Combined Entrance Examination conducted by Jawaharlal Nehru University for admission to M.Tech. Biotechnology Programme

www.jnu.ac.in

PROSPECTUS

ACADEMIC SESSION 2016-17

Check List

☞ **PLEASE REFOLD THE APPLICATION FORM ONLY WHERE IT WAS ORIGINALLY FOLDED. DO NOT STAPLE, PIN OR STITCH ANY DOCUMENTS WITH THE APPLICATION FORM. SEND THE BANK DRAFT IN THE ENVELOPE PROVIDED. KEEP IT LOOSE ALONG WITH THE APPLICATION FORM INSIDE THE ENVELOPE.**

Before posting the completed application form please check that:-

☞ **You have filled in the ApplicationForm in your own handwriting.**

☞ You have noted down your Application Form Number for future correspondence or retained a photocopy of the filled in Application Form;

☞ Your Application Form is complete in all respects;

☞ You have firmly affixed the recent passport size photograph in the Application Form.

☞ You have signed the application form in the space marked for signature.

☞ **You fulfil the eligibility requirements as detailed in the Prospectus. You should, appear in the entrance examination only if you fulfil the eligibility requirements for M. Tech Biotechnology Programme. Despite this caution, in case you do not meet the minimum eligibility criteria and still appear in the entrance examination, you will do so at your own risk and cost, and if at any stage, it is found that you do not fulfil the minimum eligibility requirements, the admission, if granted to you, shall be cancelled ipso facto.**

☞ <u>**Examination Fee**</u>: you have enclosed a Demand Draft drawn in favour of **"JAWAHARLAL NEHRU UNIVERSITY"** payable at **New Delhi** for the amount indicated below towards the entrance examination fee.

General Category Candidates including OBC Candidates	**Rs. 1000/-**
SC/ST/PWD Category Candidates (PWD includes OH, VH and HH)	**Rs. 500/-**
Foreign Nationals	**US$ 40.00 or Rs.2640/-**

☞ **Application Forms can be submitted only by Registered Post/Speed Post to Section Officer (Admissions), Room No.28, Administrative Block, Jawaharlal Nehru University, New Delhi - 110067.   The completed offline Application Form must reach JNU latest by 23rd March, 2016. JNU will not accept responsibility for any postal delay or irregularity or loss in postal transit.**

PLEASE DO NOT SEND YOUR APPLICATION FORM THROUGH PRIVATE COURIER SERVICES OR ANY OTHER POSTAL MODE EXCEPT REGISTERED POST/SPEED POST

CONTENTS

I. GENERAL

Biotechnology is a multi-disciplinary area on the educational scene and programmes have been developed to meet the growing demand for trained manpower for any meaningful Biotechnology activity. The Government of India has allotted high priority for the development of Biotechnology and its exploitation in agriculture and other related disciplines.

The Jawaharlal Nehru University will hold an entrance examination for the academic year 2016-17 for admission to four-semesters (Two years) M.Tech Biotechnology programme being offered by the following participating Universities:

1. ANNA UNIVERSITY, CHENNAI
2. COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY, KOCHI, KERALA (M.Tech. in Marine Biotechnology)
3. MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY (formerly known as West Bengal University of Technology), KOLKATA.

The entrance examination will be held on May 19, 2016 at centres all over the country. (detail of examination centers is shown under Section-XII of this Prospectus)

1. Anna University, Chennai (25 Seats) *

The Centre for Biotechnology was established in 1987 in Anna University with a financial support from the Department of Biotechnology, Government of India with the objectives of providing excellent state of art educational and research facilities in frontier areas of biotechnology. The centre also carries out fundamental and translational research to develop technologies to benefit society. It also promotes research and consultancy services in biotechnology.

The Centre for Biotechnology has two campuses, one at Guindy which houses the teaching and administrative blocks and a R&D campus at Taramani which is called SPIC Bioprocess facility which houses state-of-art bioprocess laboratories and impressive facilities in cellular and molecular biology.

The major thrust areas of teaching and research offered by experienced faculty at the Centre for Biotechnology, Anna University, for the programme are:

1. Cellular and Molecular Biology
2. Chemical Biology and Biocatalysis
3. Protein Biotechnology
4. Bioprocess Engineering and Technology
5. Recombinant DNA Technology
6. Computational Biology, Genomics and Proteomics
7. Drug Discovery
8. Infectious Diseases
9. Molecular Immunotechnology
10. Stem cellular Technology and Regenerative Medicine

The candidates admitted to the program are eligible for the award of M.Tech degree in Biotechnology on successful completion of the programme. The candidates admitted to the programme are also eligible to receive scholarship at the rate prescribed by DBT.

**Fees to be paid at the time of Admission: For Tamil Nadu State: General -Rs.27520/- and SC/ST - Rs.22520/-
For Other State: General -Rs.27520/- and SC/ST - Rs.27520/-
Note: The fee is for 2015-16,and is subjected to change every year.

