

# Common Entrance Examination AMPAI



## CEE-AMPAI-2020-WB

### Common Entrance Examination AMPAI

vide order No: 250-Edn(T)/10M-26/09, issued by Department of Higher Education, Govt. of West Bengal

# CEE-AMPAI-2020-WB Information Brochure

**Examination Date: 17<sup>th</sup> May 2020 (Sunday)**

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vide Order No: 250-Edn(T)/10M-26/09/Pt V, (Issued by  
Department of Higher Education, Govt. of West Bengal)

**Examination Centres at:**

**West Bengal | Bihar | Jharkhand | Assam |  
Tripura | Uttar Pradesh | Odisha**

**AMPAI Registered Office:** Dwarka Building, 1<sup>st</sup> Floor, 7 Sarat Bose Road, Kolkata – 700  
020 | Landline: 033-2289 3943/44; | Website: [www.ampai.in](http://www.ampai.in)

**Helpline Numbers:** 98308 69988 | 90730 24729 | 94320 11490

# COMMON ENTRANCE EXAMINATION - ASSOCIATION OF MINORITY PROFESSIONAL ACADEMIC INSTITUTES: CEE- AMPAI- 2020-WB (SIKHMINORITY)

## 1. About CEE-AMPAI-2020-WB

The prime objective of **Common Entrance Examination (CEE)** organized by **Association of Minority Professional Academic Institutes (AMPAI)** is to conduct an entrance examination for students in

the State and National level. Students of **Sikh and Other Minority and Non-Minority in the State and National level may appear in the CEE-AMPAI-2020-WB** examination. This examination will be conducted both for admission in the first year of 4 years B.Tech and B.Pharm courses. The examination will be held for admission in the following institutes:

SL.	COLLEGE NAME	COURSES *	No. of Seats
1.	JIS College of Engineering, Kalyani, ( <a href="http://www.jiscollege.ac.in">www.jiscollege.ac.in</a> )	ECE, CSE, INT, ELE, BMD, CIV, MEC	360
2.	Narula Institute of Technology, Kolkata ( <a href="http://www.nit.ac.in">www.nit.ac.in</a> )	ECE, CSE, INT, ELE, EIE, CIV, MEC	330
3.	Guru Nanak Institute of Technology, Kolkata ( <a href="http://www.gnit.ac.in">www.gnit.ac.in</a> )	ECE, CSE, INT, ELE, EIE, FET	270
4.	Guru Nanak Institute of Pharmaceutical Science & Technology, Kolkata ( <a href="http://www.gnipst.ac.in">www.gnipst.ac.in</a> )	PHE	60
5	Dr.Sudhir Chandra Sur Degree Engineering College, Kolkata ( <a href="http://www.dsec.ac.in">http://www.dsec.ac.in</a> )	ECE, CSE, ELE, MEC, ATE, CIV	144
Total			1164

\* As per nomenclature prescribed by WBJEE 2020 information brochure; See Annexure - V for details

*Note:* Institutes numbered from 1 to 5 above, shall give preference of admission for Sikh minority students, both from and outside West Bengal. Students from other categories may seek admission in the leftover vacant seats in any of the above mentioned five institutes.

The Common Entrance Examination, i.e. CEE–AMP AI-2020-WB will be conducted for admission to different degree level courses in Engineering & Technology and Pharmacy in the AMPAI enlisted colleges as mentioned above based on the following subject combination:

<b>Availability of courses for admission through CEE-AMP AI-2020-WB</b>	<b>Candidates have to appear in the following subjects</b>
B Tech	Mathematics, Physics, Chemistry
B Pharm	Physics, Chemistry, Biology/Mathematics

Note on subject of examination for Pharmacy candidates:

***For the Pharmacy College, the score in Physics and Chemistry will be considered along with the better score of either Mathematics or Biology.***

Admission will be strictly on the basis of merit position in written admission test and physical counseling. **It is hereby clarified as per Government Order that other minority and non-minority students from any religion, caste or category may appear in this examination for admission.**

Preference of admission will be provided to Sikh Minority students.

## **2. About AMPAI**

Association of Minority Professional Academic Institutes (AMP AI) is a registered body under West Bengal Society Registration Act 1961, vide Reg. No. S/1L/76255 Dt. 15/12/2010. The Association was established in the year 2010, and now the following colleges accept the admission of students through the Common Entrance Examination AMP AI:

**JIS College of Engineering (JISCE)**

**Narula Institute of Technology (NIT)**

**Guru Nanak Institute of Technology (GNIT)**

**Guru Nanak Institute of Pharmaceutical Science & Technology (GNIPST)**

**Dr. Sudhir Chandra Sur Degree Engineering College (DSCSDEC)**

**AMP AI** aims in creating a transparent, competitive examination and evaluation process for the selection of proficient candidates for the respective courses and giving leverage to minority students by offering them with equal education opportunities.

### 3. Subjects of Examination:

Candidates are required to appear in 3 papers:

Paper I : Mathematics

Paper II : Physics and Chemistry

Paper III : Biology

### 4. Schedule of Examination CEE-AMPAI-2020-WB

Date of Examination	Subject, Marks and Timing of Examination		
17.05.2020 (Sunday)	<b>Mathematics</b> 100 Marks 9.00 a.m. - 10.30 a.m.	<b>Physics &amp; Chemistry</b> 75 marks each (Total 150 marks) 11.30 a.m. - 1.30 p.m.	<b>Biology</b> 100 marks 2.30 p.m. - 4.00 p.m.

### 5. Syllabus of Examination:

As per Annexure-I

### 6. Pattern of Question and Mode of Answering

#### 6.1 QUESTION PATTERN:

Questions will be based on the syllabus for **WBJEE – 2020** (details available at [www.wbjeeb.in](http://www.wbjeeb.in) and Annexure– I). In every subject, all questions will be Multiple Choice Questions (MCQ-type) with four options against each question and the answer(s) to each of the questions has/have to be marked on the OMR Answer Sheet.

Questions will be of two categories, divided as per the following table:

Subject	Category 1	Category 2	Total Marks
Mathematics	60 X 1 mark each	20 X 2 marks each	100
Biological Sciences	60 X 1 mark each	20 X 2 marks each	100
Physics	45 X 1 mark each	15 X 2 marks each	75
Chemistry	45 X 1 mark each	15 X 2 marks each	75

There is no negative marking.

**Category 1:**

- a. Only one option is correct, correct response will yield one mark.
- b. For more than one answer indicated against a particular question in the OMR sheet; the said answer will be treated as incorrect response/answer.

**Category 2:**

- a. Only one option is correct, correct response will yield two marks.
- b. For more than one answer indicated against a particular question in the OMR sheet; the said answer will be treated as incorrect response/answer.

6.2 MODE OF ANSWERING

- a. Questions are to be answered on specially designed machine readable answer sheets (OMR Answer Sheet). ANSWERS ARE TO BE MARKED (BUBBLED) USING BLUE/BLACK BALL POINT PEN ONLY ON THE 'OMR ANSWER SHEET.' The examination will be done by method of official mark recognition. Thus it is very important to follow the correct method of marking.  
  
N.B. It is to be noted carefully that the candidates must fill in as well as bubble in ALL the relevant information including the "Question Booklet No. and Question Booklet Series" at the indicated places on both OMR Answer Sheet and Attendance Sheet during the examination.
- b. There will be four alternative answers for each question. Candidate will indicate response to the questions by darkening the appropriate circle completely with Blue/ Black ball point pen.
- c. Any other kind of marking, eg: filling the bubble incompletely, filling with pencil, cross mark, tick work, dot mark, circular mark, over writing, scratching, erasing, white ink, marking outside the bubble, etc may lead to wrong/ partial/ ambiguous reading of the response. **AMPPI will be in no way responsible for such eventually.**

## **7. Ranking Methodology & Rules for Tie Breaking:**

In CEE-AMPAI-2020-WB, there will be separate merit lists in B.Tech and B.Pharm:

The merit list for successful candidates in the Engineering category will be prepared by listing them in the descending order of the total marks scored by them. However, there may be ties and such ties will be broken by sequentially applying the following set of rules:

1. More marks in Mathematics and Physics taken together
2. More marks in Mathematics and Chemistry taken together
3. More marks in Mathematics for only the 2 marks questions
4. More marks in Physics for only the 2 marks questions
5. More marks in Chemistry for only the 2 marks questions

For Pharmacy a separate merit list will be prepared. The list will be prepared as per the descending order of the total marks scored by them in Physics, Chemistry and Mathematics or Biological Science, whichever is greater (to be treated as 3rd subject). However, there may be ties and such ties will be broken by sequentially applying the following set of rules:

1. More marks in 3<sup>rd</sup> subject (Mathematics/Biology) and Physics taken together
2. More marks in 3<sup>rd</sup> subject (Mathematics/Biology) and Chemistry taken together
3. More marks in 3<sup>rd</sup> subject (Mathematics/Biology) for only the 2 marks questions
4. More marks in Physics for only the 2 marks questions
5. More marks in Chemistry for only the 2 marks questions

In generation of the Engineering and Pharmacy merit lists, if after applying the 5 rules stated above there are still ties, same will be broken by the date of birth (DOB) of the concerned candidates; the older candidate will be given preference over the younger one.

