്ഷ്യത്തെ അടിസ്ഥാനമാക്കിയുള്ള വിദ്യാഭ്യാസം നടപ്പിലാക്കുന്നതിന്റെ എല്ലാ തലങ്ങളിലും അധ്യാപകർക്ക് വിപുലമായ പരിശീലനം നൽകുന്നതിന് എല്ലാ സർവ്വകലാശാലകളും ഒരു പാഠ്യപദ്ധതി വികസനകേന്ദ്രം സ്ഥാപിക്കേണ്ടതാണ്.
3. എല്ലാ സർവ്വകലാശാലകളും ഏകീകൃത ഗ്രേഡിംഗ് പാറ്റേൺ പിന്തുടരേണ്ടതാണ്. എല്ലാ യു.ജി., പി.ജി പ്രോഗ്രാമുകൾക്കും യു.ജി.സി നിർദ്ദേശിച്ചിട്ടുള്ള 10 പോയിന്റ് സ്കെയിൽ ഗ്രേഡിംഗ് അനുയോജ്യമാണ്. അതിനാൽ, എല്ലാ യു.ജി., പി.ജി. പ്രോഗ്രാമുകൾക്കും യു.ജി.സി ശുപാർശ ചെയ്യുന്ന ഡയറക്ട്ഗ്രേഡിംഗ് സിസ്റ്റം പിന്തുടരാവുന്നതാണ്. പി.എച്ച്.ഡി കോഴ്സ് വർക്കിനും ഇത് ബാധകമാക്കാവുന്നതാണ്.

4. പ്രവേശനത്തിനുള്ള കാര്യക്ഷമമായ സംവിധാനമാണെന്ന് തെളിയിക്കപ്പെട്ട കേന്ദ്രീകൃത പ്രവേശനപ്രക്രിയയിലൂടെയാണ് എല്ലാ സർവ്വകലാശാലകളും വിദ്യാർത്ഥികളെ തെരഞ്ഞെടുക്കുന്നത്. യു.ജി., പി.ജി പ്രോഗ്രാമുകളിലേക്കുള്ള പ്രവേശനനടപടികൾ ജൂൺ/ജൂലൈ മാസത്തോടെ പൂർത്തിയാക്കേണ്ടതാണ്.
5. സർവ്വകലാശാലകളിലെ (യൂണിവേഴ്സിറ്റി ഡിപ്പാർട്ട്മെന്റുകളും അഫിലിയേറ്റഡ് കോളേജുകളും) ബിരുദാനന്തര ബിരുദ പ്രോഗ്രാമുകളിലേക്കുള്ള പ്രവേശനം ദേശീയ തലത്തിലുള്ള വിജ്ഞാപനത്തോടുകൂടിയ പ്രവേശനപരീക്ഷയിലൂടെ നടത്തണം. ഓരോ സർവ്വകലാശാലയും പരസ്പര കൂടിയാലോചനകൾക്ക് ശേഷം പ്രവേശനപരീക്ഷകളുടെ തീയതികൾ നിശ്ചയിക്കേണ്ടതാണ്.
6. പ്രോഗ്രാമുകളിലേക്കുള്ള പ്രവേശനയോഗ്യത കൂടുതൽ ഉദാരമാക്കേണ്ടതുണ്ട്. പ്രവേശനത്തിനുള്ള യോഗ്യത സംബന്ധിച്ച യു.ജി.സി മാർഗ്ഗനിർദ്ദേശങ്ങളും സർവ്വകലാശാലകൾക്ക് പിന്തുടരാം. പഠനപ്രോഗ്രാമിലേക്കുള്ള പ്രവേശനത്തിന് ട്രാൻസ്ഫർ സർട്ടിഫിക്കറ്റ് നിർബന്ധമാക്കേണ്ടതില്ല.
7. യൂണിവേഴ്സിറ്റിയിൽ പ്രവേശനം നേടുന്ന ഓരോ വിദ്യാർത്ഥിക്കും ഒരു യുണീക്ക് സ്റ്റുഡന്റ് ഐഡി (Unique Student ID - USID) നൽകേണ്ടതാണ്. വിദ്യാർത്ഥികളുടെ ചലനാത്മകതയും മറ്റ് വിദ്യാർത്ഥി സൗഹൃദ സംരംഭങ്ങളും മികച്ച രീതിയിൽ നടപ്പിലാക്കുന്നതിന് USID ഫലപ്രദമായി ഉപയോഗിക്കാവുന്നതാണ്.
8. എല്ലാ സർവ്വകലാശാലകളും ഒരു സ്റ്റുഡന്റ് പോർട്ടൽ നടപ്പിലാക്കണം. വിദ്യാർത്ഥിക്ക് പഠനകാലയളവിൽ പാഠ്യ-പാഠ്യേതര പ്രവർത്തനങ്ങൾ ആസൂത്രണം ചെയ്യാനും തയ്യാറാക്കാനും പ്രാപ്തമാക്കുന്ന സംവിധാനങ്ങളും സേവനങ്ങളും ഉൾക്കൊള്ളിക്കണം. വിദ്യാർത്ഥികളും സർവ്വകലാശാലയും തമ്മിലുള്ള ആശയവിനിമയത്തിനുള്ള ഫലപ്രദമായ മാർഗ്ഗമായും പോർട്ടൽ പ്രവർത്തിക്കണം.

9. സെമസ്റ്റർ ഇടവേളയ്ക്ക് ശേഷം അല്ലെങ്കിൽ സ്കീം മാറ്റത്തിനുശേഷം പഠനം പൂർത്തീകരിക്കുന്നതിന് ഫലപ്രദമായ സംവിധാനം നിർദ്ദേശിക്കപ്പെടുന്നു. അധിക ക്രെഡിറ്റുകൾ നേടുന്നതിനോ ബ്രിഡ്ജ് കോഴ്സുകൾക്ക് വിധേയമാകുന്നതിനോ ഉൾപ്പെടെയുള്ള പ്രോഗ്രാം പൂർത്തിയാക്കുന്നതിന് നിലവിലെ സ്കീമിന് (സ്റ്റാൻഡിംഗ് റെഗുലേഷൻസ്) കീഴിൽ വിദ്യാർത്ഥി പൂർത്തിയാക്കാൻ ആവശ്യമായ അക്കാദമിക് ഇടപാടുകൾ ബോർഡ് ഓഫ് സ്റ്റഡീസ് (Board of Studies - BOS) ശുപാർശ ചെയ്യേണ്ടതാണ്.
10. വിദ്യാർത്ഥികളുടെ ചലനാത്മകത ഉറപ്പുവരുത്തുന്നതിനായി അക്കാദമിക് ക്രെഡിറ്റുകൾ കൈമാറ്റം ചെയ്യുന്നതിനുള്ള ഏകീകൃതവും ഫലപ്രദവുമായ സംവിധാനം സർവ്വകലാശാലകൾ നടപ്പിലാക്കേണ്ടതാണ്.
11. OBE നടപ്പിലാക്കുന്നതിനുള്ള ശുപാർശയുടെ അടിസ്ഥാനത്തിൽ, യു.ജി, പി.ജി പ്രോഗ്രാമുകളുടെ ആന്തരിക മൂല്യനിർണയത്തിനുള്ള വെയ്റ്റേജ് കുറഞ്ഞത് 40% ആയി ഉയർത്തുവാൻ ശുപാർശ ചെയ്യുന്നു.
12. ഇന്റേണൽ പരീക്ഷ അതത് കോളേജുകളിൽ സമ്മേറ്റീവ്, ഫോർമേറ്റീവ് (Summative and Formative) മൂല്യനിർണ്ണയ രീതിയിലൂടെ നടത്തണം. 40% ഇന്റേണൽ അസസ്മെന്റിൽ 50% എഴുത്തുപരീക്ഷയിലൂടെയാണ് നടത്തേണ്ടത്. അത്തരം പരീക്ഷകളിൽ പകുതിയിലും വിദ്യാർത്ഥികളുടെ ഉയർന്ന ചിന്താശേഷി പരിശോധിക്കുന്നതിനുള്ള MCQ ഘടകങ്ങൾ ഉണ്ടായിരിക്കേണ്ടതാണ്. എഴുത്തുപരീക്ഷകളിൽ ഭൂരിഭാഗവും ഹ്രസ്വ ഉത്തര ചോദ്യങ്ങളായിരിക്കും. ബാക്കിയുള്ള 50% കുറഞ്ഞത് 3 വ്യത്യസ്ത മൂല്യനിർണ്ണയ ഘടകങ്ങൾ ഉപയോഗിച്ചാണ് വിലയിരുത്തേണ്ടത്. ഈ ഘടകങ്ങളിലൊന്ന് ബന്ധപ്പെട്ട വകുപ്പാണ് തീരുമാനിക്കേണ്ടത്. ഇത് വിദ്യാർത്ഥികളുടെ അറിവിലേക്കായി സെമസ്റ്ററിന്റെ തുടക്കത്തിൽ പ്രസിദ്ധീകരിക്കേണ്ടതും മറ്റ് 2 ഘടകങ്ങൾ BOS നിർവചിച്ചു നൽകേണ്ടതുമാണ്. കോഴ്സുകളുടെ പഠനലക്ഷ്യങ്ങളും സ്വഭാവവും അനുസരിച്ച് ഈ മൂന്ന് ഘടകങ്ങൾക്കുള്ള വെയിറ്റേജ് BOS നു തീരുമാനിക്കാവുന്നതാണ്.

