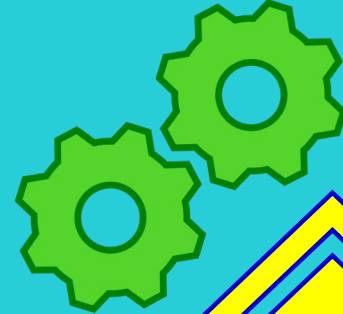# INFORMATION
BULLETIN

WBJEE-2024

Common Entrance Test for admission to

UG Courses in Engineering / Technology, Pharmacy and Architecture

Engineering /Technology

Architecture

Pharmacy

Date of Examination 28.04.2024 (Sunday)

West Bengal Joint Entrance Examinations Board
RUPANNA
West Bengal

INFORMATION BULLETIN
WBJEE-2024

Common Entrance Test for admission to UG Courses in
Engineering/Technology, Pharmacy and Architecture

Candidates must go through the Information Bulletin
carefully before registration for the entrance examination.

West Bengal Joint Entrance Examinations Board
RUPANNA
DB-118, Sector-I, Salt Lake City
Kolkata 700064
Toll free No.- 1800-123-4782 (Extn. No.- 2)

IMPORTANT INSTRUCTIONS TO CANDIDATES WHILE REGISTERING FOR WBJEE-2024

Once an application is received, it will be construed that the candidate agrees to all terms and conditions, rules and regulations stipulated in the Information Bulletin and the relevant notice(s) published by the Board for the said purpose.

Any application not in compliance with the conditions specified in the Information Bulletin is liable to be rejected.

1. Application for the examination must be done online only. No printed application form is available.

2. Ensure filling up the genuine application form available online only at **www.wbjeeb.nic.in**

3. Do not attempt to make any duplicate application.

4. It is essential to have a valid mobile number and a unique, valid email ID.
All future communications by the Board will be sent to the registered mobile number and email ID. WBJEEB will not be held responsible for non-receipt of any communication due to wrong/non-existing/non-functional/changed mobile number/ email ID or network interruption.

5. Once the registration details, i.e., **name, father's name, mother's name, gender, domicile and date of birth,** are entered and submitted, this information **cannot be changed/modified/edited under any circumstances**.
Also, the information must match exactly with the school/college admit cards, mark sheets, certificates, photo identity cards, caste/category/income certificates, etc. (as applicable), which a candidate has to produce at the time of entering the examination hall, during counselling/admission and registration with the University.

6. Do not share your application number, password, o r security question/answer with anyone. The Board will not be held responsible if any candidate commits a mistake which may result in negative consequences.

7. Upload a **scanned** copy of the photograph and signature as per the instructions provided in the Information Bulletin. If any candidate receives any SMS/email regarding a discrepancy in photograph/ signature, he/she must take corrective action immediately **within one day.** Admit cards will not be issued if these images are illegible and thus unacceptable.

8. If the candidate wish to rectify any information provided in the application, apart from their name, father's name, mother's name, gender, domicile, and date of birth; they may do so solely during the specified "**Correction Period**. The Board will, after that, restrict or stop any more changes.

9. The Examination Fees can only be paid by Net Banking/ Debit Card/ Credit Card/ UPI/ QR Code. Application fee for WBJEE-2024 is

Rs 500 (Rupees five hundred only) for General Male candidates and

Rs 400 (Rupees four hundred only) for General Female and all Male candidates of SC/ST/OBC-A/OBC-B/EWS/TFW.

Rs 300 (Rupees three hundred only) for all Female candidates of SC/ST/OBC-A/OBC-B/EWS/TFW and Third Gender candidates, plus the Bank's service charges if applicable.

The fee, once paid, is not refundable under any circumstance.

Do not wait for the last day to pay registration fees to avoid payment failure by Bank or EPG.

10. Keep copies of the **Confirmation page and the Admit card** in safe custody.

11. Candidates are requested to regularly go through the Board's website (www.wbjeeb.nic.in/ wbjeeb.in) to update themselves on the latest information.

12. Cautionary:

- Appearing for the examination and even obtaining a rank does not guarantee admission.
- Applicable rules at the time of counselling will determine allotment and admission criteria.
- Candidates must make themselves aware of the latest rules and criteria for admission into different Universities/Institutions and other specific criteria issued by the Government/ Regulatory bodies from time to time.
- If a candidate does not keep himself/herself informed about any updated material regularly, the board will not be held accountable.
- The candidates will be *prima face* allowed in the examination based on the information given by the candidates during the online application, but the documents concerning the information provided by the candidates will only be verified by the allotted institute(s) during and after counselling/admission. Hence, the candidates' certificates/ documents/ proofs must be valid as of the verification date. If any candidate's claim is found invalid during verification, his/her category/ rank/ admission may be cancelled, whenever detected .

13. The detailed time schedule of all activities regarding the examination will be available in the Board's website, in due course of time.

14. For any query regarding the examination, contact:

West Bengal Joint Entrance Examinations Board
RUPANNA
DB-118, Sector –I,
Salt Lake City,
Kolkata-700064

Examination Helpdesk: - 1800-123-4782 (Ext. No.-2)
Email: info@wbjeeb.in
Website: www.wbjeeb.in

CONTENT

1.0 Introduction

The West Bengal Joint Entrance Examinations Board
The West Bengal Joint Entrance Examinations Board (WBJEEB) was established in 1962 by the Government of West Bengal in exercise of the powers conferred under article 162 of the Constitution of India pursuant to No. 828-Edn(T), dated 02.03.1962.

Subsequently, in 2014, the Government of West Bengal enacted the West Bengal Act XIV of 2014 to form **The West Bengal Joint Entrance Examinations Board** (hereinafter called '**Board**') and empowered it to conduct Common Entrance Examinations for the selection of candidates for admission to undergraduate and postgraduate Professional, Vocational and General Degree Courses in the State of West Bengal and to conduct on-line counselling process or otherwise adopting a single-window approach.

WBJEEB has been instrumental in the admission process based on online application and allotment through e-Counselling since 2012. It advocates fairness and transparency, ensures no error, and adopts state-of-the-art technology, in all its activities.

2.0 West Bengal Joint Entrance Examination-2024 (WBJEE-2024)
WBJEEB will conduct OMR based Common Entrance Examination (**WBJEE-2024**) for admission in the academic session 2024-25 for Undergraduate Courses in Engineering/Technology, Pharmacy and Architecture courses of different Universities, Government Colleges as well as Self-Financing Engineering/Technological Institutes in the State of West Bengal.

2.1 Schedule of WBJEE-2024

Date of Examination	Paper/ Subject	Schedule
28.04.2024 (Sunday) (Tentative and may be changed in extra ordinary circumstances)	**Paper-I (Mathematics)**	**11:00 a.m. to 1.00 p.m.**
	Paper-II (Physics & Chemistry)	**2:00 p.m. to 4:00 p.m.**

The test will be held once a year and there shall be no further examination under any circumstances for those who cannot appear on the date and time mentioned above.

2.2 Papers and ranks
- Candidates appearing in both paper-I and paper-II are eligible for a **General Merit Rank (GMR) and a Pharmacy Merit Rank (PMR).** Such candidates may be considered for admission in all courses of Engineering and Pharmacy.
- Candidates appearing only in paper-II are eligible for PMR only. Such candidates may be considered for admission into Pharmacy courses only (except in Jadavpur University).
- **Candidates appearing only in paper-I are not eligible for any rank.**

2.3 The pattern of Question Papers in WBJEE-2024

All questions will be **Multiple-Choice Questions (MCQ)**, with four options against each question. There will be three categories of questions in each subject. The number of questions, as well as the maximum marks for each, are given in the following table:

Subject	Category-1 Each Q carries 1 (One)mark (-ve marks =-1/4)	Category-2 Each Q carries 2 (two)marks (-ve marks =-1/2)	Category-3 Each Q carries 2 (two)marks (No -ve marks)	Total Number of Questions	Total Marks
	No. of Q	No. of Q	No. of Q		
Mathematics	50	15	10	75	100
Physics	30	5	5	40	50
Chemistry	30	5	5	40	50

2.4 Application Fees:

Fee payable for WBJEE – 2024 (through Net Banking/ Debit Card/ Credit Card/ UPI/ QR Code) No service charges will be imposed by the authorised Banks		
Category of Candidates	**Type of Candidate**	**(Fees in ₹)**
General	Male	500
	Female	400
SC/ST/ OBC-A /OBC-B/EWS/ PwD/ TFW	Male	400
	Female	300
Third Gender		300

2.5 Syllabus of Examination: The subject-wise Syllabus for the WBJEE-2024 is given in Appendix 8.

2.6 Mode of answering in the examination

- Questions are to be answered on a specially designed optical machine-readable response **(OMR)** sheet, which will be evaluated by the Optical Mark Recognition method. Thus, it is very important to follow the correct way of marking.
- Candidates will indicate their response to the questions by **darkening the appropriate circle/bubble entirely with a blue/black ink ball point pen**. Pen will be provided by the WBJEEB.
- Any other kind of marking, e.g., filling the circle/bubble incompletely, filling with pencil, cross mark, tick mark, dot mark, circular mark, over writing, scratching, erasing, white ink(prohibited), marking outside the circle/bubble etc. may lead to wrong/partial/ambiguous reading of the response. **WBJEEB will be, in no way, responsible for such an eventuality, and this may lead to the cancellation of the OMR sheet.**
- Response marking cannot be edited/changed/erased/modified.

2.7 Scoring Methodology

Category-1

a) Only one option is correct.

b) The correct response will yield 1 (one) mark for each question.

c) The incorrect response will yield -¼ (25% negative) marks for each question.

d) For any combination of more than one option, even if it contains the correct option, the said answer will be treated as incorrect and will yield -¼ (25% negative) marks.

e) Not attempting the question will fetch zero mark.

Category-2

a) Only one option is correct.

b) The correct response will yield 2(two) marks for each question.

c) The incorrect response will yield -1/2 (25% negative) marks for each question.

d) For any combination of more than one option, even if it contains the correct option, the said answer will be treated as incorrect and will yield -1/2 (25% negative) marks.

e) Not attempting the question will fetch zero mark.

Category-3

a) One or more option(s) is/are correct.

b) Marking all correct option(s) only will yield 2 (two) marks.

c) For any combination of answers containing one or more incorrect options, the said answer will be treated as wrong, yielding a zero mark even if one or more of the chosen option(s) is/are correct.

d) For partially correct answers, i.e., when all right options are not marked and also no incorrect options are marked, marks awarded =2 × (no of correct options marked) / total no of actually correct option(s).

e) Not attempting the question will fetch zero mark.

2.8 Ranking Methodology and Merit Lists

WBJEEB will prepare merit ranks based on the candidates' **scores in the Common Entrance Test.** Individual candidates will be able to view and download their rank cards, which will contain their score and rank. **WBJEEB does not publish any rank/score list for the public** to ensure confidentiality for individual candidate.

Based on the papers (subjects) that appeared for and the corresponding marks scored, two separate Merit Ranks shall be generated in the following method:

A. General Merit Rank (GMR):

a) A sequence of General Merit Rank (GMR) will be prepared based on the total scores obtained in Paper-I and Paper-II, taken together.

b) Ranking shall be done in descending order of total marks scored in all the subjects. In case of ties, tie-breaking rules, as given in 2.8, shall apply.

c) Separate reserved category merit positions will also be indicated for the respective category of students, e.g., SC Rank, ST Rank, OBC-A Rank, OBC-B Rank, EWS Rank, PWD Rank, TFW Rank, etc., as applicable.

d) Admission to all Engineering / Technology / Architecture Courses and the Pharmacy Course in Jadavpur University will be based only on **GMR**.

e) Sequencing orders for counselling/allotment of seats/admission will be based only on GMR (not category ranks). Category ranks will only be reflected in the rank card to provide an information regarding category wise position of the respective candidate.

B. Pharmacy Merit Rank (PMR):

a) A sequence of Pharmacy Merit Rank (PMR) will be prepared based on the score in paper-II only, i.e., Physics and Chemistry.

b) Ranking shall be done in the descending order of marks scored in paper-II. In case of ties, tie-breaking rules, as given in 2.8, shall apply.

c) Separate reserved category merit positions will also be indicated for respective categories of students, e.g., SC Rank, ST Rank, OBC-A Rank, OBC-B Rank, EWS Rank, PWD Rank, TFW Rank, etc., as applicable.

d) Admission to all Pharmacy Courses except in Jadavpur University shall be made based on **PMR**.

e) Sequencing orders for counselling/allotment of seats/admission will be based only on PMR (not on category ranks). Category ranks will only be reflected in the rank card to provide an information regarding category wise position of the respective candidate.

C. Category ranks:

These are generated based on the category information given by the candidates during the online application, but documents are verified by the allotted institute during counselling. Hence, the candidate's certificates/ documents/ proofs must be valid as of the verification date. If any candidate's claim is found invalid during verification, his/her category rank will be cancelled, and the candidate will be considered in the general category. **The category ranks of other candidates will not be revised.**

2.9 Tie-breaking Methodology in determination of Merit Rank

2.9.1 Tie-breaking Rules for GMR

i. Less negative marks in Mathematics, Physics and Chemistry taken together.
ii. More positive marks in Mathematics and Physics taken together.
iii. More positive marks in Mathematics and Chemistry taken together.
iv. Less negative marks in Mathematics and Physics taken together.
v. Less negative marks in Mathematics and Chemistry taken together.
vi. More positive marks in Mathematics for only the 2 (two) marks questions
vii. More positive marks in Physics for only the 2 (two) marks questions
viii. More positive marks in Chemistry for only the 2 (two) marks questions
ix. Less negative marks in Mathematics for only the 2 (two) marks questions
x. Less negative marks in Physics for only the 2(two) marks questions.
xi. Less negative marks in Chemistry for only the 2(two) marks questions.

