



**PADMASHREE DR. D. Y. PATIL UNIVERSITY**  
(Established under section 3 of the UGC act, 1956 vide notification No. F.9.21/2000-U.3 Dated 20.06.2002 of the Govt. of India)  
**NAAC Accreditation: "A" Grade**  
**DEPARTMENT OF BIOTECHNOLOGY & BIOINFORMATICS**  
Plot No50, Sector -15, C.B.D. Belapur, Navi Mumbai - 400614.



**Prospectus and Application Form**

**AIET - M.TECH 2012**  
**ALL INDIA ENTRANCE TEST**

**FOR ADMISSION TO**

**M.TECH. BIOTECHNOLOGY**  
**M.TECH. BIOINFORMATICS**  
**M.TECH. PHARMACOINFORMATICS**  
**M.Sc. GENETIC ENGINEERING**  
**M.Sc. BIOTECHNOLOGY**  
**M.Sc. BIOINFORMATICS**  
**M.Sc. ENVIRONMENTAL BIOTECHNOLOGY**

## **AIET – M.TECH 2012**

### **IMPORTANT INFORMATION AT A GLANCE**

- Entrance Test Fee** : Rs. 1500/- payable by cash/demand draft drawn in favour of 'Padmashree Dr. D.Y.Patil University', payable at Navi Mumbai.
- Date of Availability of Application forms** : From Monday, 2<sup>nd</sup> April, 2012  
Available at C.B.D. Belapur Campus
- Last date for receipt of Completed Application Form** : **Should reach the below address before 4.00pm on Saturday, 19<sup>th</sup> May, 2012**  
**Coordinator: AIET – M. Tech 2012**  
**Department of Biotechnology and Bioinformatics**  
**Level – 5, Plot – 50, Sector – 15, CBD Belapur, Navi Mumbai – 400614.**  
**Tel: (022) 27563600 / 39286149 Fax : (022) 39286197**
- Last date for Submission of Completed Application Form with late fee of Rs. 500/- Online** : **Upto 4.00 pm on Wednesday, 23<sup>rd</sup> May, 2012**
- Hall Tickets** : The Hall Ticket will be sent to the candidates by email only.
- Date, Time and Venue of Entrance Test Examination** : **Saturday, May 26<sup>th</sup>, 2012 from 12.00 noon to 1:30 p.m.**  
**Department of Biotechnology and Bioinformatics**  
**Padmashree Dr. D. Y. Patil University**  
**Plot – 50, Sector – 15, CBD Belapur, Navi Mumbai – 400614.**
- Announcement of Result** : **Thursday, May 31<sup>st</sup>, 2012 at 4.00 p.m.**
- Schedule of Counseling** : **5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> June, 2012.**  
**Department of Biotechnology & Bioinformatics**  
**Plot No. 50, Sector-15, CBD Belapur, Navi Mumbai-400614.**  
**Tel: (022) 27563600 / 39286149 Fax: (022) 39286197**
- Commencement of Classes** : Will be notified at the time of counseling
- Documents to be brought** :  
1. Graduation / Equivalent Examination mark statement and Certificate.  
2. Post Graduation / Equivalent Examination mark statement and Certificate, if applicable.  
3. AIET M.Tech 2012 mark statement  
4. Bonafide and character certificate from the Head of the Institution last attended.  
5. Leaving and / or Transfer Certificate from the Institute last attended.  
6. Nationality Certificate  
7. Domicile Certificate  
8. Residence Proof  
9. Backward Class / Caste Certificate if applicable, duly verified by the Competent Authority  
10. Passport (in case of Foreign Nationals / Wards of Indian Origin / Wards of Non Resident Indians)  
11. Physical Fitness Certificate from a Registered Medical Practitioner.

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**PADMASHREE DR. D. Y. PATIL UNIVERSITY, NAVI MUMBAI**  
ALL INDIA ENTRANCE TEST M.TECH 2012 (AIET- M.TECH 2012)

**ADMISSION PROCESS**

**1. INTRODUCTION**

The All India Entrance Test M.TECH 2012 (referred to as AIET-M.TECH 2012) is conducted for selection of candidates for admission to M. Tech (Biotechnology / Bioinformatics / Pharmacoinformatics) & M. Sc. (Genetic Engineering/Biotechnology/Bioinformatics/Environmental Biotechnology) programmes conducted at Department of Biotechnology & Bioinformatics, CBD Belapur, Navi Mumbai-400 614.

The medium of instruction for the above courses is English.

The duration of M.Tech courses and M.Sc courses is 2 years.

The course wise intake capacity is as follows:

Course	Intake Capacity
M.Tech in Biotechnology	50
M.Tech in Bioinformatics	30
M. Tech Pharmacoinformatics	30
M.Sc in Genetic Engineering	30
M.Sc in Biotechnology	30
M.Sc in Bioinformatics	30
M. Sc. Environmental Biotechnology	30

**2. MODE OF ENTRANCE TEST**

The question paper for Entrance Test Examination will be one and half hour's duration consisting of 100 questions of multiple choice type. Each correct answer carries one mark. There is no negative marking.

**3. DATE AND TIME OF AIET-M.TECH 2012**

The AIET-M.TECH 2012 will be conducted on **Saturday, 26<sup>th</sup> May 2012**, from **12.00 noon to 1.30 PM** at Department of Biotechnology and Bioinformatics, Padmashree Dr. D. Y. Patil University, Plot – 50, Sector – 15, CBD Belapur, Navi Mumbai – 400614.

**4. ELIGIBILITY CRITERIA FOR APPEARING AT AIET - M.TECH 2012**

**I. M.Tech Biotechnology/Bioinformatics / Pharmacoinformatics**

A graduate student having completed any of the following with minimum 50% marks in B.E / B.Tech Biotechnology / Bioinformatics / Chemical Engineering / Computer Science / Computer Engineering / Biomedical Engineering / Bioprocess Technology / B.Pharm / M.B.B.S. / B.D.S. or M. Sc. and equivalent.

## II. M. Sc Genetic Engineering/Biotechnology/Bioinformatics/Environmental Biotechnology

A graduate student having completed any of the following with minimum 50% marks in Zoology/Botany/Life Sciences/Biochemistry/Biotechnology/Microbiology and equivalent.

**Note:** Candidates who are due to appear in the final semester / year of the qualifying examination shall also be considered for appearing in the entrance test provided the candidates have secured 50% or equivalent grade in previous semesters. However, in the event of selection, the admission will be subject to their securing the minimum 50% marks or equivalent CGPA in the qualifying examination.

### 5. CENTRE FOR THE ENTRANCE TEST

The AIET-M.TECH 2012 shall be conducted at  
Department of Biotechnology and Bioinformatics  
Padmashree Dr. D. Y. Patil University  
Plot – 50, Sector – 15, CBD Belapur, Navi Mumbai – 400614.

### 6. INSTRUCTIONS FOR FILLING THE APPLICATION FORM

1. Candidates are advised to retain with them a photocopy of the completed application form before sending the form to the Admission Committee for their personal record and future reference.
2. Write in CAPITAL LETTERS only and tick in appropriate boxes using a blue or black ball point pen.
3. Ensure that the candidate's name and date of birth are the same as those mentioned in their High School or Board certificate.
4. Fill in the form completely. **Incomplete application forms will be rejected.**

#### 6.1 Name of the Candidate

Enter your name as given in your original certificate of the High School or the Board Examination. Enter only one letter in one box leaving one box blank between any two parts of the name, as shown in the following example:

**Example :** Dighe Amit Suresh

Surname First

D	I	G	H	E		A	M	I	T		S	U	R	E	S	H
---	---	---	---	---	--	---	---	---	---	--	---	---	---	---	---	---

#### 6.2 Category

Tick the appropriate box

#### 6.3 Nationality

#### 6.4 Religion

#### 6.5 Passport Details (In case of foreign nationals)

#### 6.6 Date of Birth

Enter the date, month and year of your birth as per English calendar and as recorded in your High School or the Board Examination Certificate. Use numeral 01 to 31 for date, 01 to 12 for month and the year as per the following example.