13. ക്ലാസ്റൂം അറ്റന്റൻസ് ഒരു മൂല്യനിർണ്ണയ മാനദണ്ഡമാക്കേണ്ടതില്ല. അതിനാൽ ക്ലാസ് ഹാജറിന് വെയിറ്റേജ് നൽകുന്ന രീതി നിർത്തലാക്കാവുന്നതാണ്.
14. ഇന്റേണൽ അസസ്മെന്റിന്റെ ഫലം അവസാനസെമസ്റ്റർ പരീക്ഷ ആരംഭിക്കുന്നതിന് 2 ആഴ്ച മുമ്പെങ്കിലും പ്രസിദ്ധീകരിക്കേണ്ടതാണ്.
15. കോളേജുകൾ ഉപയോഗിക്കുന്ന ഇന്റേണൽ അസസ്മെന്റ് രീതികൾ അവലോകനം ചെയ്യുന്നതിനുള്ള ഒരു സംവിധാനം സർവ്വകലാശാല രൂപീകരിക്കേണ്ടതുണ്ട്. നടപടിക്രമങ്ങളിലെ മനപൂർവ്വമല്ലാത്ത വിഴ്ച്ചകൾക്കു ശിക്ഷ നടപടികൾ ശുപാർശ ചെയ്യേണ്ടതില്ല, മറിച്ച് അദ്ധ്യാപകർക്ക് അവരുടെ മൂല്യനിർണ്ണയവും ഗ്രേഡിംഗും പിഴവുകൂടാതെ ചെയ്യുന്നതിന് സഹായിക്കുന്നതിനുള്ള നടപടിക്രമമായി പ്രവർത്തിക്കേണ്ടതാണ്.
16. ഇന്റേണൽ അസസ്മെന്റുമായി ബന്ധപ്പെട്ട പരാതികൾ പരിഹരിക്കുന്നതിന് സർവ്വകലാശാലകൾ ത്രിതല പരാതി പരിഹാര സംവിധാനം നടപ്പാക്കാവുന്നതാണ്. ഡിപ്പാർട്ട്മെന്റ് തലത്തിൽ ടയർ 1, കോളേജ് തലത്തിൽ ടയർ 2, യൂണിവേഴ്സിറ്റി തലത്തിൽ ടയർ 3 എന്നിങ്ങനെയാവും സംവിധാനം പ്രവർത്തിക്കുക.
17. സർവ്വകലാശാലകൾ ചോദ്യപേപ്പറുകൾ തയ്യാറാക്കി എക്സ്റ്റേണൽ പരീക്ഷകൾ നിലവിൽ നടത്തുന്ന രീതി തുടരും. എന്നാൽ ഏതാനും എക്സ്റ്റേണൽ പരീക്ഷകളുടെ മൂല്യനിർണയം അതാത് കോളേജുകളിൽ തന്നെ നടത്തുന്ന രീതി ശുപാർശ ചെയ്യുന്നു. എല്ലാ ദ്വിവത്സര പ്രോഗ്രാമുകളുടെയും 1,3 സെമസ്റ്ററുകളിലെ എക്സ്റ്റേണൽ പരീക്ഷകളുടെ ഉത്തര പേപ്പറുകൾ, മൂന്ന് വർഷ പ്രോഗ്രാമുകളിലെ 1,2 സെമസ്റ്ററുകളിലെ എക്സ്റ്റേണൽ പരീക്ഷകളുടെ ഉത്തര പേപ്പറുകൾ, 3 വർഷത്തിൽ കൂടുതൽ ദൈർഘ്യമുള്ള എല്ലാ പ്രോഗ്രാമുകളുടെയും 1,2,5,6 എന്നീ സെമസ്റ്ററുകളിലെ എക്സ്റ്റേണൽ പരീക്ഷകളുടെ ഉത്തര പേപ്പറുകൾ എന്നിവയുടെ മൂല്യനിർണയം അതത് കോളേജുകളിൽ തന്നെ നടത്തേണ്ടതാണ്.

18. മൂല്യനിർണയം അതത് പരീക്ഷാ കേന്ദ്രങ്ങളിൽ തന്നെ നടത്തപ്പെടുന്ന എക്സ്റ്റേണൽ (എൻഡ് സെമസ്റ്റർ), ഇന്റേണൽ (തുടർച്ചയായ ഇന്റേണൽ അസസ്മെന്റ്) പരീക്ഷകൾ പതിവായി നിരീക്ഷിക്കുന്നതിനുള്ള ഒരു സംവിധാനം സർവ്വകലാശാലകൾ നടപ്പിലാക്കണം. ഇന്റേണൽ, എക്സ്റ്റേണൽ മാർക്കുകളിലെ വലിയ വ്യത്യാസം പരിശോധിക്കുന്നതിനുള്ള സംവിധാനവും ഏർപ്പെടുത്തണം.
19. കോഴ്സുകളുടെ ക്രെഡിറ്റ് അനുസരിച്ച് സർവ്വകലാശാലകൾ നടത്തുന്ന സെമസ്റ്റർ എക്സ്റ്റേണൽ പരീക്ഷകളുടെ ദൈർഘ്യം നിശ്ചയിക്കുന്നതിന് ശുപാർശ ചെയ്യുന്നു. 4 ക്രെഡിറ്റുകളും അതിനുമുകളിലും ഉള്ള കോഴ്സുകൾ 3 മണിക്കൂർ ദൈർഘ്യമുള്ള അവസാന സെമസ്റ്റർ എക്സ്റ്റേണൽ പരീക്ഷകളിൽ വിലയിരുത്തപ്പെടും. അതുപോലെ 3 ക്രെഡിറ്റ് കോഴ്സിന് 2.5 മണിക്കൂർ, 2 ക്രെഡിറ്റ് കോഴ്സിന് 2 മണിക്കൂർ, 1 ക്രെഡിറ്റ് കോഴ്സിന് 1.5 മണിക്കൂർ എന്നിങ്ങനെ എഴുത്തുപരീക്ഷയുടെ സമയദൈർഘ്യം നിശ്ചയിക്കാവുന്നതാണ്.
20. എല്ലാ എക്സ്റ്റേണൽ എഴുത്തുപരീക്ഷകളിലും വിദ്യാർത്ഥികൾക്ക് പരമാവധി 15 മിനിറ്റ് കൂൾ ഓഫ് സമയം ശുപാർശ ചെയ്യുന്നു.
21. എല്ലാ പ്രായോഗിക, പ്രോജക്ട് വർക്കുകളുടെ മൂല്യനിർണ്ണയങ്ങളും തുടർച്ചയായ മൂല്യനിർണ്ണയ രീതിയിലൂടെ ആന്തരികമായി നടത്തേണ്ടതാണ്. അതാത് മേഖലകളിൽ ആവശ്യമായ വൈദഗ്ധ്യം നേടുക എന്നതാണ് പ്രാക്ടിക്കൽ കോഴ്സുകളുടെ ലക്ഷ്യം എന്നതിനാൽ, അത്തരം കോഴ്സുകൾക്ക് പരീക്ഷകൾ ഒഴിവാക്കാം. ഓരോ ദിവസത്തെയും പ്രാക്ടിക്കലിനു മൂല്യനിർണ്ണയം നടത്തുന്ന രീതി ശുപാർശ ചെയ്യുന്നു. മൂല്യനിർണ്ണയവും വൈവാവോസിയും സെമസ്റ്ററിന്റെ അവസാനം കോളേജ് നിയമിക്കുന്ന ഒരു എക്സ്റ്റേണൽ എക്സാമിനർ നടത്തേണ്ടതും വിശദാംശങ്ങൾ സർവ്വകലാശാലയെ അറിയിക്കേണ്ടതുമാണ്. പ്രോജക്ട് കോഴ്സിന്റെ കാര്യത്തിൽ, ഒന്നോ

രണ്ടോ എക്സ്റ്റേണൽ വിദഗ്ദ്ധരെ ഉൾപ്പെടുത്തി കോളേജ് രൂപീകരിക്കുന്ന ഒരു ബോർഡ് ഓഫ് എക്സാമിനേഴ്സ് വൈവാവോസി പരീക്ഷയ്ക്കൊപ്പം പ്രോജക്റ്റ് മൂല്യനിർണയം നടത്തേണ്ടതാണ്.

