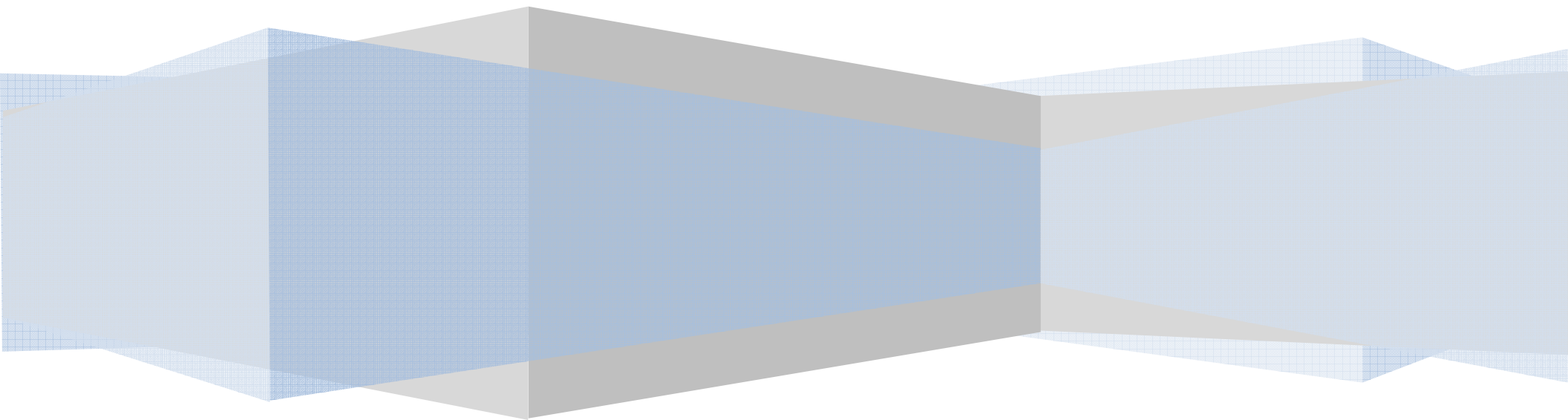


Bhabha Atomic Research Centre Training Schools

INFORMATION BROCHURE

Selection to OCES-2012 & DGFS-2012 Schemes



Government of India
DEPARTMENT OF ATOMIC ENERGY(DAE)
Bhabha Atomic Research Centre Training Schools (OCES/DGFS-2012)

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Training Schemes and Employment Description

1. One-year Orientation Course for Engineering Graduates and Science Post-Graduates for the year 2012-2013 (OCES-2012) is conducted at BARC Training Schools situated at Mumbai, Kalpakkam, Indore and Hyderabad. [Table-1](#) lists Eligible Disciplines. [Table-2](#) lists the eligible disciplines and orientation of the training program at each of the Training Schools along with the placement information on successful completion of training. A Trainee Scientific Officer (TSO) who scores a minimum of 50% aggregate marks on completion of the training program is declared to have passed the course successfully. Successful TSOs will be posted as scientific officers in one of the following DAE units:

- a. [Bhabha Atomic Research Centre \(BARC\), Mumbai*](#)
- b. [Indira Gandhi Centre for Atomic Research \(IGCAR\), Kalpakkam](#)
- c. [Raja Ramanna Centre for Advanced Technology \(RRCAT\), Indore](#)
- d. [Variable Energy Cyclotron Centre \(VECC\), Kolkata](#)
- e. [Heavy Water Board \(HWB\), Mumbai*](#)
- f. [Nuclear Fuel Complex \(NFC\), Hyderabad*](#)
- g. [Board of Radiation and Isotope Technology \(BRIT\), Mumbai*](#)
- h. [Nuclear Power Corporation of India Ltd \(NPCIL\), Mumbai*](#)
- i. [Bharatiya Nabhikiya Vidyut Niqam Ltd \(BHAVINI\), Kalpakkam*](#)
- j. [Uranium Corporation of India Ltd \(UCIL\), Jaduguda*](#)
- k. [Atomic Minerals Directorate of Exploration & Research \(AMD\), Hyderabad*.](#)

*These units have their head office at the indicated locations. Placement can be at the Head Office or at other facilities of these units located in different parts of India.

