



CHAPTER V

INFRASTRUCTURE

5

INFRASTRUCTURE

5.1. Non-availability of Infrastructure as per norms

During audit, the following instances were noticed where infrastructure as per norms were not available.

5.1.1. Infrastructure facilities in University Institutes of Technology and University Institutes of Management

- According to UGC (Affiliation of Colleges by Universities) Regulations, 2009, undisputed ownership and possession of land measuring not less than two acres if a college is located in metropolitan city and five acres if it is located in other areas, besides building for carrying out administrative and other activities are required for colleges for affiliation to Universities.

The University runs 34 University Institutes of Technology (UITs) in self-financing mode. These UITs offer Undergraduate courses such as BBA, B.Com, B.Sc. in Computer Science and some UITs offered Postgraduate Courses also. On verification it was seen that only 19 UITs⁴⁵ were functioning in their own buildings, six UITs⁴⁶ were functioning in rented buildings, five UITs⁴⁷ in buildings of local self-governments, three UITs⁴⁸ in school buildings and one UIT⁴⁹ in a building owned by Education Department.

When even the colleges have to meet minimum standards such as availability of land of two acres in metropolitan cities and five acres in other areas, building and infrastructure as a precondition for affiliation to the University, it is only reasonable that UITs functioning under the aegis of the University of Kerala also meet minimum standards of infrastructure.

Test-check of nine out of 34 UITs revealed that there were shortage of rooms for rest rooms, seminar halls, canteen halls, library books etc., as detailed in **Appendix 5.1**.

UITs functioning in the rented buildings had limited infrastructure facilities and shortage of space which was a hindrance to the smooth functioning. Though the matter has been informed by the Principals of UITs to the University, no steps have been taken to address the issue. In

⁴⁵ UIT Thiruvananthapuram, UIT Pirappancode, UIT Vakkom, UIT Vellarada, UIT Kanjiramkulam, UIT Veli, UIT Tholicode, UIT Malayinkeezhu, UIT Kattayikonam, UIT Kollam, UIT Pathanapuram, UIT Yeroor, UIT Kottarakkara, UIT Thenmala, UIT Mukhathala, UIT Ittiva, UIT Paravur, UIT Regional Centre Karuvatta and UIT Regional Centre Muthukulam

⁴⁶ UIT Neyyattinkara, UIT Kallara, UIT Azhoor, UIT Pallickal, UIT Adoor and UIT Mannady

⁴⁷ UIT Sasthamcotta (Rented), UIT Alappuzha, UIT Mannancherry, UIT Chengannur and UIT Charamangalam

⁴⁸ UIT Bharanickavu, UIT Aroor and UIT Pathiyoor

⁴⁹ UIT Mannar

the case of UIT, Veli it was noticed that the students admitted during the academic year 2018-19 discontinued their courses within one-week due to lack of sufficient infrastructure facilities. No student was admitted during 2019-20. Adequate infrastructure is a pre-requisite for providing quality education.

- As per AICTE Approval Process Handbook 2019-20, the institutions conducting management courses should follow the norms for land, built-up requirements, computer, software, internet, printers and laboratory equipment for the technical institutions. Norms for essential and desirable requirements of the Technical Institutions are as provided in the Appendix 4, 5 and 6 of Approval Process Handbook. Test-check of two (out of seven) UIMs⁵⁰ by Audit for availability of mandated infrastructure revealed shortage of land, tutorial rooms, strong rooms for storing question/ answer papers, computers etc., as detailed in **Appendix 5.2**.

Functioning of UIMs without mandatory facilities will adversely affect the quality of education and thereby affect the future of the students studying in these institutions. Given the fact that UIMs are self-financing institutions and are running at a profit, all steps must be taken to improve the facilities in these institutions so that more students are encouraged to take admission in these institutions.

Government replied (13 December 2021) that steps had been initiated to acquire own buildings and develop the infrastructure facilities for UITs and UIMs. A provision of ₹ one crore was allocated in the budget speech 2021-22 for providing infrastructure facilities to self-financing institutions directly run by the University.