22. ഇന്റേണൽ അസസ്മെന്റിൽ വിജയിക്കുന്നതിന് മിനിമം വ്യവസ്ഥ ചെയ്യുന്നില്ല. എന്നാൽ സെമസ്റ്റർ പരീക്ഷയിൽ വിജയിക്കുന്നതിനും കോഴ്സുകളിലെ (ഇന്റേണൽ & എക്സ്റ്റേണൽ പരീക്ഷകൾ ചേർന്ന) വിജയത്തിനും മിനിമം നിശ്ചയിക്കാവുന്നതാണ്.

23. എല്ലാ മുൻ സെമസ്റ്റർ പരീക്ഷകളും വിജയിച്ചെങ്കിലും അവസാനവർഷത്തിലെ സെമസ്റ്റർ പരീക്ഷകളിൽ (പ്രോഗ്രാമിന്റെ അവസാനരണ്ട് സെമസ്റ്ററുകളിൽ) 2 കോഴ്സുകളിൽ കൂടാത്ത എക്സ്റ്റേണൽ പരീക്ഷകളിൽ പരാജയപ്പെടുന്ന വിദ്യാർത്ഥികൾക്ക് ഒരു പ്രത്യേക സപ്ലിമെന്ററി പരീക്ഷ നടത്താവുന്നതാണ്. ഒരു വർഷം നഷ്ടമില്ലാതെ പഠനം തുടരാൻ ഇത് വിദ്യാർത്ഥിയെ സഹായിച്ചേക്കാം. പ്രോഗ്രാമിന്റെ അവസാനസെമസ്റ്ററിന്റെ ഫലങ്ങൾ പ്രസിദ്ധീകരിച്ച് 3 മാസത്തിനുള്ളിൽ പരീക്ഷ നടത്തി ഫലം പ്രസിദ്ധീകരിക്കാൻ ശുപാർശ ചെയ്യുന്നു.

24. പരീക്ഷയുമായി ബന്ധപ്പെട്ട എല്ലാ പ്രവർത്തനങ്ങളും സർവ്വകലാശാല പ്രസിദ്ധീകരിക്കുന്ന അക്കാദമിക് കലണ്ടറിന്റെ സ്ഥിരീകരണത്തിൽ ഓരോ അധ്യയനവർഷത്തിന്റെയും തുടക്കത്തിൽ പ്രസിദ്ധീകരിച്ച പരീക്ഷാ കലണ്ടർ കർശനമായി പാലിക്കേണ്ടതാണ്.

25. പ്രകൃതിക്ഷോഭം കാരണം അല്ലാതെ പരീക്ഷകൾ മാറ്റിവെക്കുന്നത് പൂർണമായും ഒഴിവാക്കാം. ഉചിതമായ കാരണങ്ങളാൽ പരീക്ഷകൾ മാറ്റിവച്ചതിന്റെ രേഖ സർവ്വകലാശാല സൂക്ഷിക്കേണ്ടതാണ്.

26. പ്രോഗ്രാമുകളിലേക്ക് പ്രവേശനം നേടിയ വിദ്യാർത്ഥികളുടെ സർട്ടിഫിക്കറ്റുകളും ഡാറ്റ വെരിഫിക്കേഷനും പ്രവേശനപ്രക്രിയകൾ പൂർത്തിയായി 30 ദിവസത്തിനുള്ളിൽ കോളേജുകൾ പൂർത്തിയാക്കണം.

27. വിദ്യാർത്ഥി പോർട്ടലിൽ നിന്ന് ഡൗൺലോഡ് ചെയ്ത ഹാൾ ടിക്കറ്റിന്റെ പ്രിന്റും മറ്റൊരു ഐഡന്റിറ്റി പ്രൂഫും ഹാജരാക്കിയാൽ വിദ്യാർത്ഥിയെ പരീക്ഷാഹാളിൽ പ്രവേശിപ്പിക്കാവുന്നതാണ്. ഐഡി പ്രൂഫുകളായി സമർപ്പിക്കേണ്ട രേഖകൾ സർവ്വകലാശാല തീരുമാനിക്കുകയും പ്രസിദ്ധീകരിക്കുകയും ചെയ്യേണ്ടതാണ്.
28. പരീക്ഷകളിലെ ക്രമക്കേടുകൾ കുറയ്ക്കുന്നതിനുള്ള മാർഗ്ഗ നിർദ്ദേശങ്ങളും പ്രോട്ടോക്കോളുകളും സർവ്വകലാശാലകൾ പ്രസിദ്ധീകരിക്കുകയും നടപ്പിലാക്കുകയും ചെയ്യേണ്ടതാണ്. ഓരോ പരീക്ഷാകേന്ദ്രവും പരീക്ഷാ ഹാളുകളിൽ ഡിജിറ്റൽ നിരീക്ഷണ സംവിധാനങ്ങൾ (കുറഞ്ഞത് 3 മാസത്തേക്കുള്ള ബാക്കപ്പ് സഹിതം) സജ്ജീകരിച്ചിരിക്കണം. വിദ്യാർത്ഥികൾ ക്രമക്കേടുകളിൽ ഏർപ്പെടാതിരിക്കാൻ ബോധവത്ക്കരണ പരിപാടികൾ നടത്താവുന്നതാണ്.
29. എല്ലാ ഉന്നത വിദ്യാഭ്യാസ സ്ഥാപനങ്ങളിലും സുസജ്ജമായ ഒരു കൗൺസിലിംഗ് സെന്റർ ഉണ്ടായിരിക്കണമെന്നും ഒരു കൗൺസിലറുടെ സേവനം ലഭ്യമാക്കണമെന്നും കമ്മീഷൻ ശുപാർശ ചെയ്യുന്നു. പ്രസ്തുത കേന്ദ്രം യു.ജി.സി യുടെ മാർഗ്ഗരേഖകൾക്കനുസരിച്ചായിരിക്കണം പ്രവർത്തിക്കേണ്ടത്.
30. എല്ലാ സർവ്വകലാശാലകളും ഡിജിറ്റൽ ചോദ്യ ബാങ്കും ഓൺലൈൻ ചോദ്യപേപ്പർ കൈമാറ്റവും നടപ്പിലാക്കേണ്ടതാണ്.
31. സംസ്ഥാനത്തുടനീളമുള്ള ഉന്നത വിദ്യാഭ്യാസ സ്ഥാപനങ്ങളിലെ എല്ലാ അദ്ധ്യാപകർക്കും ഒരു യുണീക്ക് ടീച്ചർ ഐഡി (Unique Teacher ID - UTID) നൽകാവുന്നതാണ്. UTID ആധാറുമായി ബന്ധിപ്പിക്കേണ്ടതാണ്. അക്കാദമികവും അക്കാദമികേതരവുമായ വിവരങ്ങൾ രേഖപ്പെടുത്തുന്നതിനുള്ള സൗകര്യങ്ങൾ പോർട്ടലിൽ ഉണ്ടായിരിക്കേണ്ടതാണ്. അധ്യാപനത്തിനായി നിയോഗിച്ചിട്ടുള്ള കോഴ്സുകൾ അധ്യാപകൻ നിർബന്ധമായും സമയബന്ധിതമായി അപ്ഡേറ്റ് ചെയ്യേണ്ടതാണ്.

