



1. ELIGIBILITY FOR PH.D. ADMISSIONS

1.1 Educational Qualifications

The Minimum qualifications for admission to the Ph.D. programme shall be:

A Master's degree in Engineering/Technology/Science/Management/Architecture/Planning/Humanities and Social Science or any other equivalent qualification recognized by the institute. Minimum 60% marks or 6.5/10 CGPA /CPI at Master's degree is essential for admission in Ph.D. programme of the institute.

The concerned department will judge suitability of the candidate for pursuing Ph.D. in particular discipline based on his/her specialization in Master's Degree.

Candidates who are appearing in qualifying examination are also eligible to apply. However, they have to produce a certificate of passing the qualifying examination as stated above on the day of interview.

1.2 Other Conditions

- A candidate should apply for full time/ sponsored/ self financed/ part time candidate on the prescribed form on or before due date fixed for the same.
- There is no age limit for the applicant.
- Candidates are advised to refer Ph.D. ordinance available in the institute website to make sure their eligibility on full time/ sponsored/ self financed/ part time category.

2. SELECTION PROCESS

- (i) Shortlisting of candidates for Ph.D. program will be done on the basis of objective type written examination.
- (ii) Candidates who are regular faculty and staff member of NIT Raipur who have successfully completed their probation period need not to appear in written entrance examination. Similarly, UGC/CSIR (JRF)/NET/Teacher Fellowship holder/M. Phil. passed candidates need not to appear in written entrance examination.
- (iii) All other eligible candidates will be shortlisted based on their performance in written examination.
- (iv) All shortlisted candidates along with candidate of category (ii) above will be called for interview for final selection.

3. RESERVATION/RELAXATION

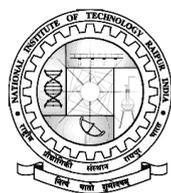
Number of seats for Ph.D. admission is not fixed. Hence preference will be given to OBC/SC/ST/PH candidates over OC candidates if all other things remain the same.

4. DATE OF WRITTEN EXAMINATION AND INTERVIEW

The date of written examination and interview is not yet finalized. These dates along with result of scrutiny and selection will be displayed in the institute website www.nitr.ac.in and no intimation will be sent to the candidates by post. The candidates are advised to visit institute website regularly.

5. SCHOLARSHIP

The award of scholarship/fellowship to full time candidates will be applicable accordingly to Central Government/MHRD norms.



राष्ट्रीय प्रौद्योगिकी संस्थान – रायपुर
NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR
(Institute of National Importance)
G.E. Road, Raipur – 492010 (C.G.)

Phone: (0771) 2254200
Fax : (0771) 2254600
E-mail: director@nitrr.ac.in
Website: www.nitrr.ac.in

Year 2016

S. N	Departments	Broad Research Areas
1	Applied Geology	Petrology and Geochemistry, Hydrogeology, Remote Sensing & GIS, Hyperspectral Remote Sensing application in Geology .
2	Biomedical	Medical Image processing, Biosignal Processing, Biosensor Development, Soft computing, health informatics, pattern recognition, Biomedical instrumentation, biomechanics of foot, Gait analysis, Non-invasive blood glucose monitoring device, Non-invasive blood flow monitoring device , Diabetic foot risk assessment system, Biofluid mechanics, Cardiovascular mechanics, Biomems device and sensor designing, Tissue engineering product development with 3-d printing technology, Microfluidics and its application for development of point of care devices.
3	Bio-Technology	Nanotechnology & its application in medical & Environmental area, Biosensor fabrication , Bioremediation , Biofuel production , Biopolymer in biomaterial application , Biochemical process modelling and optimization, Computational drug design, Biochemical Engineering or Chemical Engineering, Drug targeting and discovery , Biocatalyst, Biopolymer nanocomposites.
4	Chemical Engineering	Membrane separation, Biodegradation, Nano - Composites , Polymers, Process Intensification; Biomass Production etc., Nanotechnology, Electrochemistry, Renewable Energy, Pyrolysis, Biofuels, Reactive separation modeling, Metal extraction, Bioresource Technology, Wastewater treatment, Catalytic reaction.
5	Chemistry	Organic Chemistry / Analytical Chemistry, Nuclear Chemistry Materials, Environmental Chemistry, Nanotechnology. Luminescence/ DNA Binding & Drug Designing, Corrosion & Biosorbants. Inorganic Chemistry/ Environmental Nano Science. Synthesis and Characterization of Polymer Nano Composite, Environmental Chemistry, Inorganic Chemistry/ Catalysis, Polymer Synthesis, Synthetic Organic Chemistry/ Hetero Cyclic Chemistry, Newer Methodologies, Drug Design Of Pharmaceutical Importance, Crystal Engineering And Hydrogen Bonding Interaction Studies In Metal-Complexes And Their Bio-Medical Applications; Coordination Polymers And Metal -Organic Framework.