## **8. Eligibility Criteria and Academic Qualification for Appearing in CEE-AMPAI-2020-WB:**

After examination or admission, or during any stage thereof, if it is found on scrutiny that an applicant is underage or otherwise ineligible, his/ her application for admission will be cancelled outright even if he/ she appeared in CEE-AMPAI-2020-WB and secured a position in merit list. Permission to appear in CEE-AMPAI-2020-WB 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 favor of the candidate for his/ her admission to any engg/ tech or pharmacy course unless he/ she has fulfilled all the prescribed requirements as specified below.

**8.1 CITIZENSHIP: APPLICANT MUST BE A CITIZEN OF INDIA.**

**8.2 AGE RESTRICTION: ENGINEERING & TECHNOLOGY / PHARMACY COURSES:**

Candidates must be at least 17 (seventeen) years of age as on 31.12.2020. There is no upper age limit. A candidate born on or after 01.01.2003 is not eligible to appear in the CEE-AMPAI 2020-WB. Date of Birth as recorded in Class X Examination under any School/Secondary Education Board Certificate/Admit Card will only be considered.

**8.3 ACADEMIC REQUIREMENTS:**

**8.3.1 For Bachelor in Engineering & Technology:**

Candidates must have passed 10+2 Examination from a recognized Council / Board with:

Individual pass marks in Physics and Mathematics along with any one of Chemistry / Biotechnology / Biology / Computer Science / Computer Application as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in regular mode.

Minimum of 45% marks in the above subjects taken together as well as pass in English in the 10+2 examination with a minimum of 30% marks.

**8.3.2 For Bachelor in Pharmacy Course:**

Candidates must have passed 10+2 Examination from a recognized Council / Board with:

Individual pass marks in Physics and Chemistry along with any one of Mathematics / Biotechnology / Biology as compulsory subjects with individual pass marks (in both theory and practical wherever applicable) in regular mode.

Minimum of 45% marks in the above subjects taken together as well as pass in English in the 10+2 examination with a minimum of 30% marks.

### 8.3.3 Important consideration in terms of academic qualification

A candidate appearing in the qualifying examination ie '10+2' standard examination in 2019 may appear in the CEE-AMPAI-2020-WB but shall not be made eligible for allotment of seat for admission if he/she does not pass the qualifying examination with required minimum standard of eligibility criteria as stated above.

8.3.4 AMPAI do neither verify the information provided by the candidate during online application nor verify any certificate of date of birth, domicile, income, reservation category, academic qualification etc. for deciding the eligibility of the candidate. Admit Cards issued only on the basis of the information provided by the candidate. Also there is no scope of changing / correcting any information after the last date of online application.

All verifications are done during counseling, admission, registration with the University. If at any stage after examination it is found on scrutiny that the applicant is otherwise ineligible, his/her candidature shall be treated as cancelled even if he / she secured a Merit Rank in CEE-AMPAI-2020- WB.

### 8.4 DOMICILE CERTIFICATE:

Candidates seeking admission in B. Tech / B. Pharm course under reserved quota in colleges mentioned on page 3, must submit the domicile certificate in prescribed format from competent authority along with application form.

8.4.1 The Domicile of any state shall be treated for those candidates who are

EITHER

Residing in any State / UT of India continuously at least for last 10 (ten) years as on 31.12.2020 (Proforma A-I and A-II)

OR

Whose parent(s) is / are permanent residents of any State / UT of India having permanent addresses within the State (Proforma B).

8.4.2 Procedure for Submission of Domicile Certificate:

Candidate must submit Domicile Certificate in either Proforma A-I or Proforma A-II or Proforma B, whichever is applicable for his/her case.

The 'Blank Proforma' is downloadable from [www.ampai.in](http://www.ampai.in). Download the same and print it in duplicate on A4 size white paper.

Get the Certificate filled in properly and duly authenticated/signed by a Competent Authority as specified in 6.4.3.

The Duplicate Copy of the Certificate is to be kept with the Office of the Issuing Authority for future reference/ verification. Photocopy of the Original Certificate in the name of the applicant and a photocopy of his/her parent's voter ID card are to be attached with the Confirmation Sheet.



Original Certificate need not be submitted with the Confirmation Sheet. The candidate must retain the same and shall have to produce it at the Reporting Centre during admission.

#### **8.4.3 Competent Authority to issue Residential/Domicile Certificate:**

In order to become eligible for admission to any category of seats in Engineering & Technology / Pharmacy Colleges, Residential/Domicile Certificate has to be submitted by the intending candidate in Proforma given in the Annexure IV of this Brochure. The applicable proforma is to be downloaded and printed on an A4 size white paper and will be required to be filled in properly.

#### **Proforma A-I and Proforma B:**

It must be signed and certified by any of the following competent authorities from Central Government or State Government having local jurisdiction over the place of the permanent residence of the concerned candidate or his/ her parents, as the case may be, viz.

i) District Magistrate; ii) Additional District Magistrate; iii) Deputy Magistrate & Deputy Collector; v) Sub - Divisional Officer; vi) Block Development Officer;

vii) Superintendent of Police, viii) Additional Supdt. Of Police; ix) Sub Divisional Police Officer or Deputy Supdt. of Police, x) Commissioner, Additional Commissioner, Joint Commissioner, Deputy Commissioner, Assistant Commissioner of Police Commissionerate;

xi) Judicial Magistrate of any rank or position in the concerned district or Metropolitan locality or Judges / Judicial Officers of Hon'ble High Court at Calcutta or Hon'ble Supreme Court of India;

xii) Commissioner, Additional Commissioner, Joint Commissioner, Assistant Commissioner of Municipal Corporation; xiii) Executive Officer of Municipality;

xiv) Assistant Secretary / equivalent or above in the Secretariat to the Government of any State or Central Government; xv) Deputy Director or above in the Directorate to the Government of any State or Central Government.

Every official certifying the Domicile Status of the candidate or his/her parents MUST provide one's FULL NAME, DESIGNATION, PLACE OF POSTING WITH ADDRESS, LANDLINE AND MOBILE NUMBER

ALONG WITH THE EMPLOYEE'S IDENTITY CARD NUMBER. These details are MANDATORY. CERTIFICATION FROM ANY AUTHORITY OTHER THAN WHAT HAVE BEEN ENUMERATED ABOVE 'WILL NOT BE ACCEPTED.'

Note: No elected people's representative like municipal commissioner, councilor of Municipal Corporation, any elected member of three-tier Panchayat system or GTA, MLA or MP is entitled to issue such certificates.

**Proforma A-II:**

Domicile certificate in this proforma must be signed from Head of the Institution from which the candidate has passed his/her 10+2 examination or will appear in his/her 10+2 examination. Such certificate must be issued based on verification of the school education record of the candidate. The proforma for such certificate is provided in the website and may be downloaded.