32. സർവ്വകലാശാലകളിലെ പരമ്പരാഗത മൂല്യനിർണ്ണയ സംവിധാനങ്ങൾ പുന:ക്രമീകരിക്കേണ്ടതുണ്ട്. ഉത്തര സ്ക്രിപ്റ്റുകളുടെ ഐഡന്റിറ്റി മറയ്ക്കുന്നതിന് ഫാൾസ് നമ്പറിംഗ് ഇല്ലാതെ, ഉത്തര സ്ക്രിപ്റ്റുകളുടെ കൂടുതൽ കാര്യക്ഷമമായ മാനേജ്മെന്റിനായി ബാർകോഡുകളോ QR കോഡുകളോ നടപ്പിലാക്കാവുന്നതാണ്. മൂല്യനിർണ്ണയം കഴിഞ്ഞു മാർക്കുകൾ/ഗ്രേഡുകൾ സർവ്വകലാശാല വെബ് പോർട്ടലിലേക്ക് നേരിട്ട് അപ്ലോഡ് ചെയ്യാൻ വ്യവസ്ഥ ചെയ്യാവുന്നതാണ്.
33. പരീക്ഷകളിൽ വിജയിക്കുന്നവരുടെ എണ്ണം വർദ്ധിപ്പിക്കുക എന്ന ലക്ഷ്യത്തോടെ മോഡറേഷൻ നൽകുന്നത് ഒഴിവാക്കാവുന്നതാണ്. എല്ലാ സർവ്വകലാശാലകളും മോഡറേഷൻ നയം രൂപീകരിക്കേണ്ടതും എല്ലാ പ്രോഗ്രാമുകളിലും കോഴ്സുകളിലും നടപ്പിലാക്കേണ്ടതുമാണ്.
34. വിദ്യാർത്ഥികൾക്ക് നിലവിൽ ലഭിക്കുന്ന ഗ്രേസ് മാർക്കിന്റെ ഇരട്ട ആനുകൂല്യം ഒഴിവാക്കേണ്ടതാണ്. ഗ്രേസ് മാർക്ക് നൽകുന്നതിനുള്ള ഏകീകൃത നയവും ഗ്രേസ് മാർക്ക് നൽകുന്നതിനുള്ള ചട്ടങ്ങളും സർവ്വകലാശാലകൾ രൂപീകരിക്കേണ്ടതാണ്.
35. എല്ലാ പരീക്ഷകളുടെയും ഫലങ്ങൾ പരീക്ഷയുടെ അവസാന തീയതി മുതൽ 30 ദിവസത്തിനുള്ളിൽ പ്രഖ്യാപിക്കുകയും പ്രസിദ്ധീകരിക്കുകയും സ്റ്റുഡന്റ് പോർട്ടൽ വഴി വിദ്യാർത്ഥികൾക്ക് ഉടൻ ലഭ്യമാക്കേണമെന്നും ശുപാർശ ചെയ്യുന്നു.
36. സർവ്വകലാശാലകൾ പരീക്ഷകളുടെ മുഴുവൻ പ്രക്രിയയും ആനുകാലികമായി ഓഡിറ്റ് ചെയ്യുന്നതിനുള്ള ഒരു സംവിധാനം നടപ്പിലാക്കേണ്ടതാണ് - രണ്ട് വർഷത്തിലൊരിക്കൽ എന്ന രീതിയിൽ എങ്കിലും പ്രസ്തുത ഓഡിറ്റ് റിപ്പോർട്ട് പരീക്ഷാ കൺട്രോളറുടെ അഭിപ്രായങ്ങൾ സഹിതം സിൻഡിക്കേറ്റ് മുൻപാകെ നിർദ്ദേശങ്ങൾക്ക് സമർപ്പിക്കാവുന്നതാണ്.
37. പ്രൊവഷണൽ ഡിഗ്രി സർട്ടിഫിക്കറ്റുകൾ ഉൾപ്പെടെ അച്ചടിച്ച മാർക്ക് ലിസ്റ്റുകൾ/ഗ്രേഡ് കാർഡുകൾ ഫലം പ്രസിദ്ധീകരിച്ച് 15 ദിവസത്തിനകം വിദ്യാർത്ഥികൾക്ക് ലഭ്യമാക്കണമെന്നും ശുപാർശ ചെയ്യുന്നു. ഫലം പ്രസിദ്ധീകരിച്ച് 30 ദിവസത്തിനുള്ളിൽ

യോഗ്യതയുള്ള വിദ്യാർത്ഥികൾക്ക് ബിരുദ സർട്ടിഫിക്കറ്റുകൾ ലഭ്യമാക്കേണ്ടതാണ്. ഡിഗ്രി സർട്ടിഫിക്കറ്റുകളിൽ പഠനരീതി രേഖപ്പെടുത്താവുന്നതാണ്. വിദ്യാർത്ഥി റെഗുലർ പഠനരീതിയിൽ ആണ് എങ്കിൽ ഡിഗ്രി സർട്ടിഫിക്കറ്റിൽ കോളേജിന്റെ പേരും രേഖപ്പെടുത്താവുന്നതാണ്.

38. എല്ലാ സർവ്വകലാശാലകളും ഡിജിലോക്കർ വഴി മാർക്ക് ലിസ്റ്റുകളുടെയും ഗ്രേഡ് കാർഡുകളുടെയും ഡിഗ്രി സർട്ടിഫിക്കറ്റുകളുടെയും ഡിജിറ്റൽ ആധികാരികതയുള്ള പകർപ്പുകൾ ലഭ്യമാക്കേണ്ടതാണ്.

39. സ്റ്റുഡന്റ് പോർട്ടൽ മുഖേനവിദ്യാർത്ഥിക്ക് എല്ലാ സേവനങ്ങൾക്കും ഓൺലൈനായി അപേക്ഷിക്കാൻ കഴിയണം. മുഴുവൻ വിദ്യാർത്ഥി സേവനങ്ങൾ ഓൺലൈൻ ആക്കേണ്ടതാണ് എന്ന് ശുപാർശ ചെയ്യുന്നു. ഓൺലൈൻ സേവനങ്ങൾ സംയോജിത ഫീസ് പേയ്മെന്റ് സംവിധാനങ്ങളോടെ പൂർത്തിയാക്കേണ്ടതാണ്.

40. പുനർമൂല്യനിർണയത്തിനായി ഓൺ സ്ക്രീൻ മൂല്യനിർണ്ണയം നടപ്പിലാക്കാവുന്നതാണ്. റീവാലുവേഷന് മുന്നോടിയായി ആൻസർ സ്ക്രിപ്റ്റിന്റെ സൂക്ഷ്മപരിശോധനയ്ക്കുള്ള വ്യവസ്ഥ ഉണ്ടായിരിക്കേണ്ടതാണ്. സൂക്ഷ്മ പരിശോധനയ്ക്കായി അപേക്ഷ ലഭിച്ചാൽ ആൻസർ സ്ക്രിപ്റ്റിന്റെ സ്കാൻ ചെയ്ത പകർപ്പ് വിദ്യാർത്ഥിക്ക് നൽകേണ്ടതാണ്. വ്യക്തിഗത ഉത്തര സ്ക്രിപ്റ്റുകളുടെ പുനർമൂല്യനിർണ്ണയത്തിന്റെ ഫലം മാർക്ക്/ഗ്രേഡുകൾ അംഗീകാരത്തിന് ശേഷം ഉടൻ പ്രസിദ്ധീകരിക്കേതാണ്. പുനർമൂല്യനിർണ്ണയത്തിന്റെ ഫലങ്ങൾ അപേക്ഷിക്കാനുള്ള അവസാനതീയതി മുതൽ 30 ദിവസത്തിനുള്ളിൽ പ്രസിദ്ധീകരിക്കേണ്ടതാണ്.

41. പരീക്ഷകളെക്കുറിച്ചുള്ള ഫീഡ്ബാക്ക് സമർപ്പിക്കാൻ വിദ്യാർത്ഥികളെ പ്രാപ്തമാക്കുന്നതിന് സർവ്വകലാശാലകൾക്ക് ഒരു സംവിധാനം നടപ്പിലാക്കാവുന്നതാണ്. അതിന്റെ വിശകലനം

ചോദ്യപേപ്പറിന്റെ ഗുണനിലവാരത്തെയും ഘടനയെയും കുറിച്ച് ഒരു ധാരണ ഉണ്ടാക്കാൻ ഉപയോഗിക്കാവുന്നതാണ്.

42. സർവ്വകലാശാലകൾ സുസജ്ജമായ ഒരു പരിശീലനകേന്ദ്രം സ്ഥാപിക്കേണ്ടതാണ്. സർവ്വകലാശാലയുടെ അക്കാദമിക്, പരീക്ഷാ ഉത്തരവാദിത്തങ്ങളുടെ എല്ലാ മേഖലകളിലും അധ്യാപകർക്കും അഡ്മിനിസ്ട്രേറ്റീവ് ഉദ്യോഗസ്ഥർക്കും പതിവായി പരിശീലന സെഷനുകൾ നടത്തേണ്ടതാണ്.

43. ഡോക്ടറൽ തീസിസിന്റെ മൂല്യനിർണ്ണയ പ്രക്രിയ ത്വരിതപ്പെടുത്തുന്നതിനു നടപടികൾ നിർദ്ദേശിക്കുന്നു. ഡോക്ടറൽ തീസിസിന്റെ മൂല്യനിർണ്ണയം 90 ദിവസത്തിനുള്ളിൽ പൂർത്തിയാക്കിയെന്ന് സർവ്വകലാശാലകൾ ഉറപ്പാക്കണം. റിസർച്ച് സ്കോളർമാരുടെ പോർട്ടലിലൂടെ തീസിസ് മൂല്യനിർണ്ണയത്തിന്റെ സ്റ്റാറ്റസ് റിസർച്ച് സ്കോളറെ അറിയിക്കാവുന്നതാണ്.

