

INFORMATION BULLETIN

**Common Entrance Test for Lateral Entry
In Bachelor's Degree Courses in Engineering/ Tech./ Pharmacy
JEELET-2022**

**Date of Examination
14.05.2022 (Saturday)**

(Tentative and may be changed in extraordinary circumstances)



West Bengal Joint Entrance Examinations Board
AQ-13/1, Sector V, Salt Lake City
Kolkata 700091
1800-1023-781, 1800-3450-050

Release date: 14th January 2022

••

IMPORTANT INSTRUCTIONS FOR ONLINE APPLICATION	
<p>Candidates are required to go through the Information Bulletin carefully before applying for the examination.</p> <p>Once an application is received, it will be construed that the candidate agrees to all terms & conditions, rules & regulations stipulated in the Information Bulletin and in the relevant notices published by the Board for the said purpose.</p> <p>Any application not in compliance with the conditions specified in the Information Bulletin is liable to be rejected.</p>	
1.	Application for the examination must be done online only. No printed application form is available.
2.	Ensure filling genuine application form available online at www.wbjeeb.nic.in
3.	<p>It is essential to have a mobile number and a unique email ID.</p> <p>All future communications will be sent to the registered mobile number and email ID. WBJEEB will not be responsible for non-receipt of any communication due to the mobile number and/or the email ID being wrong/non-existing/non-functional/changed or due to insufficient network conditions.</p>
4.	<p>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.</p> <p>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.</p>
5.	Do not attempt to make any duplicate application.
6.	Do not share your application number; password, security question/answer with anyone.
7.	Upload scanned copy of photograph and signature as per the instructions provided in the Information Bulletin. If any candidate receives any SMS/email regarding 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 not acceptable.
8.	If any information other than name, father's name, mother's name, gender, domicile and date of birth given in the application needs to be corrected, the rectification can be done by the candidate only within the notified ' Correction Period '. The Board cannot and will not make or allow any correction thereafter.
9.	<p>The Examination Fees can be paid by Net Banking/ Debit Card/ Credit Card only.</p> <p>Application fee for the examination is Rs 500 (Rupees five hundred only) for General candidates and Rs 400 (Rupees four hundred only) for SC/ST/OBC-A/OBC-B candidates, plus the Bank's service charges as applicable.</p> <p>SC/ST/OBC-A/OBC-B candidates availing of the concession will have to upload/submit respective certificates in given formats at the time of counselling, failing which his/her candidature will be cancelled.</p>

	<p>The fee once paid is not refundable under any circumstances.</p> <p>Do not wait for the last day to make fee payment to avoid payment failure by Bank or EPG.</p>
10.	Keep copies of confirmation page, admit card in safe custody.
11.	Candidates are requested to go through the Board's website (www.wbjeeb.nic.in/wbjeeb.in) regularly to update themselves for the latest information.
12.	Appearing for the examination and even obtaining a rank do not guarantee admission. Rules as will be applicable 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 University/Institution and other specific criteria issued by the Government/Regulatory bodies from time to time. Board will not be responsible by any way, if any candidate fails to aware himself/herself regularly on any updated information.
13.	<p>For any query regarding the examination, contact:</p> <p style="text-align: center;">The Controller of Examinations West Bengal Joint Entrance Examinations Board AQ-13/1, Sector -V, Salt Lake City, Kolkata-700091</p> <p style="text-align: center;">Examination Helpdesk: -1800-1023-781, 1800-3450-050 Email: info@wbjeeb.in</p>

Section	CONTENTS	Page
1.0	Introduction	5
2.0	The examination	5
2.1	Schedule	5
2.2	Pattern of Question Papers	5
2.3	Syllabus	6
2.4	Scoring Methodology	6
2.5	Mode of answering in the examination	7
2.6	Ranking Methodology and publication of Merit Lists	7
2.7	Tie-breaking Methodology in Merit Rank	7
2.8	Rules of the examination	8
3.0	Eligibility and academic qualification criteria	8
3.1	Eligibility criteria for application	8
3.2	Eligibility criteria for admission	8
3.3	Document verification	9
4.0	Seat Matrix	10
5.0	Reservation	10
6.0	Requirements in terms of Residential/Domicile Criteria	10
6.1	Criteria to be treated as domicile of West Bengal	11
6.2	Competent authority to issue domicile certificate	11
7.0	Competent Authorities for the issuance of SC/ST Certificate	12
8.0	Competent Authorities for issuing of OBC-A / OBC-B Certificate	12
9.0	Reservation of seats for PwD	12
9.1	Special facilities to PwD candidate for appearing in the examination	12
10.0	Legal jurisdiction	13
11.0	Procedure for submission of application Form	13
11.1	Registration	13
11.2	Application	13
11.3	Uploading of images	14
11.4	Payment of examination fees	14
11.5	Confirmation page	14
11.6	Correction of application form	14
12.0	Admit Card	14
13.0	Allocation of examination centre	14
14.0	Evaluation and declaration of result	15
15.0	General rules about documents	15
16.0	Counselling/seat allotment and provisional admission	16
Appendix-1	Proforma a-1 for domicile certificate	17
Appendix-2	Proforma b for domicile certificate	18
Appendix-3	Certificate regarding Physical limitation in examination to write	19
Appendix-4	Letter of Undertaking for Using Own Scribe	20
Appendix-5	Rules of the Examination	21
Appendix-6	Syllabus	23
Appendix-7	Examination zones	27
Appendix-8	Specified disabilities	29