## 9. Seat Matrix: Availability of Seats, List of Colleges, Courses with their Branch Codes:

Sl No.	Colleges	Courses	Branch Codes	Seats for Minority	Total Seats
1	JIS College of Engineering	Electronics & Communication Engineering	ECE	60	330
		Computer Science Engineering	CSE	90	
		Information Technology	INT	45	
		Electrical Engineering	ELE	60	
		Bio-Medical Engineering	BMD	15	
		Civil Engineering	CIV	30	
		Mechanical Engineering	MEC	30	
2	Narula Institute of Technology	Electronics & Communication Engineering	ECE	30	330
		Computer Science Engineering	CSE	90	
		Information Technology	INT	45	
		Electrical Engineering	EE	30	
		Electronics & Instrumentation Engineering	EIE	30	
		Civil Engineering	CIV	60	
		Mechanical Engineering	MEC	60	
3	Guru Nanak Institute of Technology	Electronics & Communication Engineering	ECE	60	270
		Computer Science Engineering	CSE	90	
		Information Technology	INT	45	
		Electrical Engineering	EE	30	
		Applied Electronics & Instrumentation Engineering	EIE	15	
		Food Technology	FET	30	
4	Guru Nanak Institute of Pharmaceutical Science & Technology	Bachelor in Pharmaceutical Science & Technology	PHE	50	50
5	Dr. Sudhir Chandra Sur Degree Engineering College	Electronics & Communication Engineering	ECE	18	144
		Mechanical Engineering	MEC	18	
		Computer Science Engineering	CSE	54	
		Automobile Engineering	AUE	18	
		Electrical Engineering	EE	18	
		Civil Engineering	CIV	18	

**(Intake may change as per the norms of the Regulatory Authority.) Total Seats = 1164**

**Note: Percentage of reserved seats declared as per discretion of the minority institutes and as per the notification by the Govt. of West Bengal.**

## 10. Application and Submission Procedure:

A candidate may apply for CEE-AMPAL-2020-WB, in 2 ways:

- |        |            |
|--------|------------|
| EITHER | a) Online  |
| OR     | b) Offline |

### a) **ONLINE Registration for Application to CEE-AMPAL-2020-WB:**

1: Registration at CEE-AMPAL-2020-WB website: The candidate needs to login at [www.ampal.in](http://www.ampal.in), go to "Apply Online" section and create his/her user id account by providing his/her name and email at the "New Online Registration" section. The candidate will receive an auto-generated unique password in the e-mail id so provided by him/her.

2: Logging In with Unique Password:

- (i) The candidate needs to check his/her e-mail id for the aforesaid auto-generated email containing the Unique Password to login.
- (ii) The candidate needs open this mail to get the unique password.
- (iii) The candidate needs to re-visit [www.ampal.in](http://www.ampal.in) and go to the login page. This time (s)he needs to use the "**Existing Users Login**" section where (s)he may enter his/her e-mail id and the password sent on email and proceed to fill up the on-line application form to CEE-AMPAL-2020-WB. After login, the candidate may change the password.

3: Filling up of On-line form:

To fill up the on-line application form for CEE-AMPAL-2020-WB, the candidate needs to note the following important points.

**Important Note:** Applicants to fill up CEE-AMPAL-2020-WB may fill up the online application form and submit Rs.200/- (Rupees Two Hundred only) as application fees via the online payment gateway at one sitting only during filling up of the online application form. That is, **the form cannot be partially filled and saved and submitted at a later stage.**

If a student is unable to fill up the form completely or, is somehow unable to complete form fill up after starting and logs out leaving the form incomplete, shall need to restart filling up the form at a later stage by logging in with his/her e-mail id and password.

The on-line payment needs to be completed immediately after submission of the online application form.

If any student logs out **after online form submission and before completing online payment transaction, shall need to fill up the application form afresh.**

If a candidate is able to fill up the online application form and during online payment experiences any problems at the payment gateway due to failure in payment, may proceed for payment at a later time by choosing the option of “**Retry Payment**”

available with the Logout option. In this case, the candidate is not required to fill up the online application form afresh.

**Submission of on-line application form needs to be completed before the due date.**

Once the online application form is submitted, this form is final and details in the said form cannot be altered or changed anymore. Students are requested to exercise caution or get in touch with AMPAI Helpline numbers when facing any difficulty. Candidate shall receive e-mail intimation once the application form for CEE-AMPAI-2020-WB has been successfully submitted.

4: Candidates applying to appear for CEE-AMPAI-2020-WB also need to upload the following documents along with the on-line application form:

- (i) Recent passport –size photograph (Approximate dimensions: Height:4.5 cm x Width: 3.5 cm; Size: 300 KB)
- (ii) Scan of own signature: (Approximate dimensions: Height:1.5 cm x Width: 3.5 cm; Size: 100KB)
- (iii) Admit Card of 10<sup>th</sup> Standard examination (Approximate dimensions: Height: 210mm x Width: 297mm; Size: 600KB)

5: The candidate next needs to make a payment of Rs. 200/- [Rupees Two Hundred only] by the on-line payment gateway. Unless this payment transaction is successfully completed, the application status to appear for CEE-AMPAI-2020-WB is not complete.

Any student who initiates the on-line registration process and fails to complete the on-line process for whatever reason may choose to apply for CEE-AMPAI-2020-WB in the off-line process. There is no penalty in leaving the online process of application incomplete.

However, a candidate may apply in CEE-AMPAI-2020-WB in one way only: either on-line or off-line. Any candidate who has already completed application online shall not be allowed to apply off-line at a later side and vice versa. In such a case, the application done later, (either off-line or on-line as applicable) shall be cancelled.

Last date of submission of online application form for CEE-AMPAI-2020-WB is 10<sup>th</sup> May, 2020.

**b) OFFLINE Registration for Application to CEE–AMPAI-2020-WB:**

**Step 1:** The candidate needs to visit [www.ampai.in](http://www.ampai.in) and download a pdf copy of the Application form.

**Step 2:** The candidate needs to take a printout of the downloaded form and fill up the necessary information.

Candidates can download the Application Form from [www.ampai.in](http://www.ampai.in).

Application Fee of Rs.200/- has to be paid by DD in favour of “**Association of Minority Professional Academic Institutes**” or “**AMPAI**” payable at Kolkata

Duly filled up Application Form along with Examination fee and **important documents** can be submitted either in person or by post to the following address:

**AMPAI Office, Dwarka Building, 1st Floor, 7, Sarat Bose Road, Kolkata, West Bengal, Pin – 700 020**

List of Important Documents to be submitted along with the filled up application form of CEE-AMPAI-2020-WB:

- (i) Copy of Admit Card of 10<sup>th</sup> Standard examination
- (ii) Duly filled up domicile certificate as per proforma given in the information brochure of CEE-AMPAI-2020-WB.

Last date for submission of OFF-LINE application form to CEE-AMPAI-2020-WB is 10<sup>th</sup> May 4.00PM.

An SMS will be sent to the mobile number provided by each candidate after receiving the Application Form.

## 11. Issue of Admit Card:

Admit Cards will be made available online from [www.ampai.in](http://www.ampai.in) from 7<sup>th</sup> May 2020. Candidates will be able to download their respective admit cards after providing their name, date of birth, user id (their email address) and password.

Candidates must bring one copy A4 size print out of their admit cards at the examination hall on 17<sup>th</sup> May 2020.

Examinees must download their admit cards from the website prior to attending the examination.

## 12. List of Examination Centre Locations:

The allocation of examination centre will be based on the choices given by the candidate during Application Form fill-up. Each applicant has the right to choose a maximum of two centres. However, discretion of AMPAI in allocation of examination centre shall be final. NO REQUEST FOR

CHANGE OF ALLOCATED CENTRE WILL BE ENTERTAINED UNDER ANY CIRCUMSTANCES. The list of Examination

Centre Locations is given below:

The addresses of the examination centres will be mentioned in the admit cards

Location	Exam Centre Code
North Kolkata	01
South Kolkata	02
North 24 Pgs (Agarpara)	03
South 24 Pgs (Sodepur)	04
Nadia (Kalyani)	05
Howrah	06
Kharagpur	07
Asansol	08
Durgapur	09
Malda	10
Murshidabad	11
Siliguri	12
Ranchi	13
Jamshedpur	14
Dhanbad	15
Patna	16
Guwahati	17
Silchar	18
Agartala	19
Benaras	20
Gorakhpur	21
Bhubaneswar	22

### **13. Evaluation and Declaration of Results of CEE-AMPAI-2020-WB**

The OMR answer sheets will be scanned and scored and result will be prepared on the basis of separate merit lists for B.Tech and B.Pharm courses. The merit list of both B.Tech and B.Pharm courses shall be prepared by listing them in the descending order of the marks scored by them.

### **14. Legal Jurisdiction:**

All matters pertaining to conduct of CEE-AMPAI-2020-WB shall fall within the jurisdiction of Kolkata only.

