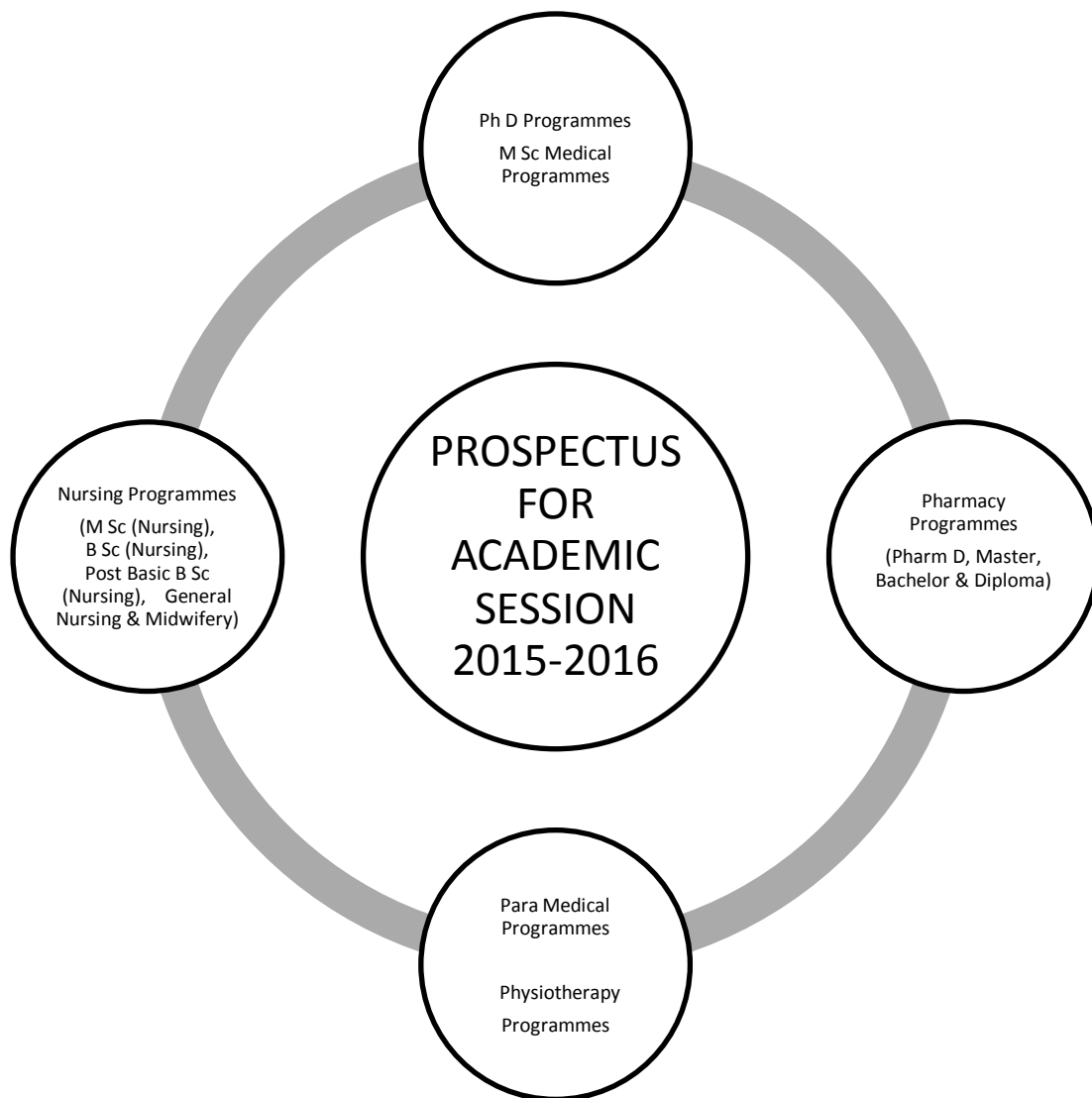


ADESH UNIVERSITY



There is one God	IK ONKAR
His name is everlasting	SATNAM
He is the Creator	KARTA
He is present throughout His creation	PURAKH
He fears none	NIRBHAO
He hates none	NIRVAIR
His existence is immortal	AKAL MOORAT
He is not born, nor does He die	AJOONI
He is self-illuminated	SAIBHANG
He is realized through the grace of the Guru	GUR PRASAD

INVOCATION

Deh shiva var mohe ehe,
Shubh karman te kabhun na taron,
Na daron arson jab jaye laron,
Nishchay kar apni jeet karon.

“O Lord, grant me this boon
May I never shirk from doing good deeds
Never should I be afraid when I go to confront the enemy
and be certain to attain victory.

Constituent Colleges/ Centers/ Departments
of
Adesh University (AU)

1. Adesh Institute of Medical Sciences & Research, Bathinda
2. Adesh Institute of Dental Sciences & Research, Bathinda
3. Adesh Institute of Pharmacy & Biomedical Sciences, Bathinda
4. College of Nursing, AIMSRS, Bathinda
5. College of Paramedical Sciences, AIMSRS, Bathinda
6. College of Physiotherapy, AIMSRS, Bathinda
7. College of Pharmacy, AIMSRS, Bathinda
8. Centre for Interdisciplinary Biomedical Research, AU, Bathinda
9. Department of Library & Information Sciences, AU, Bathinda

Message from

Chancellor

I personally, and on behalf of the Governing Body as well as the whole ADESH-family extend you a very warm welcome to join Adesh University to structure your career. We have clearly laid down our vision, mission and values and all efforts are being made to utilize the infrastructural facilities and intellectual capital to achieve these goals and values. It is our endeavor to encourage our students to participate and to involve in medical, technical, social, cultural and sports activities, just to enable them to stay abreast with global demand of being a complete human being.

When we started our first multi specialty referral hospital in 1989, our mission was to provide quality care of international standards in India. Our consistent commitment in maintaining excellence has made us the largest healthcare provider in Punjab. Today, Adesh Group is a world in itself. We manage a network of specialty and super specialty hospitals and clinics, and provide technical, medical & paramedical education. After twenty five years of dedicated service, I feel, We still have a lot to achieve.

Today, we now have a string of medical, dental, pharmacy, physiotherapy and paramedical colleges. The Adesh Group has established various colleges of Engineering & Technology, Polytechnics in Punjab. Over the years it has been fostering the mission of promoting educational excellence in the field of science and technology and has now grown into a premier technical and engineering education provider in India. We offer Diploma, Graduate and Post Graduate programs in various areas of Medical, Engineering & Technology, Pharmacy and Management.

I invite you to explore this unique field of study, which truly has an impact upon science, medicine and society. Please get in touch with us for any assistance and more information.

Dr H S Gill
MD (Medicine)
Chancellor

Message from

Vice-Chancellor

Dear students and parents,

It is with a sense of great pride and joy that we welcome you to Adesh University Bathinda Campus. The foundations of this institution have been raised on the vision to make it a world class centre of excellence in higher education, be it in healthcare or in other realms and also to provide a nidus for patient care comparable to the finest anywhere in the world. The focus therefore is on the student who has chosen Adesh University, to develop as wholesome professional globally competitive and locally responsive and for that we have set lofty institutional objectives as you shall perceive once you enter the portals of this University.

The last few years have seen us working with a great sense of determination and commitment to make this campus develop as a mini town with all the facilities inside. We are well aware that this is going to be your home away from your own home for the next several years and it is vital that the campus provides an amicable and congenial environment, healthy for your growth and comfort.

Although you are here primarily in pursuit of good education and qualification, yet, we believe that, you should have adequate opportunities for extracurricular activities, particularly cultural and sports. We encourage all such activities that will help you to develop an all round personality and become an excellent professional. At this juncture, it is important that you become aware of our expectations of you as well. As much as you have a right to stay and enjoy the privileges in the campus, other fellow students who are here have this right as well. Hence, this institution cannot tolerate indiscipline in any form including any acts of teasing, ragging or harm to fellow students, physical or emotional.

Students who have difficulties with their subject(s) are encouraged to directly seek counseling from the Principal/Head of the department concerned. They are further encouraged to contact the administration to obtain necessary help for improvement. As per institutional policy, it is mandatory for every student to ensure 75% attendance including attendance in the non-theoretical aspects of every subject besides meeting the required standards set up for the internal assessment examinations.

Having said all this, we want you to always remember that we as well as every member of the faculty, staff and management, measure our success by yours and that our doors are always open for you if you ever need our help. Wishing you the very best in your life.

Dr (Lt Col) G P I Singh
MD, DIH, FISCD, FIAPSM, FIPHA
Vice Chancellor

IMPORTANT DATES FOR B SC (NURSING)/B SC POST BASIC NURSING PROGRAMMES

1.	Last date for Online submission of Application form including particulars of Demand Draft of Rs 2000/- for General Category (Rs 1500/- for SC Candidates) in favour of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda	15.07.2015 up to 4.00 PM
2.	Last date for submission of print out copy of Application form along with self-attested copies of certificates and Demand Draft in favour of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda at the campus of Adesh University Barnala Road, Bathinda (Punjab)	18.07.2015 up to 4.00 PM
3.	Last date for submitting Application Form along with self-attested copies of certificates at the campus of Adesh University Barnala Road Bathinda with late fee of Rs 1000/- at the cash counter Adesh University	20.07.2015
4.	Availability of Admit Card on the University Website for Entrance Test for B Sc Nursing.	From 20.07.2015 onwards
5.	Conduct of Entrance Test	25.07.2015 (Saturday)
6.	Declaration of Result	Will be notified on the University Website

IMPORTANT DATES FOR PROGRAMMES OTHER THAN B SC NURSING/ B SC POST BASIC NURSING PROGRAMMES

1.	Last date for submission of Application form along with self-attested copies of certificates and fee cash/ Demand Draft in favour of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda/University Receipt of Rs 1100/- for General Category (Rs 900/- for SC Candidates).	18.07.2015 up to 4.00 PM
2.	With late fee Rs 1000/- cash or Demand Draft in favour of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda/University Receipt.	22.07.2015 up to 4.00 PM

Counseling and joining the programme: Counseling will be held at Campus of Adesh University, Bathinda from 9.00 AM onwards as per schedule given below:

Ser. No	Counseling and other schedule	Date
1.	1st Round of Counseling	Will be notified on the University website
2.	Last date for joining the programme	Will be notified during Counseling
3.	2nd Round of Counseling	Will be notified on the University Website
4.	Commencement of the Academic Session	01.08.2015

Contents:-

- A. General information about Adesh Foundation Sri Muktsar Sahib, and its Institutes**
- B. Information about Adesh University and its constituent Colleges**
- C. Eligibility & Admission Procedure for programmes offered by Adesh University**
- D. Institute Rules**
- E. Hostel Rules**
- F. Academics Awards**
- G. Library**
- H. Rules regarding Ragging and its Prevention**

Heads of Institutions

Dr Harkiran Kaur Khaira

Principal, Adesh Institute of Medical Sciences & Research

Dr Amanish Singh Shinh

Principal, Adesh Institute of Dental Sciences & Research

Mr Sridhar KV

Principal, College of Nursing

Dr H C Patil

Principal, Adesh Institute of Pharmacy & Biomedical Sciences

Mr Sarabjit Singh Brar

Principal, College of Pharmacy

Mrs Kavita Koushal

Principal, College of Physiotherapy

Dr Imtiyaz Wani

Actg Principal, College of Para Medical Sciences

Dr Kapil Gupta

Actg Chairperson, Centre for Interdisciplinary Biomedical Research

Mr Dawinder Singh Grewal

Chairman, Department of Library & Information Sciences

IMPORTANT INFORMATION

1. Please visit our website www.adeshuniversity.ac.in for all regular and updated information concerning Admissions/Date of counseling from time to time.
2. Candidates will apply online for Entrance Test (AUPMET-2015) Adesh University Paramedical Entrance Test 2015. The following category code may be filled while submitting the application form.

Category	Code
General	11
Scheduled Castes (SC)	12
Backward Classes (BC)	13
Orthopedically Handicapped	14

3. Cost of the Prospectus and application form over the counter is:
 - a. **For B Sc Nursing/Post Basic B Sc Nursing** Rs. 2000/- for General Category (Rs. 1500/- for SC Category) by Cash/Demand Draft in favor of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda.
 - b. **For Programmes other than B Sc Nursing/Post Basic B Sc Nursing** Rs. 1100/- for General Category (Rs. 900/- for SC Category) by Cash/Demand Draft in favor of Adesh Institute of Medical Sciences and Research drawn on any scheduled/nationalized bank payable at Bathinda.
4. Prospectus may also be downloaded from the website www.adeshuniversity.ac.in in which case, cost of the prospectus will be payable in the form of a demand draft in favour of Adesh Institute of Medical Sciences and Research, payable at Bathinda along with the submission of Admission Form as applicable.
5. Only those online applications for Entrance Test (AUPMET-2015) will be considered fee of which has been deposited upto 15.07.2015. Online portal will close on 15.07.2015.
6. Printed copy of Entrance Test (AUPMET-2015) application form must reach along with Demand Draft and all required documents at University campus, Barnala Road, Bathinda-151101 by 18.07.2015.
7. Printed copy of Entrance Test (AUPMET-2015) application form must reach along with late fee of Rs 1000/- in addition to the cost of the Prospectus in Cash/Demand Draft and all required documents at University campus, Barnala Road, Bathinda-151101 by 20.07.2015.
8. Fee once paid shall not be refunded/adjusted in any case.
9. The prospectus is subject to alteration/modification without notice. Updates will be displayed on university website www.adeshuniversity.ac.in

IMPORTANT NOTICE

1. Every student admitted to Adesh University, shall have to submit a self- undertaking duly signed by candidate and his/her parents, stating that he/she would not seek migration to any other Institution nor shall he/she leave the studies in midstream without completing the Programme, until and unless he/she deposits the balance amount of fee for the Programme.

2. In case of any amendment to admission procedure, fee structure etc. occurring before commencement of admission process on account of direction from competent authority, the same will be updated on the website www.adeshuniversity.ac.in
3. Mere submission of application form/deposition of application fee will not entitle a candidate for admission.
3. Notwithstanding the participation of candidates in Counseling, only eligible candidates shall be considered for admission.
4. Candidates applying under any of the reserve categories are directed to attach all relevant documents/proof of respective category with application form and also directed to bring along the originals at the time of Counseling. Such documents will be subject to verification/validation.
6. **Instructions only for Foreign National / NRI / PIO category candidates:** Candidates, who apply under Foreign National / NRI /PIO quota, will have to obtain Eligibility certificate from **Adesh University** and apply on prescribed proforma for Foreign National / NRI / PIO quota seats available at University Office alongwith prescribed fee for Foreign National / NRI/ PIO candidates.
7. **Admit card with Photograph** will be available online for print on the University website www.adeshuniversity.ac.in from 20.07.2015 onwards. After printing, the candidate will be required to affix a similar passport size photograph on the downloaded Admit Card and sign in the space provided for 'signature of candidate'.
8. **In the event the admit card is not available for print by 20.07.2015, candidates are requested to contact the office of the Registrar alongwith a valid ID proof, a passport size photograph and proof of submission of Entrance Test Application form.**
9. **ONLY PHOTOCOPIES ARE TO BE SENT WITH APPLICATION FORM. ALL NECESSARY DOCUMENTS, IN ORIGINAL, ARE NEEDED AT THE TIME OF COUNSELING.**
10. Acknowledgement of AUPMET-2015 application forms sent will usually not be given separately and ADMIT CARD will be considered as the acknowledgement. Admit cards will be issued to all applicants, after scrutiny. Receipt of Admit Card does not mean that the applicant has met all the eligibility criteria.
11. Time table, address of AUPMET-2015 centre and other relevant information will be given in the Admit Card. It is the responsibility of the candidate to check the schedule of the AUPMET-2015; discrepancies, if any, must be brought to the notice of the office of the Registrar immediately.
12. Eligibility conditions are mentioned in the Prospectus. However, final eligibility will be determined by Admission-cum-Counseling Committee at the time of counseling.