2.9.2 Tie-breaking Rules for PMR

i. Less negative marks in Physics & Chemistry, taken together.
ii. More positive marks in Chemistry
iii. Less negative marks in Chemistry
iv. More positive marks in Chemistry for only the 2 (two) marks question
v. Less negative marks in Chemistry for only the 2(two) marks questions
vi. More positive marks in Physics for only the 2 (two) marks questions
vii. Less negative marks in Physics for only the 2 (two) marks questions.

2.9.3 Final Tie-breaking rule for GMR and PMR

After application of the Tie-breaking Rules as applicable, if there are still ties, the same will be broken by the date of birth (DOB) of the candidates, with the older candidate having preference over the younger one. If the tie remains, then it will be decided by the application number in ascending order,i.e., the candidate who has applied earlier will be given preference.

2.10 Rules of the examination: Rules to be followed during the examination are given in Appendix 9

3.0 Eligibility and academic qualification

3.1 Eligibility criteria for appearing in the WBJEE-2024

a)   Citizenship: Applicant must be a citizen of India or OCI (subject to approval of the Competent Authority). OCI candidates will be eligible for only Unreserved seats in the All-India quota.

b)   Candidates must have passed the 12th standard (10+2) or its equivalent examination before 2024 or appearing in the 12th standard (10+2) or its equivalent examination in 2024.

c)   Age Restriction:
  i.   The lower age limit is 17 (seventeen) years as of 31.12.2024. A candidate should have been born on or before 31.12.2007. There is no upper age limit for appearing in the examination.
  ii. However, for admission to the degree-level Marine Engineering Course, the upper age limit is 25 Years as of 31.12.2024.

3.2 Academic criteria for admission

a) The following sections describe the criteria as per the latest communications received from the concerned Authorities.

b) Candidates must make themselves aware of the latest applicable rules of different Universities, Institutions, Government Departments, and Regulatory Bodies, like AICTE, PCI etc., at the time of admission. The board will not be responsible in any way if any candidate fails to make himself/herself aware of any updated information regularly.

c) The Board would notify revisions, corrections, modifications, addendum, and corrigendum, if any received from concerned Authorities till the start of counselling.

3.2.1 General criteria for admission into Engineering/Technology courses

The following criteria remain in effect, unless specific criteria are stated in Section 3.3.

As per AICTE , aspiring candidates should have Passed 10+2 examination with Physics/ Mathematics/ Chemistry/ Computer Science/ Electronics/ Information Technology/ Biology/ Informatics Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/ Business Studies/ Entrepreneurship as given in the table 8.4 in AICTE Approval Process Handbook-2024-2027 and as annexed (Appendix-7).

Agriculture stream (for Agriculture Engineering).

Must have obtained at least 45% marks (40% in case of candidates belonging to reserved category, i.e., SC, ST, OBC-A, OBC-B, PWD) taken together in three subjects as mentioned in the table 8.4 in AICTE Approval Process Handbook-2024 and as annexed (Appendix-7).
OR
Passed D.Voc. Stream in the same or allied sector.

(*The Universities will offer suitable bridge courses such as Mathematics, Physics, Engineering drawing, etc., for the students coming from diverse backgrounds to prepare Level playing field and desired learning outcomes of the programme*)

N.B.: In addition to the above , the following criteria must be fulfilled for taking admission in the University/ Institute/ College in West Bengal.
  i. Must have **passed** in English in the 12th standard (10+2) or equivalent examination with at least 30% marks.

ii. Required to pass theoretical and practical/project exams in all permitted subject combinations.

iii. Nevertheless, admission to specific universities (including affiliated institutes) is subject to the admission criteria set by them. Any modifications or additions made by the Competent Authorities will be duly communicated by the Board via the official website prior to the commencement of counselling.

iv. For nomenclature of different Under Graduate Courses in Engineering and Technology, it is advised to consult AICTE Approval Process Handbook-2024-2027, Section-11.3, page Nos. 119-121(See APPENDIX-7a in this Bulletin)

3.2.2 General criteria for admission to Pharmacy courses

These criteria will be applicable unless any special criteria are mentioned under section 3.3.

a) Candidate must have passed the '10+2' examination with Physics, Chemistry, Mathematics / Biology as compulsory subjects with individual pass marks (in both theory and practical/project wherever applicable) in all the three subjects as stated above.

b) Must have obtained at least 45% marks (40% in case of candidates belonging to reserved category, i.e. SC, ST, OBC-A, OBC-B, PWD) in the above three subjects, taken together.

c) Must have passed English in the '10+2' examination with at least 30% marks.

d) The Board of the said Qualifying Examination must be recognized by the Central Government or State Government concerned.

3.2.3 General criteria for admission into five-Year Degree Course in Architecture

These criteria will be applicable unless any special criteria are mentioned under section 3.3.

a) As per the norms and standards of the Council of Architecture (COA), No candidate shall be admitted to an architecture course unless she/he has passed an examination at the end of the 10+2 scheme of examination with 50% marks in Physics, Chemistry and Mathematics taken together with individual pass marks and also 50% marks in aggregate of the 10+2 level examination.

b) Candidate must also qualify for the NATA (National Aptitude Test in Architecture) conducted by the Council of Architecture (COA), New Delhi. However, further notification in this regard, if any issued by COA/ NTA also may be applied.

3.2.4 General criteria for admission into Marine Engineering

These criteria will be applicable unless any special criteria are mentioned under section 3.3.

As per the norms and standards of the Director General of Shipping, Government of India, Candidates must pass Higher Secondary (10+2) Examination of West Bengal Council of Higher Secondary Education or equivalent examination from a recognized Council/Board in regular class mode with:

60% marks in Physics, Chemistry and Mathematics taken together with individual pass marks (both in theory and practical/project wherever applicable) in each of the said subjects.

Minimum of 50% marks in English as a subject in either the '10' standard or in the '10+2' standard.

N.B.: As per the norms and standards of the Director General of Shipping, Government of India, 25% of seats of the total intake of an institution must be filled in at the time of admission; otherwise, the course could not be continued for that academic session by the institution.

3.2.5 General criteria for admission into Mining Engineering

These criteria will be applicable unless any special criteria are mentioned under section 3.3.

It is the same as section 3.2.1, but the candidate must not have colour blindness/uniocularity.

3.2.6 Document verification

a)   Admit cards and rank cards are issued based on the information provided by the candidate. All verifications are done during and after counselling/admission by the **allotted Institute**. Hence, candidates cannot assume that the personal information shown on the admit card/ rank card is approved by the Board.

b)   If during document verification by the **allotted Institute**, it is found that information given by the candidate is/are incorrect or if the candidate is unable to produce valid certificate/ document/ proof as per the then applicable rules and as on the date of its verification, his/her information will be corrected/modified accordingly which may even make him/her ineligible for some/all seats/course(s).

c)   Similarly, if at any stage during or after counselling, it is found on scrutiny that the information/document(s) provided by the candidate is false/incorrect, his/her candidature is liable to be treated as cancelled even if he/she secured a Merit Rank and/or a seat has been allotted to the candidate. Hence, securing a Rank does not constitute a right/guarantee in favour of a candidate for his/her claim for admission if he/she fails to comply with the required criteria.

3.3 Special academic criteria for admission into some specific Universities/ University Departments/ Institutions or for admission to some specific courses as per communications received till date from the concerned Authorities are given in this section.

For all other institutes and courses not specifically mentioned in this section, the criteria given in section 3.2, above will be applicable.

3.3.1 University of Calcutta

The admission criteria for all B. Tech. Courses (including Jute & Fibre Technology) may be considered as follows:

Candidate must pass '10+2' or equivalent Examination from a recognized Council/ Board in regular class mode with Mathematics, Physics and Chemistry as compulsory subjects with at least 60% (55% for Reserve Category students i.e. SC, ST, OBC-A, OBC- B, PWD) marks in the above three subjects taken together, individual pass marks (both in theory & practical wherever applicable) in each of the subjects, and pass marks in English with a minimum of 30% in the said qualifying examination.

3.3.2 Jadavpur University

a)   **Engineering/Technology and Pharmacy courses:** Candidates must pass the Higher Secondary (10+2) Examination in the science stream in the regular class modeof West Bengal Council of Higher Secondary Education or equivalent examination from a recognized Council/Board with

  i. Individual pass marks (both in theory & practical/project wherever applicable) in Physics, Chemistry and Mathematics as compulsory subjects.

 ii. Minimum of 60% marks in the above subjects taken together (45% for SC, ST, OBC-A, OBC-B, PWD candidates) having 60% marks in Mathematics (45% for SC, ST, OBC-A, OBC-B, PWD candidates) as well as pass marks in English with a minimum mark 30% (for all category of candidates) in the said qualifying examination.

b)   **Architecture courses:** Candidates must pass the Higher Secondary (10+2) Examination in the science stream in the regular class mode of West Bengal Council of Higher Secondary Education or equivalent examination from a recognized Council/Board with:

  i. Minimum of 50% marks in Physics, Chemistry and Mathematics and 50% marks in aggregate of the (10+2) Examination (37% for SC, ST, OBC-A, OBC-B, PWD candidates).

 ii. Candidates must qualify for NATA (National Aptitude Test in Architecture), conducted by the Council of Architecture (COA), New Delhi. The Results of the above examination should be valid.

3.3.3 Bidhan Chandra Krishi Viswa Vidyalaya (B.Tech. in Agricultural Engineering)

a)   The candidate must pass the Higher Secondary (10+2) or its equivalent examinations with Physics, Chemistry, Mathematics and English as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in all the above four subjects in regular class mode.

b)   The candidate must obtain at least 50% marks (40% in case of candidates belonging to SC, ST, OBC-A, OBC-B, PWD) in the above four subjects taken together.

3.3.4 West Bengal University of Animal and Fishery Sciences (B. Tech in Dairy Technology)

a) Citizenship: The Applicant must be a citizen of India.

b) Age: Not less than 17 years as of 31st December in the year of application.

c) The candidate must be a domicile of West Bengal.

d) The candidate must qualify for the West Bengal Joint Entrance Examination for Engineering/Technology (WBJEE-2024) conducted by WBJEEB.

e) The candidate must pass the Higher Secondary (10+2) Examination of the West Bengal Council of Higher Secondary Education or its equivalent examination in the science stream from any recognized Board/Council from any institution.

f) The candidate must pass the Higher Secondary (10+2) or its equivalent examinations with Physics, Chemistry, Mathematics and English as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in all the above four subjects in regular class mode.

g) The candidate must obtain at least 50% marks (40% in case of candidates belonging to SC, ST, OBC-A, OBC-B, PWD) in the above four subjects taken together.

3.3.5 Aliah University

a) Candidate must have taken Mathematics, Physics and Chemistry, having at least 100 Marks in total in each subject of the final examination (10+2).

b) The candidate has to secure at least 60% overall in Physics, Chemistry and Mathematics taken together at the 12th level with individual pass marks in all three subjects in regular class mode.

c) (10+2) appearing candidates are also eligible for the examination. However, their admission will be cancelled if they fail to secure the criteria mentioned above later on.

3.3.6 Sister Nivedita University

a) For admission in **Computer Science** and **Business Systems** (TCS-Industry Integrated), **B. Tech in Computer Science and Engineering**, **B. Tech in Computer Science and Engineering (Artificial Intelligence and Machine Learning), B. Tech in Computer Science and Engineering (IoT, Cybersecurity and Block Chain Technology), B. Tech in Electronics and Communication Engineering(ECE), B. Tech in Electronics Engineering (VLSI Design and Technology),** the candidate must have obtained 45% in Physics,Chemistry and Mathematics in State Board or its equivalent exam.

b) For B. Arch course:

i.Candidate must have passed the '10+2' examination with at least 50% marks in aggregate with Physics, Mathematics and Chemistry and also at least 50% marks in aggregate of the 10+2 level examination **or** passed 10+3 Diploma Examination with Mathematics as compulsory subject with at least 50% marks in aggregate.

ii.Candidates must qualify for an Aptitude Test in Architecture conducted either by NTA (i.e. JEE) or NATA (National Aptitude Test in Architecture) conducted by the Council of Architecture (COA), New Delhi.

3.3.7 Adamas University

a) **School of Engineering & Technology:**

i) **B.Tech Computer Science and Engineering:** Minimum 60% aggregate in 10+2 or equivalent from any recognized board with Physics, Mathematics and Chemistry/ Computer Science/ Electronics/ Information Technology/ Biology/ Informatics Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/ Business Studies/ Entrepreneurship (With min 45% marks in respective subject).

ii) **B.Tech Electrical Engineering ,B.Tech Electronics and Communication Engineering, B.Tech Mechanical Engineering, B.Tech Civil Engineering:** Minimum 55% aggregate in 10+2 or equivalent from any recognized board with Physics, Mathematics and Chemistry/ Bio. Tech/ Biology/ Technical Vocational (With a minimum of 45% marks in respective subject).

b) **School of Medical Sciences (Pharmacy):**

Minimum 60% aggregate in 10+2 or equivalent from any recognized board conducted by the respective state/central government authorities recognized as equivalent to 10+2 examination by the Association of Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry, Mathematics/Biology as optional subjects individually.

