CRITERION IV

INFRASTRUCTURE & LEARNING RESOURCES

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

St. Peter's University has been striving hard to provide effective, efficient and innovative teaching and learning process. These goals are being achieved by providing sufficient and serene environmental infrastructure and learning resources, spacious and well-furnished classrooms, well-equipped laboratories, library, home like hostels, playgrounds etc. The infrastructure rejuvenates minds of everyone studying in the University to acquire more knowledge, skills, and values for future endeavors.

4.1 Physical Facilities

4.1.1 How does the university plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

The University takes efforts to ensure adequate availability of physical infrastructure. The details of the physical infrastructure are given in table 4.1.

Table.4.1 Physical Infrastructure

S. No.	Building	Floor	Departments/ Centres functioning in the building
1	Main Block	Ground Floor	Chemistry lab, Physics lab, University Office, DFO section, Library, Seminar Hall, Conference Hall, Department of Bio-Medical Engineering, Department of Chemistry, Department of Physics, Dean of Students chamber
		First Floor	Common Computer Centre, Computer Lab, Placement cell, Vice – Chancellor chamber, Advisor Room, Certificate Section, ECE Labs.
		Second Floor	Department of ECE, Department of EIE, Faculty Rooms, Class Rooms, Instrumentation Lab, Exam Cell, Director Academic Room, Department of English
		Third Floor	Faculty Rooms, Class Rooms, Department of IT, Department of Maths, Department of CSE, Unit Test Cell

		Fourth Floor	Attendance Cell, Class Rooms, Drawing Hall, Estate Officer Room
2	Mechanical Block	Ground Floor	Laboratories
		First Floor	Department of Mechanical Engineering, Faculty Room, CAD Lab, Class Rooms
		Second Floor	Department of Production Engineering , Faculty Room, Class Rooms
		Third Floor	Department of Civil Engineering , Faculty Room, Class Rooms, Drawing Hall
		Fourth Floor	Drawing Hall
3	EEE Block	Ground Floor	1. Electrical Machines lab 2. Bio – Chemistry Lab 3. Micro Biology Lab 4. Bio Process Lab 5. Molecular Biology Lab 6.AeronauticalEngineering laboratories a. Aero Dynamics Lab b. Air Craft Structure Lab c. Propulsion Lab d. Aero Engine Lab e. Air frame Lab f. Air Craft Systems 7. a.Physical Chemistry Lab b.Organic Chemistry Lab c.MechanicalOperations lab d.Technical Analysis Lab e.Heat Transfer Lab 8. Automobiles Repair and Maintenance Lab
		First Floor	1. Sophisticated Analytical Instrumentation Facility 2. Power Electronics lab 3. Control / Measurements& Instrumentation Lab 4. Solar Lab 5. Simulation Lab

			6.EEE class rooms and Faculty room
		Second Floor	Process Control lab, Dear(R&D) office, Faculty Room, Bio-technical engineering Faculty room and class rooms
		Third Floor	Chemical Reaction Engineering Lab, Auto Mobile Component lab, Chemical Engineering Faculty Room and Class Rooms, Automobile Engineering Faculty room and class rooms
4	Administrative Block	Ground Floor	Registrar, C.O.E Office, Dean (EEE), R& D section
		First Floor	DC meeting room, Paper valuation room
		Second Floor	Paper Evaluation section
5	P.G.Block	Ground Floor	Vice Chancellor Chamber Secretariat and P.G. Library
		First Floor	Communication Skills Lab, MBA Faculty& Class rooms
		Second Floor	MCA Faculty Room, MCA Lab and class rooms
		Third Floor	Architecture Faculty Room, Studios and class rooms

4.1.2 Does the university have a policy for the creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

Yes, the University has a policy. Lot of efforts have been made to enhance infrastructure. LCD projectors are available to promote teaching-learning environment. Some of the departments share their facilities with other departments which ensures that the facilities are optimally utilized. Language Labs have been set up in the language departments to teach soft skill courses. Well equipped laboratories are available for the PG students and Ph.D. scholars to promote their practical skills. Sophisticated Analytical Instrumentation Facility (SAIF) Lab has been established to the tune of 100 Lakhs in this academic year to promote research. New machines have been procured and installed for Advanced Manufacturing through Technology Business Incubator. A separate air conditioned room has been made ready with audio / video projection facility for conducting doctoral committee meetings for research scholars and for conducting seminars and meetings.

4.1.3 How does the University create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

The University has well equipped laboratories and computing facilities with adequate space, uninterrupted power supply and internet connectivity. Each faculty is allocated a separate cubicle. Each department is provided with computers with Internet connectivity for the benefit of faculty, scholars, students and administrative staff. The University has also setup TBI and MSME for the promotion of Entrepreneurship. Faculty has a lot of scope in Research and Entrepreneurship. Faculty and students have funding from MSME and can use the facilities of TBI.

4.1.4 Has the university provided all departments with facilities like office room, common room and separate rest rooms for women students and staff?

Yes, all the departments have an office room and common seminar hall in each block. The University has provided adequate toilet facilities for women students, and women staff in each building. Women's waiting room and health centre are also available.

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

The University is planning to provide ramps for the buildings for the benefit of differently abled persons. Further, a provision for lift had been made in the main building.

4.1.6 How does the university cater to the requirements of residentialstudents? Give details of:

Women's Hostel

Number of hostels : 01
Number of rooms available : 160
No. of inmates : 22

Other Facilities:

A library with newspapers, weekly magazines, one TV hall, Computers, power inverters, indoor games, Reverse Osmosis System for drinking water, 30 Computers with internet, Fire Extinguishers.

Men's Hostel

Number of hostels : 01
Number of rooms available : 197
No. of inmates : 55

Other Facilities:

Library with newspapers, one TV hall, 40 Computers with internet, power inverters, Fire Extinguishers, 10 KVA UPS System.

Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

Gymnasium is available

Broad band connectivity / Wi-Fi facility in hostels.

Yes. Broad band connectivity is available in both the hostels.

4.1.7 Does the university offer medical facilities for its students andteaching and non-teaching staff living on campus?

Yes, A primary health centre has been established in the campus. Spacious room with good light and ventilation is located in the ground floor of the main building. One male doctor and a female doctor along with 2 nursing assistants are available in the centre. A medicine rack with full stock of medicinal facilities is available for first aid management of injuries and minor ailments. The equipments available in the centre are Thermometer, Stethoscope, BP apparatus, Tuning fork, Opthalmoscope, Echo Cardiogram, Electro Encephalogram, Patient Monitoring System, Saline stand, Pulse Oxymeter, wheel chair and Stretcher are also available. An ambulance to take the patients to the nearby multi-specialty hospital is also available.