### **15. Procedure for Conduct of Examination:**

- 15.1. The Examination Hall will be opened 45 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.
- 15.2. Candidate must bring with them:
  - i) Admit Card of CEE-AMPAI-2020-WB
  - ii) Admit card of Class / Std. Xth / XIIth examination as photo ID
  - iii) Black / Blue Ball Point Pen.
- 15.3. Candidates must show on demand the Admit Card (CEE-AMPAI-2020-WB) for admission to the Examination Hall. A candidate not possessing the Admit Card issued by the designated Authority shall not be allowed to enter in the Examination Hall by the Center-in-Charge.
- 15.4. A seat indicating Roll No. will be allocated to each candidate. Candidates must find out and occupy their allotted seats.
- 15.5. 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.13.2 inside examination Hall.
- 15.6. Mobile Phones, Calculators, Slide Rules, Log Tables, Electronic Watches with facilities of Calculator are not allowed in the Examination Hall. Possession of such items during the Examinations may lead to cancellation of candidature.
- 15.7. 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. Candidate should not leave the hall without handing over their OMR sheet and question booklet to the invigilator on duty; otherwise this may lead to cancellation of the concerned paper.
- 15.8. It is to be noted carefully that the candidates must write the "Question Booklet No. and Question Booklet Series" at the indicated places both on the OMR Answer Sheet and Attendance Sheet during examination. Otherwise his/her OMR Answer sheet in the concerned subject will be cancelled.



15.9. Candidates shall maintain silence during the examination. Any conversation or gesticulation or disturbance in the examination hall shall be deemed as misdemeanor. 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.

**If a candidate is found impersonating, his/her candidature may be cancelled outright and the concerned examinee will be handed over to the Police.**

## **16. Counseling and Admission:**

Detailed information regarding admission to the concerned College(s) and allotment of seats therein shall be made available at [www.ampai.in](http://www.ampai.in) in due course. It should be noted that being Merit Listed alone does not make a candidate eligible for admission to any concerned College.

## **17. DOs AND DON'Ts**

### 17.1 DOS:

17.1.1 Candidates have to bring one photo identification proof at the Examination Hall.

17.1.2 The photo identification may be Admit card of Class / Std.X /10+2 examinations.

17.1.3 Read the instructions carefully before filling-in of the Application Form.

17.1.4 Specify the Date of Birth correctly.

17.1.5 Choose the District and examination zones correctly.

17.1.6 Name of the candidate and complete mailing address with correct postal Pin Code (No.) should be filled up in designated places.

17.1.7 Paste color photographs with gum so that it is not detached in any way.

17.1.8 Enter the examination hall only with your Admit Card and blue/black ball point pens.

17.1.9 Submit the OMR Answer Sheet to the Invigilator after completion of each session of Examination.

17.1.10 Write the Question Booklet No. in the specified places on both the OMR Answer Sheet and Attendance Sheet.

### 17.2 DON'TS:

17.2.1 Don't staple or pin the photographs.

17.2.2 Don't attest both photographs.

17.2.3 Don't sign in capital letters.

17.2.4 Don't bring Mobile Phone, Calculator or any other Electronic Gadget inside the Examination Hall.

## **18. Important Dates**

Publication of advertisement – 27<sup>th</sup> March, 2020

Application forms available in website [www.ampai.in](http://www.ampai.in) 27<sup>th</sup> March, 2020(Offline) & 28<sup>th</sup> March, 2020(Online)

Last date of receiving of Off-line Application form 10<sup>th</sup> May, 2020 up to 4:00 pm at AMPAI Office

Publication date of downloadable Admit card in [www.ampai.in](http://www.ampai.in) (For both online & off-line applicants): 14<sup>th</sup> May, 2020 onwards.

Date of Examination: 17<sup>th</sup> May 2020.

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## 19. Annexure – I: Syllabus for CEE-AMPAI-2020-WB

### Mathematics

#### Algebra

A.P., G.P., H.P.: Definitions of A. P. and G.P.; General term; Summation of first n-terms of series  $\Sigma n$ ,  $\Sigma n^2$ ,  $\Sigma n^3$ ; Arithmetic/Geometric series, A.M., G.M. and their relation; Infinite G.P. series and its sum.

Logarithms: Definition; General properties; Change of base.

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

Quadratic Equations: Quadratic equations with real coefficients; Relations between roots and coefficients; Nature of roots; Formation of a quadratic equation, sign and magnitude of the quadratic expression  $ax^2 + bx + c$  (where a, b, c 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  $3^{2n+1} + 2^{2n+2}$  ( $n \geq 1$ )

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

Matrices: Concepts of  $m \times n$  ( $m \leq 3$ ,  $n \leq 3$ ) 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.

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

## **Trigonometry**

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

### **Coordinate geometry of two dimensions**

Distance formula, section formula, area of a triangle, condition of collinearity of three points in a plane.

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

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

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

### **Co-ordinate geometry of three dimensions**

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

## **Calculus**

Differential calculus: Functions, composition of two functions and inverse of a function, limit, continuity, derivative, chain rule, derivative of implicit functions and 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: Formation of ordinary differential equations, solution of homogeneous differential equations, separation of variables method, linear first order differential equations.

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

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

## Physics

**Physical World, Measurements, Units & dimensions:** Physical World, Measurements, Units & dimensions  
Units

& Dimensions of physical quantities, dimensional analysis & its applications, error in measurements, significant figures.

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

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

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

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

Bulk properties of matter: Elasticity, Hooke's law, Young's modulus, bulk modulus, shear, rigidity modulus, Poisson's ratio elastic potential energy. Fluid pressure: Pressure due to a fluid column, buoyancy, Pascal's law,

effect of gravity on fluid pressure. Surface tension: Surface energy, phenomena involving surface tension, angle of contact, capillary rise,

Viscosity: Coefficient of viscosity, streamline & turbulent motion, Reynold's number, Stoke's law, terminal velocity, Bernoulli's theorem. Heat & Thermal Physics: Heat & temperature, thermal expansion of solids. liquids

& gases, ideal gas laws, isothermal & adiabatic processes; anomalous expansion of water & its effects, sp. heat capacity,  $C_p$ ,  $C_v$ , calorimetry; change of state, specific latent heat capacity. Heat transfer; conduction, thermal and thermometric conductivity, convection & radiation, Newton's law of cooling, Stefan's law.

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

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

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

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

Current Electricity:

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

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

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

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

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

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

Optics II (Wave Optics): Scattering of light - blue colour of the sky, elementary idea of Raman effect; wave optics: wave front & Huygens' principle, reflection & refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection & refraction using Huygens' principle Interference, Young's double slit experiment & expression for fringe width, coherent sources, Fraunhofer diffraction due to a single slit,

Particle nature of light & wave particle dualism: Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation - particle nature of light, matter waves; wave nature of particles, de Broglie relation.

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

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

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

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

# Chemistry

## Atoms, Molecules and Chemical Arithmetic:

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

## Atomic Structure:

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

## Radioactivity and Nuclear Chemistry:

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

## The Periodic Table and Chemical Families:

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

## Chemical Bonding and Molecular Structure:

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



intra-molecular hydrogen bonding and its effects on physical properties (mp, bp and solubility); Hydrogen bridge bonds in diborane.

Coordination Compounds:

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

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

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

Gaseous State:

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

Chemical Energetics and Chemical Dynamics:

Chemical Energetics – Conservation of energy principle, energy changes in physical and chemical transformations. First law of thermodynamics; Internal energy, work and heat, pressure – volume work; Enthalpy. Internal energy change ( $\Delta E$ ) and Enthalpy change ( $\Delta H$ ) in a chemical reaction. Hess's Law and its applications (Numerical problems). Heat of reaction, fusion and vaporization; Second law of thermodynamics; Entropy; Free energy; Criterion of spontaneity. Third law of thermodynamics (brief introduction).

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

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

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

Physical Chemistry of Solutions:

Colloidal Solutions – Differences from true solutions; Hydrophobic and hydrophilic colloids (examples and uses); Coagulation and peptization of colloids; Dialysis and its applications; Brownian motion; Tyndall effect

and its applications; Elementary idea of emulsion, surfactant and micelle. Electrolytic Solutions – Specific conductance, equivalent conductance, ionic conductance, Kohlrausch's law, Faraday's laws of electrolysis, applications. Numerical problems.

