



# West Bengal Joint Entrance Examinations Board

AQ-13/1 | Sector-V | Salt Lake City | Kolkata - 700 091 | West Bengal  
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## INFORMATION BROCHURE JEM - 2012

### Information Brochure with Syllabi for the Joint Entrance Examination - 2012

#### *For Admission to Degree Level*

Engineering ▶ Technology ▶ Dairy Technology ▶  
Agricultural Engineering ▶ Architecture ▶  
Medical ▶ Dental ▶ Pharmaceutical Courses in  
University/Colleges in West Bengal



## IMPORTANT NOTES

1. JEM is the Entrance Test for admission to degree level Engineering & Technology / Dairy Technology / Pharmacy / Architecture / Agricultural Engineering / Medical / Dental, etc. courses in Universities / University Departments / Government as well as Self Financing Colleges of the State of West Bengal.

2. Date of Written Examination is **15<sup>th</sup> April 2012 (SUNDAY)**.

3. **Bio-Metric Identification :**

Candidates must compulsorily affix their **LEFT THUMB IMPRESSION (LTI)** using blue / black Ink Pad on the application form in the specified spaces.

4. Recent coloured PHOTOGRAPHS with white background inscribing name of the candidate and date on Photograph and having size 2.5 cm × 3.5cm. are to be pasted on the application form at the indicated places. Before pasting the candidate should write his/her name and Application Form Number on the reverse side of the photograph.

5.0 Eligibility criteria for candidates :

5.1 Age Restriction :

Candidates must be **17 (seventeen)** years of age or above as on **31.12.2012**. There is no upper age limit except for the Marine Engineering Course for which the upper age limit is 25 Years as on 31.07.2012.

5.2 Residential requirements :

For Govt. Engineering & Technology Colleges, Govt. Medical and Dental Colleges as well as for Private Medical and Dental Colleges, candidates must have been residing in the State of West Bengal continuously at least for last 10 (ten) years as on 31.12.2011 or their parents must be permanent residents of West Bengal having their permanent home address in the State of West Bengal and must furnish the Residential requirement certificate to that effect within the Application Form from one of the competent authorities as mentioned in the Information Brochure.

5.3 Academic requirements :

5.3(a) **For Engineering & Technology courses :**

**For all the Courses except B. Arch., Marine Engineering and B. Pharmacy :** General candidates must pass H.S. (10+2) or its equivalent exam, with a minimum of 45% marks in Physics, Chemistry and Mathematics taken together (40% for SC/ST candidates) and with at least 30% marks in English (for all category of candidates) with individual pass marks in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject).

**For Marine Engineering Course :** The minimum percentage of marks is 60% in Physics and Chemistry and Mathematics taken together in (10+2) level with at least 50% marks in English either in 10th or in 12th Standard and with individual pass mark in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject) for all category of candidates.

**For B. Pharm Course :**

i) **For Institutions other than Jadavpur University :**

General candidates must pass H.S. (10+2) or its equivalent examination with a minimum of 45% marks in Physics, Chemistry and Mathematics / Biology taken together (40% for SC/ST candidates) and with at least 30% marks in English and having individual pass marks in Physics, Chemistry, Mathematics / Biology, English and Vernacular (or any other fifth subject) for all category of candidates. The vacant seats in Pharmacy after the counselling of merit listed candidates under Engg. Category will be filled up from the merit listed candidates under Medical Category.

ii) **For Jadavpur University :**

General candidates must pass H.S. (10+2) of its equivalent examination with a minimum of 45% marks in Physics, Chemistry and Mathematics taken together (40% for SC/ST candidates) and with at least 30% marks in English and having individual pass marks in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject) for all category of candidates. Admission to Bachelor in Pharmaceutical Technology course at Jadavpur University will be made from the merit listed candidates under Engineering category only.

**For B. Arch. Course :**

A candidate, besides satisfying the eligibility criteria as stated in 5.3(a), para-I, have to qualify in the NATA (**National Aptitude Test in Architecture**) conducted by the **Council of Architecture, New Delhi** and necessary document in this regard is to be produced at the time of counselling.

5.3(b) **For Medical and Dental courses :**

General Candidates must pass H.S. (10+2) Examination of West Bengal Council of Higher Secondary Education or equivalent examination recognized by the West Bengal University of Health Sciences with individual pass marks in Physics, Chemistry, Biology, English and Vernacular (or and other fifth subject) along with a minimum of 50% marks in Physics, Chemistry and Biology taken together (40% for SC/ST candidates) and 30% marks in English (for all category of candidates) in the said qualifying examination (10+2). In addition, candidates must have to secure at least 50% marks in Physics, Chemistry and Biological Sciences taken together (40% for SC/ST candidates) in the Joint Entrance Examination, West Bengal.

6. Schedule of Examination :

Date of Examination	9.30 a.m. to 11.30 a.m.	12.30 p.m. to 2.30 p.m.	3.30 p.m. to 5.30 p.m.
<b>15.04.2012 (Sunday)</b>	<b>Mathematics (100 marks)</b>	<b>Physics &amp; Chemistry (50 marks)      (50 marks)</b>	<b>Biological Sciences (100 marks)</b>

**N.B.** Candidates appearing in the qualifying examination (10+2) in 2012 will be allowed to sit for JEM 2012 provisionally and their admission, if merit listed, will be subjected to satisfying minimum requirements of eligibility as specified above.

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## 1. INTRODUCTION :

The West Bengal Joint Entrance Examinations Board was formed as 'West Bengal Board of Examination for Admission to Engineering Degree Colleges' in the year 1962, born out of a concept of holding a common admission test for the Engineering Colleges of the State of West Bengal. The basic purpose was to select candidates to be considered for admission to the State Engineering Colleges on the basis of the results of a single competitive examination, which would also lead to saving of time, energy and expenditure on the part of the candidates in appearing at number of entrance tests.

Since inception, the Office of the Board had been functioning at 'Slater Hall' in the campus of the Bengal Engineering and Science University, Shibpur (erstwhile known as "Bengal Engineering College, Shibpur") till January 2008.

At present, (with effect from 2008-09) the Board has been functioning at **AQ-13/1, Sector – V, Salt Lake, Kolkata-700 091.**

**At present, the Board conducts six entrance examinations as stated below :**

	<b>Exams.</b>	<b>Scope of admission</b>
<b>1</b>	<b>'JEM'</b>	For admission to degree level Engineering & Technology courses including Dairy Technology / Pharmaceutical Technology / Agricultural Engineering, etc. as well as Medical, Dental, etc. courses in different Universities / University Departments / Government Colleges as well as Self Financing Colleges of the State of West Bengal.
<b>2</b>	<b>'EVET'</b>	For admission to degree level course in VETERINARY SC. & ANIMAL HUSBANDRY
<b>3</b>	<b>'JECA'</b>	For admission to Post Graduate level Master of Computer Application (MCA) course conducted in different Engineering & Technology Colleges as well as in different Universities/University Department of the State of West Bengal.
<b>4</b>	<b>'JELET'</b>	For direct admission to 2 <sup>nd</sup> Year (3 <sup>rd</sup> Semester Level) of 4 years degree level Engineering & Technology / Pharmacy courses of the diploma holders in Engineering & Technology / Pharmacy and B.Sc. degree holders with mathematics as one of the subjects in the graduation level.
<b>5</b>	<b>'JENPARH'</b>	For admission to degree level courses of Ayurvedacharya, Homoeopathy, Unani, Nursing and Physiotherapy.
<b>6</b>	<b>'JEHOM'</b>	For admission to degree level Hotel Management & Catering Technology courses in AICTE approved self financing Hotel Management Institutions of the State of West Bengal.

## 2. Scheme of Examination "JEM - 2012" :

It is the Entrance Test for admission to different degree level Engineering & Technology/ Dairy Technology/ Pharmacy/ Agricultural Engineering, etc as well as degree level Medical / Dental courses in Universities / University Departments / Government colleges as well as Self Financing Colleges of the State of West Bengal.



- 2.1 The Examination “JEM-2012” will consist of 4 (Four) papers: i) Mathematics (100 marks), ii) Physics (50 marks) & Chemistry (50 marks) and iii) Biological Sciences (100 marks).

There are three different options for a student while appearing in the Joint Entrance Examination (JEM-2012) as stated below :

Options	Availability of Courses for admission through ‘JEM-2012’	Subject required to appear in (JEM -2012)	Type of form to be applied
1	Engineering & Technology / B.Arch./ Dairy Technology / Agricultural Engineering / Pharmacy	Mathematics, Physics & Chemistry	‘E’
2	Medical / Dental/ Pharmacy	Biological Science, Physics & Chemistry	‘M’
3	Engineering & Technology / B.Arch. / Dairy Technology / Agricultural Engineering / Pharmacy / Medical / Dental	Mathematics, Physics, Chemistry and Biological Sciences	‘C’

## 2.2 The Question Pattern for each subject :

In each subject all questions will be Multiple Choice Questions (MCQ-type, with four options including single correct answer). **In MCQ type, for each incorrect response, 33.33% of mark would be deducted** and more than one answer indicated against one question will be treated as incorrect response/answer. All questions will have to be answered on specially designed machine gradable answer sheets (OMR answer sheet). **Answers are to be marked using blue/black ball point pen only** on the ‘OMR answer sheet’.

**N.B. It is to be noted carefully that the candidates must write the “Question Booklet No” at the indicated places on both the OMR Answer Sheet and Attendance Sheet during examination.**

## 2.3 Rules for Tie breaking :

In case of two or more candidates obtaining equal marks, inter-se merit of such candidates shall be determined in compliance with the following rules.

### For Engineering ranking :

- by total negative marks obtained by the candidates in the subjects Mathematics, Physics and Chemistry. Candidate obtaining lesser total negative marks shall be given preference.
- and then candidate securing lesser negative marks in Mathematics shall be given preference.
- and then candidate securing lesser negative marks in Physics shall be given preference.



d) and then by age (preference to older candidate).

**For Medical ranking :**

- a) by total negative marks obtained by the candidates in the subjects Physics & Chemistry and Biological Sciences. Candidate obtaining lesser total negative marks shall be given preference.
- b) and then candidate securing lesser negative marks in Biological Sciences shall be given preference.
- c) and then candidate securing lesser negative marks in Chemistry shall be given preference.
- d) and then by age (preference to older candidate).

**2.4 Schedule of Examination “JEM - 2012” :**

Date of Examination	9.30 a.m. to 11.30 a.m.	12.30 p.m. to 2.30 p.m.	3.30 p.m. to 5.30 p.m.
15.04.2012 (Sunday)	Mathematics (100 marks)	Physics (50 marks) & Chemistry (50 marks)	Biological Sciences (100 marks)

**N.B. No further examination shall be held under any circumstances for those who will be unable to appear in WBJEE on the scheduled date of the examination.**

**3. Eligibility criteria for candidates :**

**3.1 Applicant must be a citizen of India.**

**3.2 Age Restriction :**

Candidates must be **17 (seventeen)** years of age or above as on **31.12.2012**. There is no upper age limit except for the **Marine Engineering Course** for which the upper age limit is **25 years** as on **31.07.2012**.

**3.3 Residential requirements and certificates from Competent Authorities :**

*Candidates desirous of seeking admission to Government Engineering/Technology Colleges, Govt. Medical and Dental Colleges as well as to Private Medical and Dental Colleges, must have been residing in the State of West Bengal continuously at least for last 10 (ten) years as on 31.12.2011.*

**OR**

*Their parents must be permanent resident of West Bengal having their permanent home address in the State of West Bengal.*

Certificate of residence in this respect shall have to be produced in the proforma as printed in the Application Form for JEM-2012 from any one of the **Competent Authorities** as given below. The proforma of residential certificate as printed in the form is required to be filled in properly (as applicable).

The Residential Certificate as applicable should be obtained from any of the following competent authorities [i) District Magistrate; ii) Additional District Magistrate; iii) Deputy Magistrate; iv) Deputy Collector; v) Sub-Divisional Officer; vi) Block Development Officer; vii) Superintendent

of Police or Additional Supdt. of Police; viii) Chief or Additional Chief Metropolitan Magistrate; ix) Director of Scheduled Caste and Tribe Welfare; x) Commissioner, Additional Commissioner, Joint Commissioner, Deputy Commissioner of Kolkata Police; xi) Deputy Secretary or above to the Government of West Bengal; xii) Heads of the Institutions (located in West Bengal) where the applicants are presently studying or last studied; xiii) Members of Parliament in West Bengal; xiv) Members of West Bengal Legislative Assembly; xv) Sabhapati - Panchayat Samity; xvi) Mayor-in-Council-Municipal Corporation; xvii) Municipal Commissioner and Chairman Borough Committee; xviii) Councillor, Municipal Corporation] in whose jurisdiction the candidates reside.

### 3.4 Academic requirements :

#### 3.4(a) For Engineering & Technology courses :

**For all the Courses except B. Arch., Marine Engineering and B. Pharmacy :** General candidates must pass H.S. (10+2) or it's equivalent examination with a minimum of 45% marks in Physics, Chemistry and Mathematics taken together (40% for SC/ST candidates) and with at least 30% marks in English (for all category of candidates) with individual pass marks in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject).

**For Marine Engineering Course :** The minimum percentage of marks is 60 % in place of 45% in Physics, Chemistry and Mathematics taken together in '10+2' level with at least 50% marks in English either in 10<sup>th</sup> or in 12<sup>th</sup> Standard and with individual pass marks in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject) for all category of candidates.

#### **For B. Pharm. Course :**

##### (a) For Institutions other than Jadavpur University :

General candidates must pass H.S.(10+2) or it's equivalent examination with a minimum of 45% marks in Physics, Chemistry and Mathematics/Biology taken together (40% for SC/ST candidates) and with at least 30% marks in English and having individual pass marks in Physics, Chemistry, Mathematics/Biology, English and Vernacular (or any other fifth subject) for all category of candidates.

After the counselling of merit listed candidates under Engg. Category, the vacant seats in Pharmacy will be filled up from the merit listed candidates under Medical Category.

##### (b) For Jadavpur University,

General candidates must pass H.S.(10+2) or it's equivalent examination with a minimum of 45% marks in Physics, Chemistry and Mathematics taken together (40% for SC/ST candidates) with at least 30% marks in English and having individual pass marks in Physics, Chemistry, Mathematics, English and Vernacular (or any other fifth subject) for all category of candidates.

Admission to undergraduate course in Pharmaceutical Technology at Jadavpur University will be made from the candidates merit listed under the Engineering Category only Published by WBJEEB on the basis of JEM - 2012.



**For B. Arch course :** A candidate, besides satisfying the eligibility criteria as stated in 3.4(a), Para-1, must have to qualify in the **NATA (National Aptitude Test in Architecture)** conducted by the **Council of Architecture, New Delhi** and necessary document in this regard is to be produced at the time of Counselling.

### **3.4(b) For Medical and Dental courses :**

General Candidates must pass H.S. (10+2) Examination of West Bengal Council of Higher Secondary Education or equivalent examination recognized by the West Bengal University of Health Sciences with individual pass marks in Physics, Chemistry, Biology, English and Vernacular (or any other fifth subject) along with a minimum of 50% marks in Physics, Chemistry and Biology taken together (40% for SC/ST candidates) and 30% marks in English (for all category of candidates) in the said qualifying examination (10+2). In addition, candidates must have to secure at least 50% marks in Physics, Chemistry and Biological Sciences taken together (40% for SC/ST candidates) in the Joint Entrance Examination, West Bengal.

**4.0 Syllabus of Examination “JEM-2012” :** The -syllabus for JEM-2012 has been given in **APPENDIX-I.**

### **5.0 Application Procedure :**

**5.1 a) Availability of Application Form :** The **application kit** (i.e., prescribed printed application form along with Information Brochure and posting window envelop) will be available from the different Branches of **United Bank of India** (as specified in the advertisement) on payment of **Rs. 500/-** (for E & M type Form) and **Rs.600/-** for C type Form in cash **from 28.12.2011 to 18.01.2012.** The application form once purchased cannot be returned or replaced.

b) The **application kit** may also be obtained by post from the Board on application with an additional fee of Rs.200/-(Rupees two hundred only). The total amount (i.e. cost of application form plus 200/-) has to be paid through Demand Draft drawn in favour of “West Bengal Joint Entrance Examinations Board” payable at Kolkata/Howrah.

**Last date for request for Application Kit by post is 06.01.2012.**

The Board shall not be responsible for non-receipt of request for Application Form within stipulated date by post due to postal delay.

c) The Application Kit can also be obtained only from the office of the Board at AQ-13/1, Sector – V, Salt Lake, Kolkata-700 091 with payment of the actual cost of the Form and late fee of Rs.300/-(Rupees three hundred only) through a Bank Draft to be drawn in favour of “West Bengal Joint Entrance Examinations Board” payable at Kolkata/Howrah for the period from **19.01.2012 to 21.01.2012.**

**5.2 Guidelines for filling in the Application Form :** The guidelines for filling in the Application Form has been provided in **APPENDIX-II.**

**5.3 Submission of Application Form :** The duly filled in Application Form must be sent in the printed window envelop provided in the “Application Kit” through **Speed Post only** to **West Bengal Joint Entrance Examinations Board, AQ-13/1, Sector-V, Salt Lake, Kolkata-700 091**. Before sending the Application Form the candidate must ensure that the Bar Code printed on the right hand top portion of the Application Form (side-1) is clearly visible from the window.

**The last date for receipt of completed Application Form by Speed Post only is 24.01.2012.**

Candidates must enclose the Bank slip marked “**Board Copy**” along with the application form. The Bank slip marked “**candidate copy**” must be retained by the candidate.

*No application form will be received by hand or through courier/other agencies.*

**Last Date for receipt of Application Forms : 24<sup>th</sup> January, 2012. Forms received after the last date will not be processed.**

**5.4. Intimation regarding receipt of Application form by the Board in the website :**

The candidate is required to *put/log/enter the Application Form Number* in the specified space through the following website for having intimation regarding receipt of his/her application form by the Board.

**www.wbjeeb.in**

The **application form nos.** of the received application forms **will be displayed** in the websites.

**6. Issue of Admit Card :** After receipt of Application Form by the Board, an Admit Card will be sent to the applicant indicating thereon his/her Examination Centre of the Joint Entrance Examination by Speed Post. However, the Board will not be responsible for any consequences that may arise due to loss of Admit Card in transit.