For one whose date of birth is 18<sup>th</sup> June 1994

DATE            MONTH            YEAR

1	8		0	6		1	9	9	4	
---	---	--	---	---	--	---	---	---	---	--

**6.7            Sex**

Tick the appropriate box

**6.8            Place of Birth**

**6.9            Address for Correspondence**

Enter your complete postal address to which communication is to be sent. Also mention Tahsil and District in which the place is situated.

**6.10          State**

Mention name of the state with respect to the above correspondence address.

**6.11          PIN code**

**6.12          E-Mail ID**

**6.13          Tel No (With STD Code)**

Enter your contact telephone number with STD code prefixed to it.

**6.14          Tel No Office**

**6.15          Fax No (With STD Code)**

Enter your fax number, if any, with STD code prefixed to it.

**6.16          Permanent Address**

**6.17          Board of Qualifying Examination**

Enter name of the Board from which qualifying examination is passed / appeared.

**6.18          Name of qualifying examination**

Enter the name of the Qualifying examination passed or appeared for.

**6.19          Whether passed or appeared for the qualifying examination.**

Tick the appropriate box.

**6.20          If Passed, percentage of marks in the qualifying examination.**

Fill in percentage of marks.

### **6.21 Order of preference of programmes**

Fill in your order of preference of programmes with the number given for each programme, in the boxes from left to right.

**For example:** If your order of preference is M.Tech Bioinformatics, then M.Tech Biotechnology then M.Sc Genetic Engineering then M.Sc Biotechnology then M. Sc Bioinformatics then M. Tech Pharmacoinformatics then M. Sc. Environmental Biotechnology

2	1	4	5	6	3	7
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Admission to the programs will be strictly as per order of preferences mentioned by the candidate in the application form.

### **6.22 Details of Entrance Test Fees**

Fill in details of date, amount, DD number and name of bank with branch in the space provided.

### **Photograph**

Scan a recent (taken not more than 3 months prior) good photograph of size 3.5 cm x 2.5 cm in the box provided in the application form. It is expected that the candidate will have the same appearance at the time of examination as in the said photograph.

## **7. HALL TICKET**

The Hall Tickets will be sent to the candidates by email.

## **8. SUBMISSION OF APPLICATION FORM & ENTRANCE TEST FEE**

The Entrance Test fee payable is Rs. 1500/-. The fees is payable by cash / demand draft drawn in favor of Padmashree Dr. D. Y. Patil University, on a nationalized / scheduled bank, payable at Navi Mumbai. Particulars of the draft must be filled in the body of the forms as well in both parts of the receipt attached along with the form. The candidates should write their full name address and application number on the reverse of the demand draft.

**The last date of receipt of completed application forms at the following address is upto 4:00PM on Saturday, 19<sup>th</sup> May, 2012.**

**\*With late fee of Rs. 500/- up to 4:00pm on Wednesday, 23<sup>rd</sup> May, 2012.**

**The Coordinator: AIET- M.TECH 2012**  
**Department of Biotechnology and Bioinformatics**  
**Padmashree Dr. D. Y. Patil University**  
**Level 5, Plot – 50, Sector - 15**  
**Navi Mumbai – 400 614.**  
**Tel No.: (022) 27563600, 39286149**  
**Email id: [drdejanid@dypatil.edu](mailto:drdejanid@dypatil.edu) / [biosciences@dypatil.edu](mailto:biosciences@dypatil.edu)**

It will be the responsibility of the candidate to ensure that his / her demand draft for fees reaches the office of the Coordinator of Admission Committee with in the specified time and date. The Demand Draft received after

the due date shall be rejected and such candidates shall not be allowed to appear for the Entrance Test. The Admission Committee: **AIET-M.TECH 2012** will not be responsible for non-receipt of Demand Draft within the specified time and date or due to postal / courier service delay.

## **9. MERIT LIST**

The results of the Entrance Test (names of the candidates and marks obtained by them) will be declared by the Admission Committee at **4 pm on Thursday, May 31<sup>st</sup>, 2012**. The results will be displayed at University notice board and on the website of the University [www.dypatildbb.ac.in](http://www.dypatildbb.ac.in) / <http://www.dypatil.ac.in>.

## **10. FN / PIO / NRI CATEGORY**

Please note that Fifteen percent seats for each course are reserved for Foreign National / PIO / NRI category and the fee structure for this category is different from that of the General Category as detailed in Item No 11. The candidates desirous of getting admission under this category will have to apply separately on a prescribed form available from the University Office.

As students from countries other than India, come from different backgrounds from a wide range of countries graduating at different times each year, an examination for them becomes a difficult task. The students desirous of getting admission in this category are exempted from appearing for AIET - M.TECH 2012. Preference will be given to Foreign Nationals and wards of Persons of Indian Origin settled abroad.

The candidates in General Category who desire to be considered for admission against vacant seats in FN / PIO / NRI category and who agree to be governed by the fee structure of this category, will have to submit a separate application which can be obtained from the Admission Office of the University in addition to application for appearing at AIET-M.TECH 2012. The vacant seats will be filled on the basis of inter-se-merit of such candidates based on their AIET- M.TECH 2012 marks.

### **Documents required for admissions under FN/PIO/NRI category (having results of qualifying examination declared)**

Attach the Original documents or attested copies of

- Indian Embassy in the student's country OR  
Mission/Embassy of the Student's country in New Delhi, OR  
Ministry of Education in student's country
- Provisional admission application form completed in all respects
- Eight passport size photographs
- 10+2 or equivalent mark sheet/grade sheet
- 10<sup>th</sup> or equivalent mark sheet/grade sheet
- Gap certificate if applicable
- Migration certificate
- Student's passport
- Sponsor's passport and Visa
- Sponsor's Letter
- Registration certificate
- Residence permit

Interested students/ parents should approach University Office for the details and compliance of the documents.

**Reservation will be as per the directive of the Government of India (MHRD)**

## **11. Fee Structure**



The Tuition Fees per Annum payable by the candidates admitted to various courses for academic year 2012-13 is as follows.

Course	Tuition Fees per Annum
<b>A) General Category M. Tech (Biotechnology/Bioinformatics / Pharmacoinformatics)</b>	Rs. 1 ,45,000/-
<b>M. Sc (Genetic Engineering / Biotechnology / Bioinformatics / Environmental Biotechnology)</b>	Rs. 1,00,000/-
<b>B) FN/PIO/NRI category M.Tech / M.Sc</b>	8000/- (USD)

The fee excludes Eligibility and Enrolment fees applicable for calendar year 2012-2013 and will be reviewed.

### **A) Mode of Payment**

The candidates will have to bring cash / demand draft of

- Rs. 1,45,000/- (Tuition Fees) in case of M.Tech (Biotechnology / Bioinformatics / Pharmacoinformatics), Rs. 1,00,000/- (Tuition Fees) in case of M.Sc (Genetic Engineering/Biotechnology/Bioinformatics /Environmental Biotechnology) courses, drawn in favour of **Padmashree Dr. D.Y. Patil University - Department of Biotechnology & Bioinformatics**, on nationalized / scheduled bank payable at Navi Mumbai while reporting for counseling. The requests for extension of time limit for payment or to accept partial payment will not be entertained. The candidates may be required to submit Bank Guarantee covering payment of fees for the balance years of the course.
- The tuition fees excludes enrolment and eligibility fees which shall be charged separately as decided by the University from time to time.

