## CONTENTS

SI. No. Descriptions

1. Introduction ..... 2
2. Scheme of Examination ..... 2
3. Schedule of Examination ..... 3
4. Syllabus ..... 3
5. Language of the Question Papers ..... 3
6. Eligibility Criteria ..... 3
7. Date of Birth ..... 4
8. Application Procedure ..... 4
9. Examination Centres Cities ..... 5
10. Admit Card ..... 5
11. Procedure for Conduct of Examination and Use of Answer Sheet ..... 6
12. Evaluation and Declaration of Results ..... 6
13. Counselling, Seat Allocation, Document Verification and Admissions ..... 6
14. Legal Jurisdiction ..... 6
15. Rules for Reservation ..... 6
Appendix
I. Tentative List of Participating Institutions in AIEEE-2008 ..... 7
II. Nomenclature of Disciplines in Degree Engineering \& Technology/ ..... 8
Architecture/Town Planning (Approved by AICTE)
III. Syllabus ..... 9
IV. Addresses of Designated Branches of Syndicate Bank, Regional Offices of CBSE and Designated Institutions from where Application Forms can be procured against Cash Payment only ..... 19
V. Instructions for completing and sending the Application Form By Post ..... 24
VI. List of Cities where All India Engineering/Architecture Entrance Examination will be conducted ..... 27
VII. A. Procedure to be followed in conduct of AIEEE ..... 29
B. Instructions for use of Test Booklet and Answer Sheet ..... 30
VIII. List of qualifying examinations ..... 32
Other enclosures

- Application Form- Envelope for dispatch of Application Form by the candidate


## 1. Introduction

1.1 Programme of Action (PoA), 1992 under the National Policy on Education (NPE), 1986 envisaged conduct of a common entrance examination on all India basis for admission to professional and technical programmes in the country. For admission to Engineering and Architecture/Planning programmes, Government of India vide Resolution dated $18^{\text {th }}$ October 2001 has laid down a Three - Exam Scheme (JEE and AIEEE at the National Level and the State Level Engineering Entrance Examinations (SLEEE) for State Level Institutions - with an option to join AIEEE). This takes care of varying admission standards in these programmes and helps in maintenance of professional standards. This also solves problems of overlaps and reduces physical, mental and financial burden on students and their parents due to multiplicity of entrance examinations.
1.2 The sixth All India Engineering Entrance Examination (AIEEE) was held on 29th April, 2007. 5,99,096 candidates appeared, out of $6,41,276$ candidates registered, for the examination at 1047 centres located in 79 cities. Approximately, 13653 seats in various institutions, namely National Institutes of Technology, Deemed Universities, Technical Institutions and other Govt. funded Institutions were offered through this examination A centralized counselling had been organized for filling up the All India seats.

The States/Institutes listed below used AIEEE-2007 ranks to fill seats through their own counselling:-

West Bengal, Himachal Pradesh, Haryana, Uttarakhand, Punjab University, Chandigarh, Punjab Engineering College, Chandigarh, Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Army Institute of Technology, Pune, $15 \%$ all India quota for D C E/N.S.I.T, Delhi under Delhi University.
1.3 Keeping in view greater variety of subjects offered by different School Boards at the 10+2 (Class - XII) level, more subject combinations in qualifying examination $(10+2)$ would now be possible. For the convenience of candidates, provision for on-line submission of Application Form has also been made.
1.4 This year many other institutions are expected to admit students through AIEEE. A tentative list of institutions and States/UTs likely to admit students on the basis of AIEEE-2008 is given in Appendix-I. Final list of institutions admitting students through AIEEE-2008 would be contained in the Information Brochure for Counselling and released on AIEEE website in due course. A list of nomenclature of courses approved by AICTE at
the undergraduate level in Engineering and Architecture/ Planning is given in Appendix-II.

### 1.5. Short Title

These rules will be called as All India Engineering/ Architecture Entrance Examination (AIEEE) rules.

### 1.6 Definitions

i) "Government" means "Government of India".
ii) "Ministry" means "Ministry of Human Resource Development, New Delhi".
iii) "Board" means "Central Board of Secondary Education, Delhi".
iv) "AIEEE" means "All India Engineering/Architecture Entrance Examination".
v) "Qualifying Examination" means "Examination on the result of which the candidate becomes eligible to apply for admission to All India Engineering/ Architecture Entrance Examination".
vi) "Rules" means "The rules specified by the Central Board of Secondary Education for the conduct of AIEEE under the directive of Ministry of Human Resource Development, Govt. of India, New Delhi.".
vii) "Scheduled Castes" means "Scheduled Castes as specified and laid down by the Government of India".
viii) "Scheduled Tribes" means "Scheduled Tribes as specified and laid down by the Government of India".
ix) "Other Backward Classes(OBCs)" means "Other Backward Classes as specified and laid down by the Government of India or by the respective States/UTs as the case may be".
x) "Physically Handicapped" means "Physically Handicapped person as specified and laid down by the Government of India or the respective States/UTs, as the case may be".
xi) "AICTE" means "All India Council for Technical Education, New Delhi".

## 2. Scheme of Examination

2.1 Entrance examination would consist of two papers i.e. 1st paper consisting of three parts of Physics, Chemistry and Mathematics of equal weightage with objective type questions for B.E/B. Tech courses and 2nd paper - consisting of Mathematics, Aptitude Test and Drawing for B. Architecture and B. Planning. The Aptitude Test is designed to evaluate candidate's perception, imagination, observation, creativity and architectural awareness.

### 2.2 Scoring and Negative Marking

There will be objective type questions with four options having single correct answer. For each incorrect response, one third of the total marks allotted to the question would be deducted. No deduction from the total score will, however, be made if no response is indicated for an item in the answer sheet. The candidates are advised not to attempt such item in the answer sheet if they are not sure of the correct response. More than one answer indicated against a question will be deemed as incorrect response and will be negatively marked. All objective type questions are required to be answered on specially designed machine gradable answer sheets. Answers are to be marked using ball point pen (black/blue) only. For the purpose of evaluation, Test Booklet Code as printed in the Answer Sheet on Side-2 will be accepted as final.
2.3 Subject combination for each paper and type of questions in each paper are given in the table below:

|  | SUBJECTS | TYPE OF QUESTIONS |
| :--- | :--- | :--- |
| Paper 1 | Physics, Chemistry <br> \& Mathematics | Objective type questions with equal <br> weightage to Physics, Chemistry \& Mathematics |
| Paper 2 | Mathematics - Part I <br>  <br> Drawing Test - Part III | Objective type questions <br> Objective type questions <br> Two questions to test drawing aptitude |

2.4 Requirement of papers for different courses is given in the table below:

| COURSE | PAPERS |
| :--- | :--- |
| B.E/B.TECH | Paper-1 |
| B.ARCH/B. PLANNING | Paper-2 |

3. Schedule of Examination
3.1 AIEEE will be conducted on the following dates as per schedule given below:

| Dates of Examination | Paper | Subjects | Timings | Duration |
| :--- | :--- | :--- | :--- | :--- |
| 27.04 .2008 | Paper 1 |  <br> Mathematics | $0930-1230$ Hours | 3 Hours |
| 27.04 .2008 | Paper 2 | Mathematics - Part I <br>  <br> Drawing Test - Part III | 1400-1700 Hours | 3 Hours |

3.2 For those unable to appear in AIEEE on scheduled date of examination for any reason, including loss of application form/admit card in transit, no re-examination shall be held under any circumstances. The schedule will remain unaltered even if the date is declared as a public holiday.
3.3 Students may move to the venue of examination if they have applied for B. Arch/B. Planning

## 4. Syllabus

The question papers for the Examination shall be based on a common minimum syllabus drawn from syllabi taught in different State Boards. This is given at Appendix III.
5. Language of the Question Papers

Candidates can opt for question papers either in English or in Hindi. The option has to be exercised while filling Application Form. It cannot be changed later.
6. Eligibility Criteria : Candidates are, however, required to appear in the papers as per Scheme of Examination for AIEEE specified in para 2.4 of this Bulletin.
6.1 The minimum academic qualification for admission through AIEEE is a pass in the final examination of 10+2 (Class XII) or its equivalent referred to as the qualifying examination (see Appendix -VIII). Those appearing in 10+2 (Class XII) final or equivalent examination may also appear in AIEEE for consideration of provisional admission.
6.2 Subject combinations required in the qualifying examination for admission to B.E./B.Tech. and B. Arch./B. Planning Courses shall be as under:

| Course | Compulsory | Anyone of the Optional Subjects |
| :--- | :--- | :--- |
| B.E/B.TECH* | Physics \& Mathematics | Chemistry, <br> Bio-technology <br> Computer Science <br> Biology |
| B.ARCH/B. PLANNING** | Mathematics <br> with 50\% marks in aggregate <br> at $10+2$ level |  |

* This is as per decision of the All India Council for Technical Education (AICTE).
** Provisionally as per the orders of the Hon'ble High Court of Delhi and directive received from the Ministry of Human Resource Development.
6.3 The number of attempts which a candidate can avail at All Indian Engineering/Architecture Entrance Examination shall be limited to 03 (three) uniformly for all the candidates in consecutive years.
One Time Exemption : Candidates who have already availed three attempts or more will be permitted to appear in All India Engineering / Architecture Examination 2008 as a last chance.
6.4 Only Indian nationals are eligible.
6.5 Admission of students for foreign nationals, persons of Indian origin and Indian nationals living abroad, in centrally funded institutions, i.e National Institute of Technology (NITs), Indian Institute of Information Technology (IIIT), Allahabad, Atal Bihari Vajpayee Indian Institute of Information Technology and Management (ABVIITM), Gwalior, National Institute of Foundry and Forge Technology(NIFFT), Ranchi, North Eastern Regional Institute of Science and Technology (NERIST), Itanagar and Sant Longowal Institute of Engineering and Technology(SLIET), Longowal shall be as per Ministry of Human Resource Development's letter No.F.21-2/2001-TS.I dated 14.05.2001. Educational Consultants India Limited is the coordinating agency and single window facility for admission under this scheme. For details, please contact the Programme Officer, Educational Consultants India Limited, EDCIL House, 18 A, Sector 16 A, Noida-201301 (Uttar Pradesh) Telephone : 0091-0120-2512001 to 2512006, Fax No. 0091-0120-2515372 E. Mail - placement @ edcil.co.in


## 7. Date of Birth

Only those candidates whose date of birth falls on or after October 01, 1983 are eligible. However, in the case of Scheduled Caste (SC), Scheduled Tribe (ST) and Physically Handicapped (PH) candidates, upper age limit is relaxed by 5 years, i.e. SC, ST and PH candidates who were born on or after October 01, 1978 are eligible. Date of birth as recorded in the Secondary Education Board/University certificate only will be taken as authentic.

## 8. Application Procedure

8.1 Application can either be made 'Online' or submitted on prescribed Application Form only.
8.2 Information Bulletin containing Application Form can obtain by post from the Assistant Secretary (AIEEE), Central Board of Secondary Education, PS 1-2, Institutional Area, I P Extension, Patparganj, Delhi-110092 or personally from Regional Offices of CBSE and Designated Branches of Syndicate Bank/other Banks/Designated Institutions (List given in Appendix IV). The Syndicate Bank/other Banks, the designated institutions and Regional Offices of the CBSE will not send the Information Bulletin by Post. Hence, no request should be made to them for sending the Bulletin by Post. Candidate should not buy the Information Bulletin from any private publisher/ vendor as these may be fake Information Bulletins.
The Regional Offices of CBSE, designated branches of Syndicate Banks/Other Banks/designated Institutions (see list given in Appendix-IV) are not responsible for any consequences, that may arise due to non-availability of forms in case the copies of application forms are sold out before the last date. The candidate should get the Information Bulletin containing application forms from the Assistant Secretary (AIEEE), CBSE, PS 1-2 Institutional Area, IP Extension, Patparganj, New Delhi-110 092 by post.
8.3 The cost of Information Bulletin inclusive of examination fee for BE/B.Tech only or B.Arch/B.Planning only is Rs. 300/-, \& Rs. 150/- for General and SC/ST candidates respectively. Candidates appearing for both BE/B.Tech and B.Arch/B.Planning together should send their application form along with additional fee in the form of Demand Draft of Rs. 200/- for General and Rs. 100/- for SC/ST candidates in favour of Secretary, CBSE payable at Delhi/New Delhi.

For candidates opting examination centre in foreign country, the fees for appearing in BE/B Tech only or B Arch/B Planning only is Rs. 1000/- and Rs. 500/- for General and SC/ST candidates respectively. They should send additional fees@ Rs. 700/-for General Category \& Rs. 350/ - for SC \& ST Category in the form of demand draft in favour of Secretary, C.B.S.E payable at Delhi/New Delhi. Those who want to appear both BE/B.Tech \& B. Arch/B Planning together they should send their application form along with additional fee in the form of demand Draft of Rs. 1700/- for General and Rs. 850/- for SC/ST candidates in favour of Secretary, CBSE payable at Delhi/New Delhi.
8.4 To obtain Information Bulletin containing Application Form by post, candidates should send their request to the Assistant Secretary (AIEEE), Central Board of Secondary Education, PS 1-2 Institutional Area, IP Extension, Patparganj, New Delhi-110092 along with a bank draft of Rs.350/- for General Category and Rs. 200/- for SC/ST candidates in favour of The Secretary, CBSE, payable at Delhi/New Delhi and a self-addressed envelope of 12 " x 10". This includes Rs. 50/- towards postal charges.

### 8.5 For 'Online' submission at website www.aieee.nic.in

Online submission of application with photograph, signature and thumb impression of Left hand in the prescribed column on Computer Generated/Printed Form and down loaded from the website and to be sent by Registered/Speed Post (NOT BY COURIER) to CBSE and payment as per Clause 8.3 (including cost of bulletin, as the case may be) made by Demand Draft in favour of the Secretary, CBSE, payable at Delhi/New Delhi.
Candidates submitting applications ‘Online’ are required to retain a photocopy of each of the Computer Generated Application Form and the Demand Draft for future correspondence, if required.
8.6 In addition to Examination Fee, Service/Processing Charges of Rs. 5/- will be payable by the candidates to the designated Branches of Syndicate Bank/ Institutions.
8.7 Instructions for completing and sending the Application

Form by post are given in Appendix V. Candidates are advised to go through the instructions carefully before filling up the application form. Instructions for online submission of application will be given on AIEEE website www.aieee.nic.in

- Request for change/correction in any particulars in the Application Form shall not be entertained under any circumstances. The Board will not be responsible for any consequences arising out of non-acceptance of any correction/addition/deletion in any particular once filled in the application form whatsoever the reasons may be.
- Incomplete Application Forms, or the forms having over-writing, shall be rejected.
- The candidates who have made application online must submit Computer Generated Application Form along with Demand Draft of any scheduled Bank.