4.1.8 What special facilities are available on campus to promote student's interest in sports and cultural events/activities?

Sports

Three playgrounds are available in the campus in which Cricket, Football, Handball, Volley Ball, Ball Badminton and Kabaddi are played. Indoor facilities for games such as Table Tennis, Shuttle, Carom and Chess are also available in the campus.

Cultural activities

Cultural activities are promoted in the University to harness the traditional cultural skills/activities of students. Cultural competitions are conducted and students exhibit their skills during various programmes like

University Day and Women's day. A faculty incharge helps in the Training programmes for students to excel in arts and cultural events.

4.2Library as Learning Resource

4.2.1 Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

St.Peter's University has a Library Committee. It comprises of Chairman, Members including Heads of all departments and student representative and the Librarians of both UG and PG library. The Committee meets periodically and plans to procure Books and Journals as per the University syllabus to render the effective service to the users' community, and to optimize the use of library materials. Digital Library and procurement of NPTEL material are the significant initiatives that the committee has taken.

4.2.2 Provide details of the following:

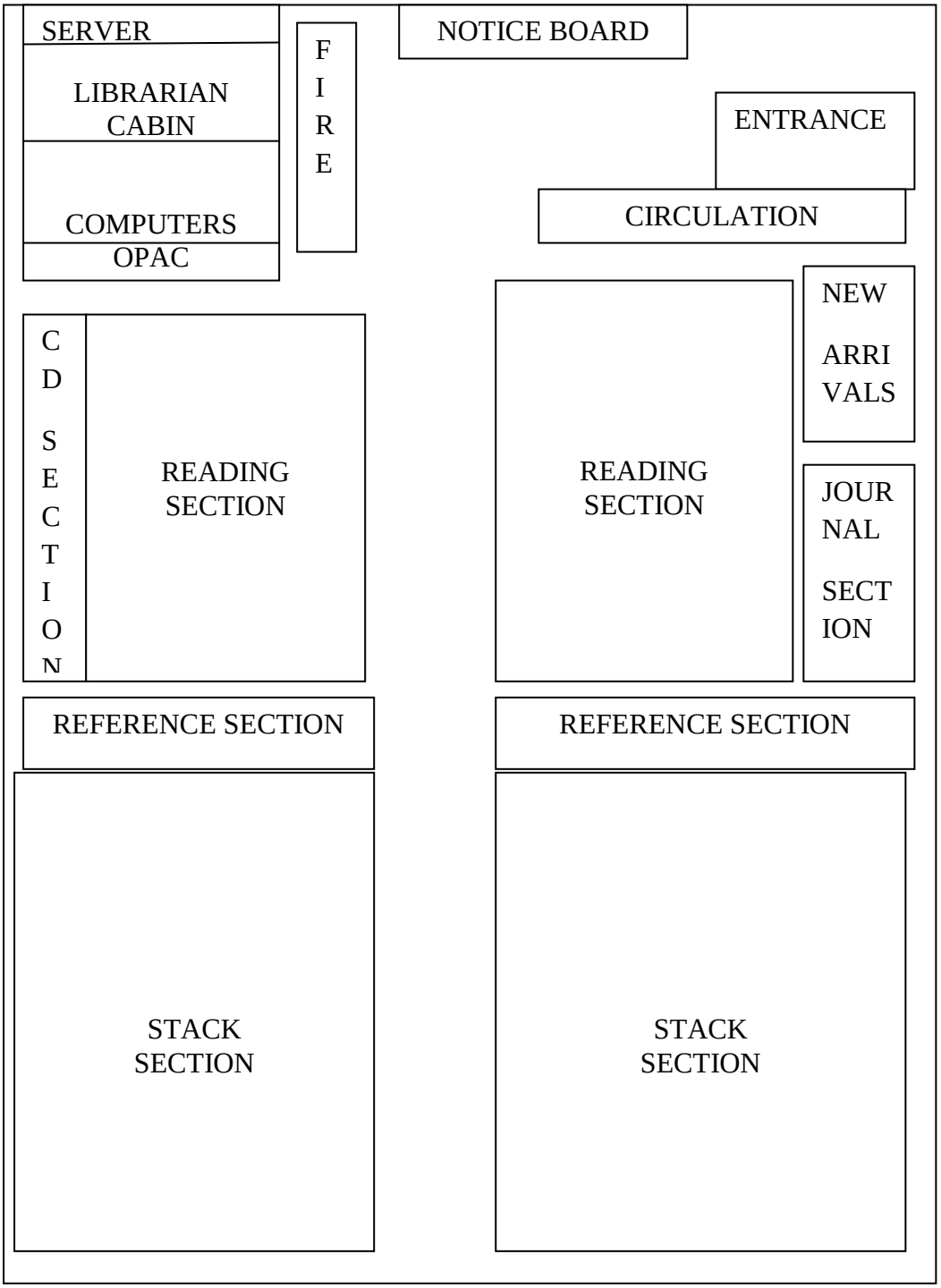
- **Total area of the Library (in Sq.mts.) :** 2400 Sq.mts
- **Total Seating Capacity** : 84
- **Working Hours (on working days, on holidays, before examination, during examination, during vacation)**
    - Week Days : **8 am to 8 pm**
    - Saturdays &Sundays : **8 am to 2 pm**
- **Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources) available.**

  The library has 14 reading tables with a seating capacity of 84. Digital library with 30 computers is available for accessing e-resources.