**B) REFUND RULES:** In case of cancellation of admission within one month from the date of admission through counseling as per the schedule mentioned in point no. 14, the fees will be refunded in full, after deduction of Rs 1,000/- towards administrative charges.

In the event of a student leaving the programme after commencement of the academic year, proportionate deductions in the fees would be made as applicable.

### **C) Merit Scholarship:**

The Candidate who secures the highest mark in each semester examination will be awarded a merit scholarship of Rs. 1000/- (per month) for the next semester.

## **12. SELECTION PROCESS**

Selection of the candidates will be done on the basis of merit at the Entrance Test.

## **13. SPECIAL INSTRUCTIONS TO CANDIDATES WHOSE NAMES ARE ON THE ADMISSION LIST**

1. Letters of admission will not be issued unless the original Final year marksheet is deposited with the Office
2. Students who wish to cancel their admission will not be given original mark-sheet unless they produce documentary evidence from the authorities of college / Institute where the students have been assigned a seat.
3. Such students will also surrender their seat by giving a written application to the Department in advance stating the reason for cancellation of the allotted seat.

## 14. COUNSELING FOR ADMISSION

The Counseling for Admission will be carried at  
Department of Biotechnology and Bioinformatics  
Padmashree Dr. D. Y. Patil University  
Plot No. 50, Sector-15,  
CBD Belapur, Navi Mumbai – 400 614.  
Tel. : (022) 27563600 / (022) 39286151,  
Fax : (022) 39286176

The AIET- M.TECH 2012 merit list in a serial order shall be a list of successful candidates in order of merit based on the score obtained in AIET – M. Tech 2012. Mere inclusion of a candidate in the merit list would not entitle every candidate to present himself / herself for counseling. The counseling of the candidates short listed for counseling will be carried out according to the following schedule given in Table.

**Table: Counseling Schedule**

Day	Date	10 AM to 1 PM Serial Number of Merit List	2 PM to 5 PM Serial Number of Merit List
Tuesday	05/06/12	1 to 50	51 to 100
Wednesday	06/06/12	101 to 150	151 to 250 and above

### **Call Letter will not be sent to the candidate.**

Candidate will be called for counseling according to the published serial number list. At the counseling, the eligibility of the candidates for admission shall be verified from the original documents and those found eligible will be offered provisional admission. The admission to various courses will be offered on the basis of inter-se-merit of the candidates.

Candidates selected for admission will have to make payment of fees as mentioned in Item No 12 A (Mode of Payment). The physical presence of the candidate at the counseling is essential. If a candidate is unable to present himself/herself for counseling on account of unavoidable circumstances, he/she may authorize another individual to represent him/her. The said representative must carry with him/her, the authorization from the candidate in the format given in the prospectus, bring all the original documents for verification and pay the fees immediately if the candidate is found eligible and offered admission.

Absence of the candidate/representative at the indicated time and date will result in instantaneous forfeiture of any claim for admission and the University will not be responsible for this. Only the candidate and the authorized representative will be allowed in the Counseling Hall.

Asking a candidate to report for counseling does not mean that he/she will be admitted to the courses. The actual admission will depend upon the number of seats available when his/her turn comes in order of his/her inter-se-merit. Candidate will have to report for counseling at their own cost.

## 15. DOCUMENTS

The candidates who have passed their qualifying examination from Universities outside India are required to enclose photocopies of the certificates and mark sheets of examinations passed by them along with the application form. Certificates and documents are required to be submitted by all selected candidates at the time of admission.

## **16. COMMENCEMENT OF CLASSES**

The date of commencement of classes will be communicated to the candidates at the time of counseling. Candidates will be required to be present in the campus and report to the Professor and Head of the Department for the inaugural address, so that, they are aware of the various requirements, facilities, structure and organization of the Department and the University.

## **17. DISCIPLINE**

The candidates admitted in the Department of the University are subject to the discipline and conduct rules of the University. A Disciplinary Committee will deal with all cases either suo moto or when referred to it by the Professor and Head of the Department or the Vice Chancellor of the University. The decision of the Vice-Chancellor shall be final in this regard.

## **18. COURT JURISDICTION**

Any legal dispute arising out of the conduct of AIET- M.TECH 2012 and admission procedure to the Department of Biotechnology & Bioinformatics of Padmashree Dr. D.Y. Patil University shall be subject to the jurisdiction of the Courts of Navi Mumbai and High Court at Mumbai only.

## **19. DISCLAIMER**

Padmashree Dr. D.Y. Patil University, Navi Mumbai has not authorized any individual agent or agency to deal with the admissions to its Department. The University will not be responsible for any activities of such individual agents / agencies.

Whilst every effort has been made to ensure accuracy of contents at the time of publication of the Entrance Test Prospectus, the University reserves the right to amend or alter information without notice. No liability can be accepted by the University in connection with such alterations or amendments. All differences and disputes arising in the interpretation and implementation of the sections of the prospectus will be referred to the Vice Chancellor and his decision shall be final and binding.

## **20. SYLLABUS FOR THE ALL INDIA ENTRANCE TEST**

For:

- 1.** M. Tech Biotechnology
- 2.** M. Tech Bioinformatics
- 3.** M. Tech Pharmacoinformatics
- 4.** M. Sc Genetic Engineering
- 5.** M. Sc Biotechnology
- 6.** M. Sc Bioinformatics
- 7.** M. Sc. Environmental Biotechnology

### **BIOCHEMISTRY**

Organization of life. Importance of water. Cell structure and organelles. Structure and function of biomolecules: Carbohydrates, Lipids, Proteins and Nucleic acids. Biochemical separation techniques. Spectroscopic methods; UV-visible and fluorescence. Protein structure, folding and function: Myoglobin, Hemoglobin, Lysozyme, ribonuclease A, Carboxypeptidase and Chymotrypsin. Enzyme kinetics and regulation, Coenzymes.

Metabolism and bioenergetics. Generation and utilization of ATP. Photosynthesis. Major metabolic pathways and their regulation. Biological membranes. Transport across membranes. Signal transduction; hormones and neurotransmitters.

DNA replication, transcription and translation. Biochemical regulation of gene expression. Recombinant DNA technology and applications. Genomics and Proteomics.

The immune system. Active and passive immunity. Complement system. Antibody structure function and diversity. Cells of the immune system: T, B and macrophages. T and B cell activation. Major histocompatibility complex. T cell receptor: Immunology techniques: Immunodiffusion immunoelectrophoresis, RIA and ELISA.

### **BIOTECHNOLOGY**

Recombinant DNA technology, Architecture of plant genome; plant tissue culture, methods of gene transfer into plant cells; manipulation of phenotypic traits in plants; production of secondary metabolites using suspension and immobilized cell culture; methods of plant micropropagation; crop improvement and development of transgenic plants. Animal cell metabolism and regulation; nutritional requirements for animal cell culture; production of vaccines; growth hormones using animal cell culture, hybridoma technology, vectors for gene transfer and expression and regulation of gene.

### **FOOD BIOTECHNOLOGY**

Scope of biotechnology in food & beverage industry , elementary ideas of canning & packing, sterilization & pasteurization of food products.

Factors affecting spoilage, methods of food preservation, quality control of food, detecting systems- ELISA, RIA, monoclonal antibodies & DNA probes.

Dairy products- General points, cheese, yoghurt, butter, cultured buttermilk, cultured sour milk, novel products.

Cereal products- Bread & baked goods, starch hydrolytes.

### **PLANT BIOTECHNOLOGY**

Historical aspects of plants cell, tissue and organ culture, PTC lab, aseptic conditions, nutritional components of tissue culture medium.