*The admit cards of the eligible candidates will also be uploaded on the website as mentioned under clause (6). In case the applicant does not receive the Admit Card before examination, he/she may download a copy of the same from the website and can appear in the examination in the concerned Examination Centre indicated in the downloaded Admit Card with the following documents-*

- a) *Identical two copies of the original photographs (as pasted in the Application Form) duly attested by the Head of the recognized Institute last attended.*
- b) *Photo copy of the filled-in Application Form of JEM-2012.*
- c) *Postal slip for despatch of filled-in Application Form (by Speed Post).*
- d) *Bank Slip (which is retained by the candidate)*
- e) *Original Admit Cards of Madhyamik (10th standard) or equivalent examination / H.S.(10+2 standard) or equivalent examination.*

*Duplicate Admit Cards may be issued on convenient dates, to be notified later, after examination on receipt of written request in this regard from the Applicants enclosing the copies of documents as mentioned above under clause 6(a to e).*

*Requisite fee of Rs. 300/- (Rupees three hundred) only in the form of a Bank Draft to be drawn in favour of West Bengal Joint Entrance Examinations Board payable at Kolkata / Howrah has to be paid for the purpose.*

Candidates must ensure that the photographs on the admit card are not mutilated/distorted/soiled even by accident and the hologram pasted on the photograph is not torn or taken out. Candidates with such admit cards will not be allowed to appear in the Joint Entrance Examination.

*Candidates must retain their admit cards carefully in a secured place in undamaged condition in all respect as stated above till the completion of admission procedure.*

*No duplicate Admit Card will be issued after the Joint Entrance Examination under any circumstances.*

*All applicants who appear to be prima facie eligible shall be provisionally permitted to sit for the Joint Entrance Examination. If, after scrutiny at any stage, it is found that an applicant is otherwise ineligible his/her candidature will be automatically cancelled even if he/she has appeared at the Joint Entrance Examination and secured a position in the merit list or at any stage during Counselling/admission or registration.*

*The candidature of a candidate will be automatically cancelled if he/she fails to produce any of the required appropriate documents in original during counselling / admission or registration for fulfillment of eligibility and other criteria as specified earlier.*

## 7. Centre of Examination :

- The allotment of examination centre will be completely at the discretion of the Board. No request for change of centre allotted will be entertained under any circumstances.
- Candidates must indicate the name of the states they belong to by ticking the appropriate **State Box** on the top of the printed window envelop received in the Application Kit.
- Candidates must write the district code as specified in **Appendix –IV** in the appropriate Boxes on the top of the printed window envelop received in the Application Kit.
- Candidates residing in West Bengal must also specify their district on the top of the printed envelop received in the Application Kit in the Box provided for the purpose.

## 8. Procedure for conduct of Examination : Important procedures to be followed during the conduct of examination have been specified in APPENDIX - III.

### 8.1 Districts and their Codes :

Districts and their codes have been mentioned in APPENDIX - IV.

## 9. Evaluation and Declaration of Results of JEM – 2012 :

9.1 **Rules for scrutiny/review of Answer Sheet :** *The Board neither publishes nor communicates the result to any individual applicant. It does not have any provision for post publication scrutiny and /or review and hence will not entertain any such application after the examination.*

9.2 **Declaration of the Results of ‘JEM - 2012’ :** Results of ‘JEM – 2012’ are likely to be declared by June 15, 2012. Results will be available in various websites over and above the website of the Board, which will be announced in various electronic/printing media before declaration of results. On the basis of performance in JEM-2012 the Board will publish the merit list(s). The number of merit listed candidates to be published will be decided by the appropriate authority.

9.3 Rank Cards will be made available only to the merit listed candidates in due course after declaration of the results. Detailed information in this regard will be available in the following website:

**[www.wbjeeb.in](http://www.wbjeeb.in)**

## 10. Legal Jurisdiction :

10.1 All matters pertaining to conduct of JEM–2012 shall fall within the jurisdiction of Kolkata only.

10.2 The Board will not be a party pertaining to any dispute arising in the process of admission to any course of study through JEM – 2012.

## 11. Admission :

11.1 Detailed information regarding admission to the Constituent Universities/University Departments/ Colleges and allotment of seats to any Engineering/ Technology/Pharmacy/College shall be made available in due course. The admission and allotment of seats to Medical and Dental Colleges shall be governed by the Central Selection Committee (Medical) and accordingly candidates have to comply with the requirements of eligibility conditions for admission as would be laid down by the concerned Central Selection Committee. It should be noted that being Merit Listed does not make a candidate eligible for admission to any constituent University/University Department/ College.

### 11.2 Tuition Fee Waiver Scheme (TFW)

W.B. Govt. in the Higher Education Department has implemented the Tuition Fee Waiver Scheme (TFW) for all AICTE approved Govt. Engineering and Technology Colleges, Govt. aided self-financing Engineering and Technology Colleges, Engineering Departments of State-aided Universities as well as non-aided self-financing Engineering and Technology Colleges of the State from the academic session of 2011-12 for economically backward meritorious students of the State of West Bengal

#### a) Eligibility :

Students who have been merit listed in the Joint Entrance Examination – 2012 (JEM-2012) conducted by West Bengal Joint Entrance Examinations Board and

- i) whose annual family income from all sources is less than Rs. 2.50 lakhs (Rupees two lakhs and fifty thousand) only
  - ii) who are domiciled in West Bengal only
- shall be eligible for seats under this scheme.

**b) Availability of seats under TFW Scheme along with other modalities :**

- i) Up to maximum 5% of sanctioned intake per course will be made available under this scheme.
- ii) These seats shall be supernumerary in nature.
- iii) The affiliating University shall allow requisite no. of seats over and above the sanctioned strength for each of such affiliated college under this scheme subject to a maximum of 5% of the approved intake or the number of actual tuition fee waiver granted by the College in the same branch, as per selection made by the State Admission Authority, whichever is less.
- iv) The waiver is limited to the Tuition Fee for all the Institutions concerned  
All other fees except tuition fee will have to be paid by the beneficiary.
- v) The selection of candidates for the tuition fee waiver scheme shall be decided during the counseling process based on inter-se merit from amongst the eligible candidates.  
The results of Joint Entrance Examination conducted by West Bengal Joint Entrance Examinations Board will be the basis of the merit in this case.
- vi) In the event of non-availability of students in this category fulfilling all prescribed criteria, the same shall not be given to any other category of applicants.

**c) Competent persons to issue annual family income from all sources :**

For the purpose of determining the Annual Income of parents / guardians from all sources, an officer of the State Govt. in the rank of Block Development Officer or Sub-Divisional Officer or Additional District Magistrate or District Magistrate / Group 'A' Gazetted Officer of State or Central Govt. of similar rank or above in the rural region.

Or

Executive Officer of Municipality / Assistant Commissioner or above in Municipal Commissionerate / Group "A" Gazetted Officer of State or Central Govt. of similar rank or above in the urban region.

Will be competent to issue Income Certificate to be issued to each of such students.

**It may be noted that aforesaid Income Certificate issued by any other person will not be entertained in this regard.**

- 11.3** Particulars regarding availability of branches in Engineering & Technology as well as B.Arch/ Pharmacy/MBBS/Dental etc. courses offered by the different Universities/ University Departments

/ Institutions are provided herewith for ready reference of intending students. It is to be noted that final list for availability of seats in B.E. / B. Tech. and/or MBBS/BDS etc. courses shall be provided by the competent authority prior to counselling and allotment.

11.4 Detailed procedure of counselling will be notified in due course.

## 12. Certificate for Reserved Categories :

12.1 **Certificate for SC/ST** : Scheduled Caste / Scheduled Tribe candidates in W.B., as specified in Govt. of W. B. Order No. 1813-PCW/MR-94/11 dated 20.06.2011 are eligible for admission through Joint Entrance Examination, 2012. **However, SC / ST candidates hailing from States other than West Bengal are not eligible for such benefit and they will be treated as General category candidates.** The Caste certificates will have to be produced at the time of counselling from the competent authorities viz A-(i) Deputy Director, Backward classes welfare, W.B. (ii) Commissioner, Backward classes welfare W.B. in case of candidates claiming to be SC or ST residing in any part of West Bengal.

B-(i) Deputy Collector of Land Revenue, Kolkata; ii) Collector of Stamp Revenue, Kolkata; iii) Metropolitan Magistrate, Kolkata; iv) Additional Chief Metropolitan Magistrate, Kolkata; v) Chief Metropolitan Magistrate, Kolkata; vi) 1<sup>st</sup> Class Stipendiary Magistrate; vii) Executive Magistrate; viii) Sub-divisional Magistrate; ix) Sub-divisional Officer; x) Deputy Collector; xi) Additional District Magistrate; xii) Collector and xiii) District Magistrate within their respective jurisdictions - in case of candidates claiming to be SC or ST and ordinarily residing within such jurisdictions.

12.2 **Certificate for PC** : The PC candidates claiming seats under reserved category are required to produce PC certificate from the competent authority satisfying the following criteria.

12.2 (a) For Admission to B.E/B.Tech/B.Arch Courses : For Physically Challenged (locomotor disorder, visual impairment, Speech & hearing Impairment) category candidate a minimum of **40%** disability is required subject to the condition that the candidate is capable of carrying out all activities related to theory and practical work as applicable to B.E/B.Tech/B.Arch courses without any special concession and exemption.

12.2 (b) For Admission to MBBS/Dental Courses : In case of PC candidates the earmarked seats shall be filled up by candidates with locomotor disability of lower limbs between **50% to 70%**. However, in case any seat in the earmarked quota remains unfilled on account of non availability of candidates with locomotor disability between **50% to 70%**, then any such unfilled seats in the said quota shall be filled up by persons with locomotor disability of lower limbs between **40% to 50%**.

**13. List of the Universities / University Departments / Institutions offering different degree level Engineering / Technology / B.Pharm / B.Arch / B. Agricultural Engineering courses in West Bengal as on 12.12.2011**

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
<b>A. University &amp; University Departments</b>			
1	<b>BENGAL ENGINEERING &amp; SCIENCE UNIVERSITY, SHIBPUR</b> College Road, P.O. – Botanical Garden, Howrah - 711 103 (033) 2668-4561-63 / 2668-0521-25, (033) 2668-2916, 1503 www.becs.ac.in	Shibpur, Howrah Pin-711 103	AES, CE, CST, EE, ETC, IT, ME, MT, MIN, AR
2	<b>BIDHAN CHANDRA KRISHI VISWA VIDYALAYA</b> P.O.Krishi Viswavidyalaya, Mohanpur, Nadia-741 252 (03473) 222657 / 223257 / 58159, Extn. 252(O) www.bckv.edu.in	Mohanpur Nadia Pin-741 252	AG
3	<b>JADAVPUR UNIVERSITY</b> Kolkata – 700 032 (033) 2414-6007, 6666/6194/6643/6495/6443, Fax-2414-6414/2413 www.jadavpur.edu	Jadavpur Kolkata Pin-700 032	AR, CH, CE, CSE, EE, ECE, ME, MT, PH, PE, PT, PW, COE, EIE, IT, FBC
4	<b>UNIVERSITY OF KALYANI</b> P.O. Kalyani, Dist Nadia, Pin- 741 235 (033) 2582 3457 (Direct) 2582 8750 Ext. 228, (033) 25828282(Fax) www.klyuniv.ac.in	Kalyani Nadia Pin- 741 235	AEIE/EIE, IT
5	<b>UNIVERSITY INSTITUTE OF TECHNOLOGY, BURDWAN</b> Colapbag North, Burdwan - 713 104 (0342) 26588776, 2658777, 2658787 www.buruniv.ac.in, www.uit.html	Burdwan Pin-713 104	CSE, ECE, AEIE/EIE, IT, CE, EE
6	<b>UTTAR BANGA KRISHI VISWAVIDYALAYA</b> P.O.- Pundibari, Dist.- Cooch Behar, Pin 736 165 (03582) 270948, 9434080523 (M), (0358) 2270143 www.ubkv.ac.in	Cooch Behar Pin-736 165	AG
7	<b>WEST BENGAL UNIVERSITY OF ANIMAL &amp; FISHERY SCIENCES</b> 37/68, Kshudiram Bose Sarani, Kolkata - 37 (033) 2558 0278, 2556 3123, Fax No. - 2546-7696	Kolkata Pin-700 037	DT
8	<b>WEST BENGAL UNIVERSITY OF TECHNOLOGY</b> BF-142, Salt Lake, Sector-I, Kolkata - 700 064 (033) 2321-1327 / 1345, (033) 23341034 www.wbut.net	Salt Lake Kolkata Pin-700 064	IT, CSE

**\*Admission of students to Bengal Engineering and Science University, Shibpur from JEM-2012 in the Academic Session 2012-13 is subject to Approval from the Concerned University Authority.**

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
<b>B. State Government Institutions</b>			
9	<b>GOVT. COLLEGE OF ENGINEERING &amp; CERAMIC TECHNOLOGY</b> 73, A.C. Banerjee Lane, Kolkata - 700 010 2370 1264, 2363-2072 www.gcect.ac.in	Beliaghata Kolkata Pin-700 010	CSE, CT, IT
10	<b>GOVT. COLLEGE OF ENGINEERING &amp; TEXTILE TECHNOLOGY</b> 4, Barrack Square East, P.O.- Berhampore, Murshidabad-742 110 (03482) 252809 / 250142, (0348) 2252809 www.gcettb.org	Behampore, Murshidabad Pin -742 110	CSE, TT, EE, ME
11	<b>GOVT. COLLEGE OF ENGG. &amp; TEXTILE TECHNOLOGY</b> 12, William Carey Road, Serampore - 712 201 (033) 2662 1058 / 3156, (033) 26621058 (Fax) www.gcetts.org	Serampore Hooghly Pin-712 201	CSE, IT, TT, APM
12	<b>GOVERNMENT COLLEGE OF ENGINEERING &amp; LEATHER TECHNOLOGY</b> L.B.Block, Sector – III, Salt Lake City, Kolkata – 700 098 (033) 2335-6977, (033) 23358353 www.gcelt.gov.in	Salt Lake Kolkata Pin-700 098	LT, CSE, IT
13	<b>INSTITUTE OF PHARMACY</b> Jalpaiguri, P.O.& Dist: Jalpaiguri, Pin - 735 101. (03561) 230057, (0356) 1221884	Jalpaiguri Pin-735 101	PH
14	<b>JALPAIGURI GOVERNMENT ENGINEERING COLLEGE</b> P.O. – Jalpaiguri Government Engineering College, Jalpaiguri-735 102 (03561) 255131 / 255132, 256143 (Fax) www.jgec.org	Jalpaiguri Pin-735 102	CE, CSE, EE, ECE, IT, ME
15	<b>KALYANI GOVERNMENT ENGINEERING COLLEGE</b> Kalyani University Campus, P.O.- & P.S.- Kalyani, Nadia-741 235 (033) 2582 6680 Registrar / Phone & Fax : (033) 2582-1309 (Principal) / 2580-8437 (A.O.) www.kgec.edu.in/www.kgec.ac.in	Kalyani Nadia Pin-741 235	CSE, ECE, EE, ME, IT
<b>C. Private / Self-Financing Institutions</b>			
16	<b>INSTITUTE OF JUTE TECHNOLOGY</b> 35, Ballygunge Circular Road, Kolkata-19 (033) 2461-5477/5632/5326/5444 Fax: 2461-5632 www.kgec.edu.in	Ballygunge Kolkata Pin-700 019	JFT, JT



Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
17	<b>NATIONAL POWER TRAINING INSTITUTE</b> Michel Faraday Street, City Centre, Durgapur - 713 216 (0343) 2545888 / 2546237, (0343) 2545888 (Fax) www.npti.nic.in www.nptidgp.com	Durgapur Pin-713 216	PW
18	<b>ASANSOL ENGINEERING COLLEGE</b> Sen-Religh Road, Kanyapur, Asansol, Burdwan - 713 304 (0341) 225 2108 / 225 3057, (0341) 2256334 e-mail.aeccal@vsnl.net	Asansol Burdwan Pin-713 304	CSE, ECE, IT, ME, EE, AEIE/EIE, CE
19	<b>ARYABHATTA INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> Panagarh, P.O.- Panagarh Bazar, Burdwan-713 148 (0343) 2526417/ 416/ 415, (0343) 2526417 (Fax) www.alemd.in	Panagarh Burdwan Pin-713 148	CSE, ECE, IT, EE, EEE, ME
20	<b>ABACUS INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> Natun Gram, Mogra Hooghly - 712 148 (03213) 202076, 222403 / 222604 / 222657 (Fax) www.abacusinstitute.com	Mogra Hooghly Pin-712 148	CSE, AEIE, ECE, IT, EE
21	<b>ACADEMY OF TECHNOLOGY</b> Aedconagar, Hooghly- 712 121 (033) 2684-2888/ 0003, (033) 2684-2888 (Fax) www.actechindia.org	Adisaptagram Hooghly Pin-712 121	CSE, ECE, EE, IT, AEIE/EIE, ME
22	<b>ADAMAS INSTITUTE OF TECHNOLOGY</b> Barasat-Barrackpore Road, Barasat, North 24 Parganas (N), Kolkata-700 126, (033) 2524-1817 www.adamas.co.in	Barasat 24 Pgs. (N) Pin-700 126	ECE, CSE, IT, CE EE, ME
23	<b>BANKURA UNNAYANI INSTITUTE OF ENGINEERING</b> Subhankar Nagar, Pohabagan, Bankura - 722 146 (03242) 259 360/ 255 955, 255955 (Fax) www.buie.info	Bankura Pin-722 146	CSE, ECE, EE, IT, AEIE/EIE, ME
24	<b>BENGAL COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b> Sahid Sukumar Bannerjee Sarani, Bidhan Nagar, Durgapur – 713 212 (0343) 253 2606/253 3189-190, (0343) 253 6756, 253 3186 www.bcetdgp.ac.in	Bidhan Nagar Durgapur Pin-713 212	CSE, ECE, AEIE/EIE, IT, EEE, BT, CE, ME, EE
25	<b>BENGAL COLLEGE OF PHARMACEUTICAL SCIENCE &amp; RESEARCH</b> Biplabi Rasbehari Basu Sarani, Bidhan Nagar, Durgapur-713 212 253 3189, 253-4972, Fax- (0343) 253 3186 e-mail.aksest_pharm@rediffmail.com	Bidhan Nagar Durgapur Pin-713 212	PH