## 9. Examination Centres Cities

List of cities where the examination will be conducted is given in Appendix VI. Candidates are required to give three options convenient to them. While every effort will be made to allot a Centre in one of the places opted by the candidate, the Board reserves its discretion to allot a Centre other than that of candidate's choice any where in India. Under no circumstances, the Centre once allotted shall be changed by the Board.

## 10. Admit Card

The Admit Card will be sent by post "Under Certificate of Posting (UPC)" to the candidate (including those who made application online) about four weeks before the conduct of the examination, however, the Board will not be responsible for any consequences that may arise due to loss of admit card in transit. It will be the responsibility of the candidate to contact/write to the Board in case he/ she is not in receipt of the Admit Cards by 10th April 2008. Such requests be sent to Assistant Secretary (AIEEE), Central Board of Secondary Education, PS 1-2 Institutional Area, IP Extension, Patparganj, Delhi-110 092 with two photographs (as pased on the Application Form), one should be attested by Principal of the institution where candidate is studying/passed XII or by the gazetted officer. Photocopy of the Application Form, proof regarding remittance of fee (photocopy of the Demand Draft) in respect of those candidates who have made application online, and the original postal receipt issued by the Post Office for having dispatched the Application Form by Registered/Speed Post in order to get a duplicate Admit Card. Such request for issue of duplicate Admit Card should accompany with a Demand Draft in favour of Secretary, CBSE payable at New Delhi amounting Rs.

50/- as fee and additional Rs. 30/- as postal charges for outstation candidates. Request for issue of admit card after the examination will not be entertained.
In no case the duplicate Admit Card would be issued at the Examination Centres.
11. Procedure for Conduct of Examination and Use of Answer Sheet

Procedure for conduct of examination and instructions for use of the Test Booklet and Answer Sheet are given in Appendix VII. Candidates are advised to go through carefully before going for the Examination.

## 12. Evaluation and Declaration of Results

12.1 On the basis of performance in AIEEE, separate rank lists will be prepared for B.E./B.Tech. and B.Arch/ B.Planning. Score Card indicating All India Rank and State Rank with total marks and marks in each subject shall be sent to all candidates appearing in AIEEE.
12.2 Candidates scoring above a certain cut off percentage of marks (being different for General and SC/ST/PH category candidates) to be called for counselling shall be determined at the time of declaration of AIEEE results. Cut off percentage of marks for OBC shall be determined as and when government orders are issued for the same. All India Rank and marks shall also be released on AIEEE website. The results of AIEEE 2008 are likely to be declared on or before $7^{\text {th }}$ June, 2008.
The score card will be dispatched to the candidates from 12.06.2008 to 28.06.2008 under Certificate of Posting (UPC). The Board will not be responsible for any consequences that may arise due to loss of score card in transit. In case of non-receipt of the score card within the stipulated period candidate may apply for duplicate score card on payment of Rs. 50/- (plus postal charges of Rs. 30/- for outstation candidates) in the form of Demand Draft in favour of Secretary, CBSE, payable at Delhi/New Delhi between 09.07.2008 to 30.08.2008. No request for issue of duplicate score card will be entertained thereafter.
12.3 As per the notified cut off score and the candidates declared eligible up to the notified Rank shall be called to appear for counselling.
12.4 In case of two or more candidates obtaining equal marks, inter-se merit of such candidates shall be determined as follows:
B.E/B.Tech - By marks obtained in Mathematics and then in Physics in the AIEEE and then by age (preference to older candidates).
B.Arch/B.Planning - By marks obtained in Aptitude Test and then in Mathematics in the AIEEE and then by age (preference to older candidates).
12.5 Rules for rechecking/re-evaluation of Answer Sheets: Since the AIEEE answer sheets are machine graded with extreme care and repeatedly scrutinized there is no provision for rechecking/re-evaluation of answer sheets. No correspondence in this regard will be entertained.

## 13. Counselling, Seat Allocation, Document Verification and Admissions

13.1 Final list of institutions admitting students (with intake in each discipline and category as per reservation) through AIEEE-2008, including counselling procedure, counselling schedule and counselling centres would be contained in the Information Brochure for Counselling and it shall also be released on AIEEE website in May 2008
13.2 The Central Counselling Board shall send by post the Information Brochure for Counselling only to the candidates to be called for counselling.
13.3 Verification of documents would be done at the time of counselling/admission. The purpose would be to verify different records regarding identification, age, qualifying examination, state of eligibility and category of the candidate. On failing to establish of any of the documents, the candidates will not be considered for admission.
13.4 SC, ST and PH candidates will be required to produce original certificate issued by the competent authority at the time of counselling, failing which they will not be considered for admission.
13.5 All correspondence regarding counselling and refund of the amount paid to the Central Counselling Board (CCB) or any of the participating institution should be made with the concerned authorities.

## 14. Legal Jurisdiction

All disputes pertaining to the conduct of AIEEE shall fall within the jurisdiction of Delhi only. The Secretary of the Board shall be the legal person in whose name the Board may sue or may be sued.

If any person or officer dealing with the conduct of AIEEE engages himself/herself in act(s) that would result in the leakage of the question paper(s) or attempt to use or help in the use of unfair means in this examination, he/she shall be liable to prosecution under the Indian Penal Code.

## 15. Rules of Reservation

Reservation for SC/ST and Physically Handicapped candidates wil be applicable as per the Govt. of India/ State concerned existing rules or amended from time to time. However, reservation for OBC candidates, if any, would be communicated through newspaper/ advertisement/AIEEE website as and when Government orders for the same are issued.

## Tentative List of Participating Institutions in AIEEE 2008

## A. National Institutes of Technology(NIT)

1. National Institute of Technology (NIT), Agartala
2. Motilal Nehru National Institute of Technology, Allahabad (U.P.)
3. Maulana Azad National Institute of Technology, Bhopal (Madhya Pradesh)
4. National Institute of Technology, Calicut (Kerela)
5. National Institute of Technology, Durgapur (West Bengal)
6. National Institute of Technology, Hamirpur (Himachal Pradesh)
7. Malviya National Institute of Technology, Jaipur (Rajasthan)
8. Dr. B R Ambedkar National Institute of Technology, Jalandhar (Punjab)
9. National Institute of Technology, Jamshedpur (Jharkhand)
10. National Institute of Technology, Kurukshetra (Haryana)
11. Visvesvaraya National Institute of Technology, Nagpur (Maharashtra)
12. National Institute of Technology, Patna (Bihar)
13. National Institute of Technology, Rourkela (Orissa)
14. National Institute of Technology, Silchar (Assam)
15. National Institute of Technology, Hazartbal, Srinagar (J \& K)
16. Sardar Vallabhbhai National Institute of Technology, Surat (Gujarat)
17. National Institute of Technology, Surathkal (Karnataka)
18. National Institute of Technology, Tiruchirapalli (Tamil Nadu)
19. National Institute of Technology, Warangal (Andhra Pradesh)
20. National Institute of Technology (NIT), Raipur (Chhattisgarh)

## B. Indian Institutes of Information Technology (IIIT) and Indian Institute of Information Technology and Management

 (IIITM)1. Indian Institute of Information Technology, Allahabad (U.P.)

Atal Bihari Vajpayee Indian Institute of Information Technology \& Management, Gwalior (M.P.)
Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design \& Manufacturing, Jabalpur (M.P.)
Indian Institute of Information Technology, Design \& Manufacturing, Kanchipuram, Tamil Nadu

## C. Self Financed Deemed Universities/University

1. International Institute of Information Technology, Hyderabad (A.P.)
2. Birla Institute of Technology, Mesra, Ranchi (Jharkhand)
3. Birla Institute of Technology, Patna (Bihar)
4. Shri Mata Vaishno Devi University, Gandhinagar, Jammu Tawi (J \& K)
5. Kalinga Institute of Industrial Technology, Bhubhaneswar (Orissa)
6. The Shanmugha Arts, Science, Technology \& Research Academy (Sastra), Thanjavur (Tamil Nadu)
7. The LNM Institute of Information Technology, Jaipur (Rajasthan)
8. Sri Chandrasekharendra Saraswati Viswa Mahavidyalaya, Kanchipuram (Tamil Nadu)
9. Dr. M.G.R. Educational and Research Institute, Chennai (Tamil Nadu)
10. Faculty of Engineering \& Technology, Gurukul Kangri Vishwavidyalaya, Haridwar (Uttarakhand)
D. Other Central Government Funded Institutions
11. Indian Institute of Carpet Technology, Bhadohi (U.P.) (IICT, Bhadohi)
12. School of Planning and Architecture, I.P. Estate, New Delhi (SPA, Delhi).
13. National Insitute of Foundary \& Forge Technology, Ranchi (Jharkhand), (NIFFT, Ranch)
14. Assam University, Silchar (Assam)
15. J.K. Institute of Applied Physics \& Technology, University of Allahabad, Allahabad- 211002 (U.P.)

## E. States/UTs

The States/Institutes listed below are likely to use AIEEE-2008 ranks to fill seats through their own counselling.

1. Haryana
2. Uttarakhand
3. Himachal Pradesh (All India Quota will be filled through Central Counselling Board)
4. Army Institute of Technology, Pune, Maharashtra
5. Tezpur University, Napaam, Assam
6. $15 \%$ All India Quota in Delhi College of Engineering and N.S.I.T., Delhi under Delhi University will be filled through Central Counselling Board.
Final List of Institutions admitting students (with intake in each discipline and category as per reservation) through AIEEE-2008 for Counselling shall also be released on AIEEE website in the month of May 2008

## Nomenclature of Disciplines in Degree Engineering \& Technology/Architecture/ Town Planning(Approved by AICTE)

## A. ENGINEERING \& TECHNOLOGY COURSES

1. Aeronautical Engineering
2. Agricultural Engineering
3. Automobile Engineering
4. Applied Electronic and Instrumentation
5. Automation and Robotics
6. Bio-Medical Engineering
7. Bio-Technology
8. Ceramic Engineering
9. Chemical Engineering
10. Civil Engineering
11. Computer Science and Engineering
12. Electrical Engineering
13. Electronics and Communication Engineering
14. Environmental Engineering
15. Food Technology
16. Industrial Engineering and Management
17. Information Technology
18. Instrumentation and Control Engineering
19. Leather Technology
20. Marine Engineering
21. Materials Science \& Technology
22. Metallurgical Engineering
23. Mechanical Engineering
24. Mining Engineering
25. Oil \& Paint Technology
26. Polymer Science and Rubber Technology
27. Printing Technology
28. Production Engineering
29. Pulp \& Paper Technology
30. Sugar Technology
31. Textile Engineering \& Technology
32. Transportation Engineering
B. ARCHITECTURE \& TOWN PLANNING
33. Architecture
34. Building Construction Technology
35. Interior Design
36. Planning

## MATHEMATICS

## UNIT 1: SETS, RELATIONS AND FUNCTIONS:

Sets and their representation; Union, intersection and complement of sets and their algebraic properties; Power set; Relation, Types of relations, equivalence relations, functions;. one-one, into and onto functions, composition of functions.
UNIT 2 : COMPLEX NUMBERS AND QUADRATIC EQUATIONS:
Complex numbers as ordered pairs of reals, Representation of complex numbers in the form a+ib and their representation in a plane, Argand diagram, algebra of complex numbers, modulus and argument (or amplitude) of a complex number, square root of a complex number, triangle inequality, Quadratic equations in real and complex number system and their solutions. Relation between roots and co-efficients, nature of roots, formation of quadratic equations with given roots.
UNIT 3 : MATRICES AND DETERMINANTS:
Matrices, algebra of matrices, types of matrices, determinants and matrices of order two and three. Properties of determinants, evaluation of determinants, area of triangles using determinants. Adjoint and evaluation of inverse of a square matrix using determinants and elementary transformations, Test of consistency and solution of simultaneous linear equations in two or three variables using determinants and matrices.
UNIT 4 : PERMUTATIONS AND COMBINATIONS:
Fundamental principle of counting, permutation as an arrangement and combination as selection, Meaning of $P(n, r)$ and $C(n, r)$, simple applications.

## UNIT 5 : MATHEMATICAL INDUCTION:

Principle of Mathematical Induction and its simple applications.
UNIT 6 : BINOMIAL THEOREM AND ITS SIMPLE APPLICATIONS:
Binomial theorem for a positive integral index, general term and middle term, properties of Binomial coefficients and simple applications.

## UNIT 7 : SEQUENCES AND SERIES:

Arithmetic and Geometric progressions, insertion of arithmetic, geometric means between two given numbers. Relation between
A.M. and G.M. Sum upto $n$ terms of special series: $\mathrm{Sn}, \mathrm{Sn}^{2}, \mathrm{Sn}^{3}$. Arithmetico-Geometric progression.
UNIT 8 : LIMIT, CONTINUITY AND DIFFERENTIABILITY:
Real - valued functions, algebra of functions, polynomials, rational, trigonometric, logarithmic and exponential functions, inverse functions. Graphs of simple functions. Limits, continuity and differentiability. Differentiation of the sum, difference, product and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite and implicit functions; derivatives of order upto two.
Rolle's and Lagrange's Mean Value Theorems.
Applications of derivatives: Rate of change of quantities, monotonic - increasing and decreasing functions, Maxima and minima of functions of one variable, tangents and normals.

## UNIT 9 : INTEGRAL CALCULUS:

Integral as an anti - derivative. Fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functions. Integration by substitution, by parts and by partial fractions. Integration using trigonometric identities.
Evaluation of simple integrals of the type


Integral as limit of a sum. Fundamental Theorem of Calculus. Properties of definite integrals. Evaluation of definite integrals, determining areas of the regions bounded by simple curves in standard form.
UNIT 10: DIFFERENTIAL EQUATIONS:
Ordinary differential equations, their order and degree. Formation of differential equations. Solution of differential equations by the method of separation of variables, solution of homogeneous and linear differential equations of the type:
$\underline{d y}+p(x) y=q(x)$
dx
UNIT 11: CO-ORDINATE GEOMETRY:
Cartesian system of rectangular co-ordinates
in a plane, distance formula, section formula, locus and its equation, translation of axes, slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axes.

## Straight lines

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, distance of a point from a line, equations of internal and external bisectors of angles between two lines, coordinates of centroid, orthocentre and circumcentre of a triangle, equation of family of lines passing through the point of intersection of two lines.

## Circles, conic sections

Standard form of equation of a circle, general form of the equation of a circle, its radius and centre, equation of a circle when the end points of a diameter are given, points of intersection of a line and a circle with the centre at the origin and condition for a line to be tangent to a circle, equation of the tangent. Sections of cones, equations of conic sections (parabola, ellipse and hyperbola) in standard forms, condition for $y=m x+c$ to be a tangent and point (s) of tangency.
UNIT 12: THREE DIMENSIONAL GEOMETRY:
Coordinates of a point in space, distance between two points, section formula, direction ratios and direction cosines, angle between two intersecting lines. Skew lines, the shortest distance between them and its equation. Equations of a line and a plane in different forms, intersection of a line and a plane, coplanar lines.
UNIT 13: VECTOR ALGEBRA:
Vectors and scalars, addition of vectors, components of a vector in two dimensions and three dimensional space, scalar and vector products, scalar and vector triple product.
UNIT 14: STATISTICS AND PROBABILITY:
Measures of Dispersion: Calculation of mean, median, mode of grouped and ungrouped data. Calculation of standard deviation, variance and mean deviation for grouped and ungrouped data.
Probability: Probability of an event, addition and multiplication theorems of probability, Baye's theorem, probability distribution of a random variate, Bernoulli trials and Binomial distribution.