44. സർവ്വകലാശാല വകുപ്പുകളിലെ/കേന്ദ്രങ്ങളിലെ പ്രോഗ്രാമുകളുടെ റെഗുലേഷനുകൾ രൂപപ്പെടുത്തുന്ന അക്കാദമിക് ബോഡി വകുപ്പുകളിൽ പിന്തുടരുന്ന മൂല്യനിർണ്ണയ പ്രക്രിയകൾ ആനുകാലികമായി ഓഡിറ്റ് ചെയ്യുന്നതിനുള്ള ഒരു സംവിധാനം രൂപപ്പെടുത്തേണ്ടതാണ്.

45. പട്ടികജാതി / പട്ടികവർഗ വിഭാഗങ്ങളിൽ നിന്നുള്ള വിദ്യാർത്ഥികൾ, പ്രത്യേകിച്ച് സർവകലാശാല സംവിധാനത്തിലേയ്ക്ക് ആദ്യമായി പ്രവേശിക്കുന്ന ഈ വിഭാഗത്തിൽപ്പെട്ട വിദ്യാർത്ഥികൾക്ക് പ്രോഗ്രാമിനായി നിർദ്ദേശിച്ചിരിക്കുന്ന വ്യത്യസ്ത മൂല്യനിർണ്ണയ രീതികളുടെ നടപടിക്രമങ്ങളിൽ പരിശീലനം നൽകുന്നത്, അവർക്ക് മൂല്യനിർണ്ണയത്തിൽ ആത്മവിശ്വാസത്തോടെ പങ്കെടുക്കുന്നതിന് അവസരം നൽകും.

46. പ്രതിസന്ധി ഘട്ടങ്ങളെ തരണം ചെയ്യാൻ പ്രാപ്തമാക്കുന്ന തരത്തിൽ, ICTയുടെ പുതിയ ടൂളുകൾ പ്രയോജനപ്പെടുത്തുന്ന ബോധന-പരിശീലന-മൂല്യനിർണ്ണയ സംവിധാനങ്ങൾ സർവ്വകലാശാലകൾ സ്വായത്തമാക്കണം.

47. ഡിജിറ്റലായി പ്രാപ്തമാക്കിയ അധ്യാപനപഠനപ്രക്രിയയിൽ എല്ലാവരെയും ഉൾക്കൊള്ളിച്ചുകൊണ്ടുള്ള പഠനപ്രവർത്തനം ഉറപ്പാക്കുന്നതിന് ഡിജിറ്റൽ കഴിവുകൾ നേടുന്നതിൽ നിലനിൽക്കുന്ന തടസ്സങ്ങളെ മറികടക്കാൻ സർവ്വകലാശാലകൾ നയങ്ങളും തന്ത്രങ്ങളും വികസിപ്പിക്കേണ്ടതാണ്.
48. പ്രവേശനം, അധ്യാപനം, പഠനം, മൂല്യനിർണ്ണയം, മൂല്യനിർണ്ണയത്തിനുള്ള രീതികൾ (എഴുത്തുപരീക്ഷകൾ ഉൾപ്പെടെ), വിദ്യാർത്ഥികൾക്കുള്ള മറ്റ് ആനുകൂല്യങ്ങൾ എന്നിവയിൽ RPwD ആക്ട് 2016-ൽ വിജ്ഞാപനം ചെയ്തിട്ടുള്ള പ്രകാരം PwD യുടെ വിവിധ വിഭാഗങ്ങൾക്ക് കീഴിൽ വിദ്യാർത്ഥികൾക്ക് അനുവദിച്ചിരിക്കുന്ന സൗകര്യങ്ങളെക്കുറിച്ച് സർവ്വകലാശാലകൾ അവലോകനം നടത്തി ആവശ്യമായ നടപടികൾ സ്വീകരിക്കേണ്ടതാണ്.
49. റഗുലേഷനുകൾ/സ്കീം/പാഠ്യപദ്ധതി തുടങ്ങിയവയിൽ കാലാകാലങ്ങളിൽ നിർദ്ദേശിക്കുന്ന മാറ്റങ്ങൾ തൊട്ടടുത്ത അധ്യയനവർഷം മുതലുള്ള പുതിയ പ്രവേശനങ്ങൾക്ക് മാത്രമേ നടപ്പിലാക്കൂ എന്ന് സർവ്വകലാശാലകൾ ഉറപ്പാക്കേണ്ടതാണ് എന്ന് ശുപാർശ ചെയ്യുന്നു.
50. അക്കാദമിക്/ എക്സാമിനേഷൻ/ അഡ്മിനിസ്ട്രേഷൻ/ ഫിനാൻസ്/ പ്ലാനിംഗ് ഘടകങ്ങൾ ഉൾപ്പെടുന്ന എല്ലാ പ്രവർത്തനങ്ങൾക്കും ERP അടിസ്ഥാനമാക്കിയുള്ള ഒരു സമ്പൂർണ്ണ യൂണിവേഴ്സിറ്റി റിസോഴ്സ് പ്ലാനിംഗ് സിസ്റ്റം (URP) അടിയന്തിരമായി വികസിപ്പിക്കുകയും നടപ്പിലാക്കുകയും വേണം.

Annexures

Annexure - I

Outcome Based Education - Brief Implementation Plan

Outcomes are the abilities the students acquire and demonstrate at the end of a learning experience. The learning experience can be an instructional unit that involves a small number of hours of instructional activity, a course of one-semester duration, or a two to four-year formal undergraduate programme. Outcomes serve as the basis for effective interaction among concerned stakeholders. The outcome being the product of learning, it may be called a learning product. Therefore, "the product defines the process" in OBE.

It is results-oriented thinking and is the opposite of input-based education. The emphasis is on the educational process and where we are happy to accept whatever is the result. However, it should be remembered that Outcome-based education is not merely producing outcomes for an existing curriculum.

1. Choosing the right Model of OBE & Taxonomy of Learning

The best fit for the Indian Universities can be adopted in our system. As the OBE proposed in UGC documents, accreditation and ranking process including policy directions, the OBE adopted consisted of 3 levels of outcomes.

Outcomes can be defined at three different levels in the case of general undergraduate programmes.

Programme Outcomes: POs (programme Outcomes) are statements that describe what the students graduating from general programmes should be able to do.

Programme Specific Outcomes: PSOs (programme Specific Outcomes) are statements that describe what the graduates of a specific programme should be able to do.

Course Outcomes: COs (Course Outcomes) are statements that describe what students should do at the end of a course.

In addition to this, the appropriate learning taxonomy must be selected. For. Eg. the Bloom's Revised Taxonomy of Anderson and Krathwohl 2001 can be a good model. Incorporating this to the outcome statements of course level can be done here. It has to be taken at the state level so that there shall not be any dispute and ambiguity in the selection of appropriate learning taxonomy.

Duration Required: 3 months

2. Comprehensive Handbook on OBE

Once the decision is taken with regard to the model to be adopted and the learning taxonomy to describe levels of outcomes, it is appropriate to prepare a comprehensive handbook descripting the features and methodology for the adoption of OBE scheme. This will contain sufficient samples and templates for the faculty to refer during the process of curriculum design and faculty recharge programmes. The Kerala State Higher Education in association of Prof. N.J. Rao has prepared a handbook for OBE and is being circulated to the state universities and colleges for reference purposes. Such a handbook shall contain the relevant aspects of the CBCS and credit structure also.

Duration Required: 3 months

3. Identify the current status of OBE

In this stage, it is better to assess the current status of OBE implemented in our institutions. There are a number of institutions and a few universities have already started doing OBE designing for their curriculum although it is limited up to the level of preparing the syllabus. It needs to be evaluated to ensure whether the prepared curriculum ensures the quality aspect and also how they can be translated to the actual implementation in the assessment mechanism. It can be done at their institution level taking the service of experts in the field. The structure and design shall be uniformly adopted by the institutions concerned. The best designed curriculum can be taken as a sample/template for the designing purpose.

Duration Required: 3 months

4. Training to the faculty

The most important stage of the implementation process is to provide adequate training to the entire faculty of our institutions. This shall be done along with providing training to the BoS members of universities and autonomous institutions. The training must be a very intensive *hands-on- workshop model* for at least a continuous period of 3 days. It also requires a team of experts or master trainers for resource persons. There are a number of teaching faculty in our institutions who have already attained proficiency in OBE. We can create or build a pool of such resource persons for this purpose.

This training must be done by inviting experts from outside of the state and also ensuring high quality like Prof. N.J. Rao, who has already made significant contributions in this field. The model proposed by Prof. Rao has been accepted in NAAC, NBA and UGC and AICTE as appropriate one.

Duration Required: 1 year

5. Software Support

For effective and speedy implementation, software support with sufficient backend mechanisms is essential. The software algorithm for OBE components are considerably simple and basic. Hence it may not be advisable to stick to a single software. Faculty from computer science or applications of our institutions can lead the role in developing a software. The student community can also contribute in this. Since it requires the basic computation mathematics, open source software is the ideal fit for this purpose. Each university or institutions can develop the software once a decision on the model to be implemented is, taken.