5.1.2. Non-implementation of Smart card system in the Kerala University Library

The Government of Kerala accorded (August 2013) administrative sanction for an amount of ₹50 lakh for the implementation of the project “Smart Card System in the Kerala University Library”. The project envisaged saving of time, cost, labour besides easy inventory control and stock verification, reducing of crowding at circulation tables etc. As per the agreement, the project has four phases i.e., implementation of Library management software (KOHA), supply and tagging of Radio Frequency Identification (RFID) tags and issue of membership cards, installation of staff station and RFID integration with KOHA.

The work was entrusted (March 2017) to Kerala State Electronics Development Corporation Limited (Keltron) for ₹49.70 lakh. As per the agreement, Keltron was to supply, install and commission the system in all respects in the University library within 120 working days of the work order (14 March 2017).

⁵⁰ University Institutes of Management at Alappuzha and Adoor

Audit observed that the system can be implemented only after completion of tagging and supply of smart cards to members. Out of 2,80,000 books identified for RFID tagging, 48,696 books remain to be RFID tagged (September 2021). Keltron could complete the work of installation of drop box, kiosk and staff station only by September 2021. Audit noticed that an amount of ₹37.47 lakh was paid to Keltron.

Thus, even though an amount of ₹50 lakh was allocated (August 2013) for the implementation of Smart Card System, the work was entrusted only after three and a half years (March 2017). It was also noticed that the work which had to be completed and commissioned in July 2017 has not been completed even after four years (August 2021). Thus, the benefits of smart card system are yet to materialise.

Government replied (13 December 2021) that steps were being initiated for inviting quotations for the supply of smart cards.

As the supply of smart cards to users is still pending, the project remains incomplete even after eight years of obtaining Administrative Sanction.

5.2. Health care facility

According to Chapter XI of Kerala University First Ordinances, 1978, every student shall present a medical inspection report or health card⁵¹ from the school or college he last attended. Every student shall be required to undergo medical inspection on admission to a course of study under the University and in every alternate year, thereafter. Audit observed that University collects fees from every student as “Medical Inspection Fee” and during 2016-2021 it ranged from ₹10 to ₹50 and the total amount collected by the University was ₹16.30 lakh⁵². However, Audit observed that funds so collected were being credited to the own account of the University and were not being utilised for medical inspection of students. Audit observed that during the period covered in audit, no medical inspection had been conducted for the students.

University operates two University Health Centres (UHC) at Karyavattom campus and Senate Hall (SH) Campus, Palayam, in Thiruvananthapuram to provide emergency care for staff and students of University. Out of two Health Centres, the service of the doctor was available only at UHC at Karyavattom. The service of the doctors was available at UHC at SH Campus, Palayam till 31 March 2017 and thereafter service of one nurse was available. After the retirement of the nurse, the centre is non-functional since March 2020. The UHC at Karyavattom⁵³ was functioning in a dilapidated building with leaking roof. The X-ray and ECG machines are dysfunctional since 2005 and 2019

⁵¹ It will have complete health records of students including immunisation records, biennial examinations, health issues since birth, diseases and issues related to their development along with a list of current disorders among students and their initial diagnostics.

⁵² 2016-17 - ₹2.25 lakh, 2017-18 - ₹4.30 lakh, 2018-19 - ₹1.79 lakh, 2019-20 - ₹4.16 lakh and 2020-21 - ₹3.80 lakh

⁵³ Employee details - Resident Medical Officer, Nurse, Medical Attender, Radiographer, Lab Technician, Clinical Psychologist (one each)

respectively. There were no wheelchairs or stretchers or oxygen cylinders in the UHC. Used syringes were accumulated in the UHC.