1.0	<p>Introduction:</p> <p>The West Bengal Joint Entrance Examinations Board</p> <p>The West Bengal Joint Entrance Examinations Board (WBJEEB) was established in 1962 by Government of West Bengal in exercise of the powers conferred under article 162 of the Constitution of India in pursuant to No. 828-Edn(T), dated 02.03.1962.</p> <p>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 Tests for 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.</p> <p>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.</p>
2.0	<p>The examination: WBJEEB will conduct OMR based Common Entrance Test (JELET-2022) for admission in the academic session 2022-23 into 2nd year (3rd semester) of 4-year Undergraduate Courses in Engineering/ Technology and Pharmacy of different Universities, Government Colleges as well as Self Financing Engineering & Technological Institutes in the State of West Bengal.</p>
2.1	<p>Schedule of JELET-2022:</p> <p>14th May 2022 (Saturday), 11 a.m. to 1:00 p.m.</p> <p>JELET-2022 will be held once only and there shall be no further examination under any circumstances for those who are unable to appear on the above date and time of JELET-2022 examination.</p>
2.2	<p>Pattern of Question Paper.</p> <p>A. At the time of online application, candidates will select his/her qualifying examination among</p> <ol style="list-style-type: none"> i. Diploma in Engineering/Technology ii. Diploma in Pharmacy iii. BSc <p>B. There will be two separate papers namely,</p> <ol style="list-style-type: none"> i. Paper-I for Diploma in Engineering/Technology OR BSc candidates. ii. Paper-II for Diploma in Pharmacy candidates.

C. Paper-I for Diploma in Engineering/Technology OR BSc candidates will have the following structure.

Diploma in Engineering/ Technology OR BSc	Category-1 Each Q carries 1 mark (-ve marks = -1/4)	Category-2 Each Q carries 2 marks (No -ve marks)	Total No. of Questions	Total Marks
Topics	No. of Questions	No. of Questions		
Mathematics	30	10	40	50
Physics	25	5	30	35
Chemistry	15	5	20	25
Fundamentals of Electrical & Electronics Engineering	10	-	10	10
Total			100	120

D. Paper-II for Diploma in Pharmacy candidates will have 100 questions of Category-1.

E. All questions will be of **Multiple-Choice Question (MCQ)** type, with four answer options. Time for the paper is 2 hours. The questions will be in **English language only**.

2.3 Syllabus: See Appendix-6

2.4 Scoring Methodology

Category	Scoring methodology
1	a) Only one option is correct. b) Correct response will yield 1 (one) mark for each question. c) Incorrect response will yield -1/4 (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 -1/4 (negative 25%) marks. e) Not attempting the question will fetch zero mark.
2	a) One or more options is/are correct. b) Marking all correct options 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 incorrect, and it will yield zero (0) mark even if one or more of the chosen options is/are correct. d) For partially correct answers, i.e., when all correct options are not marked and also no incorrect options are marked, marks awarded = $2 \times (\text{no of correct options marked}) / (\text{total no of actually correct options})$

	e) Not attempting the question will fetch 0 marks
2.5	<p>Mode of answering in the examination.</p> <p>a) Questions are to be answered on specially designed optical machine-readable response (OMR) sheet, which will be evaluated by Optical Mark Recognition method. Thus, it is very important to follow the correct method of marking.</p> <p>b) Candidates will indicate response to the questions by darkening the appropriate circle completely with blue/black ball point pen.</p> <p>c) Any other kind of marking e.g., filling the bubble incompletely, filling with pencil, cross mark, tick mark, dot mark, circular mark, over writing, scratching, erasing, white ink, marking outside the bubble etc. may lead to wrong/partial/ambiguous reading of the response. WBJEEB will be, in no way, responsible for such eventuality.</p> <p>d) Response marking cannot be edited/changed/erased/modified.</p>
2.6	<p>Ranking Methodology and publication of Merit Lists</p> <p>a) WBJEEB will prepare merit ranks based on the candidates' score in the Common Entrance Test. Individual candidates will be able to view and download his/her Rank Card, which will contain score and rank. WBJEEB does not publish any rank/score list for public to ensure confidentiality to each individual candidate.</p> <p>b) The rank shall be in the name and style of 'GMR' (General Merit Rank)/ 'PMR' (Pharmacy Merit Rank)</p> <p>c) Two (2) separate rank lists will be prepared based on the candidates' qualifying examination, e.g.</p> <ol style="list-style-type: none"> i. Diploma in Engineering/ Technology OR B.Sc. (GMR). ii. Diploma in Pharmacy. (PMR). <p>d) The sequence of GMR/PMR will be prepared based on the marks scored.</p> <p>e) Ranking shall be done in the descending order of marks scored. In case of ties, tie-breaking rules as given in 2.7 shall be applicable.</p> <p>f) Separate reserved category merit position will also be indicated for respective category of students e.g., SC Rank, ST Rank, OBC-A Rank, OBC-B Rank, PWD Rank, etc., as applicable.</p> <p>g) Sequencing order for counselling/allotment of seat/admission will be based on GMR only (not on category ranks). Category ranks are for information only to candidates of respective category.</p> <p>h) Category ranks are generated based on the category information given by the candidates during online application, but documents are verified by the allotted Institutes during counselling. Hence candidate's certificates/ documents/ proofs must be valid as on the date of verification. If during verification, any candidate's claim is found invalid at that time, his/her category rank will be cancelled, and the candidate will be considered thereafter in general category. Category ranks of other candidates will not be revised.</p>
2.7	<p>Tie-breaking Methodology in Merit Rank:</p> <p>A. Paper-I:</p>

	<ol style="list-style-type: none"> 1. Less negative marks in total. 2. More positive marks in Mathematics. 3. Less negative marks in Mathematics. 4. More positive marks in Physics. 5. Less negative marks in Physics. 6. More positive marks in Chemistry 7. Less negative marks in Chemistry. 8. More positive marks in Fundamentals of Electrical & Electronics Engg. 9. Less negative marks in Fundamentals of Electrical & Electronics Engg. <p>B. Paper-II:</p> <ol style="list-style-type: none"> 1. Less negative marks in total <p>C. If tie exists still thereafter, same will be broken by the date of birth (DOB) of the concerned candidates; the older candidate will be given preference over the younger one.</p>
2.8	Rules of the examination (JELET-2022): Rules to be followed during the examination is given in APPENDIX-5
3.0	Eligibility and academic qualification criteria
3.1	<p>Eligibility criteria for application:</p> <p>a) Citizenship: Applicant must be a citizen of India.</p> <p>b) Age Restriction:</p> <ol style="list-style-type: none"> I. There is no upper age limit for Diploma holders in Engineering/ Technology/ Pharmacy. II. For B. Sc. Candidates, the upper age limit is 27 (twenty-seven) years as on 31.12.2022. III. For Diploma holders in marine Engineering, the upper age limit is 25 (twenty-five) years as on 31.12.2022
3.2	<p>Eligibility criteria for admission:</p> <p>(A) Diploma holders seeking admission into Engineering & Technology Degree Courses:</p> <ol style="list-style-type: none"> i. The candidate must pass Diploma in ANY branch from an institute approved by AICTE for admission in ANY branch of Engineering & Technology. ii. The candidate must secure at least 45% (40% for SC/ ST/ OBC-A/ OBC-B/ PwD) marks or equivalent CGPA in diploma examination. iii. But for admission in Jadavpur University, the candidate must secure at least 60% (45% for SC/ ST/ OBC-A/ OBC-B/ PwD) marks or equivalent CGPA in diploma examination. iv. All relevant norms of D. G. Shipping will be applicable for admission into Degree Course in Marine Engineering. <p>(B) B. Sc. candidates seeking admission into Engineering & Technology Degree Course:</p>