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
26	<b>BENGAL COLLEGE OF ENGINEERING &amp; TECHNOLOGY FOR WOMEN</b> Shilpo Kanan Road, Bidhan Nagar, Durgapur (0343) 253-2606, 253-3189, Fax (0343) 253 3186 2533142 e-mail.skset_dgp@rediffmail.com	Bidhan Nagar Durgapur Pin-713 212	CSE, ECE, EE, IT EEE
27	<b>BENGAL INSTITUTE OF TECHNOLOGY &amp; MANAGEMENT</b> BITM Campus, Santiniketan Bypass, P.O.- Doranda, Pin : 731 235 (03463) 271 353, 271273, City: 98300 08167 www.camelliagroup.org	Santiniketan Pin-731 235	CSE, ECE, EE, IT, AEIE/EIE, ME, CIV
28	<b>BENGAL INSTITUTE OF PHARMACEUTICAL SCIENCES, KALYANI</b> State Pharmacopoeial Laboratory & Pharmacy for Indian Medicine Campus, Kalyani-741 235, Nadia (033) 2589 1724, 2589 1768, 6450 3121 www.bipstrust.org / bibs e-mail : bips_rediffmail.com	Kalyani, Nadia Pin-741 235	PH (Ayurveda)
29	<b>BENGAL SCHOOL OF TECHNOLOGY</b> Sugandha, Delhi Road, P.O.- Sugandha, Dist- Hooghly-712 202 2686-6064/2027/2868 www.sedcoindia.com/pharmacy	Sugandha Hooghly Pin-712 202	PH
30	<b>BIRBHUM INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> B.I.E.T. P.O. Suri, Dist: Birbhum- 731 101. (03462) 250 568/597, 258415 (Fax) e-mail.dir.biet@yahoo.com	Suri Birbhum Pin-731 101	CSE, ECE, EE, IT, CE, ME
31	<b>BUDGE BUDGE INSTITUTE OF TECHNOLOGY</b> Nischintapur, Budge-Budge, Kolkata 700 137. (033) 2482-0670, Fax- (033) 2482-0641. www. bbit.edu.in, e-mail.contact@bbit.edu.in	Budge Budge 24 Pgs. (S) Pin-700 137	CE, EE, CSE, ECE ME,
32	<b>BCDA COLLEGE OF PHARMACY &amp; TECHNOLOGY, HRIDAYPUR</b> 78, Jessore Road (South), Hridaypur, Barasat, Kolkata-700 127 (033) 2584 2665, 94338 41204 (M) www.bcdapt.com	Hridaypur 24 Pgs. (N) Pin-700 127	PH
33	<b>BENGAL INSTITUTE OF TECHNOLOGY</b> Tech Town, Dhapa Manpur on Basanti Highway, Hadia, Kolkata-150 (033) 2345 8004 / 05, Fax. 2345-8077 www.bitonline.in, e-mail.bitkolkata@yahoo.co.in	Dhapa Kolkata Pin-700 150	CSE, ECE, IT, BT

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
34	<b>B.P.PODDAR INSTITUTE OF MANAGEMENT &amp; TECHNOLOGY</b> 137, VIP Road, Poddar Vihar, Kolkata – 700 052 (033) 2573 9607/ 9608/ 9609/ 9610, (033) 2573 9401 www.bppimt.ac.in	Poddar Bihar Kolkata Pin-700 052	CSE, ECE, IT, EE
35	<b>BHARAT TECHNOLOGY</b> Banitabla,Uluberia, Howrah-711 316 (033) 2363-9292, Fax.2709-4430, 2372-0017	Uluberia Howrah Pin-711 316	PH
36	<b>BRAINWARE GROUP OF INSTITUTIONS</b> 398, Ramkrishnapur Road, Barasat, Kolkata-700 124 City office Ph : (033) 4020 0824	Barasat 24 Pgs. (N) Pin-700 124	CSE, EE, ECE, CE, IT, ME
37	<b>COLLEGE OF ENGINEERING AND MANAGEMENT, KOLAGHAT</b> P.O.- KTPP Township (Mecheda), Purba Midnapore- 721 171 (03228) 250600/ 250971/ 249444, Fax: (0322) 8250880 www.cemkolaghat.org	Kolaghat Midnapore Pin-721 171	CSE, ECE, EE, IT, AEIE/EIE, ME
38	<b>CALCUTTA INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> 24/1A, Chandi Ghosh Road, Tollygunge I.T.I.Campus, Kolkata – 40 (033) 2421 9951/ 8998, Fax: (033) 2481 6767 www.ciemcal.org	Tollygunge Kolkata Pin-700 040	CSE, ECE, EE, IT, ICE/CIE, CE
39	<b>CALCUTTA INSTITUTE OF TECHNOLOGY</b> P.O.- Banitabla, Uluberia, Howrah-711 316 (033) 2661-2094/ 96/ 97, (033) 2661-0736, 3733 (Fax)	Uluberia Howrah Pin-711 316	CSE, ECE, IT, CH, EE
40	<b>CALCUTTA INSTITUTE OF PHARMACEUTICAL TECH. AND ALLIED HEALTH SCIENCES.</b> Banitabla, Checkpost, P.O.-Banitabla, Uluberia, Howrah – 711 316 (033) 2709 4367, 2661-2096/97, (033) 2661 0736, Fax: 2661-0736 www.urschard.org	Uluberia Howrah Pin-711 316	PH
41	<b>CAMELIA INSTITUTE OF TECHNOLOGY</b> Digberia (Badu Road), Madhyamgram, Kolkata – 700 129 (033) 6455-1145/ 1146/ 1660, 2212-1007/ 1009/ 2885 www.camelliagroup.org	Madhyamgram 24 Pgs. (N) Pin- 700 129	CSE, ECE, EEE, IT, AEIE/EIE, EE, ME
42	<b>CAMELIA SCHOOL OF ENGINEERING &amp; TECHNOLOGY</b> Nadibhag, P.O.- Badu Road, Madhyamgram, Kolkata – 700 129 (033) 3248-6971/ 72 www.camelliagroup.org	Madhyamgram 24 Pgs. (N) Pin-700 129	ECE, CSE, IT, EE, CE, ME, EEE

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
43	<b>CAMELIA INSTITUTE OF TECHNOLOGY &amp; MANAGEMENT</b> Halder Dighi, G.T.Road, Bainchi, Hooghly-712 134 (033) 2212 -1007 / 1009, Fax – (033) 227 7540 www.cameliagroup.org	Bainchi Hooghly Pin-712 134	CSE, EE, ME, ECE CE
44	<b>CAMELIA INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> Bud bud, Dist - Burdwan - 713 403 (033) 2212 -1007 / 1009, Fax – (033) 227-7540	Budbud Burdwan Pin-712 403	CSE, ECE, EE, IT, AEIE/EIE, ME, CE
45	<b>CAMELIA INSTITUTE OF ENGINEERING</b> Nadibhag, P.O.- Babu Road, Madhyamgram, Kolkata - 700 129	Madhyamgram 24 Pgs. (N) Pin- 700 129	CIV, CSE, EE, ECE, MEC
46	<b>DR.B.C.ROY ENGINEERING COLLEGE</b> Jemua Road, Fuljhore, Durgapur – 713 206, Dist: Burdwan (0343) 250-1353/ 4106/4121, Fax: (0343) 250-4059/3424 www.bcrec.org, www.bcrec.net.in	Fuljhore Durgapur Pin-713 206	CSE, ECE, EE, IT, AEIE/EIE, ME, CE
47	<b>DR.B.C.ROY COLLEGE OF PHARMACY AND ALLIED HEALTH SCIENCES</b> Dr. Meghnath Saha Sarani, Bidhannagar, Durgapur - 713 206 (0343) 253-2678, 2532679 www.bcrec.org, www.bcrec.net.in	Bidhan Nagar Durgapur Pin-713 206	PH
48	<b>DURGAPUR INSTITUTE OF ADVANCED TECHNOLOGY &amp; MANAGEMENT</b> G.T. Road Rajbandh, Durgapur – 713 212, Dist : Burdwan. (0343) 2520712 / 13, (0343) 2520881 (Fax) www.diatm_rahul.ac.in	Rahbandh Durgapur Pin-713 212	CSE, ECE, EE, IT, CH, ME
49	<b>DUMKAL INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> Basantapur, Murshidabad-742 406, (03481) 231-144, 231-155, 230033, 231188 www.b-e-s.net	Dumkal Murshidabad Pin-742 406	CSE, ECE, IT, EE, AEIE/EIE, ME
50	<b>DREAM INSTITUTE OF TECHNOLOGY,</b> Samali, P.O.-Nahazari, PS.-Bishnupur, 24 Pgs (S), Kolkata-104 033-2498-0376, 3293-6088, Fax: (033) 2458-0244, 2398 0244 www.dreaminstituteonline.org	Bishnupur 24 Pgs. (S) Pin-700 104	CSE, ECE, AEIE/EIE, EE
51	<b>DR. SUDHIR CHANDRA SUR DEGREE ENGINEERING COLLEGE</b> 540, Cassipur Dum Dum Road, Kolkata - 700 074 (033) 2560-0149, 2289-3945 (Fax) www.jisgroup.org	Dum Dum Kolkata Pin-700 074	CSE, ECE, ME, AE, EE
52	<b>FUTURE INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> Sonarpur Station Road, Teghori, P.O.-R.K.Pally, Kolkata -700 150 (033) 2434-5615/ 5640, Fax: (033) 24345641 www.fiemonline.org	Sonarpur Kolkata Pin-700 150	CSE, ECE, IT, EE, ME, AEIE/EIE

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
53	<b>GARGI MEMORIAL INSTITUTE OF TECHNOLOGY</b> Balarampur, Baruipur, Kolkata - 700 144 (033) 6535-0032, 2460-5166 (Fax)	Balarampur Kolkata Pin-700 144	CSE, ECE, EE, CIV, MEC
54	<b>GLOBAL INSTITUTE OF MANAGEMENT AND TECHNOLOGY</b> Pal Para More, Bhatjangla, Krishna Nagar, Nadia, (West Bengal) (03472) 271 211/829, Fax (03472) 271 311	Krishna Nagar Nadia Pin-741 102	ECE, CE, EE, ME CSE
55	<b>GUPTA COLLEGE OF TECHNOLOGICAL SCIENCE</b> [College of Pharmacy] Ashram More, G. T. Road, Asansol-713 301, Dist : Burdwan, (0341) 231-3120 / 231-3336, Fax : (0341) 231 4604 www.gctsindia.in	Asansol Burdwan Pin-713 301	PH
56	<b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> 157, Nilgunj Road, Panihati Kolkata - 700 114 (033) 2523-3900 / 0743, Fax: (033) 2563-7957 www.jisgroup.ac.in/gnit/	Panihati Kolkata Pin-700 114	CSE, ECE, EE, IT, AEIE/EIE, FT
57	<b>GURUNANAK INSTITUTE OF PHARMACEUTICAL SCIENCE &amp; TECHNOLOGY</b> 157/F, Nilgunj Road, Panihati, Kolkata – 700 114 2523-1247, (033) 2563-7957, 2224-2200, 2289-3945 www.gnipst.ac.in	Panihati Kolkata Pin-700 114	PH
58	<b>GREATER KOLKATA COLLEGE OF ENGINEERING AND MANAGEMENT</b> Dudhnai, Baruipur, Ramnagar-II, 24 Pgs. (South) (033) 2430 5897, Fax: (033) 2430-5897	Baruipur 24Pgs (S) Pin-700 047	CSE, ECE, IT, AEIE/EIE, EE
59	<b>HALDIA INSTITUTE OF TECHNOLOGY</b> P.O. HIT, Haldia, Purba Medinipur -721 657 (03224) 252850/ EPBX :252900/253061/255615/255616/617 www.hit-haldia.in	Haldia Medinipur Pin-721 657	CSE, ECE, BT, CE, CH, EE, AEIE/EIE, FT, ICE/CIE, ME, PE, IT
60	<b>HERITAGE INSTITUTE OF TECHNOLOGY</b> Chowbhaga Road, Anandapur, P.O.-East Kolkata Township, Kolkata-107, (033) 2443- 0454/ 56/ 57, Fax : (033) 2443-0455 www.heritageit.edu	Anandapur East Kolkata Township Pin-700 107	CSE, ECE, BT, CH, AEIE/EIE, IT, CIV, ME
61	<b>HOOGHLY ENGINEERING &amp; TECHNOLOGY COLLEGE</b> Vivekananda Road, Pipulpati, P.O.-& Dist.-Hooghly, Pin-712 103 (033)2681- 0505/1392, Fax: (033) 2680-3026, 2680-4121 www.hooghlyetcs.org	Pipulpati Hooghly Pin-712 103	CSE, ECE, EE, CE, ME
62	<b>IMPS COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b> Nitynandapur, P.O-Malda, Dist : Malda-732 101 (03512) 271-555 / 278-115, Fax : (0351) 2278115	Malda Pin-732 103	CSE, ECE, EE, IT, CE

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
63	<b>INSTITUTE OF ENGINEERING AND MANAGEMENT</b> Y-12, Sector-V, Electronic Complex, Salt Lake City, Kolkata-700 091 (033) 2357- 8189 / 2059, Fax: (033) 2357-8302 www.iemcal.com	Salt Lake Kolkata Pin-700 091	CSE, ECE, IT
64	<b>INSTITUTE OF TECHNOLOGY AND MARINE ENGINEERING</b> Jhinga, P.O -Amira, P.O: Amira, Diamond Harbour Road, 24Pgs(S)-743 368 (953174)245101/ 356/078 www.itmeindia.org	D.H.Road 24 Pgs(S) Pin-743 368	CSE, ECE, IT, MR, BT, AEIE/EIE, ME
65	<b>INSTITUTE OF SCIENCE &amp; TECHNOLOGY</b> Dhurabila, Dhamkuria, Chandrakona Town, Paschim Medinipur-721201 (03225) 267-288, 266-644, 266644 (Fax) www.istonline.org.in	Chandrakona Medinipur Pin-721201	CSE, ECE, AEIE/EIE, IT, EEE, CE
66	<b>IERCCEM INSTITUTE OF INFORMATION TECHNOLOGY</b> Banipur College Road, Banipur, Habra, 24 Pgs.(N), Pin- 743 233 (033) 2357-7550-59, Fax- (033) 2357 -7735	Banipur Habra Pin-743 233	ECE, AEIE./EIE, CSE, IT, EEE
67	<b>IDEAL INSTITUTE OF ENGINEERING</b> Kalyani Shilpanchal, Kalyani, Nadia, Pin - 741235 (033) 2502 5528/5629, 2337 8447, 9433058450 www.idealinstituteofengineering.com, e-mail : idealineg@gmail.com	Kalyani Pin-741 235	ECE, ME, CE, EE, CSE
68	<b>JIS COLLEGE OF ENGINEERING</b> Block "A" Phase III, Kalyani - 741 235, (033) 2582 2137/ 2856/ 2580 8640, Fax : (033) 2582-2138 www.jiscollege.ac.in	Kalyani Pin-741 235	CSE, ECE, IT, BM, EE, AEIE/EIE, ME, CE
69	<b>KANKSA ACADEMY OF TECHNOLOGY &amp; MANAGEMENT</b> Behind B.D.O. Office, Kanksa Block, P.O.- Panagarh Bazar, Burdwan, (0343) 2524038/41, Fax – (0343) 252 4039, www.kanksaacademy.com	Panagarh Burdwan Pin-713 148	CSE. ECE, EE, IT, CE, ME
70	<b>KANAD INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> P.O.- Mankar, Dist.- Burdwan, Pin-713144 (0343) 2517137/38, 9732285316(M) www.kanadinstitute.org	Mankar Burdwan Pin-713144	CSE, ECE, IT, EE, ME, CE
71	<b>MURSHIDABAD COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b> Banjetia, Berhampore, Dist: Murshidabad- 742 102. (03482) 258-145/ 251-191, (03482) 277-267 www.mcetbhb.net	Berhampur Murshidabad Pin-742 102	CSE, ECE, IT, EE, AEIE/EIE, CIV

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
72	<b>MEGHNAD SAHA INSTITUTE OF TECHNOLOGY</b> Naziabad, P.O.- East Kolkata Town Ship, Kolkata – 700 107 (033)2443-1031, 2443-1032, 2357-6163/6164/1094 (033)2226-2841 www.msitcollege.org	East Kolkata Township Kolkata Pin-700 107	CSE, ECE, IT, CE, EE
73	<b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> Braja Radha Nagar P.O. Gosaipur, P.S.-Bishnupur, Bankura-722 122 (03244) 255206/07/08, City: 2460 5166/24406245, (0324) 4255206 www.mitbishnupur.com	Bishnupur Bankura Pin-722 122	CSE, ECE, EE, IT, ME, PE
74	<b>MCKV INSTITUTE OF ENGINEERING</b> 243, G.T.Road (N) Liluah, Howrah -711 204. (033) 2654-9315/ 17, Fax: (033) 2654-9318 www.mckv.edu.in	Liluah Howrah Pin-711 204	CSE, ECE, IT, AE, ME, EE
75	<b>MODERN INSTITUTE OF ENGINEERING &amp; TECHNOLOGY</b> Bandel, Barol-Malimpur, Rajhat, Hooghly-712 123 (033) 2684 4316 / 4317 www.mietcollege.org e-mail : info@mietcollege.org	Bandel Rajhat Hooghly Pin - 712 123	CSE, ECE, EE, AEIE, CIV
76	<b>NARULA INSTITUTE OF TECHNOLOGY</b> 81, Nilgunj Road, Agarpara, Kolkata - 700 109 (033) 2563 8888/ 7777, Fax: (033)2683-7029 www.nit.ac.in	Agarpara Pin-700 109	CSE, ECE, EE, IT, CE, AEIE
77	<b>NETAJI SUBHAS CHANDRA BOSE INSTITUTE OF PHARMACY</b> Tatla, Chakdaha, Nadia -741 222 (03473) 329-337/207054, Fax : (03473) 247 882 www.nscbipe.org	Chakdaha Nadia Pin-741 222	PH
78	<b>N.S.H.M COLLEGE OF PHARMACEUTICAL TECHNOLOGY</b> 60 (124), B. L. Saha Road, Kolkata-700 053 Phone & Fax : (033) 2403-2152/2300/2301 www.nshm.com	Kolkata Pin-700 053	PH
79	<b>NETAJI SUBHAS ENGINEERING COLLEGE</b> (Near Garia Rly. Station), Garia, Kolkata-152 (033) 2436-3333/ 1285 City: 2226 4396/ 9785, Fax: (033) 24361286 www.nsecollege.org, e-mail: info@nsecollege.org	Garia Kolkata Pin-700 152	CSE, ECE, EE, IT, BM, AEIE/EIE
80	<b>NSHM KNOWLEDGE CAMPUS, DURGPUR</b> Arrahshibtala, Durgapur - 713 212 (0343) 2533 813 / 14 / 15 Fax : (0343) 2534025 www.nshm.com, e-mail : contactus@nshm.com	Arrahshibtala Durgapur Pin-713 212	CSE, ECE, EEE, ME, CE

Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
81	<b>OMDAYAL GROUP OF INSTITUTIONS</b> Plot No. 38 & 39 Uluberia Industrial Growth Centre, Near Birshibpur Railway Station, Uluberia - 711 316 (033) 2661 3179 / 3366 www.oders.in	Birshibpur Uluberia Pin-711 316	ECE, CE, ME, CSE, IT
82	<b>PAILAN COLLEGE OF MANAGEMENT &amp; TECHNOLOGY</b> Plot 2-6, Sector-I, Phase-I, Bengal Pailan Park, Amgachia Road, Joka, Kolkata-700 104 (033) 2453 5605, 2497 8006/07, Fax-2497 8238	Pailan Park Kolkata Pin-700 104	CSE, ECE, EEE, IT
83	<b>REGENT EDUCATION &amp; RESEARCH FOUNDATION</b> Bara Kanthalia, P.O – Sewli Telini Para, P.S – Titagarh, Kolkata – 700 121, (033) 6459 8188, 2535-3051/52 (Fax) e-mail : rerfkolkata@gmail.com	Titagarh Kolkata Pin-700 121	CSE, ECE, EEE, CE, ME
84	<b>RCC INSTITUTE OF INFORMATION TECHNOLOGY</b> College of Lether Technology (Old Campus), Beliaghata, Canal South Road, Kolkata- 700 015. (033) 2323-2463, 2323-4435, Fax : (033) 2323-4668 www.rcciit.in	Beliaghata Kolkata Pin-700 015	CSE, ECE, IT, EE, AEIE
85	<b>SILIGURI INSTITUTE OF TECHNOLOGY</b> Hill Cart Road, P.O-Sukna, Siliguri, Darjeeling-734 009 (0353) 277 8002/8004, Fax : 277 8003 www.sitcollege.org, e-mail : silslg@satam.net.in	Sukna Darjeeling Pin-734 009	CSE, ECE, EE, IT, AEIE/EIE, CIV
86	<b>SAROJ MOHAN INSTITUTE OF TECHNOLOGY</b> Vill+P.O.-Guptipara, Dist : Hooghly, Pin : 712 512 (03213) 262-806 / 262-1719, Fax : (03213) 262856	Guptipara Hooghly-512	CSE, ECE, EE, AEIE/EIE, IT, ME
87	<b>ST. THOMAS COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b> 4, Diamond Harbour Road, Kolkata - 700 023 (033) 2448 1081/ 1082, Fax : (033) 24482914 www.stcet.org	Kolkata Pin-700 023	CSE, ECE, EE, IT
88	<b>SEACOM ENGINEERING COLLEGE</b> Jaladhulagori, P.S.-Sankrail, Howrah - 711 302 2679-0481 / 0482 / 0483, Fax : (033) 2679-0480 www.seacomkolkata.org	Sankrail Howrah Pin-711 302	CSE, ECE, EE, ME, IT, MR
89	<b>SANAKA EDUCATION TRUST'S GROUP OF INSTITUTIONS</b> P.O.- Malandighi, P.S.- Kaksha, Durgapur - 713 212 Dist-Burdwan	Durgapur Burdwan Pin-713 212	CSE, ECE, EEE, IT, ME, CE, EE



Sl. No.	Name of the Institution & Address	Location	Courses offered noted by abbreviations
90	<b>SURENDRA INSTITUTE OF ENGINEERING &amp; MANAGEMENT</b> Dhakuria, P.O.-New Chamta, P.S.- Matiagara, Siliguri, Darjeeling - 734 009 Fax : (0353) 6467517/518/519/520	Siliguri Darjeeling Pin – 734 009	CSE, ECE, EE, ME, CE
91	<b>SUPREME KNOWLEDGE FOUNDATION GROUP OF INSTITUTIONS</b> 1Khan Road, P.O.- Mankundu, Hooghly- 712 139 (033) 2683 1141, 2683 1146 www. Supremeknowledgefoundation.com	Mankunu Hooghly Pin-712 139	CSE, AEIE, ECE, EE
92	<b>SWAMI VIVEKANANDA INSTITUTE OF SCIENCE &amp; TECHNOLOGY</b> Dakshin Gobindapur, P.S.- Sonarpur, Kolkata - 700145 (033) 2437-9913	Sonarpur 24 Pgs (S) Pin-700 145	CSE, ECE, EEE, ME
93	<b>ST.MARY'S TECHNICAL CAMPUS, KOLKATA</b> Barasat North 24 Parganas, District-Kolkata, Pin-700 126 040-2402 - 8676	Barasat	CSE, ECE, EEE, ME
94	<b>TECHNO GLOBAL-BALURGHAT</b> Mangalpur, Near District Jail, P.O- Beltala, P.S. – Balurghat, South Dinajpur, -733 103, (0352) 2271101	Balurghat South Dinajpur Pin-733 103	CSE, EE, ECE, IT, CIV
95	<b>TECHNO INDIA</b> EM 4/1, Salt Lake City, Sector – V, Kolkata - 91 (033) 2357 5683/ 84, (033) 23575686 City: 2226 4396/ 9785 www.ticollege.org	Salt Lake Kolkata Pin-700 091	CSE, ECE, EE, FT, IT, AEIE/EIE
96	<b>TECHNO INDIA COLLEGE OF TECHNOLOGY</b> New Town, Rajarhat, Kolkata-700 156 (033) 2324 – 2050, Fax: 2324-2090 www.tictcollege.org	New Town Rajarhat Kolkata Pin-700 156	CSE, ECE, EE, AEIE/EIE, IT

### 13.2. *Abbreviations of different courses and their full names :*

*Abbreviations of different courses and their full names are given in APPENDIX-V.*

### 13.3 **Reservation of seats in B.E. / B. Tech. / B. Pharm. / B. Arch. / B. Agricultural Engineering :**

#### 13.3.1 **Reservation of seats for SC/ST/PC Candidates :**

In **Govt. Engineering/Technology Colleges** of the State as well as in those **Self Financing Private Engineering & Technology Colleges of the State, who have received some grants-in aid from the Government**, reservation of seats for SC/ST/PC candidates shall be governed by the State Govt. Reservation Rules.

For **Self Financing Private Engineering & Technology Colleges** of the State, reservation of seats under such category is not a mandatory requirement. However, some of such colleges offer seats to reserved category of students at the discretion of the concerned College Authority.

For Universities / University Departments, reservation of seats for SC/ST/PC candidates shall be governed by the rules of the concerned University.

Availability of seats for aforesaid reserved category of students shall be declared by the Appropriate authority in due course.

**It is important to be noted that availability of such reserved category of seats are applicable for candidates as per Govt. of W.B. rules.**

#### 13.3.2 **Reservation of seats for students under Defence Quota :**

Altogether 12 (twelve) nos. of seats are reserved for students under Defence Quota. 7 (seven) seats in different branches in Govt. Engineering & Technology Colleges of the State. 2 (two) seats are reserved at Jadavpur University and 3 (three) seats are reserved at \*Bengal Engineering and Science University, Shibpur. The branches of such seats in Universities will be decided by the respective University Authority. Branchwise distribution of 7 (seven) seats under Govt. Engineering Colleges are furnished below :

<i>Name of the Govt. Engg./Technology College</i>	<i>No. of seats with branch available</i>
1. Jalpaiguri Govt. Engineering College	: 1 (Mechanical Engineering) : 1 (Information Technology)
2. Govt. College of Engg. & Textile Tech.,Serampore	: 1 (Information Technology)
3. Govt. College of Engg. & Textile Tech.,Berhampore	: 1 (Computer Science & Engg.)
4. Govt. College of Engg. & Ceramic Tech., Kolkata	: 1 (Information Technology)
5. Govt. College of Engg. & Leather Tech., Kolkata	: 1 (Leather Technology)
6. Kalyani Govt. Engineering College, Kalyani	: 1 (Electrical Engineering)

For consideration under **Defence Quota**, candidates will have to apply to the **Rajya Sainik Board, Home Department, Government of West Bengal, Writers' Buildings, Kolkata – 700 001** through the concerned Zila Sainik Board, W.B. (for ex-servicemen) and Units (for Serving Soldiers) in the prescribed form (available with them) with an attested copy of WBJEE Admit Card. Based on the recommendation of the said Rajya Sainik Board, a separate Merit List shall be published by the Joint Entrance Examinations Board for consideration for counselling and allotment of seats.

**\*Admission of students to Bengal Engineering and Science University, Shibpur under Defence Quota from JEM-2012 in the Academic Session 2012-13 is subject to Approval from the Concerned University Authority.**

### 13.3.3 Reservation of seats for students Merit listed in All India Engineering Entrance Examination (AIEEE), 2012 :

Seats are available for students merit listed in All India Engineering Entrance Examination (AIEEE), 2012 upto the extent of 10% of the approved seats in all the existing Self Financing Engineering & Technology Colleges only of the State. Allotments of seats shall be strictly on the basis of merit and preference of students through the counselling process conducted by the Competent Authority. *The eligibility and other criteria as stipulated for JEM – 2012 candidates for admission to degree level Engineering / Technology / Pharmacy /Architecture etc. courses, will also be applicable for AIEEE merit listed candidates.*

### 13.3.4 Reservation of seats for admission under Management Quota :

Self Financing Engineering & Technology Colleges of the State offering B.Tech./ B. Pharm. Courses have been allowed to admit student directly by the Concerned Management from intending merit listed students fulfilling the required eligibility criteria as may be specified by the State Govt. in the Higher Education Department in this regard. Seats available for such category are maximum 10% of the approved intake. However, final status for availability of such seats shall be notified in due course.

### 14. Selection for Admission :

Selection for Engineering & Technology courses will be based on the basis of the WBJEE merit / option / with regard to preferences for Colleges/ Universities/ Institutions/ and Branches. Detailed information will be notified and made available from the following website in due course :

**[www.wbjeeb.in](http://www.wbjeeb.in)**

### 15. Admission to M.B.B.S & B.D.S courses :

#### 15.1 Eligibility Criteria for Candidates :

##### 15.1.2 Applicant must be citizen of India.

General Candidates must pass H.S. (10+2) Examination of West Bengal Council of Higher Secondary Education or equivalent examination recognized by the West Bengal University of Health Sciences with individual pass marks in Physics, Chemistry, Biology, English and Vernacular (or any other fifth subject) along with a minimum of 50% marks in Physics, Chemistry and Biology taken together (40% for SC/ST candidates) and 30% marks in English (for all category of candidates) in the said qualifying examination (10+2). In addition, candidates must have to secure at least 50% marks in Physics, Chemistry and Biological Sciences taken together (40% for SC/ST candidates) in the Joint Entrance Examination, West Bengal.

##### 15.1.3 Age Restriction : Candidates must be 17 (seventeen) years of age or above as on **31.12.2012**. There is no upper age limit.

**N.B. :** After examination or admission, if it is found on scrutiny that an applicant is under-age or otherwise ineligible, his/her application for admission will be cancelled outright even if he /she appeared in the Joint Entrance Examination and secured a position in the Merit List. Permission to appear at the Joint Entrance Examination or securing a rank in the Merit List on the basis of the performance in the

said examination does not constitute a right / guarantee in favour of the candidate for his/her admission to a Medical College or Dental College unless he/she has fulfilled all the prescribed requirements as specified earlier.

**15.1.4 Residential requirements :** For admission to the M.B.B.S. & B.D.S. courses in Government and Private Colleges, the candidates must either have been residing in the State of West Bengal continuously at least for last 10 (Ten) years as on 31.12.2011

**OR**

Their parents must be permanent resident of West Bengal having their permanent home address in the State of West Bengal.

Certificate of residence in this respect shall have to be produced in the proforma as printed in the Application Form for JEM-2012 from any of the **Competent Authorities** as given below. The proforma of residential certificate as printed in the form is required to be filled in properly (as applicable).

The Residential Certificate as applicable should be obtained from any one of the following competent authorities [i) District Magistrate; ii) Additional District Magistrate; iii) Deputy Magistrate; iv) Deputy Collector; v) Sub-Divisional Officer; vi) Block Development Officer; vii) Superintendent of Police or Additional Supdt. of Police; viii) Chief or Additional Chief Metropolitan Magistrate; ix) Director of Scheduled Caste and Tribe Welfare; x) Commissioner, Additional Commissioner, Joint Commissioner, Deputy Commissioner of Kolkata Police; xi) Deputy Secretary or above to the Government of West Bengal; xii) Heads of the Institutions (located in West Bengal) where the applicants are presently studying or last studied; xiii) Members of Parliament in West Bengal; xiv) Members of West Bengal Legislative Assembly; xv) Sabhapati - Panchayat Samity; xvi) Mayor-in-Council-Municipal Corporation; xvii) Municipal Commissioner and Chairman Borough Committee; xviii) Councillor Municipal Corporation] in whose jurisdiction the candidates reside.

**N. B.** Total seats for “All-India through All India Entrance Test” will be filled up as per directive of the Hon’ble Supreme Court. For admission to these seats, candidates will have to apply separately to the Central Board of Secondary Education, New Delhi, subsequent to their notification for the purpose.

Residential requirement as stated above is also applicable for the Scheduled Caste and Scheduled Tribe candidates of this State of West Bengal only.

*There is no separate reservation on All-India basis except in open seats.*

**15.1.5 Medical Fitness :** Medical certificate will have to be produced during counselling from a Registered Medical Practitioner regarding physical and mental fitness as per proforma provided by Central Selection Committee (Medical). The proforma may be obtained from Central Selection Committee (Medical) against payment of Rs. 20/-.

**N.B. :** Candidates with visual handicapness and hearing disablement are not eligible for preferential admission quota.

**15.2 Application form :** One combined application form for admission to M.B.B.S. Course in 11 (Eleven) Medical Colleges mentioned at ‘A’ below and for admission to B.D.S. Course in 5 (Five) Dental Colleges mentioned at ‘B’ below will be available after publication of Merit List provided by the ‘WBJEE Board’

between 11 a.m. and 2 p.m. on working days from Central Selection Committee (Medical) at Medical College Campus, Kolkata and all Medical/Dental Colleges in West Bengal on production of receipt of original Treasury Challan of Rs.100/- for application form for admission to M.B.B.S./B.D.S. Course under head of account "0210-Medical and Public Health -03 - Medical Education, Training and Research -105 - Allopathy - 005 - Fees for Joint Entrance Examination - 16 - other Fine etc. For Joint Entrance Examination 2006" on column 8a of T.R. form 7 with the words "prices of the application form for admission to 1<sup>st</sup> year M.B.B.S./B.D.S. Courses for the Session 2012-2013." Account Code : 0210 03 105 005- 16. Cheques / Drafts / Postal requests will not be entertained.

**15.3 Selection :** Selection for M.B.B.S. Course and B.D.S. Course will be based on the Rank position in the Merit List of the Joint Entrance Examination having regard to preferences for Medical or Dental Colleges and subject to passing the qualifying examination satisfying the eligibility criteria. Counselling of the Merit Listed candidates for admission to MBBS/BDS courses will be conducted by the Central Selection Committee (Medical). The venue, dates and time of the aforesaid counselling will be notified by the concerned authority in due course.

Selected candidates for both the M.B.B.S. and B.D.S. Course will have to furnish bonds giving undertaking to serve the State Government anywhere in the State for a minimum period of 3 years after passing.

#### **15.4 INSTITUTIONS :**

##### **A. M.B.B.S. Course :**

1. Medical College Kolkata, 88, College Street, Kolkata – 700 073. Ph. No.(033) 2241-401
2. N.R.S. Medical College, 138, Acharya J. C. Bose Road, Kolkata – 700 014. Ph. No. 2244-3213-16
3. R.G. Kar Medical College, 1, Kshudiram Bose Sarani, Kolkata – 700 004. Ph. No.(033) 2555-7656/75
4. Calcutta National Medical College, 32, Gorachand Road, Kolkata–700 014. Ph. No.(033) 2244-0122
5. Bankura Sammilani Medical College, Bankura – 722 102. Ph. No. (3242) 250981
6. Burdwan Medical College, Burdwan – 713 104. Ph. No. (0342)2558641-45
7. North Bengal Medical College, P.O. Sushrutnagar, Darjeeling – 734 432. Ph. No. (0353) 2585482/83
8. I.P.G.M.E&R., Acharya J.C. Bose Road, Kolkata – 700 020. Ph. No.
9. Midnapur Medical College, Paschim Medinipur. Ph. No. (03222) 274321.
10. K.P.C. Medical College & Hospital, 1F, Raja Subodh Chandra Mullick Road, Jadavpur, P.O- Jadavpur University, Kolkata – 32. Ph.No. (033) 30016119



11. College of Medicine and J. N. M. Hospital, WBUHS, Kalyani, Nadia

**B. B.D.S. Course :**

1. Dr.R.Ahmed Dental College, 114, Acharya J.C. Bose Road, Kolkata-14.  
Ph. No.(033) 2246 6876
2. North Bengal Dental College, Sushrutnagar, Darjeeling – 734 432. Ph. No. (0353) 2585248
3. Gurunanak Institute of Dental Science & Research, 157, Nilganj Road, Kolkata, Panihati,  
Kolata – 700 114. Ph.No. (033) 2583 9998
4. Haldia Institute of Dental Sciences and Reserch, Haldia, Purba Medinipur – 721 645.  
Ph. No.(03224) 645704/280110/255662
5. Burdwan Dental College, Power House Para, Burdwan, Dist. Burdwan-713101.

Total intake shall include reserved seats for Govt. of India, Donors, SC/ST/PC and for All India quota seats as per directive of the Supreme Court. Policy for admission to 11 (eleven) Government Medical Colleges and Dental Colleges and total intake will be notified by the Appropriate Authority in due course of time.

In case of 5 (Five) Dental Colleges, total intake (including reservation, if any) will also be notified by the Appropriate Authority in due course of time.

**Other details & Counselling :** Details information will be available from the Chairman, Central Selection Committee, Medical, Anatomy Building, Medical College, 88, College Street, Kolkata – 700 073 (Phone 2241-4901 to 4905 (Extn.2030).

16.

A Sample of a duly filled in Application Form - JEM-2012 is given in **APPENDIX-VI.**



## APPENDIX – 1

WEST BENGAL JOINT ENTRANCE EXAMINATIONS BOARD

### SYLLABUS FOR JEM - 2012

## PHYSICS

### Mechanics & General properties of matter

- (i) Units and dimensions : Units of measurement, system of units, fundamental and derived units, S I units, dimensional analysis  
  
Methods of measurement: Vernier scale, screw gauge, analysis of errors, significant figures.
- (ii) Scalars and vectors: Addition, subtraction, multiplication of vectors
- (iii) Kinematics in one, two and three dimensions, projectiles, uniform circular motion, centripetal force, centrifugal force, relative velocity
- (iv) **Dynamics** : Newton's laws of motion; inertial frames, uniformly accelerated frame (pseudo-forces), conservation of linear momentum, rocket motion, centre of mass, impulsive forces, friction.
- (v) Work, Power and Energy , conservative and non-conservative forces, conservation of energy, collision(elastic and inelastic).
- (vi) Rotational motion : Torque, angular momentum and conservation of angular momentum, moment of inertia, radius of gyration, moment of inertia of objects with simple geometrical shapes, rotational kinetic energy and rolling on horizontal surface

**Gravitation** : Laws of gravitation, gravitational field and potential, acceleration due to gravity and its variation, escape velocity, Kepler's laws and planetary motion, motion of satellites, Geostationary orbit.

**Elasticity** : Hooke's law, elastic moduli, Poisson's ratio, elastic energy.

**Hydrostatics and Fluid Mechanics** : Pressure in a fluid, Pascal's law, Archimedes' principle, hydraulic press .

**Surface energy and surface tension, capillary rise.**

**Viscosity, streamline and turbulent motion, critical velocity, Reynold's number, Stoke's law, Bernoulli's theorem.**

**Vibrations** : Simple Harmonic Motion, equation of motion, damped and forced vibrations, resonance, superposition of SHM.