Contact Address: Prof. P. Gautam ,
Director and HOD
Centre for Biotechnology,
Anna University,
Chennai – 600025
Tamil Nadu
Phone No. : 044-22358362
Fax No. : 044-22350299
E-mail : hoddirbtauc@gmail.com
directorcbt@annauniv.edu

2. Cochin University of Science and Technology, Kochi, Kerala (8 Seats) *

The M.Tech programme in Marine Biotechnology sponsored by Department of Biotechnology, Government of India is a unique course of its kind in the country.

Over above two decades, Government of India has been supporting infrastructure development and research in focused areas of Marine Biotechnology to develop novel processes and products aiming at enhancement of manifold industrial

processes, biomedical material development, environment management etc. These efforts paved the way for the development of Marine Biotechnology industry in the country harnessing the potentials of the marine environment. The Department of Biotechnology, Government of India on taking stock of the situation realized that to infuse power to the sector effective human resource with vibrant entrepreneurship and high level technical expertise were the prime requirements. This paved the way for instituting the M.Tech. programme in Marine Biotechnology at National Centre for Aquatic Animal Health, Cochin University of Science and Technology in 2008 with the objective of generating the right kind of human resource to augment the developments in Marine Biotechnology industry in the country. The National Centre for Aquatic Animal Health is equipped with state-of-the-art facilities for research and education in Marine Biotechnology.

The four semester M.Tech programme consists of three semesters of theory, practical classes, assignments, problem analysis, short term projects and case studies with in-house research during the third and fourth semesters. The thrust areas are:

1. Advanced molecular biology
2. Marine genomics and proteomics
3. Animal cell culture technology
4. Marine algal biotechnology
5. Marine bioprospecting
6. Marine microbiology
7. Biotechnological interventions in aquatic animal health management
8. High health broodstock development
9. Bioprocess technology
10. Nanobiotechnology

The curriculum includes a short term cruise onboard FORV Sagar Sampada.

A training programme in an industry or in an Institution is placed during summer vacation after the first year. Scholarships are paid at the rate prescribed by Department of Biotechnology, Government of India.

Fees to be paid at the time of Admission: Rs.17060/-(approx.)

Contact Address: Prof. I S Bright Singh,
UGC-BSR Faculty
National Centre for Aquatic Animal Health,
Cochin University of Science and Technology,
Lakeside Campus, Fine Arts Avenue,
Kochi - 682016 Kerala

Phone No.	:	0484 - 2381120
Fax No.	:	0484 - 2381120
E-mail	:	bsingh@cusat.ac.in, isbsingh@gmail.com
web site	**:**	**www.ncaah.org**

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3. Maulana Abul Kalam Azad University of Technology, Kolkata (21 Seats) *

The Government of West Bengal under its Ministry of Higher Education has set up the Department of Biotechnology with a view to establish a Centre for Excellence in Biotechnology at Maulana Abul Kalam Azad University of Technology (formerly known as West Bengal University of Technology). The Department of Biotechnology (DBT), Government of India is initially supporting this 4-semester M.Tech. programme in Biotechnology at Maulana Abul Kalam Azad University of Technology for 5 years. The M.Tech.(Biotechnology) programme took off successfully in early 2003. A good and sufficient infrastructure has been established with the financial support received from the Department of Biotechnology, Govt. of India. The main focus of this department is training of students and developing expertise in various facets of Biotechnology. The research trainings (R&D) that will be undertaken as a part of the future programme, and the knowledge students would gather from the course curricula would help them and the researchers in future to develop commercially viable biotechnological processes/products. Scholarships will be payable at the rates prescribed by the Department of Biotechnology.

Fees to be paid at the time of Admission: Rs.26700/-(approx.) (excluding accommodation)

Contact Address: Prof. Subrata Kumar Dey,
Professor & Director
Department of Biotechnology,
Maulana Abul Kalam Azad University of Technology,
BF-142, Salt Lake, Sector-I,
Kolkata – 700064

Phone No.	:	033-23211327 Ext.112
Fax No.	:	033-23341030
E-mail	:	subrata.dey@wbut.ac.in, subratadey184@gmail.com

* No. of seats is subject to change by Department of Biotechnology, Government of India.   ** Subject to revision.

II. ELIGIBILITY FOR ADMISSION

Minimum 60% marks or equivalent CGPA (under grading system) from any recognised university in any one of the following:

B.Tech/BE in:		**M.Sc. in:**
1. Chemical Engineering		1. Biotechnology
2. Biochemical Engineering	**OR**	2. Life Sciences
3. Industrial Biotechnology		3. Botany, Zoology, Biochemistry
4. Leather Technology		4. Microbiology, Genetics
5. Chemistry/Biotechnology		5. Biophysics
6. Biomedical Engineering		6. Microbial Genetics & Bioinformatics
7. B. Pharma		
8. Chemical Technology		

For Anna University: Candidates with B.Tech/B.E in Electrochemistry, Bioengineering, Pharmaceutical Technology, Food Technology, B.Tech. in Agricultural Biotechnology and M.Sc. in Chemistry & Physics are also eligible.

For Cochin University of Science and Technology: Candidates with M.Sc in Marine Biotechnology, Marine Biology/Aquatic Biology & Fisheries, Environmental Biotechnology are also eligible.

For West Bengal University of Technology : Candidates with M.Sc. in Bioengineering are also eligible.