However, students with 10+2 qualifications from non-formal and non-class rooms-based schooling, such as the National Institute of Open Schooling, open school systems of States, etc., shall not be eligible for admission to the B. Pharm Course.

Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations, will be eligible.

3.3.8 JIS University

a) B. Tech:

i. Candidate must have passed the Qualifying Examination, i.e., the '10+2' examination with Physics and Mathematics along with any one of **Chemistry / Biotechnology / Biology /Computer Science/Computer Application/Technical Vocational** Subject as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in all the three subjects as stated above in **regular class mode**.

ii. Must have obtained at least 60% marks (55% in case of candidates belonging to reserved category, e.g., SC, ST, OBC-A, OBC-B, PWD) in the above three subjects **taken together**.

iii. Must have passed English in the '10+2' examination with at least 30% marks.

iv. Candidate must have obtained at least 60% marks (55% in case of candidates belonging to reserved category, i.e., SC, ST, OBC-A, OBC-B,PWD) in aggregate in the (10+2) exam.

b) B. Pharm:

i. Candidate must have passed the '10+2' examination with **Physics, Chemistry, and Mathematics / Biology** as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in all three subjects as stated above in **regular class** mode.

ii. Must have obtained at least 60% marks (55% in case of candidates belonging to reserved category, i.e. SC, ST, OBC-A, OBC-B, PWD) in the above three subjects taken together.

iii. Must have passed English in the '10+2' examination with at least 30% marks.

iv. Candidate must have obtained at least 60% marks (55% in case of candidates belonging to reserved category, i.e. SC, ST, OBC-A, OBC-B, PWD) in aggregate in (10+2).

v. The Board of the said Qualifying Examination must be recognized by the Central Government or State Government concerned.

3.4 Requirements in terms of Residential/Domicile Criteria

a)   The candidate must be a domicile of Home State, i.e., West Bengal, for admission,

i. Any seat, including general category seats in any Government aided Engineering/ Technology / Pharmacy Colleges.

ii. Any seat, including general category seats in B. Tech. (Dairy Technology) inWest Bengal University of Animal & Fishery Sciences.

iii. 90% of the General category seats in Jadavpur University.

iv. Any reserved category seat (SC, ST, OBC-A, OBC-B, PWD, TFW, EWS) in any institute.

b)   The State (West Bengal) residential/ domicile requirement is applicable for admission to Aliah University as it is a State Govt. University.

c)   The candidate needs to download the required proforma as per the details given in section 3.4.1 and keep the certificate ready to be produced during counselling, admission, etc.

3.4.1 Criteria to be treated as domicile of West Bengal and applicable proforma of certificate

Only those candidates will be treated as domicile of West Bengal who are either,

a)   residing in West Bengal continuously for at least 10 (ten) years as of 31.12.2023.

OR

b)   whose parent(s) is/are a permanent resident(s) of West Bengal having permanent address within the State of West Bengal.

In the case of (a) above, a certificate is to be obtained as per proforma 'a1' (Appendix – 1) or proforma 'a2' (Appendix – 2).

In case of (b) above, a certificate is to be obtained in proforma 'b' (Appendix – 3), or the candidate must produce in original any two of Voter ID card/ Aadhaar card/ Passport/ Ration card belonging to his/her parents. The said documents must justify that the residential address of the parent(s) is/are in West Bengal.

During counselling, etc., if SC/ST/OBC-A/OBC-B candidates who are domiciled in West Bengal and cannot produce the required domicile certificate, they can produce their category certificates (issued by the Govt. of WB) instead of domicile certificate. But if the category certificate is found invalid during verification, their domicile status is also considered NON-West Bengal.

3.4.2 Competent authority to issue domicile certificate

a) **Proforma 'a1' or 'b'** must be signed and certified by any of the following competent authorities from the Central Government or State Government *having local jurisdiction over the place of the permanent residence of the concerned candidate or his/her parent(s)* viz.

i.   District Magistrate, Additional District Magistrate, Deputy Magistrate, Deputy Collector, Sub – Divisional Officer, Block Development Officer.

ii.   Superintendent of Police, Additional Superintendent of Police, Sub Divisional Police Officer, Deputy Superintendent of Police,

iii.   Commissioner, Additional Commissioner, Joint Commissioner, Deputy Commissioner, Assistant Commissioner of Police Commissionerate.

iv.   Judicial Magistrate of any rank or position in the concerned district, Metropolitan locality, or Hon'ble High Court at Calcutta or Hon'ble Supreme Court of India.

v.   Corporation Area - Commissioner, Additional Commissioner, Joint Commissioner, Assistant Commissioner.

vi.   Assistant Secretary or above in the Secretariat to the Government of West Bengal (including GTA) or Central Government.

vii. Deputy Director or above in the Directorate to the Government of West Bengal or Central Government.

viii. Collector of Kolkata (Stamp and Revenue) located at 11, N.S. Road, Kolkata-700001 for the inhabitants under the jurisdiction of Kolkata Police Area.

b) Officials issuing domicile certificates MUST provide their full name, designation, place of posting with address, and landline/mobile number. He/she should also provide his/her identity card number if available.

c) **Domicile certificates issued by any elected people's representative such as Municipal Commissioner, Councillor of Municipal Corporation/ Municipality, Member of a three-tier Panchayat system or GTA, MLA or MP are unacceptable.**

d) **Proforma 'a2'** must be signed and certified by the Head of the Institution from which the candidate has passed or will appear in the 10+2 examination. Such a certificate must be issued after verifying the candidate's school education record.

4.0 Seat matrix.

The seat matrix for the academic session 2024-25 will be declared by the office of The Director of Technical Education, Govt. of W.B. in due course of time and will be published on the Board's web site before counselling.

In addition to above ,the seat matrix for last year, i.e., for the academic session 2023-24, will also be published on the Board's website before counselling.

Note that there may be other seats available in some institutes/courses that they do not offer through e-counselling and, hence, will not appear in the seat matrix.

5.0 Reservation of seats for students under Reserved Category

The Government of West Bengal in Higher Education Department, vide Memorandum No. 339-Edn(CS) / OM -74L /2023, dt. 26-05-23 along with Memorandum No. 628-Edn(CS) / OM -74L /2023, dt. 18-09-23, have decided to provide the benefit of admission to Higher Education Institutions in West Bengal for the Economically Weaker Sections **(EWS)** in commensurate with the Constitution (103rd Amendment) Act, 2019, *read* with Office Memorandum No. 325-PAR(AR)/3P-1/2019 dated 09th July 2019 issued by the Personnel & Administrative Reforms Department, Govt. of West Bengal *read* with Memorandum No. 959-BCW/MR-52/2019 dated 18th May 2023 issued by Backward Classes Welfare Department, Govt. of West Bengal.

5.1 Reservation of Seats for SC/ST/OBC-A/OBC-B/PWD/TFW/EWS

a) Reservation of Seats will be available for SC/ST/OBC-A/OBC-B/PWD/TFW/EWS category of candidates as per applicable rules set by the competent authority depending upon the type of institute as decided by the competent authority. The OBC-A/OBC-B candidates belonging to the Non-Creamy Layer (NCL) are only eligible for consideration as reserved candidates. OBC-A/OBC-B candidates must produce an **updated NCL certificate** during Counselling/ Admission.

b) Such reservation shall be restricted to candidates who are Indian citizens and domiciled in West Bengal. OCI candidates will be eligible for only Unreserved seats in the All India quota.

c) Candidates claiming reservation must submit relevant certificates issued by the competent Authorities.

d) Certificates are to be produced for verification at the **allotted Institute** during counselling, admission, etc. If, at that time, it is found that any information given by the candidate is/are incorrect/false or if the candidate is unable to produce a certificate/ document/ proof **valid as per the then applicable rules as on the date of its verification**, his/her information will be corrected/modified accordingly which may even make him/her ineligible for some/all seats/course(s). The candidate may be reconsidered in the next round of counselling (if any).

5.2 Competent Authorities for the issuance of SC/ST Certificate for WB domicile candidates claiming under such reserve category of seats
SC/ST Certificates are to be issued by any of the following authorities:
i. Sub-Divisional Officers for all districts except Kolkata
ii. District Welfare Officer, Kolkata & Ex-Officio Joint Director, B.C.W. Dept. in case of Kolkata Municipal Area [as defined in clause (9) of Section 2 of K.M.C Act, 1980].

5.3 Competent Authorities for the issuance of OBC-A (NCL*) / OBC-B (NCL*) Certificate for WB domicile candidates claiming under such reserve category of seats
As per Notification vide No. 374(71)-TW/EC/MR-103/94 dated 27/7/1994, read with Memorandum No. 1204-SBCW/MR-67/10 dated 27/7/2015 issued by Backward Classes Welfare Department. Govt. of W.B., the following authorities may issue OBC-A (NCL) / OBC-B (NCL) certificates:
i.   Sub-Divisional Officers for all districts except Kolkata
ii.   District Welfare Officer, Kolkata & Ex-Officio Joint Director, B.C.W. Dept. in case of Kolkata Municipal Area [as defined in clause (9) of Section 2 of K.M.C Act, 1980].
*NCL- Non-Creamy Layer

5.4 Competent Authorities for issuance of EWS Certificate for WB domicile candidates claiming under such reserved category of seats and others.
As per Office Memorandum No. 325-PAR(AR)/3P-1/2019 dated 09th July 2019 issued by the Personnel & Administrative Reforms Department (Administrative Reforms Cell), Govt. of West Bengal read with Memorandum No. 959-BCW/MR-52/2019 dated 18th May 2023 issued by Backward Classes Welfare Department, Govt. of West Bengal, EWS Certificates are to be issued by any of the following authorities:
a) District Magistrate/ Additional District Magistrate
b) Sub-Divisional Officers
c) District Welfare Officer, Kolkata and Ex-officio JD, BCW & TD in respect of Kolkata covering the jurisdiction of the Kolkata Municipal Corporation.
N.B. For eligibility and other details, please follow the Memorandums mentioned above.

5.5 Reservation of seats for PWD candidates
a) According to Section 2(r) of the RPWD Act, 2016, **"persons with benchmark disabilities"** means a **person with not less than forty per cent (40%) of a specified disability** where specified disability has not been defined in measurable terms and includes a person with disability where specified disability has been defined in measurable terms, as certified by the certifying authority.
b) Accordingly, reservations in PWD seats will be available for the following types of disabilities, the percentage of disability being not less than 40%.
  i.   Locomotor disability as specified in the Schedule of RPWD Act, 2016.
  ii.   Visual impairment as specified in the Schedule of RPWD Act, 2016.
  iii.   Hearing impairment as specified in the Schedule of RPWD Act, 2016.
  iv.   Speech & language disability as specified in the Schedule of RPWD Act, 2016
  v.   Intellectual disabilities as specified in the Schedule of RPWD Act, 2016
  vi.   Mental illness.
  vii.   Disabilities are caused due to chronic neurological conditions and blood disorders.
  viii.   Multiple disabilities, including deafblindness.
c) The "specified disabilities" included in the RPWD Act Schedule are in APPENDIX-11.
d) PWD certificates are to be issued by any of the authorities as given in Order No. 289-

HF/O/PHP/IR-05/2017 dated 29.08.2018 by the Government of West Bengal, Health & Family Welfare Department (PHP Branch).

5.6 Special facilities to PWD candidates for appearing in the examination

a) **Concessional application fees:** PWD candidates are eligible for a 40% concession on application fees. To avail the same, the candidate must formally apply in writing (enclosing a copy of his/her confirmation page and PWD certificate) to the Chairman, WBJEEB and send/submit the application to the Board office within the last date of online application.

b) **Compensatory time**: Twenty minutes per hour of compensatory time as per the duration of the examination (On a pro-rata basis) will be allowed to the PWD candidates with benchmark disabilities.

c) **Scribe/reader**: The facility of the Scribe/Reader will be allowed to a candidate with a benchmark disability who has writing limitations, including speed if so desired by him/her. (See Appendix – 5 and Appendix – 6)

d) To avail the facility of compensatory time and/or scribe/reader, the candidate must formally apply in writing (enclosing a copy of his/her confirmation page, PWD certificate, a certificate in the format as given in Appendix-5 and a letter of undertaking in the format as given in Appendix-6) to the Chairman, WBJEEB and send/submit the application to the Board officeat least 60 days before the date of commencement of the examination. **Special arrangements will be made in the office of the Board in Kolkata for such candidates to sit for the examination. Such facilities are not available in other examination centres.**

e) The Board's decision, in this regard, will be final and binding on the candidate.

5.7 Reservation of Seats for admission of the wards of Defense Personnel (Defense Quota Seats)

As per the Govt. Order vide No. 406(T), Dated 09.06.2016 of the Higher Education Department, Govt. of West Bengal; 13(thirteen) seats are available for admission of the wards of Defense Personnel through WBJEE-2024.

