

INSTRUCTION BOOKLET

AGRICULTURE AND MEDICAL

ENGINEERING, AGRICULTURAL & MEDICAL COMMON ENTRANCE TEST
(on behalf of APSCHE)

EAMCET-2012

FOR ENTRANCE TEST RELATING TO PROFESSIONAL COURSES IN

- A) B.Sc.(Ag.) / B.Sc.(Hort.) / B.V.Sc. & AH / B.F.Sc. / B.Tech. (FST) / B.Sc. (CA&BM)
B) MBBS / BDS
C) BAMS / BHMS / BNYS
D) B.Pharm / B.Tech.(Bio-Technology) (Bi.P.C.)
E) Pharm-D (Bi.P.C)

EAMCET - 2012 (AM) on 12-05-2012 from 2-30 PM to 5-30 PM

Note: Information about the Entrance test is also available in the Website <https://www.apeamcet.org>**LAST DATES FOR SUBMISSION OF ONLINE APPLICATION**

WITHOUT LATE FEE	30-03-2012
WITH LATE FEE Rs. 500/-	09-04-2012
WITH LATE FEE Rs. 1000/-	19-04-2012
WITH LATE FEE * Rs. 5000/-	28-04-2012
WITH LATE FEE * Rs. 10000/-	09-05-2012

* For candidates submitted with late fee of Rs.5,000/- and 10,000/-
Test Centre will be allotted only at Hyderabad / Secunderabad

Address for Correspondence:
CONVENER, EAMCET - 2012
EXAMINATIONS BUILDING, GROUND FLOOR,
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
KUKATPALLY, HYDERABAD - 500 085. ANDHRA PRADESH

EAMCET - 2012 (Agriculture and Medical)

A Common Entrance Test designated as “Engineering, Agricultural & Medical Common Entrance Test” (EAMCET – 2012) will be conducted by JNT University Hyderabad for the academic year 2012-2013 for admission into the First Year of Professional Courses i.e. A) B.Sc.(Ag.) / B.Sc.(Hort.) / B.V.Sc. & AH / B.F.Sc. / B.Tech. (FST) / B.Sc. (CA&BM) B) MBBS / BDS C) BAMS / BHMS / BNYS D) B.Pharm / B.Tech.(Bio-Technology) (Bi.P.C.) E) Pharm-D (Bi.P.C)

I. PARTICULARS OF EAMCET – 2012

The examination is on **12-05-2012** between **2.30 P.M and 5.30 P.M.**

The Entrance test is of 3 hour duration and the question paper consists of a total 160 questions comprising of a total of 80 questions in Biology (Botany - 40, Zoology – 40), 40 questions in Physics and 40 questions in Chemistry.

“All questions are objective type (multiple choice) only and each question carries one mark. The syllabus in Biology, Physics and Chemistry is furnished in Annexure–I. The model questions and model OMR Response sheet along with instructions are given in Annexure – II”. and Annexure-V respectively.

II. ELIGIBILITY TO APPEAR FOR EAMCET – 2012

Candidates satisfying the following requirements shall be eligible to appear for EAMCET-2012

1. Candidates should be of Indian Nationality or Persons of Indian Origin (PIO) / Overseas Citizen of India (OCI) Card Holders.
2. Candidates should belong to the state of Andhra Pradesh. The candidates should satisfy local/non-local status requirements as laid down in the A.P. Educational Institutions (Regulation of Admission) order, 1974 as subsequently amended.
3. A. For B.V.Sc. & A.H. / B.Sc. (Ag) / B.Sc. (Hort) / B.F.Sc. / B.Tech. (FS&T) / B.Sc. (CA&BM) courses

Candidates should have passed or appeared for the final year of intermediate examination (10+2 pattern) or any examination recognized as equivalent thereto by the Board of Intermediate Education, A.P., with any two / three of the subjects indicated against each course noted below :

- | | |
|--------------------|--|
| a. B.Sc.(Ag.) | <ul style="list-style-type: none"> i. Physical Sciences ii. Biological or Natural Sciences iii. Agriculture iv. Vocational Course in Agriculture |
| b. B.Sc.(Hort) | same as above |
| c. B.V.Sc. & A.H | <ul style="list-style-type: none"> i. Physical sciences ii. Biological or Natural Sciences iii. Vocational Courses in Veterinary Sciences |
| d. B.F.Sc | <ul style="list-style-type: none"> i. Physical Sciences ii. Biological or Natural Sciences iii. Vocational Courses in Fishery Sciences |
| e. B.Tech (FS & T) | <ul style="list-style-type: none"> i. Mathematics ii. Physical Sciences <p style="text-align: center;">or</p> <ul style="list-style-type: none"> i. Physical Sciences ii. Biological or Natural sciences |
| f. B.Sc (CA & BM) | <ul style="list-style-type: none"> i. Mathematics ii. Physical Sciences <p style="text-align: center;">or</p> <ul style="list-style-type: none"> i. Physical Sciences ii. Biological or Natural Sciences |

Note: i) Irrespective of the subjects taken at the qualifying examination, candidates seeking admission to the above courses should appear for Biology, Physics and Chemistry in EAMCET -2012.(AM Category)

ii) Candidates Should complete 17 years of age as on 31st December of the year of admission and an upper age limit of 22 years for all the candidates and 25 years in respect of SC/ST candidates as on 31st December of the year of admission.