Important Notes:

➢ **Before applying, please ensure that you fulfil the eligibility requirements as prescribed above. Also please note that permission to appear in the entrance examination is strictly subject to your fulfilling the minimum eligibility requirements prescribed by each University as detailed above. You may, therefore, appear in the entrance examination only if you fulfil the eligibility requirements for M. Tech Biotechnology Programme. Despite this caution, in case you do not meet the minimum eligibility criteria and still appear in the entrance examination, you will do so at your own risk and cost, and if at any stage, it is found that you do not fulfil the minimum eligibility requirements, the admission, if granted to you, shall be cancelled ipso facto.**

➢ Number of seats is subject to change by the participating Universities.

➢ Candidates who are due to appear in the final semester/year of the qualifying examination shall also be considered for appearing in the entrance examination provided they have secured 60% or equivalent CGPA (under grading system) in previous semesters/year. However, in the event of their selection, the admission will be granted to them subject to their securing minimum 60% marks or equivalent CGPA in their qualifying examination.

III. RESERVATION/CONCESSION

a) **Reservation:** 15%, 7½% and 3% of seats shall be reserved for Scheduled Caste (SC), Scheduled Tribe(ST) and Person with Disability (PWD) candidates (with not less than 40% disability) respectively. All the SC/ST and PWD candidates who have passed the qualifying examination are eligible to apply irrespective of their percentage of marks in the qualifying examination. OBC reservation, wherever applicable, will be implemented as per the policy of each participating University.

b) **Concession for Kashmiri Migrants:** 10% marks will be added to the overall marks scored by a Kashmiri migrant candidate in the Entrance Examination. After adding 10% marks, in case he/she is covered in the cut-off point in the merit list, he/she will be offered admission strictly in accordance with his/her inter-se merit alongwith other candidates subject to his/her meeting the minimum prescribed eligibility requirements and also subject to his/her producing valid registration documents issued by the notified authorities certifying the candidate's Kashmiri Migrant status.

IV. GUIDELINES FOR ENTRANCE EXAMINATION

The question paper for Entrance Examination will be of 3-hours duration consisting of Two Streams: (i) Technology Stream and (ii) Life Sciences Stream.]

(i)   Technology Stream :
Part A	:	Basic Engineering & Technology..at under graduate level
Part B	:	Physics/Chemistry/Maths...at under graduate level
Part C	:	Fundamental Life Sciences and Informatics..at 10+2 level

(ii)   Life Science Stream:
Part A   :   Life Sciences (Biochemistry, Molecular Biology & Immunology)......at post graduate level
Part B   :   Physics/Chemistry...……………….........at undergraduate level
Part C   :   Maths, Computer & Information Sciences.............…….....………..………….at 10+2 level

V. SYLLABUS

Section I

Technology/Engineering Stream

Part A

(Basic Engineering and Technology Pharmacology)

i)   Basic Engineering and Technology

Basic concepts/principles in mechanical engineering, electrical and electronics engineering:

Chemical Engineering: Computer applications in chemical engineering- chemical process industries instrumentation methods of chemical analysis- thermodynamics- stoichiometry- fluid dynamics- mechanical operations- heat and mass transfer operations- chemical kinetics/reaction engineering- process instrumentation dynamics and control- process equipment design.

Principles of Biochemical Engineering: Enzyme catalysis (Michaelis Menton Kinetics) and reactor design. Material & energy balances of fermentation processes. Kinetics of microbial growth and product formation (Monad model- Leudeking-Piret model). Nature of fermentation processes. Transport phenomena in biochemical reactors- Mass transfer in immobilized enzyme systems and Oxygen transfer in submerged fermentation process, examples of primary metabolites, secondary metabolites and enzymes. Bioreactor operation and design, reactor sterilization. Batch, fed-batch and continuous culture process and cell recycle processes. Modelling of non-ideal behavior in bioreactors. Novel bioreactors, air-lift reactors, membrane bioreactors and fluidized bed reactors. Filtration and membrane based separations, centrifugation, extraction, absorption and chromatography.

(ii)   Pharmacology

Physiology, Pharmacology & Biochemistry: Basic physiology and biochemistry pertaining to all the systems in the body. Classification, mode of action, pharmacological effects, side effects, toxicity and posology of drugs acting on the CNS, ANS, CVS, gastrointerstinal system, endocrine system. Principles of chemotherapy, chemotherapeutic agents, anticancer drugs, vitamins and minerals.

Industrial Pharmacy : Pharmaceutical processing - mixing, milling, drying, powder compression, clarification, filtration, Rheology, sterilization, sterility testing, disinfection, Pharmaceutical dosage forms : Formulation, manufacture and evaluation of solid, semisolid, liquid, aerosols and parentrals. Chemistry of natural products, SAR and Chemistry of analgesics, anticancer, CVS drugs, drugs acting on the CNS, GIT, chemotherapeutic agents, vitamins, hormones.classification, identification, extraction and isolation of active principles of commonly used medicinal plants. Immunological preparations, genetic engineering, fermentation, Biopharmaceutics, Pharmacokinetics-drug absorption, distribution, metabolism and elimination- general principles. Basic concepts of analysis of drugs.