(A) ADESH FOUNDATION, SRI MUKTSAR SAHIB

Introduction

1. The Adesh Group, a pioneer in health care, medical and technical education came into existence with the establishment of Adesh foundation in 1995 vide Registration No. 618 of 1995-1996 (Registered under Societies' Registration Act XXI, 1860) in Sri Muktsar Sahib, an underdeveloped area of Southern Punjab, with aims and objectives of serving humanity in the sphere of health care as well as medical, paramedical and technical education.
2. Adesh Foundation, under the chairmanship of Dr. H.S. Gill, MD (Medicine) has several institutions in its fold.
3. ADESH UNIVERSITY: Adesh University was established in the State of Punjab in July 2012 by Act No. 6 of 2012 of Government of Punjab, notified under Punjab Government Gazette (Extraordinary) dated July 10, 2012 under Punjab Private Universities policy 2010 for the purposes of making provisions for instruction, teaching, education, research, training & related activities at all levels in disciplines of higher education including professional, medical/dental/ technical teaching, general education etc, particularly to the aspirants of the rural area.

(B) ADESH UNIVERSITY AND ITS CONSTITUENT COLLEGES

INTRODUCTION

1. BRIEF HISTORY: The University was established at Bhuchio Kalan, Tehsil Nathna, Distt. Bathinda under an Act of Punjab State Legislature (Punjab Act No. 06 of 2012) in the name of Adesh University for the purposes of teaching and ensuring proper and systematic instruction, training and research in all disciplines of higher education to include Modern Systems of Medicine and Indian Systems of Medicine, professional, technical, general education, language and literature, art and culture, management, tourism and hospitality and in other streams and subjects as per the needs of the industry and society in general. It is not only an affiliating and examining body but also a teaching and research centre in Medical and allied health sciences. It is expected to play a vital role in improving the standards of medical and health education in the state and in conducting relevant research in all aspects of health sciences, basic as well as applied, which ultimately will ameliorate the health standards of the people of Punjab and surrounding areas like Haryana, Rajasthan and Himachal Pradesh etc. The University is poised to be a trendsetter in developing appropriate modes and models of healthcare to ensure quality healthcare to the people.
2. The University has been recognized by various regulatory bodies like Medical Council of India vide Govt. of India Letter No U.12012/216/2005-ME (PII) (Vol-I) dated 03.04.2014, Dental Council of India vide Govt. of India letter No V.12017/50/2007-DE dated 24.04.2014, Pharmacy Council of India vide their letter No 17-1/2013-PCI/3668-3880 dated 13.05.2013 and India Nursing Council vide their Letter No 18-26/11036-INC dated 30.08.2013. The UGC has also included Adesh University in the list of Private Universities maintained by the University Grants Commission, under section 2(f) of the UGC Act. 1956.
3. Established with a mission to create an intellectual, academic and physical environment conducive to free flow of ideas and exchange of information between various faculties of the University, between this University and other universities of health sciences in the country and abroad, thereby opening a window to the world for the health professionals, health

planners, health managers, biomedical and social scientists and educationalists in health sciences of the country. Efforts are on to establish contact and reach an understanding with various institutions towards achieving this goal.

UNIVERSITY'S PRESENT STATUS

1. All the constituent colleges of the University viz., Adesh Institute of Medical Sciences and Research, Adesh Institute of Dental Sciences of Research, Adesh Institute of Pharmacy and Biomedical Sciences, College of Nursing, AIMSRS, College of Physiotherapy, AIMSRS, College of Paramedical Sciences and College of Pharmacy are recognized by the regulatory bodies.
2. The University Campus comprises of all constituent colleges along with Auditorium of 1200 capacity, Senate Block, Academic Block, Centre for Interdisciplinary Biomedical Research (CIBR), Department of Library and Information Sciences. The University has added excellence in Research.
3. The University is now primarily focusing on strengthening postgraduate medical education and research and evolving excellence in a rural backdrop.

UNIVERSITY'S NEW PROJECTS

1. The University has planned to run a number of employment-oriented diploma programmes and certificate programmes in health sciences.
2. The University is also in the process of developing the following departments:
 - (i) Centre for Inter Disciplinary Biomedical Research (CIBR)
 - (ii) Department of Library and Information Science (DLISc)
 - (iii) Advanced Centre for Research in AYUSH Systems of Medicine

UNIVERSITY'S CONSTITUENT COLLEGES

1. At present, the University is having the following seven constituent colleges:
 - i. Adesh Institute of Medical Sciences and Research, Bathinda
 - ii. Adesh Institute of Dental Sciences of Research, Bathinda
 - iii. Adesh Institute of Pharmacy and Biomedical Sciences, Bathinda
 - iv. College of Nursing AIMSRS, Bathinda
 - v. College of Physiotherapy AIMSRS, Bathinda
 - vi. College of Paramedical Sciences , AIMSRS, Bathinda
 - vii. College of Pharmacy AIMSRS, Bathinda
2. The University is in continuous pursuit to achieve excellence in healthcare delivery and medical education and research in the State. Admissions to various undergraduate and post graduate programmes in the constituent institutions of this University in the State of Punjab are made on merit basis through the conduct of **Entrance Tests conducted by the University and/ or academic merit basis** to enroll suitable candidates to the various PG/UG/ Diploma and Certificate Programmes in the Medical/Dental/ Nursing/ Pharmaceutical and Allied Sciences.

ADESH INSTITUTE OF MEDICAL SCIENCES AND RESEARCH, BATHINDA (AIMSR)

Introduction

1. The institution is a constituent college of Adesh University under the provisions of Adesh University Act No 6 of 2012 promulgated vide Punjab Government Gazette (Extraordinary) dated 10th July, 2012 and Govt. of India, Ministry of Health and Family Welfare vide notification No. U12012/216/2005-ME(P-II) dated 3rd April 2014. The Institution conveniently located on the main Bathinda - Barnala National Highway No. 7 with good road and rail connectivity to all major cities in Punjab and India. The institute is situated in a clean and unpolluted environment adjacent to Bathinda Cantt., about 12 kms from Bathinda Railway station. The institution boasts of a self contained 40-acre campus, having 24 hours running water & electricity supply, sewerage treatment plant, faculty and staff residences, and fine hostels.
2. The AIMSAR is a medical college with annual intake of 150 students for MBBS programme Established in 2005. This institute is recognized by Medical Council of India and Ministry of Health and Family Welfare, Government of India, vide gazette notification no. U.12012/216/2005-ME(P-II) dated 19th May 2011.
3. Post Graduate (MD/MS) programmes in the subjects of General Surgery, Obstetrics & Gynaecology, Anatomy, Physiology, Biochemistry, Pharmacology, Pathology, Microbiology and Community Medicine have been granted by Medical Council of India. All the teaching departments are equipped with state of the art modern laboratories, instruments and teaching aids. The institute has air-conditioned Lecture Theaters equipped with multimedia and other audiovisual facilities. Special emphasis is laid on participatory learning. The medical college has a spacious centralized air-conditioned library on the second and third floors of the College building. It has well-ventilated and illuminated expansive reading rooms. There are more than 13000 books pertaining to various Under Graduate and Post Graduate programmes and more than 200 national and international journals. The library is equipped with a large number of computers having lease line internet facility. The library is included in the e-library network and provides access to a large number of e-journals through 40 internet nodes.
4. Computers, along with internet facility, have been provided in all the teaching departments of the institution, thus helping the staff members to update their knowledge and skills from time to time. A huge state-of-the art centrally air-conditioned auditorium-cum-examination hall with modern audio-visual aids, having a seating capacity of 1200 is available. Regional, state and National level professional conferences, workshops and seminars are frequently held in the auditorium.

Teaching Hospital (AIMSR)

1. The teaching hospital of AIMSAR is a majestic seven storey building with a basement, a land mark that cannot be missed on the Bathinda-Barnala National Highway No. 7. It is a multispecialty tertiary care hospital having capacity of 750 beds. It is the beginning of a vision leading ultimately to a postgraduate institute in this region of Punjab. The entrance foyer of the hospital has enough space to seat more than 1350 patients and their attendants waiting for registration, buying medicines at the drug store or visiting their relatives. The Emergency department is conveniently located close to the main entrance from the highway for easy and quick access to the ambulances. The Maternity-care unit, two operation

theatres, 4 labor rooms, and neonate nursery are also situated on the ground floor, thus making it easily accessible to female patients.

2. The outpatient departments (OPDs) are provided with modern equipment. The ICU complex consists of medical Intensive Care Unit (ICU), Intensive Cardiac Care Unit (ICCU), Respiratory Intensive Care Unit (RICU), Surgical Intensive Care Unit (SICU), Pediatric Intensive Care Unit (PICU), Neonatal Intensive Care Unit (NICU) and a Renal Dialysis Unit.
3. The investigative laboratories are equipped with latest state-of-the art technologies, instruments and equipment. The Department of Biochemistry is equipped with fully automatic analyzer (Beckman Coulter), Arterial Blood Gas (ABG) analyzer, Biolyte analyzer for electrolytes, semi automatic analyzers, Elisa Reader and flame photometers etc. The Department of Microbiology is fully equipped with Laminar flow and modem kits for undertaking diagnostic tests in bacteriology, serology & immunology, parasitology, mycology, virology, and mycobacteriology including Dark Ground Microscopy. The Department of Pathology is fully equipped for histopathology, cytopathology, clinical hematology and clinical pathology with automatic tissue processors, automatic hematology cell counter, cryostat and coagulometers. In the department of Radio-diagnosis there are 300 m.A. X-ray, 500 m.A. X-ray, 800 m.A, 600 m.A. X-ray, 500 m.A. X-ray Units, I.I.TV, Digital X-ray (C R System) for teleradiology, Single Slice CT Scan, 16 Slice CT Scan, 1.5T MRI, 800 T Mammography, Sonography, Color Doppler and mobile X-ray Units. The Department of Cardiology is equipped with multichannel ECG machines, Echocardiography and TMT facilities. Department of Gastroenterology is equipped with upper and lower GI endoscopes. Investigative procedures such as EEG, EMG, Nerve Conduction Studies, VEP and BAER are conducted by the Department of Neurology. Biofeedback Psychological instruments and ECT machine are available with the Psychiatry Department. The Department of Urology is equipped with facilities for lithotripsy, C-Arm fluoroscopy, and uroflowmetry.
4. There are ten ultramodern operation theatres in the hospital with the latest equipment for the Anesthesia department. There are two Image intensifiers (C-Arm) installed in the operation theatres.
5. The hospital has fully equipped, licensed state-of-the art Blood Bank for whole Blood & component processing facilities which works round the clock running under the Department of Transfusion Medicine.

ADESH INSTITUTE OF DENTAL SCIENCES AND RESEARCH, BATHINDA (AIDSR)

Introduction

1. The institution is a constituent college of Adesh University under the provisions of Adesh University Act No. 6 of 2012 promulgated vide Punjab Government Gazette (Extraordinary) dated July 10, 2012 and Govt. of India Ministry of Health and Family Welfare vide notification no. V 12017/50/2007-DE dated 24th Aril 2014 on the main Bathinda - Barnala National Highway No. 7 with good road and rail connectivity to all major cities in Punjab and India. The institute is situated in a clean and unpolluted environment adjacent to Bathinda Cantt., about 12 kms from Bathinda Railway station. The institution boasts of a self contained 40-acre campus, having 24 hours running water & electricity supply, sewerage treatment plant, faculty & staff residences and fine hostels.

2. The AIDSAR is a dental college with 100 students admission capacity Established in 2008. The college is recognized by the Dental Council of India and Ministry of Health & Family Welfare, Govt. of India vide letter no. F. No V 12017/50/2007-DE dated 23/01/2013.
3. All the teaching departments of basic sciences are equipped with state of the art modern laboratories, instruments and teaching aids. The institute has well maintained, air conditioned lecture halls with 120 seating capacity equipped with LCD projector together with multi-media & other audio visual facilities, along with sound amplifying systems with special emphasis laid on participatory learning.
4. The dental college has a spacious library with air cooled, well ventilated and illuminated expansive halls for reading purposes. The library is equipped with computers having broad band unlimited internet access for reference to the latest publications of the research material and other information through Pubmed and worldwide web. The library has E-library network which provides access to a large number of e journals. Photo copier & printer services are available at a nominal cost to the students. The library also has got a huge reading room for the students to bring their own study material to pursue in a peaceful and temperature controlled environment. Computers have been provided to all the departments of the college and teaching hospital, thus helping the staff members to update their knowledge and skills from time to time. In addition a spacious examination hall for students to appear in respective departments has also been provided. A huge state-of-the art centrally air-conditioned auditorium-cum-examination hall, with modern audio visual aids, with a seating capacity of 1200 is available. Regional, state & National level professional conferences, workshops & seminars are frequently held in the auditorium.

Teaching Hospital (AIDSAR)

1. The hospital has an entrance foyer which provides a splendid view and a visual comfort for the patients, having enough space to seat more than 100 patients, waiting for their registration, buying medicines at the pharmacy on one side or simply waiting for the relatives. The ground floor has department of Oral Surgery OT (Minor & Major), Department of Oral Medicine, Hematological Lab, Radiovisiography, Ortho Pantomo Gram Room and Lecture Hall. The first floor consists of Department of conservative laboratory, and Endodontics, Pre-Clinical conservative Laboratory, Department of prosthodontics, Dental Material Laboratory and Lecture Hall. The second floor consists of Department of Pedodontics and its Laboratory, Department of Orthodontics and its laboratory, Department of Periodontics, Pre-Prosthetics Laboratory, Central Library and Lecture Hall.
2. The third floor consists of Department of Oral Pathology and its laboratory, Department of preventive and public health Dentistry and Lecture hall. Hospital is having 205 dental chairs with all the attachments; all the chairs and units are functioning and electrically operated. Hospital has monthly OPD attendance more than 3000-3500 patients. AIDSAR provides modern facilities for all kinds of Dental care. The college has Community Dental Van fully equipped with all the treatment facilities which allows to conduct dental health awareness programs at rural and remote areas, and to provide all kinds of Dental care.