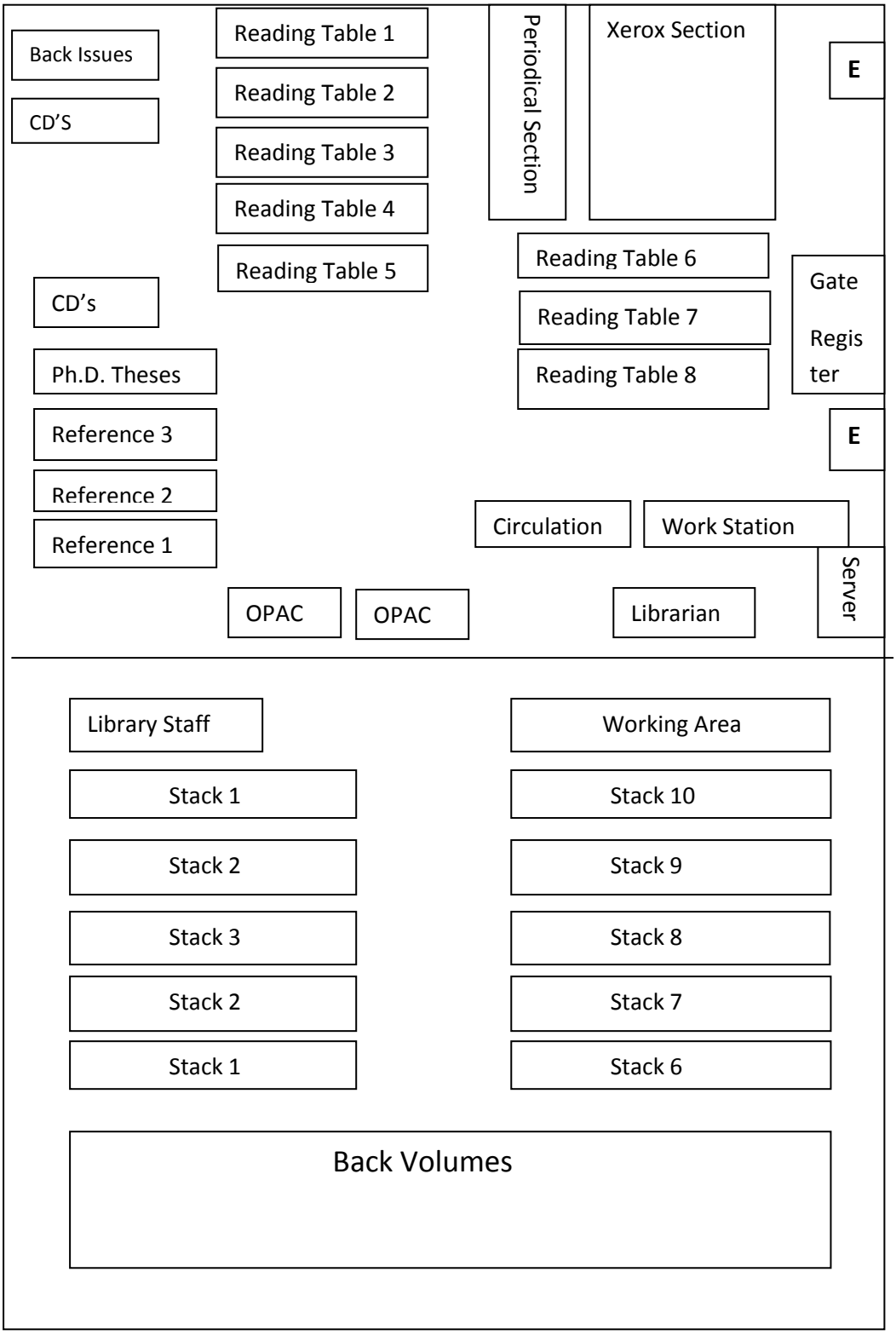
- **Clear and prominent display of floor plan; adequate sign boards; fire alarm; access to differently-abled users and mode of access to collection provided**

  The floor plan is herewith given for both the UG and PG libraries. The mode of access to collection is provided. The campus makes use of Shelf guide system, which is provided for accessing the books on the shelves. Fire extinguishers have been provided in both the libraries.

UG LIBRARY LAYOUT



PG LIBRARY LAYOUT



4.2.3 Give details of the library holdings:

a) Print (books, back volumes and theses)

S.No	Books	Back volumes	Theses
1	67199	1604	33

b) Average number of books added during the last three years

S.No	Library Holdings Books	2012 - 2013	2013 - 2014	2014 - 2015
1	Books	427	125	491

c) Non Print (Microfiche, AV) CD's :2553

d) Electronic (e-books, e-journals)

S.No	**Electronic e-Journals**	**No.of Journals**	**e-Books and e-Journals**
1	IEEE Online E-Journals	146	Access through open source database
2	ASME	26	
3	ASCE	34	
4	DELNET	e-Books & e-Journals and ILL	
5	NPTEL	NPTEL Course Materials	
6	INFILIBNET	Resources sharing	
7	EDUSAT	Online network programming	
8	British Council Library	Inter Library loan	

e) Special collections (e.g. text books, reference books, standards, patents)

S.No	**Special Collections**	**Total**
1	Text Books	43932
2	Reference Books	1120
3	P. G Books	15069
4	Basic Books	7078
5	Standard and Patents	306
6	Ph.D. Thesis	34

f) Book Banks

Access provided to Book Bank (Total number books in the SC/ST Book Bank section): 2407

g) Question Banks

Online question Bank services are provided from the inception of the university.

4.2.4 What tools does the library deploy to provide access to the collection?

The University library services are automated through the use of standard library software package called "AutoLib".The circulation service is fully computerized and all the documents are bar-coded. Four systems with Online Public Access Catalogue (OPAC) are provided to the users to access and browse and retrieve the online information from the library. Web OPAC module facilities on the intranet/internet environment are provided.

- **WEB OPAC Address**

  UG-LIBRARY = http://172.16.2.1/opac/index.asp

  Access through Intranet inside the campus

  PG-LIBRARY = http://172.16.9.1/opac/index.asp

  Access through Intranet inside the campus

- **Electronic Resource Management package for e-journals:**
  Not available.

- **Federated searching tools to search articles in multiple databases**
  Nil

- **Library Website**
  The library page is available on the university website.

- **In-house/remote access to e-publications**

  Intranet access to e-publications is available in the campus.

4.2.5 To what extent is ICT deployed in the library? Give details with regard Library automation.

- **Library Automation**

University Library services are fully automated with the Autolib Software.

The following services are provided:

1. Circulation Control service
2. Reservation
3. Inter Library Loan
4. Internet Services
5. Reprography Services
6. On line Question Bank
7. Research Alert
8. OPAC
9. Video Lecture (NPTEL)
10. INFLIBNET Consortium Link with St Peter's University.
11. Periodical services
12. Over dues &Books dues report
13. Member database etc
14. Book Data Base

- **Total number of computers for general access:**

  4 Computers are provided for general access.

- **Total numbers of printers for general access:**

  2 printers are provided for general access.