UNIT 15: TRIGONOMETRY:
Trigonometrical identities and equations.

Trigonometrical functions. Inverse trigonometrical functions and their properties. Heights and Distances.

UNIT 16: MATHEMATICAL REASONING:
Statements, logical operations and, or, implies, implied by, if and only if. Understanding of tautology, contradiction, converse and contrapositive.

## PHYSICS

The syllabus contains two Sections - A and B. Section - A pertains to the Theory Part having $80 \%$ weightage, while Section - B contains Practical Component (Experimental Skills) having 20\% weightage.

## SECTION - A

## UNIT 1: PHYSICS AND MEASUREMENT

Physics, technology and society, S I units, Fundamental and derived units. Least count, accuracy and precision of measuring instruments, Errors in measurement, Significant figures.
Dimensions of Physical quantities, dimensional analysis and its applications.

UNIT 2: KINEMATICS
Frame of reference. Motion in a straight line: Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity
Uniformly accelerated motion, velocity-time, position-time graphs, relations for uniformly accelerated motion.
Scalars and Vectors, Vector addition and Subtraction, Zero Vector, Scalar and Vector products, Unit Vector, Resolution of a Vector. Relative Velocity, Motion in a plane, Projectile Motion, Uniform Circular Motion.

UNIT 3: LAWS OF MOTION
Force and Inertia, Newton's First Law of motion; Momentum, Newton's Second Law of motion; Impulse; Newton's Third Law of motion. Law of conservation of linear momentum and its applications, Equilibrium of concurrent forces.
Static and Kinetic friction, laws of friction, rolling friction.
Dynamics of uniform circular motion: Centripetal force and its applications.
UNIT 4: WORK, ENERGY AND POWER
Work done by a constant force and a variable force; kinetic and potential energies, workenergy theorem, power.

Potential energy of a spring, conservation of mechanical energy, conservative and nonconservative forces; Elastic and inelastic collisions in one and two dimensions.

## UNIT 5: ROTATIONAL MOTION

Centre of mass of a two-particle system, Centre of mass of a rigid body; Basic concepts of rotational motion; moment of a force, torque, angular momentum, conservation of angular momentum and its applications; moment of inertia, radius of gyration. Values of moments of inertia for simple geometrical objects, parallel and perpendicular axes theorems and their applications.
Rigid body rotation, equations of rotational motion.

## UNIT 6: GRAVITATION

The universal law of gravitation.
Acceleration due to gravity and its variation with altitude and depth.
Kepler's laws of planetary motion.
Gravitational potential energy; gravitational potential.
Escape velocity. Orbital velocity of a satellite. Geo-stationary satellites.
UNIT 7: PROPERTIES OF SOLIDS AND LIQUIDS
Elastic behaviour, Stress-strain relationship, Hooke's Law, Young's modulus, bulk modulus, modulus of rigidity.
Pressure due to a fluid column; Pascal's law and its applications.
Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, Reynolds number. Bernoulli's principle and its applications.
Surface energy and surface tension, angle of contact, application of surface tension - drops, bubbles and capillary rise.
Heat, temperature, thermal expansion; specific heat capacity, calorimetry; change of state, latent heat.
Heat transfer-conduction, convection and radiation, Newton's law of cooling.
UNIT 8: THERMODYNAMICS
Thermal equilibrium, zeroth law of thermodynamics, concept of temperature. Heat, work and internal energy. First law of thermodynamics.
Second law of thermodynamics: reversible and irreversible processes. Carnot engine and its efficiency.

UNIT 9: KINETIC THEORY OF GASES
Equation of state of a perfect gas, work done on compressing a gas.
Kinetic theory of gases - assumptions, concept of pressure. Kinetic energy and temperature: rms speed of gas molecules; Degrees of freedom, Law of equipartition of energy, applications to specific heat capacities of gases; Mean free path, Avogadro's number.
UNIT 10: OSCILLATIONS AND WAVES
Periodic motion - period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion (S.H.M.) and its equation; phase; oscillations of a spring restoring force and force constant; energy in S.H.M. - kinetic and potential energies; Simple pendulum - derivation of expression for its time period; Free, forced and damped oscillations, resonance.
Wave motion. Longitudinal and transverse waves, speed of a wave. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves, Standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect in sound

## UNIT 11: ELECTROSTATICS

Electric charges: Conservation of charge, Coulomb's law-forces between two point charges, forces between multiple charges; superposition principle and continuous charge distribution.
Electric field: Electric field due to a point charge, Electric field lines, Electric dipole, Electric field due to a dipole, Torque on a dipole in a uniform electric field.
Electric flux, Gauss's law and its applications to find field due to infinitely long uniformly charged straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell.
Electric potential and its calculation for a point charge, electric dipole and system of charges; Equipotential surfaces, Electrical potential energy of a system of two point charges in an electrostatic field.
Conductors and insulators, Dielectrics and electric polarization, capacitor, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, Energy stored in a capacitor.

## UNIT 12: CURRRENT ELECTRICITY

Electric current, Drift velocity, Ohm's law,

Electrical resistance, Resistances of different materials, V-I characteristics of Ohmic and nonohmic conductors, Electrical energy and power, Electrical resistivity, Colour code for resistors; Series and parallel combinations of resistors; Temperature dependence of resistance.

Electric Cell and its Internal resistance, potential difference and emf of a cell, combination of cells in series and in parallel.
Kirchhoff's laws and their applications. Wheatstone bridge, Metre bridge.
Potentiometer - principle and its applications.
UNIT 13: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM
Biot - Savart law and its application to current carrying circular loop.
Ampere's law and its applications to infinitely long current carrying straight wire and solenoid.
Force on a moving charge in uniform magnetic and electric fields. Cyclotron.
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 uniform magnetic field; Moving coil galvanometer, its current sensitivity and conversion to ammeter and voltmeter.
Current loop as a magnetic dipole and its magnetic dipole moment. Bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements. Para-, dia- and ferro- magnetic substances.
Magnetic susceptibility and permeability, Hysteresis, Electromagnets and permanent magnets.
UNIT 14: ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENTS
Electromagnetic induction; Faraday's law, induced emf and current; Lenz's Law, Eddy currents. Self and mutual inductance.
Alternating currents, peak and rms value of alternating current/ voltage; reactance and impedance; LCR series circuit, resonance; Quality factor, power in AC circuits, wattless current.
AC generator and transformer.
UNIT 15: ELECTROMAGNETIC WAVES
Electromagnetic waves and their characteristics. Transverse nature of electromagnetic waves.
Electromagnetic spectrum (radio waves,
microwaves, infrared, visible, ultraviolet, Xrays, gamma rays). Applications of e.m. waves.

UNIT 16: OPTICS
Reflection and refraction of light at plane and spherical surfaces, mirror formula, Total internal reflection and its applications, Deviation and Dispersion of light by a prism, Lens Formula, Magnification, Power of a Lens, Combination of thin lenses in contact, Microscope and Astronomical Telescope (reflecting and refracting) and their magnifying powers.
Wave optics: wavefront and Huygens' principle, Laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving power of microscopes and astronomical telescopes, Polarisation, plane polarized light; Brewster's law, uses of plane polarized light and Polaroids.

UNIT 17: DUAL NATURE OF MATTER AND RADIATION
Dual nature of radiation. Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation; particle nature of light. Matter waves-wave nature of particle, de Broglie relation. Davisson-Germer experiment.

## UNIT 18: ATOMS AND NUCLEI

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum.
Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity-alpha, beta and gamma particles/ rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, nuclear fission and fusion.

## UNIT 19: ELECTRONIC DEVICES

Semiconductors; semiconductor diode: I-V characteristics in forward and reverse bias; diode as a rectifier; I-V characteristics of LED, photodiode, solar cell and Zener diode; Zener diode as a voltage regulator. Junction transistor, transistor action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator. Logic gates (OR, AND, NOT, NAND and NOR). Transistor as a switch.

## UNIT 20: COMMUNICATION SYSTEMS

Propagation of electromagnetic waves in the atmosphere; Sky and space wave propagation, Need for modulation, Amplitude and Frequency Modulation, Bandwidth of signals, Bandwidth of Transmission medium, Basic Elements of a Communication System (Block Diagram only).

## SECTION -B

## UNIT 21: EXPERIMENTAL SKILLS

Familiarity with the basic approach and observations of the experiments and activities:

1. Vernier callipers-its use to measure internal and external diameter and depth of a vessel.
2. Screw gauge-its use to determine thickness/diameter of thin sheet/wire.
3. Simple Pendulum-dissipation of energy by plotting a graph between square of amplitude and time.
4. Metre Scale - mass of a given object by principle of moments.
5. Young's modulus of elasticity of the material of a metallic wire.
6. Surface tension of water by capillary rise and effect of detergents.
7. Co-efficient of Viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
8. Plotting a cooling curve for the relationship between the temperature of a hot body and time.
9. Speed of sound in air at room temperature using a resonance tube.
10. Specific heat capacity of a given (i) solid and (ii) liquid by method of mixtures.
11. Resistivity of the material of a given wire using metre bridge.
12. Resistance of a given wire using Ohm's law.
13. Potentiometer-
(i) Comparison of emf of two primary cells.
(ii) Determination of internal resistance of a cell.
14. Resistance and figure of merit of a galvanometer by half deflection method.
15. Focal length of:
(i) Convex mirror
(ii) Concave mirror, and
(iii) Convex lens using parallax method.
16. Plot of angle of deviation vs angle of incidence for a triangular prism.
17. Refractive index of a glass slab using a travelling microscope.
18. Characteristic curves of a p-n junction diode in forward and reverse bias.
19. Characteristic curves of a Zener diode and finding reverse break down voltage.
20. Characteristic curves of a transistor and finding current gain and voltage gain.
21. Identification of Diode, LED, Transistor, IC, Resistor, Capacitor from mixed collection of such items.
22. Using multimeter to:
(i) Identify base of a transistor
(ii) Distinguish between npn and pnp type transistor
(iii) See the unidirectional flow of current in case of a diode and an LED.
(iv) Check the correctness or otherwise of a given electronic component (diode, transistor or IC).

## SECTION: A

## PHYSICAL CHEMISTRY

## UNIT 1: SOME BASIC CONCEPTS IN CHEMISTRY

Matter and its nature, Dalton's atomic theory; Concept of atom, molecule, element and compound; Physical quantities and their measurements in Chemistry, precision and accuracy, significant figures, S.I. Units, dimensional analysis; Laws of chemical combination; Atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae; Chemical equations and stoichiometry.

## UNIT 2: STATES OF MATTER

Classification of matter into solid, liquid and gaseous states.

## Gaseous State:

Measurable properties of gases; Gas laws Boyle's law, Charle's law, Graham's law of diffusion, Avogadro's law, Dalton's law of partial pressure; Concept of Absolute scale of temperature; Ideal gas equation; Kinetic theory of gases (only postulates); Concept of average, root mean square and most probable velocities; Real gases, deviation from Ideal behaviour, compressibility factor, van der Waals equation, liquefaction of gases, critical constants.

## Liquid State:

Properties of liquids - vapour pressure, viscosity and surface tension and effect of temperature on them (qualitative treatment only).

## Solid State:

Classification of solids: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea); Bragg's Law and its applications; Unit cell and lattices, packing in solids (fcc, bcc and hcp lattices), voids, calculations involving unit cell parameters, imperfection in solids; Electrical, magnetic and dielectric properties.

## UNIT 3: ATOMIC STRUCTURE

Discovery of sub-atomic particles (electron, proton and neutron); Thomson and Rutherford atomic models and their limitations; Nature of electromagnetic radiation, photoelectric effect; Spectrum of hydrogen atom, Bohr model of hydrogen atom - its postulates, derivation of the relations for energy of the electron and radii of the different orbits, limitations of Bohr's model; Dual nature of matter, de-Broglie's relationship, Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, quantum mechanical model of atom, its important features, $\Psi$ and $\Psi 2$, concept of atomic orbitals as one electron wave functions; Variation of $\Psi$ and $\Psi 2$ with $r$ for 1 s and 2 s orbitals; various quantum numbers (principal, angular momentum and magnetic quantum numbers) and their significance; shapes of $s, p$ and $d$-orbitals, electron spin and spin quantum number; Rules for filling electrons in orbitals - aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of elements, extra stability of half-filled and completely filled orbitals.

## UNIT 4: CHEMICAL BONDING AND MOLECULAR STRUCURE

Kossel - Lewis approach to chemical bond formation, concept of ionic and covalent bonds.
Ionic Bonding: Formation of ionic bonds, factors affecting the formation of ionic bonds; calculation of lattice enthalpy.
Covalent Bonding: Concept of electronegativity, Fajan's rule, dipole moment; Valence Shell Electron Pair Repulsion (VSEPR) theory and shapes of simple molecules.
Quantum mechanical approach to covalent bonding: Valence bond theory - Its important features, concept of hybridization involving s, $p$ and dorbitals; Resonance.
Molecular Orbital Theory - Its important features, LCAOs, types of molecular orbitals (bonding, antibonding), sigma and pi-bonds,
molecular orbital electronic configurations of homonuclear diatomic molecules, concept of bond order, bond length and bond energy.
Elementary idea of metallic bonding. Hydrogen bonding and its applications.

## UNIT 5: CHEMICAL THERMODYNAMICS

Fundamentals of thermodynamics: System and surroundings, extensive and intensive properties, state functions, types of processes.
First law of thermodynamics - Concept of work, heat internal energy and enthalpy, heat capacity, molar heat capacity; Hess's law of constant heat summation; Enthalpies of bond dissociation, combustion, formation, atomization, sublimation, phase transition, hydration, ionization and solution.
Second law of thermodynamics; Spontaneity of processes; DS of the universe and DG of the system as criteria for spontaneity, DGㅇ (Standard Gibbs energy change) and equilibrium constant.

## UNIT 6: SOLUTIONS

Different methods for expressing concentration of solution - molality, molarity, mole fraction, percentage (by volume and mass both), vapour pressure of solutions and Raoult's Law - Ideal and non-ideal solutions, vapour pressure composition, plots for ideal and non-ideal solutions; Colligative properties of dilute solutions - relative lowering of vapour pressure, depression of freezing point, elevation of boiling point and osmotic pressure; Determination of molecular mass using colligative properties; Abnormal value of molar mass, van't Hoff factor and its significance.