Allocation of a successful OCES TSO to a DAE unit is done based on performance in the OCES program. Apart from the DAE units listed above, DAE reserves the right to place a small number of TSOs to any other unit under the Atomic Energy Commission (AEC) or the Atomic Energy Regulatory Board (AERB).

Performance above a specified threshold in course work at the Training School will entitle TSOs to a Post-Graduate Diploma or could earn them credits towards MTech/ MPhil/ PhD Programs of the Homi Bhabha National Institute (HBNI), a Deemed to be University.

2. Two-year DAE Graduate Fellowship Scheme for Engineering Graduates and Physics Post-Graduates for the term beginning in 2012 (DGFS-2012). Under this scheme, Engineering Graduates and Physics Post-Graduates who are selected for the BARC Training School program and who also have secured admission for M Tech/ M Chem Engg in select institutes and specializations as listed in [Table-3](#), are paid stipend and tuition fee to pursue a M Tech/ M Chem Engg degree while retaining their employment in DAE. After successful completion of one-year course work at the institute, fellows undertake project work, which is assigned and supervised jointly by a DAE and an institute guide. On successful completion of M Tech/ M Chem Engg, they are posted as Scientific Officers in DAE. On joining, they are required to first undertake a four-month Orientation Course (OCDF) at the BARC Training School, Mumbai. The DGFS fellows are enrolled and posted in one of the following units of DAE:

a) BARC, Mumbai b) IGCAR, Kalpakkam c) RRCAT, Indore.

Allocation of a DGFS fellow to a DAE unit is done at the beginning of the M Tech/ M Chem Engg program based on Selection Interview performance.

Selected candidates are required to execute an agreement and a **Personal Indemnity Bond** to serve DAE for at least three years after completion of training. Indemnity Bond is for ₹ 2,45,000 for OCES trainees and ₹ 5,05,000 for DGFS fellows. **No third party surety is required.**

During Training: (i) Stipend and Allowances: OCES trainees as well as DGFS fellows are paid stipend of ₹ 20,000 per month during the period of their training and a one-time book allowance of ₹ 5,000, **(ii) Boarding and Lodging** in DAE/Institute Hostel/Guest House is mandatory.

On Appointment: Appointment in DAE units shall be as a 'Group A' Gazetted Officer of the Government of India except in NPCIL, UCIL AND BHAVINI which are governed by the service rules of Corporations.

Grade And Pay Scale

Appointment in all the units shall be as a Scientific Officer 'C' (SO/C) in the pay band - III ₹ 15,600-39,100 with grade pay of ₹ 5,400. Appointment will be at the beginning of the pay scale with OCES TSOs getting two or three increments

depending on their performance during the OCES program and the DGFS fellows getting three or four increments depending on their performance in M Tech/M Chem Engg and four-month Orientation Course for DGFS Fellows (OCDF). Emoluments (with three increments) at the time of joining including Dearness Allowance, House Rent Allowance, Transport Allowance, (the latter two calculated at Present Mumbai rates), will be approximately ₹. 47,000/-. In addition, other Allowances are also payable such as Professional Update Allowance & Leave Travel Concession by air. A comprehensive Contributory Health Service Scheme or equivalent for employees and their dependent family members is also available at all DAE Units.

Incentive scheme : With a view to promote excellence in all activities undertaken by the department, officers are also eligible for additional incentives upto 40% of their basic pay subject to fulfillment of the targets set and their performance in the periodic appraisals carried out as per the norms.

Selection Process

Selection to OCES/DGFS is a two-step process: **Screening** to short-list candidates followed by **Selection Interview** of the short-listed candidates. Except for RSE discipline (code 44), there is a separate selection process for each of the other disciplines listed in [Table-1](#). **RSE is available only as an additional option to applicants for Physics and Chemistry disciplines (codes 41 and 42).**

1) Screening for the Engineering disciplines (codes 21-29) is based on two alternative methods:
(a) Cut-off **GATE Score** for short-listing candidates for interview will be declared on this website by March 1, 2012. The address to this latter website will also be separately announced in advertisements which will appear in leading national dailies in February and March, 2012.

