National Entrance Screening Test 2024

NEST 2024

Information Brochure & Syllabus

Entrance test for admission to

5-year Integrated MSc Program, 2024-29

at

National Institute of Science Education and Research (NISER) Bhubaneswar

and

University of Mumbai - Department of Atomic Energy Centre for Excellence in Basic Sciences (UM-DAE CEBS) Mumbai

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Introduction to NEST 2024

The **National Entrance Screening Test** (NEST) is a compulsory computer-based test for admission to the five-year Integrated MSc programme in Biology, Chemistry, Mathematics and Physics, at National Institute of Science Education and Research (NISER), Bhubaneswar and University of Mumbai – Department of Atomic Energy Centre for Excellence in Basic Sciences (UM–DAE CEBS), Mumbai.

Integrated MSc program at NISER, Bhubaneswar & UM-DAE CEBS, Mumbai

Both NISER and UM-DAE CEBS are autonomous institutions established by the Department of Atomic Energy (DAE), Government of India, in 2007. NISER is an off-campus centre of Homi Bhabha National Institute (HBNI), and all academic programmes of NISER are affiliated to HBNI. Although UM-DAE CEBS is a DAE institution, it is physically located on the Kalina campus of the University of Mumbai and the degrees to students are awarded by the University of Mumbai. These institutes were started with the mandate to provide high-quality teaching in basic sciences by a faculty of distinguished scientists embedded in a vibrant research environment and to create a national pool of scientists ready to take up research challenges in the frontiers of basic and applied sciences. The integrated MSc programme at these institutes is a residential programme and follows a semester–based course structure and continuous assessment within a flexible and innovative academic curriculum, exposing the students to research early in the programme. The placements of the graduated students from NISER and UM-DAE CEBS provide testimony of the success of this initiative.

NISER and UM-DAE CEBS are equipped with state-of-the-art teaching and research laboratories, modern computational facilities, and excellent libraries. All the students are accommodated in hostels on campus and are provided with an environment conducive to their success in classroom learning and research.

NISER, Bhubaneswar, and UM-DAE CEBS, Mumbai, are in compliance with the UGC and Govt. of India guidelines on anti-ragging. Ragging in any form is a punishable offence and hence is totally prohibited on these campuses. Any complaint regarding ragging can be made at the 24x7 toll-free National Anti-Ragging Help Line number 1800-180-5522 and/or at the email ID: helpline@antiragging.in.

The candidates admitted to the programme are eligible to receive an annual scholarship of Rs 60,000 through the DISHA program of the Department of Atomic Energy, Government of India. In addition, the scholarship recipients receive a grant of Rs 20,000 per annum for summer internships. Candidates selected by DST for the INSPIRE-SHE program are endorsed for the INSPIRE scholarship by NISER and UM-DAE CEBS. Alumni of the programme are presently pursuing Ph.D. at reputed universities and institutes in India & abroad.

Besides, top performers at NISER and UM-DAE CEBS, securing overall grades above a certain threshold at the end of the programme, are eligible to appear directly for the interview for admission to Bhabha Atomic Research Centre (BARC) training school.

The details of the Integrated MSc programme, list of courses, research activities of the individual schools, institute facilities, and faculty profiles at NISER and UM-DAE CEBS may be found on their respective websites (*www.niser.ac.in* and *www.cbs.ac.in*).

Eligibility criteria for admission to the programme

***Educational qualification*:** Candidates seeking admission to NISER and UM–DAE CEBS for the Integrated MSc programme 2024–29 should be from the regular science stream in classes XI and XII. It is mandatory for all aspiring candidates to write the NEST 2024 examination. Candidates must have passed the class XII examination from any recognised Board in India in the years 2022 or 2023 or should be appearing for the same in 2024. Candidates who are appearing for the board examination in 2024 must pass it by the time of admission into the programme. Also, candidates must secure at least 60% marks in aggregate or equivalent grade in class XII examination to be eligible for admission to NISER and UM-DAE CEBS. Candidates satisfying all the above criteria will be considered for admission strictly on the basis of the Merit List of NEST 2024. For candidates belonging to scheduled castes (SC), scheduled tribes (ST), and Divyangjan categories, the minimum requirement of marks is relaxed to 55% in aggregate or equivalent grade in class XII examination. Where only letter grades are available, a certificate from the concerned Board specifying an equivalent percentage of marks is required to be submitted. In the absence of such a certificate, the decision of the admissions committee of the concerned institution will be final.