- **Internet band width speed:**

  1 Gbps bandwidth speed has been provided in the campus

- **Institutional Repository**

  Nil

- **Content management system for e-learning**

  Not Available.

- **Participation in resource sharing networks/consortia(like INFLIBNET)**

  INFLIBNET and DELNET are the resource sharing networks which St.Peter's University is currently using.

4.2.6 Provide details (per month) with regard to

- **Average number of walk-ins:** 700
- **Average number of books issued/returned :** 850
- **Ratio of library books to students enrolled :**33

- **Average number of books added during the last four years :** 1056
- **Average number of login to OPAC :** 50
- **Average number of login to e-resources :**50
- **Average number of e-resources downloaded/printed :** 120
- **Number of IT (Information Technology) literacy trainings organized:**

  Orientation for student's are given in the class rooms at the beginning of the academic year to access the library resources.

4.2.7 Give details of specialized services provided by the library with regard to :

- **Manuscripts** :
  Manuscripts are not available in the university.

- **Reference :**
  Services are provided to the user community

- **Reprography/Scanning :**
  Services are available.

- **Inter-library Loan Service :**
  Inter-Library Loan Service through DELNET and British Council library

- **Information Deployment and Notification**
  Circulars and other notifications are put up on the notice boards of the library and the departments.

- **OPACS :**
  Four systems have been provided to utilize OPAC services

- **Internet Access :**
  Internet with bandwidth speed of 1 Gbps is available in the library.

- **Downloads :**
  Users are allowed to download
  NPTEL course materials
  Question bank, Journals,
  Articles from IEEE, ASME, ASCE journals
  DELNET

- **Printouts :**

Provision is made for students to download the information and send it through email or copy it in CD for taking printouts.

- **Reading list/ Bibliography compilation :**

    - The University Library displays the new arrivals of books.
    - Research Alert- provides content of journal articles

- **In-house/remote access to e-resources**

  Intranet access to e-publications is available in the campus.

- **User Orientation**:

  Every year, fresher orientation programme is arranged for the newcomers. In addition to this programme, user awareness programme are arranged to the students in the class rooms.

- **Assistance in searching Databases :**

  Library staff assists the students in searching the database.

- **INFLIBNET/IUC facilities:**

  INFLIBNET facility is available.

4.2.8 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

The annual library budget and the amount spent for the purchase of books and journals for the year 2014-15 is given in the Table 4.2.

Table 4.2 Annual Library Budget

S.No	Particulars	Amount Rs.
1	E-Journals	6,47,380.00
2	National Journals hard copy	1,04,850.00
3	Books	7,64,617.00
4	Institutional Membership	20,000.00
5	AMC for Auto lib software	7,500.00
6	Stationary for U.G & P.G. Library	10,000.00
7	Scanners	15,540.00
	Total	15,69.887.00

4.2.9 What initiatives has the university taken to make the library a 'happening place' on campus?

UG Library is situated in the main block of the campus. The users can easily access the library and this will save the time of the users. A separate P.G Library with reprographic section and 15 Departmental libraries function in the campus for the benefit of the faculty and students. All the services are available for the users with polite staff members to assist. The library acts as a knowledge warehouse.

4.2.10 What are the strategies used by the library to collect feedback from its users? How is the feedback analyzed and used for the improvement of the library services?

Questionnaire method is used to collect the feedback from the users. User feedback is analyzed using simple mathematical calculation. Based on the feedback, action has been taken to improve the library service. Further, a suggestion register is made available in the library for the users to give feedback.

4.2.11 List the efforts made towards the infrastructural development of the library in the last four years.

The University has established a School of Architecture Library.
A digital library has been setup with 30 computers.
Online access of Ph.D. thesis through INFLIBNET
NPTEL lecture material
E-Journals.

4.3 IT Infrastructure

4.3.1 Does the University have a Comprehensive IT Policy with regard to

IT Service Management

The department of MCA maintains university website since inception of university. The department, with all the necessary information about the University has designed the website. Updates are done periodically. The maintenance is carried out by updating the web content or pages as and when necessary. The Data Centre which is under the department of the MCA helps in updating the web content. The department co-ordinates with all the departments of the University for creating new content when required.

Statistics and reports including web site visits and traffic are analyzed when needed. The examination results of UG and PG programmes are published in the University website. All the placement activities are publicized in the website.

Information Security

Microsoft Essentials Antivirus software is used by the university for the protection of the computers from viruses, trojans, worms, spywares, root kits, hackers. It is a powerful, efficient and user-friendly anti-virus application that guards our computers against all threats. The files stored in each computer are automatically scanned for viruses and cleaned every day. Server based softwares are stored in the centralized servers and all the clients are able to access them effectively and in a secure manner.

Network Security

SQUID Firewall is used by the university for internet security, network security, e-mail protection and secure remote access. This firewall is being used since inception and it has been found to provide good protection, performance and value. Group policies are created by enabling content filter option for different categories like Admin wise Policy, Faculty wise Policy, Students wise Policy etc., to protect the traffic from network by blocking the sites according to the policies. The entire Dataflow in the University campus is supervised by Real time Monitoring, Log Monitoring and Packet Monitoring.

Risk Management

The university takes many efforts to ensure that Risk Management is done to avoid loss of data and other problems associated with it. The process of planning, organizing, and protecting the University resources are done effectively in the university by the computer centre.

SQUID Firewall for Internet security and Network security has been provided for risk management. Domain policies have been created which control the users of the computer system in a proper way. Entire database backup of the University website is done automatically. The centre has fire extinguishers, which can be used to protect any physical damage to the properties, in case of fire. A 1.5 ton split air conditioner is used to maintain the temperature constantly in the Server room, which contains routers and switches. For the power back, One online 10 KVA UPS with 20 batteries of 66AH is being used.

Software Asset Management

Software Asset Management involves managing and optimizing the purchase, deployment, maintenance, utilization, and disposal of software applications within University. The university is having the Microsoft Campus Agreement for Campus Licensing for all the Microsoft Products includes MS Windows 2008 Server, Microsoft Essentials for Antivirus and

CAL. Other Softwares are MATLAB, Oracle 11i, CATIA, AutoCAD, IBM Rational Rose, CREO.