- i. The candidate must pass B. Sc. Degree from any University recognized by UGC with at least 45% (40% for SC/ ST/ OBC-A/ OBC-B/ PwD) marks
- ii. Also, the candidate must have passed 12th standard school examination with Mathematics as a subject.
- iii. The candidate, if admitted, will have to clear the subjects of Engineering Mechanics and Engineering Graphics / Engineering Drawing of the 1st year Degree Course in Engineering/Technology along with their second-year subjects.
- iv. B.Sc. candidates will be considered for admission only if vacancies remain even after filling the seats with available Diploma holder candidates.
- v. B. Sc. Candidates are not eligible for admission into Degree Course in Pharmacy.
- vi. B. Sc. Candidates are not eligible for admission in Jadavpur University through lateral entry.

(C) **Both B. Sc. Candidates and Diploma holders Engineering & Technology** will also be eligible for admission to the 1st year Engineering Degree Courses, subject to vacancies in the 1st year classes in case the vacancies as lateral entry at second year are exhausted. However, the admission shall be based strictly on the eligibility criteria as mentioned above.

(D) **Diploma holders in Pharmacy seeking admission into Degree Course in Pharmacy**

- i. The candidate must pass Diploma in Pharmacy from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act.
- ii. The candidate must secure at least 45% (40% for SC/ ST/ OBC-A/ OBC-B/ PwD) marks or equivalent CGPA.
- iii. Such candidates will also be eligible for admission to the 1st year Degree Course subject to vacancies in the 1st year classes in case the vacancies as lateral entry at second year are exhausted. However, the admission shall be based strictly on the eligibility criteria as mentioned above.

3.3 Document verification.

- a) Admit cards, Rank cards are issued based on the information provided by the candidate. All verifications are done during and after counselling **by the allotted Institute**. Hence candidates cannot assume that the personal information shown in the admit card, rank card are approved by the Board.
- b) If during document verification by the **allotted Institute**, it is found that any information given by the candidate is/are not correct or if the candidate is unable to produce certificate/ document/ proof **valid 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.

4.0	<p>Seat matrix.</p> <p>The seat matrix for last year i.e., for the academic session 2021-22 is given in Board's website.</p> <p>Seat matrix for the academic session 2022-23 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 at Board's web site before counselling.</p> <p>Note that there may be other seats available in some institute/course which are not offered by them through e-counselling and hence do not appear in the seat matrix.</p>
5.0	<p>Reservation of seats:</p> <ol style="list-style-type: none"> a) Reservation of Seats will be available for SC/ST/OBC-A/OBC-B/PWD category of candidates as per applicable rule depending upon the type of institute. b) Such reservation shall be restricted to candidates who are Indian citizen and domiciled in West Bengal. c) Candidates claiming reservation must submit relevant Certificate issued by the competent Authorities as given below. d) Certificates are to be produced for verification by the allotted Institute during counselling, admission etc. If at that time, it is found that any information given by the candidate is/are not correct or if the candidate is unable to produce 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) and the candidate may be reconsidered in next round of counselling (if any).
6.0	<p>Requirements in terms of Residential/Domicile Criteria</p> <ol style="list-style-type: none"> a) The candidate must be a domicile of Home State i.e., West Bengal for admission in, <ol style="list-style-type: none"> i. Any seat including general category seats in any Government aided Engineering / Technology / Pharmacy Colleges. ii. Any seat including general category seats in Aliah University. iii. Any seat including general category seats in B. Tech. (Dairy Technology) in West Bengal University of Animal & Fishery Sciences. iv. Any seat including general category seats in Jadavpur University. v. Any reserved category seat (SC, ST, OBC-A, OBC-B, PWD) in any institute. b) The candidate needs to download the required proforma as per the detail given in section 6.1 and keep the certificate ready to be produced during counseling, admission etc. b) If any of the certificates is then found to be invalid, the candidate will lose the opportunity of admission in seats reserved for WB domiciled candidates. c) However, Diploma holders in Fashion Technology from Govt. Polytechnic Institutions from Tripura are eligible for admission to Degree level Apparel Production & Management Course and Textile Technology Course in Govt. College of Engineering and Textile Technology, Serampore and Berhampore under Lateral Entry Scheme with relaxation of (West Bengal) domicile criteria.

6.1

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 at least for last 10 (ten) years as on 31.12.2021.

OR

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

In case of a) above, a certificate is to be obtained as per form 'a1' or proforma 'a2'.

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

During counselling etc. if SC/ST/OBC-A/OBC-B candidates who cannot produce required domicile certificate, they can produce/upload their category certificates (issued by the Govt. of WB) in lieu of domicile certificate. But in that case if the category certificate is found invalid at the time of verification, their domicile status is also considered to be NON-West Bengal.