COLLEGE OF NURSING, AIMSR, BATHINDA

1. The College of Nursing was established in 2005 to provide quality education in the field of Nursing. The institute currently offers four Programmes:
 - (i) Diploma in General Nursing and Midwifery Programme. The Programme will be of three years duration.

- (ii) B Sc Nursing (Basic) of four years duration leading to degree in B Sc Nursing.
 - (iii) A Bridge Programme of 2 years Post Basic B Sc Nursing for candidates who have already completed Diploma in General Nursing Programme.
 - (iv) M Sc Nursing Programme of two years duration in the areas of Medical & Surgical Nursing, Psychiatric Nursing, Obstetric and Gynaecological Nursing, Paediatric Nursing.
2. All the Programmes are recognized by Punjab Nurses Registration Council and Indian Nursing Council.

ADESH INSTITUTE OF PHARMACY AND BIOMEDICAL SCIENCES, BATHINDA

1. Established in 2007 with aim to provide quality education in pharmaceutical sciences, Adesh Institute of Pharmacy and Biomedical Sciences is providing education in the field of B. Pharmacy and M. Pharmacy in Pharmaceutics discipline. The institute is approved by the Pharmacy Council of India (PCI) and affiliated to Adesh University and Government of Punjab.
2. Institute has made rapid strides in academic, curricular and extra-curricular activities along with its significant research contribution to deliver high quality of pharmacy education. Institution's goal is to ensure that the budding and upcoming Pharmacists from this institution will be placed appropriately among the various job prospects like Pharmaceutical Industry, Healthcares Research Centres, Hospital Pharmacy, Clinical Pharmacy, Community Pharmacy, Academics, Research and Development, etc.

COLLEGE OF PHARMACY, AIMS, BATHINDA

1. Established in 2006, College of Pharmacy-AIMS, Bathinda is the one of finest Pharmacy institution of Punjab. Institution has been developed in 5 acres of land with impressing building, lush green campus and unpolluted environment with magnificent infrastructure.
2. The institution is duly approved by Pharmacy Council of India (PCI), New Delhi and affiliated to Adesh University, Bathinda. The institution is having a team of highly qualified and experienced full time faculty, supporting technical staff, and doctors who are competent and committed to provide theoretical and hands- on practical knowledge to the students.

COLLEGE OF PHYSIOTHERAPY, AIMS, BATHINDA

1. College of Physiotherapy, AIMS, Bathinda was established in the year 2005 to offer Bachelor in Physiotherapy programme. Housed within the seven-story majestic building of AIMS Hospital, the college is equipped with state of the art modern equipment and gadgets required in the field of Physiotherapy.
2. With annual intake of 40 students, College of Physiotherapy, AIMS is the only Physiotherapy institute in the region, attached to 750 bedded advance multi-speciality referral hospital and medical college. The College of Physiotherapy has Exercise Therapy, Electro Therapy, Hydrotherapy, Biomechanics labs with out-patient departments and 40 bedded indoor Physiotherapy ward.

COLLEGE OF PARAMEDICAL SCIENCES, AIMS, BATHINDA

1. Established in the year 2006 with an aim of providing job opportunities to the students of this backward belt of Punjab by training them in the field of various paramedical sciences, the College of Paramedical sciences has leaped great strides, and now imparts training in

postgraduate fields of paramedical programme in Medical Laboratory Technology, Radiography & Imaging Technology, Operation Theatre Technology.

2. The institute is providing training in paramedical subjects by way of regular class room and bed side teaching, with hand on training in the state of the art diagnostic laboratories and operation theatre. College of Paramedical Sciences imparts training in diploma programmes, degree programmes beside running one year certificate programmes in specialized fields of Paramedical Sciences like dialysis and anesthesia technology.
3. Our mission is to provide hand on training to the students who wish to excel in the field of allied-diagnostic and investigative branch. Paramedical experts play a very important role in helping the doctor make an accurate diagnosis for treatment, cure and overall care of patients. More often than not, the role of Paramedics is both diagnostic and therapeutic; Paramedic include X-ray technologists, medical laboratory technicians, dieticians, food services workers, dental mechanics, emergency medical technicians, safety engineers, pharmacists, sanitary engineers, microbiologists, optometrists, Physiotherapists, occupational therapists, speech therapists, radiographers and prosthetic & orthotic engineers.
4. Job Opportunities: Medical technologists have unlimited choices of practice setting. Hospitals, independent laboratories, Clinics, Public Health facilities and industry, all currently have positions open for qualified technologists. Additional Opportunities are available in Molecular Diagnostics, Molecular Biotechnology, Companies and In-Vitro Fertilization Laboratories as well as in Research Labs.

(C) Eligibility & Admission Procedure for programmes offered by Adesh University

B. Sc. (Nursing) Programme

A. ELIGIBILITY CRITERIA

1. The minimum age for admission shall be 17 years on 31st December of the year in which admission is sought.
2. Minimum education:
 - 10+2 class passed with Science (PCB) & English Core/English Elective with aggregate of 45% marks from recognized board under AISSCE/CBSE/ICSE/SSCE/HSCE or other equivalent Board.
3. Candidate shall be medically fit.
4. Students appearing in 10+2 examination in Science conducted by National Institute of Open School with 45% marks.
5. Students shall be admitted once in a year.
6. **The admission to the programme shall be on the basis of inter-se-merit in the Entrance Test to be conducted by the University (AUPMET-2015) as notified. However, in case the number of candidates are less than the number of seats available for the programme, then the Entrance Test AUPMET-2015 shall not be held. The admission to the programme, in such a case, shall be on the basis of inter-se-merit of the percentage of marks scored by the candidates in the qualifying examination.**

B. Duration of the Programme : 4 years

C. Fee Structure

	For Indian Students	NRI/ foreign students
1. Tuition Fee	Rs 40250/- per annum	US \$ 15000/-
2. Registration fee	Rs 4000/-	Rs 4000/-
3. Security deposit	Rs 20000/-	Rs 20000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

Post Basic B. Sc. (Nursing)

A. Eligibility Criteria

1. Passed the Higher Secondary or Senior Secondary or Intermediate or 10+2 or an equivalent examination recognized by the university for this purpose. Those who have done 10+1 in or before 1986, will be eligible for admission.
2. Obtained a certificate in General Nursing and Midwifery and registered as R.N.R.M. with the State Nurses Registration Council. A male nurse, trained before the implementation of the new integrated programme besides being registered as a nurse with State Nurses Registration Council, shall produce evidence of training approved by Indian Nursing Council for a similar duration in lieu of midwifery in any one of the following areas:
 - O.T. Techniques
 - Ophthalmic Nursing
 - Leprosy Nursing
 - TB Nursing
 - Psychiatric Nursing
 - Neurological and Neuro surgical Nursing
 - Community Health Nursing
 - Cancer Nursing
 - Orthopedic Nursing
3. Candidates shall be medically fit.
4. Students shall be admitted once in a year.
5. **The admission to the programme shall be on the basis of inter-se-merit in the Entrance Test to be conducted by the University (AUPMET-2015) as notified. However, in case the number of candidates are less than the number of seats available for the programme, then the Entrance Test AUPMET-2015 shall not be held. The admission to the programme, in such a case, shall be on the basis of inter-se-merit of the percentage of marks scored by the candidates in the qualifying examination.**

B. Duration of the Programme : 2 years

C. Fee Structure

	For Indian Students	NRI/ foreign students
1. Tuition Fee	Rs 40250/- per annum	US \$ 15000/-
2. Registration fee	Rs 4000/-	Rs 4000/-
3. Security deposit	Rs 20000/-	Rs 20000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

General Nursing and Midwifery (G. N. M.)

A. Eligibility Criteria

1. Minimum and Maximum age for admission shall be 17 and 35 years respectively.
2. Minimum education:
 - 10+2 class passed preferably Science (PCB) & English with aggregate of 40% marks.
or
 - 10+2 in Arts (Mathematics, Biotechnology, Economics, Political Science, History, Geography, Business Studies, Accountancy, Home Science, Sociology, Psychology, Philosophy) and English Core/English Elective or Health care Science - Vocational stream ONLY, passing out from recognized Board under AISSCE/CBSE/ICSE/SSCE/HSCE or other equivalent Board with 40% marks.
or
 - 10+2 vocational ANM under CBSE Board or other equivalent board from the school and recognized by Indian Nursing Council with 40% marks.
or
 - Registered as ANM with State Nursing Registration Council.
or
 - 10+2 Arts or Science examination or Health care Science - Vocational stream ONLY conducted by National Institute of Open School with 40% marks.
3. Student shall be medically fit.
4. Student shall be admitted once in a year.

B. Duration of the Programme : 3 years

C. Fee Structure

1. Tuition Fee	Rs 40250/- per annum
2. Registration fee	Rs 1000/-
3. Security deposit	Rs 7000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

ADMISSION PROCEDURE

Admission to B.Sc. (NURSING)/ Post Basic B Sc. (NURSING)

IMPORTANT INSTRUCTIONS AND PROCEDURE TO FILL ONLINE APPLICATION FORM

1. ADMISSION APPLICATION FORM FOR ADMISSION TO B SC NURSING/POST BASIC B SC NURSING PROGRAMMES UNDER AUPMET-2015.
 - (i) Before applying, candidate should carefully read PROSPECTUS for eligibility conditions and other important instructions.
 - (ii) Only one application is to be submitted by a candidate. Submitting more than one application by a Candidate is liable to be rejected.
 - (iii) Candidate ensures that he/she has completed the age of 17 years on or before 31st December, 2015.
 - (iv) After filling online application, candidate should have to deposit requisite fee in the University through Cash or Demand Draft in favour of Adesh Institute of Medical Sciences and Research Payable at Bathinda. Fee shall not be accepted in any other mode i.e. Cheque etc.
 - (v) After filling online application form by candidate, University will issue a Unique Registration Id. Registration id (i.e. Login Id) and password will be provided to the candidate at his/her registered Mobile Number through SMS and email.
 - (vi) Admit card will be issued against those Registration Id's, against which Registration Id application fee has been received by the University within a stipulated date and time.
 - (vii) Candidate should have to apply online on or before 15.07.2015. After this online application form will not be available at the University website and no request will be entertained in this regard.
 - (viii) Fee should be deposited by 15.07.2015 by 04:00 pm. Fee once deposited will not be refunded/adjusted in any case.
 - (ix) Date should be filled in the format of dd/mm/yyyy i.e. date/month/year.
 - (x) After filling of online application form, applicant will receive a Registration No and Password at his/her given mobile no and E-mail address.
 - (xi) Registration No and Password is mandatory for further process, so keep it secret and don't disclose to any unknown person.
 - (xii) You have to login to upload Photograph, Edit Application, Application Status and to change your password options.
 - (xiii) How to upload Photograph the candidate is required to login by entering Registration No and Password. The size of photograph should not be more than 25KB respectively. Candidate may use third party software i.e. <http://www.shrinkpictures.com> to resize their photograph before uploading.
 - (xiv) **Lock of Application:** To get printout of online application form the candidate is required to lock the application. Once the application is locked the candidate will not be able to edit his/her application data, so be ensured that the entered data is correct before locking the application form.
 - (xv) All application forms will be locked automatically, after the cut off date. Once Application form is locked, it can't be unlocked by applicant.
 - (xvi) Candidates are advised to always Log out your application form when you are leaving the computer.

Note: Please fill your valid mobile no. and email address to receive information regarding your application form time to time in the form of SMS and Email. You will also receive your Registration no. and Password on your given mobile no and Email address.

Important: In case candidate wants to make any change in his/her online application form after locking, he/she has to write separate application wherein he/she will clearly describe that what information he/she wants to modify. He will also attach printout of his/her online application form and submit his/her request personally in the University before 22.07.2015 with correction/editing fee of Rs. 500/- in the shape of Demand draft drawn in favour of Adesh Institute of Medical Sciences and Research. After this date, no request will be entertained for any change in the application form

ADMIT CARD

1. Candidates are required to download the admit cards from the website and follow the instructions given therein. Candidate may please note that admit cards will not be sent by the post. The admit cards will be available on University website from 20.07.2015 onwards. Candidate must not mutilate the Admit Card or change any entry made therein. Candidates are advised to preserve their Admit Cards in good condition till admission in Nursing Colleges is over.

Note: Admit card will be issued only to those candidates whose admission fee has been received. In case any candidate has deposited fee and his/her admit card is not downloaded then he/she has to contact to the University personally on 20.07.2015 with copy of University fee receipt

DATE OF TEST

The Test will be conducted on 25.07.2015(Saturday) Timing 11:00 am to 2:00 pm.

SCHEME OF TEST

1. The Test shall have one paper consisting of questions in Physics, Chemistry and Biology (Botany and Zoology). The duration of test will be three hours from 11.00 a.m. to 2.00 p.m. which includes the time consumed in signatures, thumb impressions, photography and other security measures. There will be 200 Multiple Choice Questions (50 each of Physics, Chemistry, Botany and Zoology). Each question will carry four marks, thus total marks will be 800. For each correct response the candidate get four (4) marks. For each incorrect response Two (2) marks will be deducted from the total score.
2. The questions will be in English. The candidate will be required to find out the correct answer and mark it on the Optical Mark Reader (OMR) Response Sheet by darkening the corresponding oval against the serial number of the question with BLACK FINE TIP BALL PEN ONLY provided by the university at the time of test.

SYLLABUS

The syllabus for AUPMET-2015 is given at **Annexure-I** of this Prospectus.

Centres for the conduct of AUPMET-2015

The test shall be conducted at the centre decided by the University, the same will be notified on the Admit Card.

CONDUCT OF THE TEST

1. The test will be conducted at the centre notified by the University.
2. The test will be conducted on 25.07.2015(Saturday) from 11.00 a.m. to 2.00 p.m. Date is subject to change due to unanticipated reasons. Efforts will be made to notify the change to candidates. However, candidates are advised to keep abreast of the notification on the University website.
3. Candidates are required to reach the Test Centre at least 1 hour before the start of test. If the candidates do not report in time they are likely to miss some of the general instructions to be announced in the examination hall.
4. The candidates must show, on demand, the Admit Card for entry in the examination hall. A candidate who does not bring the Admit Card issued by the Adesh University, Bathinda, will not be admitted to the examination hall under any circumstances by the Centre Superintendent. All candidates shall be videographed at the examination centre.
5. A seat with the Roll Number will be allotted to each candidate.
6. Candidates must find out and occupy their allotted seats after consulting the seating plan displayed at Examination Centre.
7. A candidate who comes after 10 minutes of the commencement of the Test shall not be permitted to take the test.
8. A candidate shall not be allowed to carry any textual material, printed or written, bits of papers or any other material except the Admit Card inside the Examination Hall.
9. Calculators, Slide Rules, Log Tables, Electronic Watches with facilities of calculators, cellular phones, pagers or any other electronic devices the use/misuse of which would be adverse to the proper conduct of this Test shall not be allowed inside the Examination Hall. Any candidate in possession of these may be expelled from this Test.
10. No candidate, without the special permission of the Centre Superintendent or the Invigilator concerned, will leave his/her seat or the Examination Room until the expiry of full time allotted for test. Candidates should not leave the Hall without handing over their Question Booklets and the OMR Response Sheets to the invigilator on duty.
11. Smoking in the Examination hall during examination is strictly prohibited.
12. Tea, coffee, cold drinks, snacks, toffees, chocolates etc. are not allowed to be taken into the examination rooms during the examination
13. Use of Electronic/Manual Calculator is strictly prohibited.
14. Mobile phones or electronic devices of any kind are not allowed to be taken in. Violation may lead to cancellation of candidature of violates.
15. Candidates shall maintain perfect silence and attend to their papers only. Conversation, gesticulation or disturbance in the Examination Hall shall be deemed as a violation.

