CRITERION 4 – INFRASTRUCTURE AND LEARNING RESOURCES (100)
Key Indicator - 4.1 Physical Facilities (30)

4.1.1. *The institution has adequate facilities for*

Describe the adequacy of facilities for teaching –learning as per the minimum specified requirement by statutory bodies within a maximum of 500 words

a. ***teaching - learning. viz., classrooms, laboratories, computing equipment, etc.***
b. ***ICT enabled facilities such as smart classes, LMS etc***
c. ***Facilities for cultural and sports activities, yoga centre, games (indoor and outdoor) gymnasium, auditorium etc.***

Response:

- The University has enhanced its physical infrastructure as per the norms by AICTE/COA (**using funds received under DDQIP and TEQIP**) based on its requirements in terms of increase in the number of students; number of programmes/courses; expansion of research laboratories for augmenting R & D activities in the University; and others. **It has 102 classrooms/studios, and 102 laboratories.**
- The University also makes space for meeting the crucial requirements of its constituents by construction of new hostels and residential facilities for the students, teachers and staff of the University.
- All Departments of the University are **well equipped with sufficient number of classrooms and laboratories as per statutory guidelines and getting approvals from AICTE/COA every year**.
- All the campuses are **Wi-Fi enabled** and allows teachers, students to access the Internet for **a dynamic teaching-learning process, for projection of videos, other online resources viz., live databases and online journals**.
- All Departments have a dedicated **computer lab/facility** for use by students, and **laboratories** are regularly upgraded and are well equipped with the necessary instrumentation and consumables to allow individual-centric, performance-based learning, involving experimentation by students.
- The University has a refurbished Auditorium that can be used by any Department for organizing lectures, conferences and workshops. The University provides additional funds on request to different Departments for up-gradation and maintenance of teaching facilities.
- The University has **central Library fully digitized and RFID enable** supported by departmental libraries in all constituent colleges.
- Almost all classrooms and seminar halls are enabled with ICT facilities such as LCD, smart board, Wi-Fi/LAN, audio video recording facilities.
- The university has Youtube channel (https://www.youtube.com/c/aktudigitaleducationup) AKTY Digital Education which has 2,29,000 subscribers, 62000 videos and 17,406,063 views. It covers lectures related to wide range of topics covering almost each and every course taught.

- University has a fully air-conditioned **Pt. Atal Bihari Bajpai Multipurpose Hall (Auditorium)** of **76 x 48 meters** with **seating capacity of 2000 persons**. The Auditorium has a **40 x 13 metres** stage, two greenrooms, and a robust PA/ audio-visual presentation system. In addition to that University has smaller **Vishvesharaiya Auditorium of Capacity-400 persons** for smaller gathering.
- The University lays immense stress on the holistic development of its students and

staff. For this, it has invested in the creation of **excellent sports facilities and extensive infrastructure for holding cultural events and other co-curricular activities**. The annual cultural and sport event PRAVAH is organised by university every year in enhance the competitive spirit among AKTU students. It organises Yoga Day event every year. Besides the above, a rich variety of cultural events and annual cultural festivals are organised on an ongoing basis by the colleges and departments of the University.

- The IET campus has **Sport complex of 65498.71 sqmts** for indoor and outdoor sports. Moreover, it has **Auditorium named Pandit Ram Prasad Bismil Sabhagar of area 3632.12 sqmt** for cultural activities.

- FoAP has **seminar halls for cultural activities/yoga and student activity centre for indoor sports**. Student activity centre has the facility of **TT table, chess, carom** and other indoor games. The campus outdoor sport facility too, like **volleyball and badminton court**. Pratidhawani, an annual cultural event organized by students every year and clubbed with Alumni meet. On the occasion of Independence Day, Republic Day, Teachers Day etc students organize cultural activities and competitions. **Hostels have gymnasium facility**.