Open Source Resource

The computer centre ensures that the open source resources are used effectively for the curriculum system setup, teaching strategy and resource construction. Students use open source application in Linux operating system by using Telnet. PHP, MySQL, and NS2 are used as open source software for the FOSS Lab and Networks Lab for the students. Open source journals from DELNET and INFLIBNET are available in the university library for the benefit of students and scholars.

Green Computing

The university ensures disposal of obsolete electronic items in the campus. The e-waste is disposed through the vendors for recycling. The electronic gadgets are disposed through vendors with proper e-waste management techniques without affecting the environment. Most of the circulars in the university are sent by email to avoid the use of paper. Printing on both sides of the paper and use of one-sided paper is advocated to conserve paper.

4.3.2 Give details of the university's computing facilities i.e. hardware and software.

- **Number of systems with individual configurations**

  The details of server configurations and node configurations are given in the tables 4.3 and 4.4 respectively.

Table 4.4 Details of Server Configuration

S. No	Server Configuration	Total
S1	**IBM Server with XEON Processor @ 3.0 Ghz** 512 MB DDR ECC RAM / 2 MB L2 Cache 73.4 GB SCSI Hard Disk / Intel 86484 AA Intel 86484AA eSeries 226 Mother Board 15' SVGA Color Monitor / IBM Mouse	**2**

	10/100/1000 Mbps TX Ethernet Card 2s 1p, 2 +2 FP USB Port / 104 Key Keyboard	
S2	**IBM X3400 Xeon Server @ 1.88 GHz** FSB 1 GB PC2 5800 667 Mhz / 2 *512 MB RAM 73.8 GB SAS Hard Disk / 48x CDROM Drive 15" SVGA Color Monitor / 10/100/1000 NIC 104 Keys Keyboard / IBM Mouse / 2s 1p Port	**3**
S3	**IBM Pentium - 4 @ 2.8 Ghz (8480-ISS)** 512 MB DDR ECC RAM / 2 MB L2 Cache Intel 845 Chipset Motherboard / 52x CD Drive 36.4 GB SCSI Hard Disk / 15" SVGA Color Monitor 1.44 MB FDD / IBM Mouse / Keyboard	**4**
S4	**IBM 8648-iAS Model Server** Intel XEON Pentium - 4 @ 3 Ghz 2 MB L2 Cache / 1 GB DDR2 ECC RAM Hot Swap 72*2 GB SCSI Hard Disk Drive CDROM Drive 52x / Gigabit Ethnernet Card / Dual SMPS 15" TFT Monitor / Keyboard / Mouse	**1**
S5	**IBM Pentium - 3 @ 1.2 Ghz (226 Series)** 512 MB ECC RAM / 512 Kb Cache 73.4 GB SCSI Hard Disk / 15" SVGA Color Monitor 48x CDROM Drive / 1.44 MB FDD / KB / IBM Mouse 10/100 Mbps Ethernet Card and AGP Card	**4**
S6	**HP-ProLiant ML350 G5** / Intel Quad Core Xeon 2.33GHz/1333/ 2GB MB DDR ECC RAM / DVD-Reader 300GB SCSI SAS Hard Disk / 15" LCD Color Monitor 10/100/1000 Ethernet Card / 104 Keys Keyboard / HP Mouse / 2s 1p Port	**1**
S7	**HP Proliant ML 150 G3** Intel Pentium - 4 @ 1.6 Ghz / Quad Core Zeon Processor 4 MB L2 Cache / 2 GB 667 Mhz DDR2 RAM Hot Swappable 146*2 GB Hard Disk HL-DT-ST-CD / RW - DVD -R / HP 15" TFT Monitor 10/100/1000 Mbps TX Ethernet Card / Optical Mouse 2s 1p, 2 +2 FP USB Port / 104 Key Keyboard	**1**
S8	**HP Proliant ML 350 G5** Intel Pentium - 4 @ 1.6 Ghz / Quad Core Zeon Processor 4 MB L2 Cache / 2 GB 667 Mhz DDR2 RAM	

	Hot Swappable 72*2 GB Hard Disk / IBM Optical Mouse LG/DVD-RW / IBM 17" TFT Monitor 10/100/1000 Mbps TX Ethernet Card 2s 1p, 2 +2 FP USB Port / 104 Key Keyboard	**2**
S9	**HP Proliant ML 350 G6** Intel Pentium - 4 @ 2.0 Ghz / Quad Core Zeon Pro-E5504 4 MB L3 Cache / 4 GB DDR3 RAM @1333 Regis DMMS Hot Swappable 300 * 2 GB SAS Hard Disk DVD ROM Drive / HP 18.5" TFT Monitor / Optical Mouse Embedded NC326i Dual Port Gigabit Ethernet Adapter Redundant Fan Kit / 460 W CS HE Power Kit	**1**
S10	**HP Proliant ML 330 G6 Xeon @ 2.27 Ghz** 4 GB SD ECC RAM / 500 GB x 2 SAS Hard Disk Drive Gigabit Ethernet Card / HP Optical Mouse 104 Keys Keyboard / HP 18.5 " TFT Monitor 2s 1p, 2 +2 FP USB Port / 104 Key Keyboard	**1**
S11	**HP Proliant ML 350e Server** Intel XEON E5-240t @ 2.2 Ghz 8 GB SD ECC RAM / 300 GB *2 SATA Hard Disk Drive HP Lv 18 " LED Monitor / DVD Writer Optical Scroll Mouse / KeyBoard / Gigabit E- Card	**1**
	Total Number of Servers	**21**

Table 4.4 Details of Node Configuration

S. No	Nodes Configuration	Total
1	HP Pentium - 4 @ 3.06 Ghz / **(DX - 2180**) 512 MB DDR RAM / 80 GB SATA Hard Disk Intel 915 GV Chipset Motherboard / 15" Color Monitor 10/100/1000 Mbps Ethernet Card / 1 MB Cache 2s 1p, 4+2 FP USB Port / Optical Scroll Mouse 104 Keys Keyboard	**149**
2	**Lenovo** Pentium - Dual Core @ **1.8 Ghz**(**2160** P**)** 2 * 2 MB L2 Cache / Intel 946 GZ Chipset MB	