3. B. For MBBS / BDS Courses (as per GO Ms.No. 195 dated 07-07-2011):

- (i) Candidates should have passed or appeared for the final year of the Intermediate Examination (10+2 pattern) or equivalent examination with Physics, Chemistry, Biology (Botany and Zoology) / Biotechnology and English individually and must have obtained 50% marks taken together in Physics, Chemistry, Biology (Botany and Zoology) / Biotechnology at the qualifying examination. In respect of candidates belonging to Scheduled Caste and Schedule Tribe & Backward Classes, the marks obtained shall be a minimum of 40% marks taken together in Physics, Chemistry, Biology (Botany and Zoology) / Biotechnology.
- (ii) Candidates should have completed 17 years of age as on 31st December of the year of admission.

3. C. For BAMS / BHMS / BNYS Courses

- (i) Candidates should have passed or appeared for the final year of the Intermediate Examination (10+2 pattern) or equivalent examination with Physics, Chemistry, Botany and Zoology as optional which shall include a practical test in each subject.
- (ii) a) Candidates should have completed 17 years of age as on 31st December of the year of admission.
b) There is no maximum age limit for admission into BAMS/BHMS
c) For admission into BNYS course, candidate should not have completed 22 years of age as on 31st December of the year of admission. For SC and ST candidates the maximum age limit shall be extended by 3 years.

3. D. For B. Pharm Course:

- (i) Candidates should have passed or appeared for the final year of the intermediate examination (10+2 pattern) with Biology, Physics and Chemistry as optionals, conducted by the Board of Intermediate Education, A.P. as equivalent thereto.
- (ii) Candidates should have completed 16 years of age by the date of commencement of admission or on such other date as may be notified by the CET committee. There is no upper age limit

3. E. For B.Tech (Bio-Technology) Course:

Candidates should have passed or appeared for the final year of the intermediate examination (10+2 pattern) with Biology, Physics and Chemistry as optionals, along with the bridge course examination in mathematics conducted by the Board of Intermediate Education, Govt. of A.P shall be eligible.

3. F. For Pharm-D Course:

- (i) candidates should have passed or appeared for the final year of Intermediate Examination (10+2 pattern) with Physics, Chemistry and Biology as optional conducted by the Board of Intermediate Education, Andhra Pradesh or any other examination recognized by the Board of Intermediate Education, Andhra Pradesh as equivalent thereto or should have passed or appeared at the final year of the diploma examination in pharmacy course conducted by the Andhra Pradesh State Board of Technical Education and Training or any other examination recognized as equivalent thereto by the Board of Intermediate Education, Andhra Pradesh.
- (ii) The candidates should have completed 17 years of age as on 31st December of the year of admission to the above course.

III. GENERAL INFORMATION / INSTRUCTIONS:

- a. **The Convener, EAMCET – 2012 reserves the right to reject the application of the candidate at any stage, if (i) the online application is incomplete, (ii) the candidate fails to satisfy the eligibility conditions, (iii) any false or incorrect information is furnished, (iv) the online application is submitted after the due date. No correspondence will be entertained in this regard.**
- b. The Convener is not responsible for non-receipt of application by the notified date and time for any reason.

IV. MEDIUM OF ENTRANCE TEST:

The question paper contains questions in "English" and "Telugu" medium. Candidates, who have studied the qualifying examination in Urdu medium and wish to avail assistance for translating the questions into Urdu, will be allotted a test Centre at Hyderabad only.

V. REGISTRATION FEE:

Payment of registration fee for submission of online application is the first step and the registration fee is Rs.250/-. Which has to be paid through the following modes.

a) AP ONLINE / E-SEVA / CSC

b) CREDIT CARD / DEBIT CARD

VI. SAME CENTRE FOR CANDIDATES APPEARING FOR BOTH ENGINEERING AND AGRICULTURE & MEDICINE:

Candidates of E – Category who are eligible and desirous of taking the test in AM - Category, in addition to the test for E-Category should **select the option both (E & AM Category) together**, during the submission of the online application. so that same centre can be allotted to them for both the tests. If this instruction is not followed, the candidate may be allotted different test centres for E & AM category tests. Convener, EAMCET-2012 is not responsible in allotment of different centres