**Wave motion :** Elastic waves, longitudinal and transverse waves. progressive waves, superposition of waves: interference, stationary waves, beats, vibration of strings, air columns, velocity of elastic waves in different media, Doppler effect

**Thermal Physics :** Scales of temperature, thermal expansion of solids, liquids and gases, calorimetry, change of state of matter, latent heat, transition temperature, Transmission of heat: conduction, convection, radiation, Black body radiation, absorptive and emissive powers: Kirchoffs law, Wien's law, Stefan's law, Newton's law of cooling, Kinetic theory : mean free path, pressure of an ideal gas, mean and rms velocity of molecules of a gas, kinetic interpretation of temperature, degrees of freedom, equipartition of energy(statement only) — application to monoatomic and diatomic gases.

**Thermodynamics :** First law of thermodynamics, equivalence of heat and work, intensive and extensive thermodynamic variables, reversible and irreversible processes, specific heats of gases, relation between  $C_p$  and  $C_v$ .

**Optics :** Reflection and refraction at plane and spherical surfaces, total internal reflection, thin lenses, power of a lens, combination of lenses and mirrors, deviation and dispersion by prisms

Simple and compound microscopes, astronomical telescope, human eye: defects and remedies.

Coherent sources, interference of light, Young's double slit.

**Electrostatics :** Coulomb's law, electric field and potential, flux of electric field, Gauss' law, electric field and potential due to an infinite line charge, charged infinite sheet, solid spheres and spherical shells. Electric dipole and field due to dipole.

Capacitance, spherical and parallel plate capacitors, energy stored in a capacitor, series and parallel combination of capacitors,

**Current Electricity :** Electric current, drift velocity and mobility, Ohm's law, resistivity, combination of resistances in series and parallel, combination of cells.

Kirchoffs laws, Wheat stone bridge, Metre bridge, potentiometer.

Heating effect of current, thermoelectricity, see beck and Peltier effect.

Chemical effect of current, Faraday's law of electrolysis, primary and secondary cells.

**Electromagnetism :** Magnetic effects of Current, Biot Savart's law, magnetic field due to an infinite line charge, circular coil and solenoid, Ampere's circuital law, Lorentz force, Fleming's left hand rule, force between two current carrying conductors, magnetic moment of a current loop, magnetic dipole, torque experienced by a current carrying coil in a uniform magnetic field, galvanometer, current sensitivity, conversion of galvanometer to voltmeter and ammeter.



Magnetic field of earth, tangent galvanometer, magnetic properties of materials : Dia, para and ferromagnet , permeability, susceptibility.

Electromagnetic induction : Magnetic flux, Faraday's laws of electromagnetic induction, Lenz's law, self and mutual induction, , Flemings right hand rule, Alternating current, peak and rms value of alternating current; generator, D.C. motor and transformer

Qualitative idea of electromagnetic wave and its spectrum.

**Modern Physics :** Bohr's atomic model for hydrogen like atom, hydrogen spectrum, x-ray emission, Moseley's law, wave particle duality, de Broglie's hypothesis, photo-electric effect .

Constituents of atoms, isotopes, mass defect, mass-energy equivalence, binding energy. radioactivity -  $\alpha$ ,  $\beta$ ,  $\gamma$  radiation, half life, mean life, fission, fusion.

Energy bands in solids, intrinsic and doped semiconductors, p-n junction diode, rectifier, pnp and npn transistors, common emitter characteristics.

Binary number, AND, OR, NOT, NAND and NOR gates.

## MATHEMATICS

### Algebra

**A.P., G.P., H.P. :** Definitions of A. P. and G.P.; General term; Summation of first n-terms; A.M.and G.M.; Definitions of H.P. (only 3 terms) and H.M.; Finite arithmetico-geometric series.

**Logarithms :** Definition; General properties; Change of base.

**Complex Numbers :** Definition and properties of complex numbers; Complex conjugate; Triangle inequality; Square root of complex numbers; Cube roots of unity; D'Moivre's theorem (statement only) and its elementary applications.

**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  $ax^2+bx+c$  ( $a,b,c$  are rational 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 ( $n \geq 1$ ), 7 divides  $3^{2n+1} + 2^{n+2}$  ( $n \geq 1$ ).

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

**Infinite series :** Binomial theorem for negative and fractional index. Infinite G.P. series, Exponential and Logarithmic series with range of validity (statement only), simple applications.

**Matrices :** Concepts of  $m \times n$  ( $m \leq 3, n \leq 3$ ) 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. Nonsingular matrix. Inverse of a matrix. Finding area of 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 difference of 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.

**Probability :** Classical definition, addition rule, conditional probability and Bayes' theorem, independence, multiplication rule.

## Trigonometry

Trigonometric ratios, compound angles, multiple and submultiple angles, general solution of trigonometric equations. Properties of triangles, inverse trigonometric functions.

Co-ordinate geometry of two dimensions

**Basic Ideas :** Distance formula, section formula, area of a triangle, condition of collinearity of three points in a plane.

Polar coordinates, transformation from Cartesian to polar coordinates and vice versa. Parallel transformation of axes, concept of locus, elementary locus problems.

**Straight line :** 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.

**Circle :** 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 . Parametric equation of a circle. Intersection of a line with a circle. Equation of common chord of two intersecting circles.

**Conics :** Definition, Directrix, Focus and Eccentricity, classification based on eccentricity.

**Parabola :** Standard equation. Reduction of the form  $x = ay^2+by+c$  or  $y = ax^2+bx+c$  to the standard form  $y^2 = 4ax$  or  $x^2 = 4ay$  respectively. Elementary properties and parametric equation of a parabola.

**Ellipse and Hyperbola :** Reduction to standard form of general equation of second degree when  $xy$  term is absent. Conjugate hyperbola. Simple properties. Parametric equations. Location of a point with respect to a conic.

**Differential calculus :** Functions, composition of two functions and inverse of a function, limit, continuity, derivative, chain rule, derivatives of implicit functions and of functions defined parametrically.

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 :** Formulation and solution of differential equations of the forms.

- 1)  $dy / dx = f(x).g(y)$
- 2)  $dy / dx = f(y/x)$
- 3)  $dy / dx = (ax+by) / (cx+dy)$
- 4)  $dy / dx = (a_1x+b_1y+c_1) / (a_2x+b_2y+c_2)$ ,  $(a_1/a_2 = b_1/b_2)$
- 5)  $dy / dx + p(x)y = Q(x)$
- 6)  $d^2y / dx^2 + p_1 dy/dx + p_2y = 0$  with  $p_1$  and  $p_2$  constants.
- 7)  $d^2y/dx^2 = f(x)$

**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.

## BIOLOGICAL SCIENCES

**Unit of Life :** Definition of life, Cell as the basic unit of life. Cell theory, Prokaryotic and Eukaryotic cell – structure and differences.

**Ultrastructure and functions of cellular components :** Cell wall, Plasma membrane, Plastid, Endoplasmic reticulum, Golgi bodies, Mitochondria, Ribosomes, Lysosomes, Nucleus, Centrosomes, Cilia, Flagella.

**Microscopy :** Components and principles of Simple and Compound Microscope;

**Electron Microscope :** Basic functional principles.

**Physical and Chemical principles involved in maintenance of life processes :** Diffusion, Osmosis, Absorption, Osmoregulation.

**Biomolecules :** Classification and structural properties of carbohydrates, lipids, aminoacids, proteins and nucleic acids.

**Carbohydrates :** Monosaccharides, digosaccharides, and polysaccharides (starch, glycogen, cellulose).

**Proteins :** Simple (albumins, globulins, collagen) and conjugated proteins (only examples).

**Nucleic acids :** Structure of DNA, RNA, types of RNA.

**Enzymes :** Definition & properties, Examples; Mechanism of Action, Allosterism and Regulation.

**Chromosomes and Cell Division :** Morphology of **of chromosomes; Euchromatin and Heterochromatin.** Nucleic acid as genetic material (Examples: Bacterial Transformation and Viral Transduction).

**Brief idea of Polytene Chromosomes :** Cell cycle and phases (excluding control mechanism). Characters of malignant cell; Process & significance of Meiosis.

**Genetics :** Laws of Heredity : (Monohybrid and dihybrid crosses; Mendel's laws). Back cross, Test cross, Linkage, Crossing over, Sex linked inheritance – Colour blindness, Haemophilia.

**Mutation :** Definition and Types; Replication of DNA, Transcription and Translation (Brief idea).

**Origin, Evolution and Diversity of Life :** Haldane and Oparin's concept on origin of life. Modern concept of Natural selection, Biological Species concept.

**Human evolution :** An outline.

**Taxonomy and Classification :** Definition; Importance of Taxonomy, Binomial Nomenclature, Law of Priority (Homonym & Synonym).

**Concept of Biodiversity :** Definition of Biodiversity ; Genetic diversity; Species diversity and Ecosystem diversity. Five kingdom classification (only distinct characters). Salient features of major animal phyla with common examples, classification of Chordates (up to Sub Class) with distinctive characters only.

**Population Biology :** Concept of population growth (logistic and exponential) and population control.

**Ecosystem :** Concept of ecosystem and Biosphere, Wetland.

Brief idea of Ecological pyramids, Energy flow, Biogeochemical cycle (concept only).

**Environmental pollution :** Air, water and noise pollution – sources effects and probable control strategies; Biomagnification and Bioaccumulation. Cause of Dyslexia, Minamata and Etai etai diseases. Green house effect, BOD, COD, Acid rain and Ozone hole.

**Virus and Bacteria :** Morphological characteristics of Bacteriophage (T2), Plant virus (TMV); Animal virus (influenza), Bacterial cell (E. coli).

**Staining :** Gram staining for bacteria.

**Biotechnological application of microbes :** (a) Agricultural – *Rhizobium* and other Nitrogen fixing bacteria, Biofertilizers and Bio-pesticides ; (b) Industrial – Production of curd; tanning and brewery; synthesis of antibiotics, vitamin. (c) Cloning of microbial genes.

**Tissue and tissue system :** (a) Plant Tissues – Meristematic and permanent (types with characterization and function). (b) Animal Tissue – outline classification and examples.

**Functions of life :**

**Photosynthesis :**

Major photosynthetic pigments, outline concept of light and dark reaction phases, basic idea of bacterial photosynthesis,  $C_2$ ,  $C_3$ ,  $C_4$  pathways, CAM (in brief), photorespiration.

**Respiratory System :**

- (a) Definition of respiration, Mechanisms of glycolysis, Kreb's cycle (Flow chart only; calculation for ATP,  $CO_2$  &  $H_2O$ ) ; Outline idea of Electron Transport system, Relationships of photosynthesis and respiration. (b) Respiratory system in human : Respiratory tract, Mechanism of breathing, Role of intercostals muscles and diaphragm;

Significance of physiological and anatomical dead space.

Tidal volume, inspiratory and expiratory reserve volumes, residual volume, vital capacity. Composition of inspired, expired and alveolar air. Common respiratory diseases – definition and causes – Asthma, Tuberculosis, Hypoxia, Anoxia, Apnoea, Dyspnoea.

### **Cardiovascular System & Blood :**

Anatomy of Heart – junctional tissues of the heart; origin and propagation of cardiac impulse. Histological structures of arteries, veins and capillaries.

Cardiac cycle – Atrial and ventricular events only; cardiac cycle time, Heart sound.

Cardiac output – definition, Stroke and Minutes volume.

**Blood Pressure :** factors controlling & measurement.

Blood – Composition and functions of blood.

Blood coagulation and anticoagulants, Blood group and Rh factor, Blood Transfusion, Lymph and tissue fluid formation and functions, Portal circulation.

**Nutrition and Digestive System :** Basic constituents of food and their nutritional significance. Vitamins – dietary sources, functions and deficiency symptoms of water and fat soluble vitamins. Structure and functions of the alimentary canal and the digestive glands. Functions of the digestive juices (saliva, gastric juice, pancreatic juice, intestinal juice), Biles.

Digestion and absorption of carbohydrates, lipids and proteins. Diseases – Peptic and Gastric ulcers, Gastritis; fasting and obesity.

**Metabolism :** Definition; B.M.R. – Controlling factors; elementary idea of metabolic pathways; glycogenesis, glycogenolysis, gluconeogenesis, Oxidation of fatty acids, Ketone body formation and its significance.

Deamination, Transamination and Decarboxylation of aminoacids (definition only).

**Excretory System :** Histology and function of the nephron (brief idea)

Normal and abnormal constituents of urine.

**Nervous and Muscular system :** Brief outline of human brain structure.

**Cranial Nerves :** Distribution and Function. Spinal cord – Structure and major functions, Reflex arc (types) and reflex action : Conditional and unconditional reflexes.

**Autonomic :** sympathetic and parasympathetic (definition only) nervous system.

**Synapse :** Structure and mechanism of synaptic transmission.

Different types of muscles and their structure, properties of muscles

(i) Excitability (ii) Contractility (iii) All or none law (iv) Refractory period (v) Summation of stimuli (vi) Tetanus (vii) Rigor mortis; Mechanism of muscle contraction.

**Endocrine system and animal hormones :**

Definition of endocrine glands and hormones, functions of hormones released from (i) pituitary (ii) thyroid (iii) pancreas (iv) adrenal (v) gastrointestinal gland, An outline mechanism of action of protein & steroid hormones.

Causes and symptoms of Acromegaly, Diabetes insipidus, Diabetes mellitus, Goiter, Cushing's disease.

## Growth, Reproduction, and Ageing :

### A. In Plants :

Different parts of a typical flower (China rose). Types of flower : regular and irregular, actinomorphic, zygomorphic. Aestivation in Musaceae & Malvaceae. Floral formula : Definition, symbols used in floral formulae in Musaceae (e.g. Banana) and Malvaceae (eg. China rose) ; Pollination – Definition, self and cross pollination; Merits and demerits of self and cross pollination. Fertilization – Process of double fertilization. Dispersal of fruits and seeds – Types with examples. Phases and factors of Growth, Differences between growth and development, Abscission senescence, ageing and growth of seeding and the role of gibberellic acid.

### B. In Animals :

Primary and secondary sex organs and secondary sex characters – Testis – Histology, Functions of Testosterone. Spermatogenesis (outline). Ovary – Histology : Functions of estrogen and progesterone; Oogenesis (outline); structure of mature Graafian follicle.

Menstrual cycle (brief idea). Fertilization and Implantation.

**Immunology :** A brief idea of antigen and antibody. Elementary knowledge of inherited, acquired, humoral, cell mediated immunity. Active and passive immunity. Prevention of AIDS and Hepatitis B.

### Medical, Agricultural and Economic Zoology :

- A. Outline idea of diseases, their causative organism, mode of infection, symptoms and preventive measures of :
- (i) Malaria
  - (ii) Filariasis
  - (iii) Ascariasis

Distinguishing features of Culex, Anopheles and Aedes

Life cycle and comparative study of Culex and Anopheles;

Causative agents of encephalitis and kalaazar and control of their vectors.

B. Characteristic features of major and minor carps and examples of exotic carps. Mechanism of induced breeding – hypophysation.

Composite culture of carps, common diseases of carp – Gillrot, fin rot and Dropsy.

Definition of pest, Damage symptoms and control of *Scirpophaga incertulus* and *Leptocorisa acuta*.

C. Poultry – Types of poultry birds ; high yielding varieties of poultry birds. Species of honey bees in India and different castes in a colony. Composition and uses of honey.

Chemical composition of silk, types of silk and silk worms.



Life cycles of mulberry silk worm. Structure of silk gland.

Symptoms of Flacherie, Muscardine, Grassarie and Pebrine.

### **Application of Biology :**

Pesticides and Biological Pest Control – Benefit and hazards, Basic principles of *ex situ* and *in situ* conservation.  
Red Data Book, Green Data Book.

Role of phytohormones in horticulture and agriculture.

Hybridization in plants – Definition and techniques.

Idea about plant cell and tissue culture – Micropropagation.

Principles and application of transgenic plants and animal, Test tube baby.

### **Biomedical Engineering :**

Application - ECG & EEG

Imaging – USG, CT Scan, X-ray, MRI

Therapeutic - Pacemaker, Dialyzer.

## 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, Sommerfelds 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.

Uncertainty principle; The concept of atomic orbitals, shapes of *s*, *p* and *d* orbitals (pictorial approach)

### Radioactivity and Nuclear Chemistry

Radioactivity –  $\alpha$ -,  $\beta$ -,  $\gamma$  -rays and their properties; Artificial transmutation; Rate of radioactive decay, decay constant, half-life and average 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); Fajan's 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 electro negativity, 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.

Double salts and complex salts, co-ordination compounds (examples only), co-ordination number (examples of co-ordination number 4 and 6 only).

## 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 with temperature.

Dalton's Law of partial pressure, Graham's Law of gaseous diffusion. Deviations from ideal behavior.

Liquefaction of gases, real gases, van der Waal's 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 ( $\Delta E$ ) and Enthalpy change ( $\Delta H$ ) in a chemical reaction. Hess's Law and its applications (Numerical problems). Heat of reaction, fusion and vapourization; Second law of thermodynamics; Entropy; Free energy; Criterion of spontaneity.

**Chemical Equilibria** – The Law of mass action, dynamic nature of chemical equilibria. Equilibrium constants, Le Chatelier's Principle. Equilibrium constants of gaseous reactions ( $K_p$  and  $K_c$ ) and relation between them (examples). Significance of  $\Delta G$  and  $\Delta G^\circ$ .

**Chemical Dynamics** – Factors affecting the rate of chemical reactions (concentration, pressure, temperature, catalyst). 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).

## Solubility and Solubility Products.

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 ( $E^\circ$ ), Electrochemical series, feasibility of a redox reaction.

Significance of Gibb's equation :  $\Delta G^\circ = -nF\Delta E^\circ$  (without derivation), no numerical problems.

Redox titrations with (examples); Nernst equations (Numerical problems).

## Chemistry of Non-metallic Elements and their Compounds

Carbon – occurrence, isotopes, allotropes (graphite, diamond, fullerene); CO and CO<sub>2</sub> production, properties and uses.

Nitrogen and Phosphorus – occurrence, isotopes, allotropes, isolation from natural sources and purification, reactivity of the free elements. Preparation, properties, reactions of NH<sub>3</sub>, PH<sub>3</sub>, NO, NO<sub>2</sub>, HNO<sub>2</sub>, HNO<sub>3</sub>, P<sub>4</sub>O<sub>10</sub>, H<sub>3</sub>PO<sub>3</sub> and H<sub>3</sub>PO<sub>4</sub>.

Oxygen and Sulfur – 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).

## Halogen

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.

## Chemistry in Industry

Large scale production (including physicochemical principles where applicable omitting technical details and uses of individual items).

**Heavy Chemicals :** Sulfuric acid (contact process), Ammonia (Haber's process), Nitric acid (Ostwald's process), sodium bi-carbonate and sodium carbonate (Solvey process).

Polymers, Polythene, Nylon-66, rubber from natural source, vulcanization.

Electrochemicals – sodium hydroxide, chlorine, bleaching powder as by-products.