16. If a candidate is found using unfair means or impersonating, then his/her candidature will be cancelled and he/she will be liable to be debarred for taking examination either permanently or for a specified period according to the nature of offence. Decision of the University shall be final and binding in this regard. However candidates who try to send impersonators shall be barred permanently.
17. In the OMR Response Sheet there would be four ovals against every question marked as A, B, C, D. The candidate shall shade one of the four ovals corresponding to the correct response to a question using BLACK FINE TIP BALL PEN provided by the university only. There will be negative marking for wrong answers.
18. Candidates are advised not to write anything on any place which is not specifically provided for this purpose.
19. The sheet at the end of the question booklet can be used for rough work. Rough work can also be carried out on the margin of Question Booklet.
20. The candidates will start the question paper at 11.00 a.m. which will be announced by the invigilator.
21. Candidates must read the instructions given on the Question Booklet and OMR Response Sheet before attempting to answer the questions.
22. During the programme of the Test, Invigilator will approach each candidate to get his/her attendance marked on the Attendance Sheet and also get thumb impression of the candidate. Male candidates shall affix their Left Thumb Impression and female candidate shall affix their Right Thumb Impression at the space provided on Attendance Sheet and OMR Response sheet and the Roll No. Counter slip sheet for records.
23. The candidate shall be required to fill the Question Booklet No. and OMR Response Sheet number on the Attendance Sheet. The Invigilator shall also sign at the appropriate places on the Question Booklet, OMR Response Sheet and Attendance Sheet and on the Roll Number counter slip sheet.
24. Candidate must fill the Question Booklet number, OMR Response Sheet No. and Question Booklet Set very carefully.
25. The candidate is required to hand over both question booklet and OMR Response Sheet to the Centre Superintendent even if they have not attempted any question and no page/part of the question booklet and OMR Response Sheet is to be torn or removed or taken out of the Examination Centre under any circumstances failing which the candidature shall be cancelled.
26. No candidate shall be allowed to leave the examination hall/ room before the expiry of the time i.e. not before 2.00 p.m.
27. The Centre Superintendent/Observer/other authorized University officer / official shall be competent to expel a candidate from the examination centre.

28. There shall be other measures which shall be announced at the centre.
29. No enquiries with regards to the date of declaration of result shall be entertained by the University.

MODE OF THE TEST

1. The examination shall be only one paper consisting of Physics, Chemistry and Biology (Botany & Zoology). There will be 200 questions in all 50 on Physics, 50 on Chemistry, and 100 on Biology (50 each on Botany & Zoology).
2. The paper shall be of 3 hours duration and shall carry 800 marks.
3. The test will be of objective type with multiple choice questions and candidates will be provided with a sealed Question Booklet and an OMR Response Sheet. In the Test/Question Booklet, there will be 200 items (questions) serially numbered from 1 to 200. Each item will be followed by four responses marked (A), (B), (C) and (D). Of these four responses only one will be the correct or the most appropriate response.
4. The candidate will write with BLACK FINE TIP BALL PEN, the required information regarding: Roll Number, Name, Question Booklet No., Question Booklet Set etc. on the Test/Question Booklet before opening the seal.
5. Candidate must write the Sr. No. and Set of the Question Booklet carefully on the OMR Response sheet and the OMR Response sheet number on the question booklet and Both the OMR Response sheet number & the Question Booklet No. on the attendance sheet.

PROCEDURE TO BE FOLLOWED IN THE EXAMINATION HALL

1. Ten minutes before the commencement of the Test, each candidate will be given sealed Question Booklet and an OMR Response Sheet.
2. Immediately on receipt of the Question Booklet the candidates will fill in the required particulars on the cover page of the Question Booklet and column 1 to 4 of Side-I of the OMR Response Sheet with BLACK FINE TIP BALL PEN only. He/She will not open the Seal of Question Booklet until asked to do so by the invigilator.
3. Immediately after opening the Question Booklet the candidate should check it thoroughly and inform the invigilator within 10 minutes regarding any discrepancy/ies found in Question Booklet (if any). After 10 minutes any claim regarding this may not be entertained.
4. The test will start exactly at the time mentioned in the Admit Card and an announcement to this effect will be made by the invigilator.
5. During the examination time, the invigilator will check Admit Card of the candidates to verify the identity of each candidate. The invigilator will also put his/her signatures in the place provided on Side-I of the OMR Response Sheet.
6. After completing the test and before handing over the Question Booklet and the OMR Response Sheet, the candidate should check again that all the particulars required in the

Question Booklet and the OMR Response Sheet have been correctly written or filled. Ensure that the Roll No. and the Question Booklet Series are correctly written and coded in the OMR Response Sheet.

7. A signal will be given at the beginning of the examination and at half-time. A signal will also be given before the closing time when the candidate must stop marking the response.

THE OMR RESPONSE SHEET

1. OMR Response Sheets will be distributed along with the Question Booklet.
2. OMR Response Sheet can be filled only with BLACK FINE TIP BALL PEN.
3. The OMR Response Sheet will be scanned by an Optical Scanner. There will be two sides of the OMR Response Sheet i.e. Side-I and Side-II.
 - (i) Side-I of the OMR answer sheet contains the following columns, which are to be filled up neatly and accurately with a BLACK FINE TIP BALL PEN:-
 - a. Name
 - b. Roll No.
 - c. Question Booklet Number
 - d. Signature of candidate
 - (ii) Side-II of the OMR answer sheet contains the following columns, which are to be filled up neatly and accurately with a BLACK FINE TIP BALL PEN:-
 - a. Roll No.
 - b. Question Booklet Number
 - c. Columns 1 to 200 (i.e. responses to questions in Question Booklet). Each column corresponds to the serial number of question given in the Question Booklet.

NOTE: Please use BLACK FINE TIP BALL PENS only for writing/coding particulars on the OMR Response Sheet. Use of any other writing instrument shall invalidate the OMR Response Sheet. The candidate must ensure that the OMR Response Sheet is not folded, soiled or mutilated. No stray marks should be put on OMR Response Sheet.

PEN

Please note that only BLACK FINE TIP BALL PEN provided by the university at the time of test will be used in the test. In case pencil or any pen other than BLACK FINE TIP BALL PEN is used, the OMR Response Sheet may be rejected by the Optical Scanner and such a response sheet will be invalidated.

CAUTION WHILE MARKING AN ANSWER

1. If more than one oval is darkened such a response shall be treated wrong.

2. The candidate is advised to decide about the answer before it is marked on the OMR Response Sheet. He/ She must ensure that appropriate oval is completely darkened with BLACK FINE TIP BALL PEN only. A lightly/partially/faintly darkened oval will be treated as a wrong method of marking and will be rejected by the Optical Scanner.
3. Use BLACK FINE TIP BALL PEN only to darken the appropriate oval.
4. The oval should be so darkened that it is completely filled.
5. Darken only one oval for each entry.
6. Make the marks only at the space provided.
7. Please do not fold the OMR Response Sheet or make any stray marks on it.

SCORING AND MARKING

- A. **Each question carries four (4) marks. For each correct response the candidate get four (4) marks. For each incorrect response Two (2) marks will be deducted from the total score.** No deduction from the total score will, however, be made if no response is indicated for a question in the answer sheet. The candidates are advised not to attempt such question(s) in answer sheet, if they are not sure of the correct response. **More than one answer indicates a question will be deemed as incorrect response and will be negatively marked.**
- B. For the purpose of the evaluation, the test booklet code as printed in the Answer sheet on side-2 will be accepted as final.

ROUGH WORK

The candidate will not do any rough work or writing work on the OMR Response Sheet. All rough work is to be done at the space provided on the question booklet.

CAUTION FOR REMOVAL OF PAGE(S) FROM QUESTION BOOKLET

The candidate will check and ensure that the Question Booklet contains number of pages as are written on the top of the first page. The candidate shall not remove any page(s) from the Test-Booklet and if any page(s)is/are found missing from his/her Booklet, then his/her candidature will be cancelled and a criminal case maybe got registered against him/her. In case a candidate finds that there are blank or duplicate or unreadable page(s) in his/her booklet then this fact shall be brought to the notice of the invigilator on duty who shall supply a fresh Question Booklet of the same set to the candidate.

UNFAIR MEANS PRACTICE & BREACHES OF EXAMINATION RULES:

1. **Unfair means practice is an activity that allows a candidate to gain an unfair advantage over other candidates. It includes, but not limited to:**
 - a. Having in possession papers, books, notes, electronic devices or any other material or information relevant to the examination in the paper concerned;
 - b. Paying someone to write examination (impersonation) or prepare material;

- c. Breaching examination rules;
- d. Assisting another candidate to engage in malpractice; -giving or receiving assistance directly or indirectly of any kind or attempting to do so;
- e. Writing questions or answers on any material other than the answer sheet given by the Centre Superintendent for writing answers;
- f. Tearing of Answer Sheet, any page of the test booklet, etc.;
- g. Contacting or communicating or trying to do so with any person, other than the Examination Staff, during the examination time in the examination centre;
- h. Taking away the answer sheet out of the examination hall/room;
- i. Smuggling out Question Paper or its part or smuggling out answer sheet or part thereof;
- j. Threatening any of the officials connected with the conduct of the examination or threatening any of the candidates;
- k. Using or attempting to use any other undesirable method or means in connection with the examination.
- l. Manipulation & fabrication in online documents viz. admit card, rank letter, etc.
- m. Forceful entry in Examination Hall with mala fide intentions.
- n. Affixing of fabricated photograph on the application form.

2. PUNISHMENT FOR USING UNFAIR MEANS PRACTICE

During the programme of examination, before or later on, if a candidate is found indulged in any of the above or similar practices, shall be deemed to have used unfair practices at examination and marked as UNFAIRMEANS (U.F.M.). **Such candidates would be debarred from taking this examination permanently in future and shall also be liable for criminal action and /or any other action as deem fit by the University.**

- 3. Candidates should ensure before leaving the Examination Hall that they have handed over the Answer Sheet and Question paper to the invigilators on duty and that they have signed on the Attendance Sheet second time. In case the candidate does not hand over the Answer Sheet & Question paper and takes away the same with him/ her, this shall amount to use of unfair means practices and accordingly his/her case shall be dealt with.
- 4. The candidate will check and ensure that the Test-Booklet contain as many number of pages as are written on the top of the cover page.

INFORMATION FOR PARENTS/GUARDIANS

- 1. Parents/Guardians are advised to ensure that their ward should not indulge in unfair means activities/malpractices which breach the examination rules. If any candidate is found to be indulged in any such activity he/she shall be debarred from taking this examination permanently in future and shall also be liable for criminal action and/or any other action deem fit by the University.
- 2. **The conduct of AUPMET Examination would be video graphed. The candidates are required to keep their head in upright position and face the camera during the videography so that their identity could be clearly established.**
- 3. **It is mandatory for the candidate to bring his/her Admit card along with duly attested/signed certificate by the Principal/Executive magistrate for appear in AUPMET Examination. Candidate must submit the counter part to the invigilator staff in the examination centre.**

- In addition to (3) above, it is mandatory for the candidate to bring an additional passport size photograph for pasting it on the specific space in the attendance sheet.

Admission to General Nursing and Midwifery (G N M)

Selection of candidates for G N M programme will be on merit basis as referred in the eligibility criteria for G N M programme.

M Sc Nursing Programmes

A. Eligibility Criteria

- The candidate should be a Registered Nurse and Registered midwife of equivalent with any State Nursing Registration Council.
- The Minimum education requirements shall be the passing of: B.Sc. Nursing/B.Sc. Hons. Nursing/Post Basic B.Sc. Nursing with minimum of 55% aggregate marks.
- The candidate should have undergone in B.Sc. Nursing / B.Sc. Hons. Nursing / Post Basic B.Sc. Nursing in an institution which is recognized by Indian Nursing Council.
- Minimum one year of work experience after Basic B.Sc. Nursing.
- Minimum one year of work experience prior or after Post Basic B.Sc. Nursing.

B. Duration of the Programme : 2 years

C. Fee Structure	1 st Year	2 nd Year
1. Tuition Fee	50000/-	100000/-
2. Registration Fee	4000/-	Nil
3. Security Deposit	20000/-	Nil

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda

Admission to Ph D Programmes

A. Ph D Programme full time

Programme	Eligibility	Duration			
		With M Phil		Without M Phil	
		Min	Max	Min	Max
Medical Biochemistry Medical Microbiology Biotechnology	MD/M Sc in Biochemistry/Microbiology/ Biotechnology/Genetics	2 yrs	4 yrs	3 yrs	5 yrs
Pharmaceutical sciences	M. Pharm				

B. Ph D Part time Programme

Programme	Eligibility	Duration			
		With M Phil		Without M Phil	
		Min	Max	Min	Max
Medical Biochemistry Medical Microbiology Biotechnology	MD/M Sc in Biochemistry/Microbiology/ Biotechnology/Genetics	3 yrs	5 yrs	4 yrs	6 yrs
Pharmaceutical sciences	M. Pharm				

Admission Procedure

1. Eligibility criteria and Procedure for Admission to Ph D Programme:-

- a. A candidate (Indian/foreigner) who has qualified for the award of the Master's Degree of a recognized Institute or of any other University recognized by the University Grant Commission with not less than 50% marks or an equivalent grade; and
- b. The University shall admit students for Ph D programs through an entrance test at the level of the University dates for which will be notified on the university website www.adeshuniversity.ac.in and may take separate administrative decisions with respect to students who have qualified in:
 - (i) UGC/CSIR (JRF) examination.
 - (ii) SLET/GATE/Teacher Fellowship examination
 - (iii) M Phil examination
- c. At the time of interview, the doctoral candidates are expected to discuss their research interests/area, and are to be assessed for their suitability for the program.
- d. The number of seats for Ph D programs shall be decided well in advance and notified at the time of counseling or on the University website www.adeshuniversity.ac.in.
- e. Candidates seeking admission to Ph D programme should get the prospectus and application form from the University office by remitting the cost of the prospectus. The duly filled in application should be submitted on or before the prescribed last date mentioned in the advertisement. If the application form is downloaded from the website the candidate should remit the cost of application form while submitting the application. Incomplete applications will be summarily rejected.
- f. **Admission of Foreign Students**
Foreign applicants will be considered at any time if recommended by the Ministry of External Affairs, Government of India. The foreign nationals must produce a valid research visa at the time of seeking admission to the Ph D programme. If admitted, they will be governed by the rules of Government of India and by the authorities of the Institute from time to time.

g. Entrance Test

An Entrance Test will be conducted by the university the dates of Entrance Test will be notified on University website www.adeshuniversity.ac.in. The question paper will be prepared totally for a 2 hours' test: One hour for Research Aptitude Test (General) and one hour for the Subject Test. A minimum of 60% score is a must to become eligible for provisional admission to Ph D program. Question paper for Research Aptitude Test (General) and subject Test will be set and evaluated by a Board consisting of the concerned subject experts and duly constituted by the Hon'ble Vice Chancellor.