***Age limit*:** There is no age limit for appearing in the NEST 2024 examination and admission to either NISER or UM-DAE CEBS.

Eligibility criteria summary: a candidate becomes eligible for the programme when he/she satisfies **all the three criteria** stated below:

(a) Secures a position in the NEST merit list. Please refer to page 11 of this document for the rules of merit list preparation.
(b) Passed the XII standard board examination in the science stream in the years 2022 or 2023 or has appeared in 2024 from any recognised board in India.
(c) Secures at least 60% in aggregate in the XII standard board examination. For *SC*/ST/Divyangjan candidates, the requirement is 55%.

Note: *Necessary certificates supporting eligibility criteria have to be furnished only at the time of admission. Offer of admission is subject to verification of all original certificates at the time of admission/counselling. Certificates in support of eligibility criteria need not be produced for appearing in the NEST 2024 examination.*

Reservation of seats

For the Integrated MSc programme 2024–29, the total number of seats at NISER and UM-DAE CEBS are 200 and 57, respectively. NISER and UM-DAE CEBS follow the Govt. of India rules for reservation of seats. The categories and the extent of reservation are as follows:

Other Backward Classes belonging to the Non–Creamy Layer (OBC–NCL): 27% of seats are reserved for OBC–NCL. The class should have been mentioned in the central list of OBCs (*http://www.ncbc.nic.in/User_Panel/CentralListStateView.aspx*). If offered admission under the OBC-NCL category, the candidate must produce the relevant valid certificate on the date of admission.

Candidates belonging to the creamy layer of OBC are **NOT** entitled for reservation. Such candidates are treated as belonging to the General category. The Socially and Educationally Backward Classes (SEBC) as notified by some of the State Governments, are, as such, **NOT** eligible to avail any reservation unless they satisfy the OBC–NCL criteria.

Reservation for Economically Weaker Sections (EWS) of society is allowed in the General-EWS category for admission to UM-DAE CEBS only.

Scheduled Caste (SC) / Scheduled Tribe (ST): 15% seats are reserved for the SC category candidates and 7.5% seats are reserved for the ST category candidates. The benefit of reservation will be given only to those castes and tribes that are mentioned in the respective lists of corresponding states published by the Government of India: (*http://socialjustice.nic.in/UserView/index?mid=76750* *and* *https://tribal.nic.in/ST/LatestListofScheduledtribes.pdf*).

The number of seats reserved for SC, ST, OBC (Non–Creamy–Layer), and Divyangjan candidates is according to the Government of India norms. To claim seats under reserved category, relevant documents must be furnished at the time of admission. All category certificates should be written in either English or Hindi. In case certificates are written in any other language, a translated copy duly notarized must also be provided.

Divyangjan: 5% of seats are reserved in every category, i.e., General, OBC–NCL, SC and ST for persons with disabilities (Divyangjan). Benefit would be given only to those who have at least 40% impairment, irrespective of the type of disability. Leprosy–cured candidates who are otherwise medically fit to pursue the course are also included in this subcategory. Candidates are advised to ensure that the certificate is in accordance with the latest guidelines of the Government of India (visit the website of the Ministry of Social Justice and Empowerment, Department of Disability Affairs for latest information: https://disabilityaffairs.gov.in). The reservation for Divyangjan candidates is horizontal and hence, unfilled seats will be allotted to candidates belonging to the respective categories i.e., unfilled SC (Divyangjan) seats will be allotted to candidates belonging to the SC category and so on. If selected, the candidates must produce all original certificates at the time of admission failing which, the offer of admission will be cancelled.

