



## CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

### 4.1 Physical Facilities

#### 4.1.1 What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The need for infrastructural facilities are assessed by various parameters like the introduction of new courses, increase in the intake of students, changed curriculum demanding the introduction of new laboratories, diversification of courses, need for introducing the technological innovations, etc. The requirements are discussed at the departmental level first, then at the infrastructure committee level, then heads of departments, and the need assessment is propagated to the management. The management discusses the requirements at the Dean and Joint Secretary level and ascertains the necessity of the new infrastructure and the cost analysis is done with the technically competent persons. This is then placed in the managing committee meeting which meets every second Saturday of the month as an agenda. The need assessment and the cost analysis would be circulated to the members ahead of the meeting. Based on the economic feasibility, technical feasibility and the actual need, the new infrastructure creation or enhancement would be initiated. Usually the creation or enhancement of new infrastructure takes a time duration of three to four months for the approval.

#### 4.1.2 Detail the facilities available for

##### a. Curricular and Co – Curricular activities

##### i. Curricular activities.

- **Spacious class rooms ( 38 class rooms)** with good seating infrastructure which are well illuminated and well ventilated. Average area of each class room is about **950 sq.ft. (88.26 m<sup>2</sup> )**
- **Seven class rooms** are made **ICT ready** with the LCD projectors and screen being fixed. Teachers can make power point or multimedia presentations in these class rooms as plug and play.



- **Laboratories** are well equipped and spacious with appropriate seating arrangement. Average area of each laboratory is about **1200 sq.ft. (111.48 m<sup>2</sup>)**
- Every department is provided with an **exclusive staff room** equipped with computer and internet connectivity. Average area of each staff room is about **800 sq.ft. (74.322 m<sup>2</sup>)**. About **18 staff rooms** are in existence.
- **NCC, NSS, Sports rooms and Placement** cell are equipped with computers and internet connectivity.
- **Common room for girls** exist on the ground floor with attached toilet facility.
- **An excellent library with over 60,000 volumes**, several periodicals, internet connectivity and good seating arrangement for 100 members for reference purpose. Xerox facility is available.
- **A separate e – library with about 20 computers and internet connectivity is available in the library. Students and staff can access e – resources in the library.**
- **A separate PG library with computer and reference section as well as issue section.**
- An **indoor auditorium** with multimedia facility and good seating arrangement. Indoor Auditorium has seating capacity of **600 members**. There is an **outdoor auditorium** with a seating capacity of **1200 members**.
- **Central computing facility** with about **80 computers** with core 2 duo processor and above computers. Internet connectivity is provided to all computers.
- **PG computer laboratory** with about 20 core 2 duo processors and above computers provided with internet connectivity. These computers are loaded with software suitable for scientific purposes and analysis.
- **English Language laboratory** with about 18 core i3 processor computers loaded with communication software and internet connectivity. The lab is also equipped with multimedia speakers and **LCD projector** for screening audio – visual learning aids like movies, e – resources, etc. The Language lab is also equipped with a **UPS of 5 kVA capacity**.



- **Spacious administrative office** with every personnel equipped with computer and internet connectivity. Enormous storage space for records in the office. A separate **UPS of 10kVA** capacity for the office.
- **An EDP section with core i3 computers and printer for purposes of maintaining student data base up to date.**
- **All the computers** in the college are **networked**.
- **Electrical Generator of 63 kVA capacity** for lighting purposes and laboratory purposes of the whole college campus. Online and Offline UPS facility for computers in the college with a total capacity of about 60 kVA. **Separate and dedicated electrical generator of 50 kVA for the auditorium.**
- A **green house** in the campus with a wide variety of plant species.
- A **museum** is attached to the **Zoology Department** which preserves and showcases a wide collection of animal species.
- The **Zoology laboratory** is equipped with the **smart board** for technology enabled teaching – learning.
- Every science laboratory and commerce department has been equipped with LCD projector.
- There are **two document projectors** for use in the laboratory and class rooms for teaching purposes.
- Department of **Physics** is equipped with **6 computers** for teaching computational physics in the laboratory. All the computers are networked and internet connected.
- Department of **electronics** is equipped with about 12 computers for teaching – learning purposes in the laboratory

## ii. **Co-curricular activities**

- Co-curricular activities are generally conducted after the class hours either in the class rooms or in the auditorium. Cultural fest and Commerce fest are conducted exclusively on two/three days where the teaching work will be suspended. These activities are conducted on a large scale in the class rooms, both indoor and outdoor auditoriums simultaneously. Indoor auditorium has a good ambience and a **seating capacity of 600**. Outdoor auditorium has a vast area with **seating capacity of about 1200**.