6	Civil Engineering	Geotechnical Engineering, Soil Structure Interaction, Non Linear Analysis, Earthquake Engineering, Concrete Technology, Structural Durability, Energy/ GIS Application/ Image Processing, Structural Engineering, Finite Element, Structural Dynamics, System Identification, Inverse problem.
7	Computer Application(MCA)	Internet of Things, Soft Computing, Decision Support Systems, Software Engineering, Computer Networks, Information Security, Multimedia Security, Brain Computer Interfacing, Evolutionary Techniques, EEG Signal Processing.
8	Computer Science & Engineering	Distributed System and Applications, Security in Cloud Computing, Real Time Distributed System, Wireless Sensor Network Data Mining, Machine Learning and Application, Computational Intelligence.
9	Electrical Engineering	Power system, Power Electronics, Power Quality, Control System, Signal Processing, Soft Computing Techniques & Applications, Medical Signal & Image processing, Speech Signal Processing, Machine learning, Pattern Recognition, Medical ultrasound, Power System Protection, Flexible AC Transmission System, AI Techniques & its Application, Power Electronics Converter, Renewable Energy Systems, Soft Computing Applications in Power System, Optimization, Artificial Intelligence, High Voltage Engineering.
10	Electronics & Telecommunication Engineering	Internet of Things, Wireless sensor networks and applications, Cryptography and network security, Image/video processing and computer vision, Filter optimization using evolutionary optimization techniques, VLSI design and microelectronics, Multimedia security.
11	Humanities & Social Sciences	English Literature, English Language Teaching.
12	Information Technology	Data Communication Networks, Wireless Sensor Networks, Soft-Computing, Cloud Computing, Delay Tolerrant networks, Big Data Processing.
13	Mathematics	Mathematical Modeling & Dynamical Systems, Queueing theory & Inventory System, Generalized Inverses of Matrices and Tensors, Mathematical Ecology, Fluid dynamics, Algebra, Fuzzy Set Theory, Rough set Theory.
14	Mechanical Engineering	Industrial Engineering & Management, Strategic Management, Design, Production Engineering, Solid Mechanics, Dynamics, Computational Mechanics, Smart Materials, Tribology (Ball Bearing), Mechanism Synthesis, Stress Analysis.
15	Metallurgical Engineering	Thin film technology, Functional Nano materials, Solidification Technology, Metal Matrix Composite, Chemical Serving, Alloy Design & Multi component alloys, Steel Metallurgy, Computational Modeling & Optimization, Image processing of Microstructure.

16	Mining Engineering	Environment, Computer application in Mining, Remote Sensing & GIS, Surface Mining, Fluid Dynamics, Rock Excavation, Coal Mining
17	Physics	Material Science, (Experimental), Optical properties or Nanophosphor, Luminescence.



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G.E. Road, Raipur – 492010 (C.G.)

Phone: (0771) 2252700

Fax : (0771) 2254600

E-mail: registrar@nitrr.ac.in

Website: www.nitrr.ac.in

PH.D. APPLICATION FORM - 2016

Registration Number: _____

(for office use only)

1. (a) Name of the candidate: _____

(b) Date of Birth: DD MM YYYY
[][] [][] [][][][] [][][][]

(c) Sex: Male/Female

(d) Marital Status: Married/Single

(e) Father's/Guardian's /Husband's Name: _____

Space for Photo
(Passport Size)
(Attested)

2. Programme Applied for: _____ in the department of _____
Preferred area of Research: _____

3. Are you applying for Ph.D. programme 2016 of any other department of NIT Raipur: YES NO
If yes, mention the name of the department: _____