- CAS has one seminar hall (Room No. 211, 228.81 m^2) for cultural activities, one mini seminar hall (Room No. 215, 172 m^2), one room (Room No. 315, 105.5 m^2) for rehearsal, **1 Yoga Room** (Room No. 415, 172 m^2), **one badminton court (81.75 m^2), 1 room for table Tennis and carom (Room No. 515, 172 m^2) and one auditorium (620 m^2)**. All these rooms are available for the students and can be availed by the students through proper channel.

- UPID campus is facilitated with **Seminar Hall, common rooms for girls and boys, cafeteria, Yoga centre and Gym.** It also has a **badminton court** for students as outdoor sports activity.

- The campus is **environment friendly and barrier free** with immense greenery and serenity for a pleasant stay. **Ramps, lifts, railings, toilets for handicap, etc** installed to make all campuses barrier free.

- IET campus has well-equipped **primary health centre, guest house, separate sports complex, canteen and mess facilities**. The campus is full of greenery and well connected with internal roads.

- The CAS campus is having **hostels for the students (both girls and boys) and flats for the faculties**.

- The UPID campus has **common rooms for both girls and boys**, and **indoor and outdoor sport facilitie**s too. **First aid facilities** are available in college campus.

File Description

Classroom and Lab Details:	View Document
Geotagged Photographs:	View Document
Cultural and Sports facilities with Geotagged photographs	View Document
Lab Details	View Document
Building Plans	View Document

4.1.2. Average percentage of expenditure excluding salary for infrastructure augmentation during the last five years (INR in Lakhs) 4.1.4.1: Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)

Response:

Year	2022-23	2021-22	2020-21	2019-20	2018-19
INR in lakhs	5697.14	21834.8	1508.52	1382.26	921.22

Average percentage: 52.89%

Key Indicator - 4.2 Library as a Learning Resource (20)

4.2.1. Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscription to e-resources and journals are made. The library is optimally used by the faculty and students.
Write description in a maximum of 500 words

Response:
The university has a **central library and 4 department libraries** with approx. 1 lakh books, 60,000 e-books, 1800 journals and 2000 bond thesis

  a. All the libraries are fully computerized with **RFID system** using the **KOHA** open-Source integrated management software that also provides web-based access to the catalogue. The Central Library at AKTU campus is also serving as the Headquarters to the **AKTU Nalanda E- Consortium**. Bar coded Library cards are issued to patrons from the system. Alert emails for Issue, Return, Due Dates are sent by the system automatically. Accessible 24x7, the Central library provides efficient access to the high-quality scholarly content, computer software and other scholarly electronic resources to address information need of students, research scholars, faculty to enhance research productivity of the institutions. Central Library contains more than **10,000+ Reference books & Text books** in print form from publishers of repute containing **2800+ titles** on different subjects. The IET library is equipped with **56900 books and 1745 journals. FOAP Library** contains more than 23000 books and 2000 e-books, and UPID library contains 1740 text books, 259 reference books and 19200 e-books.
  b. The **library web catalogue (OPAC)** can also be accessed from all other PCs in the campus intranet. **19,000+ E-books** Reference Books, Text Books from the world-Renowned Publishers (McGraw Hill, Science Direct, Pearson Education, BSP Books Pvt. Ltd, Taylor & Francis, Springer Nature, Cengage Learning, Cambridge University Press, UK) are available with perpetual licences through Nalanda E-Consortium, AKTU. Online journal subscription with **4100+ e-journal** access of Elsevier Science Direct, Springer, John Wiley, Emerald Publishing, Gale one from Cengage learning Pvt Ltd, EBSCO, and Springer Nature, Taylor & Francis, through Nalanda E-Consortium, AKTU. Member and access of National Digital Library, MHRD. Complete Access to SCOPUS CITATION **DATABASE** (Empower institutions to bolster performance, rank, and reputation) Reprographic Facility. Digital library equipped with 16 multimedia PCs. External users from other institutions are allowed to use the library on production of library access cards or a letter from their institution. In the COVID -19 period user (Students, faculties and staff) are being given access remotely keeping safe at their home through the remote access software **MYLOFT/ RemoteXs software** so that they can access the desired content remotely at their own convenience from