- b. Extra –curricular activities – sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.

### iii. Extra –curricular activities and sports

- Extra-curricular activities including extension activities are carried out in the indoor auditorium and outdoor auditorium
- The college has several committees which include [Physics ALPHA Club](#), [Electronic Vidyunmana Club](#), [Computer Science Protocol](#), [Commerce VINYAAS](#), [Life Sciences Nature Club](#), etc. where mostly students organize and plan the events throughout the year.
- The college has a [basket ball court](#) which conforms to the national standards. [A stadium](#) with a seating capacity of [about 500 persons](#) is in existence in the college field.
- The college has [volley ball and throw ball courts](#) in the open field.
- Cricket is practised in the college field everyday and more rigorously on holidays and Sundays. Cricket batting pitch with net for practice is created in the field.
- Outdoor Sports are conducted in the college field. Football and athletic events are conducted by hiring the National College, Jayanagar grounds or the Corporation Stadium, Jayanagar within a reach of 2 km from the college.
- Indoor games like Chess, Carrom, Table Tennis, etc. are conducted in the outdoor auditorium. The Shuttle Badminton and Ball Badminton are also conducted in the outdoor auditorium.
- [Multi-Gym facility](#) is provided for boy students and male staff of the college as a common facility in the High School building in the same campus either before 08:30 am or after 02:30 pm.

### iv. Public speaking and Communication Skills development

- Usually public speaking is either conducted in the indoor or outdoor auditorium. Public address system is in – built in the indoor auditorium



whereas in the outdoor auditorium, the Public address system will be put in place before the event starts.

- Communication skills is taught in the English Language Lab. Communication skills course is also introduced by the Career Counselling and Placement cell.

**v. Yoga**

Yoga is taught to students in the outdoor auditorium. Yoga is also practised in the outdoor auditorium. Usually, yoga classes are held whenever an yoga expert is invited to the college on a periodic basis.

4.1.3 How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution / campus and indicate the existing physical infrastructure and the future planned expansions if any).

The infrastructure of the college caters to the growing needs of the students and faculty. The class rooms are occupied from morning to evening for teaching programmes. The facilities developed/augmented during the last four years are as below:

Facility augmented	Year of Creation	Expenditure incurred (in Rs.)
Biotechnology Lab	2013 - 14	7,36,517=00
PG Physics Laboratory	2012 - 13 and 2013 - 14	25,11,338=00
X - ray Diffractometer for PG Physics Lab	2013 - 14	15,31,160=00
PG Chemistry Laboratory	2013 - 14	33,34,939=00
PG Mathematics Staff Room	2012 - 13	7174=00
Library partition to create a separate e - library	Dec 2013	95,625=00
PG Computer Laboratory	2011 - 12 and	3,87,081



Facility augmented	Year of Creation	Expenditure incurred (in Rs.)
	2012 - 13	
PG Library	2011 - 12 to 2013 - 14	6,00,000
English Language Laboratory	Oct 2013	11,00,000
ICT Related expenses	2010 - Jan 2015	1,15,95,921
New class rooms (8 Nos.)	Sept 2014	130,00,000
Installation of additional CCTV	July 2014	1,30,000
<b>TOTAL</b>		<b>3,50,29,755=00</b>

4.1.4 How does the institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?

- The class rooms for physically challenged students are allotted on the ground floor. The functional mobility of such students is helped by the peers and the staff of the college.
- Visually challenged students are helped by the peers for their functional mobility.
- Preferential service is provided to differently-abled students in the library and the canteen.

4.1.5 Give details on the residential facility and various provisions available within them:

a. Hostel Facility – Accommodation available

The college has hostel for girls in the campus as a common facility for all BHS institutions. The intake capacity is 80. The hostel is dormitory type provided with separate reading compartments and a warden on site 24 × 7. The girls’ hostel is fully accommodated to 80.

There is no hostel facility for the boys.



b. Recreational facilities, gymnasium, yoga center, etc.

The hostel inmates have various recreational facilities like television, screening of movies during weekends, etc. National festivals and Ganesha festival is celebrated. Dasara festival is also celebrated with pomp and splendor.