These seats are supernumerary in nature, and separate allotment is done by the West Bengal Joint Entrance Examinations Board as per the following guidelines:

a) For consideration under Defense Quota, intending candidates will have to apply to the Rajya Sainik Board, Home Department, Government of West Bengal, Writers' Buildings, Kolkata – 700001 through the concerned Zila Sainik Board, W.B. (for ex-servicemen) and Units (for serving soldiers) in the prescribed form with an attested copy of WBJEE – 2024 Admit Card.

b) Based on the recommendation of the said Rajya Sainik Board, a separate list shall be published by the WBJEEB for subsequent **offline** counselling and allotment of seats *inter-se* merit basis. Securing a General Merit Rank (GMR) in WBJEE-2024 is mandatory for such a seat category.

c) Institution-wise and course-wise seats under Defense Quota for academic session 2023-24 are given in Appendix-12. The list for the academic session 2024-25 shall be published before counselling.

5.8 Seats for admission through JEE (Main) 2024

Seats are available for students listed in **JEE (Main)- 2024,** up to 10% of the approved seats in all **Self-Financed Engineering and Technology Colleges** of West Bengal.

The eligibility and other criteria stipulated in section 3 for admission to degree-level Engineering / Technology /Pharmacy / Architecture courses will also apply to JEE (Main) 2024 merit-listed candidates.

6.0 Tuition Fee Waiver (TFW) Scheme

6.1 Availability of seats under the Tuition Fee Waiver (TFW) Scheme

    a) The Government of West Bengal has implemented the Tuition Fee Waiver Scheme (TFW) for meritorious and economically backward students.

    b) The student must be domiciled in West Bengal, and his/her total annual Family Income from all sources must be less than **Rs. 2.50 lakhs** (Rupees two lakhs and fifty thousand only).

    c) The waiver is limited to the Tuition Fee only. All other fees will have to be paid by the student.

6.2 Submission of Income Certificate in availing seat under the TFW Scheme

a) Candidates must produce the **Income Certificate** as per the proforma provided in **Appendix-4** of this Information Bulletin.

b) Candidates claiming such seats must submit relevant Certificates issued by the competent authorities as enlisted below.

   i.An Officer in the rank of Assistant Secretary or above in State or Central Govt.

   ii.District Magistrate

 iii.Additional District Magistrate

 iv.Sub-Divisional Officer

   v.Block Development Officer

Note: Income certificates issued by any elected people's representative such as Municipal Commissioner, Councillor of Municipal Corporation/Municipality, Member of a three-tier Panchayat system or GTA, MLA or MP are not acceptable.

7.0 Legal jurisdiction

a) All matters pertaining to the conduct of the examination and counselling shall fall within the jurisdiction of Kolkata only.

b) During the admissions procedure, the Board will not take part in any upcoming disputes.

c) WBJEEB is obliged to share with any candidate any information about his/ her own status in common entrance test and counselling, for which any candidate can contact WBJEEB individually and personally. However, WBJEEB is unable to share any information about any other candidate.

8.0 Procedure for submission of application form and payment of examination fees etc.

8.1 Registration

a) The candidate will enter personal details such as name, father's name, mother's name, date of birth, gender, identification type and number, present and permanent address, mobile number, email ID, etc.

b) Candidates must be careful while entering their name, father's name, mother's name, date of birth, gender, and domicile. This information cannot be changed/edited/modified under any circumstances.

c) Then, the candidate has to create a password, review and submit the registration.

d) An application number will be generated and will appear on the screen. Also, an SMS/email will be sent to the registered Mobile No./ Mail-id of the candidate(s).

e) Candidates must remember his/her application number and password. If the candidate forgets the password, they have to recover itthrough the "Forgot Password" option. There is no other way to recover the password.

f) No person/agency can change/edit/input any information without knowing the password. Hence, candidates must not share their passwords with anybody. The Board will not be responsible for any changes resulting from sharing/ divulging the password.

8.2 Application
a)   At this stage, the candidate needs to fill in various other information such as domicile, category, PWD status,TFW status, income category, religion, nationality, academic details, etc.
b)   After that, the candidate needs to choose zones of examinations in order of his/her choice and submit the application.

8.3 Uploading of images
a) The candidate is required to upload JPG/JPEG images of his/her recent colour photograph (10 to 200 KB) and signature (4 to 30 KB).
b) The photo and Signature of the candidate are to be uploaded in one go.

8.4 Payment of Examination Fees

Fee payable for WBJEE – 2024 (through Net Banking/ Debit Card/ Credit Card/ UPI/ QR Code) No service charges will be imposed by the authorised Banks		
Category of Candidates	**Type of Candidate**	**(Fees in ₹)**
General	Male	500
General	Female	400
SC/ST/ OBC-A /OBC-B/EWS/ PwD/ TFW	Male	400
SC/ST/ OBC-A /OBC-B/EWS/ PwD/ TFW	Female	300
Third Gender		300

N.B.: The fee, once paid, is not refundable under any circumstances.

8.5 Confirmation Page
Upon successfully completing all the above steps, the candidate shall be directed to download the 'Confirmation Page,' which means that the application is **complete**. APPLICATION IS **NOT COMPLETE** UNTIL THE CONFIRMATION PAGE IS GENERATED.

8.6 Correction of application form
a)   It is impossible to correct any primary registration data, i.e., **Name, Father's Name, Mother's name, gender, domicile, and Date of birth.**
b)   If any candidate intends to correct any other information in his/her application, he/she can do so after logging in during the given **correction period. The Board will not entertain any request for any correction under any circumstances beyond the correction period. Also, the Board will not make any corrections on behalf of any candidate**.

9.0 Admit Card
a)   Admit cards will be generated on the notified date for the student to download and take a print. Candidate must carry a printed hard copy of the admit card to the examination centre.
b)   Candidates must ensure that the admit card is not mutilated/ distorted/ soiled, even by accident. Candidates with such mutilated/ distorted/ soiled admit cards may not be allowed to appear in the examination.

10.0 Allocation of examination centre

a)   The allocation of the examination centre will be based on the choice of zones given by the candidate. However, under unavoidable circumstances, candidates may be allocated to a zone out of his/her choice. **The decision of the board in the allocation of the examination zone/centre shall be final**. No request for a change of allocated centre will be entertained under any circumstances. A list of district-wise examination zones is given in **Appendix-10**.

b)   A zone of an examination may be cancelled in the event of insufficient candidate enrollment or in the event of any unforeseen problem. The candidate will be assigned to an alternative examination zone in such a circumstance.

11.0 Evaluation and declaration of result

a)   **Model Answer Keys** will be available, for a brief period, at the Board's website after the examination. Candidates can log in and view the model answer keys.

b)   Candidates can also challenge any answer key, within the stipulated period, on payment of ₹500 **(Rupees Five hundred only) per question** plus the bank's service charges, if any.

c)   The Board will review the challenges and publish the Final and Frozen Answer Keys. **In this case, the Board's decision is final, and no further communication will be entertained.**

d)   Images of OMRs and machine-read responses will be available, for a brief period, on the Board's web site, after the examination. Any candidate can view the images of his/her OMR and machine-read responses by logging in with his/her password. Candidates should download (within the stipulated period) and preserve copies of their OMRs. However, the duration of preservation of record (s)/ document (s)/ information (by the WBJEEB) has already been notified and is available on the Board's website.

e)   Any candidate unsatisfied with the captured responses may challenge online, within the stipulated period, on payment of ₹500 **(Rupees Five hundred only) per question** plus bank's service charges, if any.

f)   The Board will review the challenges and make the final decision. **The Board's decision on the challenges will be final, and no further communication will be entertained.**

g)   Challenges by email, letter, fax, telephone, etc., other than through prescribed online mode, will not be accepted or entertained.

h)   The result will be published as a Rank Card containing all relevant ranks, total scores, and component scores in paper-I (Mathematics) and paper-II (Physics & Chemistry). Candidates can view and download their rank card, for a brief period, by logging in with their password. **The Board never publishes a rank list to ensure confidentiality to each candidate**.

i)   Rank card with scores will be issued to all candidates appearing in WBJEE-2024. But all **may not be awarded a rank and hence may not be eligible for counselling** (as the Board will decide a cutoff rank and/or a cutoff score).

j)   If any candidate has any grievance about his/her score, he/she may raise a query through email to **info@wbjeeb.in** within 24 hours of the declaration of the result, attaching copies of OMRs, rank card, question booklet number and its series code, question wise calculation of the score. If the candidate wishes to make a physical representation, it is allowed till noon on the next working day of the result publication. The Board will not entertain any query/grievance after that.

k)   A candidate can calculate his/her score from his/her machine-read response and published final answer keys. However, if any candidate needs a calculation sheet from the Board, he/she will have to apply to the Board with a demand draft of Rs. 500/- in favour of 'West Bengal Joint Entrance Examinations Board' payable at Kolkata. But this facility will be available only till 60 days after the declaration of the result or till the counselling is over, whichever is later.

12.0 General rules about documents

a) Whenever and wherever a candidate produces documents like a confirmation page, admit card, rank card, caste/ category/ domicile/ income certificate, etc., he/she must produce it in original. Documents generated by the portal must be printed by using the 'PRINT' link provided for the purpose. **Screen shots, photographs of the screen, images captured/stored by/in mobile phone etc., are not acceptable as valid document.**

b) The confirmation page, admit card, rank card, etc., contains some personal information as given by the candidate during the online application. As such, the Board is in no way responsible for any mistake made due to incorrect entry provided by the candidate.

c) All verifications are done by the allotted institute during/after counselling/Admission. Hence, candidates cannot assume that the personal information shown on the confirmation page, admit card, rank card, etc. are accepted or approved by the Board.

d) If the candidate faces any problem during admission/ counselling in any institute or thereafter due to any mistake committed by him/her in providing such personal information during the online application, the Board cannot render any help, **e.g., issuing any letter of correction, etc**. The candidate must take necessary actions at his/her end with the institute, where he/she takes admission.

e) The confirmation page cannot be downloaded after the examination is over. Rank card and OMR images cannot be downloaded after the counselling is over. **Candidates must preserve such documents safely**.

f) However, if any candidate needs a duplicate copy of Rank Card, Admit Card etc. can be provided by the Board, but only till the end of counselling or 60 days after the date of declaration of the result, whichever is later. To get a duplicate copy, the candidate must apply to the Board and pay a processing fee of Rs. 500/- for each document by a bank draft to be drawn in favour of "West Bengal Joint Entrance Examinations Board", payable in Kolkata.

13.0 Counselling/seat allotment and admission

a) A separate notification with details of counselling and admission will be published on the Board's web site shortly after the publication of the result.

b) Course-wise and institute-wise availability of seats, as to be provided by the Competent Authorities , will be published before counselling and allotment.

APPENDIX

APPENDIX-1
PROFORMA a1
Residential/Domicile Certificate for candidates residing in the State of West Bengal continuously for at least the last ten (10) years as of 31.12.2023

Certified that _____

Son/ daughter of _____is a

resident/permanent resident of West Bengal at Village/House No. _____

Street _____ Post Office_____ Police Station _____

In the District _____under_____ Assembly

Constituency and has been living in the State of West Bengal continuously/ uninterruptedly

at least for the last ten (10) years as of 31-12-2023.

Paste 4 cmx3 cm size recent colour photograph of the candidate in this box. Photo must be attested by the certifying authority

(Candidate's Photograph)

Candidate's signature

Candidate must sign here in front of the certifying authority

Signature of Certifying Authority _____

Full Name of Certifying Authority (Block letters) _____

Designation with Official Seal _____

Office Address _____

Office Phone No._____Mobile No:_____(optional)

ID No:_____(optional)

Note: Photographs are to be attested by the certifying authority. The Certifying Authority may preserve a duplicate copy of this Certificate as a record.

APPENDIX-2
PROFORMA-a2

Residential/Domicile Certificate for candidates residing in the State of West Bengal continuously for at least the last ten (10) years as of 31.12.2023

Certified that_____son/daughter of _____has passed the '10+2' Examination in theyear_____/ will appear in the Final '10+2' Examination in 2024 from this Institution.

It is also certified that the student is a resident/permanent resident of West Bengal at Village/House No. _____ Street _____Post Office _____ Police Station_____in the district of _____ under_____Assembly Constituency and has been living and studying in the State of West Bengal continuously / uninterruptedly, at least for the last ten (10) years as of 31-12-2023.

Paste 4 cmx3 cm size recent colour photograph of the candidate in this box. Photo must be attested by the certifying authority	Candidate's signature
(Candidate's Photograph)	Candidate must sign here in front of the certifying authority

Signature of Certifying Authority _____

Full Name of Certifying Authority (Block Letter)_____

Designation with Official Seal

Office Address: _____

Office Phone No. _____   Mobile No: (optional): _____

 ID No: (optional):_____

Note: Photographs are to be attested by the certifying authority. The Certifying Authority may preserve a duplicate copy of this Certificate as a record.

APPENDIX-3
PROFORMA b

Residential/Domicile Certificate for candidates not residing in the State of West Bengal but whose parent(s) is (are) permanent resident(s) of West Bengal having their permanent home address within West Bengal

Certified that _____

Father/mother of _____(the

applicant) is a permanent Resident of West Bengal at Village/House No. /Street

_____ Post Office _____ Police Station _____

In the District of _____ Under_____Assembly
Constituency

Paste 4 cmx3 cm size recent colour photograph of the candidate in this box. Photo must be attested by the certifying authority	Paste 4 cmx3 cm size recent colourphotograph of father/ mother ofthe candidate in this box. Photo must be attested by the certifying authority

Candidate's Signature

(Candidate's Photograph)   (Father's/ Mother's Photograph)

Father's/ Mother's Signature

Candidate must sign here in front of the certifying authority

Signature of Certifying Authority _____

Full Name of Certifying Authority (Block Letter) _____

Designation with Official Seal _____

Office Address _____

Office Phone No._____Mobile No:_____(optional)

ID No:_____(optional)

Note: Photographs are to be attested by the certifying authority. The Certifying Authority may preserve a duplicate copy of this Certificate as a record.