anytime anywhere on 24 x 7 basis. All the e-journals available through IET library are reputed international journals and is available at intranet http://library.ietlucknow.ac.in:8080/. Library also has an E-resource through Knowledge hub virtual library available through intranet at http://k-hub.in/NewResources.aspx?id=2. The library of IET is also registered in National Digital Library. The library management software at FOAP is integrated with all modules (**including Evergreen, NewGenLib, Libsys, Voyager and SOUL**) and has a multi-user accessibility. Digital Library Services in which Institutional Repository are being made with 'DSpace Software'. All libraries have CCTV for security. UPID also has a well-equipped **Digital Library with 7 nodes having Internet connectivity** for access to E-Resources.

c. All the libraries are being used by students and faculty optimally with a daily percentage of more than 5% students and average per day usage of around 200 inclusive of all libraries. All the libraries are freely accessible to all students and faculty members irrespective of departments. The libraries are being optimally used by the students and faculty in both- online and offline modes. External users from other institutions are allowed to use the library on production of library access cards or a letter from their institution. In the COVID -19 period user (Students, faculties and staff) are being given access remotely keeping safe at their home through the remote access software MYLOFT/ RemoteXs software so that they can access the desired content remotely at their own convenience from anytime anywhere on 24 x 7 basis.

File Description

LMS details and bills:	View Document
E- resources details and bill:	View Document
Library Usage register:	View Document

Provide the relevant information in institutional website as part of public disclosure
AKTU/CAS: https://cas.res.in/library.html
IET: https://digital-library.theiet.org/
FOAP: https://foaplibrary.in/

4.2.2 Percentage *expenditure for purchase of books/ e-books and subscription to journals/e-journals year wise during the last five years*

4.2.2.1: Annual expenditure for purchase of books and journals year-wise during the last five years (INR in lakhs)

Response: Rs 1179.82 lakhs (10%)

Year	2022-23	2021-22	2020-21	2019-20	2018-19
INR (in lakhs)	72.44	3000.13	2622.13	112.603	91.78
Average annual Expenditure =	**1179.82**	**Lakhs**			

File Description

Institutional data in prescribed format	View Document
Audited statements of accounts	View Document

Library Committee Meeting Proceedings	[View Document](#)
Bills of books purchased	[View Document](#)

Key Indicator – 4.3 IT Infrastructure (30)

4.3.1. Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection
Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words

Response:

IT facilities have been updated on regular basis. Also, new IT equipment has been purchased as per the requirements.

In session 2018-19, numerous new desktop systems (I7 processor, 8 GB RAM, 250 GB HDD) purchased to upgrade IT systems. New Epson projectors were upgrade the ICT. 55" & 86" ICT enabled Screens were also purchased, these were installed in different spaces of the institutions. To maintain computer laboratories, regular purchasing of RAM and other hardware components were also done. Google Developers Code Lab is constructed with an objective to replicate coding experience at Google. The specifications of the installed computers are i5 processor, 8GB RAM, and virtualization technology enabled, Windows 10 operating system, good internet speed, and double monitors.

In session 2019-20, Upgradation of ICT in form of built-in webcam for communication, new CCTV cameras with one CCTV DVR are also installed to keep an eye everywhere.

In session 2020-21, high performance system were installed in the following labs
- GIS Laboratory
- Environmental Laboratory
HP laptop (I7 processor, 2.8 Ghz), Drone was purchased to distribute among faculty members.

In session 2021-22, following labs were established equipped with high performance system.
- Artificial Intelligence Lab : It is equipped with NVIDIA-DGX-2 which is the world's first 2 petaflops system
- Industrial Automation Lab: It contains a high proportion of hands-on study particularly in the areas of computer Aided Manufacturing (CAM), Computer Numerical Control (CNC) and manufacturing automation.
- Design and Simulation Center: This lab consists of 18 high end specifications computer systems (32 GB high speed RAM, 4 GB dedicated Graphics card and high-performance multicore intel processor.)
- VR Lab

In session 2022-23, new desktop computers (I7, 12th Generation, 16GB RAM, 1TB hard disk with Graphic Cards) are purchased to upgrade existing computer laboratories. Overall in every year, our computer laboratories were upgraded or new laboratories set up for new requirements.