2. Categories Of Ph D Candidates

There shall be three categories of Ph D candidates:

- Full-time scholars
- Part-time teacher candidates (internal & external)
- Part-time non-teacher candidates (internal & external)

2.1 FULL – TIME Ph D CANDIDATES

All eligible candidates who are admitted to the Ph D program as per eligibility criteria mentioned above and pursue full-time research for Ph D in this Institute will fall in this category. A person working in Adesh University in a project sponsored by the UGC/CSIR/ICSSR/ICAR/DOE/DST/DBT/ICMR and other funding agencies with a duration of not less than two years shall also be eligible to register for Ph D under this category, provided his /her Principal Investigator offers his/her consent and the candidate fulfills the eligibility criteria mentioned above.

2.2 PART-TIME TEACHER CANDIDATES (INTERNAL & EXTERNAL)

2.2.1 Part-time internal teacher candidates:

The eligible candidates are those working as temporary or regular faculty members in various Departments/Colleges of this University with minimum two years of service at the time of applying for the Ph D programme.

2.2.2 Part-time external teacher candidates:

The eligible candidates are those working as teachers in any educational/research Institutions with minimum two years of services at the time of applying for the Ph D programme.

2.3 PART –TIME NON-TEACHER CANDIDATES (INTERNAL & EXTERNAL)

2.3.1 Part-time internal non-teacher candidates:

The eligible candidates are the permanent non-teaching staff of Adesh University with three years of service at the time of applying for the Ph D programme.

2.3.2 PART-TIME EXTERNAL NON-TEACHING CANDIDATES:

2.3.2.1 The eligible candidates are those working as staff in departments of state/central government, public/private/ NGO sector with three years of service at the time of applying for the Ph D programme.

2.3.2.2 Retired persons can also register themselves under this category, provided they satisfy the eligibility requirements.

2.4 RESIDENTIAL REQUIREMENT (Part-time)

2.4.1 Part-time teacher and non-teacher external scholars are required to reside on campus for a minimum 180 days during their period of research.

2.4.2 The Research Supervisor concerned will decide what constitutes "residence" and where the residential requirement is to be fulfilled, considering the nature of the study and its requirements. The Research Supervisor shall send a certificate to the Registrar to the effect that the candidate has completed 180 days of campus residential requirement when submitting the Thesis.

Fee Structure

A. For full time Ph D Programme

1.	Tuition Fee	Rs 55000/- per annum
2.	Registration Fee	Rs 5000/-
3.	Security Deposit	Rs 5000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

B. For Part time Ph D Programme

1.	Tuition Fee	Rs 70000/- per annum
2.	Registration Fee	Rs 5000/-
3.	Security Deposit	Rs 5000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

Post Graduate Medical Programmes

A. Name of Programmes

M Sc Medical Biochemistry, M Sc Medical Microbiology, M Sc Biotechnology, M Sc Anatomy and M Sc Physiology

B. Eligibility Criteria - I

The candidate should qualify MBBS/BDS/B VSc./BAMS/BHMS/B Sc Nursing/BPT/B Sc Medical (Anatomy, Physiology, Biochemistry) examinations from recognized university/institution with minimum 50% marks.

C. Duration of the Programme : 2 years

D. Eligibility Criteria - II

The candidates who have passed B Sc in any branch of life sciences examinations from recognized university/institution with minimum 50% marks.

E. Duration of the Programme : 3 years

Admission procedure

1. Candidates for M Sc programme shall be selected strictly on the basis of their Academic Merit. For this purpose the cumulative performance of the students in their graduation examination shall form the basis of their merit. The minimum marks being 50% for all the candidates.
2. The programme for the degree of Master of Science in Medical Subjects shall commence in the month of August/September.
3. The programme is for full time Post Graduate Students meaning thereby that the candidate is not doing any job anywhere except he may be working as the Research Assistant or Research technician or is a full stipendiary in the department concerned.
4. The PG student shall be required to participate in the teaching and training of the undergraduate students.

F. Fee Structure

- | | |
|---------------------|----------------------|
| 1. Tuition Fee | Rs 90000/- per annum |
| 2. Registration Fee | Rs 4000/- |
| 3. Security Deposit | Rs 5000/- |

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

Pharmaceutical Sciences Programmes

A. Post Graduate Programmes

1. Doctor of Pharmacy (Pharm. D)

i. Eligibility criteria

- a. All the aspirants who apply for Pharm.D programme must have cleared their higher secondary board examination with chemistry and physics as obligatory subjects together with Biology or Mathematics from recognized institution/university/Board.
- b. Those who passed Diploma in Pharmacy (D. Pharm) programme can also apply provided the institution from which they took the degree should be recognized under section 12 of the Pharmacy Act lay down by the Pharmacy Council of India.

- c. Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.
- d. He/ She shall complete the age of 17 years on or before 31st December 2015.

ii. Duration of the Programme : 6 years

Pharm. D: The duration of the programme shall be six academic years (five years of study and one year of internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of six years duration is divided into two phases –

Phase I – consisting of First, Second, Third, Fourth and Fifth academic year.

Phase II – consisting of internship or residency training during sixth year involving posting in specialty units. It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services and acquires skill under supervision so that he or she may become capable of functioning independently.

iii. Fee Structure

- | | |
|---------------------|----------------------|
| 1. Tuition Fee | Rs 80000/- per annum |
| 2. Registration Fee | Rs 4000/- |
| 3. Security Deposit | Rs 5000/- |

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

2. Masters in Pharmacy (Pharmaceutics)

i. Eligibility Criteria

- a. A candidate who has passed B.Pharm degree examination of any recognized University and has secured not less than 50% of the maximum marks (aggregate of four years) prescribed for the qualification examination shall be eligible for the admission to the M.Pharm programme.
- b. For SC / ST candidates the prescribed percentage of marks shall be 45% of the maximum marks in the qualifying examinations.

ii. Eligibility Certificate

The Candidate who has passed the qualifying examination as specified in Regulation No. 1 above from any other University other than the Adesh University, before seeking admission to any one of the constituent colleges shall obtain an Eligibility Certificate from the University by remitting the prescribed fees along with application form, which may be downloaded from the University web site, the candidates should obtain Eligibility Certificate before admission. Due to some

unavoidable reason, if the candidate got admission only on the last day of the cut-off date then the candidate shall directly go and join the College without Eligibility Certificate. The Institute shall admit such candidates without Eligibility certificate with the condition that the Eligibility Certificate should be produced within 15 days.

iii. **Registration**

A Candidate admitted to the Master of Pharmacy programme in the constituent college of the Adesh University, Bathinda, shall submit the prescribed application form for registration duly filled along with prescribed fee and declaration in the format, to this University through the constituent colleges within two weeks from the cut-off date prescribed for Master of Pharmacy programme for admission.

iv. **Duration of The Programme**

The programme of study including submission of dissertation shall be of 24 months (two years) duration from the commencement of academic term. The study of M.Pharm programme shall be of annual system that includes M.Pharm Ist year and M.Pharm IInd Year. At the end of M.Pharm Ist year, there shall be a university examination. At the end of M.Pharm IInd Year, the candidate shall submit a dissertation on a research project. No exemption shall be given from this period of study and training for any other experience gained prior to the admission to the programme.

PG students are required to participate in teaching/training of undergraduate students.

v. **Fee Structure**

1. Tuition Fee	Rs 90000/- per annum
2. Registration Fee	Rs 4000/-
3. Security Deposit	Rs 5000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

B. Graduate Programme

Bachelor of Pharmacy (B Pharma)

1. Eligibility Criteria

- i. Candidates who have passed (10+2) examination or an equivalent examination of any approved Board or university with not less than 40% marks in any combination comprising Physics, Chemistry and Mathematics (P.C.M.) or Physics, Chemistry and Biology/Biotechnology(P.C.B) or Physics, Chemistry, Mathematics and Biology/biotechnology (P.C.M.B).
- ii. In respect of candidates who have taken (P.C.M.B). Combination the aggregate of (P.C.M). or P.C.B. whichever is higher shall be considered for the purpose of admission.

- iii. In case of students belonging to SC/ST/or Category-I, the minimum percentage of marks for admission to B. Pharm Programme shall have not less than 35% marks in equivalent examination (P.C.B, or P.C.M. or P.C.M.B.)
- vi. Candidates who have passed Diploma in Pharmacy Programme with not less than 50% aggregate, from an institution, approved by Pharmacy Council of India shall be eligible to this Programme and shall be admitted directly to II B. Pharm Programme.
- vii. The admission to this programme will be based on merit or in the qualifying an entrance test to be conducted by Adesh University, provided the candidate is otherwise eligible for admission.

2. Duration of the programme

The programme of study for B. Pharm shall extend over a period of four academic years for 10+2 candidate and three academic years for those admitted to second B. Pharm directly. The curricula and syllabi for the programme shall be prescribed from time to time.

3. Fee Structure

i.	Tuition Fee	Rs 60000/- per annum
ii.	Registration Fee	Rs 3000/-
iii.	Security Deposit	Rs 3000/-

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

C. Diploma Programme

Diploma in Pharmacy (D Pharmacy)

1. Eligibility Criteria

Minimum qualification for admission to Diploma in Pharmacy 'Part-I programme – the candidate should have passed in any of the following examinations with physics, Chemistry and Biology or Mathematics:

- i. Intermediate examination in Science;
- ii. The first year of the three year degree programme in Science;
- iii. 10+2 examination (academic stream) in Science;
- iv. Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.

2. Duration of Programme

The duration of the programme shall be of two academic years with each academic year spread over a period of not less than one hundred and eighty working days in addition to 500 hours practical training spread over a period of not less than 3 months.

3. Fee Structure

- | | |
|-----------------------|----------------------|
| i. Tuition Fee | Rs 30000/- per annum |
| ii. Registration Fee | Rs 2000/- |
| iii. Security Deposit | Rs 2000/- |

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

Bachelor in Physiotherapy Programme (BPT)

1. Eligibility Criteria

- i. No candidate shall be admitted to the B.P.T programme unless he/she has:-
 - a. Passed 10+2 examination from the Punjab School Education Board or any other examination from a statutory University/Board recognized as equivalent there to by Adesh University, Bathinda with Physics, Chemistry, Biology and English and must have obtained a minimum of 50% marks taken together in Physics, Chemistry and Biology. In the case of candidates belonging to Scheduled Castes/Backward Class, the percentage of aggregate marks required pass marks would be 40%. The admission shall be made on the basis of inter-se-merit of qualifying examination i.e. +2 medical merit list. Other terms & conditions may be as notified by the Govt. of Punjab from time to time.
 - b. Completed or shall be completing the age of 17 years on 31st December of the year of admission.
- ii. English shall be medium of instruction for study and examination of the Bachelor of Physiotherapy degree programme.

2. Duration of Programme

- i. The duration of Bachelor of Physiotherapy programme shall be four and half academic years including six months compulsory rotatory internship as under:

a. First Professional B.P.T	1 year
b. Second Professional B.P.T	1 year
c. Third Professional B.P.T	1 year
d. Fourth Professional B.P.T	1 year
e. Internship	6 months

3. Fee Structure

- | | |
|-----------------------|----------------------|
| i. Tuition Fee | Rs 40250/- per annum |
| ii. Registration Fee | Rs 4000/- |
| iii. Security Deposit | Rs 10000/- |

Note: admitted candidates will be required to pay the fee on the spot in cash/ demand draft in favour of Adesh Institute of Medical Sciences and Research payable at Bathinda.

Paramedical Programmes

For admission to Master, Post Graduate Diploma, Degree, Diploma and Certificate Programmes the detail of programmes, eligibility criteria, duration and Fee structure is as under:-

Programmes	Eligibility	Duration	Fees Detail		
			Tuition Fee	Regn Fee	Sec Deposit
M Sc Medical Lab Tech	B Sc Medical Lab Tech	2 years	35000/- Per Semester	3000/-	3000/-
Post Graduate Diploma Programmes					
PG Diploma in MRI/CT	B Sc RIT	1 year	39,000 per semester	2,000	2,000
PG Diploma in Blood Bank & Transfusion Tech	B Sc MLT	1 year			
Graduate Programmes					
B Sc in MRI/CT Tech	10+2 Med/ Non-Med or equivalent or 10+2 in any stream with diploma in corresponding discipline from a recognized Board/University	3 years	30,000 per semester	3,000	3,000
B Sc Medical Lab Tech		3 years	24,000 per semester	3,000	3,000
B Sc Operation Theatre Tech					
B Sc Radio Imaging Tech					
B Sc Dialysis Tech					
B Sc Anaesthesia Tech					
Allied Health Sciences Programmes					
B Sc Medical (Anatomy, Physiology, Biochemistry)	10+2 Medical	3 years	25,000 per annum	4,000	5,000
B Sc Audiology & Speech Pathology					
B Sc Optometry	10+2 Medical/Non Medical	4 Years including training	60,000 per Semester	4,000	5,000
Diploma Programmes					
Diploma in Medical Laboratory Technology (DMLT)	10+2 in any stream	1 years	17,500 per Semester	2,000	2,000
Diploma in Operation Theatre Technology (DOTT)					
Diploma in Radio Imaging Technology (DRIT)					
Diploma in Dialysis Technology (DDT)					
Diploma in Anaesthesia Technology (DAT)					

Programmes	Eligibility	Duration	Fees Detail		
			Tuition Fee	Regn Fee	Sec Deposit
Certificate Programmes					
Certificate Programme in Dialysis Technology (CDT)	10 th / Matric	1year	17,500 per Semester	2,000	2,000
Certificate Programme in Anaesthesia Technology (CAT)					
Dental Chair Side Assistant	10 th / Matric	1 year	12,500 per semester	2,000	2,000

Library Sciences Programmes

For admission to Master, Bachelor and Diploma in Library Sciences Programmes the detail of programmes, eligibility criteria, duration and Fee structure is as under:-

Programmes	Eligibility	Duration	Fees Detail		
			Tuition Fee	Regn Fee	Sec Deposit
Master in Library Sciences	Bachelor in Library Sciences	1 year	18,000 per annum	4,000	5,000
Bachelor in Library Sciences	Graduation in any stream	1 year	15,000 per annum	3,000	3,000
Diploma in Library Sciences	10+2 any stream	1 year	13,500 per annum	2,000	2,000

General Information

1. Candidates seeking admission in all above Programmes are required to apply to the Adesh University, by submitting Common Admission Application Form enclosed with this prospectus, by due date. Last Date for submission of admission application form, date of counseling and starting of academic session will be notified on University website www.adeshuniversity.ac.in
2. The Candidates are advised to regularly visit the website of the University for updated information failing which the candidates would be responsible.
3. Photocopies of following documents, attested by the Principal of the College/School last attended or Class-I Gazetted Officer should accompany the Admission form:
 - i. Matric or equivalent certificate for date of birth
 - ii. Detail marks card of 10+2 along with Diploma/UG Degree/PG Examination DMC, as applicable
 - iii. Character Certificate from Institution last attended (specifically mentioning the status of his/her behavioral pattern) (Appendix-II)
 - iv. Undertaking in original by candidate & parent/guardian after affixing self-attested recent photographs of the candidate regarding Gap year, if applicable (Appendix-I)*
4. Candidates will have choice to fill up to five programmes, in order of preference by submitting Common Application form.