Section I

Technology/Engineering Stream

Part - B

(Physics, Chemistry and Mathematics)

Mathematics:

Calculus - Differential Equation- Complex numbers- Complex integration- Power series- Three Dimensional Geometry-Algebra.

Physics:

Mechanics: Kinematics- Newton's laws - work and mechanical energy- dynamics of rotary motion- fundamentals of special theory of relativity- gravitation- motion in non-inertial frames.

Thermodynamics: Ideal gases- Ist law of thermodynamics- Kinetic theory of gases- 2nd law of thermodynamics -real gases.

Electricity and Magnetism: Electrostatics- Coulomb's law- electric field potential- capacitance- dielectrics in an electric field- energy of an electric field- direct current- magnetic field of direct current- - eletromagnetic induction.

Waves and Optics: Free harmonic oscillators- elastic waves- electromagnetic waves- interference, diffraction, scattering and polarisation of light- thermal radiation.

Modern Physics: Structure of matter and basic solid state physics - elementary nuclear physics- elementary quantum mechanics- structure of atom.

Chemistry:

Inorganic chemistry: Electronic structure of atoms, periodic table and periodic properties. General characteristics, structure and reactions of non-transition elements and transition elements. Coordination compounds, structure, crystal field and ligand field theories, spectral and magnetic properties.

Organic chemistry: Synthesis, reactions and mechanisms of alkenes, alkynes, arenes, alcohols, phenols, aldehydes, ketones, carboxylic acids and their derivatives, halides, nitro compounds and amines. Structure and properties of biomolecules, carbohydrates, amino acids and proteins.

Physical chemistry: Chemical equilibrium, first law, thermochemistry, second law and entropy, free energy, properties of dilute solutions. chemical kinetics, rates of reactions and factors affecting rates of reactions. Spectroscopy, principles of UV- visible and IR spectroscopy.

Section I

Technology/Engineering Stream

Part C

(Fundamentals of Life Sciences and Informatics)

Life Sciences: Organization of unicellular organisms, invertebrates and vertebrates. Ultrastructure of plant and animal cells. Nucleic acids, protein synthesis, Mendalian genetics. Morphology of angiosperms. Biotechnology, Physiology.

Information Technology: Introduction to www.Networking: Basics-modem-hub-switch-commands to transfer files-remote login. Elements of languages used on the Internet JAVA- Perl. Elements of databases- Relational databases.

Section II

Science Stream

Part A

Life Sciences

Biochemistry: Cell structure and function; protein synthesis; genetic code; DNA & RNA; carbohydrate, protein and lipid metabolism, clinical biochemistry; In born erros of metabolism; hormones and their function.

Molecular biology & recombinant DNA technology: Properties of nucleic acids, chromosomes, DNA replication, damage and repair, gene manipulation, cloning vectors, gene libraries, screening of libraries, gene cloning, applications of recombinant DNA technology, PCR, RFLP, Western, Northern and Southern blotting.

Immunology : Cells of the immune system, lymphoid tissues, complement, antibodies, hybridoma technology, applications of monoclonal antibodies, antigen recognitioin, processing and presentation, cell mediated immunity, cytokines, hypersensitivity, vaccine technology, auto-immunity, transplantation, immune responses to various infections, Immunotechnology.

Section II

Science Stream

Part B

(Physics and Chemistry)

Physics:

Mechanics : Kinematics- Newton's laws- work and mechanical energy- dynamics of rotary motion- fundamentals of special theory of relativity- gravitation- motion in non-inertial frames.

Thermodynamics: Ideal gases – 1st law of thermodynamics- Kinetic theory of gases- 2nd law of thermodynamics- real gases.

Electricity and Magnetism : Electrostatics- Coulomb's law- electric field potential- capacitance- dielectrics in an electric field- energy of an electric field- direct current- magnetic field of direct current- electromagnetic induction

Waves and Optics: Free hormonic oscillators- elastic waves- Electromagnetic waves- interference, diffraction, scattering and polarisation of light- thermal radiation.

Modern Physics: Structure of matter and basic solid state physics- elementary nuclear physics- elementary quantum mechanics- structure of atom.

Chemistry:

Inorganic Chemistry: Electronic structure of atoms, periodic table and periodic properties. General characteristics, structure and reactions of non- transition elements and transition elements. Coordination compounds, structure, crystal field and ligand field theories, spectral and magnetic properties.

Organic Chemistry: Synthesis, reactions and mechanisms of alkenes, alkynes, arenes, alcohols, phenols, alde-hydes, ketones, carboxylic acids and their derivatives, halides, nitro compounds and amines. Structure and properties of boimolecules, carbohydrates, amino acids an proteins.

Physical Chemistry: Chemical equilibrium, first law, thermochemistry, second law and entropy, free energy, properties of dilute solutions. Chemical kinetics, rates of reactions and factors affecting rates of reactions. Spectroscopy, principles of UV-visible and IR spectroscopy.