Fuel Gases – LPG, CNG.

Silicon carbide and silicones.

## Environmental Chemistry

Common modes of pollution of air, water and soil. Ozone layer, ozone hole – important chemical reactions. Green House effect; Smog; Pollution of water by domestic and industrial effluents; Pollutants–pesticides, fertilizers and plastics.

## Chemistry of Carbon Compounds

Hybridization of carbon –  $\sigma$ - and  $\pi$ -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  $\alpha$ -dicarbonyl compounds, acidity and basicity of simple organic compounds.

### Aliphatic 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;  $S_N1$  and  $S_N2$  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.

Alkyl halides – Preparation from alcohols; Formation of Grignard reagents and their synthetic applications for the preparation of alkanes, alcohols, aldehydes, ketones and acids;  $S_N1$  and  $S_N2$  reactions (preliminary concept).

Alcohols – Preparation 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  $1^\circ$ ,  $2^\circ$  and  $3^\circ$  amines (Hinsberg method); Reaction with  $HNO_2$ ; Carbyl amine reaction.

### Aromatic Compounds

Benzene – Kekule structure, aromaticity and Huckel rule. Electrophilic substitution – halogenation, sulfonation, nitration, Friedel Crafts reaction, ozonolysis. Directive influence of substituents in monosubstituted benzenes.

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** – Nucleophilic substitution, cine substitution (excluding mechanism).

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 noninterfering Acid and Basic Radicals by dry and wet tests from among :

- (a) Acid Radicals :  $\text{Cl}^-$ ,  $\text{S}^{2-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{CO}_3^{2-}$
- (b) Basic Radicals:  $\text{Cu}^{2+}$ ,  $\text{Al}^{3+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Fe}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Na}^+$ ,  $\text{NH}_4^+$

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 - II

### Guideline for filling in the Application Form of Joint Entrance Examination

#### জয়েন্ট এন্ট্রান্স পরীক্ষার আবেদনপত্র পূরণের প্রয়োজনীয় নির্দেশাবলী

The applicant is required

- i) To go through the Information Brochure very carefully and to get acquainted with all the requirements.  
i) আবেদককে (applicant) ‘জ্ঞাতব্যবিষয় ও তথ্যসম্বলিত পুস্তকটি’ (Information Brochure) অত্যন্ত যত্নসহকারে পড়তে হবে এবং প্রয়োজনীয় বিষয়গুলির সাথে পরিচিত হতে হবে।
- ii) To satisfy eligibility and other criteria in order to appear in the examination.  
ii) আবেদকের পরীক্ষায় বসার নির্ধারিত যোগ্যতা এবং অন্যান্য মান-নির্নায়ক গুণাবলী অবশ্যই থাকতে হবে।
- iii) To ensure that while filling in the Application Form in English Capital Letters, proper care be taken to the fact that one letter is written clearly within one box only and there is no overlapping in any case.  
iii) আবেদনপত্র পূরণের সময় একটি নির্দিষ্ট বাক্সে ইংরাজী বড় হাতের অক্ষরে একটিমাত্র অক্ষর লিখতে হবে এবং লক্ষ্য রাখতে হবে লিখিত অক্ষর যেন বাক্সের সীমা ছাড়িয়ে না যায়।
- iv) To send the application form complete in all respect through **Speed Post** only within prescribed date mentioned in the Information Brochure.  
iv) আবেদনপত্র সঠিকভাবে এবং সম্পূর্ণরূপে পূরণ করে জ্ঞাতব্যবিষয় ও তথ্যসম্বলিত পুস্তিকায় উল্লেখিত নির্ধারিত তারিখের মধ্যে একমাত্র স্পীডপোস্টেই পাঠাতে হবে।
- v) To write complete permanent address with postal pin code and Police Station in the Application Form in own hand writing in CAPITAL LETTERS in English only.  
v) আবেদনপত্রে ডাকবিভাগীয় পিন কোড এবং থানার নামসহ সম্পূর্ণ স্থায়ী ঠিকানা আবেদকের নিজস্ব হস্তাক্ষরে একমাত্র ইংরাজী বড় হাতের অক্ষরে লিখতে হবে।
- vi) To note that the circles are to be darkened with Black/Blue Ball Pen only.  
vi) কালো অথবা নীল বলপেন দিয়ে নির্দিষ্ট বৃত্তগুলি (circles) সতর্কতার সাথে ভরতে হবে, যেন বলপেনের কালি বৃত্তের সীমা ছাড়িয়ে না যায়।
- vii) To note that overwriting, cuttings, erasing in the Application Form and incomplete Application Form may lead to rejection of the form. Any error arising on this account shall be the responsibility of the candidate.  
vii) আবেদনপত্রে লেখার উপরে পুনরায় লেখা, কাটাকাটি, রাবার দিয়ে ঘষাঘষি করলে এবং আবেদনপত্র অসম্পূর্ণ থাকলে, সেই আবেদনপত্র বাতিল হিসাবে গণ্য হবে। পুনর্লিখন, কাটাকাটি, ঘষাঘষি এবং অসম্পূর্ণতাজনিত ত্রুটির সম্পূর্ণ দায়িত্ব আবেদকের উপর বর্তাবে।



- viii) To note that the duly filled in Application form should be inserted in the printed window envelop supplied with the application kit in such a way that the Bar Code printed on the right hand portion of the Application form (side-1) is clearly visible from the window.
- viii) সম্পূর্ণরূপে পূরণ করা আবেদনপত্রটি আবেদনপত্রের সাথে প্রদত্ত মুদ্রিত খামের মধ্যে এমনভাবে ভরতে হবে যাতে আবেদনপত্রের ১ নং পাতার ডানদিকের অংশে মুদ্রিত বারকোড (Bar Code) স্বচ্ছ আবরণে ঢাকা খামের ফাঁকা অংশ দিয়ে স্পষ্টভাবে দেখা যায়।
- ix) To note that the Application Form duly filled in should be sent to **West Bengal Joint Entrance Examinations Board, AQ-13/1, Sector-V, Salt Lake, Kolkata – 700 091** in the printed window envelop supplied with the Application Kit through **Speed Post** only so as to reach positively by **24.01.2012**.
- ix) যথাযথভাবে পূরণ করা আবেদনপত্রটি আবেদনপত্রের সাথে প্রদত্ত মুদ্রিত খামে একমাত্র ‘স্পীডপোস্টেই’ এই ঠিকানায় পাঠাতে হবে–  
**West Bengal Joint Entrance Examinations Board**  
**AQ-13/1, Sector –V, Salt Lake,**  
**Kolkata - 700 091**  
 যাতে আবেদনপত্রটি অবশ্যই 24.01.2012 তারিখের মধ্যে নির্দেশিত ঠিকানায় পৌঁছায়।  
 No Application Form will be received by hand or through other agencies.  
 Forms received after the last date will not be processed.  
 সরাসরি হাতে – হাতে অথবা অন্য কোন উপায়ে প্রেরিত আবেদনপত্র গ্রহণ করা হবে না।  
 নির্দেশিত শেষ তারিখ অর্থাৎ 24.01.2012 তারিখের পর প্রাপ্ত আবেদনপত্র গ্রহণ যোগ্য হবে না।
- x) **To note that he/she has retained a Photocopy of his/her filled in application form.**  
 If a candidate submits more than one Application Forms without due intimation to the Authority, his/her candidature shall be liable to be cancelled.
- x) আবেদক (applicant) নিজের কাছে পূরণ করা প্রেরিত আবেদনপত্রের একটি ‘ফটোকপি (Photocopy) রাখবে।  
 কর্তৃপক্ষকে না জানিয়ে যদি কোন আবেদক একাধিক আবেদনপত্র জমা দেয়, সেই আবেদকের আবেদনপত্র বাতিল হিসাবে গণ্য হবে।

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Before filling in the Application Form the candidate should carefully note the sample filled in Application Form given in the Appendix-VII of the Information Brochure.

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আবেদনপত্র পূরণ করার পূর্বে তথ্য সম্বলিত পুস্তিকায় ৭নং পরিশিষ্টে (Appendix -VII) মুদ্রিত পূরণ করা আবেদনপত্রের নমুনাটি পরীক্ষার্থীকে যত্নসহকারে লক্ষ্য করতে হবে এবং তারই অনুসরণে আবেদনপত্র পূরণ করতে হবে।

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**Filling in of the Application form as per Serial Nos. :-**

For Sl.No. 1) Candidate should write his/her Name in CAPITAL LETTERS as given in Madhyamik or equivalent Examinatin (10th standard).

Example :- Suppose candidate's name is **PRABIR KUMAR MITRA**

First Name 

P	R	A	B	I	R	
---	---	---	---	---	---	--

Middle Name 

K	U	M	A	R		
---	---	---	---	---	--	--

Last Name 

M	I	T	R	A		
---	---	---	---	---	--	--

ক্রমিক নং 1. : মাধ্যমিক বা সমতুল্য (দশম মান) পরীক্ষায় যেমন নথিভুক্ত করা আছে সেইমত ইংরাজী বড় হাতের অক্ষরে পরীক্ষার্থীকে নিজের নাম লিখতে হবে।

উদাহরণ- মনে করা যাক পরীক্ষার্থীর নাম

**PRABIR KUMAR MITRA**

প্রথম নাম  
(FIRST NAME) 

P	R	A	B	I	R	
---	---	---	---	---	---	--

মধ্য নাম  
(MIDDLE NAME) 

K	U	M	A	R		
---	---	---	---	---	--	--

শেষ নাম  
(LAST NAME) 

M	I	T	R	A		
---	---	---	---	---	--	--

Sl. No. 2a) Candidate should write his/her Father's name in capital letters. One box should be left blank between each part of the name.

Example – Suppose candidate's Father's name is

**SISIR KUMAR MITRA**

S	I	S	I	R		K	U	M	A	R		M	I	T	R	A			
---	---	---	---	---	--	---	---	---	---	---	--	---	---	---	---	---	--	--	--

ক্রমিক নং 2a : পরীক্ষার্থীদের পিতার নাম ইংরাজী বড় হাতের অক্ষরে লিখতে হবে। নামের ভিন্ন ভিন্ন অংশের মধ্যে একটি বাক্স ফাঁকা রাখতে হবে।

উদাহরণ – মনে করা যাক পরীক্ষার্থীর বাবার নাম

**SISIR KUMAR MITRA**

S	I	S	I	R		K	U	M	A	R		M	I	T	R	A			
---	---	---	---	---	--	---	---	---	---	---	--	---	---	---	---	---	--	--	--

Note : For Sl. No. - 1 If the candidate has no middle name then the boxes specified for writing middle name should be kept vacant. Only the boxes specified for writing first and last name should be filled in.

পরীক্ষার্থীর যদি কোন 'মধ্যনাম' না থাকে সেই ক্ষেত্রে মধ্যনামের জন্য নির্দিষ্ট বাক্সগুলি ফাঁকা রেখে শুধুমাত্র প্রথম ও শেষ নামের জন্য নির্দিষ্ট বাক্স গুলি পূরণ করতে হবে।





## Appendix – II Contd.

Sl.No. - 2b : Candidate should write his/her Mother's name in capital letters. One box should be left blank between each part of the name as per example given in Sl. No. 2a.

ক্রমিক নং - 2b : পরীক্ষার্থীদের মাতার নাম ইংরাজি বড় হাতের অক্ষরে লিখতে হবে। নামের ভিন্ন ভিন্ন অংশের মধ্যে একটি বাক্স ফাঁকা রাখতে হবে ঠিক Sl No. 2a এর উদাহরণের মতো।

Sl.No. - 2c(i) - Candidate should write his/her Guardian's (if parents are not alive) name in capital letters. One box should be left blank between each part of the name as per example given in Sl. No. 2a.

Sl.No. - 2c(ii) Candidate should write his/her relationship with the guardian as mentioned in 2c(i).

Example – if the relationship is uncle

U	N	C	L	E			
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ক্রমিক নং - 2c(i) পরীক্ষার্থীদের অভিভাবকের নাম (পিতা, মাতা জীবিত না থাকলে) ইংরেজি বড় হাতের অক্ষরে লিখতে হবে। নামের ভিন্ন ভিন্ন অংশের মধ্যে একটি বাক্স ফাঁকা রাখতে হবে ঠিক Sl No. 2a এর উদাহরণের মতো।

ক্রমিক নং - 2c(ii) পরীক্ষার্থীদের ক্রমিক নং 2c(i) তে উল্লিখিত অভিভাবকের সাথে পরীক্ষার্থীর সম্পর্কে উল্লেখ করতে হবে।

উদাহরণ - যদি সম্পর্কে কাকা হন

U	N	C	L	E			
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Sl.no. 3 – The candidate should paste his/her recent colour photograph (2.5 cm X 3.5 cm) with white background inscribing name of the candidate and date on photograph in the box provided which should not be attested, stapled or pinned. The Form Number and the Name should be written on the reverse side of the photograph before pasting. The photograph should be pasted with gum in such a manner that the adhesive does not overflow.

ক্রমিক নং 3 : সাদা প্রেক্ষাপটে সম্প্রতি তোলা ২.৫সেমি x ৩.৫সেমি আকারের একটি রঙিন ফটো নির্দিষ্ট বাক্সে লাগাতে হবে। ফটোটিতে পরীক্ষার্থীর নাম এবং ফটো তোলার তারিখ ছাপানো থাকতে হবে। আঠা দিয়ে লাগানোর পূর্বে ফটোটির পিছন দিকে আবেদন পত্রের নম্বর এবং পরীক্ষার্থীর নাম লিখতে হবে। ফটোটি প্রত্যায়িত করার প্রয়োজন নেই এবং ফটো স্টেপল করা বা পিন দিয়ে লাগানো চলবে না। আঠা দিয়ে ফটোটি এমনভাবে লাগাতে হবে যাতে আঁঠার উপচিয়ে না পড়ে।

Sl.No. 4 – Write complete permanent address in capital letters including the name of the Police Station postal pin code and Telephone No..

ক্রমিক নং 4 : ডাকবিভাগীয় পিন কোড, থানার নাম ও টেলিফোন নং সহ সম্পূর্ণ স্থায়ী ঠিকানা ইংরাজী বড় হাতের অক্ষরে লিখতে হবে।

Sl.No. 5 – The candidate should write his/her Address for Communication / Mailing address if it is different from Permanent Address.

ক্রমিক নং 5 : পরীক্ষার্থীকে ডাকে পাঠানোর সম্পূর্ণ ঠিকানা লিখতে হবে যদি কিনা উহা স্থায়ী ঠিকানা থেকে আলাদা হয়।



Sl.No. 6 – Write date, month and year of your Date of Birth in the appropriate boxes use numbers 1- to 31 for the date 1 to 12 for the month and last two boxes for the year of birth.

Example : - Suppose Date of Birth is 20th January 1990

ক্রমিক নং 6 : উপযুক্ত বাক্সে পরীক্ষার্থীর জন্মের তারিখ, মাস এবং বৎসর উল্লেখ করতে হবে। জন্মতারিখের জন্য ০১ থেকে ৩১, জন্মমাসের জন্য ০১-১২ এবং শেষ দুটি বাক্স জন্মবৎসরের জন্য ব্যবহার করতে হবে। উদাহরণ – মনে করা যাক পরীক্ষার্থীর জন্ম তারিখ

(20th January, 1990)

D	D	M	M	Y	Y	Y	Y
2	0	0	1	1	9	9	0

Sl.No.-7 : The candidate should darken the appropriate circle in respect of Gender.

ক্রমিক নং 7 : পরীক্ষার্থী মহিলা না পুরুষ সেটা জানানোর জন্য মহিলা/পুরুষ চিহ্নিত উপযুক্ত বৃত্তটি নীল অথবা কালো বলপেন দিয়ে ভরতে হবে।

Sl.No.- 8 : The candidate should darken the appropriate circle in respect of the religion, he/she belongs to.

In case the candidate darknes the circle against 'OTHERS' he/she should specify the religion in the place provided.

ক্রমিক নং 8 : পরীক্ষার্থী যে ধর্মাবলম্বী সেই ধর্মের জন্য নির্দিষ্ট বৃত্তটিকে নীল অথবা কালো বলপেন দিয়ে ভরতে হবে।

যদি পরীক্ষার্থী ('OTHERS') এর জন্য নির্দিষ্ট বৃত্তটি বল পেন দিয়ে ভরে তবে তাহাকে তার ধর্মের নাম নির্দিষ্ট জায়গায় লিখতে হবে।

Sl.No.- 9 : The candidate, if physically challenged should darken the circle carefully against 'Yes' and if not against 'No'.

ক্রমিক নং 9 : পরীক্ষার্থী শারীরিকভাবে প্রতিবন্ধী কিনা সেটা জানানোর জন্য 'হ্যাঁ' অথবা 'না' চিহ্নিত উপযুক্ত বৃত্তটি নীল অথবা কালো বলপেন দিয়ে সাবধানে ভরতে হবে।

S.l.No.- 10 : The candidate should darken the circle against 'YES' if he/she is a citizen of India and against 'NO' if not.

ক্রমিক নং 10 : পরীক্ষার্থী নাগরিকত্ব (Natoinality) ভারতীয় হলে 'হ্যাঁ' চিহ্নিত উপযুক্ত বৃত্তটি নীল অথবা কালো বলপেন দিয়ে ভরতে হবে। অন্যথায় 'না' চিহ্নিত উপযুক্ত বৃত্তটি ভরতে হবে।

Sl.No.-11 : The candidate should write his/her permanent address district code in the boxes [for district code see **APPENDIX – IV** of the Information Brochure].

ক্রমিক নং 11 : তথ্য সম্বলিত পুস্তিকার ৪ নং পরিশিষ্টে (APPENDIX-IV) বিভিন্ন জেলার কোড নম্বর দেওয়া আছে। নিজের স্থায়ী ঠিকানার 'জেলার কোড' নম্বরটি পরীক্ষার্থীকে নির্দিষ্ট বাক্সে লিখতে হবে।

Sl.No.12 : The candidate should darken the appropriate circle in respect of his/her category [for example Gen, SC, ST]

ক্রমিক নং 12 : GEN/SC/ST এই তিনটি শ্রেণীর মধ্যে পরীক্ষার্থী যে শ্রেণীভুক্ত সেটার জন্য নির্দিষ্ট বৃত্তটি কালো অথবা নীল বলপেন দিয়ে ভরতে হবে।

Sl.No.- 13 : The candidate should darken the appropriate circle in respect of the State he/she belongs to.

ক্রমিক নং 13 : পরীক্ষার্থী যে রাজ্যের অধিবাসী তার জন্য নির্দিষ্ট বৃত্তটি কালো অথবা নীল বলপেন দিয়ে ভরতে হবে।

Sl.No.- 14 : The candidate should put his/her full signature (Not in capital letters) at the box provided.