All the campus infrastructure is installed with Wi-Fi enabled facility for student & faculties with the band width of approximately 1Gbps (attachment enclosed)

File Description

Details of Wifi/Internet connection	[View Document](#)
Details of IT facilities	[View Document](#)

IT Policy:
http://iqac.aktu.ac.in/policies/INFORMATION%20TECHNOLOGY%20INFRASTRUCTURE%20USAGE%20PO
LICY.pdf

4.3.2. Student - Computer ratio (Data for the latest completed academic year)
4.3.2.1. Number of students: Number of Computers available to students for academic purposes
Data Requirements:

☐ Number of computers available for student use = **1295**
☐ Total Number of students = **3496**

Response: 2.7:1

Upload the specific document as per description given below
Department wise details of computers   View Document
Stock Register and bill   View Document

4.3.3. Institution has the following Facilities for e-content development and other resource development
1. Audio visual center, mixing equipment, editing facilities and Media Studio
2. Lecture Capturing System(LCS)
3. Central Instrumentation Centre
4. Animal House
5. Museum
6. Business Lab
7. Research/statistical database
8. Moot court
9. Theatre
10. Art Gallery
11. Any other facility to support research

Options:
A. Any 7 or more of the above
B. Any 6 of the above
C. Any 5 of the above
D. Any 3-4 of the above
E. Any 2 or below

Response: A

Upload the specific document as per description given below:
Details of all the facilities   View Document

Key Indicator - 4.4 Maintenance of Campus Infrastructure (20)

4.4.1. *Average percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the last five years* 4.4.1.1: Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year wise during the last five years (INR in lakhs)

Response: 38.61%

Year	2022-23	2021-22	2020-21	2019-20	2018-19
INR in lakhs	3580.81	3261.05	5561.43	5953.51	4521.61

Upload the specific document as per description given below:

Institutional data in prescribed format   [View Document](#)

Audited statements of accounts   [View Document](#)

4.4.2 *There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.* Describe policy details of systems and procedures for maintaining and utilizing physical, academic and support facilities within a minimum of 500 word and maximum of 1000 words

Response:

- Given that the **University campus buildings are quite new**, the primary responsibility for major maintenance lies with the construction agency.
- The Maintenance Section collaborates closely with the construction agency to monitor the condition of the buildings, report any issues, and coordinate for any major repairs or renovations, if required.
- All equipment and assets purchased, including laboratory equipment and ICT facilities, are chosen based on **their warranty and service agreements**.

Apart from that the University has a systematic mechanism for maintaining and utilizing physical, academic and support facilities like laboratory, library, sports complex, computers, and classrooms. Some of them are maintained by an Annual Maintenance Contract (AMC) given to concerned agencies and the others are maintained by the maintenance section of the University consisting of skilled staff members working under the supervision of AE and JE (Civil) and JE (Electrical). All civil and electrical maintenance are done as per the state government rules.

Laboratory Utilization and Maintenance Policy:
All the laboratories are spacious and the equipment are well maintained. Do's and Don'ts/safety precautions are displayed in almost every laboratory. All equipment in the laboratories are marked with unique identification and records of the same are maintained by the Laboratory staffs. All necessary software and hardware are available in the Laboratory for the students. In-house minor servicing of the laboratory instruments is done regularly by the concerned Laboratory technical staff and the major repair of the equipment are outsourced by following the procedure of the University. Consumables are purchased for the laboratory by the Department well in advance by following the rules and regulations of the University. Lab assistant and Lab attendants are trained for different lab related works in the Laboratory. All electrical wirings and grounding are done as per the norms. Fire extinguishers are provided in almost every lab and department for the safety of students and lab staff members. Repairs and maintenance requisites are submitted regularly by the HODs of the concerned department to the concerned maintenance section such as repair and maintenance section (Civil Maintenance/ Electrical Maintenance) for electrical/ civil repair work.