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

Ionic and Redox Equilibria:

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

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

Redox Equilibria: Oxidation – Reduction reactions as electron transfer processes, oxidation numbers, balancing of redox reactions by oxidation number and ion-electron methods. Standard electrode potentials ( $E^\circ$ ), 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).

Hydrogen:

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

Chemistry of Non-Metallic Elements and their Compounds:

Carbon – occurrence, isotopes, allotropes (graphite, diamond, fullerene); CO and CO<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 Sulphur – Occurrence, isotopes, allotropic forms, isolation from natural sources and purification, properties and reactions of the free elements. Water, unusual properties of water, heavy water (production and uses). Hydrogen peroxide and ozone (production, purification, properties and uses).

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

Chemistry of Metals:

General principles of metallurgy – occurrence, concentration of ores, production and purification of metals, mineral wealth of India. Typical metals (Na, Ca, Al, Fe, Cu and Zn) – occurrence, extraction, purification

(where applicable), properties and reactions with air, water, acids and non-metals. Manufacture of steels and alloy steel (Bessemer, Open-Hearth and L.D. process). Principles of chemistry involved in electroplating, anodizing and galvanizing. Preparation and properties of  $K_2Cr_2O_7$  and  $KMnO_4$ .

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

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

Chemistry in Industry:

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

Polymers:

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

Surface Chemistry:

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

Environmental Chemistry:

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

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  $\beta$ -dicarbonyl compounds, acidity and basicity of simple organic compounds.

## Compounds:

Alkanes – Preparation from alkyl halides and carboxylic acids; Reactions — halogenation and combustion. Alkenes and Alkynes – Preparation from alcohols; Formation of Grignard reagents and their synthetic applications for the preparation of alkanes, alcohols, aldehydes, ketones and acids; SN1 and SN2 reactions (preliminary concept). Markownikoff's and anti-Markownikoff's additions; Hydroboration;

Oxymercuration-demercuration, reduction of alkenes and alkynes (H<sub>2</sub>/Lindler catalyst and Na in liquid NH<sub>3</sub>), metal acetylides.

## Haloalkanes and Haloarenes:

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

## Alcohols:

Preparation of alcohols from carbonyl compounds and esters. Reaction – dehydration, oxidation, esterification, reaction with sodium, ZnCl<sub>2</sub>/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<sup>o</sup>, 2<sup>o</sup> and 3<sup>o</sup> amines (Hinsberg method); Reaction with HNO<sub>2</sub>; Carbyl amine reaction. Aromatic Compounds:

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

Amines – Preparation from reduction of nitro compounds; Formation of diazonium salts and their stability; Replacement of diazonium group with H, OH, X (halogen), CN and NO<sub>2</sub>, diazocoupling and reduction.

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

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

## Application Oriented chemistry:

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

## Introduction to Bio-Molecules:

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

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

Principles of Qualitative Analysis:

Detection of water soluble non-interfering Acid and Basic Radicals by dry and wet tests from among:

Acid Radicals:  $\text{Cl}^-$ ,  $\text{S}^{2-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{CO}_3^{2-}$ . 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.

## **Biology**

Science of Life

Basic unit of life process; Cell Theory; prokaryotic and eukaryotic cells- structure and differences

Ultra structure and functions of cellular components

Cell wall, plasma membrane, plastids, endoplasmic reticulum, Golgi bodies, mitochondria, ribosomes, lysosomes, nucleus, nucleolus, centrosome, microbodies (peroxisomes and glyoxysomes), cytoskeleton, vacuole, centriole, cilia, flagella

Chemical constituents of living cells

Classification, components and structural properties of carbohydrates, lipids, proteins and nucleic acids; enzymes, enzymatic action (lock and key, allosterism, regulation)

Chromosome

Morphology of chromosomes; brief idea of polytene chromosomes; euchromatin and heterochromatin; nucleic acids as genetic material (viral transduction and bacterial transformation)

Cell division

Cell cycle; mitosis- definition and significance (process not required); meiosis- process, types and significance; difference between mitosis and meiosis

Genetics and Evolution

Mendelian inheritance (laws only); deviations from Mendelism- (i) incomplete dominance, (ii) codominance,

(iii) multiple alleles and inheritance of blood groups (ABO, Rh); phylogenetic inheritance (elementary); chromosome theory of inheritance; chromosomes and genes; sex determination in humans, birds and honey bees; linkage and crossing over; sex-linked inheritance- haemophilia, colour blindness; Mendelian disorders in humans- (i) autosomal (a) Thalassaemia (b) Down syndrome (ii) sex-linked (a) Turner's syndrome (b) Klinefelter's syndrome (cause and symptoms only)

Molecular basis of inheritance

DNA as the genetic material (Griffith, Avery-MacLeod-McCarty and Hershey-Chase experiments); structure of DNA and RNA; types of RNA- mRNA, rRNA and t-RNA; DNA packaging; central dogma (elementary); DNA replication; transcription; genetic code; translation; elementary knowledge of regulation of gene expression (lac operon); DNA finger printing (basic idea only)

## Evolution

Origin of life- theories of origin of life; abiogenic origin/chemical origin of life- Oparin-Haldane hypothesis; biological evolution- evidences, theories of organic evolution, Darwin's contribution, synthetic theory; mechanism of evolution- variation and its sources of origin, mutation, recombination; gene flow and genetic drift; Hardy-Weinberg principle; human evolution- an outline

## Morphological variations and structural organization

Plant tissue and tissue system- types, structure and functions; animal tissue- classification, structure and functions in brief

## Physiology and Biochemistry

### Plants

1. Movements of water, nutrients and gases: absorption of gases, water and nutrients; cell-to-cell transport, diffusion, active transport; plant-water relation- imbibitions, water potential, osmosis and plasmolysis; long distance transport- apoplastic, symplastic, root pressure, transpiration pull, uptake of minerals; transpiration and guttation; opening and closing of stomata; transport through xylem and phloem
2. Essential minerals: macro and micro nutrients and their functions; elementary idea of hydroponics; nitrogen metabolism; nitrogen cycle; biological nitrogen fixation
3. Respiration: cellular respiration- glycolysis, fermentation, TCA cycle and ETS (aerobic)- definition, process and significance; energy relation- number of ATP molecules generated in respiration; amphibolic pathways; respiratory quotients of nutrients
4. Photosynthesis: definition; site of photosynthesis; photosynthetic pigments (structure not required); photochemical and biosynthetic phases; photorespiration; C3 and C4 pathways; factors controlling photosynthesis
5. Growth and development: idea of growth, differentiation and development; various growth factors (light, temperature, water, nutrients, hormones only); growth rate; growth regulation- auxin, gibberellins, cytokinin, ethylene, ABA; seed germination, seed dormancy, vernalisation; photoperiodism- definition, types of plants on the basis of the length of photoperiod
6. Reproduction: mode of reproduction- sexual and asexual; asexual reproduction- definition, characteristics, modes (binary fission, sporulation, budding, gemmule formation, fragmentation, regeneration, vegetative propagation, cutting, grafting, layering and gootee); sexual reproduction- flower structure; pollination (autogamy and geitonogamy); cross pollination (allogamy and xenogamy); agents of pollination- brief description with examples; significance; development of male gametophyte and female gametophyte; outbreeding devices; pollen-pistil interaction, double fertilization; post-fertilization events- development of endosperm and embryo (in brief); formation of

fruit and development of seed (elementary); special modes- apomixes, parthenogenesis, parthenocarpy and polyembryony (brief account); significance of fruit and seed formation