*Figure 5.1: Dilapidated building with leaking roof and used syringes accumulated at the University Health Centre, Karyavattom.
Photograph taken by Audit party on 06.09.2021.*

University replied that no such medical certificate/ health card as envisaged in the Kerala University First Ordinances, 1978 is collected from students. Government replied (13 December 2021) that the formalities for the purchase of ECG machine, Centrifuge⁵⁴ and a semi auto-analyser⁵⁵ were under process. Proposals for purchase of trolley and oxygen cylinder had been submitted to the authorities concerned. The process of providing health card to all students admitted to departments of the University was going on. The appointment of Honorary Director at University Health Centre, Palayam was under consideration.

Non-conducting of medical inspection of students despite collecting fee for that purpose was not in order. The two UHCs in Thiruvananthapuram which could

⁵⁴ Equipment used to separate blood cells from serum/ plasma

⁵⁵ Equipment used to test blood, serum, plasma and urine samples

provide emergency medical treatment to the students of the University were either non-functional or in very dilapidated condition.

5.2.1. Improper implementation of Medical cum Accidental Insurance Policy for Students (MAIPS)

The Syndicate decided (12 May 2017) to introduce a new insurance scheme 'Medical cum Accidental Insurance Policy for Students' (MAIPS) from 2017-18 through a public sector company M/s. New India Assurance Co. Ltd replacing Student Group Personal Accident Insurance Scheme (SGPAIS) already being implemented by the University⁵⁶. The company offered accidental death coverage for ₹ three lakh, medical coverage upto ₹20,000 for illness and ₹50,000 for accidents at the rate of ₹240 per student per year. An amount of ₹86.79 lakh collected during 2017-18 from 36,163 students was released⁵⁷ to the insurance company without executing legal documents/MoU. Later, the Syndicate decided (31 August 2018) to discontinue MAIPS and continue with SGPAIS. Subsequently, in its meeting held on 16 November 2018, the Syndicate resolved to entrust the legal advisor to initiate legal steps to recover the amount paid to the insurance company and to issue show-cause notice to the persons responsible for handing over the premium amount to the insurance company without MoU. Even though a case was filed (August 2019) before the Kerala State Consumer Dispute Redressal Commission, Thiruvananthapuram against the insurance company, no action has been taken against the official responsible.

Government replied (13 December 2021) that it was advised not to initiate any action against the officials responsible till the final verdict, as any action against the staff of the University in this regard will adversely affect the claim of the University in the Court.

The handing over of a substantial amount to the insurer by a University official without any agreement/MoU points to inadequacy of control mechanism in the University.

5.3. Facilities for differently abled students

The Persons with Disabilities Act, 1995 envisages that differently abled persons should have access to education at all levels. The Report on 'Inclusive and Qualitative Expansion in Higher Education' issued under 12th Five-year Plan by UGC envisages improvement in basic infrastructure facilities to enable differently abled students to access all institutions of higher education. Further, during accreditation of an institution, NAAC considers availability of physical facilities such as lifts, ramps/ rails, assistive technologies and facilities, disabled

⁵⁶ To cover the medical expenses and deaths due to accidents to regular students, University of Kerala implemented (25 October 2008) from the academic year 2008-09 with a premium of ₹25 per student per year.

⁵⁷ ₹75,62,160 on 28 September 2017, ₹1,50,240 on 29 December 2017 and ₹9,66,720 on 12 January 2018

friendly washrooms, scribes for examinations, skill development etc., in an institution.

Out of the 14 departments and 15 institutions test-checked ramps were not available in four departments and nine institutions; lifts were not available in 11 departments and six institutions functioning in multi-storeyed buildings; braille software was not available in any of the institutions or departments; disabled friendly toilets were not available in six departments and 11 institutions. Details are given in **Appendix 5.3**.

Differently abled friendly facilities are essential for making educational institutions more inclusive. Lack of facilities in these institutions would be an impediment in accessing higher education for students with disabilities.

Government replied (13 December 2021) that the University had already adopted barrier free access to the University building and all the new projects were planned with barrier free environment for persons with disabilities such as lift/ ramp, separate toilet for differently abled persons. Braille software was made available in the Kerala University Library, from 29 October 2021 onwards.