Section II

Science Stream

Part C

(Mathematics, Computer and Information Sciences)

Mathematics: Vectors- Trignometry- Differentiation & Integration- Matrices

Information Sciences: Introduction to www. Networking: Basics-modem-hub-switch-commands to transfer files-remote login. Elements of languages used on the Internet JAVA- Perl. Elements of databases- Relational database.

Computer Application: Basics of computers-hardware-components of a computer. Operating systems- windows-linux- simple commands. Elementary Boolean arithmetic- substraction- addition- multiplication. Applications- word processing- spread sheets. Elementary basic programming commands and syntax.

VI. PREVIOUS YEARS' QUESTION PAPERS

For the reference of intending candidates, a set of question papers pertaining to the last three years are available on JNU website www.jnu.ac.in

VII. SELECTION PROCEDURE

Selection of the candidates will be done in accordance with their inter-se merit drawn on the basis of All India Entrance Examination vis-à-vis the preference of Universities exercised by candidates. In case a candidate has not indicated his/her option for joining a particular university, his/her name will not be considered for that university.

The Selection procedure will be as follows:

1) After the merit list is drawn more than double the number of candidates than the total intake only will be informed of their merit rank in the entrance examination. The candidates will also be informed about the total number of seats in each participating University. The candidates will be asked to exercise their options for joining the Universities in the proforma (which will be sent by JNU). The candidates will be asked to send to JNU a Bank Draft of Rs.5,000/- (Rs.2,500/- in the case of SC, ST, PWD candidates) **as initial security deposit** giving their willingness to be considered for admission to the participating Universities in accordance with their options for joining the Universities vis-à-vis their inter-se merit in the Entrance Examination. **ALL CANDIDATES ARE ADV ISED TO CHECK THE RESULT ON THE WEB SITE OF THE UNIVERSITY (www. jnu.ac.in) IN THE SECOND WEEK OF JUNE.**

2) Before excerise the options candidates are advised to check their eligibility as prescribed by different University and ensure that they fulfil the prescribed eligiblity.

3.a) The candidates who do not exercise their options for joining any of the participating universities will not be considered for admission to that university/universities.

3.b) Candidates who do not fulfil the eligibility for any University would not be considered for admission to that University/ Universities.

4) After allotment of seats, the JNU will send intimation to the candidates about their allotment of the university and also to the concerned participating university to which the candidate has been selected. Please note that once allotment of University is made on the basis of inter se merit vis-à-vis options,other options of the universities given by the candidate shall stand frozen. **CANDIDATES ARE ADV ISED TO CHECK THE ALLOTMENT OF UNIVERSITY ON THE WEB SITE OF THE UNIVERSITY (www. jnu.ac.in) IN THE FIRST/SECOND WEEK OF JULY.**

5) The participating university will then inform the candidate about the complete admission procedure and schedule of their university as well as the amount of fee etc. to be deposited by the candidate. The initial security deposit already sent by the candidate through demand draft to JNU will be sent to concerned University for refund to the students after first semester.

6) In case the candidate is offered admission in accordance with his/her options for joining the University vis-à-vis his/her inter-se merit, but subsequently either does not join the concerned University or withdraw after joining

during the first semester then in that event, the initial deposit of Rs. 5,000/- and Rs.2,500/- for General/OBC and SC/ST/PWD categories respectively, <u>shall stand forfeited</u>.

7) The initial security deposit of Rs.5,000/-, (Rs.2,500/- in the case of SC/ST, PWD candidates) will be refunded in full to those of the candidates who are not offered admission to any of the participating university.

8) **<u>Candidates may note that request for transfer from one university to another will not be entertained under any circumstances. Therefore, candidates are advised not to make any request in this regard</u>.**

9) Only those candidates who will be asked to exercise their option, the list/letter of these candidates will be available on JNU website (www.jnu.ac.in)) although intimation to this effect is also sent to the candidates on their e-mail account. However, the candidates are advised to find out through their own sources whether their names appear in the list and thereby make arrangement for sending their final option together with initial security deposit by the stipulated date. **<u>The University will not issue any paper intimation to the candidates. Candidates are advised to regularly check JNU website for updates</u>.**

10) **PLEASE NOTE THAT ONLY ONE MERIT LIST WILL BE RELEASED AND THERE WILL BE NO SECOND LIST UNDER ANY CIRCUMSTANCES**.

VIII. ADMIT CARD FOR ENTRANCE EXAMINATION

The candidates may download their Admit Card from the University's website: www.jnu.ac.in around 10th May 2016 and take the Admit Card to the Examination Centre with a copy of latest passport size photograph.

Before taking the entrance examination, please ensure that you fulfil the eligibility requirements as prescribed by the University. Also please note that permission to appear in the entrance examination is subject to your fulfilling the minimum eligibility requirements prescribed for admission as notified in the prospectus. You may, therefore, appear in the entrance examination only if you fulfil the eligibility requirements as prescribed for M.Tech Biotechnology Programme under Section-II of this prospectus. Despite this caution, in case you do not meet the minimum eligibility criteria and appear in the entrance examination, you will do so at your own risk and cost, and if at any stage, it is found that you do not fulfil the minimum eligibility requirements, the admission, if granted to you, shall be cancelled ipso facto.