The existing indoor and outdoor sports facilities are utilized by the inmates during the morning and evening hours. The hostel inmates have been found playing shuttle badminton, ball badminton, volley ball, throw ball, etc.

c. Computer facility including access to internet in hostel

NIL

d. Facilities for medical emergencies

The hostel is considered a home away from home and inmates are given utmost personal care. Love and affection is showered by the warden. First-aid is available in the campus. The health tie-up with Rangadore memorial hospital is extended to the hostel mates as well. The transportation facility is provided by the ambulance of the hospital in case of emergencies.

e. Library facility in the hostels

NIL

f. Internet and Wi-Fi facility

NIL

g. Recreational facility-common room with audio-visual equipments

NIL

h. Available residential facility for the staff and occupancy

Not available

i. Constant supply of safe drinking water

Mineral water is supplied to the hostel inmates with a dispenser. Also water purifier is installed in the premises.

j. Security

The hostel and the college campus has security 24 × 7.



4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?

The college has a tie-up with Rangadore Memorial Hospital for the medical care of students. However, the health centre attached to the NCC wing of the college provides the necessary first-aid in cases of emergency before being referred to the hospital. The college being in the centre of the city is surrounded by many leading private and government hospitals which is well accessible within 10 minutes from the college.

4.1.7 Give details of the Common Facilities available on the campus

Sl. No.	Facility	Features
1.	IQAC Office	The functional unit of IQAC in the college is located in the mezzanine floor opposite the Zoology department of the college. The space is shared with Career and Counselling Cell and Placement cell . This unit is provided with computer and printer having internet connectivity.
2.	Grievance Redressal Cell	The grievance redressal cell is shared in the electronics department of the college
3.	Women Empowerment Cell	The Women Empowerment cell in the college shares its office in the department of physics and department of Botany
4.	Counselling and Career guidance, Placement Cell	The functional unit of counseling and career guidance as well as the placement cell is shared with the IQAC in the mezzanine floor opposite the department of zoology. This unit is provided with a computer, printer and internet connectivity
5.	Staff Rooms	Each department is given an exclusive staff room with each room having an average area of 800 sq.ft. Computer Science department are provided two staff rooms. <b>The average area per staff member in the staff room is about 90 sft.</b> All the staff members are provided with a table, a chair and a personal cupboard. The staff rooms are well ventilated, lighted and provided with a





Sl. No.	Facility	Features
		computer and internet connection
6.	Common room for girls	One common room for girls is provided on the mezzanine floor opposite department of electronics with an attached toilet and a lady attendant staff. The room is equipped with chairs, tables, Newspapers and periodicals are provided for student use
7.	Rest Room for Girls	The rest room for girls is available on the ground floor and two units in the second floor in addition to the facility in the common room for girls
8.	Vehicle Parking	The college campus has a large area of parking space both in front of the college and the back yard of the basket ball stadium. Nearly 1200 two wheelers can be parked and about 60 four wheelers can be parked at any point of time. The space for staff vehicle parking is provided on the ground floor in the rear block and the side wing of the PU block.
9.	Guest House	Guest house facility is not exclusively available at present. <b>A guest house in the Vijaya Teachers College, Jayanagar run by the Management is being used as a common facility at present.</b> Whenever dignitaries are invited and accommodation is required, they are housed either in the Vijaya teachers College guest house or are accommodated in decent lodges around the college within a radius of 1 km.
10.	Canteen	The college has a hygienic canteen in the front end of the campus. The canteen serves delicious and nutritious food, both South Indian and North Indian, at a subsidized cost.
11.	Transport	Transport facility is not provided by the institution at present. The college, being located in the center of the city, has been well connected to all parts of the city with the help of public transport system. A metro railway station is planned by the Govt. in front of the institution and the work is under progress. During field visits and industrial visits the transportation is hired by the



Sl. No.	Facility	Features
		college
12.	Drinking Water	Two Water coolers with Aqua guard and reverse osmosis (RO) purifier facility are available on the ground floor. The college draws drinking water from the Bangalore Water Supply which provides filtered and clean water
13.	Bank	Syndicate Bank is located in the college campus. All fee remittances are to be made to the appropriate accounts maintained with this bank
14.	ATM	An Axis Bank ATM Counter and Syndicate Bank ATM is available in the college campus at the front end
15.	Recreational spaces for staff and students	There are separate staff rooms for every department. The college has indoor and outdoor games. Ball badminton, Shuttle badminton, chess, carrom, etc. are accommodated in the outdoor auditorium. Basket ball, Cricket and football are being played in the outdoor field
16.	Auditorium	An indoor auditorium with multimedia facility and good seating arrangement for about 600 members. An outdoor auditorium with a seating capacity of 1200 members.