NEST 2024 Examination

The NEST 2024 examination will be conducted at multiple centres (major towns or cities) all over India on **June 30, 2024 (Sunday), 9:00 AM – 12:30 PM (first session) and 2:30 PM – 6:00 PM (second session)**. **The candidates will be assigned to one of the two sessions**. Based on the performance in NEST 2024, Merit List of the candidates will be prepared (see Merit list preparation section on page 11) and posted on NEST 2024 website (*www.nestexam.in*) by **July 10, 2024.**

NEST 2024 examination will be a Computer-Based Test (CBT/online exam)

Examination centres: A proposed list of about 115 centres (cities and towns of India) for the NEST examination is given in the table below. Candidates must choose **5 (five)** centres in order of their preference while filling out the application form. Every effort will be made to allot the centre of first preference. Please note that ultimately, the allotment of an examination centre by the NEST Committee has to be regarded as final, and the request for a change of centre will, in general, not be entertained. The address of the test venue allotted to the applicant will be mentioned on the NEST admit card. Admit cards will be available for download from an online application portal from **May 29, 2024**. Refer to the section '**How to Apply**' below for details on online registration and application process.

No.	Centre Name	No.	Centre Name	No.	Centre Name
1	Port Blair [AN]	40	Kannur [KL]	79	Rayagada [OD]
2	Guntur [AP]	41	Kasaragod [KL]	80	Rourkela [OD]
3	Kurnool [AP]	42	Kollam [KL]	81	Sambalpur [OD]
4	Rajahmundry [AP]	43	Kottayam [KL]	82	Bhatinda [PB]
5	Tirupathi [AP]	44	Kozhikode [KL]	83	Jalandhar [PB]
6	Vijayawada [AP]	45	Malappuram [KL]	84	Mohali [PB]
7	Visakhapatnam [AP]	46	Palakkad [KL]	85	Puducherry [PY]
8	Vizianagaram [AP]	47	Pathanamthitta [KL]	86	Bikaner [RJ]
9	Naharlagun-Itanagar [AR]	48	Thiruvananthapuram [KL]	87	Jaipur [RJ]
10	Dibrugarh [AS]	49	Thrissur [KL]	88	Jodhpur [RJ]
11	Guwahati [AS]	50	Wayanad [KL]	89	Udaipur [RJ]
12	Tezpur [AS]	51	Bhopal [MP]	90	Chennai [TN]
13	Bhagalpur [BR]	52	Gwalior [MP]	91	Coimbatore [TN]
14	Patna [BR]	53	Indore [MP]	92	Madurai [TN]
15	Chandigarh [CH]	54	Jabalpur [MP]	93	Salem [TN]
16	Bhilai Nagar [CG]	55	Jalgaon [MH]	94	Tiruchirappalli [TN]
17	Raipur [CG]	56	Kolhapur [MH]	95	Tirunelveli [TN]
18	New Delhi [DL]	57	Mumbai [MH]	96	Hyderabad [TS]
19	Panaji [GA]	58	Nagpur [MH]	97	Karimnagar [TS]
20	Ahmedabad [GJ]	59	Nanded [MH]	98	Warangal [TS]
21	Bhuj [GJ]	60	Pune [MH]	99	Agartala [TR]
22	Rajkot [GJ]	61	Ratnagiri [MH]	100	Prayagraj (Allahabad) [UP]
23	Surat [GJ]	62	Gangtok [SK]	101	Agra [UP]

24	Hamirpur [HP]	63	Shillong [ML]	102	Aligarh [UP]
25	Shimla [HP]	64	Imphal [MN]	103	Gorakhpur [UP]
26	Jammu [JK]	65	Aizawl [MZ]	104	Kanpur [UP]
27	Srinagar [JK]	66	Dimapur [NL]	105	Lucknow [UP]
28	Leh [Ladakh]	67	Kohima [NL]	106	Noida [UP]
29	Bokaro Steel City [JH]	68	Angul [OD]	107	Varanasi [UP]
30	Dhanbad [JH]	69	Balangir [OD]	108	Dehradun [UK]
31	Jamshedpur [JH]	70	Balasore [OD]	109	Haldwani [UK]
32	Ranchi [JH]	71	Bargarh [OD]	110	Roorkee [UK]
33	Bengaluru [KA]	72	Baripada [OD]	111	Asansol [WB]
34	Hubballi (Hubli) [KA]	73	Berhampur-Ganjam [OD]	112	Burdwan [WB]
35	Mangaluru (Mangalore) [KA]	74	Bhawanipatna [OD]	113	Durgapur [WB]
36	Mysuru (Mysore) [KA]	75	Bhubaneswar [OD]	114	Hooghly [WB]
37	Alappuzha [KL]	76	Cuttack [OD]	115	Kolkata [WB]
38	Ernakulam [KL]	77	Dhenkanal [OD]	116	Siliguri [WB]
39	Idukki [KL]	78	Jharsuguda [OD]	-	–