Those candidates who have applied and fulfil the prescribed eligibility conditions but somehow are not able to download the Admit Card are advised to contact either the JNU Representative (who will be available at the Examination Centre at least a day in advance) or the Presiding Officer/Principal of the Centre to sort out the problems. It may be noted that only those candidates will be allowed to appear in the entrance examination whose names appear in the roll-list available with the examination centre. The University will assume no responsibility whatsoever in case the candidate fails to report on the due date and time for appearing in the entrance examination.

IX. TIME-TABLE FOR ENTRANCE EXAMINATION/ADMISSION

1.	**Start of Online Application process**	**from 4.00 p.m. on 8th February, 2016**
2.	**Issue of offline Application Forms (by Post)**	**10th February, 2016**
3.	**Last date for issue of offline Application Forms (by Post)**	**10th March, 2016**
4.	**Closing of online Application Process**	**till 5.00 p.m. on 21st March, 2016**
5.	**Last date of submission of completed offline Application Form to reach JNU**	**23rd March, 2016**
6.	**Date and time of Entrance Examination**	**May 19, 2016 (2.00 P.M. to 5.00 P.M.)**
7.	**Results of Entrance Examination**	
	i. Merit list of candidates to excercise their option for Universities	**2nd/3rd week of June, 2016**
	ii. Final result of alloted Universities	**last week of June/1st week of July, 2016**
8.	**For admission/result queries candidate may visit our website**	**www.jnu.ac.in**

Although the University will inform the candidates falling under consideration zone about their merit in CEEB on their e-mail account, it is the responsibility of the candidate to see the result on University website. The list/letter of these candidates will also be available on JNU website (www.jnu.ac.in). <u>The University will not issue any paper intimation to the candidates. Candidates are advised to regularly check JNU website for updates</u>.

X. HOSTEL FACILITIES

The outstation candidates admitted to the programme of study of the participating Universities will be considered for hostel accommodation as per rules of the concerned University subject to availability of hostel accommodation. Students may please note that grant of admission in a University would not ensure automatic allotment of hostel accommodation and that the same will be offered subject to its availability.

XI. CERTIFICATES AND OTHER DOCUMENTS REQUIRED AT THE TIME OF ADMISSION

(a)   Two self attested copies of the Matriculation, Higher Secondary Pre-University of Indian School Certificate or Senior School Certificate (10+2) or an equivalent examination certificate, showing the age/date of birth of the candidate;

(b)   A Character Certificate from the Head of the Institution last attended;

(c)   Two self attested copies of the statement of marks obtained by the candidate in Senior School, Bachelor's Degree/ Master's Degree examination etc; or their equivalent examination;

(d)   Two self attested copies of the Bachelor's Degree and/Master's Degree;

(e)   SC/ST/OBC Certificate, if belonging to SC/ST/OBC category

(f)   A Medical Certificate for PWD Candidates certifying that the disability is not less than 40%.

(g)   Migration Certificate (in original) from the Head of the Institution/University last attended:

Important: The candidates are also required to produce all originals of the above certificates/documents for verification at the time of registration/admission. In the absence of any of the original certificates/documents, registration/admission shall not be allowed.

XII. INSTRUCTIONS FOR COMPLETING THE APPLICATION FORM

Notes:

a)   **Please read the Check List given in the inside front cover of the brochure before filling-up the Application Form.**

b)   **Please fill the form in your own handwriting.**

c)   **Please note down your Application Form Number for future correspondence or retain a photocopy of the filled in Application Form.**

d)   **The Application Form is to be filled in by the candidate IN BLACK INK ONLY giving complete information using capital letters as far as possible. Please read carefully the instructions given hereunder before filling up the form. Refer to the sample of a filled-in Application Form given in the prospectus. Note especially the right method to darken the bubbles as shown in the Sample Application Form.**

e)   **First, write in black ink (using capital letters) the required information in the boxes (wherever provided). Then darken the appropriate bubble corresponding to the letter/numeral underneath each box. What you write in these boxes is only for your guidance and verification that you are darkening the bubble corresponding to the correct letter/numeral.**

f)   **If you wish to change a marking, completely cover the darkened bubble with white fluid, and then darken the appropriate bubble.**

g)   **Please note that your name, your parent's/guardian's name, and your date of birth should exactly be the same as given in your 10th class or first Board/Pre-Universtiy examination certificate. Any deviation, whenever discovered, may lead to cancellation of your candidature.**

1.   **Name of the Candidate:** Write your name in capital letters as given in your 10th class certificate or your first Board/ Pre-University Examination. Female candidate may write her present surname in case of name change after marriage. Write only one letter in each box. Leave one, **and only one**, blank box between consecutive words of your name. Darken the appropriate bubble underneath each letter of the name. If your name has several initials, leave one bubble blank after each of them.

2.   **Date of Birth :** Darken the bubbles to indicate date of birth exactly same as given in your High School or your first Board Examination in terms of day, month and year. Use numeral 01 to 31 for date, use numerals 01 to 12 for month and use last two digits for the year of birth.

3.   **Gender:** Darken the appropriate bubble.

4.   **Nationality:** Darken the appropriate bubble. In case you are a Foreign National, please indicate the country to which you belong in the space provided.