Initiation & maintenance of callus, organogenesis, plant propagation through tissue culture micropropagations of flowering plants, commercial applications. Somatic embryogenesis, synthetic seeds. Plant Cell cultures as a system for production of fine chemicals, plant suspension cultures, enhancement of product formation, biotransformations, hairy root cultures.

### **ANIMAL BIOTECHNOLOGY**

Animal Cell Cultures, advantages & limitations, major differences in vitro, types of tissue culture, Biology of cultured cells, environment, cells proliferation, kinetics, differentiation, energy metabolism, initiation & maintenance of culture, development of continuous cell line.

Applications of animal cell cultures. Production of vaccines, growth hormones, hybridoma technology.

### **BASIC TECHNIQUES IN RECOMBINANT DNA TECHNOLOGY**

Restriction enzymes, cloning vectors, construction of cDNA & genomic DNA library, cloning strategies, growth & selection of transformed cells. Analysis of gene & gene transcripts, colony hybridization, Southern hybridization, DNA sequencing , PCR.

Application of DNA technology in diagnosis, of diseases gene therapy, genetically engineered bacteria in agriculture & therapeutics. Transgenic animals - fish, mice, sheep, methodology of transgenesis. Ethical & regulatory issues

Transgenic plants - Artificial & natural methods of gene transfer, transgenic plants, edible vaccines.

### **LIFE SCIENCES**

Anatomy: Roots, stem and leaves of land plants, meristems, vascular system, their ontogeny, structure and functions.

Plant cell structure, organization organelles, cytoskeleton, cell wall and membranes.

Development: cell cycle, cell division, senescence, hormonal regulation of growth; life cycle of angiosperm, pollination, fertilization, embryogenesis, seed formation, seed storage proteins, seed dormancy and germination.

Concept of cellular totipotency, organogenesis and somatic embryogenesis, somaclonal variation, embryo culture in vitro fertilization.

Physiology and Biochemistry: Plant water relations, transport of minerals and solutes, N<sub>2</sub> metabolism, proteins and nucleic acid, respiration, photophysiology, photosynthesis, photorespiration; biosynthesis, Mechanism of action and physiological effect of plant growth regulators.

Genetics: Principles of Mendelian inheritance, linkage, recombination and genetic mapping; extra chromosomal inheritance; eukaryotic genome organization (chromatin structure) and regulation of gene expression, gene mutation, chromosome aberrations (numerical and structural), transposons. Plant breeding: principles, methods- selection, hybridization, heterosis; male sterility, self and inter- specific incompatibility; haploidy; somatic cell hybridization; molecular marker assisted selection; gene transfer methods viz direct and vector-mediated, transgenic plants and their applications in agriculture.

Economic Botany: Economically important plants- cereals, pulses, plants yielding fiber, timber, sugar, beverages, oils, rubber, dyes, gums, drugs and narcotics a general account.

Systematics: Systems of classification (non-phylogenetic vs. phylogenetic- outline). Plant groups, molecular systematics.

Plant Pathology: Nature and classification of plant diseases, diseases of important crops caused by fungi, bacteria and viruses and their control measures mechanism(s) of pathogenesis and resistance.

Ecology and Plant geography: ecosystems types, dynamics, degradation, ecological succession; food chains; vegetation types of the world; pollution and global warming; speciation and extinction, conservation strategies.

Animal world: Animal diversity, distribution, systematic and classification of animals, the phylogenetic relationship.

Evolution: Origin of life, history of life on earth, evolutionary theories; natural selection, adaptation, speciation.

Genetics: Principles of Inheritance, molecular basis of heredity, the genetic material, transmission of genetic material, mutations, cytoplasmic inheritance.

Cell biology: Structure of cell, cellular organelles and their structure and function, cell cycle, cell division, cellular differentiation, chromosome and chromatin structure. Eukaryotic gene organization and expression.

Animal Anatomy and Physiology: Comparative physiology, the respiratory system, circulatory system, digestive system, the nervous system, the excretory system, the endocrine system, the reproductive system, the skeletal system, osmoregulation.

Parasitology and Immunology: Nature of parasite, host-parasite relation, protozoan and helminthic parasites, the immune response, cellular and humoral immune response, evolution of the immune system.

Development Biology: Embryonic development, cellular differentiation, organogenesis, metamorphosis, genetic basis of development.

Ecology: the ecosystem, habitats the food chain, population dynamics, species diversity, zoogeography, biogeochemical cycles, conservation biology.

Animal Behaviour: Types of behaviours, courtship, mating and territoriality, instinct, learning and memory, social behaviour across the animal taxa, communication, pheromones, evolution of animal behaviour.

## **MICROBIOLOGY**

Historical perspective- Discovery of the microbial world; Controversy over spontaneous generation; Role of microorganisms in transformation of organic matter and in the causation of diseases

Methods in microbiology- Pure culture techniques; theory and practice of sterilization; Principles of microbial nutrition: Construction of culture media; Enrichment culture techniques for isolation of chemoautotrophs, chemoheterotrophs and photosynthetic microorganisms.

Microbial evolution- Systematics and taxonomy- Evolution of earth and earliest life forms; Primitive organisms and their metabolic strategies; new Approaches to bacterial taxonomic classification.

Microbial Diversity- Bacteria archaea and their broad classification; Eukaryotic microbes, yeast, fungi, slime mold and protozoa; Viruses and their classification.

Microbial growth- the definition of growth, mathematical expression of growth, growth curve, measurement of growth and growth yields; Synchronous growth; Continuous culture.

Nutrition and metabolism - Overview of metabolism; microbial nutrition; Energy classes of microorganism; Culture media; Energetics, modes of ATP generation by heterotrophs; Fermentation; Glycolysis; Respiration; The citric acid cycle; Electron transport systems; Alternate mode of energy generation; Pathways (anabolism) in the biosynthesis of amino acids, purines, pyrimidines and fatty acids.

Metabolic diversity among microorganisms Photosynthesis in microorganisms; Role of chlorophylls, carotenoids and phycobilins; calvin cycle; Chemolithotrophy; Hydrogen- iron- nitrite- oxidizing bacteria; Nitrate and sulfate reduction; methanogenesis and acetogenesis.

Prokaryotic cells: structure function- Cells walls of eubacteria (peptidoglycan) and related molecules; Outer-membrane of gram- negative bacteria; Cell wall and cell membrane synthesis; Flagella and motility; Cell inclusions like endospores, gas vesicles

Microbial diseases and host parasite relationships- Normal microflora of skin; Oral cavity; Gastrointestinal tract; Entry of pathogens into the host; Infectious disease transmission; Respiratory infections caused by bacteria and viruses; Tuberculosis; Sexually transmitted disease including AIDS; Diseases transmitted by animals (Rabies, plague), insects and ticks (Rickettsias, Lyme disease, malaria); Food and water borne diseases; Public health and water quality; Pathogenic fungi; Emerging and resurgent infectious diseases.

Chemotherapy/ Antibiotics- Antimicrobial agents; Sulfa drugs; Antibiotics: Penicillins and cephalosporins; Broad-spectrum antibiotics; Antibiotics from prokaryotes; Antifungal antibiotics; Mode of action; Resistance to antibiotics,

Microbial genetics- Gene mutation and mutagenesis- UV and chemical mutagens; Types of mutations; Ames test for mutagenesis; Methods of genetic analysis. Bacterial genetic system- Transformation; Conjugation; Transduction; Recombination; Plasmids and Transposons; Bacterial genetic map with reference to E.coli Viruses and their genetic system- Phage- lambda and its life cycle; RNA phages; RNA viruses; retroviruses; Genetic

systems of yeast and neurospora; Extrachromosomal inheritance and mitochondrial genetics; basic concept of genomics.