## 4.2 Library as a Learning Resource

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

The library does have an Advisory committee; the composition of the committee is as under.

Sl. No.	Name of the member	Designation
1.	Prof. A R Ramesh Babu, Principal	Member
2.	Dr. M Suryaprasad, Vice - Principal	Member



Sl. No.	Name of the member	Designation
3.	Dr. M S Nagashree, Professor, Mathematics	Member
4.	Prof. D P Ravindra, Professor, Commerce and Management	Member
5.	Prof. H K Gundu Rao, Professor and Head, Computer Science	Member
6.	Smt. B S Sheela, Librarian	Member
7.	Sri. Naveed Ahamed, Librarian	Member
8.	Smt. Vijaya Prabhakar, PG Librarian	Member

The committee regularly meets to address issues of concern to staff and students. Change and extension of timings, addition of staff, augmenting of services like print, scanner, Reprographic facility – acquiring new and disposing old, etc. are some of the initiatives proposed and implemented by the committee.

The committee identified the core journals that are needed by the faculty as well as student community in general. Various proposals have been sent to the departmental heads for identification of journals that are useful. Action has been taken on such proposals and Journals have been subscribed as per the suggestion of department heads. Steps are underway to subscribe the remaining proposals which will be completed in due course.

Committee played a pivotal role in enhancing the library budget to acquire more number of reference books as well as other general books, especially books which are needed for career oriented examinations. A separate rack is dedicated to such books.

A separate e-library was set up to provide internet facility to the student community with a seating capacity of 20 student and equal no. of systems to upgrade their knowledge as well as scouting information needed in learning process.



The advisory committee felt the need for a separate Post Graduate library to complement the quick reference and other services required for both staff and student community. However the main library remains the hub for both Post Graduate as well as Undergraduate users.

Internet facility is provided in the main library for all the students.

4.2.2 Provide details of the following:

Sl. No.	Item	Description	
a.	Total area of the library (in Sq. Mts.)	UG	624.31 m <sup>2</sup>
		PG	85.47 m <sup>2</sup>
		TOTAL	709.78 m <sup>2</sup>
b.	Total seating capacity	UG	120
		PG	35
		TOTAL	155
c.	Working hours	On working days	7.30 am to 5.30 pm
		On Holidays	Nil
		Before examination days	7.30 am to 6.00 pm
		During examination days	7.30 am to 6.00 pm
		During Vacation	7.30 am to 5.30 pm
d.	Layout of the library	Individual reading carrels	NIL
		Longue area for browsing and relaxed reading	NIL
		IT zone for	20



		accessing e-resources (UG and PG)	
		Servers	2

4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.

Library acquires latest catalogues and other bibliographic materials of almost all major publishers to identify the new titles and other resources and the same will be circulated to the departments for identification of books and other learning materials. The heads of the departments in consultation with the departmental colleagues depending on the demand for new and relevant materials, provides a list of books /journals to be procured to the librarian. The librarian arranges for the order to be placed with the respective publishers or book sellers. As soon as the book is acquired the same will be kept in 'New Arrivals Rack' for awareness among the users.

Further, the library also conducts book exhibitions to create an awareness about new titles published in the respective area of study. Faculty members are also invited to make use of the same which may lead to selection of books that are needed to the library.

The year wise statistics of books and journals acquired along with the cost and no. are provided below.

**UG LIBRARY**

Library holdings	2010 - 11		2011 - 12		2012 - 13		2013 - 14	
	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost
Text books and Reference Books	1972	442407	2058	421165	1976	402066	2010	435056



Library holdings	2010 - 11		2011 - 12		2012 - 13		2013 - 14	
	No.	Total Cost	No.	Total Cost	No.	Total Cost	No.	Total Cost
Journals/ Periodicals	49	34174	47	34845	49	30114	46	30140
e-resources		5000		5000		5000		5000
Any other (Newspapers)	10	11483	10	11822	10	10867	10	10962
<b>TOTAL</b>		493064		472832		448047		481158

TOTAL for four years : **Rs. 1895101**

**PG Library**

Library holdings	2012 - 13		2013 - 14	
	No.	Total Cost	No.	Total Cost
Text books and Reference Books	554	204299	403	178204
Journals/ Periodicals			10	19,100

Total PG expenses : **Rs. 401603**

**TOTAL LIBRARY Expenditure : Rs. 2296704**

- 4.2.4 Provide details of ICT and other tools deployed to provide maximum access to library collection?

Library is equipped with state of the art software to automate the various library functions.