5.   **Category:** Darken the bubble corresponding to your category/categories as given below. **Your request for change of category subsequent to your submission of Application Form will not be accepted.**

Category	Code
General	G E N
Scheduled Caste	S C
Scheduled Tribe	S T
Other Backward Class (Only Non Creamy Layer) as per Central list	O B C

5(a). If you belong to Minority Community, darken the bubble, otherwise leave it blank.

6.   **PWD Category:** In case you are a candidate with a minimum of 40% disability, darken the bubble corresponding to your Person With Disability category as given below. Otherwise leave it blank.

      Hearing Handicapped   :   HH
      Orthopadeicaly Handicapped   :   OH
      Visually Handicapped   :   VH

      If you are VH category, darken the bubble for scribe i.e. for self/from JNU/computer required and scribe language, otherwise leave it blank.

7.   In case you are Kashmiri Migrant, darken the bubble, otherwise leave it blank.

8.   **State of Domicile:** Mention the code of the state to which you belong (refer to the codes given below). Darken the bubble corresponding to the appropriate numeral in each column.:

State/Union Territory	Code	State/Union Territory	Code
Andaman & Nicobar	0 1	Madhya Pradesh	1 9
Assam	0 2	Maharashtra	2 0
Andhra Pradesh	0 3	Manipur	2 1
Arunachal Pradesh	0 4	Meghalaya	2 2
Bihar	0 5	Mizoram	2 3
Chandigrah	0 6	Nagaland	2 4
Chattisgarh	0 7	Orissa	2 5
Delhi	0 8	Pondicherry	2 6
Daman & Diu	0 9	Punjab	2 7
Goa	1 0	Rajasthan	2 8
Gujarat	1 1	Sikkim	2 9
Haryana	1 2	Tamil Nadu	3 0
Himachal Pradesh	1 3	Telangana	3 1
Jammu & Kashmir	1 4	Tripura	3 2
Jharkhand	1 5	Uttar Pradesh	3 3
Karnataka	1 6	Uttarakhand	3 4
Kerala	1 7	West Bengal	3 5
		Any other place(in India)	3 6
Lakshadweep	1 8	Foreign Countries	3 7

9.   **Programme of Study:** Darken the appropriate bubble corresponding to the programme of study for which you will be taking the Entrance Examination **(Darken only one bubble)**.

10.   Darken the appropriate bubble corresponding to the stream for which you will be taking the Entrance Examination **(Darken only one bubble)**.

11.   Darken the bubbles corresponding to the appropriate numerals to indicate year of passing or appearing in the qualifying examination (i.e. examination on the basis of which you are seeking admission).

12.   **Entrance Examination Centre:** Darken the bubbles corresponding to the appropriate numerals to indicate the city where you would take the entrance examination. A list of cities where JNU entrance examination is to be held is given below. **No change will be permitted and no correspondence in this context will be entertained.** In case it is not possible to allot the Centre of your choice, the University reserves the right to allot you alternative centre.

Name of the Centre	Centre Code	Name of the Centre	Centre Code
1. Agartala	1001	3. Aizawl	1003
2. Ahmedabad	1002	4. Allahabad	1004

Name of the Centre		Centre Code	Name of the Centre		Centre Code
5.	Amritsar	1005	30.	Katihar	1030
6.	Bangalore	1006	31.	Kolkata	1031
7.	Bareilly	1007	32.	Lucknow	1032
8.	Bhubaneshwar	1008	33.	Mumbai	1033
9.	Calicut	1009	34.	Madurai	1034
10.	Chandigarh	1010	35.	Nagpur	1035
11.	Chennai	1011	36.	Pant Nagar	1036
12.	Coimbatore	1012	37.	Patna	1037
13.	Dehradun	1013	38.	Pondicherry	1038
14.	Delhi	1014	39.	Pune	1039
15.	Dimapur	1015	40.	Raipur	1040
16.	Gangtok	1016	41.	Ranchi	1041
17.	Ghaziabad	1017	42.	Sambalpur.	1042
18.	Gwalior	1018	43.	Shillong	1043
19.	Guwahati	1019	44.	Shimla	1044
20.	Goa	1020	45.	Silchar	1045
21.	Gorakhpur	1021	46.	Siliguri	1046
22.	Hyderabad	1022	47.	Srinagar	1047
23.	Secundrabad	1023	48.	Thiruvananthapuram	1048
24.	Imphal	1024	49.	Udaipur	1049
25.	Indore	1025	50.	Varanasi	1050
26.	Itanagar	1026	51.	Vijayawada	1051
27.	Jaipur	1027	52.	Visakhapatnam	1052
28.	Jammu	1028		**(Overseas Centre)**	
29.	Jodhpur	1029	53.	Kathmandu*	2000

Subject to sufficient number of candidates available.

Note:

1. **The University reserves the right to change/cancel any Centre of Examination within India/abroad without assigning any reason.**

2. **Addresses of the Centres of Examination will be available on our JNU website (www.jnu.ac.in) around 10th May, 2016.**

13. **Details of Bank Draft enclosed towards Entrance Examination :** Darken the bubbles corresponding to the appropriate numerals to indicate Bank Draft Number, Date of Demand Draft and amount of the demand draft. The entrance examination fee is Rs.1000/- for general category candidates including OBC candidates and Rs.500/- for the candidates belonging to SC/ST and Person with Disability (PWD) categories. The entrance examination fee for Foreign Nationals is US$ 40.00 or Rs.2640/-.