6.2

Competent authority to issue domicile certificate

- a) **Proforma 'a1' or 'b'** must be signed and certified by any of the following competent authorities from Central Government or State Government *having local jurisdiction over the place of the permanent residence of the concerned candidate or his/her parents 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 or 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.
- b) Officials issuing domicile certificates MUST provide his/her full name, designation, place of posting with address, land line/mobile number. He/she should also provide his/her identity card number if available.
- c) Note: Domicile certificates issued by any elected people's representative such as municipal commissioner, Councillor of Municipal Corporation/ Municipality, Member of three-tier Panchayat system or GTA, MLA or MP are not acceptable.

7.0	<p>Competent Authorities for the issuance of SC/ST Certificate for candidates claiming under such reserve category of seats.</p> <p>SC/ST Certificates are to be issued by any of the following authorities:</p> <ul style="list-style-type: none"> (i) Sub-Divisional Officers for all districts except Kolkata (ii) District Welfare Officer, Kolkata & Ex-Officio Joint Director, B.C.W. in case of Kolkata Municipal Area (as defined in clause (9) of Section 2 of K.M.C Act, 1980
8.0	<p>Competent Authorities for the issuance of OBC-A / OBC-B Certificate for candidates claiming under such reserve category of seats:</p> <p>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 Sub Divisional Officer of a Sub- Division in a District is the certificate issuing authority. In Kolkata such certificate is issued by such an officer as the State Government by modification authorizes. Accordingly, the District Welfare Officer, Kolkata, and Ex-officio Joint Director, BCW has been notified to act as the certificate issuing authority in respect of Kolkata covering the jurisdiction of the Kolkata Municipal Corporation.</p>
9.0	<p>Reservation of seats for PWD candidates</p> <ul style="list-style-type: none"> a) According to Section 2(r) of the RPWD Act, 2016, “persons with benchmark disabilities” means a person with not less than forty percent (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, reservation in PWD seats will be available for the following types of disabilities, percentage of disability being not less than 40%. <ul style="list-style-type: none"> 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 caused due to chronic neurological conditions and blood disorder. viii. Multiple disabilities including deaf blindness. c) The “specified disabilities”, which are included in the Schedule of the RPWD Act, are given in APPENDIX-8. d) PWD certificates are to be issued by any of the authorities as given in the 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)
9.1	<p>Special facilities to PWD candidates for appearing in the examination.</p> <ul style="list-style-type: none"> a) Concessional application fees: PWD candidates are eligible for 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

	<p>within the last date of online application.</p> <p>b) Compensatory time: Twenty minutes per hour compensatory time as per duration of examination (On pro-rata basis) will be allowed to the PWD candidates with benchmark disabilities.</p> <p>c) Scribe/reader: Facility of own Scribe/Reader will be allowed to a candidate with benchmark disability and has limitation in writing including that of speed if so desired by him/her.</p> <p>d) In order 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-3 and a letter of undertaking in the format as given in appendix-4) to the Chairman, WBJEEB and send/submit the application to the Board office within the last date of online application. Special arrangement 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 centers.</p> <p>e) The Board's decision in this regard will be final and binding on the candidate.</p>
10.0	<p>Legal jurisdiction</p> <p>a) All matters pertaining to conduct of the examination and counselling shall fall within the jurisdiction of Kolkata only.</p> <p>b) The Board will not be a party pertaining to any dispute arising in the process of admission</p>
11.0	Procedure for submission of application form, payment of examination fees.
11.1	<p>Registration</p> <p>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.</p> <p>b) Candidates must be careful while entering name, father's name, mother's name, date of birth, gender, and domicile. This information cannot be changed/edited/modified under any circumstances.</p> <p>c) Then the candidate has to create password, choose security question/ answer, review and submit the registration.</p> <p>d) An application number will be generated and will appear on the screen. Also, SMS/email will be sent to the candidate.</p> <p>e) Candidate must remember his/her application number, password, and security question/answer. If the candidate forgets the password, he/she has to recover it through "Forgot Password" option. There is no other way to recover the password.</p> <p>f) It is not possible for any person/agency to change/edit/input any information without knowing the password. Hence candidates must not share their password with anybody. The Board will not be responsible for any change resulting from sharing/ divulging of the password.</p>
11.2	<p>Application</p> <p>a) At this stage, the candidate needs to fill up various other information such as, domicile, category, PWD status, family income status, religion, nationality, academic details etc.</p>

	b) Thereafter the candidate needs to choose zones of examinations in order of his/her choice and submit the application.
11.3	<p>Uploading of images</p> <p>a) The candidate is required to upload JPG/JPEG images of his/her recent color photograph (20 to 200kB) and signature (20 to 200 kB).</p> <p>b) If any document e.g., certificate/marksheet etc. is to be uploaded, it must be in PDF format (50 to 300kB)</p> <p>c) All documents are to be uploaded in one go.</p>
11.4	<p>Payment of Examination Fees</p> <p>a) The Examination Fees can be paid by Net Banking/ Debit Card/ Credit Card only.</p> <p>b) Application fee for the examination is Rs 500 (Rupees five hundred only) for General candidates and Rs 400 (Rupees four hundred only) for SC/ST/OBC-A/OBC-B candidates, plus the Bank's service charges as applicable.</p> <p>c) SC/ST/OBC-A/OBC-B/TFW candidates availing of the concession will have to upload respective certificates in given formats at the time of counselling, failing which his/her candidature will be cancelled.</p> <p>d) The fee once paid is not refundable under any circumstances.</p>
11.5	<p>Confirmation Page: On successful completion of all the above steps, 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.</p>
11.6	<p>Correction of application form</p> <p>a) It is not possible to correct any primary registration data i.e., Name, Father's Name, Mother's name, gender, domicile, and Date of birth.</p> <p>a) 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 correction on behalf of any candidate.</p>
12.0	<p>Admit Card</p> <p>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 center.</p> <p>b) Candidates must ensure that the admit card is not mutilated/ distorted/ soiled even by accident. Candidates with such mutilated/ distorted/ soiled admit cards will not be allowed to appear in the examination.</p>
13.0	<p>Allocation of examination centre.</p> <p>a) Allocation of examination centre will be based on the choices of zones given by the candidate. However, under unavoidable circumstances, any candidates may be allocated in a zone out of his/her choice. Discretion of the Board in allocation of examination zone/centre shall be final. No request for change of allocated centre will be entertained under any circumstances. List of district-wise examination zones is given in APPENDIX-7.</p> <p>b) Any examination zone may be dropped if adequate numbers of candidates are</p>