ক্রমিক নং 14 : নির্দিষ্ট বাক্সে পরীক্ষার্থীকে তার পূর্ণ স্বাক্ষর দিতে হবে (ইংরাজী বড় হাতের অক্ষরে নয়)।

Sl.No.15a : The candidate should write Name and Address of the School/Institution from where he/she passed or appeared in H.S.(10+2)/equivalent examination along with telephone no. of the concerned school/Institution (with STD code) and postal pin code of the place where the school/Institution is situated.

ক্রমিক নং 15a : পরীক্ষার্থী যে স্কুল বা প্রতিষ্ঠান থেকে উচ্চমাধ্যমিক বা (10+2) মানের সমতুল্য পরীক্ষায় উত্তীর্ণ হয়েছে বা বর্তমানে পরীক্ষার্থী সেই স্কুল বা প্রতিষ্ঠানের নাম এবং সম্পূর্ণ ঠিকানা নির্দিষ্ট বাক্সে লিখতে হবে। STD Code সহ স্কুল বা প্রতিষ্ঠানের টেলিফোন নম্বর উপযুক্ত বাক্সে লিখতে হবে এবং যে স্থানে স্কুল বা প্রতিষ্ঠানটি অবস্থিত সেই স্থানের ডাকবিভাগীয় পিনকোড নির্দিষ্ট বাক্সে উল্লেখ করতে হবে।

Sl.No.15b : The candidate should write Name and Address of the School/Institution from where he/she passed the Madhyamik or equivalent examination (10th standard) along with telephone no. of the concerned school/Institution (with STD code) and postal pin code of the place where the School/Institution is situated.

ক্রমিক নং 15b : পরীক্ষার্থী যে স্কুল বা প্রতিষ্ঠান থেকে মাধ্যমিক বা দশম মানের সমতুল্য পরীক্ষায় উত্তীর্ণ হয়েছে সেই স্কুল বা প্রতিষ্ঠানের নাম এবং সম্পূর্ণ ঠিকানা নির্দিষ্ট বাক্সে লিখতে হবে। STD Code সহ স্কুল বা প্রতিষ্ঠানের টেলিফোন নম্বর উপযুক্ত বাক্সে লিখতে হবে এবং যে স্থানে স্কুল বা প্রতিষ্ঠানটি অবস্থিত সেই স্থানের ডাকবিভাগীয় পিনকোড নির্দিষ্ট বাক্সে উল্লেখ করতে হবে।

S.No.16 : If the candidate is eligible for Tuition Fee Waiver Scheme then he/she should darken the circle against 'YES' if not against 'NO'

ক্রমিক নং 16 : যদি পরীক্ষার্থী Tuition Fee Waiver Scheme এর জন্য যোগ্য হয় তবে হ্যাঁ চিহ্নিত উপযুক্ত বৃত্তটি নীল অথবা কালো বল পেন দিয়ে ভরতে হবে। অন্যথায় 'না' চিহ্নিত উপযুক্ত বৃত্তটি ভরতে হবে।

Sl.No. -17a : The candidate should write the name of the Board/Council which conducted the H.S.(10+2)/ equivalent examination he/she passed/appeared. He/she should also write his/her Registration No. of the concerned Board/Council with year of Registration in the appropriate boxes. **The candidates who will appear in the H.S. or equivalent examination in 2012 and have not received the Registration No. of the Concerned Board/Council at the time of filing in the Application Form should keep the concerned boxes blank.**

ক্রমিক নং 17a : যে উচ্চ মাধ্যমিক (10+2) বা সমতুল্য পরীক্ষায় পরীক্ষার্থী উত্তীর্ণ হয়েছে বা বর্তমানে প্রার্থী সেই পরীক্ষা যে পর্যদ/ পরিষদ পরিচালনা করেছে তার নাম নির্দিষ্ট বাক্সে লিখতে হবে। সংশ্লিষ্ট পর্যদ বা পরিষদের নিবন্ধীকরণ নম্বর (Registration No) এবং নিবন্ধীকরণ কোন সালে হয়েছে সেটা নির্দিষ্ট বাক্সে উল্লেখ করতে হবে। যে সমস্ত পরীক্ষার্থী আসন্ন ২০১১ সালের উচ্চমাধ্যমিক বা সমতুল্য পরীক্ষায় বসিবেন অথচ আবেদন পত্র পূরণ করিবার সময় পর্যন্ত নির্দিষ্ট অনুমোদিত বোর্ড/পর্যদ হইতে নিবন্ধভুক্তির সংখ্যা (রেজিস্ট্রেশন নম্বর) পান নাই, তাহারা পূরণ করিবার সময় নির্দিষ্ট বাক্সগুলি ফাঁকা রাখিবেন।

Sl.No.17b : The candidate should write the name of the Board/council which conducted the Madhyamik/ equivalent examination (10<sup>th</sup> standard) which he/she has passed and he/she should also write the Roll No of the concerned examination in the appropriate boxes.

ক্রমিক নং 17b : যে মাধ্যমিক বা দশম মানের সমতুল্য পরীক্ষায় পরীক্ষার্থী উত্তীর্ণ হয়েছে সেই পরীক্ষা যে পর্যদ/পরিষদ পরিচালনা করেছে তার নাম এবং সেই পরীক্ষায় পরীক্ষার্থীর ক্রমিক নং (Roll No.) উপযুক্ত বাক্সে লিখতে হবে।

Sl.No-18 : Candidate desirous of seeking admission to Govt. Engineering / Technology Colleges, Govt. Medical / Dental Colleges as well as to Private Medical and Dental Colleges should furnish Residential requirement certificate (as applicable) by one of the competent authorities as mentioned in the Information Brochure vide Clause No. 3.3.

ক্রমিক নং 18 : সরকারী ইঞ্জিনিয়ারিং / টেকনোলজি কলেজ, সরকারী ও বেসরকারী মেডিক্যাল / ডেন্টাল কলেজে পড়তে ইচ্ছুক পরীক্ষার্থীকে উপযুক্ত কর্তৃপক্ষের দ্বারা স্থায়ী বাসভূমি-সংক্রান্ত প্রমাণপত্র (Residential requirement) আবেদনপত্রের নির্দিষ্ট (যেমন প্রযোজ্য) সঠিকভাবে পূরণ করে দিতে হবে। (এই বিষয়ে তথ্যসম্বলিত পুস্তিকার সাধারণ নিয়মাবলীর ৩.৩ নং ধারা লক্ষণীয়) আবেদনপত্রের (যেমন প্রযোজ্য) অংশের

The candidate should also paste his/her recent colour photograph (2.5 cm x 3.5 cm) with white background inscribing Name of the candidate and date on photograph in the appropriate box which should not be attested, stapled or pinned. The Form number and the name should be written on the reverse side of the Photograph before pasting.

The photograph should be pasted with gum in such a manner that the adhesive does not overflow.

নির্দিষ্ট বাক্সে পরীক্ষার্থীরা সাদা প্রেক্ষাপটে সম্প্রতি তোলা ২.৫ সেমি x ৩.৫ সেমি আকারের একটি রঙিন ফটো লাগাতে হবে। ফটোটিতে - পরীক্ষার্থীর নাম এবং ফটো তোলার তারিখ ছাপানো থাকতে হবে। ফটোটি প্রত্যায়িত করার প্রয়োজন নেই এবং ফটো লাগানোর জন্য স্টেপল বা পিন ব্যবহার করা চলবে না। ফটোটি আঠা দিয়ে এমনভাবে লাগাতে হবে যাতে আঠা উপচিয়ে না পড়ে।

লাগানোর আগে ফটোর পিছন দিকে পরীক্ষার্থীর নাম এবং আবেদনপত্রের নম্বর অবশ্যই লিখতে হবে।

Sl.No19 : Candidates eligible under "Tuition Fee Waiver Scheme" should furnish the annual Family income Certificate from all sources from one of the competent Authorities as mentioned under clause 11.2c in the Information Brochure

ক্রমিক নং 19 : যে সব পরীক্ষার্থী 'Tuition Fee Waiver Scheme' এর জন্য যোগ্য তাদের উপযুক্ত কর্তৃপক্ষের দ্বারা (তথ্য সম্বলিত পুস্তিকার নিয়মাবলীর 11.2c ধারা লক্ষণীয়) পরিবারের সমস্ত সূত্রের বার্ষিক আয়ের প্রমাণ পত্র (Annual Income Certificate from all Sources) আবেদন পত্রের নির্দিষ্ট অংশে দিতে হবে।

Sl.No 20a : The candidate should read the statement in the form of declaration mentioned at i) and ii) carefully and then put his/her full signature in the appropriate space mentioning date and place and put left thumb impression at the specified box provided in blue or black indelible ink.

ক্রমিক নং 20a : অংশে ঘোষণামূলক লিখিত বিবৃতিটি যত্ন পড়তে হবে এবং উপযুক্ত জায়গায় স্থান - তারিখসহ স্বাক্ষর করতে হবে এবং নির্দিষ্ট বাক্সে নীল অথবা কালো অমোচনীয় কালিতে (indelible ink) বাম হাতের বুড়ো আঙ্গুলের টিপসহি দিতে হবে।

Sl.No 20b : The declaration of the candidate vide 20a) should be countersigned by his/her father/mother/guardian (in case of absence of both parents) with place and date.

ক্রমিক নং 20b : পরীক্ষার্থীর ঘোষণামূলক লিখিত বিবৃতি তার পিতা / মাতা / অভিভাবক (পিতা মাতার অবর্তমানে) দ্বারা প্রতি স্বাক্ষর করতে হবে। স্থান ও তারিখ উল্লেখ করতে হবে।

Sl.No. -21a & 21b : The candidate should write his/her name and full mailing address with postal pin code in the appropriate place in his/her own hand writing.

S	<---D--->	R	P	C	G	T

Candidates should also fill in the boxes provided in the Admit Card portions (vide 21-a, 21-b) as shown above with capital letters and numbers as applicable.

These boxes will contain personal information of the the candidate which will be used for cross verification.

In the above boxes

'S' - stands for the 'State', the candidate belongs to

'D' - (two consecutive boxes) stands for district code of the district, the candidate belongs to

'R' - stands for religion of the candidate

'P' - stands for physically challenged

'C' - stands for category of the candidate

'G' - stands for Gender of the candidate

'T' - stands for TFW

For 'S' - write 'W' if the State is West Bengal  
write 'T' if the State is Tripura  
and write 'O' in case of other States

For 'D' - write your district code as mentioned in the Appendix - IV of the Information Brochure of JEM-2012

For 'R' - write (i) 'H' if Hindu (ii) 'M' if Muslim (iii) 'C' if Christian (iv) 'B' if Buddhist (v) 'S' if Sikh and (vi) 'O' if belong to other religion.

For 'P' - write (i) 'Y' if Physically Challenged and (ii) 'N' if not Physically Challenged

For 'C' - write (i) 'G' if General (ii) 'S' if SC and (iii) 'T' if ST

For 'G' - write (i) 'M' if Male and (ii) 'F' if Female

For 'T' - write (i) 'Y' if TFW is applicable and (ii) 'N' if TFW is not applicable

Example : Suppose in case of a candidate -

State	-	Tripura
District	-	any district in Tripura
Religion	-	Sikh
Physically Challenged	-	Yes
Category	-	ST
Gender	-	Female
TFW	-	Applicable

Then the boxes should be filled in as follows -

T	9	0	S	Y	T	F	Y
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The candidate should also paste his/her recent colour photograph (2.5 cm x 3.5 cm) with white background inscribing name of the candidate and date on photograph in the box provided which should not be attested, stapled or pinned. The form no. and name should be written on the reverse side of the photograph before pasting. The photograph should be pasted with gum in such a manner that the adhesive does not overflow.

The candidate should also put his/her full signature (not in capital letters) in the box provided.

ক্রমিক নং 21a এবং 21b : পীরক্ষার্থীকে নিজস্ব হস্তাক্ষরে নিজের নাম এবং ডাকে পাঠানোর সম্পূর্ণ ঠিকানা নির্দিষ্ট স্থানে লিখতে হবে। নির্দিষ্ট বাক্সে ডাক বিভাগীয় পিনকোড উল্লেখ করতে হবে।

S	<---D--->	R	P	C	G	T

পীরক্ষার্থীকে অ্যাডমিট কার্ডে দেওয়া ৮টি ফাঁকা বাক্স অবশ্যই ইংরেজির বড় হরফ (ক্যাপিট্যাল লেটার) এবং ইংরেজির সংখ্যা দিয়ে পূরণ করতে হবে।

এই বাক্সগুলিতে পরীক্ষার্থীর ব্যক্তিগত তথ্যাবলি থাকবে যা সত্যতা যাচাইয়ের কাজে লাগবে।

উপরোক্ত বাক্সগুলিতে

- 'S' - দ্বারা পরীক্ষার্থী কোন রাজ্যের (স্টেট) অধিবাসী, তা জানাতে হবে।
- 'D' - (পরপর দুটি বাক্স) দ্বারা পরীক্ষার্থী কোন জেলার (ডিস্ট্রিক্ট) অধিবাসী, তা জানাতে হবে।
- 'R' - দ্বারা পরীক্ষার্থীর ধর্ম (রিলিজিয়ন) জানাতে হবে।
- 'P' - নির্দেশ করবে পরীক্ষার্থী প্রতিবন্ধী (ফিজিক্যালি চ্যালেঞ্জড) কিনা।
- 'C' - নির্দেশ করবে পরীক্ষার্থীর শ্রেণী (ক্যাটেগরি)।
- 'G' - দ্বারা নির্দেশিত হবে পরীক্ষার্থীর লিঙ্গ (জেণ্ডার)
- 'T' - দ্বারা বোঝাবে পীরক্ষার্থী টিউশন ফি ছাড় (টিউশন ফি ওয়েভার) স্কিমের আওতাভুক্ত কিনা।
- 'S'-এর জন্য : - পশ্চিমবঙ্গ হলে 'W' লিখতে হবে। ত্রিপুরার পরীক্ষার্থীরা 'T' লিখবেন। অন্য রাজ্যের পরীক্ষার্থীরা 'O' লিখবেন।
- 'D'-এর জন্য : - জে ই এম - ২০১২-র তথ্যপুস্তিকায় অ্যাপেন্ডিক্স IV-এ উল্লিখিত ডিস্ট্রিক্ট কোড অনুযায়ী যেটি সংশ্লিষ্ট পরীক্ষার্থীর ক্ষেত্রে প্রযোজ্য, তা দিয়ে এই দুটি বাক্স পূরণ করতে হবে।
- 'R'-এর জন্য : - হিন্দু সম্প্রদায়ের পরীক্ষার্থীরা 'H' লিখবেন, মুসলমান হলে 'M', খ্রিস্টান হলে 'C' বৌদ্ধ হলে 'B', শিখ হলে 'S' এবং অন্য ধর্মাবলম্বী হলে 'O' লিখবেন।
- 'P'-এর জন্য : - দৈহিক প্রতিবন্ধী হলে 'Y' লিখুন। প্রযোজ্য না হলে 'N' লিখুন।
- 'C'-এর জন্য : - সাধারণ হলে 'G', তফসিলি জাতি হলে 'S' এবং তফসিলি উপজাতিভুক্ত হলে 'T' লিখুন।
- 'G'-এর জন্য : - পরীক্ষার্থী পুরুষ হলে 'M' এবং মহিলা হলে 'F' লিখুন।
- 'T'-এর জন্য : - টিউশন ফি ওয়েভার স্কিমের আওতাভুক্ত হলে 'Y' লিখুন। প্রযোজ্য না হলে 'N' লিখুন।

নিচে একজন প্রার্থীর উদাহরণ দিয়ে কীভাবে এই ৮টি বাক্স পূরণ করতে হবে, তা বোঝানো হল -

ধরায়াক এই পরীক্ষার্থী ব্যক্তিগত তথ্যাবলী নিম্নরূপ :

- রাজ্য - ত্রিপুরা
- জেলা - ত্রিপুরার কোনও জেলা





ধর্ম - শিখ

দৈহিক প্রতিবন্ধকতা - আছে

শ্রেণী - তফসিলি উপজাতি

লিঙ্গ - মহিলা

টি এফ ডব্লু - প্রযোজ্য

এ ক্ষেত্রে এই বাক্সগুলি পূরণ করা হবে এভাবে -

T	9	0	S	Y	T	F	Y
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উপযুক্ত বাক্সে সাদা প্রেস্কাপটে সম্প্রতি তোলা পরীক্ষার্থীর ২.৫ সেমি x ৩.৫ সেমি আকারের একটি রঙিন ফটো লাগাতে হবে। ফটোটিতে পরীক্ষার্থীর নাম এবং ফটো তোলার তারিখ ছাপানো থাকতে হবে। লাগানোর আগে ফটোর পিছনদিকে আবেদনপত্রের নম্বর ও পরীক্ষার্থীর নাম লিখতে হবে। ফটোটি প্রত্যয়িত করার প্রয়োজন নেই এবং ফটো লাগাতে স্টেপল বা পিন ব্যবহার করা চলবে না। আঠা দিয়ে ফটোটি এমনভাবে লাগাতে হবে যাতে আঠা উপচিয়ে না পড়ে।

উপযুক্ত বাক্সে পরীক্ষার্থীকে পূর্ণ স্বাক্ষর করতে হবে (ইংরাজী বড় হাতের অক্ষরে নয়)।



## APPENDIX – III

### **Procedure to be followed in the conduct of Examination :**

1. The Examination Hall will be opened 15 minutes before the commencement of the test. Candidates are expected to take their seats immediately after the opening of Examination Hall. If the candidates do not report in time, they are likely to miss some of the general instructions to be announced in the Examination Hall.
2. After occupying their seats they must write their Names, Roll No., Application Form No. and Question Booklet no. of the Question at the appropriate place on OMR Answer Sheet
3. Candidate must bring with them i) Admit card (JEM-2012), ii) Black / Blue Ball Point Pen.
4. Candidates must show on demand the Admit Card (JEM-2012) for admission to the Examination Hall. A candidate who does not possess the Admit Card issued by the Board shall not be allowed to enter in the Examination Hall by the Center-in-Charge.
5. A seat indicating Roll No. will be allocated to each candidate. Candidates must find out and occupy their allotted seats.
6. **Candidates are not allowed to carry any textual material, printed or written, bits of papers or any other material except those listed under Sl.No.-3 inside Examination Hall.**
7. **Mobile Phones, Calculators, Slide Rules, Log Tables, Electronic Watches with facilities of Calculator are not allowed in the Examination Hall. Possession of such devices during the Examinations may lead to cancellation of the paper besides seizing of the same.**
8. No candidate, without the special permission of the Centre-in-Charge or the invigilator concerned, will leave his/her seat or Examination Hall until the duration of examination for a paper is over. Candidates should not leave the hall without handing over their OMR sheet to the invigilator on duty. Otherwise this will lead to cancellation of the concerned paper.
9. It is to be noted carefully that the candidates must write the "Question Booklet No." at the indicated place both on the OMR Answer Sheet and Attendance Sheet during examination. Otherwise his/her OMR Answer sheet in the concerned subject will be outright cancelled.
10. Candidates shall maintain silence and attend to their question paper only for writing answers. Any conversation or gesticulation or disturbance in the examination hall shall be deemed as misbehaviour. If a candidate is found adopting unfair means, his/her candidature shall be cancelled and he/she will be liable to be debarred from taking examination either permanently or for a period according to the nature of offence.
11. **If a candidate is found impersonating, his/her candidature will be cancelled outright and the concerned examinee will be handed over to the Police.**