4(i) Are you regular faculty/employee of NIT Raipur YES NO

If yes, date of completion of probation: _____

(ii) Are you UGC/CSIR (JRF)/NET/Teacher Fellowship holder/ M. Phil. passed candidate YES NO

(Note: Enclose certificate and proof of the above)

5. Programme category in which interested:
Full time Sponsored Self Financed Part time

6. Are you physically challenged-PH: YES NO

7. Category: OC () OBC () SC () ST ()
(Please put tick in the appropriate box)

(Note: Copy of the Caste certificate in prescribed Central Government format is to be attached)

8. Nationality: _____

9. Address for Communication

Communication /Mailing Address	Permanent Address
Phone	Mobile
E-mail	

10. Education Qualification (Starting from U.G.)

S.No.	Name of degree	Specialization	Name of Institute / university	Year of passing	% Marks/ CGPA

(Note: Attach attested photocopies of all the certificates)

11. Details of Professional Experience (starting from current experience):

S. No.	Duration	Name and Address of Employer	Position held
1.			
2.			
3.			

12. Publications if any and enclose reprints with full details of publication.

13. Details of Application Fee Enclosed

Demand Draft No.: _____ Amount Rs.: _____

Date: _____ Name of the Bank: _____

(Note: DD must be in favour of Director NIT Raipur and payable at Raipur)

DECLARATION/ UNDERTAKING

- (a) I hereby declare that the above given information is true and correct to my knowledge.
- (b) I have read and understood the rules & regulations given in the Institute Prospectus and promise that I shall obey them.
- (c) I hereby undertake to abide by the rules of the Institute.
- (d) I have noted that if my application is incomplete in any respect or information furnished is proved wrong then my application may be rejected and the admission already offered/granted may be cancelled.
- (e) **Important:** I understand that the results of scrutiny and selection will be displayed on institute website. I will not be intimated individually. Therefore, I have to visit institute website regularly.

Date: _____

Place: _____

(Name & Signature of the Candidate)

ANNEXURE-I OBC Certificat Format

FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR
APPOINTMENT TO POSTS / ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER
THE GOVERNMENT OF INDIA

“This certificate MUST have been issued on or after 1st January 2016.”

This is to certify that Shri/Smt./Kum. _____ Son/Daughter of
Shri/Smt. _____ of Village/Town _____
District/Division _____ in the _____ State belongs to the
_____ Community which is recognized as a backward class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

Shri/Smt./Kum. _____ and/or his family ordinarily reside(s) in the
_____ District/Division of _____ State. This is also to certify that
he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the
Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which
is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004.

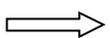
Dated:

District Magistrate/
Deputy Commissioner, etc.

Seal

NOTE:

- (a) The term ‘Ordinarily’ used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
 - (i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / Ist Class Stipendiary Magistrate / Sub-Divisional magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of Ist Class Stipendiary Magistrate).
 - (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
 - (iii) Revenue Officer not below the rank of Tehsildar and
 - (iv) Sub-Divisional Officer of the area where the candidate and / or his family resides.



Caste Certificate issued from Maharashtra State must be validated by social welfare Department of Maharashtra Government

ANNEXURE-II OBC Undertaking

(Declaration/undertaking - for OBC Candidates only)

I, _____ son/daughter of Shri _____ resident of village/town/city _____ district _____ State hereby declare that I belong to the _____ community which is recognised as a backward class by the Government of India for the purpose of reservation in services as per orders contained in Department of Personnel and Training Office Memorandum No.36012/22/93- Estt. (SCT), dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated 8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum No.36033/3/2004 Estt.(Res.) dated 9/3/2004. I also declare that the condition of status/annual income for creamy layer of my parents/guardian is within prescribed limits as on financial year ending on March 31, 2016.

Signature of the Candidate

Place:

Date:

Declaration/undertaking not signed by Candidate will be rejected

ANNEXURE-III SC/ST Certificate Format

(FORM OF CERTIFICATE TO BE PRODUCED BY A CANDIDATE BELONGING TO SCHEDULED CASTE OR SCHEDULED TRIBE)

This is to certify that Shri/Smt./Kum. _____ Son/Daughter of Shri _____ of village/Town _____ in District/Division _____ of the State/Union Territory _____ belongs to the _____ caste/Tribe, which is recognized as a Schedule Caste / Scheduled Tribe under.

The Constitution (Scheduled Castes) order, 1950.