VII. REGIONAL CENTRES FOR ENTRANCE TEST AND HELP CENTRES:

Sl. No.	Regional Centre	Name of the Regional Coordinator and address with Telephone Number along with STD Code	Venue for Help Centres
01.	ADILABAD	Dr. B. Vinod Kumar Principal, Govt. Degree & PG College for Men, Shantinagar, Adilabad – 504001 Ph : 08732-226995, 226370 (O)	Govt. Degree & PG College for Men, Shantinagar, Adilabad - 504 001
02.	AMALAPURAM	Sri A. Venkatapathi Raju Principal, S.K.B.R. College, Amalapuram-533201 Ph:08856-233656 (O)	SKBR College Amalapuram - 533201. East Godavari District.
03.	ANANTAPUR	Dr. A. Ananda Rao Principal, JNTUA College of Engg. (Autonomous) Sir M.V. Road, Anantapur-515 002 Ph : 08554-273013 (O)	JNTUA College of Engg. (Autonomous) Sir M.V. Road, Anantapur - 515 002
04.	ELURU	Dr. A. Anand Kumar Principal, Sir C.R. Reddy College of Engineering, Vatluru, Eluru – 534007 Ph : 08812-230840 (O)	Sir C.R.Reddy College of Engineering, Vatlur, Eluru - 534 007
05.	GUNTUR	Dr. P. Siddaiah Principal, and ANU College of Engineering, Guntur – 522 000. Ph : 0863-2346251 (O)	ANU College of Engineering and Technology, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur.
06.	KADAPA	Dr. B. Jayapal Gowdu Associate Prof & Director of Admissions, Yogi Vemana University, Kadapa-516 002 Ph : 08562-255442 (O)	Yogi Vemana University, Kadapa - 516 002.
07.	KAKINADA	Dr. P. Udaya Bhaskar Principal, University College of Engg., JNTU Kakinada – 533 003. Ph : 0884-3204466, 2300823 (O)	University College of Engg., JNTU Kakinada - 533 003
08.	KARIMNAGAR	Dr. P. Ramesh Principal, Govt. Degree & PG College for Women, Kashmirkadda, Near Fire Station, Mankamma Thota, Karimnagar-505 001 Ph : 0878-2249157, 2259164 (O)	Govt. Degree & PG College for Women Kashmirkadda, Near Fire Station, Mankamma Thota, Karimnagar-505 001
09.	KHAMMAM	Dr. P. Varalaxmi Principal, University Post Graduate College, Kakatiya University, Ellandu Cross Road, Khammam – 507 002 Ph : 08742-223815 (O)	University Post Graduate College, Kakatiya University, Ellandu Cross Road, Khammam – 507 002
10.	KURNOOL	Dr. V. Satish Kumar Controller of Examinations, G. Pulla Reddy Engineering College (Autono- mous), Nandyala Road, Kurnool–518007. Ph:08518-270957(O)	G. Pulla Reddy Engg. College (Autonomous) Nandyala Road, Kurnool – 518 007
11.	MACHILIPATNAM	Sri A. Vijay Kumar Principal, The Hindu College, Machilipatnam, Krishna (Dist.) – 521 001 Ph : 08672-222862 (O)	The Hindu College, Machilipatnam, Krishna (Dist.) – 521 001
12.	MAHABOONNAGAR	Sri P. Shyam sunder Reddy Principal, Govt. Polytechnic, Mahaboob Nagar – 509 001 Ph : 08542-275072 (O)	Govt. Polytechnic, Hanumanpura, Mahaboob Nagar – 509 001
13.	MEDAK	Sri K. Ramulu, Principal, Govt. Polytechnic for Women, Medak - 502 110 Ph : 08452-221493 (O)	Govt. Polytechnic for Women, Medak - 502 110
14.	NALGONDA	Dr. K. Bapujee Principal, Nagarjuna Govt. College, Nalgonda - 508 001 Ph : 08682-222453 (O)	Nagarjuna Govt. College Nalgonda - 508 001
15.	NELLORE	Sri Z. Ramesh Babu Principal, Govt. Polytechnic (Boys), Venkateswarapuram, Nellore - 524 005. Ph : 08622-250904 (O)	Govt. Polytechnic (Boys), Venkateswarapuram, Nellore - 524 005
16.	NIZAMABAD	Sri. K. Naresh Kumar Head, Dept. of History, Girraj Govt. College (Autonomous), Dubba, Nizamabad. – 503 002 Ph : 08462-220152 (O)	Girraj Govt. College (Autonomous), Dubba, Nizamabad – 503 002
17.	ONGOLE	Sri B.V. Sundara Kumar Principal, DA Govt. Polytechnic, Housing Board Colony, Ongole – 523 002 Ph : 08592-232705 (O)	DA Govt. Polytechnic, Housing Board Colony, Ongole – 523 002
18.	SIDDIPET	Dr. Ch. Nageshwar Rao Principal Government Polytechnic Siddipet-502103. Ph:08457-220115 (O)	Government Polytechnic Siddipet - 502103 Medak (Dist)
19.	SRIKAKULAM	Sri. B. Polisu Principal, Govt. Degree College (Men), Near Kodi Rama Murthi Stadium, Srikakulam-532001 Ph : 08942-222383 (O)	Govt. Degree College (Men) Near Kodi Rama Murthi Stadium, Srikakulam-532 001
20.	TIRUPATHI	Prof.A. Prabhakar Principal, S.V.University College of Engg.,Tirupathi – 517 502. Ph : 0877- 2289561(O)	S.V.University College of Engg., Tirupathi – 517 502.
21.	VIJAYAWADA	Dr. K. Mohan Rao Principal, V.R. Siddartha Engg. College (Autonomous), Kanur, Vijayawada – 520 007. Ph : 0866-2582333 (O)	V.R. Siddartha Engg. College(Autonomous), Kanur, Vijayawada – 520 007
22.	VIKARABAD	Dr. T. Veeraiah, Principal, SAP College, Vikarabad - 501 101, R.R.(Dist.). Ph : 08416-252073 (O)	SAP College, Vikarabad - 501 101, R.R.(Dist.).
23.	VISAKHAPATNAM	Prof. K. Venkatasubbaiah Prof. of Mechanical Engineering, AU College of Engg. (Autonomous), University Campus, Andhra University, Visakhapatnam-530 003 Ph:0891-2844813(O)	AU College of Engg. (Autonomous), University Campus, Andhra University, Visakhapatnam – 530 003.
24.	VIZIANAGARAM	Dr. K.V.L. Raju Principal, MVGR College of Engg., Chintalavalasa, Vizianagaram - 535 005 Ph : 08922-241014 (O)	MVGR College of Engg.,Chintalavasala Vizianagaram-535 005.
25.	WARANGAL	Dr. Bhoomigari Mohan Rao Vice-Principal (Admin), Kakatiya Medical College, Warangal – 506 004 Ph : 0870-2446889 (O)	Kakatiya Medical College Warangal – 506 004.
26.	HYDERABAD	Dr. B. Anjaneya Prasad, Chief Regional Coordinator, EAMCET – 2012, Examinations Building, Ground Floor, JNT University Hyderabad, Kukatpally, Hyderabad – 500 085 Ph : 040-23150462,23150362 Dr. N.V. Ramana Rao, Convener, EAMCET – 2012, Examinations Building, Ground Floor, JNT University Hyderabad, Kukatpally, Hyderabad – 500 085 Ph : 040-23150462,23150362	Convener, EAMCET –2012, Examination Building, Ground Floor, JNT University Hyderabad, Kukatpally, Hyderabad – 500 085.