(b) **Written Test:** It will be conducted in each of the seven Engineering disciplines (codes 21-27) except in Civil Engineering (Code 29). Candidates who do not opt for GATE or who do not qualify on the basis of GATE Score may take the Written Test. Travel Allowance is not paid for appearing in it. Written Test, which is likely to be online, will be held in the end of April 2012.

2) Screening for Science disciplines (codes 41-43 & 45-46) is based on two alternative methods:

(a) **Written Test:** It is conducted in each of the above mentioned disciplines (codes 41-43 & 45-46). Travel Allowance is not paid for appearing in it. Written test is scheduled on **Sunday, February 26, 2012.**

(b) **GATE Score:** In this case, merit list in each of the Science disciplines (codes 41-43 & 45-46) is prepared on the basis of valid **GATE Score** of the applicants. Cut-off GATE score and Written Test marks for short-listing candidates for interview in each discipline are decided after the last date of receipt of applications.

(c) **Science candidates have the option of utilizing either one or both of the screening avenues detailed above.**

(d) Students graduating with Masters Degree from University of Mumbai – Department of Atomic Energy Centre for Excellence in Basic Sciences (UM-DAE CBS) and National Institute of Science Education and Research (NISER) , Bhubaneswar whose Cumulative Grade Performance Average (CGPA) is greater than or equal to 7.5 on a scale of 10 will directly be screened into the interview stage, provided they meet all other eligibility requirements of the OCES/DGFS-2012 program. Such candidates should forward their applications through the Directors of their institutes in the forms provided by them.

Selection Interviews of shortlisted candidates will be conducted in BARC Training School, Mumbai. Outstation applicants will be paid two-way second-class sleeper train fare by shortest route or actual fare whichever is less. Probable period of selection interviews is during May-June, 2012. Names of short-listed candidates in science disciplines will be declared on this website from April 5, 2012 onwards. Short-listed candidates in Engineering disciplines, qualified on the basis of a valid GATE score will be able to choose an interview slot based on availability from April 6, 2012 onwards whereas shortlisted Engineering candidates qualified on the basis of Written Test will be able to choose an interview slot based on availability from May 16, 2012 onwards. Engineering candidates must visit the website for Engineering online applications for this purpose.

Final Selection is solely on the basis of performance in **Selection Interview** subject to medical fitness. This selection process would also be used for selecting candidates for research based academic programs and for Diploma in Radiological Physics program of HBNI. Eligibility criteria and associated details will be advertised separately.

Eligibility Criteria

Valid GATE score means score of GATE-2011/ GATE-2012

A. Qualifying Degrees and Other Academic Requirements for OCES/DGFS-2012

(a) For Engineering Disciplines (codes 21-29): B E/ B Tech/ B Sc(Engineering) with a **minimum of 60%* aggregate marks** in any of the engineering disciplines mentioned in [Table-1](#) and valid GATE Score in the same engineering discipline as the qualifying degree discipline. Those having qualifying degree in branches like Aerospace, Automobile, Industrial Production, Reliability, Ceramics, Architecture, Geology, Mining, Bio-Medical Electronics/ Instruments, Communication, Information Technology, Master of Computer Applications, Dyes & Dye Intermediates, Electrochemical Engineering, Energy Systems, Oils & Fats, Paints & Varnishes, Petrochemicals, Plastics, Paper, Sugar Technology, Textiles, etc, are **NOT ELIGIBLE**.

(b) For Physics Discipline (code 41): M Sc in Physics/ Applied Physics or BE/ B Tech in Engineering Physics with **minimum of 60%* aggregate marks**. M Sc applicants should have Physics and Mathematics up to B Sc or at subsidiary and/or ancillary level in case of five year integrated M Sc, **with minimum of 60%* aggregate marks in M Sc as well as in B Sc**. Applicants opting to be considered on the basis of GATE Score should have valid GATE Score in Physics. Applicants having B E/B Tech (Engineering Physics) as qualifying degree with valid GATE Score in Engineering Science are also eligible.