## UNIT 7: EQUILIBRIUM

Meaning of equilibrium, concept of dynamic equilibrium.
Equilibria involving physical processes: Solid -liquid, liquid - gas and solid - gas equilibria, Henry's law, general characterics of equilibrium involving physical processes.
Equilibria involving chemical processes:
Law of chemical equilibrium, equilibrium constants ( Kp and Kc ) and their significance, significance of DG and DGo in chemical equilibria, factors affecting equilibrium concentration, pressure, temperature, effect of catalyst; Le Chatelier's principle.
Ionic equilibrium: Weak and strong electrolytes, ionization of electrolytes, various
concepts of acids and bases (Arrhenius, Brönsted - Lowry and Lewis) and their ionization, acid - base equilibria (including multistage ionization) and ionization constants, ionization of water, pH scale, common ion effect, hydrolysis of salts and pH of their solutions, solubility of sparingly soluble salts and solubility products, buffer solutions.

UNIT8: REDOX REACTIONS AND ELECTROCHEMISTRY
Electronic concepts of oxidation and reduction, redox reactions, oxidation number, rules for assigning oxidation number, balancing of redox reactions.
Eectrolytic and metallic conduction, conductance in electrolytic solutions, specific and molar conductivities and their variation with concentration: Kohlrausch's law and its applications.
Electrochemical cells - Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard electrode potential, half - cell and cell reactions, emf of a Galvanic cell and its measurement; Nernst equation and its applications; Relationship between cell potential and Gibbs' energy change; Dry cell and lead accumulator; Fuel cells; Corrosion and its prevention.

## UNIT 9: CHEMICAL KINETICS

Rate of a chemical reaction, factors affecting the rate of reactions: concentration temperature, pressure and catalyst; elementary and complex reactions, order and molecularity of reactions, rate law, rate constant and its units, differential and integral forms of zero and first order reactions, their characteristics and half - lives, effect of temperature on rate of reactions - Arrhenius theory, activation energy and its calculation, collision theory of bimolecular gaseous reactions (no derivation).

## UNIT-10 : SURFACE CHEMISTRY

Adsorption- Physisorption and chemisorption and their characteristics, factors affecting adsorption of gases on solids - Freundlich and Langmuir adsorption isotherms, adsorption from solutions.

Catalysis - Homogeneous and heterogeneous, activity and selectivity of solid catalysts, enzyme catalysis and its mechanism.

Colloidal state - distinction among true solutions, colloids and suspensions, classification of colloids - lyophilic, lyophobic; multi molecular, macromolecular and associated colloids (micelles), preparation and properties of colloids - Tyndall effect, Brownian movement, electrophoresis, dialysis, coagulation and flocculation; Emulsions and their characteristics.

## SECTION - B <br> Inorganic Chemistry

## UNIT 11: CLASSIFICATON OF ELEMENTS AND PERIODICITY IN PROPERTIES

Modem periodic law and present form of the periodic table, s, $p, d$ and $f$ block elements, periodic trends in properties of elements atomic and ionic radii, ionization enthalpy, electron gain enthalpy, valence, oxidation states and chemical reactivity.

## UNIT 12: GENERAL PRINCIPLES AND PROCESSES OF ISOLATION OF METALS

Modes of occurrence of elements in nature, minerals, ores; Steps involved in the extraction of metals - concentration, reduction (chemical and electrolytic methods) and refining with special reference to the extraction of $\mathrm{Al}, \mathrm{Cu}$, Zn and Fe ; Thermodynamic and electrochemical principles involved in the extraction of metals.

## UNIT 13: HYDROGEN

Position of hydrogen in periodic table, isotopes, preparation, properties and uses of hydrogen; Physical and chemical properties of water and heavy water; Structure, preparation, reactions and uses of hydrogen peroxide; Classification of hydrides - ionic, covalent and interstitial; Hydrogen as a fuel.

UNIT 14: S - BLOCK ELEMENTS (ALKALI AND ALKALINE EARTH METALS)

## Group - 1 and 2 Elements

General introduction, electronic configuration and general trends in physical and chemical properties of elements, anomalous properties of the first element of each group, diagonal relationships.
Preparation and properties of some important compounds - sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogen carbonate; Industrial uses of lime, limestone, Plaster of Paris and cement;

Biological significance of $\mathrm{Na}, \mathrm{K}, \mathrm{Mg}$ and Ca .

## UNIT 15: P-BLOCK ELEMENTS

## Group - 13 to Group 18 Elements

General Introduction: Electronic configuration and general trends in physical and chemical properties of elements across the periods and down the groups; unique behaviour of the first element in each group.

## Groupwise study of the p-block elements

 Group - 13Preparation, properties and uses of boron and aluminium; Structure, properties and uses of borax, boric acid, diborane, boron trifluoride, aluminium chloride and alums.

## Group - 14

Tendency for catenation; Structure, properties and uses of allotropes and oxides of carbon, silicon tetrachloride, silicates, zeolites and silicones.

## Group - 15

Properties and uses of nitrogen and phosphorus; Allotrophic forms of phosphorus; Preparation, properties, structure and uses of ammonia, nitric acid, phosphine and phosphorus halides, $\left(\mathrm{PCl}_{3}, \mathrm{PCl}_{5}\right)$; Structures of oxides and oxoacids of nitrogen and phosphorus.

## Group - 16

Preparation, properties, structures and uses of dioxygen and ozone; Allotropic forms of sulphur; Preparation, properties, structures and uses of sulphur dioxide, sulphuric acid (including its industrial preparation); Structures of oxoacids of sulphur.

## Group - 17

Preparation, properties and uses of chlorine and hydrochloric acid; Trends in the acidic nature of hydrogen halides; Structures of Interhalogen compounds and oxides and oxoacids of halogens.

## Group-18

Occurrence and uses of noble gases; Structures of fluorides and oxides of xenon.

## UNIT 16: $d$ - and $f$ - BLOCK ELEMENTS

## Transition Elements

General introduction, electronic configuration, occurrence and characteristics, general trends in properties of the first row transition elements - physical properties, ionization enthalpy, oxidation states, atomic radii, colour, catalytic behaviour, magnetic properties, complex
formation, interstitial compounds, alloy formation; Preparation, properties and uses of $\mathrm{K}_{2} \mathrm{Cr}_{2} \mathrm{O}_{7}$ and $\mathrm{KMnO}_{4}$.

## Inner Transition Elements

Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction.
Actinoids - Electronic configuration and oxidation states.

## UNIT 17: CO-ORDINATION COMPOUNDS

Introduction to co-ordination compounds, Werner's theory; ligands, co-ordination number, denticity, chelation; IUPAC nomenclature of mononuclear co-ordination compounds, isomerism; Bonding-Valence bond approach and basic ideas of Crystal field theory, colour and magnetic properties; Importance of co-ordination compounds (in qualitative analysis, extraction of metals and in biological systems).

## UNIT 18: ENVIRONMENTAL CHEMISTRY

Environmental pollution - Atmospheric, water and soil.
Atmospheric pollution - Tropospheric and stratospheric
Tropospheric pollutants - Gaseous pollutants: Oxides of carbon, nitrogen and sulphur, hydrocarbons; their sources, harmful effects and prevention; Green house effect and Global warming; Acid rain;
Particulate pollutants: Smoke, dust, smog, fumes, mist; their sources, harmful effects and prevention.
Stratospheric pollution- Formation and breakdown of ozone, depletion of ozone layer - its mechanism and effects.

Water Pollution - Major pollutants such as, pathogens, organic wastes and chemical pollutants; their harmful effects and prevention.
Soil pollution - Major pollutants such as: Pesticides (insecticides,. herbicides and fungicides), their harmful effects and prevention.
Strategies to control environmental pollution.

> SECTION-C
> Organic Chemistry

## UNIT 19: PURIFICATION AND CHARACTERISATION OF ORGANIC COMPOUNDS

Purification - Crystallization, sublimation,
distillation, differential extraction and chromatography - principles and their applications.

Qualitative analysis - Detection of nitrogen, sulphur, phosphorus and halogens.
Quantitative analysis (basic principles only) - Estimation of carbon, hydrogen, nitrogen, halogens, sulphur, phosphorus.

Calculations of empirical formulae and molecular formulae; Numerical problems in organic quantitative analysis.

UNIT 20: SOME BASIC PRINCIPLES OF ORGANIC CHEMISTRY
Tetravalency of carbon; Shapes of simple molecules - hybridization ( $s$ and $p$ ); Classification of organic compounds based on functional groups: - $C=C-,-C \equiv C$ - and those containing halogens, oxygen, nitrogen and sulphur; Homologous series; Isomerism structural and stereoisomerism.

## Nomenclature (Trivial and IUPAC)

Covalent bond fission - Homolytic and heterolytic: free radicals, carbocations and carbanions; stability of carbocations and free radicals, electrophiles and nucleophiles.
Electronic displacement in a covalent bond - Inductive effect, electromeric effect, resonance and hyperconjugation.
Common types of organic reactions Substitution, addition, elimination and rearrangement.

## UNIT 21: HYDROCARBONS

Classification, isomerism, IUPAC nomenclature, general methods of preparation, properties and reactions.
Alkanes - Conformations: Sawhorse and Newman projections (of ethane); Mechanism of halogenation of alkanes.
Alkenes - Geometrical isomerism; Mechanism of electrophilic addition: addition of hydrogen, halogens, water, hydrogen halides (Markownikoff's and peroxide effect); Ozonolysis, oxidation, and polymerization.
Alkynes - Acidic character; Addition of hydrogen, halogens, water and hydrogen halides; Polymerization.
Aromatic hydrocarbons - Nomenclature, benzene - structure and aromaticity; Mechanism of electrophilic substitution: halogenation, nitration, Friedel - Craft's alkylation and acylation, directive influence of
functional group in mono-substituted benzene.

## UNIT 22: ORGANIC COMPOUNDS CONTAINING HALOGENS

General methods of preparation, properties and reactions; Nature of C-X bond; Mechanisms of substitution reactions.
Uses; Environmental effects of chloroform, iodoform, freons and DDT.

## UNIT 23: ORGANIC COMPOUNDS CONTAINING OXYGEN

General methods of preparation, properties, reactions and uses.

## ALCOHOLS, PHENOLS AND ETHERS

Alcohols: Identification of primary, secondary and tertiary alcohols; mechanism of dehydration.
Phenols: Acidic nature, electrophilic substitution reactions: halogenation, nitration and sulphonation, Reimer - Tiemann reaction.
Ethers: Structure.
Aldehyde and Ketones: Nature of carbonyl group;
Nucleophilic addition to $>\mathrm{C}=\mathrm{O}$ group, relative reactivities of aldehydes and ketones; Important reactions such as - Nucleophilic addition reactions (addition of $\mathrm{HCN}, \mathrm{NH}_{3}$ and its derivatives), Grignard reagent; oxidation; reduction (Wolff Kishner and Clemmensen); acidity of $\alpha$ - hydrogen, aldol condensation, Cannizzaro reaction, Haloform reaction; Chemical tests to distinguish between aldehydes and Ketones.

## CARBOXYLIC ACIDS

Acidic strength and factors affecting it.
UNIT 24: ORGANIC COMPOUNDS CONTAINING NITROGEN
General methods of preparation, properties, reactions and uses.
Amines: Nomenclature, classification, structure, basic character and identification of primary, secondary and tertiary amines and their basic character.
Diazonium Salts: Importance in synthetic organic chemistry.

## UNIT 25: POLYMERS

General introduction and classification of polymers, general methods of polymerization - addition and condensation, copolymerization;

Natural and synthetic rubber and vulcanization; some important polymers with emphasis on their monomers and uses - polythene, nylon, polyester and bakelite.

## UNIT 26: BIOMOLECULES

General introduction and importance of biomolecules.
CARBOHYDRATES - Classification: aldoses and ketoses; monosaccharides (glucose and fructose), constituent monosaccharides of oligosacchorides (sucrose, lactose, maltose) and polysaccharides (starch, cellulose, glycogen).
PROTEINS - Elementary Idea of $\alpha$ - amino acids, peptide bond, polypeptides; Proteins: primary, secondary, tertiary and quaternary structure (qualitative idea only), denaturation of proteins, enzymes.
VITAMINS - Classification and functions.
NUCLEIC ACIDS - Chemical constitution of DNA and RNA.
Biological functions of nucleic acids.

## UNIT 27: CHEMISTRY IN EVERYDAY LIFE

Chemicals in medicines - Analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamins - their meaning and common examples.
Chemicals in food - Preservatives, artificial sweetening agents - common examples.
Cleansing agents - Soaps and detergents, cleansing action.

UNIT 28: PRINCIPLES RELATED TO PRACTICAL CHEMISTRY

- Detection of extra elements (N,S, halogens) in organic compounds; Detection of the following functional groups: hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketone), carboxyl and amino groups in organic compounds.
- Chemistry involved in the preparation of the following:
Inorganic compounds: Mohr's salt, potash alum.
Organic compounds: Acetanilide, pnitroacetanilide, aniline yellow, iodoform.
- Chemistry involved in the titrimetric excercises - Acids bases and the use of indicators, oxalic-acid vs $\mathrm{KMnO}_{4}$, Mohr's salt vs $\mathrm{KMnO}_{4}$.
- Chemical principles involved in the qualitative salt analysis:
Cations - $\mathrm{Pb}^{2+}, \mathrm{Cu}^{2+,} \mathrm{Al}^{3+,} \mathrm{Fe}^{3+,} \mathrm{Zn}^{2+,} \mathrm{Ni}^{2+,} \mathrm{Ca}^{2+}$ $\mathrm{Ba}^{2+}, \mathrm{Mg}^{2+}, \mathrm{NH}^{4+}$.
Anions $-\mathrm{CO}_{3}^{2-}, \mathrm{S}^{2-}, \mathrm{SO}_{4}^{2-}, \mathrm{NO}^{2-}, \mathrm{NO}^{3-}, \mathrm{Cl}^{-}, \mathrm{Br}, \mathrm{I}$. (Insoluble salts excluded).
- Chemical principles involved in the following experiments:

1. Enthalpy of solution of $\mathrm{CuSO}_{4}$
2. Enthalpy of neutralization of strong acid and strong base. .
3. Preparation of lyophilic and lyophobic sols.
4. Kinetic study of reaction of iodide ion with hydrogen peroxide at room temperature.

## SYLLABUS FOR APTITUDE TEST B. ARCH./B. PLANNING

Part-I Awareness of persons, places, Buildings, Materials.) Objects, Texture related to Architecture and build ~ environment. Visualising three dimensional objects from two dimensional drawings. Visualising. different sides of three dimensional objects. Analytical Reasoning Mental Ability (Visual, Numerical and Verbal).

Part - II Three dimensional - perception: Understanding and appreciation of scale and proportion of objects, building forms and elements, colour texture, harmony and contrast. Design and drawing of geometrical or abstract shapes and patterns in pencil. Transformation of forms both 2 D and 3 D union, substraction, rotation, development of surfaces and volumes, Generation of Plan, elevations and $3 D$ views of objects. Creating two dimensional and three dimensional compositions using given shapes and forms.
Sketching of scenes and activities from memory of urbanscape (public space, market, festivals, street scenes, monuments, recreational spaces etc.), landscape (river fronts, jungles. gardens, trees, plants etc.) and rural life.