## **GUIDELINES FOR ENTRANCE TEST**

### **Pattern of Entrance Test**

The AIET- M.TECH 2012 will have one question paper. The test will have duration of one and half hours and would comprise of 100 Multiple Choice Questions (MCQ) of the objective type. Each question will carry 1 mark and the questions will be in English.

### **Regulations at the Test Centre**

The examination hall will be opened 30 minutes before the commencement of the test. Each candidate is allotted a hall ticket number. He/she should find out and occupy the seat with the allotted number. The invigilator at the examination will start giving general instructions 15 minutes prior to the commencement of the examination. Candidates must carry their Hall Ticket with them and produce it on demand for admission to the test hall. Candidates will not be allowed to write the test if they do not carry a valid Hall Ticket issued by the University with them. The invigilator will check the Hall Tickets of the candidates, during the test, to check the identity of each candidate. While this is being done, the candidates must sign the attendance sheet and declaration on the answer sheet in the presence of the invigilator. The invigilator will also put his/her signature in the place provided in the Hall Ticket and Attendance Sheet.

At 11:45 a.m. the candidates will receive an Answer Sheet. They must ensure that the Answer Sheet they have received is correct and properly printed. At 11:55 a.m., the candidates will receive a Test Booklet for AIET-M.Tech 2012. They must ensure that the Test Booklet received by them is correct and printed properly. Each Test Booklet has a specific five-digit number on the front page.

No candidate will be allowed to enter the examination hall after 12:00 noon. Candidates will have to remain seated in the examination hall till the completion of the duration of the test. Once candidates leave the hall he/she cannot return under any circumstances. Candidates are expected to maintain perfect silence for the entire duration of the examination. Any conversation or gesticulation or disturbance in the examination hall shall be deemed as misbehavior.

The Admission Committee will take strict action against the candidates, who use unfair means or impersonation. Such candidates will be asked to leave the examination hall immediately and they will be liable to be debarred from taking examination either permanently or for a specified period to be decided by the University. The Admission Committee will reserve the right to withhold the result of such candidates.

All the entries must be made using a Black or Blue Ball-point pen only. Wherever the entries have to be marked in the circles, it should be done by completely darkening the corresponding circles.

Candidates must stop marking the answers when the warning bell is rung at the closing time. After completing the test and before handing over the Test Booklet and the Answer Sheet, the candidate should check again that all the particulars required in the Test Booklet and answer sheet have been correctly written. The answer sheet of the candidates who do not submit the Test Booklet before they go out of the examination hall will not be evaluated. Such candidates will be debarred from writing the test in future.

Candidates will not be allowed to carry any textual material (printed or written), or any other material except the Hall Ticket inside the test hall. Candidates are also not permitted to carry any device that is likely to be of unfair assistance. Smoking in the test hall is strictly prohibited. Any kind of eatable or drink is not allowed into

the examination hall.

**Marking of Answers:-**

Each Multiple Choice Question will have four responses labeled A, B, C and D. Only one of the four responses is the correct or most appropriate answer. Candidates should indicate the correct or most appropriate answer by darkening the appropriate circle completely with blue or black ball point pen. The questions can also be in form of incomplete statements. The candidate should appropriately mark one of the four responses, which completes the statement. The candidates should mark their answers as shown below. A Computer using Optical Recognition will evaluate the answer sheet. The following example illustrates the correct method of indicating the answer. Question no. 98 in the Test Booklet may read as follows:

98. According to Newton’s First Law of Motion

- A.  $F = ma^2$
- B.  $F = m^2a$
- C.  $F = ma$
- D. None of the above

The correct response is C. The candidate will locate question no. 98 in the Answer Sheet and darken the circle C as shown below: (There is only ONE CORRECT WAY of indicating the answer)

	A	B	C	D	
98	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	wrong
98	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	wrong
98	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	wrong
98	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	wrong
98	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	wrong
98	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	wrong
98	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	right

If more than one circle is darkened or if the response is marked in any wrong manner as shown above, it shall be treated as wrong answer. Candidates must ensure that the Answer Sheet is not folded and they make no stray marks on it. Candidates must bring their own pen, pencil, and eraser. They are not allowed to take anything from the other candidates during examination. The order of question is not same in all Test Booklet and they are jumbled. Candidate should never change their Test Booklet during the test.

**Changing the Answer:-**

If a candidate wants to change any answer on his/her answer sheet, he/she must erase completely the existing mark and then darken the appropriate circle. To facilitate this, the candidate will have to mark correct option with blue or black ball point pen. An answer will be treated as wrong if there are marks on a circle other than darkening the circle for the correct answer. Also a lightly or faintly darkened circle will be treated as wrong and will be rejected by the Optical Scanner. Candidates are advised to decide about the answer before they mark it on the answer sheet. This would save some valuable time, which would otherwise get wasted in erasing the marks and re-doing them.

**Rough Work:**



If a candidate wishes to do some rough work, then it should be done in the Test Booklet itself. It should not be done on the Answer Sheet.

### **Scoring:**

Each question carries one mark. There is no negative marking. If the answers are not marked correctly, then it will be considered as a wrong answer. Also, no request for revaluation or re-checking will be entertained.

### **Disciplinary Measures Against Ragging**

The Padmashree Dr. D. Y. Patil University does not allow ragging in its campuses including Hostels. We have anti-ragging Committee to monitor and prevent ragging.

This is as per the guidelines of the University Grant Commission (UGC). Here is an extract from the report of the Committee Constituted by the University Grants Commission to frame guidelines to curb the menace of 'ragging' in University/educational institutions.

### **Forms of Ragging**

Ragging is found to take the following forms (the list is only indicative and not exhaustive)

Crisp orders

- To address seniors as 'Sir'
- To perform mass drills,
- To copy class notes for the seniors;
- To serve various errands,
- To do menial jobs for the seniors;
- To ask/answer vulgar questions;
- To look at pornographic pictures to shock the Freshers out of their innocence;
- To force to drink alcohol, scalding tea, etc.,
- To force to do acts with sexual overtones, including homosexual acts;
- To force to do acts which can lead to physical injury/mental torture or death;
- To strip, kiss, etc.,
- To do other obscenities

### **Punishments**

The following could be the possible punishments for those who are found guilty of participation in or abetment of ragging. The quantum of punishments shall, naturally, depend upon the nature and gravity of the offence as established by the Disciplinary Committee or the Court of Law.

- Cancellation of Admission
- Suspension from attending classes.
- Withholding/withdrawing scholarship/Fellowship and benefits.
- Debarring from appearing in any test/examination or other evaluation process.
- Withholding results
- Debarring from representing the Department in any national or international meet, tournament, youth festival, etc.
- Expulsion from the hostel
- Expulsion from the Department for periods varying from 1 to 1 semesters
- Expulsion from the Department and consequent debarring from admission to any other institution.
- Fine up to Rs. 25,000/-

- Rigorous imprisonment up to three years.

While the first 10 types of punishments can be awarded by the appropriate authority of the Department itself, the last punishment can be awarded only by a court of law.