	not available or under any unavoidable circumstance. In such case the candidate will be allocated alternative examination zone.
14.0	<p>Evaluation and declaration of result.</p> <p>a) Model Answer Keys will be available for a brief period at Board's web site shortly after the examination. Candidates can log in and view the model answer keys.</p> <p>b) Candidates can also challenge any answer key on payment of ₹500 per question plus the bank's service charges. The fee once paid is not refundable.</p> <p>c) The Board will review the challenges and publish Final and Frozen Answer Keys. The Board's decision in this regard will be final and no further communication will be entertained.</p> <p>d) Result will be published in the form of Rank Card, which will contain all relevant ranks and score. Candidates can view and download their rank card by logging in with their password. The Board never publishes a rank list to ensure confidentiality to each individual candidate</p> <p>e) Ranks cards with scores are be issued to all candidates, who appears in the examination. But all may not be awarded a rank and hence may not be eligible for counseling, for which a cut off rank and/or a cut off score will be decided by the board.</p> <p>f) If any candidate has any grievance about his/her score obtained, he/she may raise a query through email (to info@wbjeeb.in) within 24 hours of declaration of the result attaching copies of rank card, question booklet number and its series code, self-calculation of question-wise and total score. The Board will not entertain query by any other form e.g., letters, phone calls, physical visit etc.</p> <p>g) If any candidate (including those who files RTIs for score calculation or answer keys) needs a score card from the Board showing answer keys and calculation of score, he/she will have to apply to the Board with a demand draft of Rs. 500/- in favor of 'West Bengal Joint Entrance Examinations Board' payable at Kolkata. But this facility will be available only till 60 days after the declaration of result or till the counselling is over, whichever is later.</p>
15.0	<p>General rules about documents.</p> <p>a) Whenever and wherever a candidate produces documents like 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 any valid document.</p> <p>b) Confirmation page, admit card, rank card etc. contains some personal information as given by the candidate during online application. As such, the Board is in no way responsible for any mistake in it due to incorrect entry given by the candidate.</p> <p>c) All verifications are done by the allotted Institutes during counselling. Hence candidates cannot assume that the personal information shown in the confirmation page, admit card, rank card etc., are accepted or approved by the Board.</p> <p>d) In case the candidate faces any problem during admission in any institute or</p>

	<p>thereafter due to any mistake committed by him/her in providing such personal information during online application, the Board is not able to 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.</p> <p>e) Confirmation page and admit card cannot be downloaded after the examination. Rank card cannot be downloaded after the counselling is over. Candidates must preserve such documents safely.</p> <p>f) However, if any candidate needs a duplicate copy of any document, it can be provided by the Board, but only till the end of counselling or 60 days after the date of declaration of 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 in the name of “West Bengal Joint Entrance Examinations Board” payable in Kolkata.</p>
16.0	Counselling/seat allotment and provisional admission <p>a) A separate notification with details of counseling/seat allotment and admission procedure will be published in Board’s web site shortly after publication of result.</p> <p>b) Course-wise and institute wise availability of seats which will be provided by the Competent Authorities will also be published before counselling and allotment.</p>

APPENDIX -1

PROFORMA-a1**Residential/Domicile Certificate for candidates residing in the State of West Bengal continuously for at least last ten (10) years as on 31.12.2021**

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 of _____ under _____

Assembly Constituency and has been living in the State of West Bengal continuously / uninterruptedly at least for the last ten (10) years as on 31-12-2021.

Paste 4 cmx3 cm
size recent colour
photograph in this
box

Candidate's signature

**Candidate must sign here in front of the certifying
authority**

(Candidate's photograph)

Signature of Certifying Authority _____

Designation with Official Seal _____

Full Name of Certifying Authority _____

Office Address _____

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

ID No: _____ (optional)

*Note: Photograph is to be attested by the certifying authority.**The Certifying Authority should preserve a duplicate copy of this Certificate.*

APPENDIX -2

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/ are 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

Paste 4 cmx3 cm size recent colour photograph of father/ mother of the candidate in this box

Father's/ Mother's Signature

Candidate's Signature

Candidate must sign here in front of the certifying authority

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

Signature of Certifying Authority _____

Designation with Official Seal _____

Full Name of Certifying Authority _____

Office Address _____

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

ID No: _____ (optional)

Note: Photographs are to be attested by the certifying authority.

The Certifying Authority should preserve a duplicate copy of this Certificate.

APPENDIX – 3

Certificate regarding physical limitation to write in an examination.**Certificate No.** **Dated**

This is to certify that Mr./Ms.

Son/daughter of Mr. Ms.

Residing at

.....

Having WBJEE-2021 application No. has the following disability
(name of the Specified Disability)..... In percentage of
.....(in words)(in figures).

Please tick the specified disability (Assessment may be done on the basis of Gazette of India, Extraordinary, Part-II, Section-3, Subsection (ii)) Ministry of Social Justice and Empowerment)

Paste 4 cmx3
cm size recent
colour
photograph of
the candidate in
this box.

S. No.	Category	Type of Disability	Specified Disability
1	Physical Disability	Locomotor Disability	a) Leprosy cured person, b) Cerebral palsy, c) Dwarfism, d) Muscular dystrophy, e) Acid attack victims
		Visual Impairment	a) Blindness, b) Low vision
		Hearing Impairment	a) Deaf, b) Hard of hearing
		Speech & Language Disability	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) Specific learning Disability (Perceptual Disabilities, Dyslexia, Dyscalculia, Dyspraxia & Development Aphasia) b) Autism spectrum disorder
3	Mental Behaviour		a) Mental illness
4	Disability caused due to	i. Chronic Neurological Conditions	a) Multiple sclerosis b) Parkinsonism
		ii. Blood disorder	a) Haemophilia, b) Thalassemia, c) Sickle cell disease
5	Multiple Disabilities		a) More than one of the above specified disabilities including deaf blindness

This is to further certify that he /she has physical limitation which hampers his/her writing capabilities to write the examination owing to his/her disability.