The reply is not tenable as out of 29 institutions test-checked, most of them did not have differently abled friendly facilities as detailed in the Appendix.

5.3.1. Non-implementation of Library services for the Differently Abled in the University Library

Government of Kerala accorded Administrative Sanction (June 2015) for an amount of ₹50 lakh for the project 'Implementation of Library Services for Differently Abled in the Kerala University Library'⁵⁸.

For setting up of 'Resource Centre for Visually Challenged Users' in University Library, a space in the ground floor adjacent to University Librarian's room with some alterations and maintenance was identified. An estimate was prepared by the University Engineer (October 2018) for civil and electrical works of the resource centre for ₹4.18 lakh and construction of lift in the stack room for ₹25 lakh. University Engineer reported in the Monitoring Committee (11 March 2019) that the setting up of resource centre in the library and construction of lift in stack room would be completed within three months. However, it was noticed that only the civil and electrical works for ₹2.05 lakh were completed in March 2020 and November 2019 respectively. Installation of lift had not commenced and computers were not purchased (September 2021). Thus, the library services for the differently abled envisaged in 2015 is yet to be implemented (September 2021).

⁵⁸ The project involved setting up of Resource Centre for Visually Challenged Users, construction of lift, purchase and installation of computer/ hardware components and installing special equipment and software for visually challenged users.

In order to ensure the availability of a more inclusive and accessible environment and equal opportunities to quality education for the differently abled students, facilities required for them need to be arranged on priority basis.

Government replied (13 December 2021) that steps had been taken for the installation of lift. Resource centre for visually challenged had been inaugurated recently by the Hon'ble Minister of Higher Education and University had thus stepped into the process.

The reply is not tenable as the project remains incomplete as the important component of project "installation of lift" which would have made access to facilities easier for the differently abled have not been completed. The reply is silent about the supply of computers and the integration of hardware and software.

5.4. Inadequacies in University software

Software developed in-house by Kerala University Computer Centre (KUCC) is being used since 2001. Audit examined the adequacy of selected software being utilised by the University. The findings of Audit are detailed below.

5.4.1. Inadequate documentation for in-house developed software

The University informed Audit that out of 52⁵⁹ in-house software applications, only three had User Requirement Specifications (URS)/ System Design Documentation (SDD). Audit further observed that extensive software modification (at least 15-20 changes per month) is carried out in the software managed at Examination IT Cell and KUCC, based on change requests or to rectify deficiencies in the applications. These software modifications are not certified except for the preliminary testing done by the developer and a user acceptance test, which, however, is not documented. Absence of URS/SDD and non-documentation of the software modifications is a matter of serious concern in a University catering to educational needs of thousands of students.

Government acknowledged (December 2021) the audit observation stating that lack of adequate number of staff and mounting pressure to deliver software within the stipulated timeframe resulted in the KUCC not being able to adhere to the software development life cycle principles.

The impact of not adhering to the software development life cycle principles is also brought out in paragraph 5.4.2.

5.4.2. Direct access to database

University intimated (16 January 2021) that frontend interfaces were available in software for normal corrections related to mark entry, changes after result

⁵⁹ Out of the 59 Software applications (including websites and portals) developed in-house by the Computer Centre of the University, 52 software applications are currently in use. Main software applications are Cash Counter Software, UG Admissions Software, PG Admissions Software, Online Payment Portal, Online Examination Portal for regular courses, Online Examination Software for B.Ed Tabulation software for CBCS 2013 courses, Tabulation software for B.Arch course, etc.

publication etc. This was very essential because the security/ validation measures are installed in the frontend and changes made here would create a log.

The academic sections in the University issues orders for making corrections in the database and those corrections which cannot be done through the various interfaces were done directly through backend (through database) and such changes do not create a log. The KUCC had not kept any records/ documents regarding these specific orders. Access to backend can result in unauthorised change in marks awarded to candidates and non-encryption⁶⁰ of sensitive data such as marks further aggravates the risk. With no maintenance of logs, this poses a serious control deficiency as the (un)authorised changes effected from backend cannot be identified and errors managed in time. It was also informed to Audit that in the existing scenario, there was no means to trace the user ID from which update was made directly in the database. This makes the system inherently amenable to misuse.