It is also advisable that, the OBE can be linked with the MOODLE-LMS opensource package presently operated in our institutions. If an ERP solution or Academic Management System is developed, it can be made as part of it also.

Duration Required: 6 months

6. Curriculum Design at University Level

Now the actual part of curriculum design process starts. Universities and autonomous institutions can design their curriculum in OBE framework. The main stages of curriculum design in OBE structure are given in the following part.

- Write the context of Indian Undergraduate General programmes
- Write the Department's Vision and Mission, offering the programme aligned with the Institute's Vision and Mission.
- Write programme Outcomes and programme Specific Outcomes of the programme.

- State the distribution of Credits.
- Identify the courses and their Course Outcomes to meet the stated programme Outcomes and programme Specific Outcomes.
- Define the assessment process.
- Write the course outcomes of all elective courses and outcomes of all common co-curricular and extra-curricular activities

Duration Required: 6 months

7. Preparation of Assessment Tools

Question bank and pool is a vast repository of assessment items to be prepared in connection with the implementation OBE. Institutions can make a serious drive to frame questions of different learning levels particularly as per the standard of the learning taxonomy adopted. This will become an important resource for institutions. This can be done collectively using existing faculty and experts from outside. The quality and standards of the questions and other assessment tools must be prepared using appropriate rubrics for the corresponding item. Similarly there shall be effective mechanisms to monitor and ensure the quality of assessment tools designed for this purpose in a time bound manner. It has to ensure that all faculty of every institution participate in this process.

8. Assessment Process and Evaluation

The conduct of examination and other assessment activities as part of internal and end semester examinations can be framed under the OBE pattern. The question bank prepared can be effectively utilised with adequate mechanism for error free conduct of examination. The examination scheme must be accordingly modified by adding the level of learning outcome to be conveyed through the assessment items prepared by the faculty, to the learner student and to the examiners.

A complete alignment of the curriculum, instructional methods in classrooms, learning by students, assessment process and finally to correct the gap in the achievement of attainment levels etc. must be ensured in this process.

Duration Required: 1 year

9. Bridging the Gap of attainment levels

Finally, the attainment of the learning outcome must be detected as whether these outcomes are properly attained using effective computation methods by the faculty with the help of the software developed. The corrective steps shall also be taken for rectifying the gaps and shortfalls in the attainment levels of students if the expectation is not met. Proper feedback mechanism from students, teachers, parents etc must be introduced. For this purpose, evaluation of attainment by students can be checked by outsourcing the same to agencies also.

Duration Required: 3 months

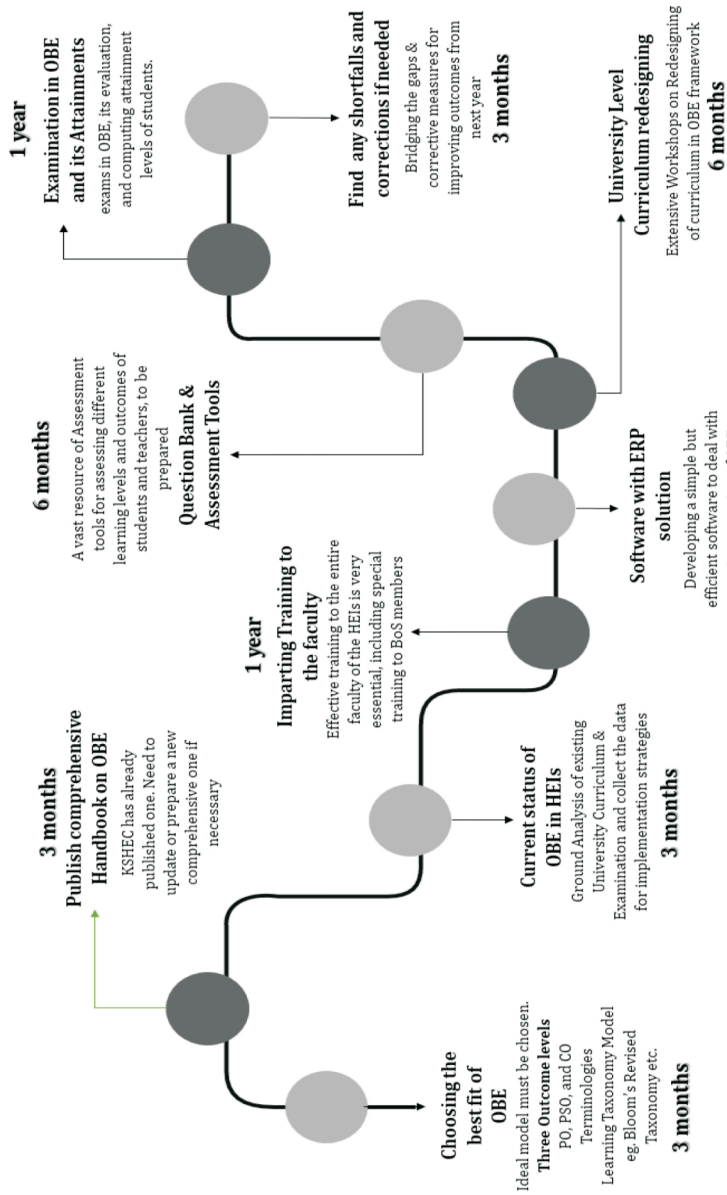


Figure A1-1: OBE implementation Plan

Annexure II

Recommended Time Flow of major Events in Examination

No	Event/Process	Time for Completion	Reference Event
1	Closure of Centralized Admission Process	30 days after	Commencement of Classes
2	Online registration	15 days after	Closure of Admissions
3	Verification of Certificates - confirming eligibility of admitted student	15 days after	Closure of Admissions
4	Uploading of Academic Credentials of the Student	30 days after	Online Registration
5	Issue of USID	30 days after	Verification of Certificates
6	Application for Examination	–	Issue of USID
7	Uploading of Internal Assessment Grades/Marks	10 Days before	Commencement of Examinations
8	Generation of Hall Tickets & Nominal Roll	3 Days before	Commencement of Examinations
9	Automated Question Paper Generation and Transmission	90 minutes before	Scheduled time of Examination on each day of Examination

10	Masking of identity of Answer Script with appropriate technology		
11	Mapping Masking Data with Register Number		
12	Completing Transit of Answer Scripts to Centralised Valuation Camp	5 days after	Completion of Examinations
13	Preliminary preparation at the CV camp	2 days after	Receipt of Answer Scripts at the CV Camp
14	Valuation (Duration of Camp - 5 days)	15 days after	Completion of Examinations
15	Uploading of marks or grade by the additional examiner	–	On the day of Valuation
16	Approval of marks or grade by the Chief Examiner	-	On the day of Valuation
17	Verification and Approval of marks / grade by the Chairman	2 days after	Completion of Valuation
18	Preparation of Statistics and Award of Moderation / Grace Mark / grade etc	5 days after	Verification and Approval by the Chairman
19	Unforeseen Delay (Maximum 5 days)	5 days after	Award of Moderation / Grace Mark / grade etc.
20	Declaration of Results	30 days after	Completion of Examination

21	Dispatch of Answer Scripts back to the University	5 days after	Completion of Valuation
22	Closure of Valuation Camp	2 days after	Dispatch of Answer Scripts back to the University
23	Application for scanned copy of the answer script	5 days after	Declaration of Results
24	Sending Answer Scripts Online to applicant	Within 3 days	Of receipt of Application
25	Application for Revaluation	5 days after	Receiving Answer Scripts Online
26	Submitting Scanned Copy of Answer Script to Examiner	3 days after	Application for Revaluation
27	Revaluation of Answer Scripts	5 days after	Receiving Scanned Copy of Answer Script by Examiner
28	Uploading Marks / Grade by the Examiner	5 days after	Receiving Scanned Copy of Answer Script by Examiner
29	Declaration of Results of Revaluation	15 days after	Last date for Application for Revaluation
30	Issue of Marklist / Grade Card / Provisional Certificate	15 days after	Publication of Results
31	Award of Degree and issue of Degree Certificates	30 days after	Receipt of Valid Application

Annexure - III

University Resource Planning (URP) System

1. Overview

The e-Governance systems in the universities need to be backed by innovation and application of technology to constitute an integrated platform for enabling the entire functioning of the University. In order to ensure its effective function the proposed system has to be custom built, integrated, intelligent and owned by the University. Majority of the Universities in the state of Kerala are functioning in conventional mode and the betterment of services can be achieved only by establishing a system that ensures the speed of service delivery, ease of use, transparency and best use of technology. The solution was envisioned with core characteristics like data integration and consistency, scalability and end to end digital data. Building a proper e-governance system that fulfils the effective management of the universities, a University Resource Planning (URP) system is essential. The URP is an Enterprise Resource Planning System (ERP) that adopts Business process reengineering (BPR) which is the practice of rethinking and redesigning the way work is done to better support an organisation's mission and reduce costs. Thus University Resource Planning System (URP) manages and integrates the University's academic and administrative operations, planning, financials and reporting.