APPENDIX – 4
Proforma for Income Certificate

Certified that Total Annual Income From all sources of _____,

guardian of _____ residing at _____   _ __

Post Office   _____ Police Station   _____ in the district

of _____ in the state of West Bengal for the financial year 2023-2024

is less than Rs. 2.50 lakhs (Rupees two lakhs and fifty thousand only) and stands at Rs.

_____ (Rupees_____)

Paste 4 cmx3 cm size recent colour photograph of the candidate in this box. Photo must be attested by the certifying authority	
	Candidate's signature
(Candidate's Photograph)	Candidate must sign here in front of the certifying authority

Signature of Certifying Authority : _____

Full Name of Certifying Authority (Block Letter)_____

Designation with Official Seal

Office Address :_____

Office Phone No.   _____Mobile No(optional): _____

ID No: (optional):_____

Note: Photographs are to be attested by the certifying authority. The Certifying Authority may preserve a duplicate copy of this Certificate as a record.

APPENDIX-5

Certificate regarding physical limitation of an examinee to write

This is to certify that I have examined Mr/Ms/Mrs_____

(name of the candidate with disability), a person with

_____(nature and percentage of disability as mentioned in the

certificate of disability), S/o/D/o

_____, a resident of

_____ (Village/District/State) and to

state that he/she has physical limitation which hampers his/her writing capabilities owing to

his/her disability.

Signature

Chief Medical Officer/Medical Superintendent

 of a Government health care institution :_____

Name & Designation:_____

Name of Government Hospital/Health Care Centre with Seal:

Place:

Date:

Note: *The certificate should be given by a specialist of the relevant stream/disability (e.g. Visual impairment - Ophthalmologist, Locomotor disability- Orthopedic specialist/ PMR)*

APPENDIX-6
Letter of Undertaking for Using Own Scribe

I,_____a candidate with_____ (name of the disability) appearing for the _____(name of the examination) bearing Application No._____.

I do hereby state that _____ (name of the scribe) will provide the service of scribe/reader for the undersigned for taking the aforesaid examination.

I do hereby undertake that his/her qualification is_____. In support of his/her maximum educational qualification, a certificate issued by the Head of the institution is attached herewith. If it is subsequently found that his/her qualification is not as declared by the undersigned and is beyond my qualification, I shall forfeit my right to the admission and claims relating thereto.

(Signature of the candidate)

Place:
Date:

APPENDIX-7
Diploma/Under Graduate Engineering Entry level qualification 10+2 level(Table 8.4)

Serial No.	Major Disciplines	Mandatory Courses at 10+2 Level	Other relevant Course(s) for this discipline
1.	Aeronautical Engineering	Phy, Chem, Maths	NA
2.	Agriculture Engineering**	Phy, Chem OR Agriculture stream	Maths/Biology/Biotechnology/Agriculture/ Agriculture stream
3.	Architecture	As per Norms of Council of Architecture (CoA)	
4.	Planning	Maths	For remaining two courses select any courses out of 14#
5.	Biotechnology**	Phy, Chem	Select any one from Bio/Biotechnology/Maths
6.	Ceramic Engineering	Phy, Chem, Maths	NA
7.	Civil Engineering	Phy, Chem, Maths	NA
8.	Computer Science and Engineering	Phy, Maths	For remaining single course select any courses out of 14#
9.	Chemical Engineering	Phy, Chem, Maths	NA
10.	Dairy Engineering	Phy, Chem, Maths	NA
11.	Electrical Engineering	Phy, Maths	For remaining single course select any courses out of 14#
12.	Energy Engineering	Phy, Chem, Maths	NA
13.	Electronics Engineering	Phy, Maths	For remaining single course select any courses out of 14#
14.	Mechanical Engineering	Phy, Chem, Maths	NA
15.	Fire and Safety Engineering	Phy, Chem, Maths	NA
16.	Food Engineering	Chem	For remaining two courses select any courses out of 14#
17.	Leather Technology	Chem	For remaining two courses select any courses out of 14#
18.	Marine Engineering	Phy, Chem, Maths	NA
19.	Metallurgy Engineering	Phy, Chem, Maths	NA
20.	Military Engineering	Phy, Chem, Maths	NA
21.	Mining Engineering	Phy, Chem, Maths	NA
22.	Nano Technology	Phy, Chem, Maths	NA
23.	Nuclear Science and Technology	Phy, Chem, Maths	NA
24.	Packaging Technology	Nil	Select any courses out of 14#
25.	Pharmaceutical Engineering**	Phy, Chem	Select any one from Bio/Biotechnology/Maths
26.	Printing Engineering**	Phy, Chem	For remaining single course select any courses out of 14#

27.	Textile Engineering	Phy, Chem, Maths	NA
28.	Fashion Technology	Nil	Select any courses out of 14#
29.	Textile Chemistry	Chem	For remaining two courses select any courses out of 14#

** First one or two Semesters may be so designed that students with Biology/Biotechnology background have adequate courses on Maths and Vice Versa and then the class is at level studying field for the rest of the semesters.

#Physics/ Mathematics / Chemistry/ Computer Science/Electronics/Information Technology/ Biology/ Informatics

Practices/ Biotechnology/ Technical Vocational subject/ Agriculture/ Engineering Graphics/ Business Studies/ Entrepreneurship.

N.B.
i.   Reproduced from AICTE Approval Process Handbook 2024-2027, page nos. 107-108
ii.   (For Entry level qualification to specific courses, AICTE Approval Process Handbook 2024-2027 may be consulted)

APPENDIX-7a
NOMENCLATURE
UNDER GRADUATE COURSES OF ENGINEERING AND TECHNOLOGY
(Ref. AICTE Approval Process Hand Book 2024-27,Section-11.3, page Nos. 119-121)

Course Name	Course Name	Course Name
Dairy Engineering	Electronics and Computer Science	Fire Engineering
Dairy Technology		Fire Technology and Safety
Digital Techniques For Design and Planning	Electronics and Control Systems	Fisheries Engineering
Dyestuff Technology	Electronics and Electrical Engineering	Food Engineering and Technology
Electrical and Computer Engineering	Electronics and Instrumentation Engineering	Food Processing and Preservation
Electrical and Electronics (Power System)	Electronics and Power Engineering	Food Processing Technology
		Food Technology
Electrical and Electronics Engineering	Electronics and Telecommunication	Food Technology and Management
Electrical and instrumentation Engineering	Electronics and Telecommunication Engineering	Footwear Technology
		Geo informatics
Electrical and Power Engineering		Geospatial Technology and Geoinformatics
Electrical Engineering	Electronics and Tele-Communication Engineering	Handloom and Textile Technology
Electrical Engineering (Electronics and Power)	Electronics and Telecommunication Engineering (Technologynician Electronic Radio)	Industrial and Production Engineering
Electrical instrumentation and Control Engineering		
Electrical Power Engineering	Electronics and Telecommunications Engineering	Industrial Biotechnology
Electrical, Electronics and Power Engineering		Industrial Engineering
Electronic Engineering	Electronics and Telematics Engineering	Industrial Engineering and Management
Electronic Instrumentation and Control Engineering	Electronics Communication and Instrumentation Engineering	Industrial IoT
Electronic Science and Engineering	Electronics Design Technology	Industrial Production Engineering
	Electronics Engineering	
Electronics and Biomedical Engineering	Electronics Engineering (VLSI Design and Technology)	Information and Communication Technology
Electronics and Communication (Communication System Engineering)	Electronics Instrument and Control	Information Engineering
	Electronics Instrumentation and Control Engineering	Information Science and Engineering
Electronics and Communication Engineering (Advanced Communication Technology)	Electronics System Engineering	Information Science and Technology
	Electronics Technology	
Electronics and Communication Engineering (VLSI Design & Technology)	Energy and Environmental Management	Information Technology
	Energy Engineering	Information Technology and Engineering
Electronics and Communication Engineering	Environment Engineering	Instrumentation and Control Engineering
FlpsHromrs nnd Cnmmi inirntmn	Environmental Engineering	
		Instrumentation and electronics
Engineering (Bio-Medical Engineering)	Environmental Science and Engineering	Instrumentation Engineering
Electronics and Communication	Environmental Science and	Instrumentation Technology

Engineering (Industry Integrated)	Technology	Instrument Technology
Electronics and Communication Engineering (Microwaves)	Facilities and Services Planning	Jute and Fibre Technology
Electronics and Communication Technology	Fashion and Apparel Engineering	Leather Technology
	Fashion Technology	Logistics & Supply Chain Management
Electronics and Computer Engineering	Fibres and lextiles Processing Technology	Man Made Fibre Technology
	Fire and Life Safety	Man-Made Textile Technology
Manufacturing Engineering and Technology	Oils, Oleochemicals and Surfactants Technology	Manufacturing Engineering
		Rubber Technology Safety and Fire Engineering
Manufacturing Process and Automation Engineering	Oil Technology	Shipbuilding Engineering Silk Technology
Manufacturing Science and Engineering	Optics and Optoelectronics	
Manufacturing Technology	Packaging Technology	Smart Agritech
	Paint Technology	Smart and Sustainable Energy
Marine Engineering Marine Technology	Petrochem and Petroleum Refinery Engineering	Software Engineering Structural Engineering
Material Science and Technology	Petrochem Engineering	Surface Coating Technology
Mechanical and Automation Engineering	Petrochemical Engineering	Technical Textiles
	Petrochemical Technology	Telecommunication Engineering
Mechanical and Mechatronics Engineering (Additive Manufacturing)	Petroleum Engineering	Textile Chemistry
	Petroleum Technology	Textile Engineering Textile Plant
	Pharmaceutical Chemistry and Technology	Textile Processing
Mechanical and Rail Engineering	Pharmaceutical Engineering	Textile Technology Tool Engineering
Mechanical Engineering	Pharmaceuticals and Fine Chemical Technology	Climate Technology
Mechanical Engineering (Automobile	Plastic and Polymer Engineering	
Mechanical Engineering (Industry Integrated)	Plastic Technology Plastics Engineering	
Mechanical Engineering Manufacturing Engineering	Polymer Engineering	
Mechanical and Smart Manufacturing	Polymer Engineering and Technology	
Mechanical Engineering (Production)	Polymer Science and Chemical Technology	
Mechanical Engineering (Welding Technology)	Polymer Science and Technology	
Mechanical Engineering Automobile	Polymer Technology Poultry Technology	
Mechanical Engineering Design	Power Electronics	
Mechatronics Engineering Medical Electronics Engineering	Power Electronics and instrumentation Engineering	
Medical Lab Technology	Power Electronics Engineering	
Metallurgical and Materials Engineering	Power Engineering Precision Manufacturing	
Metallurgical Engineering	Printing and Packing Technology	

Metallurgy Metallurgy and Material Technology	Printing, Graphics and Packaging Printing Technology	
Mine Engineering Mining Engineering	Production and industrial Engineering	
Nano Science and Technology Nano Technology	Production Engineering	
	Pulp Technology	
	Radio Physics and Electronics	
Naval Architecture and Ship Building Engineering	Robotics and Artificial Intelligence	
Nuclear Science and Technology	Robotics and Automation	
Oil and Paint Technology	Rubber and Plastics Technology	
3-D Animation and Graphics	Ceramic Engineering and Technology	Computer Science and Business Systems
Additive Manufacturing	Ceramics Engineering	Computer Science and Design*
Advanced Mechatronics and industrial Automation	Ceramic Technology	Computer Science and Engineering
Aero Space Engineering	Chemical and Biochemical Engineering	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
Aeronautical Engineering	Chemical and Electro Chemical Engineering	
Aerospace Engineering	Chemical Engineering	
Agricultural Engineering		Computer Science and Engineering (Artificial Intelligence)
Agricultural Technology	Chemical Engineering (Desalination and Water Treatment)	
Agriculture Engineering		Computer Science and Engineering (Cyber Security)
Aircraft Maintenance Engineering	Chemical Engineering (Plastic and Polymer)	Computer Science and Engineering (Data Science)
Airline Management	Chemical Technology	
Apparel and Production Management	Civil and Environmental Engineering	Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology)
Applied Electronics and Communications	Civil and infrastructure Engineering	
	Civil and Rural Engineering	Computer Science and Engineering (Internet of Things)
Applied Electronics and instrumentation Engineering	Civil and Water Management Engineering	
Architectural Assistantship	Civil Engineering	Computer Science and Engineering (Networks)
Architecture and Interior Decoration	Civil Engineering (Construction Technology)	
Artificial Intelligence (AI) and Data Science	Civil Engineering (Environmental Engineering)	Computer Science and Engineering and Business Systems
Artificial Intelligence and Machine Learning	Civil Engineering and Planning	Computer Science and information Technology
Automation and Robotics	Civil Engineering Environment and Pollution Control	Computer Science and Medical Engineering
Automation Engineering		
Automobile Engineering	Civil Engineering with Computer Application	Computer Science and Social Sciences
Automobile Maintenance Engineering		
Automotive Technology	Civil Environmental Engineering	Computer Science and Systems Engineering
Biochemical Engineering	Civil Technology	
Bioelectronics Engineering	Computer and Communication Engineering	Computer Science and Technology
Bioinformatics		Computer Technology

Biomedical and Robotic Engineering	Computer Engineering	Computing in Multimedia
Biomedical Engineering	Computer Engineering (Software Engineering)	Computing in Software
Biomedical instrumentation	Computer Engineering and Application	Construction Automation
Biotechnology		Construction Engineering
Biotechnology and Biochemical Engineering	Computer Networking	Construction Engineering and Management
Building and Construction Technology	Computer Science and Applied Mathematics	Construction Technology
Carpet and Textile Technology	Computer Science and Biosciences	Construction Technology and Management
Cement and CeramicTechnology		Cyber Physical Systems

APPENDIX-8

SYLLABUS FOR WBJEE-2024
MATHEMATICS

Algebra: A.P., G.P., H.P.: Definitions of A. P. and G.P.; General term; Summation of first n-terms of series $\sum n$, $\sum n^2$, $\sum n3$; Arithmetic/Geometric series, A.M., G.M. and their relation; Infinite G.P. series and its sum.