Audit noticed that the necessity to change data through backend has arisen due to lack of documentation of user level requirements at the planning stage. Due to the lack of development of SRS/URS, the requirements of the users were not accurately brought out and the software was not prepared in accordance with the functional requirements.

Once software is made functional, the access of live data should be entrusted to the functional Departments in accordance with the Departmental hierarchy and functional requirements. The functional Departments should have the responsibility and authority to change the data. However, Audit noticed that all developers concerned had full access to the database.

In reply, Government stated (13 December 2021) that access to live database had been given to programmers as there were no separate teams for managing the release and post release support and it had been decided to make it a practice to insert logs wherever a correction was directly made in the database so that it could be traced at a later stage. It was also stated that only those corrections that could not be managed through the available interfaces were done directly through the database and this included changes in elective paper after examination registration, changes in subject type, continuous assessment mark details, etc. and that corrections in marks were always done through interface alone.

The reply is not tenable as direct access to the database through the backend in respect of areas critical to students' performance such as continuous assessment mark details is highly risk prone and makes the data vulnerable to unauthorised modifications.

⁶⁰ Data encryption is a method of protecting data confidentiality by converting it to encoded information. The purpose of data encryption is to protect confidentiality of digital data as it is stored on computer systems and transmitted using the internet or other computer networks.

5.4.3. Inadequacies in audit trail

Audit trail is the evidence that demonstrates how a specific transaction was initiated, processed, and summarised. Log files provide the system administrators and management with a form of accountability. Unauthorised changes can be detected with audit trail. Logs should be periodically reviewed by the Management to detect unauthorised changes.

Audit noticed that, the changes in software were carried out by the programmers and the records/ statistics, test results regarding these changes were not maintained by the computer centre. Separate testing team was not constituted, and only user level acceptance was taken. Users were not completely aware of the system technicalities and effects at the backend. As system processes identical transactions consistently, any misstatements arising from erroneous computer programming will occur consistently in similar transactions and will affect large number of records.

Government stated (December 2021) that majority of the examination related software already in use were based on the old systems developed during 2001 where logging feature was absent in many interfaces which were recently included. It was also stated that basic level of approval mechanism in software for activities like grace mark entry, paper cancellation, End Semester Assessment mark edit after result publication was being incorporated. Development activities are carried out in separate database alone and not in live database. It was also stated that only those corrections which could not be managed through interfaces in software were done directly through database since all these types of requests happen at high priority often at the time of result publication and it has been made a practice to insert logs whenever a correction is done directly through the database for future reference.

The unfettered access the developers have to a critical database and the absence of details even in the log files are issues of serious concern. The Tabulation software needs to be replaced by a module that is more robust.

5.4.4. Security audit of websites and software

According to Government of Kerala order (G.O (Ms) No. 8/2019/ITD dated 22 April 2019), any e-Governance application to be hosted at the State Data Centre or elsewhere shall be security audited before launching in production and mandates to obtain “Safe to host Certification” from a CERT-In empanelled security auditing agency before opening the application to the public. All websites/ application hosted at the State Data Centre have to go through a complete security audit process before they can be hosted or whenever an alteration/ addition is made to the application. Security audits and penetration testing are required to be performed followed by subsequent hardening aimed to mitigate the vulnerabilities and strengthening the security of the applications and their environment. Periodic application security audits shall be done, at least once every two years.

Websites and Applications are hosted by the University in State Data Centre and University Data centre. It was noticed that out of 59 software/ websites, only one⁶¹ website hosted at State Data Centre was under the process of getting security audited and one⁶² website hosted at University Data Centre had been security audited. The details relating to audit of software/ websites, as per replies provided by the University, is given in **Appendix 5.4**.