Note: Candidates are advised to bring pencils, own geometry box set, erasers and colour pencils and crayons for the Aptitude Test.

ADDRESSES OF DESIGNATED BRANCHES OF SYNDICATE BANK, INSTITUTIONS AND REGIONAL OFFICES OF THE CBSE FROM WHERE INFORMATION BULLETIN WITH APPLICATION FORM CAN BE PROCURED AGAINST CASH PAYMENT (NOT BY POST)

| S.No. | PLACE | SYNDICATE BANK/ <br> INSTITUTION | ADDRESSES |
| :---: | :--- | :--- | :--- |
| ANDAMAN \& NICOBAR    <br> 1. PORT BLAIR SYNDICATE BANK 19-TAGORE ROAD, GANDHI NAGAR, MOHANPURA, PORT BLAIR- <br> 744101, ANDAMAN ISLANDS. |  |  |  |

ANDHRA PRADESH

| 2. | HYDERABAD | INSTITUTION | BHARTIYA VIDYA BHAVAN, JUBILEE HILLS, HYDERABAD |
| :--- | :--- | :--- | :--- |
| 3. | HYDERABAD | INSTITUTION | HOWARD PUBLIC SCHOOL, HIMAYAT NAGAR, HYDERABAD |
| 4. | SECUNDRABAD | INSTITUTION | ARMY PUBLIC SCHOOL, R.K. PURAM, SECUNDERABAD |
| 5. | VIJAYWADA | INSTITUTION | V.P. SIDDHARTHA PUBLIC SCHOOL, MOGALRAJAPURAM, <br> VIJAYAWADA |
| 6. | VIJAYWADA | INSTITUTION | N. ST. MATHEWS PUBLIC SCHOOL, PATAMATA, VIJAYAWADA |
| 7. | GUNTUR | INSTITUTION | SRI VENKATESWARA BALA KUTEER, 3RD LINE, SHYAMALA <br> NAGAR, GUNTUR |
| 8. | TIRUPATI | INSTITUTION | B V B SRI VENKATESWARA VIDYALAYA, BHAVAN'S CAMPUS, <br> ALIPIRI, TIRUPATI. |
| 9. | ANANTPUR | INSTITUTION | SRISATHYASAIHR. SEC. SCHOOL, PRASANTHINILAYAM, ANANTPUR |
| 10. | WARANGAL | INSTITUTION | WARANGAL PUBLIC SCHOOL, HUNTER ROAD, HANAMKONDA, <br> WARANGAL |
| 11. | VISAKHAPATNAM | INSTITUTION | VIKAS VIDYA NIKETAN, D. NO. 1-1-1-/1 SHEELA NAGAR, NH-5, <br> VISAKHAPATNAM |
| 12. | VISAKHAPATNAM | INSTITUTION | RAMANATH SECONDARY SCHOOL, NSTL COMPLEX, VIGYAN <br> NAGAR, VISAKHAPATNAM |

ARUNACHAL PRADESH

| 13. | ITANAGAR | INSTITUTION | GYAN GANGA VIDYAPEETH, CHANDER NAGAR, ITANAGAR-791111, <br> ARUNACHAL PRADESH |
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| 14. | GUWAHATI | SYNDICATE BANK | 135, MOTILAL NEHRU ROAD, PAN BAZAR, GUWAHATI-781001. |
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| 15. | JORHAT | SYNDICATE BANK | JPR ROAD JUNCTION, GAR ALI, P B NO.92, JORHAT-785001 |
| 16. | SILCHAR | INSTITUTION | NATIONAL INSTITUTE OF TECHNOLOGY, SILCHAR, ASSAM |

BIHAR

| 17. | PATNA | SYNDICATE BANK | 14, ANIKET, IAS COLONY, S.K. NAGAR, KIDWAIPURI, PATNA-800001. |
| :---: | :--- | :--- | :--- |
| 18. | PATNA | SYNDICATE BANK | BIHAR RAJYA JAL PARISHAD BLDG., SAIDPUR ROAD, PATNA |
| 19 | PATNA | SYNDICATE BANK | RANJAN PATH, BAILY ROAD, GYAN NIKETAN BLDG., GOLA ROAD, <br> DANAPUR-801503, PATNA |
| 20. | MUZAFFARPUR | SYNDICATE BANK | 23, CHHOTI KALYANI ROAD, NEAR KALYANI POST OFFICE, <br> MUZAFFARPUR, PIN CODE-842001. |
| 21. | BHAGALPUR | SYNDICATE BANK | PATAL BABU NIWAS, PATAL BABU ROAD, BHAGALPUR-812001. |
| 22. | GAYA | SYNDICATE BANK | 63, K.P. ROAD, GAYA, DISTT. GAYA-823001 |
| CHANDIGARH |  |  |  |
| 23. CHANDIGARH SYNDICATE BANK SCO 66-67, SECTOR 17-B, BANK SQUARE, PB No. 107, <br> CHANDIGARH-160017CHHATISGARH <br> 24. RAIPUR | 113, SMT SURAJDEVI SHUKLA COMPLEX, NEAR DESHBANDHU <br> SCHOOL, STATION ROAD, RAIPUR-492009. |  |  |
| 25. | BILASPUR | SYNDICATE BANK | 29/19, MAIN RAOD, DAYAL BAND, BILASPUR-495001 |
| 26. | JAGDALPUR | CANARA BANK | JAGDALPUR, DISTT. BASTAR-494001 (CHHATISGARH) |

DELHI/NEW DELHI

| 27. | ASAF ALI ROAD | SYNDICATE BANK | 29A/1, MADHAV MANSION, 1st FLOOR, ASAFALIROAD, N.DELHI-110002 |
| :---: | :--- | :--- | :--- |
| 28. | K.G. MARG | SYNDICATE BANK | JEEVAN PRAKASH BUILDING, IST FLOOR, 25, K.G. MARG, NEW <br> DELHI-110001 |


| S.No. | PLACE | SYNDICATE BANK/ INSTITUTION | ADDRESSES |
| :---: | :---: | :---: | :---: |
| 29. | GREEN PARK EXTN | SYNDICATE BANK | S-12, GREEN PARK EXTN., NEW DELHI-110016 |
| 30. | KASHMIRI GATE | SYNDICATE BANK | 1529 \& 1532, CHURCH ROAD, KASHMIRI GATE, PB No. 1677, DELHI-110006. |
| 31. | PUNJABI BAGH | SYNDICATE BANK | BLDG. No. 2 \& 3, CENTRAL MARKET, WEST PUNJABI BAGH, NEW DELHI-110026. |
| 32. | VIKASPURI | SYNDICATE BANK | M-167, VIKASPURI, NEW DELHI-110018. |
| 33. | ROHINI | SYNDICATE BANK | PLOT No. 2, SERVICE CENTRE, COMPETENT PLAZA, ROHINI SECTOR-5, DELHI-110085. |
| 34. | PREET VIHAR | SYNDICATE BANK | CBSE EXTN. COUNTER, 2, COMMUNITY CENTRE, PREET VIHAR, DELHI-110092. |
| 35. | EAST BLOCK, R.K. PURAM | SYNDICATE BANK | EAST BLOCK (BSF), BLOCK NO. 9, R.K. PURAM, NEW DELHI-110066 |
| 36. | SHAHDARA | SYNDICATE BANK | 9411-9416 SHANKAR MARKET, RAILWAY ROAD, CHHOTA BAZAR, SHAHDARA, DELHI-110032. |
| GOA |  |  |  |
| 37. | PANAJI | SYNDICATE BANK | HOTEL NOVA GOVA BUILDING, Dr. ATMARAM BORKAR ROAD, PB No. 193, PANAJI-403001 |
| GUJARAT |  |  |  |
| 38. | AHEMDABAD | SYNDICATE BANK | NEPTUNE TOWER, OPP. NEHRU RIDGE, ASHRAM ROAD, P B NO. 4078, AHEMDABAD-380009. |
| 39. | RAJKOT | SYNDICATE BANK | ABBASI-CHAMBER, NR. PARA BAZAR, DHEVAR ROAD, RAJKOT-360001 |
| 40. | SURAT | SYNDICATE BANK | RATAN KUTIR BUILDING, P B NO.277, SALABATPURA, MAIN ROAD, SURAT-395003 |
| 41. | VADODARA | SYNDICATE BANK | DHAYBER SHOPPING CENTRE, CENDIGATE ROAD, P.B. NO.8, MANDVI, VADODARA-390017 |

## HARYANA

| 42. | AMBALA CANTT | SYNDICATE BANK | $3704 / 7$, PANNA COTTAGE, JAGADHARI ROAD, AMBALA CANTT - <br> 133001. |
| :---: | :--- | :--- | :--- |
| 43. | HISSAR | SYNDICATE BANK | SCO 152-153, UCEIN, NEAR TELEPHONE EXCHANGE, RED <br> SQUARE MARKET, HISSAR-125001 |
| 44. | FARIDABAD | SYNDICATE BANK | 48, NEELAM BATA ROAD, P.B. No. 23, FARIDABAD-121001. |
| 45. | KARNAL | SYNDICATE BANK | NETAJI SUBHASH MARKET, COMMITTEE CHOWK, KARNAL- <br> 132001. |
| 46. | KURUKSHETRA | SYNDICATE BANK | SCO-14, SECTOR 17, URBAN STATE, KURUKSHETRA-136118 |
| 47 | ROHTAK | SYNDICATE BANK | JHAJJAR ROAD, ROHTAK-124001 |
| 48. | GURGAON | SYNDICATE BANK | $472 / 11$, OLD RAILWAY ROAD, GURGAON-122001 |
| 49. | PANIPAT | SYNDICATE BANK | 548/20 COLONY, G.T. ROAD, PANIPAT, DISTT. PANIPAT-132103 |
| 50 | SIRSA | SYNDICATE BANK | CITY THANA ROAD, SIRSA-125055, DISTT. SIRSA |

HIMACHAL PRADESH

| 51. | SHIMLA | SYNDICATE BANK | 6, THE MALL, SHIMLA-171001. |
| :---: | :--- | :--- | :--- |
| 52. | DHARAMSHALA | INSTITUTION | BHAGIRATHI DAS, D.A.V. PUBLIC SCHOOL, DHARAMSHALA- <br> 176215 |
| 53. | MANDI | INSTITUTION | D.A.V. CENTENARY PUBLIC SCHOOL, JAWAHAR NAGAR, MANDI- <br> 175001 |
| 54. | SOLAN | INSTITUTION | MRA D.A.V. SR. SEC. SCHOOL, BYPASS, SOLAN-173212 |
| 55. | HAMIRPUR | INSTITUTION | NATIONAL INSTITUTE OF TECHNOLOGY, HAMIRPUR-177005 (HP) |

JAMMU \& KASHMIR

| 56. | JAMMU | SYNDICATE BANK | SANT PALACE, PURANI MANDI, JAMMU-180001 |
| :---: | :--- | :--- | :--- |
| 57. | SRINAGAR | INSTITUTION | NATIONAL INSTITUTE OF TECHNOLOGY, HAZRATBAL, <br> SRINAGAR(J\&K) -196006 | | JHARKHAND | BOKARO STEELCITY | SYNDICATE BANK | C-1, CITYCENTER, SECTORIV, P.B. No. 27, BOKAROSTEELCITY-827004. |
| :---: | :--- | :--- | :--- |
| 59. | DHANBAD | SYNDICATE BANK | BALAJEE MANSIONS, KATRAS ROAD, DHANBAD-826001. |


| S.No. | PLACE | SYNDICATE BANK/ <br> INSTITUTION | ADDRESSES |
| :--- | :--- | :--- | :--- |
| 60. | RANCHI | SYNDICATE BANK | IST FLOOR, RANI SATIMARKET, LALJIHIRJIROAD, RANCHI-834001. |$|$| 61. | JAMSHEDPUR |
| :--- | :--- |
| SYNDICATE BANK | No.1, MONUMENT ROAD, BISTUPUR, JAMSHEDPUR- <br> 831001,DISTT - PURBI SINGHBHUM |
| 62. | DEOGHAR |

KARNATAKA

| 63. | BANGALORE <br> CANTT. | SYNDICATE BANK | SHOMTHI KAMAL MANSION, 33 DICKENSON ROAD, <br> CANTONMENT, P.O. BOX No.4206, BANGALORE-560042. |
| :--- | :--- | :--- | :--- |
| 64. | BWSSB-BANGALORE <br> BRANCH | SYNDICATE BANK | $10 / 1$ 1ST FLOOR, RAJDHOOTH COMPLEX, AVENUE ROAD <br> ENTRANCE, BANGALORE-560002 |
| 65. | MANGALORE | SYNDICATE BANK | LIGHT HOUSE HILL ROAD, HAM PANKATHA, MANGALORE- <br> 575001 |

KERALA

| 66. | THIRUVANTHA- <br> PURAM | SYNDICATE BANK | KERALA STATE CO-OPERATIVE AGRICULTURE AND RURAL <br> DEVELOPMENT BANK BUILDING, P.B. No.314, DISTT. <br> THIRUVANTHAPURAM-695001. |
| :--- | :--- | :--- | :--- |
| 67. | ERNAKULAM | SYNDICATE BANK | PIONEER TOWERS, IST FLOOR, P B 2616, SHANMUGHAM ROAD <br> ERNAKULAM-682031 |
| 68. | KOZHIKODE | SYNDICATE BANK | P B NO.61,CHEROOTY ROAD, KOZHIKODE-673001 |
| 69. | KOTTAYAM | SYNDICATE BANK | DOOR NO VII/854, BAKER JUNCTION, KOTTAYAM-686001 |
| 70. | THIRISSUR | SYNDICATE BANK | PALACE ROAD, THIRISSUR (KERALA) -680020 |

LAKSHADWEEP

| 71. | KAVARATTI ISLAND | SYNDICATE BANK | VIA - P.O. KOCHI, KAVARATTI, LAKSHADWEEP-682555 |
| :--- | :--- | :--- | :--- |
| 72. | ANDROTH ISLAND | SYNDICATE BANK | VIA - PO KOCHI, ANDROTH, LAKSHADWEEP-682551 |


| MADHYA PRADESH |  |  |  |
| :--- | :--- | :--- | :--- |
| 75. | INDORE | SYNDICATE BANK | 67 MTH COMPOUND, RAJA RAM MOHAN ROY COMPLEX, <br> RAJWADA CHOWK, INDORE-452004. |
| 76. | BHOPAL | SYNDICATE BANK | $102 / 103$, KALACHAND MANSION, BERASIA ROAD, BHOPAL-462001. |
| 77. | GWALIOR | SYNDICATE BANK | MOTI MARKET, JAYENDRAGANJ, LASHKAR, P.B.13, GWALIOR- <br> 474009 |
| 78. | JABALPUR | SYNDICATE BANK | MOTIWALA MARKET, JAIN MANDIR MARG, LORD GANJ, <br> JABALPUR-482002 |