Logarithms: Definition; General properties; Change of base.

Complex Numbers: Definition in terms of ordered pair of real numbers and properties of complex numbers; Complex conjugate; Triangle inequality; amplitude of complex numbers and its properties; Square root of complex numbers; Cube roots of unity; De Moivre's theorem (statement only) and its elementary applications. Solution of quadratic equation in the complex number system.

Polynomial equation: nth degree equation has exactly n roots (statement only); Quadratic Equations: Quadratic equations with real coefficients; Relations between roots and coefficients; Nature of roots; Formation of a quadratic equation, sign and magnitude of the quadratic expression $ax^2 + bx + c$ (where a, b, c arerational numbers and $a \neq 0$).

Permutation and combination: Permutation of n different things taken r at a time ($r \leq n$). Permutation of n things not all different. Permutation with repetitions (circular permutation excluded). Combinations of n different things taken r at a time ($r \leq n$). Combination of n things not all different. Basic properties. Problems involving both permutations and combinations.

Principle of mathematical induction: Statement of the principle, proof by induction for the sum of squares, sum of cubes of first n natural numbers, divisibility properties like $2^{2n} - 1$ is divisible by 3 ($n \geq 1$), 7divides $3^{2n+1} + 2^{n+2}$ ($n \geq 1$)

Binomial theorem (positive integral index): Statement of the theorem, general term, middle term, equidistant terms, properties of binomial coefficients.

Matrices: Concepts of m x n ($m \leq 3$, $n \leq 3$) real matrices, operations of addition, scalar multiplication and multiplication of matrices. Transpose of a matrix. Determinant of a square matrix. Properties of determinants (statement only). Minor, cofactor and adjoint of a matrix. Non-singular matrix. Inverse of a matrix. Finding areaof a triangle. Solutions of system of linear equations. (Not more than 3 variables).

Sets, Relations and Mappings: Idea of sets, subsets, power set, complement, union, intersection and differenceof sets, Venn diagram, De Morgan's Laws, Inclusion / Exclusion formula for two or three finite sets, Cartesian product of sets.

Relation and its properties. Equivalence relation — definition and elementary examples, mappings, range and domain, injective, surjective and bijective mappings, composition of mappings, inverse of a mapping.

Statistics and Probability: Measure of dispersion, mean, variance and standard deviation, frequency distribution. Addition and multiplication rules of probability, conditional probability and Bayes' Theorem, independence of events, repeated independent trails and Binomial distribution.

Trigonometry

Trigonometric functions, addition and subtraction formulae, formulae involving multiple and submultiple angles, general solution of trigonometric equations. Properties of triangles, inverse trigonometric functions and their properties.

Coordinate geometry of two dimensions

Distance formula, section formula, area of a triangle, condition of collinearity of three points in a plane. Polar co-ordinates, transformation from Cartesian to polar coordinates and vice versa. Parallel transformation of axes.

Concept of locus, locus problems involving all geometrical configurations,

Slope of a line. Equation of lines in different forms, angle between two lines. Condition of perpendicularity and parallelism of two lines. Distance of a point from a line. Distance between two parallel lines. Lines through the point of intersection of two lines. Angle bisector

Equation of a circle with a given center and radius. Condition that a general equation of second degree in x, y may represent a circle. Equation of a circle in terms of endpoints of a diameter. Equation of tangent, normal and chord. Parametric equation of a circle. Intersection of a line with a circle. Equation of common chord of two intersecting circles.

Definition of conic section, Directrix, Focus and Eccentricity, classification based on eccentricity. Equation of Parabola, Ellipse and Hyperbola in standard form, their foci, directrices, eccentricities and parametric equations.

Co-ordinate geometry of three dimensions

Direction cosines and direction ratios, distance between two points and section formula, equation of a straight line, equation of a plane, distance of a point from a plane.

Calculus

Differential calculus: Functions, domain and range set of functions, composition of two functions and inverse of a function, limit, continuity, derivative, chain rule and derivative of functions in various forms. Concept of differential.

Rolle's Theorem and Lagrange's Mean Value theorem (statement only). Their geometric interpretation and elementary application. L'Hospital's rule (statement only) and applications. Second order derivative.

Integral calculus: Integration as a reverse process of differentiation, indefinite integral of standard functions. Integration by parts. Integration by substitution and partial fraction.

Definite integral as a limit of a sum with equal subdivisions. Fundamental theorem of integral calculus and its applications. Properties of definite integrals.

Differential Equations: Formation of ordinary differential equations, solution of homogeneous differential equations, separation of variables method, linear first order differential equations.

Application of Calculus: Tangents and normals, conditions of tangency. Determination of monotonicity, maxima and minima. Differential coefficient as a measure of rate. Motion in a straight line with constant acceleration. Geometric interpretation of definite integral as area, calculation of area bounded by elementary curves and Straight lines. Area of the region included between two elementary curves.

Vectors: Addition of vectors, scalar multiplication, dot and cross products, scalar triple product.

PHYSICS

Physical World, Measurements, Units & dimensions: Physical World, Measurements, Units & dimensions Units & Dimensions of physical quantities, dimensional analysis & its applications, error in measurements, significant figures.

Kinematics: Scalars & vectors, representation of vectors in 3D, dot & cross product & their applications, elementary differential & integral calculus, time-velocity & relevant graphs, equations of motion with uniform acceleration.

Laws of motion: Newton's laws of motion, using algebra & calculus, inertial & non inertial frames, conservation of linear momentum with applications, elastic & inelastic collisions, impulse centripetal force, banking of roads, relative velocity, projectile motion & uniform circular motion Work, power, energy: Work, power, energy Work, work-energy theorem, power, energy, work done by constant & variable forces, PE & KE, conservation of mechanical energy, conservative and nonconservative forces, PE of a spring.

Motion of centre of mass, connected systems, Friction: Centre of mass of two-particle system, motion of connected system, torque, equilibrium of rigid bodies, moments of inertia of simple geometric bodies (2D) [without derivation] conservation of angular momentum, friction and laws of friction.

Gravitation: Kepler's laws, (only statement) universal law of gravitation, acceleration due to gravity (g), variation of g, gravitational potential & PE, escape velocity, orbital velocity of satellites, geostationary orbits.

Bulk properties of matter: Elasticity, Hooke's law, Young's modulus, bulk modulus, shear, rigidity modulus, Poisson's ratio elastic potential energy. Fluid pressure: Pressure due to a fluid column, buoyancy, Pascal's law, effect of gravity on fluid pressure. Surface tension: Surface energy, phenomena involving surface tension, angle of contact, capillary rise,

Viscosity: Coefficient of viscosity, streamline & turbulent motion, Reynold's number, Stoke's law, terminal velocity, Bernoulli's theorem. Heat & Thermal Physics: Heat & temperature, thermal expansion of solids.liquids & gases, ideal gas laws, isothermal & adiabatic processes; anomalous expansion of water & its effects, sp. heat capacity, Cp, Cv, calorimetry; change of state, specific latent heat capacity. Heat transfer; conduction, thermal and thermometric conductivity, convection & radiation, Newton's law of cooling, Stefan's law.

Thermodynamics: Thermal equilibrium (Zeroth law of thermodynamics), heat, work & internal energy. 1st law of thermodynamics, isothermal & adiabatic processes, 2nd law of thermodynamics, reversible & irreversible processes.

Kinetic theory of gases: Equation of state of a perfect gas, kinetic theory of gases, assumptions in Kinetic theory of gases, concept of pressure. & temperature; rms speed of gas molecules; degrees of freedom, law of equipartition of energy (introductory ideas) & application to specific heats of gases; mean free path, Avogadro number.

Oscillations & Waves: Periodic motion – time period, frequency, time-displacement equation, Simple harmonic motion (S.H.M) & its equation; phase; SHM in different systems, restoring force & force const, energy in S.H.M.-KE & PE, free, forced & damped oscillations (introductory ideas), resonance wave motion, equation for progressive wave, longitudinal & transverse waves, sound waves, Newton's formula & Laplace's correction, factors affecting the velocity of sound in air, principles of superposition of waves, reflection of waves, standing waves in strings & organ pipes, fundamental mode, harmonics &overtones, beats, Doppler effect.

Electrostatics: Conservation of electric charges, Coulomb's law-force between two-point charges, forces between multiple charges; superposition principle & continuous charge distribution. Electric field, & potential due to a point charge & distribution of charges, electric field lines electric field due to a dipole; torque on a dipole in uniform electric field; electric flux, Gauss' theorem & its simple applications, conductors & insulators, free charges & bound charges inside a conductor; dielectrics & electric polarization, capacitors & capacitance, combination of capacitors in series & in parallel, capacitance of a parallel plate capacitor with & without dielectric medium between the plates, energy stored in a capacitor.

Current Electricity:

Electric current, & conductor, drift velocity' mobility & their relation with electric current; Ohm's law, electrical resistance, Ohmic and non-Ohmic conductors, electrical energy & power, carbon resistors, colour codes, combination of resistances, temperature dependence of resistances, electric cell, emf and internal resistance of an electric cell, pd, combination of cells, secondary cells, (introductory) Kirchoff's laws of electrical network, simple applications, principle of Wheatstone bridge, metre bridge and potentiometer and their uses, thermoelectricity; Seebeck effect; Peltier effect, thermo emf.

Magnetic effect of current: Concept of magnetic field, Oersted's experiment, Biot - Savart law & its application to current carrying circular loop; Ampere's law & its applications to infinitely long straight wire, straight and toroidal solenoids; force on a moving charge in uniform magnetic & electric fields, cyclotron frequency; force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-- definition of ampere. Torque experienced by a current loop in a uniform magnetic field; moving coil galvanometer-its current sensitivity & conversion to ammeter & voltmeter, Inter-conversion of voltmeter & ammeter & change of their ranges.

Magnetics: Current loop as a magnetic dipole & its magnetic dipole moment, magnetic dipole moment of a revolving electron, magnetic field intensity due to a magnetic dipole bar magnet along its axis & perpendicular to its axis, torque on a magnetic dipole (bar magnet) in a uniform magnetic field; magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field & its magnetic elements. para-, dia- & ferro- magnetic substances, with examples. Electromagnets & the factors affecting their strengths, permanent magnets.

Electromagnetic induction & alternating current: Electromagnetic induction; Faraday's laws, induced emf & current; Lenz's Law, eddy currents, self & mutual induction, alternating currents, peak and rms value of alternating current and voltage; reactance and impedance; LR & CR circuits, phase lag & lead, LCR series circuit, resonance; power in AC circuits, wattless current.

Electromagnetic waves: Electromagnetic waves and their characteristics (qualitative ideas only), transverse nature of electromagnetic waves, electromagnetic spectrum, applications of the waves from the different parts of the spectrum.

Optics I (Ray optics): Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection & its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula. Newton's relation: Displacement method to find position of images (conjugate points) Magnification, power of a lens, combination of thin lenses in contact, combination of a lens & a mirror refraction and dispersion of light through a prism; optical instruments, human eye, image formation & accommodation, correction of eye defects (myopia, hypermetropia) using lenses, microscopes & astronomical telescopes (reflecting & refracting) & their magnifying powers.

Optics II (Wave Optics): Scattering of light - blue colour of the sky, elementary idea of Raman

effect; wave optics: wave front & Huygens' principle, reflection & refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection & refraction using Huygens' principle Interference, Young's double slit experiment & expression for fringe width, coherent sources, Fraunhofer diffraction due to a single slit, Particle nature of light & wave particle dualism: Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation - particle nature of light, matter waves; wave nature of particles, de Broglie relation.

Atomic Physics: Alpha-particle scattering expt Rutherford's nuclear atom model of atom; Bohr model of hydrogen atom, energy levels in a hydrogen atom, hydrogen spectrum, continuous & characteristic x-rays.

Nuclear Physics: Composition & size of nucleus, atomic masses, isotopes, isobars; isotones, radioactivity - alpha, beta & gamma particles/ rays & their properties; radioactive decay law; mass energy relation, mass defect; binding energy per nucleon & its variation with mass number; nuclear fission & fusion.