Signature

Name

Chief Medical Officer/ Civil Surgeon/Medical Superintendent

Govt. Health Care Institution with seal

APPENDIX – 4

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. 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 qualification is

Signature of the candidate

Name of the scribe:

ID of the scribe:

ID number:

Paste 4 cmx3
 cm size recent
 colour
 photograph of
 the scribe in
 this box.

APPENDIX –5**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 any inconvenience 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** & his/her paper will be cancelled.
5. Carry the following documents to enter the examination center.
 - a. A printed copy of admit card.
 - b. A copy of color photograph as was uploaded during online application.
 - c. 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.
7. Candidates are advised to take their seats at least 15 minutes before the test.
8. No candidate will be allowed to enter the examination center **beyond the scheduled time of commencement of the test 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 such items will be **reported against** & 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 & 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 & on the cover page of question booklet very carefully.
13. Write question booklet number & roll number at the appropriate places on the OMR. Wrong entry of question booklet number & roll number may lead to rejection of the OMR or wrong scoring, for which the Board will not remain responsible. If any candidate makes any mistake, he/she must **not** overwrite. Request the invigilator to strike it out & rewrite the correct numbers and put his/her signature.
14. Darken appropriate 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 & 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 & all OMRs are collected & tallied by the invigilator.
23. Candidates can take his/her question booklet after the test.
24. If any Examinee is found impersonating, he/she will be **handed over to the police** & candidature of the original candidate will be cancelled outright.
25. Candidates must follow social distancing and other COVID-19 instructions as applicable.

APPENDIX –6**JELET syllabus****Mathematics (JELET)****A. Matrices up to order 3:**

Definition of Matrix and its order. Different types of Matrices. (Rectangular, square, row, column, upper triangular, lower triangular, diagonal, scalar, identity, null). Equality of two matrices. Addition, subtraction, multiplication of a matrix by a scalar and multiplication of two matrices. Transpose of a matrix, symmetric and skew symmetric matrices, simple problems. Singular and non-singular matrices, adjoint and inverse of a matrix of order 3.

Eigen Values of matrix up to order 3. Statement of Cauchy Hamilton Theorem and application for determining inverse of matrix. Diagonalization of matrices.

B. Determinant up to order 3:

Definition and expansion of determinants of order 2 and 3. Minor and cofactors. Elementary properties of Determinants (statements only) and simple problems. Solutions of linear simultaneous equations (up to 3 unknowns) by Cramer's Rule.

Rank of a matrix up to order 3. Linear homogeneous and non-homogeneous system of equations – statements of the relevant results and its applications.

C. Complex Number:

Definition of complex numbers, Cartesian and polar. Exponential form of complex numbers. Modulus, amplitude and conjugate of a complex number. Algebra of complex numbers (Equality, Addition, Subtraction, Multiplication). Cube roots of unity and its properties. De Moivre's theorem (statements only) and simple problems.

D. Co-ordinate Geometry(2D):

Concept of polar co-ordinates and its relation to Cartesian co-ordinates. Conic section in 2D – Definition, simple properties, Tangents and Normal.

E. Vector Algebra:

Definition of a vector quantity. Concept of Position vector and Ratio formula. Rectangular resolution of a vector. Algebra of vectors – equality, addition, subtraction, and scalar multiplication. Scalar (Dot) product of two vectors of with properties. Vector (cross) product of two vectors with properties. Applications: Application of dot product in work done by a force and projection of one vector upon another, application of cross product in finding vector area and moment of a force.

Scalar and vector triple product and their geometrical interpretations. Linear combination of 3 vectors. Linear dependence and independence of vectors.

F. Differential Calculus:

Concept of function of one variable – Domain and range. Type of different functions including periodic functions. Limit and continuity. Standard limits. Types of discontinuity. Derivative of a functions (1st order and 2nd order). Statements and Applications of Roll's Theorem, Mean Value Theorem. Indeterminant Form. L'Hospital's rule.

G. Application of Derivative:

Geometric meaning of derivative. Rate measurement. Maxima and Minima (one variable)

H. Partial Differentiation:

Definition and meaning of partial derivative. Evaluation of partial derivatives. Definition and examples of homogeneous functions. Euler's theorem (1st order) on homogeneous functions for 2 variables (without proof). Problems.

I. Integral Calculus:

Definition of Integration as inverse process of differentiation. Rules for integration (sum, difference, scalar multiple). Integration of standard functions. Integration by substitution. Integration by parts. Integration by partial fraction.

Definition of definite integral and simple problems. Properties of definite integral with simple problems. Application of definite integral – area of bounded region.

J. Ordinary Differential Equation:

Definition of ordinary differential equation, order and degree. Solution of differential equation of first order and first degree. Separation of variables. Homogeneous type. Exact type. Linear type. Solution of differential equation of first order but not of the first degree. Solution of linear second order differential equation with constant coefficients. Complementary Functions (C.F). Particular integral for polynomial function e^{ax} , $\sin ax$ and $\cos ax$, $[F(-a^2) \neq 0]$ $e^{ax}V$ where V is a function. Simple problem.

K. Probability:

Definition of random experiment, sample space, event, occurrence of events and types of events (e.g., Impossible, mutually exclusive, Exhaustive, Equally likely). Classical definition of probability, simple problems. Statements of total probability, compound probability and Base's Theorem and simple problems.