## **Animals: Human**

1. Digestion and absorption: Structure of human alimentary canal including dental arrangement and digestive glands (in brief); peristalsis; digestion, role of digestive enzymes and the Cr-I hormones in digestion; absorption, assimilation of carbohydrates, protein and fats; egestion; nutritional and digestive disorder- protein-energy malnutrition (PEM), indigestion, constipation, vomiting, jaundice, diarrhea (brief idea)
2. Breathing and respiration: respiratory organs in animals (in brief); respiratory system in human (outline); mechanism of breathing and its regulation in human body; exchange of gases, transport of gases; regulation of respiration; respiratory volume; disorders related to respiration- asthma, emphysema, occupational respiratory disorders (e.g. Silicosis, asbestosis); definition of hypoxia, anoxia, apnoea, dyspnoea
3. Body fluids and circulation: composition of blood (in tabular form); blood grouping; coagulation of blood; lymph and its function; outline idea of human circulatory system; structure of human heart and blood vessels; cardiac cycle, cardiac output, stroke volume, minute volume, determination of cardiac output- Fick's principle; double circulation; regulation of cardiac activity (neural and hormonal) including factors regulating blood pressure; disorders of circulatory system- hypertension, coronary artery disease, angina pectoris, heart failure (brief idea only)
4. Excretory products and their elimination: modes of excretion- ammonotelism, ureotelism, uricotelism (definition and examples); human excretory system- structure and function (histology of nephron); urine formation and osmo regulation; regulation of kidney functions, rennin, angiotensin, antidiuretic factor (ADH) and diabetes insipidus; role of other organs in excretion- liver, skin, lung and salivary glands; disorders- uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney (brief idea only)
5. Locomotion and movement: types of movement-ciliary, flagellar and muscular; skeletal muscle contractile proteins and its function; joints; disorders of muscular and skeletal system- myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, and gout (brief idea only)
6. Neural control and coordination: brief idea of neurons and nerves, neural control and coordination; nervous system of human- central, peripheral and visceral; brain and its major parts- cerebral cortex, thalamus, hypothalamus and limbic system; midbrain, pons, medulla, cerebellum and spinal cord (outline idea); distribution and function of peripheral nervous system and autonomic nervous system; generation and conduction of nerve impulse; reflex action and reflex arc; sense organs- sensory perception; outline structure and function of eye and ear
7. Chemical coordination and regulation: endocrine glands and hormones; human endocrine system- hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads- location and function only; elementary idea of hormone action, role of hormones as messengers and regulators;

hypo- and hyperactivity of endocrine glands and related diseases- dwarfism, acromegaly, cretinism, goitre, exophthalmic goitre, diabetes, Addison's disease (brief idea of cause and symptoms only)

8. Reproduction: male and female reproductive system (outline idea with diagram); microscopic anatomy of testis and ovary; gametogenesis (brief account); menstrual cycle; fertilization and development of embryo up to blastocyst formation; implantation, pregnancy and placenta formation; elementary idea of parturition and lactation

### **Taxonomy, Systematics and Biodiversity**

Definition; binomial nomenclature; Law of priority; need for classification; genetic diversity; species diversity, ecosystem diversity, biodiversity; five kingdom classification; salient features and classification of plants and animals

### **Ecology and Environment**

Concept of ecology, ecosystem, environment, habitat and niche; biome concept and distribution; major abiotic factors; response to abiotic factors and adaptation; population interaction- mutualism, competition, predation, parasitism; population attributes- growth, birth rate and death rate; trophic relationship, pyramids of number, biomass and energy; ecological succession

### **Biodiversity and Conservation**

Pattern of biodiversity; importance and loss of biodiversity; need of biodiversity conservation; hotspot; endangered species; extinction; Red Data Book and Green Data Book; biodiversity conservation biosphere reserve, national parks and sanctuaries (general idea)

### **Environmental issues**

Sound, air, water pollution and their control; agrochemical and their effects; green house effect and global warming; ozone depletion; deforestation; idea of success stories addressing environmental issues- 1) Chipko Movement, 2) Dasholi Gram Swarajya Mandal Movement (DGSM), Silent Valley or Amrita Devi Bishnoi Movement (Jaipur); concept and biomagnification and bioaccumulation; cause of dyslexia, Minamata and itai-itai diseases; idea of BOD, COD, acid rain, ozone hole

### **Microbes and human welfare**

Morphological characteristics of bacteriophage (T2), plant virus (TMV), animal virus (influenza) and bacteria (E. coli), gram negative and gram positive bacteria (characteristics and examples)

### **Health and diseases**

Concept of immune system, antibody, antigen and its reactions; types of immunity, vaccine and vaccination (brief idea); pathogens and parasites causing human diseases (only causative agents, symptoms of diseases, modes of transmission and preventive measures)- malaria, kala azar, amoebiasis, filariasis, ascariasis, typhoid, pneumonia, common cold, ring worm, HIV, AIDS, cancer

### **Biotechnology and its applications**

Principle and process of genetic engineering (recombinant DNA technology); cloning of microbial genes (brief idea only); application of biotechnology in health and agriculture- in household food processing; industrial production, energy generation, sewage treatment; Rhizobium and other nitrogen fixing bacteria, biofertilizers and biopesticides, industrial production of curd; tanning and brewery, synthesis of antibiotics, vitamins, human insulin and vaccine production; gene therapy, transgenesis, transgenic animals and plants with examples (including BT cotton)



**Annexure – III: Guidelines for Filling up Application Form of CEE-AMPAI- 2020-WB :**

No of the Field	Description of the Field	Value	Remarks
1	Name of the Candidate	Enter Name	Type Full Name, Do not use prefixes like Sri./Mr./Ms./Dr. etc
2	Date of Birth	In DD/MM/YYYY Format	See CEE-AMPAI-2020-WB Eligibility Condition
3	Address for Communication	Type complete address for communication	Name, Address, PIN Code(6 characters), [Mandatory for correspondence]
4	Permanent Address	Type complete address for communication	Name, Address, PIN Code(6 characters), [Mandatory for correspondence]
5	Whether Domicile of West Bengal	Tick [ ✓ ]	Select Either “Yes” or “No”
6	Telephone Number (with STD Code)	Type Number	Start with STD Code , Put a “-” between STD Code & Phone Number
7	Mobile No (10 digits only)	Type Number	Do not put Zero or +91 at the beginning [Mandatory for communication]
8	Email Id	Type Email Id	This e-mail id may be used later for access to admit card. [Mandatory for communication]
9	Gender	Tick [ ✓ ] any one	Select Either “Male” or “Female” or “Other”
10	Religion	Tick [ ✓ ] any one	Select Either “Sikh” or “Others”
11	Application for	Tick [ ✓ ] any one	1. B.Tech 2. B.Pharm 3.Both
12	Father’s/Mother’s/Guardian’s Name: (As per High School Records)	Type Name	Type Full Name, Do not use prefixes like Sri./Mr./Ms./Dr. etc
13	Year of Passing (Class/Std. 10 <sup>th</sup> or equivalent Exam.)	Enter Year	In the format : YYYY
14	Year of Passing/Appearing (Class/Std. 12 <sup>th</sup> or equivalent Exam.)	Enter Year	In the format : YYYY
15	10+2 Results are awaited	Tick [ ✓ ]	Select Either “Yes” or “No”

No of the Field	Description of the Field	Value	Remarks
16	Choice of Exam Centre	Enter Name	Two different choices to be selected mandatorily from the list of examination locations as mentioned in application form.
17	Have you applied for WBJEE (2020)?	Tick [ ✓ ] any one	Select Either "Yes" or "No"
18	Have you applied for JEE Main (2020)?	Tick [ ✓ ] any one	Select Either "Yes" or "No"
19	Please indicate your annual family income	Tick [ ✓ ] any one	Select any one option
20	Declaration	Date(DD/MM/YYYY), Full Signature	Use Black Ball Point Pen
21	Paste one recent passport sized Photograph(Offline) Or Upload scanned image of your recent color photograph and signature all in one go (Online)	Photograph	Paste one recent passport sized Photograph(Offline) Or Upload scanned image of your recent color photograph and signature all in one go (Online)
22	Signature of the Candidate	Full Signature	With Black Ball Point pen

The candidate is required to pay Rs 200 as requisite fees for online or offline both. Once the fee payment is made, the candidate will be directed to download the confirmation page (Online) or the Admit Card will be sent to the candidate for Offline. For Online Payment, download the Confirmation Page and preserve the same.

## 21. Annexure – IV: Domicile Certificate Proforma

### Proforma for Residential/Domicile Certificate

#### PROFORMA - A-I

Applicable for candidates residing in the State of \_\_\_\_\_ continuously at least for last ten (10) years as on 31.12.2020

To be issued by authorized persons other than Head of the Institution from which the candidate appeared/ is due to appear in '10+2' or equivalent examination.