(c) For Chemistry Discipline (code 42): M Sc in Chemistry with **Physics** up to B Sc or at subsidiary and/or ancillary level in case of five year integrated M Sc and **Mathematics** up to Std. XII, with minimum of 60%* aggregate marks in

M Sc as well as in B Sc. Applicants opting to be considered on the basis of GATE Score should have valid GATE Score in Chemistry.

(d) For Biosciences Discipline (code 43): M Sc in Agriculture, Biochemistry, Microbiology, Molecular Biology, Biotechnology, Genetics, Botany, Zoology, Plant Science, Plant Breeding, Plant Pathology, Entomology, Food Technology, Animal Science, Life Sciences and Biosciences; or B E/B Tech/B Sc (Tech) only in Food Technology with minimum of 60%* aggregate marks. M Sc applicants should have Physics or Chemistry or Biochemistry or Agriculture Chemistry upto B Sc or at subsidiary and/or ancillary level in case of five year integrated M Sc with minimum of 60%* aggregate marks in M Sc as well as in B Sc . Applicants opting to be considered on the basis of GATE Score should have valid GATE Score in Life Sciences or in Biotechnology. Those having M Sc with specialisation in subjects like Fisheries, Horticulture, Forestry, Agronomy, Animal Husbandry, Marine Biology and Home Science etc and B E/ B Tech/ MTech in Biotechnology/ Genetic Engineering are **NOT ELIGIBLE**.

(e) For Radiological Safety Engineering (RSE, code 44): M Sc in Physics or Chemistry with Physics and Chemistry up to B Sc or at subsidiary and/or ancillary level in case of integrated M Sc, and Mathematics up to Std. XII, with minimum of 60%* aggregate marks in M Sc as well as in B Sc. **Those having M Sc in Environmental Science are NOT eligible.**

(f) For Geology Discipline (Code 45): M Sc in Geology/ Applied Geology/ Applied Geochemistry with both Geology and Mathematics upto B Sc. or at subsidiary and/ or ancillary level in case of five year integrated M Sc, with minimum of 60%* aggregate marks in M Sc as well as in B Sc. Applicants opting to be considered on the basis of GATE Score should have valid GATE Score in 'Geology and Geophysics'.

(g) For Geophysics Discipline (Code 46): M Sc in Geophysics/ Applied Geophysics with Mathematics up to B Sc. or at subsidiary and/ or ancillary level in case of five year integrated M Sc, with minimum of 60%* aggregate marks in M Sc as well as in B Sc. Applicants opting to be considered on the basis of GATE Score should have valid GATE Score in 'Geology and Geophysics'.

(h) Those having M Sc (by research) or PhD are not eligible.

***A minimum of 60% marks means the marks as per the ordinance of the respective university.**

B. Admission to DGFS

Candidates having qualifying degree in disciplines 21-29 or 41 and who meet the corresponding eligibility criteria listed above are eligible to apply for DGFS provided they secure admission for MTech/ MChemEngg starting in the academic year 2012 in Institutes in specializations listed in [Table-3](#). Confirmation of MTech/ MChemEngg admission should be communicated by July 5, 2012, failing which offer of DGFS will be withdrawn retaining their options for OCES schemes if any.

DGFS is offered only to the most meritorious candidates as per Selection Interview performance.

C. Age Limit (Age as on August 1, 2012)

- a) General Category - 26 years,
- b) OBC-29 years,
- c) SC/ST-31 years,
- d) Dependents of those who died in the riots of 1984 (Dep1984) -31 years,
- e) Persons domiciled in Kashmir Division of Jammu & Kashmir State from 01/01/1980 to 31/12/1989 (Dom Kashmir) – 31 years.

Physically Challenged persons of all categories are eligible for age relaxation of 10 years.