- Note :**
1. The Convener reserves the right to add or delete some centres from the list of Regional Centres notified.
 2. The Convener reserves the right to allot the candidates to any regional centre other than that opted by the candidates.
 3. Candidate has to submit not more than one application either for 'E' or 'AM' category test. If any candidate submits more than one application for one category, the Convener reserves the right to reject all the applications or accept any one of them only.

VIII. SUBMISSION OF ON-LINE APPLICATION FOR EAMCET – 2012

Application should be submitted through **online** mode only.

The following information must be kept ready for filling the details during online submission

- a. Hall ticket Number of qualifying examination.
- b. Hall Ticket Number of S.S.C. or equivalent.
- c. Date of Birth
- d. Caste in case of SC/ST/BC candidates.
- e. PH, NCC, Sports etc.,
- f. Income less than or more than Two Lakhs (Rupees)
- g. Study or Residence or relevant certificate for proof of local status.

Note : The above certificates are to be submitted during the counselling for admission.

Online submission:

For online submission visit the website www.apearcet.org. A candidate has to pay Rs.250/- as registration fee and late fee (if applicable). By opting any of the following two modes of payment. (a) APONLINE / E-seva / CSC. (b) Debit / Credit Card. After filling the online application with the required details, verify all the details carefully and press Submit button. Filled in online application form will be generated which contains Registration No. along with filled in details. Take printout of filled in online application form. Use the registration No. for future correspondence.

IX. Mere appearance and qualifying at EAMCET-2012 does not confer any right for admission into professional courses. Candidate has to fulfill the eligibility criteria laid down in the relevant G.O at the time of admission.

X. QUALIFYING MARKS FOR EAMCET – 2012

The qualifying percentage of marks in the Entrance Test is 25% i.e. 40 out of a total 160. However, for candidates belonging to Scheduled Castes and Scheduled Tribes, no minimum qualifying mark is prescribed. But their admission will be limited to the extent of seats reserved for such categories (vide G.O.Ms. No. 179, LEN&TE, dated 16.06.1986).

XI. EAMCET-2012 RESULTS

1. Evaluation: Every care will be taken to avoid errors in the evaluation, checking, scrutiny, tabulation and ranking. Request for verification of OMR response sheet shall be entertained on payment of Rs. 500/- (Rs.200/- in case of SC/ST candidates) after the issue of public notification. However, if a candidate desires to have a photo copy of his/her OMR response sheet shall also be entertained on payment of Rs. 1000/- (Rs.400/- in case of SC/ST candidates). Any claim for personal identification of OMR response sheet is not permitted.

2. Ranking:

- a. Candidates shall be ranked in the order of merit as explained in the Annexure-IV
- b. Rank obtained in EAMCET-2012 is valid for admission to the courses mentioned in the application form, for the academic year 2012-2013 only.
- c. Rank card will be posted to the candidate's address as given in the application form.
- d. Rank obtained with the benefit of relaxation of the minimum qualifying marks at EAMCET-2012 by any candidate claiming to belong to SC/ST Category will be cancelled in case the claim is found to be invalid at the time of admission to any course of study in any participating University / Institution.

XII. The candidates should preserve the filled in online application form, Hall Ticket and the Rank Card and produce them when called for verification. However a duplicate rank card will be issued by the Convener for admission purpose on payment of Rs. 100/- each in the form of D.D on any nationalized bank payable at Hyderabad in favour of the Convener, EAMCET - 2012.

XIII. Any malpractice in EAMCET-2012 will be dealt with as per rules in force vide G.O.Ms.No: 114, Edn / (IE) Dt: 13th May 1997 for the CET.

XIV. The OMR Answer Sheets of EAMCET-2012 will be preserved for six months from the date of publication of results after which they shall be disposed off.

XV. In any litigation concerning EAMCET-2012 Test, Convener is the person to sue and be sued. The Convener (Examination), EAMCET – 2012 is not responsible for allotment of seats at the time of admissions. The Commissioner of Technical Education, Andhra Pradesh is the Convener for the admissions.

XVI. Any litigation concerning EAMCET-2012 shall be subject to the jurisdiction of the A.P. High Court, Hyderabad only.

XVII. HALL TICKET

The candidate should download the hall ticket from website <http://www.apearcet.org>.

or

The candidate may also download the hall ticket from website <http://www.apearcet.org>. However the candidate need to surrender the downloaded hall ticket in the test centre

XVIII. COUNSELLING AND ALLOTMENT OF SEATS

The list of institutions for allotment of candidates with intake in each discipline and category, as per reservations through EAMCET – 2012 would be released in the **Information Booklet** for Counseling in due course and the same information would also be released on website www.apsche.org.

The following proforma I, II and III are to be submitted at the time of counseling to claim nativity, community and local status.