The Constitution (Scheduled Tribes) order, 1950.

The Constitution (Scheduled Castes)(Union Territory) order, 1951.

The Constitution (Scheduled Tribes) (Union Territory) order, 1951.

(As amended by the Scheduled Castes and Scheduled Tribes (Modification) Order 1956, the Bombay Reorganization Act, 1960, the Punjab Reorganization Act, 1966, The State of Himachal Pradesh Act, 1970, the North Eastern Areas (Reorganization Act, 1971) and the Scheduled Castes and Scheduled Tribes orders (Amendment) Act, 1976.)

*The constitution (Jammu & Kashmir) Scheduled Caste Order, 1956;

*The Constitution (Andaman and Nicobar Islands) Scheduled Tribes, 1959, as amended by the Scheduled Castes and Scheduled Tribes orders (Amendment) Act. 1976;

*The Constitution (Dadra and Nagar Haveli) Scheduled Castes Order 1962;

*The Constitution (Dadra & Nagar Haveli) Scheduled Tribes Order, 1962;

*The Constitution (Pondichery) Scheduled Castes Order, 1964;

*The Constitution (Uttar Pradesh) Scheduled Tribes Order, 1967;

*The Constitution (Goa, Daman & Diu) Scheduled Castes Order, 1968;

*The Constitution (Goa, Daman & Diu) Scheduled Tribes Order, 1968;

*The Constitution (Nagaland) Scheduled Tribes Order, 1970;

*The Constitution (Sikkim) Scheduled Castes Order, 1978;

*The Constitution (Sikkim) Scheduled Tribes Order, 1978;

*The Constitution (Scheduled Castes) Orders (Amendment) Act, 1990.

*The Constitution (Scheduled Tribes) Order, (Amendment) Ordinance, 1991.

*The Constitution (Scheduled Tribes) Order, (Second Amendment) Act, 1991.

*The Constitution (Scheduled Tribes) Ordinance, 1996

This certificate is issued on the basis of the Scheduled Castes/Scheduled Tribes Certificate issue to Shri _____ Father of Shri _____ of village/town _____ in District/Division _____ of the State/UT _____ who belongs to the _____ caste/Tribe which is recognized as a SC/ST in the State/Union Territory _____ issued by the _____ (name of the prescribed issuing authority) vide their No. _____ dated _____ or Shri _____ and or his/her family ordinarily reside(s) in Village/Town _____ of _____ District/Division of the State/Union Territory of _____.

Place _____

Signature _____

Date _____

Designation _____
(With seal of Office)

NOTE: - (1) The terms ordinarily reside(s) used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

(2) Candidates from Maharashtra have to produce CAST VALIDITY certificate along with the cast certificate

LIST OF AUTHORITIES EMPOWERED TO ISSUE CASTE/TRIBE CERTIFICATE:

1. District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner /Additional Deputy Commissioner / Dy. Collector/ 1st Class Stipendiary Magistrate/Sub Divisional Magistrate/Extra Assistant Commissioner / Taluka Magistrate/Executive Magistrate.
2. Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.
3. Revenue Officers not below the rank of Tehsildar.
4. Sub-Divisional Officers of the area where the candidate and/or his family normally resides.

ANNEXURE-IV SPONSORSHIP CERTIFICATE

(Sponsored candidates should attach the following certificate from the employer)

The applicant Mr. / Ms. _____ is employed as _____ in our Institute / Organization since _____ in a pay scale _____. He / She is sponsored to pursue Ph.D. program in the department of _____ at National Institute of Technology, Raipur as full time student. If selected, we shall relieve him/her from duties in the organization during the first three years of Ph.D. program.

Name and Address of the
Sponsoring Authority

Seal

Signature of the Head of the
Sponsoring Institution / Organization

ANNEXURE-V NO OBJECTION CERTIFICATE FOR PART TIME STUDENT

(Part time candidates should attach the following certificate from the employer)

We have no objection if the applicant Mr./Ms. _____ is employed as _____ in our Institute / Organization since _____ in a pay scale _____ is admitted in the Ph.D. program in NIT Raipur as part time Ph.D. student. He/ She will be permitted to spend minimum 30 contact days per semester in the institute with the supervisor till thesis submission.

Name and Address of the Employer

Seal

Signature of the Head of the Employer Institution / Organization