Solid state Electronics: Energy bands in solids (qualitative ideas only), conductors, insulators & semiconductors;semiconductor diode – I-V characteristics in forward & reverse bias, diode as a rectifier;

I-V characteristics of LED, photodiode, solar cell & Zener diode; Zener diode as a voltage regulator, junction transistor (BJT), transistor action, characteristics of a BJT, BJT as an amplifier (CE configuration) & oscillator; logic gates (OR, AND, NOT, NAND & NOR).

CHEMISTRY

Atoms, Molecules and Chemical Arithmetic:

Dalton's atomic theory; Gay Lussac's law of gaseous volume; Avogadro's Hypothesis and its applications. Atomic mass; Molecular mass; Equivalent weight; Valency; Gram atomic weight; Gram molecular weight; Gram equivalent weight and mole concept; Chemical formulae; Balanced chemical equations; Calculations (based on mole concept) involving common oxidation – reduction, neutralization, and displacement reactions; Concentration in terms of mole fraction, molarity, molality and normality. Percentage composition, empirical formula and molecular formula; Numerical problems.

Atomic Structure:

Concept of Nuclear Atom – electron, proton and neutron (charge and mass), atomic number, Rutherford's model and its limitations; Extra nuclear structure; Line spectra of hydrogen atom. Quantization of energy (Planck's equation $E = h\nu$); Bohr's model of hydrogen atom and its limitations, Sommerfeld's modifications (elementary idea); The four quantum numbers, ground state electronic configurations of many electron atoms and mono – atomic ions; The Aufbau Principle; Pauli's Exclusion Principle and Hund's Rule. Dual nature of matter and light, de Broglie's relationship, Uncertainty principle; The concept of atomic orbitals, shapes of s, p and d orbitals (pictorial approach).

Radioactivity and Nuclear Chemistry:

Radioactivity α-, β-, γ rays and their properties; Artificial transmutation; Rate of radioactive decay, decay constant, half-life and average age life period of radio-elements; Units of radioactivity; Numerical problems. Stability of the atomic nucleus – effect of neutron-proton (n/p) ratio on the modes of decay, group displacement law, radioisotopes and their uses (C, P, Co and I as examples) isobars and isotones (definition and examples), elementary idea of nuclear fission and fusion reactions.

The Periodic Table and Chemical Families:

Modern periodic law (based on atomic number); Modern periodic table based on electronic configurations, groups (Gr. 1-18) and periods. Types of elements – representative (s-block and p- block), transition (d-block) elements and inner transition (f-block/lanthanides and actinides) and their general characteristics. Periodic trends in physical and chemical properties – atomic radii, valency, ionization energy, electron affinity, electronegativity, metallic character, acidic and basic characters of oxides and hydrides of the representative elements (up to Z = 36). Position of hydrogen and the noble gases in the periodic table; Diagonal relationships.

Chemical Bonding and Molecular Structure:

Valence electrons, the Octet rule, electrovalent, covalent and coordinate covalent bonds with examples; Properties of electrovalent and covalent compounds. Limitations of Octet rule (examples); Fajans Rule. Directionality of covalent bonds, shapes of poly – atomic molecules (examples); Concept of hybridization of atomic orbitals (qualitative pictorial approach): sp, sp^2, sp^3 and dsp^2. Molecular orbital energy diagrams for homonuclear diatomic species – bond order and magnetic properties. Valence Shell Electron Pair Repulsion (VSEPR) concept (elementary idea) – shapes of molecules. Concept of resonance (elementary idea), resonance structures (examples). Elementary idea about electronegativity, bond polarity and dipole moment, inter- and intra-molecular hydrogen bonding and its effects on physical properties (mp,

bp and solubility); Hydrogen bridge bonds in diborane.

Coordination Compounds:

Introduction, Double salts and complex salts, coordination compounds (examples only), Werner's theory, coordination number (examples of coordination number 4 and 6 only), colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds.

Solid State:

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three- dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n & p type semiconductors.

Liquid State:
Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Gaseous State:
Measurable properties of gases. Boyle's Law and Charles Law, absolute scale of temperature, kinetic theory of gases, ideal gas equation – average, root mean square and most probable velocities and their relationship withtemperature. Daltons Law of partial pressure, Grahams Law of gaseous diffusion. Deviations from ideal behavior. Liquefaction of gases, real gases, van der Waals equation; Numerical problems.
Chemical Energetics and Chemical Dynamics:

Chemical Energetics – Conservation of energy principle, energy changes in physical and chemical transformations. First law of thermodynamics; Internal energy, work and heat, pressure – volume work;Enthalpy. Internal energy change (ΔE) and Enthalpy change (ΔH) in a chemical reaction. Hesss Law and its applications (Numerical problems). Heat of reaction, fusion and apourization; Second law of thermodynamics; Entropy; Free energy; Criterion of spontaneity. Third law of thermodynamics (brief introduction).

Chemical Equilibria – The Law of mass action, dynamic nature of chemical equilibria. Equilibrium constants, Le Chateliers Principle. Equilibrium constants of gaseous reactions (Kp and Kc) and relation between them (examples). Significance of ΔG and ΔG°.

Chemical Dynamics – Factors affecting the rate of chemical reactions (concentration, pressure, temperature, catalyst), Concept of collision theory. Arrhenius equation and concept of activation energy.

Order and molecularity (determination excluded); First order reactions, rate constant, half – life (numerical problems), examples of first order and second order reactions.

Physical Chemistry of Solutions:

Colloidal Solutions – Differences from true solutions; Hydrophobic and hydrophilic colloids (examples and uses); Coagulation and peptization of colloids; Dialysis and its applications; Brownian motion; Tyndall effect and its applications; Elementary idea of emulsion, surfactant and micelle.

Electrolytic Solutions – Specific conductance, equivalent conductance, ionic conductance,

Kohlrausch's law, Faraday's laws of electrolysis, applications. Numerical problems.

Non-electrolytic Solutions – Types of solution, vapour pressure of solutions. Raoult's Law; Colligative properties – lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure and their relationships with molecular mass (without derivations); Numerical problems.

Ionic and Redox Equilibria:

Ionic equilibria – ionization of weak electrolytes, Ostwald's dilution law. Ionization constants of weak acids and bases, ionic product of water, the pH – scale, pH of aqueous solutions of acids and bases; Buffer solutions, buffer action and Henderson equation.

Acid-base titrations, acid – base indicators (structures not required). Hydrolysis of salts (elementary idea), solubility product, common ion effect (no numerical problems).

Redox Equilibria: Oxidation – Reduction reactions as electron transfer processes, oxidation numbers, balancing of redox reactions by oxidation number and ion-electron methods. Standard electrode potentials ($E°$), Electrochemical series, feasibility of a redox reaction. Significance of Gibb's equation: $\Delta G° = - nF\Delta E°$ (without derivation), no numerical problems. Redox titrations with (examples); Nernst equations (Numerical problems).

Hydrogen:

Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen, hydrides-ionic covalent and interstitial; physical and chemical properties of water, heavy water, hydrogen peroxide – preparation, reactions and structure and use; hydrogen as a fuel.

Chemistry of Non-Metallic Elements and their Compounds:

Carbon – occurrence, isotopes, allotropes (graphite, diamond, fullerene); CO and CO_2 production, properties and uses. Nitrogen and Phosphorus – occurrence, isotopes, allotopes, isolation from natural sources and purification, reactivity of the free elements. Preparation, properties, reactions of NH_3, PH_3, NO, NO_2, HNO_2, HNO_3, P_4O_{10}, H_3PO_3 and H_3PO_4.

Oxygen and Sulphur – Occurrence, isotopes, allotropic forms, isolation from natural sources and purification, properties and reactions of the free elements. Water, unusual properties of water, heavy water (production and uses). Hydrogen peroxide and ozone (production, purification, properties and uses).

Halogens – comparative study, occurrence, physical states and chemical reactivities of the free elements, peculiarities of fluorine and iodine; Hydracids of halogens (preparation, properties, reactions and uses), inter- halogen compounds (examples); Oxyacids of chlorine.

Chemistry of Metals:

General principles of metallurgy – occurrence, concentration of ores, production and purification of metals, mineral wealth of India. Typical metals (Na, Ca, Al, Fe, Cu and Zn) – occurrence, extraction, purification (where applicable), properties and reactions with air, water, acids and non-metals. Manufacture of steels and alloy steel (Bessemer, Open-Hearth and L.D. process).

Principles of chemistry involved in electroplating, anodizing and galvanizing. Preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$.

Lanthanoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.

Actinoids – Electronic configuration, oxidation states and comparison with lanthanoids.

Chemistry in Industry:

Large scale production (including physicochemical principles where applicable, omitting technical details) and uses of Sulphuric acid (contact process), Ammonia (Haber's process), Nitric acid (Ostwald's process), sodium bi-carbonate and sodium carbonate (Solvey process).

Polymers: Natural and synthetic polymers, methods of polymerization (addition and condensation), copolymerization, some important polymers – natural and synthetic like polythene, nylon polyesters, bakelite, rubber. Biodegradable and non-biodegradable polymers.

Surface Chemistry:

Adsorption – physisorption and chemisorption, factors affecting adsorption of gases on solids, catalysis, homogenous and heterogenous activity and selectivity; enzyme catalysis colloidal state distinction between true solutions, colloids and suspension; lyophilic, lyophobic multimolecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion – types of emulsions.

Environmental Chemistry:

Common modes of pollution of air, water and soil. Ozone layer, ozone hole – important chemical reactions in the atmosphere, Smog; major atmospheric pollutants; Green House effect; Global warming pollution due to industrial wastes, green chemistry as an alternative tool for reducing pollution, strategies for control ofenvironment pollution.

Chemistry of Carbon Compounds:

Hybridization of carbon: σ – and π – bonds. Isomerism – constitutional and stereoisomerism; Geometrical and optical isomerism of compounds containing upto two asymmetric carbon atoms. IUPAC nomenclature of simple organic compounds – hydrocarbons, mono and bifunctional molecules only (alicyclic and heterocyclic compounds excluded).

Conformations of ethane and n-butane (Newman projection only). Electronic Effects: Inductive, resonance and hyperconjugation. Stability of carbocation, carbanion and free radicals; Rearrangement of carbocation; Electrophiles and nucleophiles, tautomerism in β-dicarbonyl compounds, acidity and basicity of simple organic compounds.

Compounds:

Alkanes – Preparation from alkyl halides and carboxylic acids; Reactions — halogenation and combustion.

Alkenes and Alkynes – Preparation from alcohols; Formation of Grignard reagents and their synthetic applications for the preparation of alkanes, alcohols, aldehydes, ketones and acids; SNl and SN2 reactions (preliminary concept). Markownikoff's and anti-Markownikoff's additions; Hydroboration;

Oxymercuration-demercuration, reduction of alkenes and alkynes (H_2/Lindler catalyst and Na in liquid NH_3), metal acetylides.

Haloalkanes and Haloarenes:

Haloalkanes – Preparation from alcohols; Nomenclature, nature of C -X bond, physical and chemical properties, mechanism of substitution reactions, optical rotation. Formation of Grignard reagents and their synthetic applications for the preparation of alkanes, alcohols, aldehydes, ketones and acids; SN1 and SN2 reactions (preliminary concept). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Alcohols:

Preparation of alcohols from carbonyl compounds and esters. Reaction – dehydration, oxidation, esterification, reaction with sodium, $ZnCl_2$/HCl, phosphorous halides.

Ethers – Preparation by Williamson's synthesis; Cleavage with HCl and HI. Aldehydes and Ketones – Preparation from esters, acid chlorides, gem-dihalides, Ca-salt of carboxylic acids. Reaction – Nucleophilic addition with HCN, hydrazine, hydroxyl amines, semi carbazides, alcohols; Aldol condensation, Clemmensen and Wolff – Kishner reduction, haloform, Cannizzaro and Wittig reactions.

Carboxylic Acids – Hydrolysis of esters (mechanism excluded) and cyanides; Hunsdicker and HVZ reactions.

Aliphatic Amines – Preparation from nitro, cyano and amido compounds. Distinction of 1º, 2º and 3º amines (Hinsberg method); Reaction with HNO_2; Carbyl amine reaction.

Aromatic Compounds: Benzene – Kekule structure, aromaticity and Hückel rule. Electrophilic substitution – halogenation, sulfonation, nitration, Friedel Crafts reaction, ozonolysis. Directive influence of substituents in monosubstituted benzenes. Carcinogenicity and toxicity.

Amines – Preparation from reduction of nitro compounds; Formation of diazonium salts and their stability; Replacement of diazonium group with H, OH, X (halogen), CN and NO_2, diazocoupling and reduction.

Haloarenes – Nature of C -X bond, substitution reactions; Nucleophilic substitution, cine substitution (excluding mechanism, Directive influence of halogen in monosubstituted compounds only).

Phenols – halogenation, sulfonation, nitration, Reimer – Tiemann and Kolbe reactions. Aromatic Aldehydes – Preparation by Gattermann, Gattermann-Koch, Rosenmund and Stephen's method. Reactions – Perkin, Benzoin and Cannizzaro.

Application Oriented chemistry:

Main ingredients, their chemical natures (structures excluded) and their side effects, if any, of common antiseptics, analgesics, antacids, vitamin-C.