OPAC (Online Public Access Catalogue)	Available for the users to browse the content thro' Author, Title, Publisher, and Key word search
INFLIBNET (N - LIST e - resources and e - books)	Subscribed which caters to the needs of users of different subjects
Library Website	Details of the library integrated into the college website on a separate page
In - house / remote access to e - publications	Available
Library Automation	Automated with Easylib library automation software



Total number of computers for public access	20 Nos.
Total number of printers for public access	01 (Networked)
Internet Bandwidth / Speed	8 Mbps
Institutional Repository	Available in both hard and soft copy format
Content Management system for e - learning	Not yet implemented. However, the NPTEL e - learning content is installed
Participation in resource sharing networks / consortia like INFLIBNET	College subscribes to INFLIBNET

4.2.5 Provide details of the following items.

Sl. No.	Item	UG	PG
1.	Average number of Walk – Ins	90 users / day	4.53 users / day
2.	Average number of books issued	51 books / day	5.97 / day
3.	Average number of books returned	49.8 books / day	4.92 books / day
4.	Ratio of library books to students enrolled	25 books / student	185 books / student
5.	Average number of books added during last three years	2014 / year	228 / year
6.	Average No. of login to OPAC	7 per day	Not Applicable
7.	Average no. of login to e - resources	62 per day (UG and PG combined)	
8.	Average no. of e - resources downloaded / printed	22 per day	
9.	No. of information literacy training organized	Not yet implemented	
10.	Details of weeding out of books and other materials	12,000 books weeded out	NA



A Power Point presentation has been uploaded in all the systems, the students can follow such presentation to learn the information scouting methods, use of INFLIBNET, and searching information thro’ Boolean search on web OPAC.

4.2.6 Give details of the specialized services provided by the library?

Sl. No.	Item	Description
1.	Manuscripts	Nil
2.	Reference	Separate section is provided
3.	Reprography	Available For both UG & PG students
4.	ILL (Inter Library Lending) services	Within the sister institutes of BSHES
5.	Information deployment and notification	Done from time to time
6.	Download	Available and restricted to only academic purpose
7.	Printing	A centrally connected printer is provided through LAN
8.	Reading list/Bibliographic compilation	Bibliographic compilation is available
9.	In house/remote access to e-resources	Available
10.	User orientation and awareness	Provided on request
11.	Assistance in searching databases	Provided
12.	INFLIBNET/IUC Facilities	INFLIBNET consortia available to the users

4.2.7 Enumerate on the support provided by the library staff to the students and the teachers of the college.

- The entire collection has been classified, catalogued according to AACR-II and Dewey decimal classification rules. The racks are arranged according to the depth classification. Any user can find the needed document just by following the classification of racks. However, assistance is provided to both teaching and student community to





locate the document and with proper guidance rendered by the library staff.

- The library has maintained e-database of the entire collection of resources. Any user can use the OPAC and search the document needed on the basis of Author, Title, Subject and keyword search along with the status of the book in question.
- Facilities to reserve a book exist and software support is available for this facility.
- Selective dissemination of information is provided to the students and the faculty on the request basis.
- New books purchased to the library are displayed on new arrival rack for the information to the users.
- Question bank of previous examinations pertaining to all semesters is available in the library.
- Reference section is available and the books used by the users are suggested to be left on the table so as relocate it properly. The library has a slogan : “A book misplaced is a book lost”.
- Back volumes of journals are bound and preserved
- Information on competitive examinations and employment opportunities exist.
- **SC/ST Book Bank** facility is in existence.

4.2.8 What are the special facilities offered by the library to the Visually/ physically Challenged persons? Give details.

Library Support staff is sufficiently trained to handle Physically challenged by providing assistance to such students by hand delivering the books and journals needed by them whenever required.

4.2.9 Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services.

The feedback about the library is collected during the student feedback from all the students and also during the Campus experience feedback from



outgoing students. Feedback is analyzed and corrective measures are implemented. Students also provide feedback thro’ the suggestion box provided at the entrance of the library. The outcome of the feedback analysis is discussed at the Advisory committee meetings and are adopted after thorough discussion.