## MAHARASHTRA

| 79. | COLABA, MUMBAI | SYNDICATE BANK | 4/5, KARTAR BHAWAN, ARTHUR BUNDER ROAD, CAUSEWAY, <br> COLABA,MUMBAI-400005 |
| :---: | :--- | :--- | :--- |
| 80. | BACKBAY RECLA- <br> MATION, MUMBAI | SYNDICATE BANK | MOTI MAHAL, 195, J. TATA ROAD, BACKBAY RECLAMATION, <br> MUMBAI-400020 |
| 81. | MALABAR HILL, <br> MUMBAI | SYNDICATE BANK | SHREEPAL NAGAR, 12 J M MEHTA ROAD, MALABAR HILLS, <br> MUMBAI-400006 |
| 82. | AURANGABAD | SYNDICATE BANK | PLOT NO. 1 SARADA ARCADE, FRIENDS COLONY, RAILWAY <br> STATION ROAD, AURANGABAD-431001 |
| 83. | NAGPUR | SYNDICATE BANK | SARDA KUNJ, 84 CENTRAL AVENUE ROAD, SEWASADAN <br> CHOWK, GANDHIBAGH, PB No.-368, NAGPUR-440018. |
| 84. | PUNE MAIN | SYNDICATE BANK | 7/2, NARAYANPETH, 1ST FLOOR, LAXMI ROAD, PUNE-411030 |
| 85. | SHOLAPUR MAIN | SYNDICATE BANK | 824, WEST MANGALWARPETH, SHOLAPUR-413002 |

MANIPUR

| 86. | IMPHAL | STATE BANK OF INDIA | STATE BANK OF INDIA, IMPHAL - 795001 |
| :--- | :--- | :--- | :--- |



| 87. | SHILLONG | SYNDICATE BANK | U-TIROT SING SYLEM ROAD, SHILLONG, DISTT. EAST KHASI <br> HILLS-793002 (MEGHALAYA) |
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MIZORAM

| 88. | AIZWAL | APEX BANK | MIZORAM CO-OP APEX BANK LTD. MAIN BRANCH, AIZWAL-796007 |
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## ORISSA

| 89. | BHUBANESWAR | SYNDICATE BANK | KALPANA SQUARE, BHUBANESWAR, DISTT. KHURDA -751014. |
| :--- | :--- | :--- | :--- |
| 90. | CUTTACK | SYNDICATE BANK | WARD NO. 14, NANDI SHAHI, P.O. CHOWDHARY BAZAR, <br> CUTTACK-753001 |
| 91. | ROURKELA | SYNDICATE BANK | PLOT NO. 467/941 UMA BHAWAN, BISRA ROAD, <br> ROURKELA-769 001, DISTT. SUNDERGARH |

PUNJAB

| 92. | PATIALA | SYNDICATE BANK | SHOP No. 1-2-3, LEELA BHAWAN MARKET <br> COMPLEX,BHUPINDER ROAD,PATIALA-147001. |
| :--- | :--- | :--- | :--- |
| 93. | JALANDHAR | SYNDICATE BANK | NEAR HOTEL SKYLARK, MODEL TOWN ROAD, PB No. 57, <br> JALANDHAR CITY, PIN-144001. |
| 94. | LUDHIANA | SYNDICATE BANK | KACHEHARI ROAD, NEAR CLOCK TOWER, LUDHIANA-141008. |
| 95. | BHATINDA | SYNDICATE BANK | 2710, BHAI KA CHAMBER, OLD BUS STAND, G.T. ROAD, <br> BHATINDA-151 001. |

## RAJASTHAN

| 96. | JAIPUR | SYNDICATE BANK | JAIPUR TOWERS, PB No. 16, M I ROAD, JAIPUR-302001 |
| :--- | :--- | :--- | :--- |
| 97. | UDAIPUR | SYNDICATE BANK | 1-BABU BAZAR, UDAIPUR-313001 |
| 98. | KOTA | SYNDICATE BANK | 68, OLD DHANMANDI, SAROVAR, CINEMA ROAD, KOTA-324006 |
| 99. | JODHPUR | SYNDICATE BANK | 862, DEVENDER SINGVI MARG, JODHPUR-342001 |

## SIKKIM

| 100. | GANGTOK | STATE BANK OF INDIA | 70 MG ROAD, GANGTOK-737101, DISTT. EAST SIKKIM |
| :---: | :--- | :--- | :--- |
| 101. | GANGTOK | SYNDICATE BANK | M.G.MARG NEW MARKET GANGTOK, DISTT.-EAST, SIKKIM-737101 |

TAMIL NADU

| 102. | CHENNAI | SYNDICATE BANK | OPP. MOUNT ROAD, POST OFFICE, 38, ANNA SALAI, CHENNAI600002 |
| :---: | :---: | :---: | :---: |
| 103. | CHENNAI | SYNDICATE BANK | DOOR NO. 24, 1ST FLOOR, APS PLAZA, SARDAR PATEL ROAD, ADYAR, CHENNAI-600020. |
| 104. | CHENNAI | SYNDICATE BANK | PLOT NO 1742, 18TH MAIN ROAD, ANNA NAGAR WEST, CHENNAI-600040. |
| 105. | COIMBATORE | SYNDICATE BANK | 80, OPPANKARA STREET, COIMBATORE-641001 |
| 106. | MADURAI | SYNDICATE BANK | 134, PALACE ROAD, MADURAI-625001 |
| 107. | VELLORE | SYNDICATE BANK | 10, MUNDY STREET, PB No. 401, VELLORE-632004 |
| 108. | TIRUNELVELI | SYNDICATE BANK | NO 184/21 WEST CAR STREET, NIZAM COMPLEX, TIRUNELVELI TOWN-627006. |
| 109. | TIRUCHIRAPALLI | SYNDICATE BANK | 146, WEST BOULEWARD ROAD, P B NO 319 TIRUCHIRAPALLI620002 |
| TRIPURA |  |  |  |
| 110. | AGARTALA | INSTITUTION | HINDI HR. SEC. SCHOOL, ABHAY NAGAR, KUNJABAN ROAD, AGARTALA-799005 |

UTTAR PRADESH

| 111. | LUCKNOW | SYNDICATE BANK | OPP. GULMARG HOTEL, HARI BHAWAN, AMINABAD, <br> LUCKNOW-226018. |
| :---: | :--- | :--- | :--- |
| 112. | VARANASI | SYNDICATE BANK | CHETGANJ, VARANASI-221001 |
| 113. | VARANASI | SYNDICATE BANK | ANAND BAZAR, GODOLIA CHOWK, VARANASI-221001 (U.P.) |
| 114. | BAREILLY | SYNDICATE BANK | 167A, CIVIL LINES, BAREILLY, BAREILLY-243001. |
| 115. | AGRA | SYNDICATE BANK | 43/2, MANISHA BLOCK, SANJAY PLACE, AGRA-282002 |
| 116. | GORAKHPUR | SYNDICATE BANK | NEAR AD GIRLS INTER COLLEGE, BANK ROAD, GOLGHAR, <br> GORAKHPUR-273001 |


| S.No. | PLACE | SYNDICATE BANK/ <br> INSTITUTION | ADDRESSES |
| :--- | :--- | :--- | :--- |
| 117. | ALLAHABAD | SYNDICATE BANK | CHANDDRA SHEKHAR AZAD MARKET, IST FLOOR, SARDAR <br> PATEL MARG, CIVIL LINES, P B NO.106, ALLAHABAD-211001 |
| 118. | KANPUR | SYNDICATE BANK | B-1/B, OFFICERS COLONY, SARVODAYA NAGAR, KANPUR-208005, |
| 119. | MEERUT | SYNDICATE BANK | 201, SAKET, MEERUT-250003 |
| 120 | NOIDA | SYNDICATE BANK | B-16-17, SECTOR-18, NOIDA, DISTT. GAUTAMBUDHNAGAR-201301 |
| 121 | ALIGARH | SYNDICATE BANK | NCC CAMPUS, ALIGARH MUSLIM UNIVERSITY, ALIGARH-202002 |
| 122 | GHAZIABAD | SYNDICATE BANK | R-1/77, GROUND FLOOR, NEW RAJNAGAR, GHAZIABAD-201002 |
| 123 | BULANDSHAHR | SYNDICATE BANK | 48-A, CIVIL LINES, BULANDSHAHR-203001. |

UTTARAKHAND

| 124. | DEHRADUN | SYNDICATE BANK | 45, RAJPUR ROAD, PB No. 30,DEHRADUN-248001. |
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| 125. | HARDWAR | SYNDICATE BANK | GROUND FLOOR, PARIMISTHI BLDG., DEVPURA (NR. HIMGIRI <br> HOTEL), HARDWAR-249401 |
| 126. | HALDWANI | INSTITUTION | SHRI GURU TEGH BAHADUR PUBLIC SCHOOL, CIVIL LINES, <br> BHOTIA PARAO, HALDWANI-263139, DISTT. NAINITAL. |
| 127. | ROORKEE | INSTITUTION | CHILDREN SR. ACADEMY, DELHI ROAD, ROORKEY-201332, <br> DISTT. HARDWAR-201332 |
| 128. | NAINITAL | INSTITUTION | BIRLA VIDYA MANDIR, NAINITAL-263001 |
| 129. | ALMORA | INSTITUTION | DIRECTOR, KUMAON ENGINEERING COLLEGE, DWARHAT, <br> ALMORA-263601 |
| 130. | PANT NAGAR | INSTITUTION |  <br> TECHNOLOGY, PANT NAGAR, DISTT. U. S. NAGAR-263145 |
| 131. | PAURI GARHWAL | INSTITUTION | G. B. PANT ENGINEERING COLLEGE, GHUDAURI, PAURI <br> GARHWAL-246001 |

## PUDUCHERRY

| 132. | PUDUCHERRY | SYNDICATE BANK | No. 122 \& 124, J N STREET, (Upstairs), NEAR VELAN SILKS, <br> PUDUCHERRY-605001. |
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## WEST BENGAL

| 133. | N.S. ROAD, KOLKATA | SYNDICATE BANK | 6 NETAJI SUBHAS ROAD, ROYAL EXCHANGE, DALHOUSIE <br> AREA, PB No. 2043, KOLKATA-700001 |
| :---: | :--- | :--- | :--- |
| 134. | SALT LAKE CITY, <br> KOLKATA | SYNDICATE BANK | BB24, SECTOR-1, SALT LAKE CITY, KOLKATA-700064 |
| 135. | BARA BAZAR, <br> KOLKATA | SYNDICATE BANK | KAVERI HOUSE, 132/1, M G ROAD, KOLKATA-700007. |
| 136. | DURGAPUR | SYNDICATE BANK | SHRILAKSHMI NARYAN BHAWAN, NACHAN ROAD, BENACHITY <br> DURGAPUR-713213 |
| 137. | ASANSOL | SYNDICATE BANK | 16, G.C. MITRA ROAD, HUTTON ROAD, ASANSOL-713301, DISTT. <br> BARDDHAMAN |
| 138 | KHARAGPUR | SYNDICATE BANK | 197/259, MALANCHA ROAD, KHARAGPUR-721301, DISTT. <br> PASCHIM MEDINIPUR |
| 139 | SILIGURI | SYNDICATE BANK | KILLA BHAWAN, SAGARMAL RAJKUMAR COMPLEX, STATION <br> FEEDER ROAD, SILIGURI-734405, DISTT. DARJEELING |

REGIONAL OFFICES OF CBSE

| 140. | AJMER | REGIONAL OFFICE | THE REGIONAL OFFICER, CBSE, TODARMALMARG, AJMER-305001. |
| :---: | :--- | :--- | :--- |
| 141. | PANCHKULA | REGIONAL OFFICE | THE REGIONAL OFFICER, CBSE, SECTOR - 5, PANCHKULA <br> (HARYANA) |
| 142. | GUWAHATI | REGIONAL OFFICE | THE REGIONAL OFFICER, CBSE, RAJGARH ROAD, RAJGARH <br> TINALI, GUWAHATI-781003. |
| 143. | ALLAHABAD | REGIONAL OFFICE | THE REGIONAL OFFICER, CBSE, 35-B, M.G. MARG, CIVIL LINES, <br> ALLAHABAD-211011, U.P. |
| 144. | CHENNAI | REGIONAL OFFICE | THE REGIONAL OFFICER, CBSE, PLOT NO. 1630-A, J-BLOCK <br> ANNA NAGAR, CHENNAI-600040 (W), TAMIL NADU. |

## ABROAD

| 145. | DUBAI | INSTITUTION | THE INDIAN HIGH SCHOOL, P.O.BOX NO. 106, DUBAI, U.A.E. |
| :---: | :--- | :--- | :--- |
| 146 | RIYAD | INSTITUTION | INTERNATIONAL INDIA SCHOOL, P.O. NO. 89788, RIYAD, <br> KINGDOM OF SAUDI ARABIA |

## INSTRUCTIONS FOR COMPLETING AND SENDING THE APPLICATION FORM

The candidate seeking admission to the AIEEE is required :-
i) to go through the Information Bulletin carefully and acquaint with all the requirements;
ii) to satisfy eligibility to appear in the examination;
iii) to send the application on the prescribed Application Form complete in all respect or submit it online;
iv) to write complete mailing address with Postal Pin Code in the Application Form in the capital letters only;
v) to fill in the Application Form in own handwriting in BLOCK LETTERS in English only, using blue/black ball point pen, within the prescribed boxes. Use blue/black ball point for darkening the appropriate circle(s) also.
vi) to write amount of additional fee, Bank draft/Demand draft No., date and Bank Code properly if applying for both BE/ B.Tech and B.Arch/B.Planning together, or opted centre at foreign country.
vii) OVERWRITING, CUTTINGS, ERASINGS IN THE APPLICATION FORM AND INCOMPLETE FORM MAY LEAD TO REJECTION OF FORM AND SHOULD BE AVOIDED. ANY ERROR ARISING ON THIS ACCOUNT SHALL BE THE RESPONSIBILITY OF THE CANDIDATE.
viii) The Application Form duly filled in should be sent to THE ASSISTANT SECRETARY(AIEEE), CENTRAL BOARD OF SECONDARY EDUCATION, PS 1-2 INSTITUTIONAL AREA, IP EXTENSION, PATPARGANJ, DELHI-110092 in the printed envelope supplied by the Board so as to reach positively by 10.01.2008. The Application Form will not be received personally in any case. The candidate must retain photocopy of his/her filled in Application Form for future correspondence, if required.
ix) The last date for receipt of Application Form by Registered/Speed Post (NOT BY COURIER) is 10.01.2008. Thereafter 15 days grace time for receipt of Application Form up to 25.01 .2008 will be allowed to the candidates belonging to remote areas viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Lahaul and Spiti District and Pangi sub division of Chamba District of Himachal Pradesh, Andaman \& Nicobar Island and Lakshadweep
x) If a candidate submits more than one Application Form, his/her candidature shall be liable to be cancelled and debarred for future examination(s).
xi) (a) For S. Nos. 1, 2 \& 3 of the Application Form :- Candidate should write his/her name, mother's name, father's name in capital letters as given in Class X Certificate of Board/University. Each letter should be filled in one box as shown below. One box should be left blank between each part of the name. Before filling in the Application Form, write on a plain paper and verify the correctness of spellings.