PROFORMA – I

**REVISED PROFORMA AS PER G.O.Ms.No.58, SOCIAL WELFARE (J) DEPT. DATED 12.05.1997
ANDHRA PRADESH GAZETTE EXTRAORDINARY PART-I
FORM III**

Serial No.

S.C.

S.T.

B.C.

Certificate No.:

Emblem

District Code :

Mandal Code :

Village Code :

**COMMUNITY, NATIVITY AND DATE OF BIRTH CERTIFICATE
(Integrated Community Certificate)**

- This is to certify that Sri / Smt./Kum _____
Son/Daughter of Sri _____
of Village/ Town _____
Mandal _____
District of the state of Andhra Pradesh belongs to _____
Community which is recognized as SC/ST/BC under :
The Constitution (Scheduled Castes) Order, 1950
The Constitution (Scheduled Tribes) Order, 1950
G.O.Ms.No.1793, Education, dated 25.09.1970 as amended from time to time BCs, SCs, STs list (Modification) Order 1956, SCs and STs (Amendment) Act, 1976.
- It is certified that Sri / Smt. / Kum. _____
is a native of _____ District of
Andhra Pradesh.
- It is certified that the place of birth of Sri / Smt. / Kum. _____ Village / Town _____
Mandal _____ District of Andhra Pradesh
- It is certified that the date of birth of Sri / Smt. / Kum. _____ is Day _____ Month _____ Year _____
(in words _____) as per the declaration
given by his / her father / mother / guardian and as entered in the School records where he / she studied.

Signature :

Date :

Name in Capital letters :

Designation :

(Seal)

Explanatory Note :

- While mentioning the community, the competent Authority must mention the sub-caste (in case of SCs) and Sub-Tribe or Sub-Group (in case of STs) as listed out in the SCs and STs (Amendment) Act, 1976.

PROFORMA – II

RESIDENCE CERTIFICATE IN SUPPORT OF APPLICATION

- It is hereby certified:
 - That Mr / Kum _____ son / daughter of
Sri / Smt. _____ a candidate for admission to the course
appeared for the first time for the _____ examination (being the minimum qualifying
examination for admission to the course mentioned above) in _____(month) _____ (year).
 - That in the 7 years, immediately preceding the commencement of the aforesaid examination he / she has resided in the
following place / places falling within the area in respect of the AU/OU/SVU region (Tick appropriate one).

S. No.	Period	Village	Mandal	District
1				
2				
3				
4				
5				
6				
7				

- The above candidate is, therefore, a local candidate in relation to the area specified in Paragraph 3(1)(2)(3) of the Andhra Pradesh Educational Institution (Regulation of Admissions) Order 1974 as amended.

Officer of the Revenue Department
(Issued by the competent
authority of Revenue Dept.)

Date:

(OFFICE SEAL)

PROFORMA – III**CERTIFICATES IN SUPPORT OF NON-LOCAL STATUS FOR E CATEGORY**

(A) Certificate to be furnished when the candidate has resided in the state for a period of 10 years
(Read Instructions under 3(a) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Mr./ Kum. _____
Son / Daughter of Sri. / Smt. _____
a candidate seeking admission in to professional courses (Engineering stream & Agricultural and medical stream) through
EAMCET 2012 for the Academic Year 2012-13 is a resident of _____
_____ (Place) in _____ (District) of Andhra Pradesh for a total period of 10 years from the year _____ to
_____ excluding the periods of study outside the state.

Place: _____ **Signature of the Competent**
Date: _____ **Authority from Revenue Dept.**

Office Seal:

(B) Certificate to be furnished when either of the parents of the candidate has resided in the state for a period of 10 years
(Read Instructions under 3(b) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Sri/Smt. _____,
Father / Mother of _____
a candidate seeking admission in to professional courses (Engineering stream & Agricultural and medical stream) through
EAMCET 2012 for the Academic Year 2012-13, is a resident of _____
_____ (Place) in _____ (District) of Andhra Pradesh for a total period of 10 years from the year _____ to
_____ excluding the periods of study outside the state.

Place: _____ **Signature of the Competent**
Date: _____ **Authority from Revenue Dept.**

Office Seal:

(C) Certificate to be furnished when the parent / spouse is an employee of the State or Central Government or Quasi-
Government Organization.

(Read Instructions under 3(c) and 3(d) of Annexure (III) of Instruction Booklet of admission)

This is to certify that Sri/Smt. _____
Father / Mother of _____
a candidate seeking admission in to professional courses (Engineering stream & Agricultural and medical stream) through
EAMCET 2012 for the Academic Year 2012-13, is presently employed in Andhra Pradesh State in the Organization
_____ from _____ till to-date. This Organization is a State / Central / Quasi Government
Organization in the State of Andhra Pradesh.

Place: _____ **Signature of the Issuing Authority**
Date _____ Designation: _____

Office Seal:**ANNEXURE - I****EAMCET-2012 SYLLABUS****NOTE**

- * In accordance to G.O.Ms.No: 16 Edn., (EC) Dept., Dt: 25th Feb' 04, EAMCET Committee has specified the syllabus of EAMCET-2012 as given hereunder.
- * The syllabus is in tune with the syllabus introduced by the Board of Intermediate Education, A.P., for Intermediate course with effect from the academic year 2010-2011(1st year) and 2011-2012 (2nd year) and is designed at the level of Intermediate Course and equivalent to (10+2) scheme of Examination conducted by Board of Intermediate Education, AP.
- * The syllabus is designed to indicate the scope of subjects included for EAMCET. The topics mentioned therein are not to be regarded as exhaustive. Questions may be asked in EAMCET-2012 to test the student's knowledge and intelligent understanding of the subject.
- * The syllabus is applicable to students of both the current and previous batches of Intermediate Course, who are desiring to appear for EAMCET-2012.