## APPENDIX – IV

### West Bengal :

District (West Bengal)	Code	District (West Bengal)	Code	District (West Bengal)	Code
Bankura	71	Hooghly	78	Murshidabad	85
Birbhum	72	Howrah	79	Nadia	86
Burdwan	73	Jalpaiguri	80	Purulia	87
Coochbehar	74	Kolkata	81	24 Parganas North	88
Darjeeling	75	Malda	82	24 Parganas South	89
Dinajpur Dakshin	76	Medinipur Paschim	83		
Dinajpur Uttar	77	Medinipur Purba	84		

### Other States :

District (Other States)	Code
Districts in Tripura	90
Districts in Other States	91

## APPENDIX – V

Abbreviation of the branches (Engg./Tech./Pharm./Arch.) and their full names :

Sl. No.	Full Name of the Course	Abbreviation	Sl. No.	Full Name of the Course	Abbreviation
1	Aerospace Engineering	AES	17	Electronics & Communication Engineering/ Electronics and Telecommunication Engg.	ECE
2	Agricultural Engineering	AG			
3	Applied Electronics / Electronics Instrumentation Engineering	AEIE/EIE			
			18	Electrical & Electronics Engineering	EEE
4	Architecture	AR	19	Food Technology	FT
5	Automobile Engineering	AE	20	Food Tech. and Biochemical Engg.	FBC
6	Apparel Production Management	APM			
			21	Information Technology	IT
7	Bio-Medical Engineering	BM	22	Jute Technology	JT
8	Bio-Technology	BT	23	Jute & Fiber Technology	JF
9	Ceramic Technology	CT	24	Leather Technology	LT
			25	Marine Engineering	MR
10	Chemical Engineering	CH	26	Mechanical Engineering	ME
11	Civil Engineering	CE	27	Metallurgical Engineering	MT
12	Computer Sc. & Engineering/ Computer Sc. & Technology	CSE/CST	28	Mining Engineering	MN
			29	Pharmaceutical Engineering	PH
13	Instrumentation & Control Engineering	ICE	30	Printing Technology	PT
14	Construction Engineering	COE	31	Power Engineering	PW
15	Dairy Technology	DT	32	Production Engineering	PE
16	Electrical Engineering	EE	33	Textile Technology	TT

## APPENDIX – VI

### Doís

1. Read the instructions carefully before filling-in of the Application Form.
2. Fill in the boxes with English capital letters.
3. Write the date of birth in the specified boxes carefully mentioning day, month & year as instructed.
4. Paste colour photographs with gum only in the appropriate places properly so that it is not detached in any way.
5. In Item Nos. 21a & 21b of the Application Form, Name of the candidate and complete mailing address with correct postal Pin Code No. should be written.
6. Candidate must put full signature in the specified places of the Application Form.
7. Write the District Code correctly in item No. 11 of the Application Form.
8. Retain a photocopy (Xerox) of the filled-in Application Form positively.
9. Send the duly filled in Application Form in Window Envelop provided with the Application Kit through 'Speed Post' only.
10. Submit the OMR Answer Sheet to the Invigilator after completion of each session of Examination.
11. Write the Question Booklet No. in the specified places on both the OMR Answer Sheet and Attendance Sheet.

### Donits

1. Don't staple or pin the photographs.
2. Don't attest the photographs.
3. Don't tear any part of the Application Form.
4. Don't staple any document with the Application Form.
5. Don't enclose any photocopy (xerox) of the testimonials.
6. Don't sign in capital letters.
7. Don't over write anywhere in the Application Form.
8. Don't use different colours of ink during filling in of the Application Form.
9. Don't wrinkle or scribble or fold the Application Form.
10. Ensure that the Application Form does not get wetted in any way.
11. Don't send duly filled in Application Form through ordinary post or through any other postal service or by hand.
12. Don't bring Mobile Phone, Calculator or any other electronic gadget inside the Examination Hall.

# APPENDIX – VII

## APPLICATION FORM FOR JEM-2012 WEST BENGAL JOINT ENTRANCE EXAMINATIONS BOARD AQ 13/1, Sector – V, Salt Lake City, Kolkata – 700 091

**Important Instructions :**

- Please read the instructions in the notification(s) Information Brochure carefully before filling in the Form.
- The following information are to be filled in NEATLY in ENGLISH CAPITAL LETTER with BLACK / BLUE BALL POINT PEN ONLY.
- Paste the Photographs in the appropriate box with gum in such a manner that the adhesive does not overflow.
- Do not make any stray mark on this form and do not fold the form.
- Do not staple, pin, wrinkle, scribble, tear and wet the sheets.
- You must retain a photocopy of the filled-in form before sending

**METHOD OF MARKING**  
WITH BLACK BALL POINT / GEL PEN ONLY (where ever applicable)  
Correct Method ○●○○ Wrong Method ⊗⊗⊗

**Type of Form**

# E

**Arch. / Engg. /  
Tech. /Pharmacy**  
Price Rs.500/-

**BAR CODE & APPLICATI ON FORM NO.**

**1. NAME OF THE CANDIDATE (BLOCK LETTERS)**

FIRST NAME: A N I M E S H  
MIDDLE NAME: K U M A R  
LAST NAME: S E N

**2. NAME OF THE PARENTS/GUARDIAN**

a. FULL NAME OF THE FATHER: P R A B I R C H A N D R A  
S E N

b. FULL NAME OF THE MOTHER: M A D H U M I T A  
S E N

c.(i) FULL NAME OF THE GUARDIAN\*  
(\*If Parents are not alive)

(ii) RELATIONSHIP WITH THE CANDIDATE



**4. PERMANENT RESIDENTIAL ADDRESS OF THE CANDIDATE**

V I L L A G E K U M A R D A N G A  
P O O N D A D I S T B A N K U R A  
P O L I C E S T A T I O N O N D A P I N C O D E 7 2 2 1 4 4 P H O N E N O. 0 3 2 4 2 2 5 4 1 0 8

**5. ADDRESS FOR COMMUNICATION/MAILING ADDRESS (TO BE FILLED IN IF DIFFERENT FROM THE PERMANENT ADDRESS)**

P I N C O D E

<p><b>6. DATE OF BIRTH</b></p> <p>D D M M Y Y Y Y</p> <p>1 2 0 6 1 9 9 3</p>	<p><b>7. GENDER</b></p> <p>MALE <input type="radio"/></p> <p>FEMALE <input type="radio"/></p>	<p><b>8. RELIGION</b></p> <p>HINDU <input type="radio"/></p> <p>MUSLIM <input type="radio"/></p> <p>CHRISTIAN <input type="radio"/></p> <p>BUDDHIST <input type="radio"/></p> <p>SIKH <input type="radio"/></p> <p>OTHERS <input type="radio"/></p>	<p>In case 'OTHERS' Please specify the Religion</p>	<p><b>9. PHYSICALLY CHALLENGED</b></p> <p>YES <input type="radio"/> NO <input type="radio"/></p>
<p><b>11. DISTRICT CODE</b></p> <p>Permanent address District Code (Refer vide appendix to Information Brochure)</p> <p><input type="checkbox"/> <input type="checkbox"/></p>	<p><b>12. CATEGORY</b></p> <p>GEN <input type="radio"/></p> <p>SC <input type="radio"/></p> <p>ST <input type="radio"/></p>	<p><b>13. STATE</b></p> <p>W.B. <input type="radio"/></p> <p>Tripura <input type="radio"/></p> <p>Others <input type="radio"/></p>	<p><b>10. CITIZEN OF INDIA</b></p> <p>YES <input type="radio"/> NO <input type="radio"/></p>	
<p><b>14. FULL SIGNATURE OF THE CANDIDATE (Not in capital letters)</b></p> <p style="text-align: center;"><i>Animesh Kumar Sen</i></p>				

**15. ACADEMIC DETAILS**

a) Name and address of the school / Institution from where the candidate Passed/appeared in H.S. / equivalent Examination

B A N K U R A Z I L L A S C H O O L

Telephone No. of the School/Institution (with STD Code) 0 3 2 4 2 2 5 4 1 1 7 PIN CODE 7 2 2 1 0 2

b) Name and address of the school / Institution from where the candidate Passed Madhyamik/equivalent examination

B A N K U R A Z I L L A S C H O O L

Telephone No. of the School/Institution (with STD Code) 0 3 2 4 2 2 5 4 1 1 7 PIN CODE 7 2 2 1 0 2

**16. WHETHER ELIGIBLE FOR TUITION FEE WAIVER SHCME**

YES

NO

(IF PLEASE FILL UP ITEMS 09)

**Applicate Form No.**

**17. NAME OF THE BOARD/COUNCIL AND REGISTRATION NO./ROLL NO.**

a) **H.S. or Equivalent Examination**

Registration No. of respective Board/Council and Year: W B C H S E 1 4 1 2 6 0 0 5 6 0 F 2 0 1 6 - 2 0 1 1

b) **Madhyamik or Equivalent Examination**

Roll No. of Madhyamik or Equivalent Examination: W B S E 2 0 3 3 9 1 9 0 4 0 9

For Official Use – Error detected : Incomplete Form  / Signature Missing  / Photo Missing  / Residential Requirement

**18. CERTIFICATE UNDER RESIDENTIAL REQUIREMENTS (FOR BOTH CANDIDATE RESIDING IN W.B. CONTINUOUSLY FOR 10 YEARS OR MORE/CANDIDATE RESIDING IN W.B. FOR LESS THAN 10 YEARS BUT WHOSE PARENTS ARE PERMANENT RESIDENTS OF W.B.)**

*(For both category of candidates either residing in W.B. continuously for 10 years or more as on 31.12.2011 or residing in W.B. for less than 10 years as on 31.12.2011 but whose parents are permanent resident of W.B.)*

Certified that \_\_\_\_\_ son/daughter/Father/Mother of \_\_\_\_\_  
\_\_\_\_\_ who is a \*resident/\*permanent resident of West Bengal at Village /House No. \_\_\_\_\_  
\_\_\_\_\_ and street \_\_\_\_\_

Post Office \_\_\_\_\_ Police Station \_\_\_\_\_ in the district of \_\_\_\_\_  
under Assembly constituency \_\_\_\_\_ \* and has been living in the state of West Bengal continuously /  
uninterruptedly for last (10) years as on 31.12.2011.

Date : \_\_\_\_\_ Signature of Certifying Authority \_\_\_\_\_

Place : \_\_\_\_\_ Designation with Official seal \_\_\_\_\_

Full Name of certifying authority (in block letters) \_\_\_\_\_

Address in full \_\_\_\_\_

Contact No. \_\_\_\_\_

\* Strike out in the case where not applicable.

(For Competent Authorities see Information Brochure of JEM-12 Ref. Item no. 3.3)



**19. CERTIFICATE OF FAMILY INCOME FOR THE APPLICANT APPLYING UNDER TUITION FEE WAIVER (TFW) SCHEME (Ref. Item No. 16)**

Certified that the ANNUAL FAMILY INCOME FROM ALL SOURCES in respect of \_\_\_\_\_  
son/daughter of \_\_\_\_\_  
of \_\_\_\_\_ Post Office \_\_\_\_\_  
District \_\_\_\_\_ West Bengal for the year 2010-2011, is less than Rs.2.50 lakhs (Rupees two lakhs  
and fifty thousand) only and which stands at Rs. \_\_\_\_\_ (Rupees  
\_\_\_\_\_ ) approximately.

Date : \_\_\_\_\_ Signature of Competent Authority \_\_\_\_\_

Place : \_\_\_\_\_ Designation with Official seal \_\_\_\_\_

Contact No. \_\_\_\_\_

N.B. For Competent Authorities see Information Brochure of JEM-12 (Ref. Item no. 11.2C)



**20. a) DECLARATION BY THE CANDIDATE AND HIS/HER LEFT THUMB IMPRESSION**

i) I have gone through the rules and regulations, eligibility and other criteria mentioned in the Information Brochure of JEM-2012 very carefully and I declare that I fulfill all the prescribed conditions of eligibility for admission to the course(s) of study applied for.

ii) I do hereby further declare without prejudice that all statements/information given in the application form are true and complete to the best of my knowledge and belief. In the event of my ineligibility being detected before or after the examination or selection, appropriate action can be taken against me, as deemed fit, by the West Bengal Joint Entrance Examinations Board/concerned College or University and my candidature for admission to any course of study will be cancelled outright at any stage without any clarification whatsoever. Moreover, I also undertake that during examination of any subject if I do not mention the Question Booklet No. in the specified places on both in the OMR Answer Sheet and attendance sheet my OMR Answer sheet in the concerned subject will be cancelled outright.

**Left Thumb  
impression  
of the Candidate** →

Date :

Place :



Anumesh Kumar Sen

Full Signature of the Candidate  
(Not in capital letters)

**20. b) COUNTER SIGNATURE OF FATHER/MOTHER/GUARDIAN (in case of absence of both parents) OF THE CANDIDATE**

Date : 04/01/2012

Place : ONDA

Pradeep Chandra Sen

Counter signature of Father / Mother / Guardian\*  
(\*In case parents are not alive)

21.a) NAME AND FULL MAILING ADDRESS (Must be written by candidate's own hand writing)

Application Form No.

ANIMESH KUMAR SEN	
c/o PRABIR CHANDRA SEN	
VIII - KUMAR DANGA PO - ONDA	
BIST - BANKURA	Pin Code 722144

S	W
D	7
R	H
P	N
C	G
G	M
T	N



Animesh Kumar Sen

Full Signature of the candidate (Not in Capital Letters)

\*\*\*\*\*

21.b) NAME AND FULL MAILING ADDRESS (Must be written by candidate's own hand writing)

Application Form No.

ANIMESH KUMAR SEN	
c/o PRABIR CHANDRA SEN	
VILL - KUMAR DANGA , PO - ONDA	
DIST - BANKURA	Pin Code 722144

S	W
D	7
R	H
P	N
C	G
G	M
T	N



Animesh Kumar Sen

Full Signature of the candidate (Not in Capital Letters)



**WEST BENGAL JOINT ENTRANCE EXAMINATIONS BOARD**

AQ 13/1, Sector – V, Salt Lake City, Kolkata – 700 091

EXAMINATION SCHEDULE		
DATE	TIME	SUBJECT
15.04.2012 SUNDAY	9.30 am TO 11.30 am	Mathematics (100 marks)
15.04.2012 SUNDAY	12.30 pm TO 2.30 pm	Physics & Chemistry (50+50=100 marks)
15.04.2012 SUNDAY	3.30 pm TO 5.30 pm	Biological Sciences (100 marks)

**ADMIT CARD JEM 2012**

INSTRUCTIONS FOR THE CANDIDATE
<p>1.Candidate will be allowed to enter the examination hall 15 minutes before the start of each session of Examination .</p> <p>2.Candidates have to bring with them (a) Black / Blue Ball Point Pen (b) Admit Card (JEM-2012).</p> <p>3.<b>Calculators, Mobile Phones, Log tables, Electronic Watches, any other electronic gadgets or any equipment with facilities of calculation and spare papers textual material, printed or written chits or paper are not allowed</b> inside the examination hall.</p> <p>4.If a candidate is found impersonating, his/her candidature will be cancelled outright and the concerned candidate will be handed over to the POLICE.</p> <p>5.No candidate without the permission of the Centre-in-Charge of the concerned invigilator will be allowed to leave his/her seat or examination hall without handing over the OMR Answer Sheet to the invigilator on the duty. At the end of examination if any candidate does not handover his / her OMR answer sheet to the invigilator on duty, this will lead to cancellation of his / her concerned papers</p> <p>6.The admit card must be shown to the persons conducting / supervising the examination as and when asked for.</p> <p>7.Candidate without Admit Card or Candidate with Admit Card having mutilated / distorted / soiled photograph will be not allowed to sit for the examination.</p> <p>8.Violation of examination norms in any form inside the examination hall including failure to submit OMR Answer Sheets to the invigilator after the examination will lead to cancellation of the candidature.</p> <p>9.Candidature of an ineligible candidate will be liable for cancellation at any stage.</p> <p>10.During examination if any Candidate does not write his / her Question booklet no. of the question in the specified places on both the OMR Answer Sheet and Attendance Sheet, his / her OMR Answer Sheet in the concerned subject will be cancelled outright.</p>

\*\*\*\*\*

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## JEM - 2012

### CHECK LIST OF APPLICATION FORM

**A candidate must ensure the following before sending the Application Form through Speed Post -**

1. Procurement of the correct Application Form for the category to be applied for and the same is filled in properly as per the instructions in the Information Brochure (*vide APPENDIX - II*).
2. 'Board's Copy' of the Bank Receipt is enclosed with the Application Form.
3. Residential Requirement Certificate (vide Sl. No. 18 of Application Form), if applicable, has been furnished as per instruction given in the Information Brochure.
4. **Five colour photographs** (size 2.5 cm × 3.5 cm) of candidate's complete face (front side) on white background inscribing name of the candidate and date on photograph are pasted (not stapled) firmly on indicated places of the Application Form.
5. The Form Number and name on the reverse side of all the photographs have been written before pasting.
6. Staple or pins have not been used any where in the Application Form and photographs.
7. LTI in blue or black indelible ink at the specified place of the Application Form given.
8. Full Signature of candidate (4 places) on the marked locations of the Application Form are given.
9. Counter Signature of parent or guardian on the marked location of the Application Form has been taken.
10. A photocopy of the filled in Application Form is retained by the candidate.
11. After inserting the Application Form in the printed window envelop provided for the purpose along with the Application Kit, the Bar Code printed on the Application form (right hand top portion of side - 1) is clearly visible from the window.
12. **Application Form thus inserted is sent through SPEED POST only writing / ticking the names of the State, District, District Code and Pin Code at the indicated places on the top of the window envelop.**

## **IMPORTANT DATES AT A GLANCE**

---

1. Sale of Application kit (Application Form along with Information Brochure and sending envelope) from different branches of United Bank of India in West Bengal and Tripura (As specified in the advertisement)	28.12.2011 to 18.01.2012
<hr/>	
2. Last date for -	
(a) Receipt of request for Application kit by post with Additional fee of Rs.200/-	06.01.2012
<hr/>	
(b) Sale of Application kit with late fee of Rs. 300/- from the office of the Board only	19.01.2012 to 21.01.2012
<hr/>	
(c) Receipt of completed Application form by speed post only	24.01.2012
<hr/>	
3. Issue of Admit Card	w.e.f. 15.03.2012
<hr/>	
4. Date of Examination (JEM-2012)	15.04.2012 (SUNDAY)
<hr/>	
5. Declaration of results	by June 15, 2012
<hr/>	