- **If any incident of ragging comes to the notice of the authority, the concerned student shall be given liberty to explain and if his/her explanation is not found satisfactory, the authority would expel him/her from the Department.**

#### **Maintenance of discipline among the students and disciplinary powers of the University**

(Under Rule 26 (h) of MOA)

#### **BL 466**

- a) Every student, during his course of studies, shall be under disciplinary jurisdiction of the competent authority which shall take appropriate action, in case of indiscipline, misconduct on part of the student.
- b) Definitions : In this Bye-Laws unless the context otherwise requires,
  - i) **'Student'** means a person who is enrolled in the Institute for receiving instructions and / or qualifying for any degree or diploma or certificate of the Institute.
  - ii) **'College'** means a constituent college runs by the Institute.
  - iii) **'Competent Authority'** means the Vice Chancellor of the Institute or the person to whom the powers are delegated by the Vice- Chancellor under these Bye-Laws.
- c) The Vice- Chancellor may, by orders, delegates all or any of his powers under the Memorandum of Association as he deems fit, to such other officer as he may nominate in that behalf.
- d) The Vice- Chancellor may in exercise of his powers, by order direct that any student or students be expelled or rusticated for a specified period or be not admitted to a course of study in college for a specified period or be punished with fine, not exceeding Rs. 5000/- or be debarred from appearing in an examination conducted by the Institute for a specified period not exceeding five years or that the result of the student or students concerned in the examination in which he or they have appeared be cancelled. Provided that, the Vice-Chancellor shall give reasonable opportunity to the student concerned of being heard if expulsion is for a period exceeding one year.
- e) Obligation of the students: Every student, shall at all the time,
  - i) Conduct himself properly,
  - ii) Maintain proper behavior,
  - iii) Observe strict discipline both within the campus of the college, hostel, hospital and also outside, in buses, railways, or at public places or at picnic or study tours, organized by the college or playgrounds or in extra curricular activities.
  - iv) Ensure that no act of his purposely or otherwise brings the Institute or college in disrepute.
- f) Any act of a student which is contrary to the provisions of clause (e) above shall constitute misconduct and / or indiscipline, which terms shall mean and include, among others any one or more of the acts jointly or severally, mentioned hereinafter, namely:
  - i) Any act whether directly or indirectly causes or attempts to cause disturbance in the lawful functioning of

- college and / or Institute.
- ii) Habitual unpunctual in attending lectures, practicals, tutorials, sessional examination and other courses, as may be prescribed.
  - iii) Repeated absence from lectures, tutorials, practicals and other courses, as prescribed.
  - iv) Any act whether direct or indirect through the media or newspapers and / or other media, by which, in the opinion of the competent authority, the college and Institute stand defamed, and any other act of intimidating and / or assailing and / or threatening the employees / officers / officials of the college and Institute and any act to cause damage to the assets of the Institute and college by any means.
  - v) Occupation of any building such as, hostel, room, residential quarter or such other accommodation in the premises owned or hired by the college or Institute without prior permission from the competent authority.
  - vi) Permitting or conniving with any person not authorized to occupy any hostel room, residential quarter, or any accommodation or any part thereof of the college or Institute.
  - vii) Securing admission in the Institute, to any undergraduate or post-graduate programme or any other course by fabrication of the documents or suppression of facts or information
  - viii) Obstruction to any students or group of students in his or their legitimate activities pertaining to classroom, laboratories, fields, playgrounds, gymnasium or places of social and cultural activity within the campus of the Institute.
  - ix) Suppressing material information or supply of false information to the college and Institute, for seeking any privilege.
  - x) Possessing or using any fire arms, lethal weapons, explosive, or dangerous or corrosive substance on the premises of the college, hostel, playground and Institute.
  - xi) Possessing or consuming any poisonous or stupefying drugs or intoxicant in any form in the college, hostel and Institute.
  - xii) Ragging, bullying or harassing any students in college and Institute or hostels or outside thereof.
  - xiii) Indulging in any act of violence, assault, intimidation or threatening in the Institution or hostels or outside thereof.
  - xiv) Destroying or attempting to destroy or tamper with any official record or document of the Institute and college.
  - xv) Misconduct of the student, at any meeting or special functions or sports and cultural activities arranged by the Institute, staff member of the college and Institute or any other public place.
  - xvi) Stealing or damaging any form produce or any property belonging to the college and Institute, staff member of the college and Institute or any other public places.
  - xvii) Instigation violence or participation in any demonstrations or violent agitation or violent strike in the college and Institute.
  - xviii) Instigation or participation in any 'gherao' of any official or staff member of the Institute.

- xix) Violation of any of the rules and regulations of the Institute or of the competent authority.
- xx) Gambling in any form in the Institute or college, hostel etc.
- xxi) Disorderly behaviour in any form or any act specifically forbidden by the competent authority.
- xxii) Refusal to appear to give evidence before enquiry officer appointed by the competent authority with respect to a charge against student concerned.
- xxiii) Any act violating any provision of the memorandum of association, Bye-Laws made thereunder.
- xxiv) Conviction in the court of law for criminal offence involving moral turpitude.
- xxv) Any other act not specifically mentioned hereto before which, whether by commission or omission, as would in the circumstances of the case be considered by the competent authority as an act of misconduct and / or indiscipline.
  - g) The competent authority may impose any one or more of the following punishment(s) on the students found guilty of misconduct, indiscipline, in proportion thereof:
    - i) Warning / censure / reprimand
    - ii) Fine not exceeding Rs. 5000/-
    - iii) Cancellation of the scholarship / award / prize / medal, awarded to the student by the Institute, with prospective effect.
    - iv) Expulsion from the college
    - v) Debarring from admission to a course or courses of study in the concerned college, debarring from appearing for examination or examinations, conducted by the Institute concerned, for a specific period, not exceeding five years.
    - vi) Cancellation of performance of the student concerned in an examination in which he has appeared.
    - vii) Rustication from the Institute for the period not exceeding five years.
  - h) If the competent authority is satisfied that there is a prima-facie case for inflicting penalties, mentioned in clause No. (g) above it may itself or through other person(s), authorized by it, for this purpose, shall make inquiry, in following manner;
    - i) Due notice in writing shall be given to the student concerned about his alleged act of misconduct / indiscipline.
    - ii) Student charged shall be required within three days of the receipt of the notice to submit his written representation about such charge(s).
    - iii) If the student fails to submit his written representation within specified time limit, the inquiry may be held separately.
    - iv) If oral evidence of the witness against student is recorded by the enquiry authority, the student charged shall be given an opportunity to cross examine the witness concerned.
    - v) If the student charged desires to see the relevant documents, which are being taken into consideration or

are to be relied upon for the purpose of proving the charge or charges, the same may at the discretion of the enquiry authority, be shown to him after the notice as provided in sub-clauses (I) above is furnished to him.

- vi) The student charged shall be required to produce documents, if any, in support of his defense. The enquiry authority may admit relevant evidence, documentary, or otherwise, at the stage before the final orders are passed.
- vii) Legal practitioner shall not be allowed to appear either on behalf of the student charged or the institute, in the proceedings to the competent authority.
- viii) Enquiry authority shall record findings on each implication of indiscipline and the reasons for such findings and submit the report along with proceeding to the competent authority.
- ix) The competent authority on the basis of findings shall pass such orders, as it deems fit.
- i) Provided that procedure prescribed above need not be followed and all or any of its provisions may be waived in the following circumstances:
  - i) when the student charged admits the charges in writing.
  - ii) When the student charged has absconded for any other reasons or it is impracticable to communicate with him.
  - iii) If in the opinion of the competent authority, a punishment or fine not exceeding Rs. 5000/- or reprimand, censure, warning is sufficient.
  - iv) If the punishment or rustication is imposed on a student by the Vice-Chancellor or such other person in whom the authority is vested by him, student shall be entitled to prefer an appeal to the grievance committee if the Institute within seven days of the receipt of the notice of the punishment.
  - v) In respect of such student, Principal of the respective college shall maintain the record of punishment.
  - k) The Institute shall, on each occasion of any punishment being imposed on any student, intimate by a letter, to be sent under a certificate of posting, the fact of such imposition to the parent or guardian of such student on the address available in the college record.
- l) **A copy of these rules shall be supplied to each student at the time of his admission to the Department and a receipt for the same shall be obtained from the student. This receipt shall form a part of the record of admission of the students.**

**PADMASHREE DR. D. Y. PATIL UNIVERSITY**

(Declared as Deemed-to-be-University under section 3 of UGC Act, 1956)

**NAAC Accreditation: "A" Grade**

**DEPARTMENT OF BIOTECHNOLOGY & BIOINFORMATICS**

Plot No50, Sector -15, C.B.D. Belapur, Navi Mumbai - 400614.