Subject: BOTANY

- I. **INTRODUCTION:** 1.1 Origin, development and scope of Botany 1.2. Classification of plant kingdom 1.3. Branches of Botany: Morphology, Cytology, Embryology, Palynology, Taxonomy, Physiology, Ecology, Palaeobotany, Genetics, Phytogeography, Phycology, Mycology, Lichenology, Bryology, Pteridology, Microbiology, Bacteriology, Virology 1.4. Parts of angiospermic plant
- II) **EXTERNAL MORPHOLOGY:** a) **Vegetative morphology:** 2.1) Root: Root system; Types, Functions, Modification of roots (Velamen roots, Photosynthetic roots, Respiratory roots, Parasitic roots, Storage roots and nodular roots). 2.2)

Stem: characteristics and functions of the stem; Modifications of stem: Aerial: Tendril, Thorn, Hook, Phylloclade, Tuberos stem and Bulbil; Sub-aerial: Runner, Stolon, Sucker & Offset, Underground: Rhizome, Corm, Stem tuber & Bulb 2.3) Leaf: Parts of Leaf, Types and Functions of leaves, Venation, Phyllotaxy, Leaf modifications: - tendrils, spines, scale leaves, phyllode, reproductive & trap leaves. **(b) Reproductive morphology:** 2.4) Inflorescence: Introduction, Types of Inflorescence - Racemose, Cymose and Special Types 2.5) Flower: Parts of a typical flower: Structure, Sex distribution and symmetry of flower, position of gynoecium. Detailed description of flower: Perianth, Calyx, Corolla, aestivation, Androecium – Parts, fixation and dehiscence of anther, length of stamens, union of stamens, Gynoecium – number of carpels, fusion of carpels, ovary – number of locules, placentation, types of styles, stigma

- III) REPRODUCTION IN ANGIOSPERMS:** 3.1) Introduction – Sporophytic and Gametophytic stages 3.2) Structure of Anther; Microsporogenesis, Structure of a pollen grain and development of male gametophyte 3.3) Ovule – Structure and Types; megasporogenesis - development and structure of embryo sac 3.4) Pollination: Types of pollination, self and cross-pollination, contrivances for cross pollination and self pollination, agents of cross pollination. 3.5) Fertilization – Process, Post - fertilization changes; Seed structure (Dicot & Monocot) and seed germination (epigeal, hypogeal & vivipary) 3.6) Fruits: Classification; False fruits and true fruits - Simple fruits (fleshy fruits – berry, pome, pepo, hesperidium, drupe; Dry fruits – dehiscent- legume, septicidal capsule, septifragal capsule, loculicidal capsule; Indehiscent fruits – caryopsis, cypsela, nut; schizocarpic – lomentum, schizocarp); Aggregate and Multiple fruits
- IV) PLANT TAXONOMY:** 4.1) Introduction – Alpha and Omega taxonomy; Aspects of taxonomy – Identification – Flora, herbaria, botanical gardens (RBG – Kew, IBG – Kolkata, NBG – Lucknow); Nomenclature, Classification – Types, Units and a brief account of Bentham & Hooker's system. Study of the following families: 4.2) Malvaceae 4.3) Fabaceae 4.4) Solanaceae 4.5) Liliaceae
- V) CELL BIOLOGY:** 5.1) Introduction, Techniques of Cell Biology – microscopy (light, electron, fluorescent, phase contrast, SEM, TEM – only uses), Separation techniques (centrifugation, electrophoresis) 5.2) Ultrastructure of plant cell (Eukaryotic cell - Structure of cell wall and cell membrane, Protoplasm, cytoplasm, Plastids, mitochondria, endoplasmic reticulum, ribosomes, golgi complex, lysosomes, peroxisomes and glyoxysomes, vacuoles and Nucleus). 5.3) Chromosomes - Introduction, structure (light microscopic study), classification, functions and nucleosome model 5.4) Nucleic acids 5.5) Cell Division : Cell Cycle, Mitosis and Meiosis
- VI) INTERNAL ORGANIZATION OF PLANTS:** 6.1) Tissues – Types (Meristematic and Permanent) structure and functions. 6.2) Internal structure of Dicot root (Primary) and Monocot root. 6.3) Internal structure of Dicot stem (Primary) and Monocot stem. 6.4) Internal structure of leaf (Dicot and Monocot) 6.5) Secondary growth in dicot stem.