5. University reserves the right not to start a programme in case the number of eligible applicants is less than 10.
6. Photograph pasted on the Application form must be attested by the Principal of the College/School last attended or Class-I Gazetted Officer.
7. All qualified candidates are required to appear for counseling in-person, along with all original documents, without waiting for any call Letters/Advertisement. No separate call letters shall be sent. If a candidate fail to report for counseling in-person, he/she will forfeit his/her candidature.
8. Date of counseling will be displayed on University website. Please stay updated at www.adeshuniversity.ac.in

Note: Second Counseling will be held later on only if necessary.

ENROLMENT IN THE CONCERNED COLLEGE

1. Candidates selected for admission in Adesh University will report to their respective Colleges for enrolment on the date to be notified at the time of counseling. Each candidate is required to submit Enrolment form along with appendices as prescribed (available online from www.adeshuniversity.ac.in) of the prospectus, along with original and 2 sets of xerox copies of the documents as per list:
 - i. Matric or equivalent certificate for date of birth
 - ii. Detail marks card of 10+2 along with Diploma/UG Degree/PG Examination DMC, as applicable
 - iii. Eight colored passport size recent Photographs (unattested) along with the Application form.
2. Enrolment form and Appendix II-VI are available from University website www.adeshuniversity.ac.in. Candidates are advised to get all documents prepared well in time, as these documents have to be submitted in original at the time of enrolment.
3. Medical Examination will be conducted at the time of Enrolment. Hostel fee and hostel related other dues will have to be submitted at the time of Enrollment.
4. Photographs on all documents submitted at the time of Enrolment in the concerned college must be unattested. Candidates may require to submit more photographs at the time of enrolment. So, all candidates are advised to keep one extra set of coloured passport size photograph from the same negative as that on admit card or other forms, with them.
5. Date of starting of classes: as notified during counseling.
6. Application must be completed in all aspects; hence applicants are advised to seek clarifications if any required before coming for admission from respective colleges whose contact numbers are given below:
 - i for Nursing Programme Ph: 0164-5055064, 5055066
 - ii for Pharmacy (Pharm D, M Pharma, B Pharma)Programme Ph: 0164-5055087
 - iii for Physiotherapy Programme Ph: 0164-5055011
 - iv for Paramedical Programmes Ph: 0164-5055091, 5055072
 - v for Diploma in Pharmacy Programme Ph: 0164-5055139, 5055037
 - vi for clarification regarding fee Ph: 0164-5055012, 5055117

NOTES:

- i. Hostel & other charges including Room Rent, Electricity, Mess, University Registration, Examination fee etc. will be extra as intimated by the university from time to time. Fee is to be deposited preferably through RTGS or as a demand draft in favour of Registrar, Adesh University, payable at Bathinda.
- ii. If a candidate leaves the Institute/shifts or migrates to some other Institute, after the last date of admission or before completing the full programme, including Internship Training, due to any reason whatsoever, the college security and the hostel security already paid shall stand forfeited. In addition, he/she will have to pay to the concerned Institute all balance fees for the entire duration of the programme. For this purpose, he/she will have to submit, at the time of admission, a self-undertaking in the form of an Affidavit duly sworn in by the candidate himself and his parents (Appendix-III).
- iii. University examination form will be sent to university after getting NO DUES certificate from the accounts section, Library, Hostel and Cafeteria.
- iv. The University charges levied from time to time will be paid by all the candidates admitted in Adesh University.

REFUND OF TUITION FEE

Fees once paid, shall not be refunded. In case any student leaves the college due to any reason what so ever after closure of the admission process/before completing the full programme, fee for entire programme is payable by him/her.

FEE FROM FAILED/DETAINED STUDENTS

A student failing/detained in any subject(s) in a University Examination shall be required to pay, for each subject and each attempt, tuition fee as under:

i	Certificate/diploma programmes of duration 1year	:	1000/-
ii	Diploma programmes of duration 2 years	:	1500/-
iii	Graduate programmes	:	2000/-
iv	Post Graduate programmes	:	3000/-

(D) UNIVERSITY RULES

1. All admissions are provisional and are subject to approval by Adesh University, Bathinda.
2. The programmes of study and examinations are governed by the regulations of Adesh University & INC/PCI/any other regulatory body as applicable.
3. The classes for the failed/detained students shall start immediately after the declaration of the results. Attendance in these classes is compulsory. All failed/detained students are required to appear for class tests/send up examinations to be eligible to appear in the next university examinations.
4. Apart from notified tuition fee structure for different categories, additional charges such as Registration Fee, Administrative Expenses, Examination Fee etc. as required by the University from time to time shall be deposited by the students.

5. The rules and regulations, including fees, may be revised as and when required and the revised rules and regulations /fee will be applicable irrespective of the conditions mentioned in this prospectus.
6. In case of insufficient applicants, admission to any particular Programmes may be suspended for a particular session.

DISCIPLINE & CONDUCT LIABILITY

1. The students in the campus shall be required to conduct themselves with utmost discipline and conduct for which they and their parents shall have to give a self attested undertaking to the Principal at the time of admission.
2. It is expressly implied upon the students and their parents to ensure a good disciplinary and moral conduct, failing which, the students may be rusticated from the institution or may be asked to vacate hostel accommodation.
3. Students must attend their theory and practical classes daily and their absence from classrooms and/or hostel shall be noted and efforts will be made to send the information to their parents in case of serious lapses.
4. The parents are required to meet the Principal and the faculty from time to time for updates regarding the academic performance and other activities of their children/wards.

ATTENDANCE

1. Every student is required to attend punctually, at the hours notified, for all the lectures, demonstrations, practicals, tutorials, tests and clinical classes.
2. No student shall be allowed to appear in the university examination(s) of the concerned subject if his/her attendance falls below 75% in a subject inclusive of attendance in non-lecture teaching i.e. seminars, group discussions, tutorials, demonstrations, practicals, hospital (Tertiary, Secondary, Primary) posting and bed side clinics etc. The remaining 25% is meant to take care of unforeseen circumstances like family/co-curricular obligations, illness etc. On no account shall a student be given attendance credit if he/she is NOT physically present in the class.

INTERNAL ASSESSMENT

1. The internal assessment in each subject(s) is based on:
 - (i) Day-to-day evaluation of student assignments, preparation for seminars, clinical case presentations, etc.
 - (ii) Performance in regular periodical theory class tests, send-up examinations, practical class tests, ward leavings, etc.
 - (iii) Students conduct and discipline in the classes.
 - (iv) Additional credit of 10% of total internal assessment in theory and practical will be given to students having >90% attendance in theory lectures or practical.

- (v) A student must secure at least 35% of the total marks fixed for internal assessment in the particular subject in order to be eligible to appear in the University Examination of that subject.
- (vi) Above rules also apply to failed/detained student who must take all class tests/send up examinations of concerned subject(s) in the subsequent semester to be eligible for appearing in university examination. Internal assessment will take into account the performance/attendance in the semester.

LECTURE THEATERS

1. Wearing of white coat (where applicable) coat with college emblem and name plate on left top pocket is compulsory for all the students. Identity card must be displayed at all the times in the campus.
2. No student is allowed to leave the lecture room without the permission of his/her teacher or until the class is dismissed.
3. Immediately after assembly of the class, the roll call will be taken. A student coming late into the Lecture Theater will be marked absent unless his excuse for being late is accepted by the teacher. Disciplinary action will be taken against any student misbehaving in the class room.
4. Students are not permitted to remain in the lecture room except during the prescribed hours of lectures.
5. Students are also not permitted to sit in the library, canteen, hostel or lawns of the Institution during class hours. Monetary fine will be imposed and disciplinary action shall be taken on the students found violating this rule.

LEAVE

1. Period of ANY TYPE of leave (including sick leave) will be considered as ABSENCE for purposes of determination of candidate's eligibility to appear in the University Examination and also for computation of Internal Assessment.
2. In all cases leave taken will be at the student's own risk so far as the percentage of attendance is concerned and even medical certificate will NOT make up for deficiency in attendance.
3. Sick leave will only be granted on the production of a valid medical certificate from an authorized medical officer appointed by the Principal of the college except when the student is already on leave out of station. The student will submit fitness certificate from same doctor before rejoining.
4. A medical certificate must specify the nature of the illness and the period with dates of leave recommended on account of that illness.
5. In case a student is absent without leave continuously for five days in a subject, the information will be sent to the Principal by head of department and if the absence continues for a period of four weeks, name of the student will be struck off the college roll. Intimation in this regard will be sent to the parents of the concerned student.

GENERAL

1. Students are required to observe order and discipline at all times in the college.
2. Students are required to wear simple and decent clothes in the college and its premises where wearing dress as per dress code is not necessary. Wearing T-Shirts without collars/ revealing clothes/shirts with slogan printed are not allowed. Each student must have at least one set of sports dress including sports shoes.
3. Following are strictly forbidden in the institution and its premises:
 - i Smoking and possession or use of alcoholic beverages or delinquency under the influence of alcohol.
 - ii Possession or use of addictive or hallucinogenic drugs in the campus.
 - iii Gambling.
 - iv Possession of or use of firearms, any lethal weapon or explosives.
4. Displaying and distribution of partisan, anti-secular and political pamphlets or circulars etc in the college, hostels and hospital premises are not allowed.
5. All irregularities and breach of discipline will be brought to the notice of the Principal by the Professors under whom the student is working.
6. Any student breaking or damaging any college property shall be required to pay the cost of repair or replacement and shall be punished under the college disciplinary rules.

DRESS CODE

1. In order to inculcate an attitude of equality, pride and allegiance to alma mater there is a prescribed dress code in all the constituent Colleges of Adesh University for summer and winter as well as for sports fields.
2. The prescribed dress is to be worn on all formal/ceremonial occasions as well as prescribed days of the week during working hours and while representing the institutions in co-curricular / extra curricular activities.
3. All students are required to observe the dress code. Violation may attract disciplinary action.

STUDENTS' COUNCIL

1. There is a students' council in each college composed of representative from each class.
2. The council assists the college authorities to channelize and address all student issues related to curricular and co-curricular activities.
3. Students' council is ceremonially installed each year. Members get weightage in internal assessment.

INDISCIPLINE AND PUNISHMENT

1. For all such offences that occur in the college or hospital premises or in the college hostels, the Principal, may at his discretion refer the case to the college disciplinary committee, which shall be appointed by the Principal from time to time. This disciplinary committee

shall have the power to interview any student or parents or any member of the staff or any member of public and is empowered to send its recommendations to the Principal. The cases involving students of more than one constituent college will be referred to Central Disciplinary Committee.

2. After considering the recommendations of the college disciplinary committee, disciplinary action by the Principal against the students committing an offence might take one or more of the following forms depending upon severity of the offences:
 - i. The student may be asked to tender an apology, verbal or written. This shall be placed on the student's record.
 - ii. A deterrent fine may be imposed.
 - iii. A red ink entry may be marked against the student which can affect his/her internal assessment on account of misconduct.
 - iv. Scholarship may be suspended, or stopped. Eligibility for education loan may be affected.
 - v. A student may be suspended from the college rolls for a period not exceeding two weeks at a time, pending enquiry into the misconduct of the student.
 - vi. The student may be expelled from the college for a certain period as decided by the disciplinary committee.
 - vii. A student may be placed on probation for a period up to one year. If during the period of probation he/she fails to improve his/her conduct, he/she may be expelled from College.

REGULATIONS RELATING TO EXPULSION

1. Expulsion whenever imposed on a college student shall mean the loss of maximum up to five calendar years and will mean he/she being debarred from the university examination during the period of his/her expulsion.
2. A student expelled from a college shall not be readmitted before the expiry of the period of his expulsion.
3. Cases of expulsion shall be reported to the university by the Principal for registration and notification.
4. A student shall continue to be under the disciplinary jurisdiction of the Principal of the college till the completion of the programme.
5. In case the applicant for admission is found to have indulged in ragging in the past or if it is noticed later that he has indulged in ragging, admission may be refused or he/she shall be expelled from the institution as per judgment of the Hon'ble Supreme Court of India in SLP (Civil) No. 24295/2004.
6. The decision of the Principal in all cases shall be considered as final.

(E) HOSTEL RULES

1. Adesh University is a residential complex. Adequate hostel facilities are available
2. Students will apply for hostel accommodation and allotment of hostel accommodation will be made on merit subject to availability.
3. All students will follow the hostel rules, as applicable, and as provided in a booklet concerning hostel rules.

(F) ACADEMIC AWARDS

1. The following criteria has been laid down for Academic Awards to students:
 - (i) All awards will be based purely on merit, as per performance in the annual/semester University Examinations.
 - (ii) Institutional Gold & Silver medal will be given to the Best Graduate and second Best Graduate of the year based on the aggregate marks in all the annual/semester University Examinations.
 - (iii) Institutional Gold, Silver and Bronze medals will be awarded to first 3 students in each annual examination.
 - (iv) Medals will be given to first 3 students in each subject in the University annual Examinations.
 - (v) Medals will be given to the distinction holders.

(G) LIBRARY

1. The Library shall be under the control of the Principal who may set up a sub- committee with a convener for its day to day management.
 - (i) The Library will be open for all entitled readers on all working days. Timings will be notified separately by concerned Colleges.
 - (ii) Silence and order must be maintained in the library at all times. Any violation of this rule will result in serious disciplinary action.
 - (iii) Any person who loses/defaces or otherwise seriously damages books etc. shall be liable to pay the cost of the replacement and in the event of the book being one of the set or series, the cost of whole set or series, shall be paid by the person if the single copy lost/damaged is not available.
2. The following shall be entitled to use the library:
 - (i) The faculty of the college and hospital
 - (ii) Students of the college.
3. Books that are required for occasional reference, such as encyclopedias, dictionaries, atlases etc. and books of great value or rarity shall not be removed from the library.

4. Books borrowed from the library are not transferable.
5. Books are issued strictly according to the priority of demand.
6. A suggestion book is kept in the library in which suggestions for new books are invited.