You are required to enclose Crossed Bank Draft for the prescribed examination fee. The bank draft should be drawn in favour of **JAWAHARLAL NEHRU UNIVERSITY** payable at **NEW DELHI.**

You must write your application form no., name, programme and examination centre opted for on the left hand corner on the reverse of the Bank Draft.

PLEASE NOTE THAT, IF YOUR APPLICATION IS REJECTED FOR ANY REASON, WHATSOEVER OR YOU ARE NOT ABLE TO TAKE THE ENTRANCE EXAMINATION, THE ENTRANCE EXAMINATION FEE PAID BY YOU SHALL NOT BE REFUNDED.

(If the bank draft towards entrance examination fee is not submitted with the application form, your application will be summarily rejected without any intimation to you).

14. **Please note that Column No. 14. (i.e your name and mailing address) will be scanned and therefore it should be written very clearly IN BLACK INK ONLY. If you make any mistake, you should cover the whole box with exact size white paper slip and write your name and address on that. Your address must not overflow this box.**

15. **Photograph** : Please write your name and application form number on the backside of a recent good quality colour photograph (taken not earlier than two months) and firmly affix (do not staple) in the box provided. The photograph should be taken preferably with dark coloured clothes in a white background. The approximate size of the photograh should be 3.5 cm. x 4.5 cm. **Do not sign on the photograph and do not get it attested.**

16. **Signature:** Put your usual signature in black ink within the box provided. Your signature must not overflow or touch the border of the box provided. Your signature establishes your identity. Hence, do not merely write your name in capital letters. This may lead to rejection of your application.

17. **Father's/Guardian's Name :** Write your father's/Guardian's name in BLOCK LETTERS exactly as in your 10th class or equivalent Certificate. Write only one letter in each box.

18. **Mother's Name :** Write your Mother's name in BLOCK LETTERS exactly as in your 10th class or equivalent Certificate. Write only one letter in each box.

19. **Mobile Number:** Darken the bubbles corresponding to the appropriate numerals to indicate your mobile number.

20. **Permanent Address :** Write your complete permanent address in CAPITAL LETTERS, including Pin Code.

21. **Email ID:** The candidate is also advised to give his/her Email ID in the column. All querries/ replies would be entertained from the registered mail id.

22. **Academic Record:** While filling up the information relating to the Academic Record, you should strike off the examinations which are not relevant and should indicate the name of the relevant examination i. e. High School, Higher Secondary, Senior School Certificate (10+2), Intermediate or equivalent, B.Sc. (Hons.), B.Sc., B.Tech., B.E., M.Sc. etc. as the case may be. If you are appearing for final year examination you should fill in all the columns except percentage of marks column wherein you should write "APPEARING". **Please do not forget to write subjects studied in qualifying examination in the column provided for verificaton of your eligibility.**

In case the University/Institution from where you have passed the examination follows letter grading system/CGPA, you are required to indicate the equivalent percentage in the space provided in the application form for the purpose of determining the eligibility.

If you are presently a student of any University, please write the name of that University also indicate the year in which you will pass out the final year examination from this University.

— **Declaration:** The candidate must sign the declaration at the end of the application form.

— **Insert the following documents in the 10" X 7" size envelope supplied with the Application Form and send it by Registered Post/Speed Post.**
    1. Bank Draft (Put the Bank Draft in the 9" X 4" size envelope supplied with the Application Form).
    2. Application Form (Refold the application form where it is originally folded).

Application Forms can be submitted only by Registered Post/Speed Post to Section Officer (Admissions), Room No.28, Administrative Block, Jawaharlal Nehru University, New Delhi - 110067. The completed offline Application Form must reach JNU latest by 23rd March, 2016. JNU will not accept responsibility for any postal delay or irregularity or loss in postal transit.

PLEASE DO NOT SEND YOUR APPLICATION FORM THROUGH PRIVATE COURIER SERVICES OR ANY OTHER POSTAL MODE EXCEPT REGISTERED POST/SPEED POST.

Important Notes:

— **If any information furnished by the candidate in the application form is found to be false, his/her admission, if granted on the basis of such information will be cancelled, ipso facto.**

— **Incomplete application forms will be summarily rejected without any reference to the candidates. The candidates are, therefore, advised to carefully complete all the relevant columns of the application form.**

— **Application Forms received after the closing date shall not be entertained. However, where marginal delay in submission of completed form occurs due to pressing reasons, or for circumstances beyond the candidate's control, such of the application forms shall be considered on the merit of each individual case with justification given by the candidate alongwith the form in support of his/her claim for its late submission.**

— **University shall not accept responsibility for any postal delay or non delivery of filled in application forms to the University or non receipt of admit card by the candidate.**

— **Any dispute with regard to any matter relating to admission shall be subject to the jurisdiction of Delhi Courts only.**