**HALL TICKET No. 2222**

Name  
**CHETAN**

Father's Name  
**HARKISHAN**

Surname  
**KANTHARIA**

**ALL INDIA ENTRANCE TEST - 2012**



Test Booklet Version

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	O	O	O	O	51	O	O	O	O	101	O	O	O	O	151	O	O	O	O
2	O	O	O	O	52	O	O	O	O	102	O	O	O	O	152	O	O	O	O
3	O	O	O	O	53	O	O	O	O	103	O	O	O	O	153	O	O	O	O
4	O	O	O	O	54	O	O	O	O	104	O	O	O	O	154	O	O	O	O
5	O	O	O	O	55	O	O	O	O	105	O	O	O	O	155	O	O	O	O
6	O	O	O	O	56	O	O	O	O	106	O	O	O	O	156	O	O	O	O
7	O	O	O	O	57	O	O	O	O	107	O	O	O	O	157	O	O	O	O
8	O	O	O	O	58	O	O	O	O	108	O	O	O	O	158	O	O	O	O
9	O	O	O	O	59	O	O	O	O	109	O	O	O	O	159	O	O	O	O
10	O	O	O	O	60	O	O	O	O	110	O	O	O	O	160	O	O	O	O
11	O	O	O	O	61	O	O	O	O	111	O	O	O	O	161	O	O	O	O
12	O	O	O	O	62	O	O	O	O	112	O	O	O	O	162	O	O	O	O
13	O	O	O	O	63	O	O	O	O	113	O	O	O	O	163	O	O	O	O
14	O	O	O	O	64	O	O	O	O	114	O	O	O	O	164	O	O	O	O
15	O	O	O	O	65	O	O	O	O	115	O	O	O	O	165	O	O	O	O
16	O	O	O	O	66	O	O	O	O	116	O	O	O	O	166	O	O	O	O
17	O	O	O	O	67	O	O	O	O	117	O	O	O	O	167	O	O	O	O
18	O	O	O	O	68	O	O	O	O	118	O	O	O	O	168	O	O	O	O
19	O	O	O	O	69	O	O	O	O	119	O	O	O	O	169	O	O	O	O
20	O	O	O	O	70	O	O	O	O	120	O	O	O	O	170	O	O	O	O
21	O	O	O	O	71	O	O	O	O	121	O	O	O	O	171	O	O	O	O
22	O	O	O	O	72	O	O	O	O	122	O	O	O	O	172	O	O	O	O
23	O	O	O	O	73	O	O	O	O	123	O	O	O	O	173	O	O	O	O
24	O	O	O	O	74	O	O	O	O	124	O	O	O	O	174	O	O	O	O
25	O	O	O	O	75	O	O	O	O	125	O	O	O	O	175	O	O	O	O
26	O	O	O	O	76	O	O	O	O	126	O	O	O	O	176	O	O	O	O
27	O	O	O	O	77	O	O	O	O	127	O	O	O	O	177	O	O	O	O
28	O	O	O	O	78	O	O	O	O	128	O	O	O	O	178	O	O	O	O
29	O	O	O	O	79	O	O	O	O	129	O	O	O	O	179	O	O	O	O
30	O	O	O	O	80	O	O	O	O	130	O	O	O	O	180	O	O	O	O
31	O	O	O	O	81	O	O	O	O	131	O	O	O	O	181	O	O	O	O
32	O	O	O	O	82	O	O	O	O	132	O	O	O	O	182	O	O	O	O
33	O	O	O	O	83	O	O	O	O	133	O	O	O	O	183	O	O	O	O
34	O	O	O	O	84	O	O	O	O	134	O	O	O	O	184	O	O	O	O
35	O	O	O	O	85	O	O	O	O	135	O	O	O	O	185	O	O	O	O
36	O	O	O	O	86	O	O	O	O	136	O	O	O	O	186	O	O	O	O
37	O	O	O	O	87	O	O	O	O	137	O	O	O	O	187	O	O	O	O
38	O	O	O	O	88	O	O	O	O	138	O	O	O	O	188	O	O	O	O
39	O	O	O	O	89	O	O	O	O	139	O	O	O	O	189	O	O	O	O
40	O	O	O	O	90	O	O	O	O	140	O	O	O	O	190	O	O	O	O
41	O	O	O	O	91	O	O	O	O	141	O	O	O	O	191	O	O	O	O
42	O	O	O	O	92	O	O	O	O	142	O	O	O	O	192	O	O	O	O
43	O	O	O	O	93	O	O	O	O	143	O	O	O	O	193	O	O	O	O
44	O	O	O	O	94	O	O	O	O	144	O	O	O	O	194	O	O	O	O
45	O	O	O	O	95	O	O	O	O	145	O	O	O	O	195	O	O	O	O
46	O	O	O	O	96	O	O	O	O	146	O	O	O	O	196	O	O	O	O
47	O	O	O	O	97	O	O	O	O	147	O	O	O	O	197	O	O	O	O
48	O	O	O	O	98	O	O	O	O	148	O	O	O	O	198	O	O	O	O
49	O	O	O	O	99	O	O	O	O	149	O	O	O	O	199	O	O	O	O
50	O	O	O	O	100	O	O	O	O	150	O	O	O	O	200	O	O	O	O

O	O	O	O
10	20	30	40

**Important Instruction**

**Wrong Method**

*A	B	C	D
A	*B	C	D
A	B		D
A	B		

**Correct Method**

	B	C	D
--	---	---	---

- Use blue or black ball point pen only to make all the entries in the Answer Sheet.
- Rough work if required should be done in the space provided for this in the Test Booklet only.
- Write your Name, Hall Ticket Number in appropriate places provided in the Answer Sheet only. Darken the Corresponding Circle
- Do not use any religious invocation or any writing that is relevant to the answer.
- Candidate must stop marking the answer as soon as warning bell is rung at the closing time.
- Candidate should not carry any written or blanks Answer Book or Test Booklet while having the examination hall
- Candidate should not speak or communicate with any other candidate while the examination is in progress. If a candidate wants anything he/she should approach the invigilator without disturbing other candidates however, he/she should not leave the seat on any account.

**Annexure- I**

**AUTHORISATION FOR REPRESENTATION**

I ..... son/daughter of ..... being unable to attend the counseling session for admission to M. Tech (Biotechnology / Bioinformatics/ Pharmacoinformatics)/ M.Sc (Genetic Engineering / Biotechnology / Bioinformatics / Environmental Biotechnology) in Padmashree Dr. D. Y. Patil University, Navi Mumbai at..... on..... do hereby authorize.....whose photograph is affixed below and who will sign as shown there under, to represent me at the counseling session. I hereby declare that the decision made by the said authorized representative will be irrevocable and that it will be final and binding on me. This authorised representative will present all the necessary documents in support of my eligibility, pay the requisite fees and complete all the formalities as may be necessary, on my behalf.

Name of the Candidate.....  
Application Number..... Hall Ticket Number.....  
Examination Centre..... Merit Number.....  
Reason for absence.....

Paste recent  
Photograph of the  
candidate  
with his/ her  
signature thereon

Signature of Candidate

Paste recent  
Photograph of the  
representative  
with his/ her  
signature thereon

Signature of the Representative

Signature of the Parent/ Guardian as  
recorded in the Application Form.