- VII) PLANT ECOLOGY:** 7.1) Introduction 7.2) Plant communities – Hydrophytes, Mesophytes and Xerophytes; Ecological adaptations (Morphological & Anatomical) of Hydrophytes and Xerophytes.
- VIII) GENETICS:** 8.1) Introduction 8.2) Mendel's Principles – Monohybrid and Dihybrid cross, Back cross and Test cross, Concept of probability in relation to Genetics. 8.3) Linkage and crossing over. 8.4) Mutations.
- IX. PLANT KINGDOM:** 9.1) Introduction 9.2) Spirogyra – distribution and habitat, thallus structure, cell structure, reproduction – vegetative, asexual, sexual, life cycle 9.3) Rhizopus – distribution and habitat, structure of mycelium and hypha, reproduction – vegetative, asexual, sexual, life cycle, sexuality in Rhizopus. 9.4) Funaria: distribution and habitat, external morphology of the gametophore, anatomy of the stem, reproduction – vegetative and sexual, sporophyte, protonema, life cycle. 9.5) Pteris: distribution and habitat, Morphology of the sporophyte, anatomy of the Rhizome, vegetative, asexual and sexual reproduction, Embryo, life cycle. 9.6) Cycas: distribution and habitat, Morphology of the sporophyte, anatomy of the coralloid root and leaflet, Reproduction, Embryo, Seed, life cycle.
- X. MICROBIOLOGY:** 10.1) Introduction and importance of microbiology. 10.2) Bacteria – Discovery, Distribution, sizes, shapes, Gram staining (in brief), structure of cell, nutrition, reproduction – asexual (binary fission), sexual – Conjugation (F^+ and F^- only), transformation and transduction (only definition, discoverer and example for transformation and transduction), economic importance – beneficial (Agriculture, Industry, Medicine, Biotechnology), harmful (spoilage of food, plants, human and animal diseases). 10.3) Viruses – historical account, types, structure (TMV and T_4 details), general account of sizes, shapes, replication (Lytic and Lysogenic cycles). Plant diseases caused by viruses, transmission of viruses and control of viral diseases.
- XI. PLANT PHYSIOLOGY :** 11.1) Introduction **A. WATER RELATIONS OF PLANTS:** 11.2) Absorption of water – Introduction, soil water, water potential, Diffusion, Imbibition, Osmosis, Plasmolysis, Mechanism of absorption of water. 11.3) **Ascent of Sap:** Definition, Cohesion – Tension theory 11.4) **Transpiration :** Definition, SPAC and types of transpiration, mechanism of stomatal movement, factors, significance, Antitranspirants. **B. NUTRITION IN PLANTS :** 11.5) Introduction, types of nutrition (symbiosis, parasitism, chemotrophism, autotrophism) 11.6) Mineral nutrition – Introduction, soil as source, criteria of essentiality, importance of macro and micro elements, ion absorption – passive and active (carrier concept), Biofertilizers. **C. METABOLISM :** 11.7) **Enzymes** – introduction, properties, IUB classification, mechanism of enzyme action (lock & key theory), enzyme inhibition 11.8) **Photosynthesis** - Definition, pigments, structural organization of chloroplast, Mechanism of Photosynthesis – Light reactions - Hill reaction, Emerson's Enhancement Effect, PSI and PSII, electron transport and proton translocation, photophosphorylation, Carbon assimilation - C_3 , C_4 pathways, Factors, Photorespiration, Blackman's law. **11.9) Respiration** – definition, Types, Mechanism of aerobic and anaerobic respiration, Alcoholic fermentation, Respiratory quotient (R.Q). **11.10) Nitrogen metabolism:** Nitrogen cycle, Biological nitrogen fixation (Symbiotic, Non- symbiotic); Genetic code, Biosynthesis of Proteins. **11.11) Plant growth & its regulators:** Growth curve; introduction to growth regulators, physiological effects and applications-Auxins, Gibberellins, Cytokinins, Abscisic acid and Ethylene; Photoperiodism and Vernalization.
- XII. PLANTS AND HUMAN WELFARE:** 12.1) Crop improvement – Introduction, aims and objectives of plant breeding; methods – definition, methodology, advantages and achievements of Introduction, Selection (Mass, Pureline, Clonal),