Any five cities from the above list, as per applicant's preference, have to be chosen while filling out the application form. Depending on the number of applicants opting for a particular test city/town, the NEST 2024 committee reserves the right to cancel or add any of the test cities without prior notice to applicants. The address of the NEST test centre allotted to an applicant will be printed on the admit card. Only this test centre should be treated as final, irrespective of the order of preference of test cities filled in at the time of online application.

Examination rules: Candidates must reach the test venue at least 90 minutes before the examination commences. The examination is 3 hours and 30 minutes in duration. It will start at 9:00 AM for the first session and 2:30 PM for the second session. Candidates will not be allowed to enter the examination hall after 9:30 AM and 3:00 PM for the respective sessions. The earliest a candidate can leave the examination hall is 11 AM and 4:30 PM for the respective sessions unless it becomes necessary to leave earlier on medical grounds. Use of log tables and calculators inside the examination hall is not allowed. Candidates may bring their own pens. Exchange/sharing of these items with other candidates is strictly prohibited. Candidates MUST bring their Admit Card, school photo Identity Card, or any other photo ID issued by Government agencies to the examination hall. Any candidate found adopting unfair means will be expelled from the examination hall without warning. Mobile phones and other similar electronic gadgets are strictly not allowed inside the examination hall.

NEST 2024 will be conducted in compliance with the guidelines issued by the Government of India regarding scribes for Divyangjan category candidates (please refer to the website: http://disabilityaffairs.gov.in). Divyangjan category candidates are eligible for extra time of 20 minutes per hour of examination duration as per GOI guidelines.

Divyangjan category candidates who require the assistance of scribes should bring their scribes, complying with the guidelines mentioned above, to the examination venue.

Question type: The question paper will consist of **4 (four)** sections of objective (MCQ) type questions. Each section is of 60 marks and will contain subject-specific questions from Biology, Chemistry, Mathematics, and Physics. Each section will have 20 questions, with exactly one correct answer. Marking correct answer will fetch 3 marks, choosing incorrect answer will lead to deduction of 1 mark and no marks will be deducted for not answering a question. It is in the interest of the candidate to attempt all sections. The merit list for both

the institutes will be prepared using the best three scores out of the four sections, and the section with the worst score will not be considered. That is, scores out of 180 marks will be considered for preparing merit list. For NEST question papers of the last few years, refer to the NEST 2024 website (*www.nestexam.in*). The language of the question paper will be **Hindi and English.** In the case of any confusion/discrepancy due to language, the question paper in English will be considered to be the standard one.

*Answering questions***:** The examination is a Computer Based Test (CBT). The candidate will enter all the requisite details at the given computer terminal. The questions will be displayed on the monitor. The answers to each question are to be provided at the computer terminal using the given electronic equipment. Details of how to answer at the terminal will be provided before the examination. Applicants are encouraged to practise by using a mock test link that will be made available on NEST 2024 web page several days before the exam date. Practice sessions on the computer-based test will be available for all applicants on the application portal after online registration and complete submission of the online application. The application portal will be accessible with the correct login credentials only.

*Syllabus***: The syllabus for NEST 2024 primarily follows the NCERT/CBSE rationalised science syllabus of classes XI–XII.** The detailed syllabus for the NEST examination is provided at the end of this document under the heading: 'Syllabus for NEST 2024'. The syllabus can also be downloaded from the NEST 2024 website, *www.nestexam.in*. **The knowledge gained during high school studies may be required to answer some of the questions.**

How to apply:

To apply for NEST 2024, candidates must fill out the online application form through *www.nestexam.in* on or after **March 20, 2024**. Candidates are strongly advised to read through the detailed online application procedure available on the website (click on 'How to Apply online'). The online application process closes on **May 31, 2024 (midnight)**.