Introduction to Bio-Molecules:

Carbohydrates – Pentoses and hexoses. Distinctive chemical reactions of glucose. Aminoacids –glycine, alanine, aspartic acid, cysteine (structures). Zwitterion structures of amino acids, peptide bond.

ADP and ATP – structures and role in bioenergetics; Nucleic acids – DNA and RNA skeleton structures. Names of essential elements in biological system.

Principles of Qualitative Analysis:
Detection of water soluble non-interfering Acid and Basic Radicals by dry and wet tests from among:
Acid Radicals: Cl^- , $S2^-$, $SO4^{2-}$, $NO3^-$, $CO3^{2-}$. Basic Radicals: Cu^{2+}, $Al^{3+,}$ Fe^{3+}, Fe^{2+}, Zn^{2+}, Ca^{2+}, Mg^{2+}, Na^+ , $NH4^+$.
Detection of special elements (N, Cl, Br, I and S) in organic compounds by chemical tests. Identification of functional groups in: phenols, aromatic amines, aldehydes, ketones and carboxylic acids.

APPENDIX - 9
Rules of the Examination

1. Candidates are advised to reach the examination centers at least 30 minutes before commencement of the test.

2. Be sure about the exact location of your examination center and means of commuting to avoid inconvenience, if any, on the day of examination.

3. No candidate will be allowed to seat for the test in any center other than the one allotted to him/her and as is mentioned in the admit card.

4. Any candidate found to occupy a seat other than the one allotted to him/her will be **reported against** and his/her paper will be cancelled.

5. Carry the following documents to enter the examination center:

   i.   A printed copy of admit card.

   ii. A copy of colour photograph as was uploaded during online application.

   iii. Any photo identity card in original such as Aadhaar card/ PAN card / Passport/voter card/ 10th standard admit card/ School – ID card.

6. Frisking may be carried out while entering the center for checking prohibited objects/articles.

7. Candidates are advised to take their seats at least 15 minutes before commencement of the test.

8. No candidate will be allowed to enter the examination center **beyond the scheduled time of commencement of the test for each half under any circumstances**.

9. **Candidates are not allowed to carry any written or printed material, calculator, pen, log table, wristwatch, any communication device like mobile phones, any blue tooth device etc. inside the examination hall. Any candidate found with prohibited such items will be reported against and his/her candidature will be summarily cancelled.**

10. Question booklets will be distributed well before commencement of the test. Take out the OMR sheet and check that your OMR number and question booklet number are same. If not,ask the invigilator to replace the whole set from same series (e.g., A/B/C/D).

11. Put your signature on the top of question booklet.

12. Read the instructions given on OMR sheet and on the cover page of question booklet very carefully.

13. Write question booklet number and roll number at the appropriate places on the OMR. Wrong entry of question booklet number and roll number may lead to rejection of the OMR or wrong scoring, for which the Board will not be held responsible. If any candidate makes any mistake, he/she must **not** overwrite. Request the invigilator to strike it out and rewrite the correct numbers and put his/her (Invigilator) signature.

14. Darken the appropriate circle/bubbles of question booklet number, roll number and question booklet series (e.g., A/B/C/D).

15. Write your name in BLOCK LETTERS, name of the center and put your signature in appropriate places on the OMR. Do not put any stray mark anywhere else; it may lead to rejection of OMR.

16. Check that your roll number, photograph, spelling of your name in the attendance sheet matches with those given in your admit card. If any correction is needed, bring it to the notice of the invigilator.

17. Question booklets can be opened only at the time of commencement of test and as will be announced by the invigilator. Check all the pages of question booklet. If there is any damage or

missing page or any difficulties to read the question booklet, ask your invigilator to replace the whole set from the same series (e.g., A/B/C/D).

18. Maintain silence during the test. Any conversation/gesticulation or creation of disturbances will be deemed as misdemeanor. If any candidate is found adopting any unfair means, his/her candidature will be cancelled, and / or he/she will be debarred either permanently or for a period as is deemed fit by the Centre- in- Charge.

19. No discussion will be allowed with the invigilator regarding any question.

20. Candidates may do rough work in the space provided in the question booklet.

21. No candidate will leave his/her seat without permission of the invigilator until the test is over.

22. No candidate will leave the hall till the end of the test and all OMRs are collected and tallied by the invigilator.

23. Candidates are allowed to take his/her question booklet after the test.

24. If any examinee is found impersonating, he/she will be **handed over to the police** andcandidature of the original candidate will be cancelled outright.

APPENDIX-10
Zone Code

Districts of W. B.	Zone	Zone code
Alipurduar	Alipurduar	**10**
Bankura	Bankura	**11**
Bankura	Bishnupur	**12**
Birbhum	Bolpur	**13**
Birbhum	Suri	**14**
Cooch Behar	Cooch Behar	**15**
Dakshin Dinajpur	Balurghat	**16**
Darjeeling	Kurseong	**17**
Darjeeling	Siliguri	**18**
Hooghly	Arambagh	**19**
Hooghly	Bandel/Chinsurah	**20**
ooghly	Serampore	**21**
Howrah	Howrah Maidan/Shibpur	**22**
Howrah	Salkia/Bally/Uttarpara	**23**
Howrah	Santragachi/Domjur	**24**
Howrah	Uluberia	**25**
Jalpaiguri	Jalpaiguri	**26**
Jhargram	Jhargram	**27**
Kalimpong	Kalimpong	**28**
Kolkata	Central Kolkata Moulali/Beliaghata/Narkel Danga/Phool Bagan/Kakurgachi/Park Circus)	**29**
Kolkata	North Kolkata (Shyam bazar/ Bagh Bazar/Girish Park/Burra Bazar/ College Street/Sealdah)	**30**
Kolkata	Salt Lake/New Town (Salt Lake/Lake Town/New Town/Rajar Hat)	**31**
Kolkata	South Kolkata (Ballygaunge/Minto Park/ Bhowanipore/Tollygaunge/Jadavpur)	**32**
Kolkata	West Kolkata Joka/Behala/Alipore/Chetla/ Khidirpore/Budge Budge)	**33**
Malda	Malda	**34**
Murshidabad	Berhampur	**35**
Murshidabad	Jiaganj	**36**
Murshidabad	Raghunathganj	**37**
Nadia	Kalyani	**38**
Nadia	Krishnanagar	**39**
Nadia	Nabadwip	**40**
North 24 Parganas	Ashoknagar	**41**
North 24 Parganas	Barasat (Airport/Madhyamgram/Barasat)	**42**

North 24 Parganas	Barrackpur (Dum Dum Jn. To Barrackpur)	**43**
North 24 Parganas	Basirhat	**44**
Paschim Burdwan	Asansol	**45**
Paschim Burdwan	Durgapur	**46**
Paschim Medinipur	Garbeta	**47**
Paschim Medinipur	Kharagpur	**48**
Paschim Medinipur	Medinipur	**49**
Purba Burdwan	Burdwan	**50**
Purba Medinipur	Contai	**51**
Purba Medinipur	Haldia	**52**
Purba Medinipur	Tamluk	**53**
Purulia	Purulia	**54**
South 24 Parganas	Garia/Sonarpur/Baruipur	**55**
South 24 Parganas	Jainagar	**56**
Uttar Dinajpur	Raiganj	**57**
Other States		
Assam	Silchar	**58**
Tripura	**Agartala**	**59**

a) **Candidates from West Bengal, Assam and Tripura must select any three zones from the above list in order of their preference.**
b) **Candidates from other states must select any three zones from the following.**

Districts of W.B.	Zone
Howrah	**Salkia/Bally/Uttarpara**
Kolkata	**Salt Lake/New Town (Salt Lake/Lake Town/New Town/Rajar Hat)**
Kolkata	**South Kolkata (Ballygaunge/Minto Park/Bhowanipore/Tollygaunge/Jadavpur)**
Kolkata	**West Kolkata (Joka/Behala/Alipore/Chetla/Khidirpore/Budge Budge)**
Paschim Burdwan	**Asansol**
Paschim Burdwan	**Durgapur**
Paschim Medinipur	**Kharagpur**

APPENDIX-11

THE SCHEDULE
[See clause (zc) of section 2]
SPECIFIED DISABILITY

1. **Physical disability :—**

A. Locomotor disability (a person's inability to execute distinctive activities associated with movement of self and objects resulting from affliction of musculoskeletal or nervous system or both), including—

(a) "**leprosy cured person**" means a person who has been cured of leprosy but is suffering from—

(i) loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifest deformity;

(ii) manifest deformity and paresis but having sufficient mobility in their hands and feet to enable them to engage in normal economic activity;

(iii) extreme physical deformity as well as advanced age which prevents him/her from undertaking any gainful occupation, and the expression "leprosy cured" shall construed accordingly;

(b) **"cerebral palsy"** means a Group of non-progressive neurological condition affecting body movements and muscle coordination, caused by damage to one or more specific areas of the brain, usually occurring before, during or shortly after birth;

(c) **"dwarfism"** means a medical or genetic condition resulting in an adult height of 4 feet 10 inches (147 centimetres) or less;

(d) **"muscular dystrophy"** means a group of hereditary genetic muscle disease that weakens the muscles that move the human body and persons with multiple dystrophy have incorrect and missing information in their genes, which prevents them from making the proteins they need for healthy muscles. It is characterised by progressive skeletal muscle weakness, defects in muscle proteins, and the death of muscle cells and tissue;

(e) **"acid attack victims"** means a person disfigured due to violent assaults by throwing of acid or similar corrosive substance.

B. **Visual impairment: —**

(a) **"blindness"** means a condition where a person has any of the following conditions, after best correction—

(i) total absence of sight; or

(ii) visual acuity less than 3/60 or less than 10/200 (Snellen) in the better eye with best possible correction; or

(iii) limitation of the field of vision subtending an angle of less than 10 degree.

(b) **"low-vision"** means a condition where a person has any of the following conditons, namely:

(i) visual acuity not exceeding 6/18 or less than 20/60 upto 3/60 or upto 10/200 (Snellen) in the better eye with best possible corrections; **or**

(ii) limitation of the field of vision subtending an angle of less than 40 degree up to 10 degree.

C. Hearing impairment—

(a) **"deaf"** means persons having 70 DB hearing loss in speech frequencies in both ears;

(b) **"hard of hearing"** means person having 60 DB to 70 DB hearing loss in speech frequencies in both ears;

D. **"speech and language disability"** means a permanent disability arising out of conditions such as laryngectomy or aphasia affecting one or more components of speech and language due to organic or neurological causes.

2. Intellectual disability, a condition characterised by significant limitation both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behaviour which covers a range of every day, social and practical skills, including—

(a) **"specific learning disabilities"** means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia;

(b) **"autism spectrum disorder"** means a neuro-developmental condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours.

3. **Mental behaviour :- "mental illness"** means a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, but does not include retardation which is a condition of arrested or incomplete development of mind of a person, specially characterised by sub-normality of intelligence.

4. **Disability caused due to :—**

(a) **chronic neurological conditions, such as** —

(i) **"multiple sclerosis"** means an inflammatory, nervous system disease in which the myelin sheaths around the axons of nerve cells of the brain and spinal cord are damaged, leading to demyelination and affecting the ability of nerve cells in the brain and spinal cord to communicate with each other;

(ii) **"parkinson's disease"** means a progressive disease of the nervous system marked by tremor, muscular rigidity, and slow, imprecise movement, chiefly affecting middle-aged and elderly people associated with degeneration of the basal ganglia of the brain and a deficiency of the neurotransmitter dopamine.

(b) Blood disorder—

(i) **"haemophilia"** means an inheritable disease, usually affecting only male but transmitted by women to their male children, characterised by loss or impairment of the normal clotting ability of blood so that a minor would may result in fatal bleeding;

(ii) **"thalassemia"** means a group of inherited disorders characterised by reduced or absent amounts of haemoglobin.

(iii) **"sickle cell disease"** means a haemolytic disorder characterised by chronic anaemia, painful events, and various complications due to associated tissue and organ damage; "haemolytic" refers to the destruction of the cell membrane of red blood cells resulting in the release of haemoglobin.

5. **Multiple Disabilities** (more than one of the above specified disabilities) including deaf blindness which means a condition in which a person may have combination of hearing and visual impairments causing severe communication, developmental, and educational problems.

6. **Any other category as may be notified by the Central Government.**

Appendix-12

Institution-wise and course-wise seats under Defence Quota for academic session 2023-24.

Sl. No.	Name of the Institution	Name of the available course(s)	No. of seats
1.	Jadavpur University	To be decided by the University Authority	2
2.	Jalpaiguri Government Engineering College, Jalpaiguri	Mechanical Engineering	1
		Information Tech.	1
3.	Kalyani Government Engineering College, Kalyani, Nadia	Electrical Engineering	1
4.	Ramkrishna Mahato Government Engineering College, Purulia	Comp. Sc. & Engineering	1
		Electronics & Communication Engineering	1
5.	Cooch Behar Government Engineering College, Cooch Behar	Comp. Sc. & Engineering	1
		Electronics & Communication Engineering	1
6.	Government College of Engineering and Leather Technology, Kolkata	Leather Technology	1
7.	Govt. College of Engineering & Ceramic Technology, Kolkata	Information Tech.	1
8.	Govt. College of Engineering & Textile Technology, Serampore	Information Tech.	1
9.	Govt. College of Engineering & Textile Technology, Berhampore	Comp. Sc. & Engg.	1

* * The list for academic session 2024-25 shall be published before counselling.