Some of the major benefits of URP include

- Improved and effective services to all stakeholders, including students, faculty and management.
- Transparency and accountability in University functions and decision making.

- Rule based information for error free and consistent decisions.
- Enabling e-cash transactions, online examination system and student life cycle management.
- End to end service maturity resulting in capture and storage of digital data, which could be used for future decision making and policy formations.

2. Existing Systems

Presently, Universities do not employ a comprehensive e-governance system. Many of the functions are partially computerized. This results in data redundancy, process delay and communication gaps. Universities use software solutions for isolated purposes which lacks data integration and thereby inhibits data driven decision making. These inconsistencies can be eliminated by effective implementation of an integrated University Resource Planning System.

3. Components of the System

The URP System could have various components, a few of them are illustrated as follows

Administration Module

The administration module would capture the operations related to all aspects of manpower establishment, asset management both within and outside the campus, inventory of various purchases, hostel management, transportation and legal processes.

Academic Module

This module links the operations connected with academic programmes, curriculum, course mappings, student details, faculty details etc. The academic audit process to ensure quality control of academic processes in affiliated institutions also need to be incorporated.

Examination Module

This module includes a Question Bank System, Online transmission of the question paper, online mark / grade entry followed by a result processing module which ensures faster and efficient declaration of results. Onscreen revaluation of answer scripts and faster disposals of malpractice reported cases are also included.

Finance Module

All finance transactions of the University including budgeting is included in this module.

Research Module

Online updation of research scholar information, Online selection and approval of the research centre and supervisor, Online updation of DC meetings, research progress monitoring and thesis evaluation etc

Affiliation Module

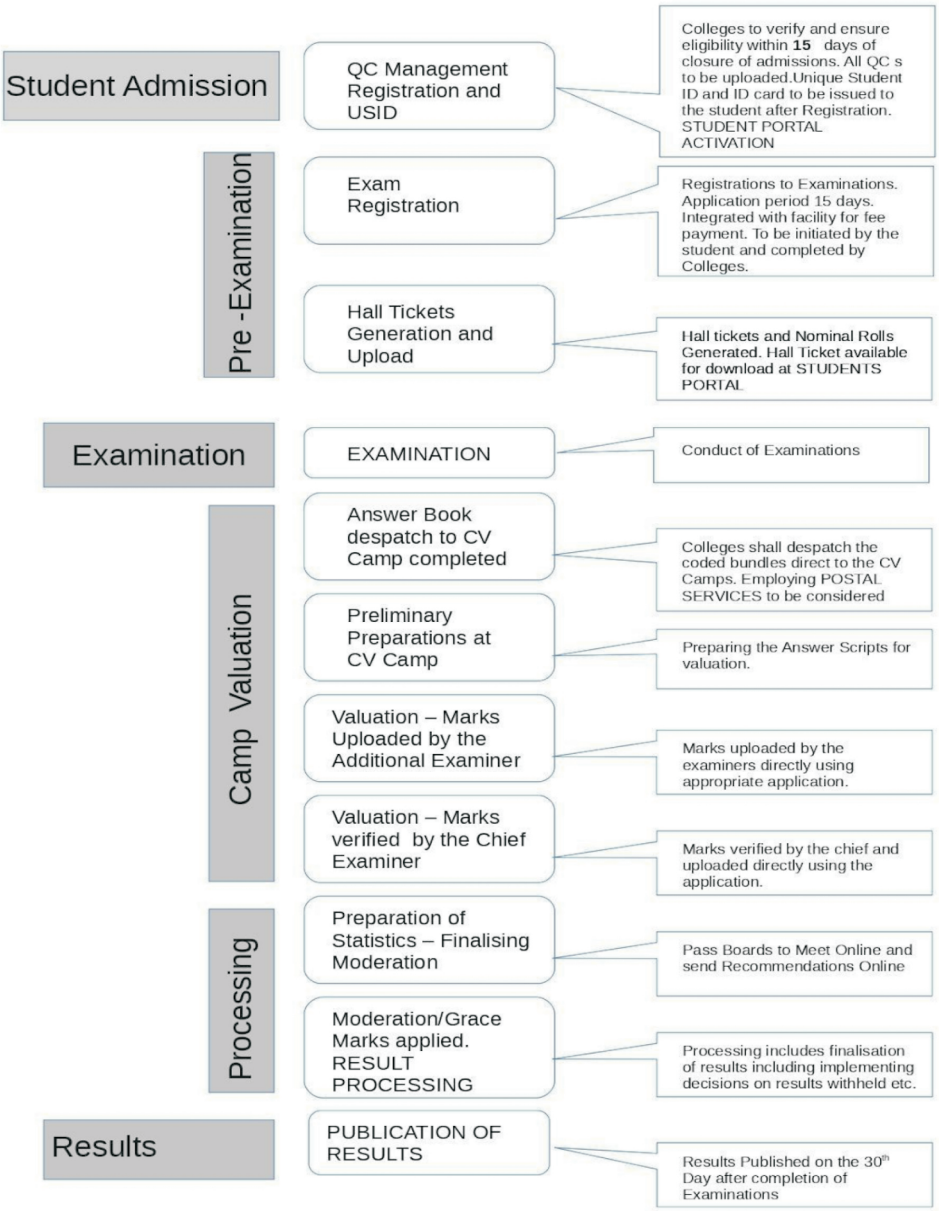
Affiliation module automates the full affiliation process of colleges with the University, which includes all the processes starting with the submission of application to the grant of affiliation.

Planning and Development

The components related to the evolving newer programmes, schemes, infrastructural additions and monitoring of the various developmental initiatives of the Universities are to be reflected in this component.

4. Examination Process Flow

It is expected that all the Universities follow a general process flow after complete reengineering of the present procedures. Design and development of curriculum is the major aspect where there are considerable differences among universities. Therefore responsibility of development/ customisation of the curriculum module rests with the University concerned. The commission recommends the following process flow for developing an effective student life cycle management system as part of the URP.


Student Admission
QC Management Registration and USID
Colleges to verify and ensure eligibility within 15 days of closure of admissions. All QC s to be uploaded.Unique Student ID and ID card to be issued to the student after Registration. STUDENT PORTAL ACTIVATION
Pre -Examination
Exam Registration
Registrations to Examinations. Application period 15 days. Integrated with facility for fee payment. To be initiated by the student and completed by Colleges.
Hall Tickets Generation and Upload
Hall tickets and Nominal Rolls Generated. Hall Ticket available for download at STUDENTS PORTAL
Examination
EXAMINATION
Conduct of Examinations
Camp Valuation
Answer Book despatch to CV Camp completed
Colleges shall despatch the coded bundles direct to the CV Camps. Employing POSTAL SERVICES to be considered
Preliminary Preparations at CV Camp
Preparing the Answer Scripts for valuation.
Valuation – Marks Uploaded by the Additional Examiner
Marks uploaded by the examiners directly using appropriate application.
Valuation – Marks verified by the Chief Examiner
Marks verified by the chief and uploaded directly using the application.
Processing
Preparation of Statistics – Finalising Moderation
Pass Boards to Meet Online and send Recommendations Online
Moderation/Grace Marks applied. RESULT PROCESSING
Processing includes finalisation of results including implementing decisions on results withheld etc.
Results
PUBLICATION OF RESULTS
Results Published on the 30th Day after completion of Examinations