Government stated (December 2021) that steps for initiating security auditing were ongoing, Security auditing of Examination Portal was complete and auditing of Kerala University main website was under progress and it had been decided by the Syndicate to entrust CDAC with the responsibility of auditing the CBCSS tabulation software. The process had reached MoU preparation phase.

Audit noticed that main software applications - Cash counter software and Online Payment Portal which deals with remittances and tabulation software had not been security audited.

5.4.5. Deficiencies in Cash Counter Software

Input validation controls have to be strong in order to ensure effective monitoring and security. While remitting the fees through cash counter, name of remitter, purpose of remittance, fee amount, type of receipt (exam/ departmental/ general) are entered in the cash counter software. The candidate code/ registration number of student remitting the fee is not captured at the payment counter. Fee amounts are manually keyed in by the cash counter staff since the remittance amounts are not populated automatically on selection of purpose of remittance. While registering for the examination, payment receipt number and candidate code/ registration number (unique code allotted to each University student) are mandatory fields. The lacunae noticed by Audit in the software are detailed below;

- Since candidate code/ registration number of students are not captured at the cash counter, the system cannot verify whether the candidate quoting a receipt number during online exam registration is the one who had actually paid the fees. Thus, there is a risk of undue benefit being availed by another candidate (who is able to access a payment receipt number of another student) to successfully register for the exam, without making payment.

Government stated (December 2021) that even though the provision to enter candidate code/ registration number in the Cash Counter software was implemented, the same was kept disabled citing possible mistakes which may arise while typing in the 10-digit candidate codes for every examination receipt by the counter staff members. The time available to service a student is only one to three minutes and around 1000 students had to be entertained per day.

⁶¹ Official website of University

⁶² Online examination portal

The reply is not tenable since the University had allowed the risk of mistakes/malpractice by disabling the provision in the software to enter candidate code/registration number. The reasons for disabling the provision due to larger number of students is also not acceptable since the University could have managed larger number of students by opening more counters for receipt of fee.

- Many of the receipt cancellations occurred due to incorrect entry of fee amount⁶³. This happened owing to the non-limiting of the possible data entry values to fee amounts prescribed by the University/ non-implementation of dropdown menu for possible remittances.

Government stated (December 2021) that the master data related to fees prescribed for various remittances had not yet been prepared and shared with the Computer Centre for incorporation in the software.

Preparation and transfer of master data relating to fees to the Computer Centre would have assisted the Universities in reducing incorrect data entry.

- The Section Officer marks the cancellation in the particular receipt form itself and new receipt is issued in lieu of it by the cash counter. The details of new receipt generated in lieu of cancelled receipt are not linked in the database which would have ensured a check on whether new receipt has been issued in lieu of the old receipt. It was noticed that transactions amounting to ₹5.99 crore have been deleted during the period 2016-17 to 2020-21.

Government stated (December 2021) that even though there was a separate column for specifying remarks for the users while cancelling receipts, the column or field in the user interface was mostly kept blank, and was not being updated with appropriate comments by the users concerned.

The reply is not tenable as to eliminate/reduce the risk associated with cancelled receipts, the same needs to be linked with new receipts issued and/or the reason for cancellation of the receipt needs to be incorporated in remarks column.

5.4.6. Periodic Stock Verification of IT Assets

According to the provisions of Rule 158 of Kerala Financial Code, all stores should be verified periodically in the manner prescribed for each Department and at least once a year. Stock including furniture, computer and its peripherals should be verified. The Head of the Office should sign a certificate of check after each verification and submit it to the controlling authority.

It was noticed by Audit that periodic stock verification of IT assets was not conducted during the period 2016-17 to 2020-21.

⁶³ typing error ₹50,000 when the original fee amount was ₹50

Given the fact that IT assets are critical to the functioning of the University, the stock verification should have been carried out periodically.

Government replied (13 December 2021) that University had directed all the sections to forward the details of computers, printers and scanners used in the sections, for consolidating the details for effecting purchase and the sections had been directed to furnish the total number of computers, printers and scanners in their stock.