Library Utilization and Maintenance Policy:

The Library recognizes the importance of functioning in a thoroughly professional way taking into
consideration the interests of all departments. The Library Committee consists of at least one faculty from each Department. The faculty members of the committee play an important role in coordinating the Library Orientation for the new entrants. This enables the Librarian and the Library staff members to meet student batches and introduce them to the easy means of accessing the books on the shelves as well as available online recourses. The Library Committee meets regularly to engage with all the issues related to student requirements from the Library as resource, and endeavors to prioritize funds judiciously in order to make the process and operations of the Library student friendly. Library is fully automated with all its subsystems like LAN and Wi-Fi connectivity. Library Management Software system is incorporated with latest technologies that enables Library to serve its users more efficiently. The Library has a wide collection of Books, Journals, Audio-video materials, photocopying facility, News Papers, Rare books, e resources etc. Barcode online circulation system is in practice in the Library. The availability OPAC has resulted in the easy access of information from any computer within the campus on subject/ author-wise book, account information like books borrowed and due date to return, penalty to be paid, if not returned in time, and so on. It also facilitates retrieval of information.
The civil and electrical maintenance work is done by construction section of University. LAN, Wi-Fi related issues are resolved by ITRC staff.

Sports Complex Utilization and Maintenance Policy:
The sports facilities of the University are utilized as per the Sports & Curriculum activities calendar
prepared by the Chairman of Council of Students Activities and Physical Training Instructor which are approved by the Academic Council and BOM. A stock register and an issue register are maintained to ensure the proper handling of the sports items. Regular maintenance of the playground and sports complex is conducted under the supervision of the chairman of CSA of the University.

IT Utilization and Maintenance Policy
University IT policy exists to maintain, secures, and ensures legal and appropriate use of Information
Technology infrastructure established in the University campus. This policy establishes University-wide strategies and responsibilities for protecting the confidentiality, integrity and availability of the information assets that are accessed, created, managed, and/or controlled by the University.
Digital Information assets addressed by the policy include data, information systems, computers, network devices, intellectual property, as well as documents and verbally communicated information. Realizing the significance of Digital and Internet Services, University has established the basic network/internet infrastructure in the University as Intranet & Internet services. It provides facilities to support and enhance the educational mission of the University; for enriching the educational experience of the students, faculty and the staff and supporting their research and academic activities; and for providing automation support to the institute. An undertaking application form for Campus Network Services, Usage Agreements, Net Access ID Allocation for Faculty/Staff and Students, Requisition Form for e-mail account for Employees and Students are filled by every individual who is stake holder of the university.

Classrooms Utilization and Maintenance Policy:
The University has enough classrooms for routine classes. Classes are utilized by different

departments in which lecture halls are allocated through the timetable on sharing basis for lecture and tutorial. All the classes are well maintained and are spacious. Majority of the classrooms are having ICT facility. The maintenance of the furniture and other civil repair work of the classroom is done as per the requirement through the concerned maintenance department of the University. Internal cleaning of all the Classes is done every day. The university has separate maintenance contract for the cleaning of classrooms by the outsource agency. Classrooms and Seminar Halls are regularly cleaned and maintained by service and housekeeping staffs. Dustbins are kept at various places near the classrooms. The Campus Cleaning i/c looks after the cleaning of all the classrooms, seminar halls, etc of the University. The maintenance team looks after the regular maintenance of civil/electrical repair works of the classrooms. The Teaching aids such as LCD Projectors, PA Systems, Desktops, Wi-Fi etc. are maintained by ITRC staff.

File Description

AMC document	View Document
Infrastructure Utilization and Maintenance Policy	View Document