Applications can be submitted only through the NEST 2024 website. There is no other mode of application submission. Login credentials for logging into application submission and fee payment portals will be provided upon online registration.

*Application Fee***:** The application fee for the male candidates of the General and OBC categories is 1,400/–. The application fee for candidates in the SC/ST/Divyangjan categories and for all female candidates is 700/–. Payments can be made using credit card/debit card/net–banking through an online payment gateway.
Please use Mastercard/Visa/RuPay cards only.

Candidates need not send any document to the NEST office in the entire application process.

Please refer to the instruction sheet (the 'How to Apply Online' tab on www.nestexam.in) for details regarding the application process.

*Admit card***:** The admit card for NEST 2024 will be available for download from **June 10, 2024**. Admit cards will **NOT** be dispatched to any applicant. Applicants must download their admit cards from the NEST website (after login). The download link will be available only till the day of the examination.

Address for correspondence:

Any NEST 2024-related queries be addressed to:

by postal mail:
Chief Coordinator NEST 2024,
UM-DAE Centre for Excellence in Basic Sciences,
"Nalanda", Opposite Nano Sciences Building,
University of Mumbai, Vidyanagari,
Mumbai 400098, India.

by e-mail to: nest@cbs.ac.in (for a quicker response, email is recommended)

The official website of NEST 2024 is: **www.nestexam.in**

Important Dates:

- Start of Online application for NEST 2024: **March 20, 2024**
- Closing of Online application: **May 31, 2024 (midnight)**
- Download of Admit Card begins: **June 15, 2024**
- NEST 2024 examination: **June 30, 2024**
  (Hours of examination: 9:00 AM – 12:30 PM & 2:30 PM – 6:00 PM)
- Announcement of results on NEST website: **July 10, 2024**

Important things to remember:

✔ Candidates are advised to reach the examination venue at least 90 minutes before the start of the examination.

✔ Candidates will NOT be allowed to enter the examination hall any later than half an hour (30 minutes) after the start of the examination, i.e., 9:30 AM in the first session & 3:00 PM in the second session.

✔ Candidates will be allowed to leave the examination hall no sooner than two hours after the start of the examination, i.e. 11.00 AM for the first session & 4.30 PM for the second session (except when required by medical emergencies).

✔ Candidates **MUST** bring their Admit Card and a valid photo Identity Card to the examination hall. Without these documents the candidate may not be allowed to enter the examination centre.

✔ Use of log tables and calculators in the examination hall is not allowed. Candidates must bring their own blue/black pen. Blank pages for rough work will be provided in the examination hall. A simple on-screen calculator will be provided.

✔ ANY kind of electronic gadgets, including mobile phones, digital/smart watches, storage devices, etc., are not allowed inside the examination hall.

- Correct email address should be provided. The NEST office communicates with candidates through this e-mail id only.
- The phone number that is provided during the application should be accessible by the candidate. The NEST office uses this phone number to reach a candidate or to send SMS messages whenever necessary.
- A properly scanned and cropped recent passport-sized photograph should be uploaded. A properly scanned and cropped signature should be uploaded.
- The photograph and signature files must be not more than 80 KB each and must be in .JPG or .JPEG format only.
- Applications incomplete in any respect will not be accepted.
- *Any dispute arising out of or related to the NEST 2024 examination shall be subject to the jurisdiction of the Bombay High Court.*

Student intake at NISER and CEBS for session 2024-2029:

The number of seats available at NISER and CEBS for admission in the year 2024 would be as follows

Category	NISER	CEBS
General	101	23
General – EWS	0	06
OBC - NCL	54	15
SC	30	09
ST	15	04
Divyangjan	5% seats in each category	5% seats in each category
Total	200	57
Total intake	200	57

Two supernumerary seats are reserved at both NISER and CEBS for eligible candidates from Jammu & Kashmir, Ladakh, as per existing government regulations.