Domicile Certificate: Type-A-Is

Certified that \_\_\_\_\_ son / daughter of

\_\_\_\_\_ is a resident/permanent resident of \_\_\_\_\_

state at Village/House No. \_\_\_\_\_ Street \_\_\_\_\_

Post Office \_\_\_\_\_ Police Station \_\_\_\_\_

in the district of \_\_\_\_\_ under Assembly Constituency \_\_\_\_\_ and has been

living in the State of \_\_\_\_\_ continuously / uninterruptedly at least for the last ten (10) years

as on 31-12-2020

Paste passport size  
photograph of  
applicant in this  
box

Note:

- Photograph is to be attested by the certifying authority.
- Candidates must submit the same photograph, as used in the Confirmation Page. The same photograph should be used during his/ her admission through this system.

Signature of Certifying Authority \_\_\_\_\_

Designation with Official Seal \_\_\_\_\_

Full Name of Certifying Authority \_\_\_\_\_

Address \_\_\_\_\_

Phone No. \_\_\_\_\_ Mobile No. \_\_\_\_\_ (Optional)

ID No. \_\_\_\_\_ (Optional)

Note : The Certifying Authority may please preserve the duplicate copy of the Certificate in his/her Office provided by the candidate.

**Proforma for Residential/Domicile Certificate**

**PROFORMA - A-II**

**Applicable for candidates residing in the State of continuously at least for last ten (10) years as on 31.12.2020**

**To be issued by the Head of the Institution from which the candidate appeared/is due to appear in '10+2' or equivalent examination.**

**Domicile Certificate: Type-A-II**

Certified that \_\_\_\_\_

son / daughter of \_\_\_\_\_ has passed the '10+2' Examination in the year \_\_\_\_\_ / will appear in the Final '10+2' Examination in 2017 from this Institution.

It is also certified that the student is resident / permanent resident of \_\_\_\_\_ state.

Village /House No. \_\_\_\_\_

Street \_\_\_\_\_ Post Office \_\_\_\_\_

Police Station \_\_\_\_\_ In the district of \_\_\_\_\_

under Assembly Constituency \_\_\_\_\_ and has been living and

studying in the State of \_\_\_\_\_ continuously /uninterruptedly at least for the last ten (10) years as on 31-12-2020

Paste passport size  
photograph of  
applicant in  
this box

Note:

- Photograph is to be attested by the certifying authority.
- Candidates must submit the same photograph, as used in the Confirmation Page. The same photograph should be used during his/ her admission through this system.

Signature of Certifying Authority \_\_\_\_\_

Designation with Official Seal \_\_\_\_\_

Full Name of Certifying Authority \_\_\_\_\_

Address \_\_\_\_\_

Phone No. \_\_\_\_\_

Mobile No. \_\_\_\_\_

ID No. \_\_\_\_\_

(optional)

Note : The Certifying Authority may please preserve the duplicate copy of the Certificate in his/her Office provided by the candidate.

**Proforma for Residential/Domicile Certificate**

**PROFORMA - B**

Applicable for candidates not residing in the State of \_\_\_\_\_ but whose parent(s) is/are permanent resident(s) of \_\_\_\_\_ having their permanent home address within the State.

To be issued by authorized persons other than Head of the Institution from which the candidate appeared/is due to appear in '10+2' or equivalent examination.

Certified that \_\_\_\_\_ Father / Mother of

\_\_\_\_\_ ( the applicant) is / are permanent

resident of \_\_\_\_\_ at Village /House No. \_\_\_\_\_ Street \_\_\_\_\_

\_\_\_\_\_ Post Office \_\_\_\_\_ Police Station

in the District of \_\_\_\_\_ under Assembly

Constituency \_\_\_\_\_

Paste passport size photograph of applicant in this box

Paste passport size photograph of Father/Mother of applicant

Note:  
Photograph is to be attested by the certifying authority.  
Candidate must submit the same photograph, as used in the Confirmation Page. The same photograph should be used during his/her admission through this system.

Signature of Certifying Authority \_\_\_\_\_

Designation with Official Seal \_\_\_\_\_

Full Name of Certifying Authority \_\_\_\_\_

Address \_\_\_\_\_

Phone No. \_\_\_\_\_ Mobile No. \_\_\_\_\_ (optional)

ID No. \_\_\_\_\_ (optional)

Note: The Certifying Authority may please preserve the duplicate copy of the Certificate in his/her Office provided by the candidate.

**22. Annexure–V: List of Branch Codes as per WBJEE 2020  
Information Brochure (Applicable for CEE-AMPAI-2020-WB)**

<b>Sr.No</b>	<b>Course /Branch Name</b>	<b>Branch Code</b>
1	Agricultural Engineering	AGR
2	Apparel Production Management	APM
3	Applied Electronics & Instrumentation Engineering / Electronics & Instrumentation Engineering/Instrumentation & Electronics Engg.	EIE
4	Architecture	ARC
5	Automobile Engineering	ATE
6	Bio Medical Engineering	BMD
7	Bio Technology	BOT
8	Ceramic Engineering/Technology	CRM
9	Chemical Engineering	CHE
10	Chemical Technology	CHT
11	Civil Engineering	CIV
12	Civil and Environmental Engineering	CEE
13	Computer Science & Engineering Technology / Computer Science & Technology	CSE
14	Construction Engineering	COE
15	Dairy Technology	DAT
16	Electrical & Electronics Engineering	EEE
17	Electrical Engineering	ELE
18	Electronics & Communication Engineering/Electronics & Telecommunication Engineering	ECE
19	Food Technology	FET
20	Information Technology	INT
21	Instrumentation Engineering	INE
22	Instrumentation and Control Engineering	ICE
23	Jute & Fibre Technology	JFT
24	Leather Technology	LET
25	Marine Engineering	MRE
26	Mechanical Engineering	MEC
27	Metallurgical Engineering	MET
28	Optics and Optoelectronics	OOE
29	Pharmaceutical Engineering / Pharmaceutical Technology	PHE
30	Power Engineering	PWE
31	Polymer Science & Technology	PST
32	Printing Engineering / Printing Technology	PRT
33	Production Engineering	PRO
34	Textile Engineering / Textile Technology	TEX

## 23. Annexure – VI : Instruction for Online CEE-AMPAI-2020-WB

### IMPORTANT INSTRUCTIONS FOR ONLINE APPLICATION FOR CEE-AMPAI-2020-WB

Candidates are required to go through the Information Bulletin carefully before attempting for online application.

Once an application is received, it will be construed that the candidate agrees to all terms & conditions, rules & regulations stipulated in the Information Bulletin ad notices published by the Board for the said purpose.

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

- 1) Application for CEE-AMPAI-2020-WB has to be done online and offline only. Printed application form available only for offline applicants. Instructions for filling the offline application form are explained in downloadable Information Brochure of CEE-AMPAI-2020-WB, Clause 8.6.
- 2) For online application, ensure filling genuine application form available online at [www.ampai.in](http://www.ampai.in)
- 3) For online application, **it is essential to have a mobile number and a unique email ID.**  
All future communications will be sent through the registered mobile number and email ID. AMPAI will not be responsible for non-receipt of any communication by the candidates if the mobile number and/ or the email ID are wrong/ non-existing/ changed.
- 4) For online application, once the registration details i.e. **name, father's name, mother's name, gender and date of birth** are entered and submitted, they **cannot be changed/ modified/ edited under normal circumstances.**  
Also the information must match exactly with the school admit cards, mark sheets, certificates, photo identity cards, caste/ category certificates etc. which a candidate has to produce at the time of entering the examination hall, during counseling, during admission and during registration with the University.
- 5) Do not attempt to make any duplicate application.
- 6) Do not share your application number, password, security question/ answer with anyone.
- 7) Upload **scanned** copy of photograph and signature as instructions provided in the Information Brochure, in case of Online Application.
- 8) If any information **other than** name, father's name, mother's name and date of birth given in the application needs to be corrected then do the correction within the given window period of correction. AMPAI will not make any correction thereafter.
- 9) If any candidate receives any SMS/ email regarding discrepancy in photograph/ signature uploaded by him/ her, he/ she must take corrective action **immediately within one day.**
- 10) The amount of application fees to be paid for appearing in CEE-AMPAI-2020-WB is **Rs200 (Rupees Two Hundred Only)** plus the Bank's Service Charges as applicable.

Payment status is updated automatically and hence should show 'OK' immediately after the payment. But in some rare cases it may be delayed due to the Bank's network delay/ failure or transaction failure at the Electronic Payment Gateway (EPG).