### 4.3 IT Infrastructure

4.3.1. Give details on the computing facility available (hardware and software) at the institution.

a. Number of computers with Configuration (provide actual number with exact configuration of each available system)

Computers Located at	No. of Systems
Central Computing Facility	85
Physics	6
Electronics	13
Other Departments	16
PG Computer Center	20
English Language Lab	18
Administrative Office	18
Laptops	9
Servers	6
<b>TOTAL</b>	<b>191</b>

Availability to students : 170



**Configurations**

Central Computing Facility; Physics; Electronics; English Language Lab; PG Computer Center; Administrative Office; 4 computers in Library	
Processor	Intel Core i3-2120(3.0 GHz, 3 MB Cache) 3 <sup>rd</sup> generation
RAM	2GB, DDR3 – 1333 MHz/ 1600MHz RMA, expandable to 4 GB or more with minimum 2 DIMM slots
HDD	500 GB (SATA) III with 3.0 Gbps, 7200 rpm
Ports	Serial – 1, parallel - 1, 6 USB 2.0 VGA;
Monitor	18.5” wide / flat ( or more/better) TFT monitor
Departments	
Processor	Intel Core 2 Duo
RAM	2GB, DDR3 – 1333 MHz/ 1600MHz RMA, expandable to 4 GB
HDD	500 GB (SATA) III with 3.0 Gbps, 7200 rpm
Ports	Serial – 1, parallel - 1, 6 USB 2.0 VGA;
Monitor	18.5” wide / flat ( or more/better) TFT monitor
Laptops	
Processor	Intel Core i3-2 <sup>nd</sup> generation ; Core i7; Core 2 Duo;
RAM	2GB, DDR3 – 1333 MHz/ 1600MHz RMA, expandable to 4 GB or more with minimum 2 DIMM slots
HDD	500 GB (SATA) III with 3.0 Gbps, 7200 rpm
Ports	Serial – 1, parallel - 1, 3 USB 2.0 , 1 USB – 3.0 VGA;
Monitor	18.5” wide / flat ( or more/better) TFT monitor



Servers
3.00 GHZ Quad Core / 12 MB Cache; 8 GB RAM; 500 GB HDD; Server Software ;

b. Computer-student ratio

170 : 2513 ( 1 Computer : 15 Students)

c. Stand alone facility

Nearly 165 computers are stand alone facility computers

d. LAN facility

The entire college campus is networked. The college is provided with the BSNL broadband unlimited plan of 8 Mbps bandwidth.

e. Wi - fi facility

The campus is not Wi - fi enabled as it leads to decrease in the speed and creates access issues since the entire campus network is on open internet access mode. Every department and the class rooms enabled ICT ready has been provided with the cabled network communication. However, using a router, the network can be made Wi - Fi ready any time.

f. Licensed software

The college has a corporate license software with the Micro - soft . All the software loaded has been licensed with different agencies.

Name of the Software	Licensed by
Microsoft Windows	Microsoft Corporation - Corporate version
Microsoft Office	Microsoft Corporation – Corporate Version
LINUX	Open source software
Tally	Tally Solutions
Library Software – Easy Lib	Purchased from a software dealer
Anti - virus software	Purchased from a software dealer
Statistical Packages	Open source
Scilab	Open source



g. Number of nodes/ computers with Internet facility

All the computers in the college are networked and provided with internet facility.

h. Any other

A system administrator has been appointed in – house to maintain and attend all the computer system issues in the college. The computer lab and office is also managed by the programmers and the technicians in the electronics laboratory.

4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

- Every department in the college is equipped with a computer and a printer. The individual departments have internet connectivity.
- Some of the departments have laptops and scanners.
- The library has 20 computers for accessing e – resources like INFLIBNET, NPTEL and other open sources with internet connectivity.
- English Language Lab and the PG computer Center has 38 computers put together with internet facility for accessing and browsing e – resources.
- Departments of Physics and electronics have 19 computers put together to meet the curricular requirements of the students in these subjects. These computers are also provided with internet connectivity.
- Computer Science Laboratory is open from morning 8:00 am to evening 5:00 pm for students to access the computers whenever they are free. All the computers are provided with internet connectivity.
- The college office has about 18 computers and is provided with a separate internet connectivity. The college faculty use the systems in the office whichever is free.
- Scanner, print facility and Xerox facilities are also available to the students and the faculty.

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

- The upgradation of computer systems is taken up on a periodic basis as and when the necessity arises. For example, whenever the new



technology or new processor based systems are introduced in the market, the systems are upgraded. Also, the system replacement is done with new systems whenever a particular system is found beyond repair. The old computers are used for hardware and networking courses being introduced as add-on courses. Due to rapid changes in the IT technology, the college annually plans to replace or add atleast 20% of the computers with the newer hardware versions so that there is a gradual change over of the hardware with a period of time.