	1 GB DDR2 RAM @ 533 Mhz**(Think Centre)** 80 GB SATA Hard Disk / 15" TFT Monitor 10/100 Ethernet Card / Keyboard / Optical Mouse	**55**
3	HP Pentium - 4 @ 3.06 Ghz / 1 MB Cache **(D290)** 512 MB DDR RAM / 80 GB SATA Hard Disk Intel Grantsdale Chipset MB / 15" Color Monitor Realtek 10/100/1000 Mbps Ethernet Card Optical Scroll Mouse / Keyboard	**76**
4	**HP Pentium - 4 @ 3.0 Ghz (DX2700)** 1 GB DDR2 RAM / 80 GB SATA Hard Disk Intel Broad water Chipset MB / 15" Color Monitor Realtek 10/100/1000 Mbps Ethernet Card Optical Scroll Mouse / Keyboard / CDROM Drive	**22**
5	**HP Pentium - 4 @ 3.0 Ghz (DX2060 MT)** 512 MB DDR2 RAM / 80 GB SATA Hard Disk Intel Grantsdale Chipset MB / 15" Color Monitor 10/100/1000 Mbps Ethernet Card HCL Scroll Mouse / Keyboard	**65**
6	**HP C2D @ 2.93 Ghz (DC5800)** 2 GB RAM / 250 GB Hard Disk / 2 MB Cache 21 " TFT Color Monitor / Keyboard / Mouse Gigabit Ethercard Card / Optical Scroll Mouse 2s 1p , 4+2 FP USB Port **(Given by Dean - S)**	**11**
7	**HCL Busybee Pentium - 4 @ 2.8 Ghz** 256 MB RAM / 52x CDROM Drive Intel 845 GV Chipset Mother Board 40 GB IDE Hard Disk / 10 /100 Mbps Ethernet Card 15" Color Monitor / Keyboard / Mouse	**1**
8	**Thin Client Server HP MS 6000 + Nodes** Intel Core 2 Duo Processor @ 2.83 Ghz 6 GB RAM (2 GB x 3) / 500 GB Hard Disk Drive	**30**

	Mouse / Keyboard / 18.5 TFT Monitor / DVD Writer	
9	**HP 202 G2 MT PC** Intel Core i3 @ 2.9 GHz / **4GB DDR3 RAM** 500 GB SAS Hard Disk Drive / HP 18.5 " TFT Monitor Gigabit Ethernet Card / HP Optical Mouse Free DOS 2.0 / 108 Keys Keyboard	**1**
10	**HP Compaq dx 2480 Model** Pentium Core 2 Duo @ 2.4 Ghz / 2 GB DDR2 RAM 160 GB SATA Hard Disk Drive / HP 15" TFT Monitor Intel G33 / G31 Express Chipset Mother Board RealTek High Definition Audio / Scroll Mouse / KB	**80**
11	**HP Pentium-4@2.93 Ghz (3090)** 2 GB DDR2 RAM / 320 GB Hard Disk Drive Intel Chipset Mother Board / 2 MB Cache 15" TFT Monitor / Optical Scroll Mouse 104 Keys Keyboard / Gigabit Ethernet Card	**3**
12	**Dell Pentium C2D @ 3.1 Ghz (OPT390)** 2 GB DDR3 RAM / 2 MB Cach e 320 GB Hard Disk Drive / 18.5 " TFT Monitor Dell Optical Scroll Mouse / Gigabit Ethernet Card 104 Keys Keyboard / 2s 1p , 4+2 FP USB Port	**2**
13	HP Pentium - 4 @ 3.06 Ghz / **(DX - 2180**) 512 MB DDR RAM / 80 GB SATA Hard Disk Intel 915 GV Chipset Motherboard / 15" Color Monitor 10/100/1000 Mbps Ethernet Card / 1 MB Cache 2s 1p, 4+2 FP USB Port / Optical Scroll Mouse 104 Keys Keyboard	**10**
14	**Lenovo Pentium - DC @ 3 Ghz (2160 P)** 2 * 2 MB L2 Cache / Intel 946 GZ Chipset MB 1 GB DDR2 RAM @ 533 Mhz	**98**

	80 GB SATA Hard Disk / 15" TFT Monitor 10/100 Ethernet Card / Keyboard / Optical Mouse	
15	HP Pentium - 4 @ 3.06 Ghz / 1 MB Cache **(D290)** 512 MB DDR RAM / 80 GB SATA Hard Disk Intel Grantsdale Chipset MB / 15" Color Monitor Realtek 10/100/1000 Mbps Ethernet Card Optical Scroll Mouse / Keyboard	**18**
16	**HP Pentium - 4 @ 3.06 Ghz (DX 2700)** 1 GB DDR2 RAM / 80 GB SATA Hard Disk Intel Broad water Chipset MB / 15" Color Monitor Realtek 10/100/1000 Mbps Ethernet Card Optical Scroll Mouse / Keyboard / CDROM Drive	**20**
17	**HP Pentium - 4 @ 3.0 Ghz (DX2060 MT)** 512 MB DDR2 RAM / 80 GB SATA Hard Disk Intel Grantsdale Chipset MB / 15" Color Monitor 10/100/1000 Mbps Ethernet Card HCL Scroll Mouse / Keyboard	**3**
18	**HP C2D @ 2.9 Ghz (DC5800)** 2 GB RAM / 250 GB Hard Disk / 2 MB Cache 21 " TFT Color Monitor / Keyboard / Mouse Gigabit Ethernet Card / Optical Scroll Mose 2s 1p , 4+2 FP USB Port **(Given by Dean - S)**	**3**
19	**Intel Core i3 4130 + N-Computing Nodes** 8 GB RAM / 500 GB Hard Disk / 18.5" TFT Monitor VspaceVirtualisation / VESA Mount Kit / HP Mouse HP 18.5 TFT Monitor / HP Keyboard	**40**
20	**HCL Busybee Pentium - 4 @ 2.4 Ghz** 256 MB RAM / 52x CDROM Drive Intel 845 GV Chipset Mother Board 40 GB IDE Hard Disk / 10 /100 Mbps Ethernet Card 17" Color Monitor / Keyboard / Mouse	**32**