**Do not wait for the last day to make fee payment in order to avoid payment failure by BANK or EPG.**

- 11) Keep copies of confirmation page, admit card in safe custody. If It is not possible to generate any duplicate copy.
- 12) For any queries regarding the examination, contact:

**Convener, CEE-AMP AI-2020-WB**  
**Dwarka Building Landmark: near Minto Park, opposite Central Plaza**  
**7 Sarat Bose Road, 1<sup>st</sup>**  
**Floor Kolkata – 700020**  
**Phone: 033-2289 3943/44**  
**Helpline: +91 98308 69988/90730 24729/94320 11490**  
**Website: [www.ampai.in](http://www.ampai.in)**



## 24. Annexure-VII: Rules for CEE-AMPAI-2020-WB

- 1) Candidates are advised to enter the examination centre at least 30 minutes before commencement of the test.
- 2) Be sure about the exact location of your examination centre and means of commuting, in order to avoid any inconvenience on the day of examination.
- 3) No candidate will be allowed to sit for the test in any centre other than the one allotted to him/ her and as is mentioned in the admit card.
- 4) Carry the following documents to enter the examination centre.
  - a. A hard copy of admit card of CEE-AMPAI-2020-WB.
  - b. A copy of color photograph as was uploaded during the online application or offline application.
  - c. Any photo identity card in original such as Aadhar card/ Pan Card/ Passport/ Voter Card/ 10<sup>th</sup> Standard Admit Card/ School ID Card.
- 5) Frisking may be carried out while entering the centre for checking prohibited objects.
- 6) Candidates are advised to take their seats at least 15 minutes before the test.
- 7) No candidate will be allowed to enter the examination hall beyond the scheduled time of commencement of the test under any circumstance.
- 8) Candidates are not allowed to carry any written or printed material, calculator, pen, docu-pen, log table, wrist watch, any communication device like mobile phones, etc. inside the examination hall. Any candidate found with such items will be reported against & his/ her candidature will be summarily cancelled.
- 9) Question booklets will be distributed well before commencement of the test. Take out the OMR sheet without breaking seals of the question booklet.
- 10) Check that your OMR number **7 booklet numbers** are the same. If not, ask the invigilator to replace the whole set from the same series.
- 11) Put your signature on the top of the **Question Booklet**.
- 12) Read the instructions given on OMR & on the cover page of question booklet very carefully.
- 13) Write question booklet number & roll number at the appropriate places on the OMR. Wrong entry of question booklet number & roll number may lead to rejection of the OMR or wrong scoring, for which AMPAI will not remain responsible. If any candidate makes any mistake, he/ she must not over write. Request the invigilator to strike it out & rewrite the correct numbers and put his/ her signature.
- 14) Darken appropriate bubbles of question booklet number & Roll number.
- 15) Write your name in Block Letters, name of the centre & put your signature in appropriate places on the OMR. Do not put any stray mark anywhere else; it may lead to rejection of OMR.
- 16) Check that your Roll Number, photograph, spelling of your name in the attendance sheet matches with those given in your admit card. If any correction is needed, bring it to the notice of the invigilator.
- 17) Question booklet seals can be opened only at the time of commencement of test and as will be announced by the invigilator. Check all the pages of the question booklet. If there is any damage or missing page or any difficulties to read the question booklet, ask your invigilator to replace the whole set from the same series.
- 18) Maintain silence during the test. Any conversation/ gesticulation or creation of disturbances will be deemed as misdemeanor. If any candidate is found adopting any unfair means, his/ her candidature will be cancelled and/ or he/ she will be debarred

either permanently or for a period for the paper as is deemed fit by the Centre-In-Charge.

- 19) No discussion will be allowed with the invigilator regarding any question.
- 20) Candidates may do rough work in the space provided in the question booklet.
- 21) No candidate will leave his/ her seat without permission of the invigilator until the test is over.
- 22) No candidate will leave the hall till the end of the test & all OMRs are collected & tallied by the invigilator.
- 23) Candidates are allowed to take his/ her question booklet after the test.
- 24) Any candidate found to occupy a seat other than the one allotted to him/ she will be **reported against** & his/ her paper will be cancelled.
- 25) If any examinee is found impersonating, he/ she will be **handed over to the police** & candidature of the original candidate will be cancelled outright.

25. Annexure – VI: Sample OMR

Sample OMR

**TO BE FILLED IN BY THE CANDIDATE USING BLACK/BLUE BALL POINT PEN ONLY**

**INSTRUCTIONS FOR CANDIDATES**

- Use only BLACK or BLUE ball point pen for filling the bubbles.
- For Category I and Category 2 questions, more than one darkened bubble will be treated as wrong answer.
- Make sure not make any stray or extraneous mark on this sheet. Rough work must not be done on this sheet.
- Do not damage this sheet by using eraser or white pen etc.
- Do not write your name or roll number or put any identification on right hand side of this sheet. Violation of this will lead to cancellation of candidature.
- Do not tick/darken the bubbles.

**OMR ANSWER SHEET NO.**  
2000007

**QUESTION BOOKLET NO.**  
2000007

**2. ROLE NUMBER**  
470111007

**3. SUBJECT**  
Biological Science

**4. NAME OF THE CANDIDATE (in Block Letters)**  
Rajanshi Lal Rakshit

**5. NAME OF THE CENTRE**  
Alipurduan Hindi Madhyamik vidyalaya, (H.S)

**6. SIGNATURE OF THE CANDIDATE**  
Rajanshi Lal Rakshit

**SIGNATURE OF THE INVIGILATOR**  
Mohan Lal Ram  
20/11/16

**Biological Science CATEGORY I: Q1-Q80**

**CATEGORY II: Q81-Q85**



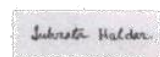
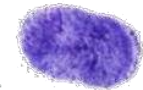


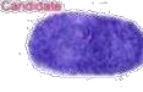



**CATEGORY III: Q86-Q115**

**8. ANSWERS**

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115.

## 26. Annexure – VII: Sample Attendance Sheet

### Sample Attendance Sheet

| WEST BENGAL JOINT ENTRANCE EXAMINATIONS BOARD<br>AQ-13/1, Sector - V, Salt Lake City, Kolkata - 700 091<br>ATTENDANCE SHEET<br>WBJEEM-2016, MEDICAL |  |   |  |  |
|---|--|---|--|--|
| CENTRE CODE: 89412  |  | DATE OF EXAM: 20/07/2016  |  |  |
| CENTRE NAME: MEGHNAD SAHA INSTITUTE OF TECHNOLOGY   |  | NO. OF PAGES: 115 of 115  |  |  |
|    |  |   |  |  |
| S.No. 455   | ROLL NO. 5894120249  | NAME SUBRATA HALDAR   |  |  |
|    |                       |   | Biological Science<br>Absent? (A)            |  |
|   | LTI of Candidate<br>  |   | Physics & Chemistry<br>Absent? (A)           |  |
|   |  |   | Question Booklet No.<br>2080345              | Question Booklet No.<br>1080345              |
|   |  |   | Signature of Candidate<br>Subrata Haldar.    | Signature of Candidate<br>Subrata Haldar.    |
| S.No. 456   | ROLL NO. 5894120250  | NAME DEBANJAN RAJBANSHI   |  |  |
|   |                       |   | Biological Science<br>Absent? (A)            |  |
|   | LTI of Candidate<br> |   | Physics & Chemistry<br>Absent? (A)           |  |
|   |  |   | Question Booklet No.<br>2080346              | Question Booklet No.<br>1080346              |
|   |  |   | Signature of Candidate<br>Debanjan Rajbanshi | Signature of Candidate<br>Debanjan Rajbanshi |
| S.No.   | ROLL NO.   | NAME  |  |  |
|   |  |   |  |  |
|   |  |   |  |  |
|   |  |   |  |  |
|   |  |   |  |  |
|   |  |   |  |  |
| Absent Candidates should be marked in black/blue ink as (A) by the invigilator.   |  |   |  |  |
| Signature of Centre-in-Charge/Addl. Centre-in-Charge  |  | Signature of Invigilator  |  |  |
|    |  | Biological Science<br>00 (ZERO)   |  |  |
|   |  | Physics & Chemistry<br>00   |  |  |
|   |  |   |  |  |
|   |  |  |  |  |