**Annexure – II**

**Medical Fitness**

A Candidate must be medically fit to undergo the professional course applied for. The medical fitness must be certified by a Registered Medical Practitioner on his letterhead in the prescribed proforma, as given below:

**CERTIFICATE OF MEDICAL FITNESS**

This is to certify that I have conducted clinical examination of Mr. / Ms ..... who is desirous of admission to M. Tech (Biotechnology / Bioinformatics / Pharmacoinformatics)/ M. Sc (Genetic Engineering / Biotechnology / Bioinformatics / Environmental Biotechnology).

He / She has not given any personal history of any disease incapacitating him / her to undergo the professional course. Also, on clinical examination it has been found that he / she is medically fit to undergo the professional course.

Certified further, that he/ she has not shown any evidence of major defects of posture, locomotion, vision, hearing or any other systemic disorder.

Though, following deviation has been revealed, in my opinion, these are not impediments to pursue a course in M. Tech (Biotechnology / Bioinformatics / Pharmacoinformatics) M. Sc (Genetic Engineering / Biotechnology / Bioinformatics / Environmental Biotechnology). (Strike, which is not applicable).

- 1. ....
- 2. ....
- 3. ....

Address of the Registered Medical Practitioner Signature :

Name :  
Registration No :  
Seal of Registered Medical Practitioner

Date:        /        / 20



# AIET – M. Tech 2012

ALL INDIA ENTRANCE TEST  
ALL INDIA ENTRANCE TEST FOR SELECTION FOR ADMISSION TO  
M. TECH (BIOTECHNOLOGY / BIOINFORMATICS /  
PHARMACOINFORMATICS) AND M. SC (BIOTECHNOLOGY/  
BIOINFORMATICS / GENETIC ENGINEERING / ENVIROMENTAL  
BIOTECHNOLOGY)

**PADMASHREE DR. D. Y. PATIL UNIVERSITY**  
(Established under section 3 of the UGC Act, 1956 vide notification no.  
F.9.21/2000-U.3 dated 20.06.2002 of the Govt. of India)  
**NAAC Accreditation: “A” Grade**  
Plot – 50, Sector – 15, CBD Belapur, Navi Mumbai – 400 614.

Application Number

Paste (Taken not more than 3 months prior photograph here)

Important Instructions:  
Please read following instructions given the Prospectus for filling the form

1. Name of the student:  
[NAME IN CAPITAL]

\_\_\_\_\_  
(SURNAME) (NAME) (FATHER'S NAME) (MOTHER'S NAME)

2. Category: a) General  Reserved   
b) SC  ST  OBC  NT  DT   
Others, Please Specify .....

3. Nationality: \_\_\_\_\_

4. Religion: \_\_\_\_\_

5. In case of a Foreign National, Details of the Passport: \_\_\_\_\_

6. Date of Birth: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ (DD/MM/YY)

7. Sex: Male  Female

8. Place of Birth: \_\_\_\_\_

9. Address of Correspondence: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. State: \_\_\_\_\_

11. Pin Code: \_\_\_\_\_

12. Email Id: 1) \_\_\_\_\_

2) \_\_\_\_\_

13. Telephone No. Residence: \_\_\_\_\_ Mobile No. \_\_\_\_\_  
(with STD Code)

14. Telephone No. Office: \_\_\_\_\_ Mobile No. \_\_\_\_\_  
(with STD Code)

15. Fax No. (With STD Code) \_\_\_\_\_

16. Permanent Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. Name of the Board of Qualifying Examination : \_\_\_\_\_

18. Name of the Qualifying Examination: \_\_\_\_\_

19. Whether Qualifying Examination Passed / Appeared : Passed  Appeared

20. Percentage of marks in the Qualifying Examination:

21. Order of Preference of Programme:

1. M. Tech Biotechnology
2. M. Tech Bioinformatics
3. M. Pharmacoinformatics
4. M. Sc. Genetic Engineering
5. M. Sc. Biotechnology
6. M. Sc. Bioinformatics
7. M. Sc. Environmental Biotechnology

**(Please fill in order of preference from left to right in the boxes above with the number given for each course.)**

22. Details of the Entrance Test Fees Paid

Mode of payment of Entrance Test Fee DD  Cash

Name of the Bank: \_\_\_\_\_

Issuing Bank: \_\_\_\_\_ DD No. \_\_\_\_\_

Date: \_\_\_\_\_ Amount: \_\_\_\_\_

# AIET M-TECH 2012

RECEIPT

## ALL INDIA ENTRANCE TEST

ALL INDIA ENTRANCE TEST SELECTION OF CANDIDATES FOR ADMISSION TO M. TECH (BIOTECHNOLOGY / BIOINFORMATICS / PHARMACINFORMATICS) AND M. Sc (GENETIC ENGINEERING / BIOTECHNOLOGY / BIOINFORMATICS / ENVIRONMENTAL BIOTECHNOLOGY) COURSES

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NAAC Accreditation: "A" Grade

Plot No – 50, Sector – 15, C.B.D. Belapur, Navi Mumbai – 400 614.

**Note: Candidates should fill both the copies of this format. The copy marked "Candidate's copy" will be sent to candidate as receipt for payment of Entrance Test Fee.**

Name and Address of the Candidate

Transaction ID

\_\_\_\_\_  
\_\_\_\_\_

Particulars of the Demand Draft:

Name of the Bank \_\_\_\_\_

Issuing Branch \_\_\_\_\_ D.D.No \_\_\_\_\_ Date \_\_\_\_\_ Amount \_\_\_\_\_

Received the Entrance Test fee as mentioned above.

Date : \_\_\_\_\_

Stamp : \_\_\_\_\_

Accounts Clerk / Cashier

# AIET M-TECH 2012

RECEIPT

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Date: \_\_\_\_\_

Stamp: \_\_\_\_\_

Accounts Clerk / Cashier

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# AIET- M.TECH 2012

HALL TICKET

## ALL INDIA ENTRANCE TEST

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NAAC Accreditation: "A" Grade

Plot No – 50, Sector – 15, C.B.D. Belapur, Navi Mumbai – 400 614.

Date of Exam: 26.05.12

Time : 12.00 noon to 1.30 p.m.

Transaction ID

Hall Ticket Number

Paste photograph here  
(taken not more than 3 months prior)

Name and address of the Candidate

Name and address of the Entrance Test Centre allotted to the candidate.

DEPARTMENT OF BIOTECHNOLOGY AND BIOINFORMATICS

PADMASHREE DR. D. Y. PATIL UNIVERSITY

PLOT – 50, SECTOR – 15, CBD BELAPUR, NAVI MUMBAI – 400614.

Candidate's Signature\*\*

Invigilator's  
Signature\*\*

Coordinator AIET-  
M.Tech 2012

\*\* To be signed in the presence of the invigilator in Examination Hall

# AIET-M.TECH 2012

ATTENDANCE SHEET

## ALL INDIA ENTRANCE TEST

ALL INDIA ENTRANCE TEST SELECTION OF CANDIDATES FOR ADMISSION TO M. TECH (BIOTECHNOLOGY / BIOINFORMATICS / PHARMACONFORMATICS) AND M. Sc (GENETIC ENGINEERING / BIOTECHNOLOGY / BIOINFORMATICS / ENVIRONMENTAL BIOTECHNOLOGY) COURSES.

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Candidate's Signature\*\*

Invigilator's  
Signature\*\*

Coordinator AIET-  
M.Tech 2012

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## NOTES

[www.dypatildbb.ac.in](http://www.dypatildbb.ac.in)

[www.dypatil.ac.in](http://www.dypatil.ac.in)

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Tel. No.(022) 39286200 / 212 / 214 Fax (022) 39286199.