LIBRARY RULES

1. Only two books will be issued for taking out from the library at a time by a candidate.
2. No book shall be kept by any students for more than 14 days. This privilege does not include the vacations. For each extra succeeding day that a book be kept there shall be a fine of Rs.10/- per book per day but the total fine shall not exceed the price of the book. Further issue of books shall be stopped till the fine is paid and the book returned to the library.
3. If the reason of non-return of book in time is beyond the control of the student and the Principal is satisfied, he may reduce the fine.
4. Every borrower will be supplied with a borrower's student card, which shall be stamped by the librarian every time a book is issued/ returned. If a card is lost, a new card is to be purchased from the librarian at prescribed cost.
5. The book card placed in the pocket at the end of the book must be delivered to the librarian before the book is taken away and the borrower must have it stamped.
6. The borrower card is not transferable. During stock checking, which will be notified in advance, all books issued must be returned.
7. Periodicals and newspapers received for the students section are placed on the table for the use of the students and must not be taken away under any circumstances.
8. Use of internet facilities in the library is subject to rules & regulations framed from time to time.

(H) RULES REGARDING RAGGING AND ITS PREVENTION

1. As per the current orders of the Hon'ble Supreme Court of India/ University grants commission / Govt. of Punjab, the following should be noted by all candidates and their parents/guardians.
2. Ragging in any form is strictly forbidden. Ragging is defined as "Any disorderly conduct whether by words spoken or written or by an act having an effect of teasing, treating or handling with rudeness any other student, including any rowdy or indisciplined activity which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in a fresher or a junior student or asking the students to do any act or perform something which a student will not do in the ordinary programme and which has the effect of causing or generating a sense of shame or embarrassment so as to adversely affect the physique or psyche of a fresher or a junior student".
3. In this connection an extract of relevant directions received from UGC are reproduced as under:

- (i) Every student for the purpose of his/her admission to the institution shall furnish a character certificate from the institutions where from he/she has passed his qualifying examination, which would mention the status of his/her behavioral pattern specially in terms as to whether he/she displayed persistent violent or aggressive behavior or any desire to harm others (Appendix-II).
- (ii) The admitting institution shall keep intense watch upon students who has a negative entry in this regard.
- (iii) An annual self-undertaking signed by each student, whether fresher or senior and his/her parent(s) jointly stating that each of them have read the relevant instructions/regulations against ragging, as well as punishments and that if the Ward has been found guilty he/she shall be proceeded against, shall be procured.
- (iv) Such a self-undertaking shall be furnished in English, Hindi as well as in vernacular (mother tongue of the parent) at the beginning of each academic year by every student (Appendix VA, VB and VC) and by the parent/guardian of the student (Appendix VIA< VIB and VIC).
- (v) In order to ensure the 'ragging free environment' in the campus, each institution shall compulsorily mention in the Prospectus and other admission related documents and shall depict the earlier directions of the Apex court and/or of the Central or State Governments pertaining to ragging as applicable, so that candidates and their parents are sensitized in respect of the prohibition and consequences of ragging.
- (vi) Each institution shall have an Anti-Ragging Committee and Anti Ragging Squad, which shall comprise of other than senior teachers of the institution, representatives of Civil & Police administration and local media.
- (vii) In case the victim of ragging his/her parent/guardian is not satisfied with the action taken by the of the Institution or by other institutional authorities, or where Head of the institution is of the opinion that the incident ought to be so reported, it shall be mandatory for the institution to file a First Information Report with the local police authorities.
- (viii) In case the applicant for admission is found to have indulged in ragging in the past or if it is noticed later that he has indulged in ragging, admission may be refused or he/she shall be expelled from the institution as per judgment of the Hon'ble Supreme Court of India in SLP (Civil) No. 24295/2004.
- (ix) Ragging in any form constitutes a criminal offence. A students indulging in ragging can be:
 - a. Expelled from the institution.
 - b. Banned from the mess/ hostel.
 - c. His/ her scholarship can be withdrawn.
 - d. Debarred from examinations.

- e. Denied admission to any institution.
 - f. Prosecuted for criminal action.
 - g. Lodging of FIR with local police against those who RAG/ABET ragging.
 - h. Deterrent fine imposed in addition to above.
- (x) If any incidence of ragging comes to the notice of the authority, the concerned student shall be given the liberty to explain and if his/her explanation is not found satisfactory, the authority would proceed with action as outlined above.
- (xi) The aggrieved students are free to report any incidence of ragging to any member of the ANTI-RAGGING COMMITTEE by written communication, telephone or SMS. All efforts will be made to keep the name of the reporting person confidential. The names and telephone numbers of the members of this committee will be provided to the students soon after admission.

Any situation not covered by these rules shall be decided by the Vice-Chancellor

APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE

Notwithstanding the nature of a programme spread over more than one academic year, the regulations in force at the time a student joins a programme shall hold good only for the examinations held during or at the end of the professional/annual/semester and amended regulations, if any, will be applicable to the subsequent professional/annual/semester examinations. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all students old or new, as specified therein.

SCHEDULE OF PROGRAMMES AND DETAILED SYLLABI

The schedule of programmes and detailed syllabi of various disciplines of undergraduate programmes shall be according to the Regulations of the University prevailing for the time being.

DISCLAIMER

The statements made in this Prospectus and all other information, contained herein are believed to be correct at the time of publication. However, the University reserves the right to make at any time, without notice, changes in and/or additions to the regulations of University and conditions governing the conduct of students, requirements for degree, fee and any other information, or statements contained in this Prospectus either on its own or under any rules or regulations imposed by UGC/Regulatory bodies. No responsibility will be accepted by the University for hardship or expense encountered by its students or any other person for such changes, additions, omissions or errors, no matter how they are caused.

SETTLEMENT OF DISPUTES

In case any student seeking admission/admitted to any disciplines available in the University, raises any dispute with regard to any order passed by the Admission Committee and/or enforcement, interpretation of the terms of the admission or any other matter covered by the Regulations of the University and/or the terms given in the Prospectus, the same shall be settled by the Vice Chancellor of the University or his nominee, whose decision shall be final subject to the condition that the dispute, if any, is referred to the Vice Chancellor within 15 days from the date of arising of the dispute.

JURISDICTION

All disputes will be subject to jurisdiction of the Civil Courts at Bathinda City only.

Syllabus for conduct of B Sc (Nursing)/Post Basic B Sc (Nursing) Entrance Test

PHYSICS

Unit I: Physical World and Measurement

Physics - scope and excitement; nature of physical laws; Physics, technology and society.

Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement, significant figures. Dimensions of physical quantities, dimensional analysis and its applications.

Unit II: Kinematics

Frame of reference. Motion in a straight line: Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion, velocity-time, position-time graphs, relations for uniformly accelerated motion (graphical treatment). Elementary concepts of differentiation and integration for describing motion, Scalar and vector quantities: Position and displacement vectors, general vectors and notation, equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors. Relative velocity. Unit vector: Resolution of a vector in a plane - rectangular components. Scalar and vector product of vectors. Motion in a plane. Cases of uniform velocity and uniform acceleration-projectile motion. Uniform circular motion.

Unit III: Laws of Motion

Intuitive concept of force. Inertia. Newton's first law of motion; momentum and Newton's second law of motion; impulse: Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces. Static and kinetic friction, laws of friction. rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on level circular road. vehicle on banked road).

Unit -IV Work, Energy and Power

Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: conservation of mechanical energy (kinetic and potential energies); non-Conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.

Unit-V Motion of System of Particles and Rigid Body

Centre of mass of a two-particle system, momentum conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of uniform rod. Moment of a force, torque, angular momentum, conservation of angular momentum with some examples. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions;

moment of inertia, radius of gyration. Values of moments of inertia for simple geometrical objects (no derivation). Statement of parallel and perpendicular axes theorems and their applications.

Unit-VI Gravitation

Keplar's laws of planetary motion. The universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy; gravitational potential. Escape velocity, Orbital velocity of a satellite. Geo-stationary satellites.

Unit-VII Properties of Bulk Matter

Elastic behaviour, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear, modulus of rigidity, poisson's-ratio; elastic energy Pressure due to a fluid column Pascal's law and its applications (hydraulic lift and hydraulic brakes). Effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, Reynold's number, streamline and turbulent flow. Critical velocity. Bernoulli's theorem and its applications. Surface energy and surface tension, angle of contact, excess of pressure, application of surface tension ideas to drops, bubbles and capillary rise. Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion, specific heat Capacity: C_p , C_v -colorimetry; change of state-latent heat. Heat transfer-conduction, convection radiation and thermal Conductivity, Qualitative idea of Blackbody radiation, Newton's law of cooling and Stefan's law, Wein's displacement law, Green House effect.

Unit-VIII Thermodynamics

Thermal equilibrium and definition of temperature (zeroth law of thermodynamics). Heat, work and internal energy. First law of thermodynamics. Isothermal and adiabatic processes. Second law of thermodynamics: reversible and irreversible processes. Heat engines and refrigerators.

Unit-IX Behaviour of Perfect Gas and Kinetic Theory

Equation of state of a perfect gas, work done on compressing a gas. Kinetic theory of gases. Assumptions, concept of pressure. Kinetic energy and temperature; rms, speed of gas molecules; degrees of freedom, law of equipartition of energy (statement only) and application to specific heat capacities of gases: concept of mean free path, Avogadro's number.

Unit-X Oscillations and Waves

Periodic motion - period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion (S.H.M) and its equation; phase; oscillations of a spring-restoring force and force constant; energy in S.H.M.-kinetic and potential energies: simple pendulum-derivation of expression for its time period: free, forced and damped oscillations (qualitative ideas only), resonance. Wave motion. Longitudinal and transverse waves, speed of wave motion. Displacement-relation for a progressive wave. Principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect.

Unit-XI: Electrostatics

Electric Charges; and their Conservation, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electrical field,

electric field due to a point charge, electric-field lines; electric dipole, electric field due to a dipole; torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (Field inside and outside). Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor, Van de Graaf generator.

Unit-XII: Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current: Ohm's law, electrical resistance. V-I characteristics (linear and non linear), electrical energy and power, electrical resistivity and conductivity. Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of cell, combination of cells in series and in parallel. Kirchhoff's laws and simple applications. Wheatstone bridge, meter bridge. Potentiometer-principle and its applications to measure potential difference and for comparing emf of two cells, measurement of internal resistance of a cell.

Unit-XIII: Magnetic Effects of Current and Magnetism

Concept of magnetic field. Oersted's experiment; Biot-savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids. Force on a moving charge in uniform magnetic and electric fields. Cyclotron. Force on a current-carrying conductor in a uniform magnetic field Force between two parallel current-carrying conductors, definition of ampere. Torque experienced by a current loop in uniform magnetic field; moving coil galvanometers- its current sensitivity and conversion to ammeter and voltmeter. Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic field intensity due to a magnetic dipole (Bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements, Para-, dia-and ferro-magnetic substances with examples, Electromagnets and factors affecting their strengths. Permanent magnets.

Unit-XIV: Electromagnetic Induction and Alternating Currents

Electromagnetic induction, Faraday's laws, induced emf and current, Lenz's Law, Eddy currents: Self and mutual inductance. Alternating current, peak and rms value of alternating current/voltage; reactance and impedances; LC oscillations, (qualitative treatment only), LCR series circuit resonance; power in AC circuit, wattless current. AC generator and transformer.

Unit-XV: Electromagnetic Waves

Need for displacement current, Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves. Electromagnetic spectrum (Radio waves, Radio-

microwaves, infra-red, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

Unit-XVI: Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens-maker's formula. Magnification, power of a lens, combination of thin lenses in contact, combination of lens and mirror. Refraction and dispersion of light through a prism. Scattering of light-blue colour of the sky and reddish appearance of the sun at sunrise and sunset. Optical instruments: Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia) using lenses. Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers. Waves optics: wave front and Huygens' Principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygens 'Principle. Interference. Young's double hole experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving power of microscopes and astronomical telescopes. Polarisation, plane polarised light -Brewster's law, uses of plane polarised light and Polaroids.

Unit-XVII: Dual nature of Matter and Radiation

Photoelectric effect, Hertz and Lenard's observations'; Einstein's photoelectric equation, particle nature of light. Matter waves-wave nature of particles, de Broglie relation. Davission-Germer experiment (experimental details should be omitted; only conclusion should be explained).

Unit-VIII: Atoms & Nuclei

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity- alpha, beta and gamma particles/rays and their properties; radioactive decay law. Mass-energy relation, mass-defect; binding energy per nucleon and its variation with mass number; nuclear fission and fusion,

Unit-XIX: Electronic Devices

Energy bands in solids (qualitative idea only) conductor, insulators and Semiconductors; semiconductor Diode-I-V characteristics in forward and reverse bias, diode as a rectifier, I-V characteristics of LED, photodiode, solar cell and Zener diode, Zener diode as a voltage regulator. Junction transistor, transistor action; characteristics of a transistor: transistor as an amplifier (common emitter configuration) and oscillator, Logic gates (OR, AND, NOT, NAND and NOR). Transistor as a switch.

Unit-XX: Communication Systems

Elements of a communication system (block diagram only); bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium- Propagation of electromagnetic waves in the atmosphere, Sky and space wave propagation. Need for modulation. Production and detection of an amplitude modulated wave.

CHEMISTRY

Unit-I Some Basic Concepts of Chemistry

General introduction: Importance and scope of chemistry. Historical approach to particulate nature of matter, laws of chemical combination. Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses. Mole concept and molar mass: percentage composition, empirical and molecular formula; chemical reactions, stoichiometry and calculations based on stoichiometry.

Unit-II Structure of Atom

Discovery of electron, proton and neutron; atomic number, isotopes and isobars. Thomson's model and its limitations, Rutherford's model and its limitations. Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, De Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p, and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli exclusion principle and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals.

Unit-III Classification of Elements and Periodicity in Properties

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, Inert gas radii. Ionization enthalpy, electron gain enthalpy, electronegativity, valence, Nomenclature of elements with atomic number greater than 100.

Unit-IV Chemical Bonding and Molecular Structure

Valence electrons, ionic bond, bond parameters, covalent bond. Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory. resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization involving s, p and d orbitals and shapes of some simple molecules, Molecular orbital theory of homonuclear diatomic molecules(qualitative idea only), hydrogen bond.

Unit-V States of Matter: Gases and Liquids

Three states of matter. Intermolecular interactions, types of bonding, melting and boiling points. Role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles' law, Gay Lussac's law, Avogadro's law. Ideal behaviour, empirical derivation of gas equation, Avogadro's number. Ideal gas equation. Derivation from ideal behaviour, liquifaction of gases, critical temperature, kinetic energy and molecular speeds (elementary idea) derivation from ideal behaviour, liquification of gasses, critical temperature Liquid State - Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Unit-VI: Solid State

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids packing efficiency, voids,

number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semiconductors.

Unit VII: Solutions

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties – relative lowering of vapour pressure, Raoult's Law, elevation of B.P., depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass. Van't Hoff factor.

Unit-VIII Thermodynamics

Concepts of System, types of systems, surroundings. Work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics - internal energy and enthalpy heat capacity and specific heat measurement of c_U and c_H , Hess's law of constant heat summation, enthalpy of: bond dissociation, combustion, formation, atomization, sublimation. Phase transition, ionization, solution and dilution. Introduction of entropy as a state function, Gibbs energy change for spontaneous and non-spontaneous processes, criteria for equilibrium. Second law of thermodynamics, third law of thermodynamics (Brief introduction).