Candidate's Name: RAJ BALA


Mother's Name: SHARDA RANI


Father's Name: RAM KISHAN

(b) Please note : For S. Nos. 4 to 10, 12, 13 \& 17 of the Application Form: In case of discrepancy in written code and darkened circle, code written in the box(es) shall be taken as final without any correspondence.
For S.Nos. $\mathbf{4}$ to $7,9 \& 12$ of the Application Form :- Write appropriate Code and darken the appropriate circle as applicable for the following:-

Choice of Examination Centre Cities (Please see Appendix VI)
State Code of Eligibility For State code please see point ' $m$ ' of this AppendixSex
Nationality
Question Paper Medium
Category
(c) For Serial No. 8 of the Application Form : In case of girl candidate if you are the only child of your parents i.e. no brother or sister write 1 in the box and darken circle Yes. Otherwise write 2 in the box and darken circle No.
(d) For S. No. 10 of the Application Form i.e Date of Birth : Write and darken the appropriate circle for the date, month and year of birth as per English calendar and as recorded in the Secondary Education Board/ University Certificate.
Use numerals 01 to 31 for the date, 01 to 12 for the month and last two digits for the year of birth as shown below. e.g. $3^{\text {rd }}$ October, 1983

## 29th November, 1986

| DATE | MONTH | YEAR |  |
| :---: | :---: | :---: | :---: |
| 03 | 10 | 8 | 3 |


| DATE |  | MONTH |  |
| :--- | :--- | :--- | :--- |
| 2 9 YEAR  | 8 1 | 2 |  |

(e) For S. Nos. 11, 14, 15 and 16 of the Application Form : Darken the appropriate circle(s) as applicable for the following:-Place of residenceSchool Board of Class-XIIType of Institution of Class-XIIMode of preparation
(f) For S. No. 13 of the Application Form: Write appropriate Code from the following:

If Physically Handicapped

## Code

If not
(g) For S. No. 17 of the Application Form i.e Courses Applying for : Write appropriate Code and darken the appropriate circle as applicable from the following:

| COURSE | CODE |
| :--- | :---: |
| B.E./B.TECH. only | 1 |
| B.ARCH only | 2 |
| B.E./B.TECH and B.ARCH (Both) | 3 |

(h) For S. No. 18 of the Application Form: The candidate should affix left hand thumb impression.
(i) For S. No. 19, 20 and 21 of the Application Form : Write appropriate code as applicable for the following:-
$\square$ Percentage of Marks (rounded off to the nearest integer)obtained in Class $X$ and Class XII (if passed)
$\square$ Year of passing/appearing Class XII (This information must be supplied otherwise application will be rejected)
$\square$ Father's / Guardian's / Mother's Educational QualificationsFather's / Guardian's / Mother's Occupation
S. No. 21Father's / Guardian's / Mother's Annual Income
(k) For S.No. 22 of the Application Form i.e Mailing Address: Write your name and complete mailing address $\operatorname{IN}$ CAPITAL LETTERS including the PIN CODE at which the communication is to be sent.
(j) For S. No. 23 of the Application Form: Write your complete STD Code \& telephone No, if available.

(I) For S. No. 24 - please fill up details of additional fees to be paid in case applying for both BE/B.Tech \& B. Arch/B. Planning (together) or opting examination centre in foreign country. In case of payment of additional fees of Rs. 200/please prefix 0 before the amount i.e. | 0 | 2 | 0 | 0 |
| :--- | :--- | :--- | :--- |

(m) State Code of Eligibility of the candidate:
(i) State Code of eligibility means the Code of the State from where a candidate has passed +2 examination by virtue of which he/she becomes eligible to appear in the AIEEE for admission to B.E/B.Tech and B.Arch/B. Planning Courses of the institutions/ Colleges of the States/UT.
Due to creation of new States of Chattisgarh, Jharkhand and Uttarakhand, certain places/institutions of Madhya Pradesh, Bihar and Uttar Pradesh from where the candidates have passed their +2 examination have now come within the jurisdiction of the newly created states. The candidates are, therefore, requested to fill in the State Code of eligibility as per the present jurisdiction of the respective States.
(ii) Indian nationals passing the equivalent qualifying examination from any institution abroad, the State of Eligibility will be determined on the basis of permanent address given in the Passport of the candidate.

| NAME OF THE STATE /UT | CODE |
| :--- | :---: |
| Andaman \& Nicobar Islands | 01 |
| Andhra Pradesh | 02 |
| Arunachal Pradesh | 03 |
| Assam | 04 |
| Bihar | 05 |
| Chandigarh | 06 |
| Chhattisgarh | 07 |
| Dadra \& Nagar Haveli (UT) | 08 |
| Daman \& Diu (UT) | 09 |
| Delhi (NCT) | 10 |


| NAME OF THE STATE /UT | CODE |
| :--- | :---: |
| Goa | 11 |
| Gujarat | 12 |
| Haryana | 13 |
| Himachal Pradesh | 14 |
| Jammu \& Kashmir | 15 |
| Jharkhand | 16 |
| Karnataka | 17 |
| Kerala | 18 |
| Lakshadweep (UT) | 19 |
| Madhya Pradesh | 20 |
| Maharashtra | 21 |
| Manipur | 22 |
| Meghalaya | 23 |
| Mizoram | 24 |
| Nagaland | 25 |
| Orissa | 26 |
| Puducherry (UT) | 27 |
| Punjab | 28 |
| Rajasthan | 29 |
| Sikkim | 30 |
| Tamil Nadu | 31 |
| Tripura | 32 |
| Uttar Pradesh | 33 |
| Uttarakhand | 34 |
| West Bengal | 35 |
|  |  |

(n) Photograph : Firmly affix two recent high contrast passport size preferably black \& white photograph (taken on or after 1.9.2007) with gum/fevicol (not to be pinned or stapled) in the space provided for it in the Application Form one duly attested by the head of the institution where the candidate is studying/passed class XII or the Gazatted officer. The photograph must indicate clearly the name of the candidate along with the date of taking the photograph. It should be without cap or goggles. Spectacles are allowed. Polaroid photos are not acceptable. The photograph of the candidate should be attested by the Principal/Head of the Institution or Gazetted Officer in such a way that part of the signature is on the photograph and remaining part of the signature is on the application form. Attestation should be done on the bottom part of the photograph so that the photograph is not defaced. Candidates not complying with these instructions or with unclear photograph are liable to be rejected. Candidates may keep 6-8 identical photographs in reserve for use at the time of entrance examination/ Counselling/Admission.


RAJ BALA
15.10.2007
(o) Request for change or correction of any information, once given in the Application Form, shall not be entertained under any circumstances. The Board will not be responsible for any consequences arising out of non-acceptance of any correction/addition/deletion in any particular once filled in the application form whatsoever the reasons may be.

| NAME OF THE STATE/CITY CITY CODE | NAME OF THE STATE/CITY | CITY CODE |
| :---: | :---: | :---: |
| ANDAMAN \& NICOBAR | HARYANA |  |
| PORT BLAIR ................................................ 201 | FARIDABAD ............ | ........... 221 |
| ANDHRA PRADESH | HISSAR . | ......... 222 |
| HYDERABAD .............................................. 203 | KURUKSHETRA ........ | ........... 223 |
| VIJAYAWADA .............................................. 205 | HIMACHAL PRADESH |  |
| VISAKHAPATNAM ........................................ 206 | HAMIRPUR | ......... 226 |
| WARRANGAL ............................................... 207 | SHIMLA .............. | ........... 227 |
| ARUNACHAL PRADESH | JAMMU \& KASHMIR |  |
| ITANAGAR ................................................... 208 | JAMMU .......... | ......... 228 |
| ASSAM | SRINAGAR .... | .......... 229 |
| GUWAHATI .................................................. 209 | JHARKHAND |  |
| BIHAR | DHANBAD . | ......... 230 |
|  | BOKARO . | ........ 231 |
| MUZZAFARPUR .......................................... 212 | JAMSHEDPUR |  |
| PATNA ........................................................ 213 |  |  |
|  | RANCHI .................... | ........... 233 |
| CHANDIGARH/PANCHKULA/MOHALI | KARNATAKA |  |
| CHANDIGARH/PANCHKULA/MOHALI .............. 214 | BANGALORE ............ | ........... 234 |
| CHHATTISGARH | HUBLI ..................... | ........... 236 |
| RAIPUR ....................................................... 215 | MANGALORE ....... | ......... 237 |
| DELHI | KERALA |  |
| DELHI ......................................................... 216 | ERNAKULAM ............ | ........... 238 |
| GOA | KOZHIKODE ........... | ........... 239 |
| PANAJI ....................................................... 217 | TRIVANDRUM ........ | ........... 240 |
| GUJARAT | MADHYA PRADESH |  |
| AHMEDABAD ............................................... 218 | BHOPAL | .......... 242 |
| SURAT ........................................................ 219 | GWALIOR .......... | ........... 243 |
| VADODARA ................................................. 220 | JABALPUR ..... | ........... 244 |

INDORE ..... 245
MAHARASHTRA
NAGPUR ..... 246
MUMBAI ..... 247
PUNE ..... 248
MANIPUR
IMPHAL ..... 249
MEGHALAYA
SHILLONG ..... 250
MIZORAM
AIZWAL ..... 251
NAGALAND
KOHIMA ..... 252
ORISSA
BHUBANESHWAR ..... 253
ROURKELA ..... 255
PUDUCHERRY
PUDUCHERRY ..... 256
PUNJAB
BHATINDA ..... 257
JALANDHAR ..... 258
RAJASTHAN
AJMER ..... 260
JAIPUR ..... 261
JODHPUR ..... 262
UDAIPUR ..... 264

SIKKIM
GANGTOK ..... 265
TAMIL NADU
CHENNAI ..... 266
COIMBATORE ..... 267
MADURAI ..... 268
TRIPURA
AGARTALA ..... 269
UTTARAKHAND
DEHRADUN ..... 271
NAINITAL ..... 273
PANTNAGAR ..... 274
ROORKEE ..... 276
UTTAR PRADESHAGRA277
ALLAHABAD ..... 278
BAREILLY ..... 279
KANPUR ..... 280
LUCKNOW ..... 281
NOIDA ..... 282
VARANASI ..... 283
WEST BENGAL
DURGAPUR ..... 284
KOLKATA ..... 285
SILIGURI ..... 286
ABROAD
DUBAI ..... 287
RIYAD ..... 288

## A. PROCEDURE TO BE FOLLOWED IN CONDUCT OF AIEEE

1. The examination rooms/hall will be opened 30 minutes before the commencement of the test. Candidates should take their seat immediately after opening of the examination hall. If the candidates do not report in time, they are likely to miss some of the general instructions to be announced in the Examination Hall.
2. The candidate must show, on demand, the Admit Card for admission in the examination rooms/hall. A candidate who does not possess the Admit Card issued by the Board shall not be permitted for the examination under any circumstances by the Centre Superintendent.
3. A seat indicating roll number will be allocated to each candidate. Candidates should find out and occupy their allotted seat only. Any candidate found to have changed room or the seat on his/her own other than allotted, his/her candidature shall be cancelled and no plea would be accepted for it.
4. A candidate who comes after the commencement of the examination shall not be permitted to sit in the examination.
5. Candidates are not allowed to carry any textual material, Calculators, Docu Pen, Slide Rules, Log Tables, Electronic Watches with facilities of calculator, printed or written material, bits of papers, mobile phone, pager or any other device, except the Admit Card inside the Examination Room/Hall. If any candidate is in possession of any of the above item, his/her candidature will be treated as unfairmeans and cancel the current examination \& also debarred the candidate for future examination(s).
6. For Aptitude Test in Architecture, candidates are advised to bring their own geometry box set, pencils, erasers and colour pencils or crayons.
7. No candidate, without the special permission of the Centre Superintendent or the Invigilator concerned, will leave his/her seat or Examination Room until the full duration of the paper is over. Candidates should not leave the room/hall without handing over their Answer Sheets to the Invigilator on duty.
8. Candidates are advised to bring with them a cardboard or a clip board on which nothing should be written, so that they have no difficulty in writing responses in the Answer Sheet even if the tables provided in the examination room/hall do not have smooth surface. They should also bring their own Ball Point Pens (Black/Blue) of good quality.
9. Smoking in the Examination Hall/Room is strictly prohibited.
10. Tea, coffee, cold drinks or snacks are not allowed to be taken into the examination rooms during examination hours.
11. Ten minutes before the commencement of the paper, each candidate will be given sealed Test Booklet with an Answer Sheet placed inside it.
12. Immediately on receipt of the Test Booklet the candidates will fill in the required particulars on the cover page of the Test Booklet with Ball Point Pen only. He/She will not open the Test Booklet until asked to do so by the Invigilator. Do not open/ break the seal before the announcement.
IMPORTANT INSTRUCTIONS PRIOR TO EXAMINATION
13. Five minutes before the commencement of the paper the candidate will be asked to break/open the seal of the Test Booklet. He/She will take out the Answer Sheet carefully. The candidate should check carefully that the Test Booklet Code printed on Side-2 of the Answer Sheet is the same as printed on the Test Booklet. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.
14. Candidate will then write particulars with Blue/Black ball point pen only on both the sides of the Answer Sheet. Use of pencil is strictly prohibited. If any body use the pencil, his/her answer sheet will be rejected and no correspondence will be entertained in this regard. After completing this step, the candidates will wait for the signal by the invigilator.
15. The test will start exactly at the time mentioned in the Admit Card and an announcement to this effect will be made by the invigilator.
16. During the examination time, the invigilator will check Admit Card of the candidate to satisfy himself/herself about the identity of each candidate. The invigilator will also put his/her signatures in the place provided in the Answer Sheet on Side-1.
17. Candidate shall bring his/her own Ball Point Pens of good quality. These will not be supplied by the Board.
18. UNFAIR MEANS :

Candidates shall maintain perfect silence and attend to their Question Paper only. Any conversation or gesticulation or disturbance in the Examination Room/Hall shall be deemed as misbehaviour. If a candidate is found using unfair means or impersonating, his/her candidature shall be cancelled and he/she will be liable to be debarred for taking examination either permanently or for a specified period according to the nature of offence.
If any candidate is in possession of any item(s) as mentioned in para 5 above, his/her candidature for current examination will be cancelled and also liable to be debarred for future examination(s).
19. After completing the paper and before handing over the Answer Sheet, the candidate should check again that all the particulars required in the Answer Sheet have been correctly written.
20. A signal will be given at the beginning of the examination and at half-time. A signal will also be given before the closing time when the candidate must stop marking the responses.
21. The candidate will check that the Test-booklet contains as many number of pages as are written on the top of the first page of the Test Booklet. The candidate shall not remove any page(s) from the Test-Booklet and if he/she is found to have removed any page(s) from his/her Test Booklet, he/she will be presumed to have used unfair means and shall be liable for criminal action.
22. The candidates must sign twice on the Attendance Sheet at the appropriate place. Firstly, immediately after commencement of the Examination and for the second time while delivering the Answer Sheet. The candidates are also required to put their left hand thumb impression in the space provided in the Attendance Sheet.