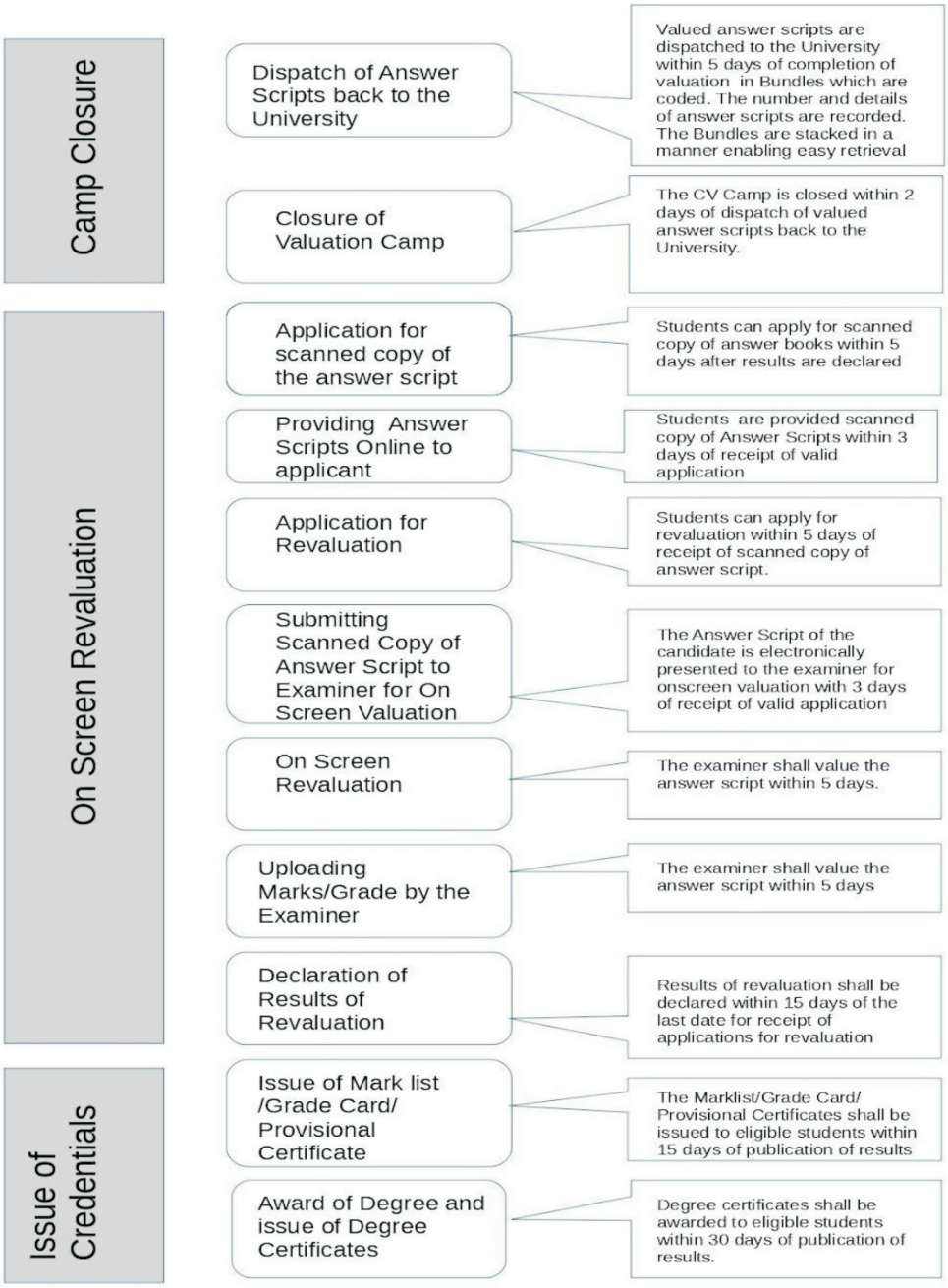


Figure A2-1 Processes in the Examination System

5. URP Implementation Strategy

5.1 Implementation Team

A high power monitoring committee to oversee the developmental activities for the timely execution must be framed. The monitoring committee would assist the state government in identifying a competent Software Developing Agency for developing the URP. A Technical committee shall be constituted for interacting with the agency developing and integrating the system. Directors of the e-Governance centres of all the Universities shall be members of the committee. The Technical committee will interact with the Software Developing Agency and the e-Governance team of Universities to determine the extent of automation, new requirements and will formulate the requirements for development. The development of the software shall be undertaken by the identified agency with close collaboration with the e-Governance team. Every University should have a full fledged e-Governance Centre, with qualified personnel on regular appointment, who shall be responsible for implementing the URP.

The Technical Committee must review the progress of sanctioned work and implementation plan regularly. It is also proposed that the e-Governance Team under the Technical Committee shall deal with technical aspects of the URP projects of the Universities. The high power monitoring committee shall supervise the development and implementation of the University Resource Planning System. The success of the implementation of the URP depends on identifying a competent agency and the establishment of resourceful e-Governance Centres in the Universities and their coordinated efforts.

5.2 Software Development Agency (SDA)

Major modules like Administration, Finance and Planning that are common to all universities can be considered as the core of the URP system, which can be customized to the needs of each University. Common modules can be developed through an identified Software Development Agency (SDA) selected through the standard selection procedures.

The SDA Team shall interact with the e Governance Centre of the University which shall provide the general requirement of the University. There shall be frequent meetings with all the sections concerned to review the progress of the project.

The scope of the Services to be offered by the SDA for University during project implementation phases include, but not limited to the following:

- Project Planning and Management
- System study and Design
- Development, Customization and Configuration of UAS
- Deployment and Commissioning of Software solution in University
- Data Centre Support
- Data Migration
- Training & Handholding support
- Support for 3rd party acceptance testing, audit and certification if needed.

In implementing the above services, the SDA shall strictly adhere to the standards set by the University e Governance Team.

5.3 Support to User Acceptance Testing, Audit and Certification

The software developed/customized shall be audited by the University from a security & controls perspective. Such an audit shall also include the IT infrastructure and network deployed for the system.
Following are the broad activities to be performed by the University as part of Security Review. The security review shall subject the system for the following activities:

a) Audit of Network, Server and Application security mechanisms
b) Assessment of authentication mechanism provided in the application /components/ modules
c) Assessment of data encryption mechanisms implemented for the solution
d) Assessment of data access privileges, retention periods and archival mechanisms
e) Server and Application security features incorporated etc.

6. IT Infrastructure

It is assumed that all universities have basic infrastructure like computers, networking and accessories.

6.1 Data centres

All data in the University are important but located in one place. Relocation or distribution of each University's data is important because data loss will happen due to various reasons. This is the motivation of the data centers at different locations. University data like examination results, staff details,

financial details etc., must be kept at more than one location (at least in one more remote location). If we have a good backbone connection between all universities, data can be relocated to each other, ensuring data security and data sharing.

Every University should have access to a Data Center that implements the latest technology standards.

6.2 University e-Governance Team

Every University shall have a full fledged e-Governance team, with qualified personnel on regular appointment, who shall be responsible for implementing the URP. The e-Governance team shall be headed by Director-IT in the hierarchy given in Figure A2-2. It is recommended that personnel shall be deployed as per the following table.

Designation	Recommended nature of Appointment	Number of personnel
Director	Regular	1
Project Officer	Regular	1
System Administrator	Regular	1
System Analyst	Regular	1
Database Architect	Regular	1
Technicians	Contract	(as per requirement)
programmers/Developers	Contract	(as per requirement)

Primary responsibilities of this team include organizing user acceptance testing, verification, software audit, implementation and training. Each University should ensure that the team should be available for the project.

The following procedure can be adapted to further development from the university e-Governance team.

1) Accepted software modules can be adapted and integrated with the proposed URP system.

2) University e-Governance Center Team can prepare draft Software Requirement Specification (SRS) and Functional Requirement Specification (FRS) for their new requirements that the State e-Governance Technical Team can verify before the development. This is required for the integration purpose of the URP system.

3) Common standards can be adopted in the design of the database and software code design for future integration.

4) Unique identification code has to be generated for staff and students in the developed software for data sharing.

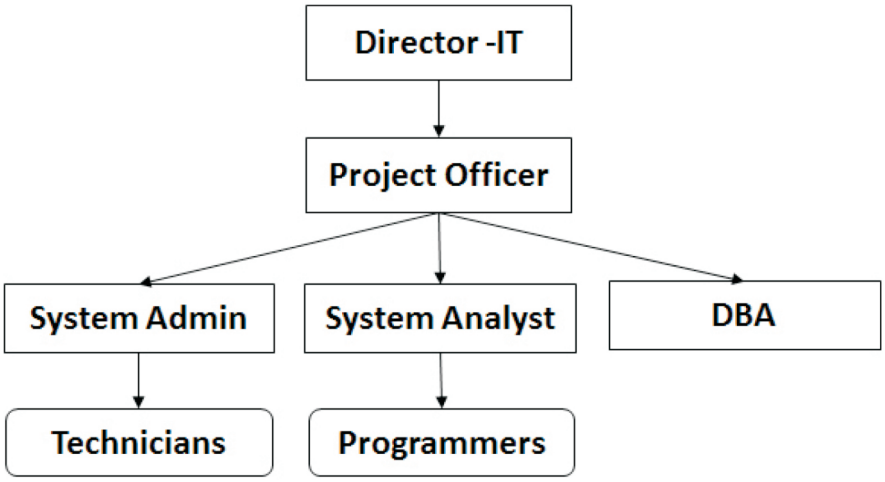


Figure A2-2. Structure of University e-Governance Team

Conclusion

All the Universities in Kerala face an acute shortage of IT workforce. Universities are facing difficulties in developing and maintaining new and existing software due to insufficient expertise. We can overcome this by enabling IT expertise through effective implementation of the University Resource Planning System. These initiatives would transform our Universities to perform on par with global standards in the expanding and evolving digital era.