D. Nationality: Applicant must be a citizen of India.

E. Applicant working in Central/ State Government Units/ PSUs/ Aided Institutions should apply through proper channel.

F. Application Fee:

A non-refundable application-processing fee of ₹ 250 (Rupees Two Hundred and Fifty) is chargeable from the applicants in General and OBC categories. **Women candidates and the candidates belonging to SC/ST and Dependents of Defence Personnel Killed in Action (DODPKIA) and physically challenged candidates are exempted from payment of application fee.**

Candidates, whose final results are awaited and/ or are appearing for GATE in 2012, but are otherwise eligible, can also apply. If selected, the mark-sheet of final result should be submitted by November 30, 2012 in case of OCES and as per the requirement of the concerned Institutes in case of DGFS.

How to Apply

ONLY ONLINE APPLICATIONS WILL BE ACCEPTED.

a) Science candidates are required to visit this website to submit their applications. Candidates may download the three fold challan from the website and make the payment of Application Processing Fee in any branch of the **State Bank of India**. After making the payment and getting the UNIQUE TRANSACTION NUMBER, the candidate has to enter the said number as response to the relevant query in the online application form.

b) Engineering candidates are required to visit a different website to which a link will be provided on this website by March 1, 2012. The address to this latter website will also be separately announced in

advertisements which will appear in leading national dailies in February and March, 2012.

Note: Candidates who have paid application fee at a branch of State Bank of India must produce original challan at the time of Selection Interview.

Some Guidelines for filling Application Form

(i) Under choice of different schemes in the application form, an OCES scheme is indicated by OCES followed by name of the training school from [Table-2](#). Choices for DGFS are indicated by DGFS followed by name of the unit where MTech/ MChemEngg project is to be carried out and where the Fellow will be placed on appointment.

(ii) Allocation of scheme will solely be on the basis of selection interview merit and choices given by the applicant subject to available seats

(iii) Choices given for those schemes, which are not applicable as per [Table-2](#), will be ignored.

(iv) Offer of a DGFS Fellowship will be withdrawn, (retaining the options mentioned for OCES), if information about MTech admission, with specialization mentioned, is not submitted by July 5, 2012.

Table-1: Eligible Disciplines and their Codes

Engineering Discipline	Code	Engineering Discipline	Code	Science Discipline	Code
Mechanical	21	Electronics*	25	Physics†	41
Chemical	22	Computers	26	Chemistry‡	42
Metallurgy	23	Instrumentation	27	Biosciences	43
Electrical	24	Civil	29	Radiological Safety Engineering (RSE)	44
				Geology	45
				Geophysics	46

*Related degree disciplines such as Electronics & Communication, Electronics & Controls are also admissible.

† The candidates belonging to Physics discipline selected for the Training School at IGCAR will be allotted Reactor Physics (RP) or Material Science (MS) stream in the Training School based on Selection Interview merit and choices given by the applicant, subject to availability.

‡ The candidates belonging to Chemistry discipline selected for the Training School at IGCAR will pursue Nuclear Fuel Cycle Chemistry in the Training School.

Table-2: Training Schools, Eligible Disciplines, Orientation of Training and Probable placements

Training School	Disciplines (refer <u>Table-1</u>)	Orientation of Training	Probable Placement after Training*#
BARC, Mumbai (Since 1957)	21 to 27, 29 & 41 to 44	-Engineering design, development, operation and maintenance of nuclear reactors. - Research in frontier areas of Basic and Engineering Sciences.	Mainly in BARC
IGCAR, Kalpakkam (Since 2006)	21, 22, 25, 27, 41 & 42	-R&D and Engineering related to Fast Breeder Reactor programme - Research in frontier areas of Basic and Engineering Sciences.	Mainly in IGCAR
RRCAT, Indore (Since 2000)	24, 25 & 41	R&D in Engineering and Science related to lasers, accelerators, plasma physics, cryogenics and superconductivity.	Mainly in RRCAT
NFC-HWB, Hyderabad (Since 2001)	21, 22, 24, 25 & 27	Operation & Maintenance and Engineering related to Nuclear Fuel Facilities & production plants for production of Heavy Water to support our Nuclear Power Program	Mainly in NFC & HWB
AMD, Hyderabad (Since 2010)	45, 46	Exploration Techniques for Uranium and other Atomic Minerals and related R&D activities	Mainly in AMD

Table-3: MTech Specializations and Admissible Pre-MTech Degree-Disciplines for DGFS