- The IT infrastructure is also upgraded in terms of the software again due to frequent revisions and updations in the newer software released.
- The servers are replaced once in three years with the associated software.
- The printers and scanners are also upgraded once in two years with new additions to the laboratories, office, library and departments.
- Faculty are trained in new IT technologies and students are required to be IT literate prior to passing out of the college.
- Upgradations and innovations are introduced based on the annual budget and the UGC grants being made available.

4.3.4 Provide details on the provision made in the annual budget for procurement, upgradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years)

Budgetary provision is made for the following:

- Upkeep and maintenance of existing computers
- Special provision for computer systems to be purchased and upgraded

Purchase of mother boards with new configuration, interface boards, RAM upgradations, key boards, CDs, DVDs, external Hard Disks, etc.



Year	Procurement and Upgradation	Maintenance	Total
2011 - 12	830000	100000	930000
2012 - 13	1230000	100000	1330000
2013 - 14	2000000	30000	2030000
2014 - 15	1200000	30000	1230000

The college has a System Administrator who monitors the well being of the systems and takes up necessary preventive and corrective measures.

4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?

- Most of the departments are equipped with LCD projector and laptops. All the departments have desktop computer with internet facility. Library also has extensive resources for adopting ICT by students and staff. The computer science department also lends facilities for use by students and staff.
- Training on the use of LCD projector / document projector and power point presentations are held by the staff of computer science department.
- Interactive smart board is available in the department of Zoology. Faculty are trained on the use of the smart board.
- Nearly seven of the class rooms are enabled ICT ready. Some of the teachers are using these facilities for teaching – learning exercises.
- Students also use the ICT facilities for their seminar presentations, assignments and preparing study notes.
- Some of the faculty have uploaded the teaching content on the college website. Constant developments of the teaching content in respective departments have been taken up on a gradual and periodic basis by the faculty of the college.
- **NPTEL resources** are available for access and students are suggested to



use them extensively.

- Total computerization of cataloguing of books, issue and return of books with customized software. Computers are used for searching the availability of a book based on title search, author search, publisher search or keyword search for Swift access to library books.
- Departments of PG Mathematics, Physics and electronics have established computer facilities for the benefit of the students and the faculty.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching - learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.

- All the learning activities are made student – centric with several approaches being put in place. Some of the class rooms are made ICT ready wherein a few teachers have adopted ICT in their class room presentations. The audio – video dissemination of information enables a student – centric learning environment.
- Student seminar presentations , project work in a few departments and the field visits enable a student – centric learning environment. The teacher plays the role of a guide suggesting the reference material, books and e – resources to be used.
- Access to various open e – resources and NPTEL resources both at the library and the departmental levels enable a student to develop independent learning environment
- The teaching content uploaded on the college website ensures a good understanding of the subject and independent learning by the student.
- The assignments provided to the students render the student to make references in the library books and e – resources suggested by the teacher to complete the assignment.
- Mathematics is taught through the use of Scilab which enables the students to understand the rudiments much better where a teacher is only a facilitator.





- Language CDs and several e – resources are available in the English Language Lab which enables the student to learn communication skills independently with the teacher acting as the facilitator.

4.3.7 Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

The institution has direct national knowledge network connectivity provided by MHRD through its NME ICT Project. The college has 20 such connections. Open access resources are being utilized along with the access to NPTEL resources procured from IIT Chennai and installed in the college. Access to e – resources is facilitated through INFLIBNET subscription.

#### 4.4 Maintenance of Campus Facilities

4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?

The college would be sanctioned minimum amounts by the management based on the previous year’s expenditure for different items apart from the UGC funds available. Whenever needs arise for more funds, the management releases the funds as a special grant.

Maintenance of	Budget Allocation for the year (in Rs.)			
	2011 - 12	2012 - 13	2013 - 14	2014 - 15
Land (Landscaping and Garden Maintenance)	30000	40000	20000	17000
Building	800000	160000	90000	70000
Furniture	30000	40000	20000	17000
Equipment	60000	60000	50000	36000
Computers	100000	100000	30000	30000
<b>TOTAL</b>	<b>300000</b>	<b>400000</b>	<b>210000</b>	<b>170000</b>