From the above reply it is evident that the University is still in the process of collecting information regarding the physical IT Assets to consolidate a stock register.

5.5. Deficiencies in execution of works by Engineering Wing of Kerala University

The Engineering Unit of the University of Kerala headed by University Engineer was established with the primary objective of providing infrastructure facilities to the University of Kerala. The deficiencies noticed in execution of works by the engineering wing are given below.

5.5.1. Construction of buildings without permission from local authorities

As per Rule 4 of Kerala Municipality Building Rules, 1999, no person shall construct/ reconstruct/ make addition/ extension/ alteration to any building without first obtaining a separate building permit from the Secretary.

A building permit is a permission or authorisation in writing by the Secretary of the local authority to carry out a work for construction or reconstruction or make alteration or addition or extension of a building. However, if any person fails to procure the permit or to regularise the unlawfully commenced, carried on or completed construction work, the Secretary shall himself cause the building or part thereof to be demolished.

The construction work of the University under plan funds (both central and state funds) are carried out by the University Engineering unit. Audit observed that during the period of audit, construction of 16 buildings (**Appendix 5.5**) were taken up by the University, however the buildings were constructed without obtaining building permits. The University had applied for permits for four buildings, but the same was not issued by the Local Self-Government Institutions. In the absence of building permit, occupancy certificate was not issued.

Government replied (13 December 2021) that University of Kerala buildings constructed, were intended for public purpose. A request was made by the Registrar to the Principal Secretary, Local Self-Government Department for granting exemption to the University from obtaining approval from the Local Bodies for the construction work. Reply was awaited.

The building permits and occupancy certificates are measures to ensure, *inter alia*, the safety of the buildings. Given the large number of users who use the University buildings, non-obtaining of the permits/ certificates is a lapse which needs to be rectified on priority.

5.5.2. Delayed/ incomplete works

Audit noticed that five major infrastructure works involving ₹9.70 crore for which Administrative Sanction was provided during the period 2011 to 2017 remained incomplete due to reasons such as failure of the University to provide unhindered land, delay in revision of estimate, delay in providing drawing by the consultants, non-invoking of risk and cost clause etc. The details of the five works are given in **Appendix 5.6**. In most of these cases, though there was time and cost overrun, the University has not taken any action to fix the responsibility on its officials or the consultants or the contractors concerned.

5.6. Conclusion

Infrastructure in some of the institutions under the control of the University was lacking on several fronts. The University did not adhere to provisions relating to health care facilities. Two health centres associated with the University were not functioning effectively. Inadequate provision was made for differently abled students. Majority of the Software used by the University and websites hosted by the University in State Data Centre and University Data Centre had not been security audited. Physical infrastructure works undertaken by the University remained largely incomplete depriving the students of the facilities of a world class University.

5.7. Recommendations

- **University may ensure that the institutions under its control meet at least a basic set of infrastructure requirements which need to be listed by the University based on prevailing UGC norms etc. Time bound action to eliminate the deficiencies in existing infrastructure should be initiated.**

(Paragraph 5.1.1)

- **University should make all efforts to make higher education more inclusive by creating differently abled friendly infrastructure in all departments and other institutions under its control.**

(Paragraph 5.3)

- **Prerequisites such as acceptance testing by users, external certification, security audit etc., as may be determined in consultation with the Government's IT department need to be**

mandatorily complied with before deploying the same for use in the University.

(Paragraph 5.4)

- Approval for new projects should be given only after ensuring satisfaction of conditions such as availability of encumbrance-free land suitable for taking up the projects.

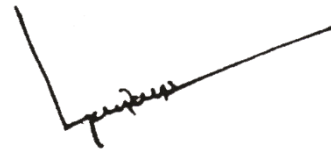
(Paragraph 5.5.2)



(ANIM CHERIAN)
Principal Accountant General
(Audit I), Kerala

Thiruvananthapuram,
The 01 July 2022

Countersigned



(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

New Delhi,
The 04 July 2022