	Sorround Speakers	
21	**HCL Busybee Pentium - 4 @ 2.8 Ghz** 256 MB RAM / 52x CDROM Drive Intel 845 GV Chipset Mother Board 40 GB IDE Hard Disk / 10 /100 Mbps Ethernet Card 15" Color Monitor / Keyboard / Mouse	**34**
22	**Thin Client Server HP MS 6000 + Nodes** Intel Core 2 Duo Processor @ 2.83 Ghz 6 GB RAM (2 GB x 3) / 500 GB Hard Disk Drive Mouse / Keyboard / 18.5 TFT Monitor / DVD Writer	**30**
23	**HP Compaq dx 2480 Model** Pentium Core 2 Duo @ 2.4 Ghz / 2 GB DDR2 RAM 160 GB SATA Hard Disk Drive / HP 15" TFT Monitor Intel G33 / G31 Express Chipset Mother Board RealTek High Definition Audio / Scroll Mouse / KB	**2**
24	**HP i3 Processor (PRO 3330 MT)** 4 GB DDR3 RAM / 500 GB Hard Disk Drive 19" TFT Monitor / Gigabit Ethernet Card Optical Scroll Mouse / 104 keysKeyboard 2s 1p 2 FP USB Port	**80**
25	**HP 202 G2 MT PC** Intel Core i3 @ 2.9 GHz / 2 GB DDR3 RAM 500 GB SAS Hard Disk Drive / HP 18.5 " TFT Monitor Gigabit Ethernet Card / HP Optical Mouse Free DOS 2.0 / 108 Keys Keyboard	**101**
26	**Dell Pentium C2D @ 3.1 Ghz (OPT390)** 2 GB DDR3 RAM / 2 MB Cach e 320 GB Hard Disk Drive / 18.5 " TFT Monitor Dell Optical Scroll Mouse / Gigabit Ethernet Card 104 Keys Keyboard / 2s 1p , 4+2 FP USB Port	**20**

	Total Number of Nodes	**955**

Computer Student Ratio

- The Computer Student Ratio is **1:4 (UG) and 1:2 (PG)**
- Training programs are organized for faculty and students to impart in-depth knowledge in the latest software technology.

Dedicated Computing Facilities

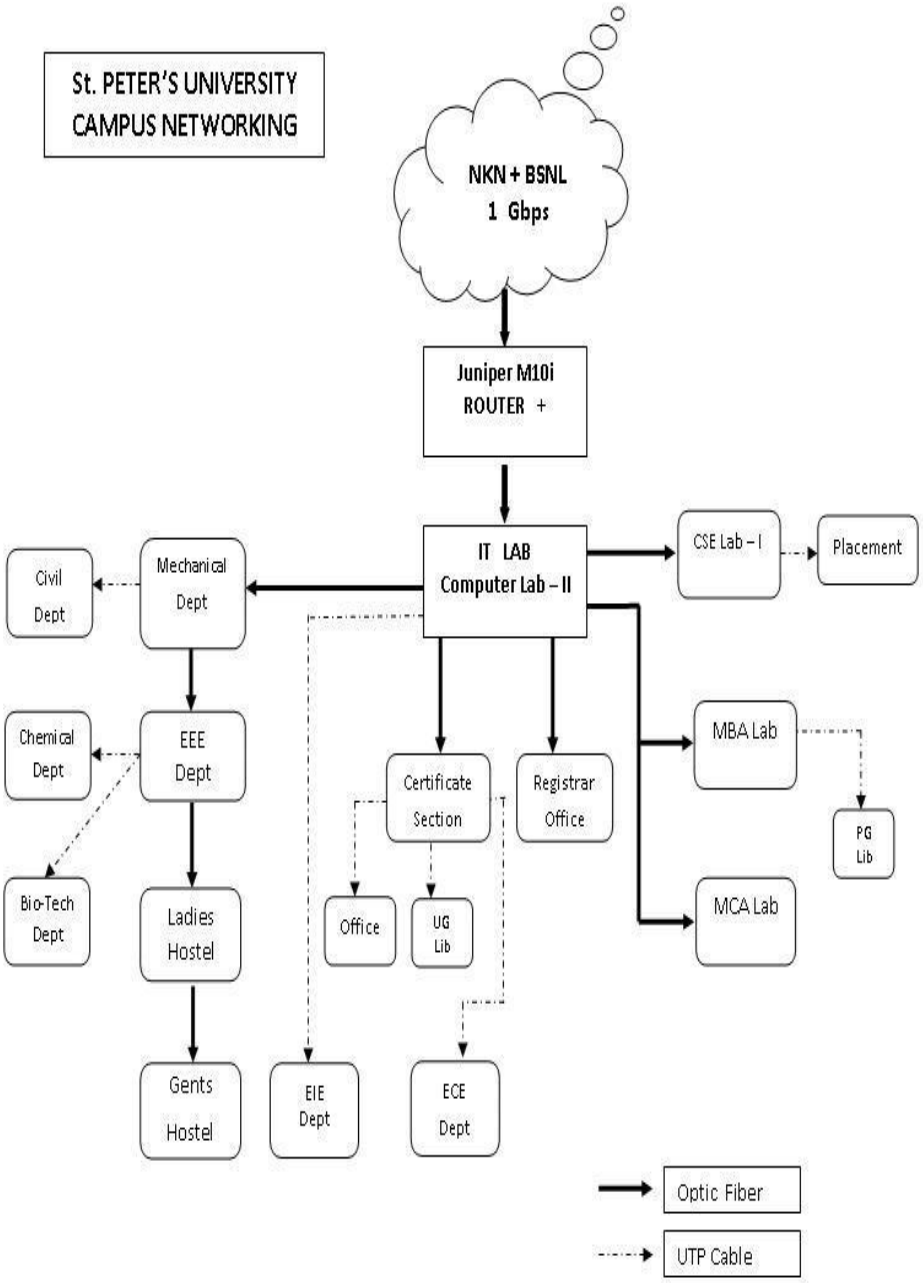
Dedicated computing facilities are available for all the departments of the university. The computing resources in the University are provided with firewall for secure network infrastructure for the use of faculty and students. These resources offer access to word processing, database packages, Internet, e-mail and print services and all the necessary softwares needed in the curricula.

LAN Facility

The Computer Centre facilitates internet connectivity to the entire University Campus with a speed of **1Gbps** provided by MHRD under NMEICT Programme through National Knowledge Network (NKN) and BSNL. The PIPE and Data Circuit Connectivity is provided by BSNL and NKN respectively. Wi-Fi facility is available in the campus.

NKN **1Gbps** connection is connected to Juniper M10i Router, then the Proxy Server and distributed to all the blocks of the University by OFC **1 Gbps** Media Converter. Hence, all the blocks are connected with OFC as backbone and terminated in the respective computer labs with **1 Gbps** D-Link Switches

The Campus Network diagram gives a detailed structure of the Campus Network.