Physics (JELET)

- A. **Units, dimension, and measurement:** CGS, MKS, SI units. Dimensions of common physical quantities, dimensional analysis. Common errors in measurement. Error, accuracy, precision, resolution, significant figure.
- B. **Kinematics:** Speed, velocity, acceleration, uniform/non-uniform, rectilinear/ circular motion. Position/ velocity-time graph. Resolution and composition of vectors, scalar multiplication of vectors.
- C. **Laws of motion:** Newton's laws of motion. Force, momentum, inertia, moment of inertia, impulse, couples, moment. Conditions of equilibrium. Conservation of momentum. Centripetal and centrifugal forces. Angular displacement/ velocity/ acceleration/ momentum, torque. Static and dynamic friction, angle of repose, banking of roads.
- D. **Work, power, energy:** Definition, measures, and units. Law of conservation of energy. Kinetic and potential energy.
- E. **Gravitation:** The universal law of gravitation. Acceleration due to gravity and its variation on/ above/ below Earth's surface. Gravitational potential energy. Vertical linear/ vertical circular/ projectile motion.
- F. **Elasticity:** Deforming force and restoring force, elastic, and plastic body. Stress-strain relationship, Hook's law, Young's modulus, Bulk modulus, Rigidity modulus, Poisson's ratio and relation between them. Elastic energy.
- G. **Surface tension:** Cohesive and adhesive forces. Definition, dimension and SI unit of surface tension. Surface energy. Angle of contact. Formation of droplets, bubble; their adhesion. Capillarity, shape of liquid meniscus in a capillary tube, rise of liquid in a capillary tube. Effect of impurity and temperature on surface tension.
- H. **Fluid mechanics/ Hydrostatics:** Pascal's law. Hydraulic lift. Buoyancy. Conditions of equilibrium of floating body. Archimedes' principle. Streamline flow and turbulent flow of a fluid, critical velocity. Equation of continuity and Bernoulli's theorem. Viscosity, Newton's formula for viscous force, coefficient of viscosity. Stokes law and terminal velocity. Effect of temperature on viscosity.
- I. **Thermal expansion of solid:** Linear, areal and volume expansion. Coefficients of expansions and their relation. Change of density with temperature.

- J. **Transmission of heat:** Conduction, convection, radiation. Thermal conductivity (formula, definition, dimensions, and SI unit).
- K. **Thermodynamics:** Thermal equilibrium, calorimetry. Zeroth law of thermodynamics. Heat, work, temperature and internal energy. First law of thermodynamics. Specific heats of gas, their relation and their ratio. Isothermal, isobaric, isochoric and adiabatic process.
- L. **Reflection of Light:** Reflection of light in plane mirror. Formation of image.
- M. **Refraction of light:** Refraction of light through plane surface. Laws of refraction. Refractive index, its relationship with the velocity of light in different media. Total internal reflection and critical angle. Principle of optical fibre.
- N. **Lens:** Convex and concave lenses. Formation of image. Relation between u , v , f . Power of a lens (in different mediums). Equivalent focal length & power of two thin lenses in contact.
- O. **Photoelectricity:** Photoemission, Work function. Photoelectric current, its variation with intensity and frequency of incident radiation. Stopping potential, Threshold frequency. Concept of photon. Einstein's photoelectric equation. Principle of solar photo-voltaic cell and its uses.

Chemistry (JELET)

- A. **Atomic Structure:** Bohr model of atom, de Broglie wave equation, Quantum numbers, Orbits and Orbitals, aufbau principal, Pauli's Exclusion principle, Hund's rule of maximum multiplicity, electronic configuration of elements. Definition of Atomic number, Mass number, isotopes, isotones and isobars. Concept of hybridization sp^3 , sp^2 , sp and shape of molecules.
- B. **Chemical Bonding:** Electrovalent, Covalent, and coordinate bonds, H-bond in HF, water, and ice. Classification of solids – crystalline and amorphous. Relationship between structure and properties of crystalline solids namely ionic solid, covalent solid and molecular solids. Covalent bonds in Carbon, Silicon and Germanium.
- C. **Acids, Bases & Salts:** Avogadro number, Mole concept, weight and volume relations. Acids, Bases and Salts (Arrhenius and Lewis concept). Acidity, basicity, neutralization reaction, hydrolysis of Salts. Equivalent Weight of acids, bases, & salts; strength of solution- normality, molarity, molality, formality and percentage strength, standard solution- primary and secondary standards, concept of pH, and pH scale. Indicators and choice of indicator, principles of acidimetry and alkalimetry. Buffer solution. Solubility product principle. Common ion effect with relation to group analysis.
- D. **Oxidation, Reduction, Electrochemistry:** Oxidation and Reduction by electronic concept, balancing chemical equations by ion-electron method, Redox Titration, Electrolysis, Arrhenius theory, Faraday's Laws, electrolysis of $CuSO_4$ solution using Pt-electrode and Cu-electrode. Application of electrolysis such as Electroplating, Electro-refining and Electrotyping, Electrochemical Cells, Primary Cell- Dry Cell, Secondary Cell- Lead storage cell, Electrochemical series.
- E. **Chemical Equilibrium:** Reversible and irreversible reactions, exothermic and endothermic reactions, chemical equilibrium, Le Chatelier's principle. Industrial preparation of Ammonia by Haber's Process, Nitric acid by Ostwald's process and Sulphuric acid by Contact Process. Catalyst and catalysis.
- F. **Metallurgy:** Minerals, Ores, Gangue, Flux, Slag, General method of extraction of metals with reference to Iron, copper and Aluminium. Definition of Alloy, purposes of making Alloy, Composition and uses of alloys such as brass, bronze, German silver, duralumin, nichrome, bell metal, gun metal, Monel metal, alnico, Dutch metal, babbitt metal, stainless steel. Amalgams, properties and uses of cast iron, wrought iron, steel and sponge iron. Uses of different alloy steels.
- G. **Water:** Soft and Hard water, action of soap on water, types of Hardness, causes of hardness, units of hardness, disadvantages of using hard water, estimation of total hardness by EDTA method, removal of hardness by Permutit process, Ion-exchange process, phosphate conditioning and Calgon treatment.

- H. **Organic Chemistry:** Organic compounds, Classification, Homologous series, Functional groups, Isomerism, Nomenclature. Properties and preparation of Methane, Ethylene and Acetylene, Methylated spirit, Rectified spirit, Power alcohol, Proof spirit. Uses of Benzene, Naphthalene and phenol.