## B. INSTRUCTIONS FOR USE OF TEST BOOKLET AND ANSWER SHEET

1. The candidates will find the Answer Sheet placed inside the sealed Test Booklet. The seal will be broken/ opened by the candidates on the announcement by the invigilator and the Answer Sheet shall be taken out. Do not open/break the seal before the announcement.
2. Side - 2 of each Answer Sheet will have a pre-printed Test Booklet Code A, B, C or D. The candidates are required to check that the Test Booklet Code pre-printed on Side-2 of the Answer Sheet is the same as printed on the Test Booklet.
3. The Answer Sheet used will be of special type which will be scanned on Optical Scanner. There will be two sides of the Answer Sheet.
Side 1 This side of the Answer Sheet contains the following columns which are to be filled in neatly and accurately by the candidate with Blue/Black ball point pen only. Use of pencil is strictly prohibited.
i) Roll Number
ii) Name of the candidate
iii) Father's Name
iv) Centre Number
v) Name of the Examination Centre
vi) Signature of the candidate

Side 2 This side of the Answer Sheet contains the following columns which are also to be filled in by the candidate with Blue/Black Ball Point Pen only. Use of pencil is strictly prohibited.
i) Roll Number
ii) Centre Number
iii) Test Booklet Number

WRITING OF PARTICULARS AND RESPONSES ON SIDE -2 WITH BLUE/BLACK BALL POINT PEN ONLY WILL BE FILLED UP AS FOLLOWS:


IMPORTANT INSTRUCTIONS FOR MARKING THE RESPONSES
i) Out of four alternatives for each question, only one circle for the correct answer is to be darkened completely with blue/ black Ball Point Pen. For example Question No. 008 in the Test Booklet reads as follows:
Qutub Minar is situated in
(1) Delhi
(2) Mumbai
(3) Agra
(4) Bangalore

The correct response to this question is (1) Delhi. The candidate will locate Question No. 008 in the Answer Sheet and darken the circle (1) as as shown below:
008
(2) 3
(4)
ii) Use Blue or Black Ball Point Pen to completely darken the appropriate circle, i.e. one circle for each entry. The answer once marked is not liable to be changed. Use of pencil is strictly prohibited. If any candidate use the pencil for darkening the answer sheet, his/her answer sheet will be rejected.
iii) A light or faintly darkened circle is a wrong method of marking and liable to be rejected by the Optical Scanner.
iv) If the candidate does not want to attempt any question he/she should not darken the circle given against that question.
v) Please do not fold the Answer Sheet and do not make any stray marks on it.

## 4. ROUGH WORK

The candidate will not do any rough work on the Answer Sheet. All rough work is to be done in the Test Booklet itself.
5. CHANGING AN ANSWER IS NOT ALLOWED

The candidates must fully satisfy themselves about the accuracy of the answer before darkening the appropriate circle as no change in answer once marked is allowed. Use of eraser or white/correction fluid on the Answer Sheet is not permissible as the Answer Sheets are machine gradable and it may lead to wrong evaluation.

## Wrong/Correct way of marking



If more than one circle is darkened or if the response is marked in any other manner or as shown in 'Wrong Method' above, it shall be treated as wrong way of marking.
6. Prior to handing over the Answer Sheet soon after the examination is over, the candidate must sign the attendance sheet as a proof thereof. The examinee is permitted to carry the Text Booklet,

## WARNING

1 PERSONS REMOVING PAGES FROM THE TEST-BOOKLET DURING EXAMINATION, IMPERSONATING OR TRYING TO APPEAR IN THE COUNSELLING THROUGH FORGED MEANS WILL BE DEALT WITH AS PER LAW.
2. CANVASSING DIRECTLY OR INDIRECTLY FOR THE ALLOTMENT OF SEATS OR INFLUENCING STAFF BY UNFAIR MEANS WOULD LEAD TO SERIOUS CONSEQUENCES INCLUDING DISQUALIFICATION OF THE CANDIDATES.

## LIST OF QUALIFYING EXAMINATIONS

i) The +2 level examination in the 10+2 pattern of examination of any recognized Central/State Board of Secondary Examination, such as Central Board of Secondary Education, New Delhi, and Council for Indian School Certificate Examination, New Delhi
ii) Intermediate or two-year Pre-University Examination conducted by a recognized Board/University.
iii) Final Examination of the two-year course of the Joint Services Wing of the National Defence Academy.
iv) Any Public School/Board/University Examination in India or in foreign countries recognized by the Association of Indian Universities as equivalent to $10+2$ system.
v) H.S.C. Vocational Examination.
vi) A pass grade in the Senior Secondary School Examination conducted by the National Open School with a minimum of five subjects.
vii) 3 or 4 -year diploma recognized by AICTE or a State Board of Technical Education.

1. Candidates can apply for AIEEE 2008 either on the prescribed Application Form or make application 'Online'.
2. For submission of application on prescribed form :

- Information Bulletin containing Application Form can be had by post from the CBSE or personally from Regional Offices of CBSE, Designated Institutions and the Designated Branches of Syndicate Bank and other Banks specified in Appendix IV.
- Candidates must follow instructions strictly as given in the Information Bulletin. Candidates not complying with the instructions shall be summarily disqualified.
- Candidates must keep a photocopy of the Application Form for use as reference for future correspondence.
- Please ensure before mailing the application that:-
o the candidate has signed the Form at two specified places;
0 the application bears signature of the Father/Guardian
o recent passport size two photographs taken on or after $1^{\text {st }}$ September, 2007, one pasted in the space marked for it and one duly attested by the Principal/Head of institution where the candidate is studying in class XII/Passed XII or by Gazetted officer.
0 candidate appearing for both the courses of B.E/B. Tech and B. Arch/B. Planning together and candidates opted centre in foreign country, have to pay additional payment as per clause 8.3 of this booklet.
0 the application is dispatched by Registered/Speed Post in the enclosed CBSE envelope only;
o the left hand thumb impression of the candidate to be affixed at the prescribed column.
0 the Application Form sent by courier shall not be accepted and rejected.
0 the Application Form sent/dispatched through the coaching centre will not be accepted and rejected.
0 the use of address of any coaching centre/coaching institution is strictly prohibited, if any body use the address of any coaching centre/institution his/her application form will be rejected.

3. For submission of application "Online' at www.aieee.nic.in"

- Online submission of application with photograph and signature on Computer Printed Form generated and down loaded from the website www. aieee.nic.in and to be sent by Registered/Speed Post (NOT BY COURIER) to CBSE and payment made by Demand Draft in favour of the Secretary, CBSE, payable at Delhi.
- Candidates submitting applications online are required:
o to mention his/her Registration No., Name and Address on the back of the Pay Order/Demand Draft
o to retain a photocopy of computer printed Form to serve as reference for future correspondence, and
o to retain a photo copy of the Bank Draft sent.

4. Information regarding receipt of applications in the AIEEE Unit of the CBSE will be put on the website www.aieee.nic.in. The candidates can check the receipt of their Application Number on the website after 45 days of dispatch of Application to the CBSE. Candidates whose particulars do not appear on the website may write to the AIEEE Unit, and forward a photocopy of the Application Form, the Demand Draft and two passport size photographs (as pasted on the Application Form).
5. In case the Admit Card is not received by $10^{\text {th }}$ April, 2008 the candidates should write/contact the CBSE between $10^{\text {th }}$ April, 2008 to $21^{\text {st }}$ April, 2008 giving details of the Post Office, date of dispatch, original receipt of postal dispatch, photostat copy of the Application Form, two photographs (as pasted on the Application Form one is duly attested as mentioned in para 2 above), and proof regarding remittance of fee who have submitted application "Online'.
6. Candidate must preserve the Admit Card till the admission process is over. Request for issue of duplicate Admit Card will not be entertained after the examination in any case.
7. For latest updates, please check AIEEE website: www.aieee.nic.in

AIEEE INFORMATION BULLETIN INCLUDES EXAMINATION FEE OF RS. 300/- FOR B.E/B. TECH ONLY OR B. ARCH/B. PLANNING ONLY FOR GENERAL CATEGORY AND RS. 150/- FOR SCHEDULED CASTE AND SCHEDULED TRIBE CANDIDATES. FOR APPEARING B.E/B. TECH AND B. ARCH/B. PLANNING (BOTH) AND OPTED EXAMINATION CENTRE IN FOREIGN COUNTRY PLEASE REFER TO CLAUSE 8.3 FOR ADDITIONAL FEE.
Address for obtaining/sending complete Application Form and clarification, if any :-

| The Assistant Secretary (AIEEE Unit), | Telephone | $: 011-22239177-80$ |
| :--- | :--- | :--- |
| Central Board of Secondary Education, |  | Extn. 110, $151 \& 157$ |
| PS 1-2 Institutional Area |  | $011-22246087$ |
| IP Extension, Patparganj |  |  |
| Delhi-110092. | Fax | $: 011-22246095$ |

## PATTERN <br> SUBJECT COMBINATIONS IN QUALIFYING EXAMINATIONS

| Course | Compulsory Subjects | Any One of the Optional Subjects |
| :--- | :--- | :--- |
| B.E./B.Tech.* | Physics \& Mathematics | Chemistry <br> Bio-technology <br> Computer Science <br> Biology |
| B. Arch./B. Planning** | Mathematics <br> with 50\% marks in aggregate <br> at 10 + 2 level |  |

* This is as per decision of the All India Council for Technical Education (AICTE).
** Provisionally as per the orders of the Ho'ble High Court of Delhi and directive received from the Ministry of Human Resource Development.

SUBJECT COMBINATIONS / TYPES OF QUESTIONS AND TOTAL MARKS

| Paper | Subjects | Types of Questions |
| :--- | :--- | :--- |
| Paper 1 |  <br> Mathematics | Objective Type Questions with equal weightage <br> to Physics, Chemistry \& Mathematics |
| Paper 2 | Mathematics - Part I <br>  <br> Drawing Test - Part III | Objective Type Questions <br> Objective Type Questions <br> Two Questions to test drawing aptitude |

REQUIREMENT OF PAPERS / APTITUDE TEST

| Course | Papers |
| :--- | :--- |
| B.E. / B. Tech. | Paper-1 |
| B. Arch. / B. Planning | Paper-2 |

TIME SCHEDULE

|  | Paper 1 | Paper 2 |  |
| :--- | :--- | :--- | :--- |
|  | DATES OF EXAMINATION | 27.04 .2008 | 27.04 .2008 |
| a) | Entry in the Examination Hall | 0900 HRS. | 1330 HRS. |
| b) | Distribution of Test Booklet | 0920 HRS. | 1350 HRS. |
| c) | Seal of the Test Booklet to be broken/opened to <br> take out the Answer Sheet | 0925 HRS. | 1355 HRS. |
| d) | Last entry in the Examination Hall | 0930 HRS. | 1400 HRS. |
| e) | Test commences | 0930 HRS. | 1400 HRS. |
| f) | Test concludes | 1230 HRS. | 1700 HRS. |

\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{5}{|r|}{IMPORTANT INFORMATION FOR AIEEE 2008 AT A GLANCE} \\
\hline 1 \& \multicolumn{2}{|l|}{a. Date of Examination} \& \multicolumn{2}{|l|}{27.04.2008} \\
\hline \& \multicolumn{2}{|l|}{b. Sale of AIEEE Information Bulletin containing Application Form} \& \multicolumn{2}{|l|}{30.11.2007 to 05.01.2008} \\
\hline \& \multicolumn{2}{|l|}{c. Online submission of application on website www.aieee.nic.in} \& \multicolumn{2}{|l|}{30.11.2007 to 05.01.2008} \\
\hline 2. \& \multicolumn{2}{|l|}{\begin{tabular}{l}
Last date for \\
a. Receipt of request for Information Bulletin and Application Form by Post at AIEEE Unit, CBSE, PS 1-2, Institutional Area, . \\
IP Extension, Patparganj, Delhi - 110092 \\
b. Sale of Information Bulletin at designated branches of Syndicate Bank, Regional Offices of the CBSE and designated institutions \\
c. Online submission of applications \\
d. Receipt of complete applications "by post" including Registration Forms with Bank Draft at AIEEE Unit, CBSE, PS 1-2, Institutional Area, IP Extension, Patparganj, Delhi - 110092
\end{tabular}} \& 15.12
05.01
05.01

10.01 \& | 2007 |
| :--- |
| 2008 |
| 2008 |
| 2008 | <br>

\hline 3. \& \multicolumn{2}{|l|}{Date of dispatch of Admit Card} \& \multicolumn{2}{|l|}{10.03.2008 to 31.03.2008} <br>

\hline 4. \& \multicolumn{2}{|l|}{Issue/dispatch of duplicate Admit Card (on request only with fee of Rs. 50/- + postal charges of Rs. 30/- extra for out station candidate.} \& \multicolumn{2}{|l|}{| 10.04.2008 to 27.04.2008 |
| :--- |
| (by hand) |
| 10.04.2008 to 21.04.2008 |
| (by post) |} <br>


\hline 5. \& Dates of Examination \& \multicolumn{2}{|l|}{| PAPER-1 27.04.2008 |
| :--- |
| PAPER-2 27.04.2008 |} \& | 0930-1230 hrs |
| :--- |
| 1400-1700 hrs | <br>

\hline 6. \& Centre of Examination \& \multicolumn{3}{|l|}{As indicated on the Admit Card} <br>
\hline 7. \& Declaration of Results \& \multicolumn{3}{|l|}{On or before 07.06.2008} <br>
\hline 8. \& Dispatch of Score Cards \& \multicolumn{3}{|l|}{12.06.2008 to 28.06.2008} <br>
\hline 9. \& Issue/Dispatch of duplicate score cards (on request only with fee of Rs. 50/-. Postal charges of Rs. 30/- extra for outstation candidate) \& \multicolumn{3}{|l|}{09.07.2008 to 30.08.2008} <br>
\hline 10. \& Materials to be brought on the day of examination \& \multicolumn{3}{|l|}{Admit Card and Ball Point Pen of good quality. For Aptitude Test in Architecture, the candidates are advised to bring their own Card Board, geometry box set, pencils, erasers and colour pencils or crayons.} <br>
\hline 11. \& Rough work \& All rough work Booklet only. T any rough work Answer Sheet. \& cand or put \& done in the Test date should NOT do stray mark on the <br>
\hline
\end{tabular}