St. PETER'S UNIVERSITY
CAMPUS NETWORKING
NKN + BSNL
1 Gbps
Juniper M10i
ROUTER +
IT LAB
Computer Lab – II
CSE Lab – I
Placement
Civil
Dept
Mechanical
Dept
Chemical
Dept
EEE
Dept
Bio-Tech
Dept
Ladies
Hostel
Gents
Hostel
Certificate
Section
Registrar
Office
Office
UG
Lib
EIE
Dept
ECE
Dept
MBA Lab
PG
Lib
MCA Lab
Optic Fiber
UTP Cable

Proprietary Software

The university is having the Microsoft Campus Agreement for Campus Licensing for all the Microsoft Products includes MS Windows 2008 Server R2 SNGL OLP NL Academic, Microsoft Essentials for Antivirus and CAL 2008 NL Acdmc UsrCAL. Other Software are MATLAB and Oracle 11i,IBM Rational Rose ,CATIA and CREO.

Number of Nodes/ Computers with Internet Facility

The University has excellent computing facilities, which includes latest computers connected over a network to our labs and offices with internet facility. The university has 955 nodes, which are interconnected via an ultra-fast Ethernet network. 40 computers in gent's hostel and 30 computers in ladies hostel are provided with internet facility. All the students are given valid user ID and password for accessing the systems.

Any other (please specify)

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

- Cloud computing facility is planned to be executed for networking.
- Big Data Analytics Lab is planned to be executed for the Post Graduate Students and Research Scholars.
- Provision of smart class rooms
- CCTV for the campus
- Video conferencing
- Webinars

4.3.4 Give details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research.

The faculty and students are provided access to on-line teaching and learning resources. The database / packages / journals such as IEEE, ASME, ASCE, open source journals from DELNET and INFLIBNET are available in the university library for the benefit of students and scholars. NPTEL materials and EDUSAT link have also been provided for the benefit of students and faculty.

4.3.5 What are the new technologies deployed by the university in enhancing Student learning and evaluation during the last four years and how do they meet new/future challenges?

The new technologies have been deployed during the last 4-5 years to enhance student learning and evaluation are strengthening of the hostels by the addition of 70 computers and internet facilities in the both ladies and gents hostel.

NPTEL video lectures have been procured for the benefit of the faculty and students. These technological facilities certainly helped the students in making learning environment more technology oriented. Also students have a lot of opportunities to learn outside the walls of the class rooms.

4.3.6 What are the IT Facilities available to individual teachers for effective teaching and quality research?

All the departments are provided with computers and internet connection. Necessary software and software development tools have been provided for preparation of lecture slides, reports and application software. Classes are conducted by the teachers using LCD projectors. NPTEL course material are also available in the departments which are used by faculty.

4.3.7 Give details of ICT – enabled classrooms/learning spaces available within the University? How are they utilized for enhancing the quality of teaching and learning?

LCD projectors and computers are widely used as classroom teaching support in university teaching departments. Seminar halls are equipped with audio visual facilities in all blocks. Language Lab provides ICT- enabled platform to the students to improve their communication skills. Supporting materials like CDs, DVDs, books, NPTEL study material, video lectures and CBT's are provided to the students for easy learning.

4.3.8 How are the faculty assisted in Preparing Computer-Aided Teaching-Learning Materials? What are the facilities available in the university for such initiatives?

All the faculty members in the university are qualified professionals in handling the systems. They assist other faculty if necessary to prepare power-point presentations. Supporting materials like CDs, DVDs, books, NPTEL study material, Video lectures and CBT's are provided to the students for easy learning.

4.3.9 How are the computers and accessories maintained?

Maintenance of computers is done by system administrators of the university and outsourcing if necessary. The system administrators clean the computers daily to remove the temporary and other junk files daily. Microsoft Essentials Antivirus software is used by the university for the protection of the computers from viruses, trojans, worms, spywares, root kits, hackers. Back up of university website database is done once in a week. Licensed softwares such as MS Server Windows 2008 std and MS Essentials Antivirus software are updated automatically.

4.3.10 Does the University avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes, the University avails the national Knowledge Network Connectivity. 1 Gbps Internet Connectivity is provided through MHRD and NMEICT Programme by BSNL. OFC PIPE Connectivity and Data Circuit are provided by BSNL and NKN respectively. Only Internet Service is availed at present. In future we plan to have e-mail service also.

4.3.11 Does the University avail of web resources such as Wikipedia, dictionary and other education enhancing resources? What are its policies in this regard?

Yes the university avails web resources. These facilities are extremely valuable to all faculty, students and research scholars in the university to improve their quality of research activities. A valid User ID and password is required to Login and access the E-Resources. The E-Resources Database menu contains the Journals such as IEEE, ASME, ASCE, open source journals from DELNET and INFLIBNET. Resources such as Wikipedia, dictionary are widely used by the faculty and students.

4.3.12 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the university.

Yes. There is a budgetary provision for the maintenance of computers and accessories every year.

4.3.13 What plans have been envisioned for the gradual transfer of teaching and learning from closed university information network to open environment?

The university has been making efforts to make teaching learning an open source. Already, open source journals from DELNET and INFLIBNET are available in the university library for the benefit of students and scholars. PHP, MySQL, and NS2 are used as open source software for the FOSS Lab

and Networks Lab for the students. Teachers are encouraged to create the online resources to enhance the open learning process. However, many subjects in the technical courses are analytical and classroom reading with student faculty interaction needs to be followed.

4.4 Maintenance of Campus Facilities

4.4.1 Does the University have an estate office / designated officer for overseeing the maintenance of buildings, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

Yes. The University has a Estate Office. This office is responsible for overseeing all the maintenance of building, classrooms and laboratories. An Estate Officer, who has a team of workers under him, heads this office. Separate assistants, plumbers and electricians have been appointed by the university and they work under the supervision of Estate Officer. A Gardener is recruited to monitor gardens and campus beautification as well as horticultural work. Sweepers and scavengers, with a structured supervision in place, rigorously do campus cleaning. Greater emphasis has been laid on the clean and green campus. During the last two years, 3200 saplings have been planted.

4.4.2 How are the infrastructure facilities, services and equipments maintained? Give details.

Annual Maintenance Contracts (AMC) have been made for the maintenance of costly equipments purchased by the university. Sewage treatment plant, fire extinguishers and all the air conditioners in the campus are also under AMC. The University has established Centre for Instrumentation to take care of the calibration of equipments.

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