- 4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?
- Housekeeping jobs like cleaning and sweeping the corridors and class rooms is given as an annual maintenance contract with one of the housekeeping agencies identified by the Management. The toilets are maintained by the peon of the college appointed for the purpose and the housekeeping agency.
  - The civil works maintenance is taken care of by a Civil Engineer appointed for the up keep of the building structure and ensure its fitness for use. Constant maintenance works will be taken up round the year.
  - A plumber is given the annual maintenance contract to ensure the good condition of taps, connecting pipes, chambers, good water supply in the campus, clean drinking water, good sanitation lines, etc.
  - Electrical maintenance is taken care of by an electrician appointed for the purpose. He is bestowed with the job of identification of faulty electrical fittings and their replacement throughout the year. He is also responsible to ensure that no loose wires keep hanging and that electrical connections are safe.
  - A Computer Hardware engineer (**System Administrator**) is appointed to ensure the upkeep of all computers in the campus. The system administrator raises the request with one of the servicing companies to do further servicing.
  - An electronics expert is identified and appointed to service the laboratory equipment. He is also endowed with the responsibility of identifying persons to service other instruments like Microscopes, Spectrometers, etc.
  - The laboratory attenders have the job of ensuring clean working conditions in the laboratory and maintaining the cleanliness of the apparatus.
  - The above measures make sure that the system has almost no entropy in its functioning.



#### 4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/ instruments?

The process of calibration and precision measures are handled by the electronics expert appointed by the management to upkeep all the electronics equipment. In respect of mechanical and chemical equipment, either the department personnel maintain themselves wherever it is feasible or invite the external agencies to maintain the equipment as or when the need arises. The external agents are paid on per call basis and the cost of components as per the actuals. Suppliers and technical experts of costly equipment provide training to departments at the time of installation. If the maintenance of costly equipment is not feasible by the staff, the actual manufacturer is invited to take the necessary preventive and corrective measures on per call basis.

#### 4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?

- The college electrician and the supporting staff is responsible for the upkeep of electrical equipments and their maintenance.
- Whenever voltage fluctuations go beyond a certain level, the auto – on generator turns on cutting off the mains supply.
- UPS has been installed in various departments, office, computer lab and library which ensures that the power supply is taken by the UPS in cases of large voltage fluctuations.
- In case of maintaining sensitive equipment, the voltage stabilizers along with spike busters are installed.
- Constant water supply is ensured by filling the overhead tanks on a periodic basis in the day.
- Hygienic Drinking water is ensured by installing RO Plant with aquaguard purified water filters.
- Plumber appointed for the campus maintenance ensures block free pipe connectivities for the supply of water.



Any other relevant information regarding Infrastructure and Learning Resources which the college would like to include.

- Excellent infrastructure in terms of well illuminated and well ventilated class rooms, library and laboratories which provide the needed ambience for learning
- **Book bank facility to SC/ST students and OBCs**
- Technological upgradation not only in terms of acquisition of computers and their maintenance but also in procuring equipment for laboratories of other departments.
- Regular maintenance by housekeeping personnel. Housekeeping is outsourced to an external agency.
- Huge expenditure is incurred on maintenance of equipment, building, land and expansion of infrastructural facilities to keep pace with the ever increasing demand for the seats in the college and introduction of new courses.
- Well maintained lawn, landscapes, water fountain, dotting greenery around the campus, green house and well maintained museum in zoology department.
- A good and well maintained library with ever increasing holdings of books and digital repository with a user-friendly service
- Reprographic service in library
- A large number of latest computers with internet and intranet connectivity for use by staff, students and office personnel.
- Availability of latest teaching aids like multimedia projector (LCD and DLP)
- Also teaching-learning aids like slide projector and movie projector are still put to use in a few departments.
- Infrastructural facilities for conducting various cultural, literary, extra-curricular activities along with sports facilities
- **Sprawling field for Cricket, kabaddi, kho-kho and basket ball games**
- **A large stadium in the sports field for encouraging sports by other students**
- Availability of various implements for conducting extension activities through NSS and NCC
- Adoption of ICT in teaching-learning aspects
- Limited hostel facility for girl students well within the campus
- Canteen facility at subsidized rates



- A syndicate bank and Axis bank ATM counter in the college campus
- Electrical generator of 63 kVA capacity for the whole college campus. Separate 50 kVA generator for indoor auditorium and rear block. Online UPS of 30 kVA and 15 kVA for computer laboratories.
- In-house service engineers appointed exclusively for maintaining computers, maintaining laboratory equipment, electrical fittings, civil works and plumbing.
- Departmental libraries in addition to the central library for use by staff and students on daily basis.
- Heavy duty Xeroxing machine available in the Management office as a common facility for making copies of confidential material like internal test question papers.
- First – aid center in the campus and health care by a multi-speciality hospital of repute in Bangalore South.

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