A student with a certain category rank will take a general seat if he/she secures a suitable general ranking.

For example, if the topper of the exam (General rank 1) happens to be an OBC candidate, he/she would get OBC rank 1, as well. In such a case, he/she would be admitted against the General rank so that all OBC seats remain available even after his/her admission.

NEST 2024 Merit List preparation

This section lists rules employed for the preparation of the merit list in the National Entrance Screening Test (NEST) 2024.

I. Scoring system

1. In the NEST 2024 examination, there are four sections of 60 marks each.
2. NEST 2024 entrance examination will be conducted in two sessions, and different sets of question papers will be used for each session. The percentile score will be calculated on the basis of the relative performance of all the qualified candidates in the respective session. The highest score in each session will be 100th percentile.
3. During the preparation of the merit list, the three best scores from the four sections will be considered. In other words, the worst score among the four sections would not be considered for the merit list calculation.
4. As merit list calculation will be performed on marks obtained in the best three sections, the 'total' marks for NEST 2024 become **180.**

II. 'Section–wise' Minimum Admissible Score (SMAS) or section-wise cut–off marks

1. Total score of each candidate will be the sum of his/her best three scores out of the four sections.
2. For each section, "20% of the average of the best 100 scores in that section" will be considered as Section–wise Minimum Admissible Score (SMAS).

*For example, if the average of the best 100 scores in the Chemistry section is 48 out of 60, then SMAS for the Chemistry section would be 48*0.20 = 9.6 marks, similarly for other sections.*

3. SMAS for different sections can be of different numerical values.
4. SMAS for the two sessions, for any particular section, can be of different numerical value.
5. SMAS for OBC students would be 90% of the respective SMAS for general category students.

For example, if in the Chemistry section, the SMAS is 9.6 for general category students, then the SMAS for OBC students would be 8.64 (90% of 9.6).

6. SMAS for SC/ST/Divyangjan students would be 50% of respective SMAS for general category students.

For example, if in the Chemistry section, the SMAS is 9.6 for general category students, then the SMAS for SC/ST/Divyangjan students would be 4.8 (50% of 9.6).

III. Overall cut-off or Minimum Admissible Percentile (MAP)

1. In addition to SMAS, a candidate is required to score equal to or above a total Minimum Admissible Percentile (MAP), to get a merit rank.

   i.   MAP for NEST 2024 is 95 percentile for general category candidates.

   ii. MAP for NEST 2024 is 90 percentile for OBC candidates.

   iii. MAP for NEST 2024 is 75 percentile for SC/ST/Divyangjan candidates.

2. A candidate scoring less than the MAP would not be allotted any merit rank and would not be deemed eligible for admission, even if he/she secures SMAS in all sections.

IV. Merit list rank preparation

The final ranking of the candidates will be based on percentile scores calculated from the best three-section scores. The merit list will be published based on the following criteria:

1. A candidate is required to score more than SMAS in at least three subject sections. Then we say that the candidate is SMAS-qualified.
2. The total score of a SMAS-qualified candidate is the sum of the scores of her/his three best scores from the SMAS securing sections.
3. A candidate is required to score equal to or above a total Minimum Admissible Percentile (MAP) to get a merit rank.
4. If the percentiles of two or more candidates become equal (i.e., in the case of a tie), then the best scores in the sections of the two students would be compared. The student with the higher score would get a better rank.
5. If the tie persists, the students would be given the same provisional rank at the time of declaration of the result, and the tie would be broken by comparing class 12th marks during admission/counselling.
6. If the tie still persists, then the younger student will get a higher rank.

V. Admission:

Getting a merit rank by satisfying SMAS and MAP criteria does not automatically entitle a candidate to a seat or to be called for admission/counselling. The details of the admission/counselling process will be uploaded on the website sufficiently in advance.

Note: *NEST committee reserves the right to relax any of the defined cut–offs in extenuating circumstances.*

SYLLABUS FOR NEST 2024

The syllabus for NEST 2024 follows the rationalised science (Physics, Chemistry, Biology and Mathematics) syllabus of class XI–XII as per NCERT.

These can be found at https://ncert.nic.in/syllabus.php .