Relevant MTech Program or Name of Dept/ Centre at the DGFS Institute	Pre-MTech Degree (Disciplines)	Institutes**
Mechanical Engineering	B E /B Tech/B Sc (Engg) (Mechanical)	All but ICT
Cryogenic	B E/B Tech/B Sc (Engg) (Mechanical)	Kh
Chemical Engineering	B E/B Tech/B Sc (Engg) (Chemical)	All but Rkl
Applied Mechanics	B E/B Tech/B Sc (Engg) (Civil/ Mechanical)	M
Civil Engineering	B E/B Tech/B Sc (Engg) (Civil)	All but Rkl, ICT
Earthquake Engineering	B E/B Tech/B Sc (Engg) (Civil)	K, R
Nuclear Hydrology	B E/B Tech/B Sc (Engg) (Civil/ Chemical)	R
Metallurgical Engineering, Materials Science/ Engineering	B E/B Tech/B Sc (Engg) (Metallurgy/ Chemical)	All but ICT
Electrical Engineering	B E/B Tech/B Sc (Engg) (Electrical/ Electronics)	All but ICT
Reliability Engineering, Systems & Control Engineering, Energy Systems	B E/B Tech/B Sc (Engg) (Mechanical/ Electrical/ Chemical)	B, D, Kh, R
Power/ Communication/ Control Engg, Integrated Electronics & Circuits	B E/B Tech/B Sc (Engg) (Electrical/ Electronics)	D, R
Instrumentation	B E/B Tech/B Sc (Engg) (Electrical/ Electronics/ Instrumentation)	Kh,M,R
Computer Science, Engineering & Technology	B E/B Tech/B Sc (Engg) (Computer/ Electrical/ Electronics)	All but Rkl, Var, ICT
Applied Optics, Lasers & Optoelectronics	B E/B Tech/B Sc (Engg) (Electronics/ Optoelectronics) M Sc (Physics/ Applied Physics)	D
Nuclear Engineering & Technology	B E/B Tech/B Sc (Engg) (Mechanical/ Chemical/ Electrical/ Electronics)	K
Solid State Materials/ Electronic Materials	B E/B Tech/B Sc (Engg) (Electrical/ Electronics) M Sc (Physics/ Applied Physics)	D, R
Electronics Engineering, Electronics and Communication Engineering	B E/B Tech/B Sc (Engg) (Electrical/Electronics)	Rkl & Var

** Institutes where specified MTech/ MChemEngg courses are offered under this scheme: B = IIT Bombay; D = IIT Delhi; K = IIT Kanpur; Kh = IIT Kharagpur; M = IIT Madras; R = IIT Roorkee; Rkl = NIT Rourkela; Var = IT-BHU, Varanasi; ICT=Institute of Chemical Technology, Mumbai. Number of DGFS Fellows selected in each approved MTech/ MChemEngg Specialization at the Institute under the DGFS will depend upon the requirements of DAE.

Table-4: Important Dates

<u>Engineering Disciplines (codes 21-29):</u>	
Last date of receipt of application on the basis of GATE Score.	31.3.2012
Last date of receipt of application for those opting for written test in 7 Engineering Disciplines.	31.3.2012
List of candidates shortlisted on the basis of GATE score to be displayed on website	5.4.2012
Availability based option to select Interview Slot for GATE qualified candidates	6.4.2012 to 9.4.2012
Written Test for Engineering Disciplines (except Civil Engg)	Last Week of April, 2012
List of candidates shortlisted on the basis of Engineering Written Test to be displayed on website	16.5.2012
Availability based option to select Interview Slot for Written Test qualified candidates	16.5.2012 to 20.5.2012
<u>Science Disciplines (codes 41-43 & 45-46):</u>	
Last date of receipt of application for those opting for written test in Science Disciplines	25.1.2012
Written Test for Science Disciplines	26.2.2012
Last date of receipt of application for those applying solely on the basis of GATE Score	31.3.2012
Last date for submission of GATE score for candidates who appeared for Written Test	31.3.2012
List of candidates shortlisted on the basis of Written Test or GATE score to be displayed on website	5.4.2012
Interview Schedule to be displayed on website	6.4.2012