Unit-IX Equilibrium

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle; ionic equilibrium ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of polybasic acids, acid strength, concept of pH, Henderson Equation. Hydrolysis of salts (elementary idea). Buffer solutions, solubility product, common ion effect (with illustrative examples).

Unit X: Chemical Kinetics

Rate of a reaction (average and instantaneous), factors affecting rates of reaction; concentration, temperature, catalyst; order and molecularity of a reaction: rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment). Activation Energy, Arrhenius equation.

Unit-XI Redox Reactions

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions in terms of loss and gain of electrons and change in oxidation number, application of redox reaction.

Unit XII: Electrochemistry

Redox reactions; conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and laws of electrolysis (elementary idea) dry cell-electrolytic cells and Galvanic cells; lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion. Relation between Gibbs Energy change and EMF of cell.

Unit XIII: Surface Chemistry

Absorption physisorption and chemisorption; factors affecting adsorption of gases on solids; catalysis; homogenous and heterogeneous, activity and selectivity; enzyme catalysis; colloidal state: distinction between true solutions, colloids and suspensions; lyophilic, lyophobic, multimolecular and macromolecular/colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation; emulsion-types of emulsions.

Unit XIV: General Principles and Processes of Isolation of Elements

Principles and methods of extraction – concentration, oxidation, reduction electrolytic method and refining; occurrence and principles of extraction of aluminum, copper, zinc and Iron.

Unit-XV Hydrogen

Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen; hydrides - ionic, covalent and interstitial; physical and chemical properties of water, heavy water; hydrogen peroxide preparation, reactions, structure and use; hydrogen as a fuel.

Unit-XVI S Block Elements (Alkali and Alkaline earth metals)

Group 1 and Group 2 elements

General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens; uses.

Preparation and properties of some important compounds:

Sodium carbonate, sodium chloride sodium hydroxide and sodium hydrogen carbonate, biological importance of sodium and potassium. CaO, CaCO₃ and industrial use of lime and limestone, biological importance of Mg and Ca.

Unit-XVII Some p-Block Elements, General introduction to p-Block

Elements

Group 13 elements: General introduction, electronic configurations, occurrence. Variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group; Boron- physical and chemical properties, some important compounds: borax, boric acid, boron hydrides. Aluminium: reactions with acids and alkalis and uses.

Group 14 elements: General introduction, electronic configurations, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first element, Carbon - catenation, allotropic forms, physical and chemical properties; uses of some important compounds: oxides. Important compounds of silicon and a few uses: silicon tetrachloride silicones, silicates and Zeolites, their uses.

Unit XVIII: p-Block Element

Group 15 elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; nitrogen - preparation, properties and uses; compounds of nitrogen- preparation and properties of ammonia and nitric acids, oxides of nitrogen (structure only); Phosphorous-allotropic forms; compounds of phosphorous preparation and properties of phosphine, halides ($\text{PCl}_3, \text{PCl}_5$) and oxoacids (elementary idea only).

Group 16 elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen; preparation, properties and uses; classification of oxides; Ozone. Sulphur - allotropic forms; compounds of sulphur preparation, properties and uses of sulphur dioxide, sulphuric acid, industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).

Group 17 elements: (General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens; preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds, oxoacids of halogens (structures only).

Group 18 elements: General introduction, electronic configuration. Occurrence, trends in physical and chemical properties, uses.

Unit-XIX: d and f Block Elements

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals-metallic character, ionization, enthalpy, oxidation states, ionic radii, colour, catalytic properties, magnetic properties, interstitial compounds, alloy formation. Preparation and properties of $\text{K}_2\text{Cr}_2\text{O}_7$, and KMnO_4 .

Lanthanoids - electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and consequences.

Actenoids - Electronic configuration, oxidation states.

Unit-XX: Coordination Compounds

Coordination compounds - introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds, bonding; Werner's theory VBT, CFT, Isomerism (structure and stereo) importance of coordination compounds (in qualitative analysis, extraction of metals and biological systems).

Unit-XXI Organic Chemistry Some Basic Principles and Techniques

General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond:- inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carboanion; electrophiles and nucleophiles, types of organic reactions

Unit-XXII Hydrocarbons

Classification of hydrocarbons

Aliphatic Hydrocarbon

Alkanes Nomenclature isomerism, conformations (ethane only), physical properties, chemical reactions including, free radical mechanism of halogenation, combustion and pyrolysis.

Alkenes - Nomenclature, structure of double bond (ethene) geometrical isomerism, physical properties, methods of preparation; chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkynes – Nomenclature, structure of triple bond (ethyne), physical properties. Methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.

Aromatic hydrocarbons: Introduction, IUPAC nomenclature: Benzene; resonance aromaticity: chemical properties: mechanism of electrophilic substitution. – nitration sulphonation, halogenation, Friedel Craft's alkylation and acylation: directive influence of functional group in mono-substituted benzene; carcinogenicity and toxicity.

Unit-XXIII: Haloalkanes and Haloarenes.

Haloalkanes: Nomenclature, nature of C-X bond, physical and chemical properties, mechanism of substitution reactions, optical rotation.

Haloarenes: Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only)

Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit –XXIV: Alcohols, Phenols and Ethers

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses, with special reference to - methanol and ethanol.

Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit-XXV: Aldehydes, Ketones and Carboxylic Acids

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Unit-XXVI: Organic compounds containing Nitrogen

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Cyanides and Isocyanides - will be mentioned at relevant places in context.

Dizonium Salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

Unit-XXVII: Biomolecules

Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); importance

Proteins - Elementary idea of amino acids, peptide bond, polypeptides proteins, primary structure, secondary structure, tertiary structure and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.

Vitamins: Classification and functions.

Harmones: Elementary idea (excluding structure)

Nucleic Acids: DNA & RNA .

Unit-XXVIII: Polymers

Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers; natural and synthetic like polythene, nylon, polyesters, bakelite, rubber. Biodegradable and Non- Biodegradable Polymers.

Unit-XXIX: Chemistry in everyday life:

1. Chemicals in medicines analgesic, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.

2. Chemicals in food- preservatives, artificial sweetening agents. Elementary idea of antioxidants.

3. Cleansing agents - soaps and detergents, cleansing action.

Unit-XXX Environmental Chemistry

Environmental pollution - air, water and soil pollution, chemical reactions in atmosphere, smog, major atmospheric pollutants; acid rain, ozone and its reactions, effects of depletion of ozone layer; greenhouse effect and global warming - pollution due to industrial wastes: green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

BIOLOGY

Unit I. Diversity in Living World

What is living?; Biodiversity; Need for classification; Three domain of life; Taxonomy & Systematic; Concept of species and taxonomical hierarchy; Binomial nomenclature; Tools for study of Taxonomy- Museums, Zoos, Herbaria, Botanical gardens.

Five Kingdom classification; Salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids.

Salient features and classification of plants into major groups-Algae, Bryophytes, Pteridophytes, Gymnosperm and Angiosperm (three to five salient and distinguishing features and at least two examples of each category) Angiosperms-classification up to class, characteristics features and examples.

Salient features and classification of Animals-non chordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples)

Unit II Structural Organization in Animals and Plants

Morphology and modifications; Tissues; Anatomy and functions of different parts of flowering plants: Root, stem, leaf, inflorescence-cymose and racemose, flower, fruit and seed (To be dealt along with the relevant practical of the practical syllabus).

Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach). (Brief account only)

Unit III Cell Structure and Function

Cell theory and cell as the basic unit of life; Structure of prokaryotic and eukaryotic cell; Plant cell and animal cell; Cell envelope, cell membrane, cell wall; Cell organelles-structure and function; Endomembrane system-endoplasmic reticulum, Golgi bodies, lysosomes, vacuoles; mitochondria, ribosomes, plastids, microbodies; Cytoskeleton, cilia, flagella, centrioles (ultra structure and function); Nucleus-nuclear membrane, chromatin, nucleolus.

Chemical constituents of living cells: Biomolecules- structure and function of proteins, carbohydrates, lipid, nucleic acid; Enzymes-types, properties, enzyme action.

Cell division: Cell cycle, mitosis, meiosis and their significance.

Unit IV Plant Physiology

Transport in plants: Movement of water, gases and nutrients; Cell to cell transport- Diffusion, facilitated diffusion, active transport; Plant- water relations-Imbibition, water potential, osmosis, plasmolysis; Long distance transport of water- Absorption, apoplast, symplast, transpiration pull, rootpressure and guttation; Transpiration-Opening and Closing of stomata; Uptake and translocation of mineral nutrients- Transport of food; Phloem transport, Mass flow hypothesis; Diffusion of gases (brief mention).

Mineral nutrition: Essential minerals, macro and micronutrients and their role; Deficiency symptoms; Mineral toxicity; Elementary idea of Hydroponics as a method to study mineral nutrition; Nitrogen metabolism-Nitrogen cycle, biological nitrogen fixation.

Photosynthesis: Photosynthesis as a means of Autotrophic nutrition; Where does photosynthesis take place; How many pigments are involved in Photosynthesis (Elementary idea); Photochemical and biosynthetic phases of photosynthesis; Cyclic and non cyclic photophosphorylation; Chemiosmotic hypothesis; Photorespiration; C₃ and C₄ pathways; Factors affecting photosynthesis.

Respiration: Exchange of gases; Cellular respiration- glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); Energy relations- Number of ATP molecules generated; Amphibolic pathways; Respiratory quotient.

Plant growth and development: Seed germination; Phases of plant growth and plant growth rate; - Conditions of growth; Differentiation, dedifferentiation and redifferentiation, Sequence of developmental process in a plant cell; Growth regulators-auxin, gibberellin, cytokinin, ethylene, ABA; Seed dormancy; Vernalisation; Photoperiodism.

Unit V Human Physiology

Digestion and Absorption: Alimentary canal and Digestive glands; Role of digestive enzymes and gastrointestinal hormones; Peristalsis, Digestion, absorption and assimilation of proteins, carbohydrates and fats, Calorific value of proteins, carbohydrates and fats (for box item not to be evaluated); Egestion; Nutritional and digestive disorders - PEM, indigestion, constipation, vomiting, jaundice, diarrhea.

Breathing and Respiration: Respiratory organs in animals (Recall only); Respiratory system in humans; Mechanism of Breathing and its regulation in humans - Exchange of gases, transport of gases and regulation of respiration, Respiratory volumes; Disorders related to respiration - Asthma, Emphysema, Occupational Respiratory disorders.

Body fluids and Circulation: Composition of blood, Blood groups, Coagulation of blood; Composition of Lymph and its function; Human circulatory system - Structure of human heart and blood vessels; Cardiac cycle, Cardiac output, ECG; Double circulation; Regulation of cardiac activity; Disorders of circulatory system - Hypertension, Coronary artery disease, Angina pectoris, heart failure.

Excretory products and their elimination: Modes of excretion - Ammonotelism, ureotelism; Uricotelism; Human excretory system – structure and function; Urine formation, Osmoregulation; Regulation of kidney-function - Renin-angiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus; Role of other organs in excretion; Disorders - Uraemia, Renal failure, Renal calculi, Nephritis; Dialysis and artificial kidney.

Locomotion and Movement: Types of movement-ciliary, flagellar, muscular; Skeletal muscle - contractile proteins and muscle contraction; Skeletal system and its functions. (To be dealt with the relevant practical of Practical Syllabus); Joints; Disorders of muscular and skeletal system – Myasthenia gravis, Tetany, Muscular dystrophy, Arthritis, Osteoporosis, Gout.

Neural control and coordination: Neuron and nerves; Nervous system in humans-central nervous system, Peripheral nervous system and visceral nervous system; Generation and conduction of nerve impulse; Reflex action; Sense organs; Sensory Perception; Elementary structure and function of eye and ear.

Chemical coordination and regulation: Endocrine glands and hormones; Human endocrine system- Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary idea); Role of hormones as messengers and regulators, Hypo- and hyperactivity and related disorders. (Common disorders eg. Dwarfism, Acromegaly, Cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease).

Imp: Diseases related to all the human physiology systems to be taught in brief.

Unit VI. Reproduction

Reproduction in organisms: Reproduction, a characteristic feature of all organism for continuation of species; Modes of reproduction-Asexual and sexual reproduction Modes –Binary fission, sporulation, budding, gemmule, fragmentation; vegetative propagation in plants.

Sexual reproduction in flowering plants: Flower structure; Development of male and female gametophytes; Pollination-types, agencies and examples; Outbreedings devices; Pollen-Pistil interaction; Double fertilization; Post fertilization events- Development of endosperm and embryo, Development of seed and formation of fruit; Special modes-apomixis, parthenocarpy, polyembryony; Significance of seed and fruit formation.

Human Reproduction: Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle; Fertilisation, embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea).

Reproduction health: Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control – Need and Methods, Contraception and Medical Termination Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies-IVF, ZIFT, GIFT (Elementary ideas for general awareness).

Unit VII. Genetics and Evolution

Heredity and variation: Mendelian Inheritance; Deviations from Mendelism- Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination-In humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance – Haemophilia, Colour blindness; Mendelian disorders in humans- Thalassaemia; Chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

Molecular Basis of Inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; Transcription, genetic code, translation; Gene expression and regulation- Lac Operon; Genome and human genome project; DNA finger printing.

Evolution: Origin of life; Biological evolution and evidences for biological evolution (Paleontological, Comparative anatomy, embryology and molecular evidence); Darwin's contribution, Modern Synthetic theory of Evolution; Mechanism of evolution-Variation (Mutation and Recombination) and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy-Weinberg's principle; Adaptive Radiation; Human evolution.

Unit VIII. Biology and Human Welfare

Health and Disease: Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis, Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology-vaccines; Cancer, HIV and AID's; Adolescence, drug and alcohol abuse.

Improvement in food production: plant breeding, tissues culture, single cell protein, Biofortification, Apiculture and animal husbandary.

Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers.

Unit IX. Biotechnology and its applications

Principles and process of Biotechnology: Genetic engineering (Recombinant DNA technology).

Application of Biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; genetically modified organisms- Bt crops; Transgenic Animals; Biosafety issues-Biopiracy and patents.

Unit X. Ecology and environment

Organisms and environment: Habitat and niche; Population and ecological adaptations; Population interactions-mutualism, competition, predation, parasitism; Population attributes-growth, birth rate and death rate, age distribution.

Ecosystems: Patterns, components; productivity and decompositions; Energy flow; Pyramids of number, biomass, energy; Nutrients cycling (carbon and phosphorous); Ecological succession; Ecological Services-Carbon fixation, pollination, oxygen release.

Biodiversity and its conservation: Concepts of Biodiversity; Patterns of Biodiversity; Importance of Biodiversity; Loss of Biodiversity; Biodiversity conservation; Hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, National parks and sanctuaries.

Environmental issues: Air pollution and its control; Water pollution and its control; Agrochemicals and their effects; Solid waste management; Radioactive waste management; Greenhouse effect and global warming; Ozone depletion; Deforestation; Any three case studies as success stories addressing environmental issues.