Fundamentals of Electrical & Electronics Engineering (JELET)

- A. **Electrical components, measuring instruments:** Electrical components, measuring instruments: Resistors, capacitors, inductors. Principle of operation of PMMC & MI type Instrument. Principles of Voltage and Current measurement. Wheatstone bridge.
- B. **Transformers:** Basic principle and construction. BH characteristics. Transformation ratio. Equivalent circuit, losses, regulation, efficiency. Auto transformer.
- C. **Electrical machines:** Types of motors and their applications. Generation of rotating magnetic fields. Basic construction and working of DC motor, single phase induction motor. Torque-Speed characteristics. Speed control.
- D. **DC sources and circuits:** Voltage and current sources, their transformation, Thevenin's, Norton's theorems. Kirchhoff current and voltage laws. Superposition, equivalence. Determination of branch current/ voltage in passive circuits. Time domain characteristics of reactive components.
- E. **AC sources and circuits:** Amplitude, frequency, time-period, phase, peak/average/ RMS values. Exponential, complex and phasor form of representation of sinusoidal voltage and current. Impedance, power factor, active/reactive power. Voltage and current relationship in star-delta connections. Behaviour of simple RLC circuits with AC excitation.
- F. **Basic semiconductor devices:** Energy level diagrams of insulator, conductor & semi-conductor. Intrinsic & extrinsic, P-type, N-type semiconductors. P-N junction diode. PNP and NPN transistors, MOSFET, CMOS.
- G. **Analog Circuits:** OPAMP, virtual ground, inverting and non-inverting amplifiers, adder, subtractor, integrator, differentiator.
- H. **Digital Electronics:** Boolean Algebra, basic gates (AND, OR, NOT, NAND, NOR, Ex-OR, Ex-NOR) – truth tables, symbols, and combination of gates.

Farmacy (JELET)

- A. Diploma Level syllabus in Pharmacy as prescribed by the Pharmacy Council of India.

APPENDIX –7**District-wise list of examination zones for JELET-2022**

(A) Candidates domiciled in **West Bengal** will choose any three (3) of the following zones in order of their preference.

S. N.	State	District	Zone
1	WB	Bankura	Bankura
2	WB	Cooch Behar	Cooch Behar
3	WB	Darjeeling	Siliguri
4	WB	Hooghly	Serampore
5	WB	Howrah	Howrah Maidan/Shibpur
6	WB	Howrah	Salkia/Bally/Uttarpara
7	WB	Howrah	Santragachi/Domjur
8	WB	Howrah	Uluberia
9	WB	Kolkata	Central Kolkata (Moulali/Beliaghata/Narkel Danga/Phool Bagan/Kakurgachi/Park Circus)
10	WB	Kolkata	North Kolkata (Shyam bazar/ Bagh Bazar/Girish Park/Burra Bazar/ College Street/Sealdah)
11	WB	Kolkata	Salt Lake/New Town (Salt Lake/Lake Town/New Town/Rajar Hat)
12	WB	Kolkata	South Kolkata (Ballygaunge/Minto Park/ Bhowanipore/ Tollygaunge/ Jadavpur)
13	WB	Kolkata	West Kolkata (Joka/Behala/Alipore/Chetla/Khidirpore/ Budge Budge)
14	WB	Malda	Malda
15	WB	Murshidabad	Berhampur
16	WB	Nadia	Kalyani
17	WB	North 24 Parganas	Barrackpur (Dum Dum Jn. To Barrackpur)
18	WB	Paschim Burdwan	Asansol
19	WB	Paschim Burdwan	Durgapur
20	WB	Paschim Medinipur	Kharagpur
21	WB	Paschim Medinipur	Medinipur
22	WB	Purba Burdwan	Burdwan
23	WB	Purba Medinipur	Haldia
24	WB	South 24 Parganas	Garia/Sonarapur/Baruipur

(B) Candidates domiciled in **Tripura** will choose any three (3) of the following zones in order of their preference.

S. N.	State	District	Zone
1	Tripura	Agartala	Agartala
2	WB	Howrah	Salkia/Bally/Uttarpara

3	WB	Kolkata	Salt Lake/New Town (Salt Lake/Lake Town/New Town/Rajar Hat)
4	WB	Kolkata	South Kolkata (Ballygaunge/Minto Park/ Bhowanipore/ Tollygaunge/ Jadavpur)
5	WB	Kolkata	West Kolkata (Joka/Behala/Alipore/Chetla/Khidirpore/ Budge Budge)
6	WB	Paschim Burdwan	Asansol
7	WB	Paschim Burdwan	Durgapur

(C) Candidates domiciled states/UTs **other than West Bengal or Tripura** will choose any three (3) of the following zones in order of their preference.

S. N.	Districts of W B.	Zone
1	Howrah	Salkia/Bally/Uttarpara
2	Kolkata	Salt Lake/New Town (Salt Lake/Lake Town/New Town/Rajar Hat)
3	Kolkata	South Kolkata (Ballygaunge/Minto Park/ Bhowanipore/ Tollygaunge/ Jadavpur)
4	Kolkata	West Kolkata (Joka/Behala/Alipore/Chetla/Khidirpore/ Budge Budge)
5	Paschim Burdwan	Asansol
6	Paschim Burdwan	Durgapur

The “specified disabilities”, which are included in the Schedule of the RPWD Act, are as follows:

S. No.	Category	Type of Disability	Specified Disability
1	Physical Disability	Locomotor Disability	a) Leprosy cured person, b) Cerebral palsy, c) Dwarfism, d) Muscular dystrophy, e) Acid attack victims
		Visual Impairment	a) Blindness, b) Low vision c) Candidates having colour blindness/unilocularity are not eligible for admission in Mining Engineering
		Hearing Impairment	a) Deaf, b) Hard of hearing
		Speech & Language Disability	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) Specific learning Disability (Perceptual Disabilities, Dyslexia, Dyscalculia, Dyspraxia & Development Aphasia) b) Autism spectrum disorder
3	Mental Behaviour		a) Mental illness
4	Disability caused due to	i. Chronic Neurological Conditions	a) Multiple sclerosis b) Parkinsonism
		ii. Blood disorder	a) Haemophilia, b) Thalassemia, c) Sickle cell disease
5	Multiple Disabilities		a) More than one of the above specified disabilities including deaf blindness