Hybridization, Heterosis, Mutation breeding and Polyploidy breeding. **Biotechnology:** 12.2) Introduction, Definition, Scope and applications of Biotechnology 12.3) Genetic Engineering - Recombinant DNA Technology, Genetically Modified Crops, Transgenic plants, Biosafety issues, applications of Genetic Engineering **12.4) Tissue Culture** – techniques and Applications. **12.5) Single cell protein** **12.6) Mushroom Cultivation:** Morphology and types of mushrooms; Food value; cultivation of white button mushrooms.

Subject: ZOOLOGY

- I. **Zoology – The Basics** : Nature and scope of Zoology, Areas of study under zoology, relationship between zoology and other sciences, basic principles of classification, need for classification, nomenclature, levels of classification or systematic hierarchy, species concept, outline classification of the kingdom animalia.
- II. **General characters and classifications Invertebrate Phyla (upto the level of classes)** : Protozoa-general characters and brief account of classification, Porifera – general characters & classification, Cnidaria – general characters and classification, Platyhelminthes – general characters and classification, Nematoda – general characters and classification, Annelida – general characters and classification, Arthropoda – general characters and classification, Mollusca – general characters and classification, Echinodermata – general characters and classification.
- III. **Animal Organization** : Introduction, Multicellularity Diploblastic, triploblastic organization, Symmetry – types and characteristic features of each symmetry with examples i.e. Asymmetry, Radial Symmetry, Biradial symmetry Bilateral symmetry, Definition of Coelome, definitions and examples of acoelomates, pseudocoelomates and eucoelomates. The structure of a generalized animal cell (brief account only), Animal Tissues (brief account) epithelial tissues, connective tissue proper, supporting tissue, fluid tissue, muscular tissue and nervous tissue.
- IV. **Locomotion and Reproduction in Protozoa** : Locomotion – Introduction, locomotory organelles in Protozoans (pseudopodia, cilia, flagella) giving examples, Locomotion in Protozoans – amoeboid movement, Sol-gel theory, Ciliary and Flagellar movements synchronal and metachronal movements in Paramecium, Effective & Recovery strokes, Reproduction in Protozoa, Types of Reproduction (i) Asexual reproduction types – Transverse binary fission in paramecium, longitudinal binary fission in Euglena (ii) Sexual reproduction in Protozoa Conjugation in Vorticella and its significance.
- V. **Animal Associations** : Definition and examples of Mutualism, Symbiosis, Commensalism, Parasitism, Structure, life cycles, diseases and preventive measures of the following parasites (1) Entamoeba histolytica (structure, life cycle pathogenecity, prevention), (2) Plasmodium vivax (structure, life cycle pathogenecity, prevention), (3) Taenia solium (External characters body wall, organs in mature proglottid, fertilization Life-cycle-Pathogenecity and prevention) (4) Wuchereria bancrofti (structure, life cycle, pathogenecity, prevention).
- VI. **Phylum Annelida** : Pheritima posthuma – (1) Introduction, importance, different genera, species, habit & habitat. External characters – structure and arrangement of setae, (2) body wall, coelom, wall of alimentary canal and locomotion, Pheritima (3) digestive system, Respiratory system, Pheritima : (4) Blood vascular system, (5) Excretory system, (6) Nervous system and receptor organs (7) Reproductive system, (8) copulation, cocoon formation & development, Regeneration, economic importance.
- VII. **Phylum : Arthropoda** : (1) Arthropoda – Introduction – Evolutionary characters of Arthropoda, (2) Cockroach, Periplaneta americana – external features, body wall, Endoskeleton, stink glands, coelom, fat bodies, locomotion, Cockroach – Digestive system, Respiratory system, Nervous system, sense organs, structure of ommatidium, (3) Mouth parts of insects, cockroach, Mosquito, Housefly, Butterfly, (4) Economic importance of insects (i) useful insects (ii) harmful insects.
- VIII. **Man & Biosphere** : (1) Elementary aspects of ecosystem, Abiotic factors - light, temperature, water and their biological effects on organisms, Biotic factors: producers, consumers and decomposers, (2) Functional aspects of ecosystem, food chains, food web, ecological pyramids, Lake as an example of fresh water ecosystem, population ecology – Population density, growth and growth curves, (3) Biodiversity, conservation of biodiversity and wild life conservation.
- IX. **Phylum – Chordata** : (1) Characteristics of Chordata, Ancestry of Chordates, Outline classification of Chordata, Theories of origin of Chordata, (2) General features of Sub-phylum Urochordata & Sub-phylum Cephalochordata, (3) Sub-phylum Vertebrata : Pisces - General Characters, Classification with examples, Amphibia : General characters, Classification with examples.
- X. **Reptilia – Aves & Mammalia** : (1) Reptilia: General Characters, Classification - Chelonia, Rhynchocephalia, Squamata and Crocodilia with typical examples, Identification of poisonous and non poisonous snakes, poison apparatus, toxicity of snake venom and treatment of snake bite including first aid. (2) Aves: Distinctive features, Classification, differences between Ratitae and carinatae with typical examples. (3) Mammalia : Distinctive features of Prototheria, Metatheria & Eutheria with examples.
- XI. **Rabbit – Functional Anatomy-I (Digestive System, Respiratory System & Circulatory System)** : (1) Classification and External characters of Rabbit, (2) Digestive System, Alimentary Canal, Digestive Glands, Nutrition & Digestion, Process of Digestion, Role of Vitamins and Mineral in Nutrition, Nutritional requirements in relation to balanced diet, (3) Respiratory system, Mechanism of breathing and transport of gases. (4) Circulatory System, Structure of heart, Function of heart, Arterial system, Venous System, Blood Clotting.
- XII. **Rabbit-Functional Anatomy-II (Musculo-Skeletal System, Excretory System, Reproductive System)** : Musculo Skeletal System, Ultra Structure of Muscle fibre, sliding filament theory, Elementary idea of Axial skeleton and appendicular skeleton: Types of Joints. Excretory System, Excretory Organs, Structure of nephron in mammals, Formation and Composition of Urine, Micturition. Reproductive system: Male Reproductive system, Female Reproductive system, Copulation, Fertilization and Development, Placenta. Gestation period.

XIII. Rabbit – Functional Anatomy-III (Nervous System, Endocrine Glands and their role in Human beings, Immunology) : Nervous System, Central, Peripheral and autonomous nervous systems, Cranial and Spinal nerves and their functions. Generation and Propagation of Nerve Impulse, Endocrine System: Endocrine glands and Role of Hormones. Endocrine disorders in Human beings. Immunology : Types of Immunity, Organs of Immune system, Cells of Immune systems, Soluble mediators of Immunity. Antigens, Mechanism of Humoral and cell mediated Immunities, Immunological disorders: AIDS, Hepatitis.

XIV. Genetics-Introduction : (1) Multiple alleles and Blood groups, ABO Blood groups, Rh antigens, Sex determination, Sex Chromosomes, Heterogametic sex determination, Sex determination in Drosophila, Sex determination and Sexual differentiation in human being, Haplodiploidy in honey bee, Effects of environment on sex determination, Hormonal control of sex determination, Sex linked inheritance, Sex linkage in drosophila, Genes on the sex chromosomes, Sex linked characters in human beings, X-linked characters, Y-linked characters, X-Y linked characters, Sex limited characters, Sex influenced characters. (2) Gene Expression and regulation, Genetic Materials, Function of Genes, Gene regulation in prokaryotes, Gene expression in eukaryotes, concepts of Gene action one gene one poly peptide concept only. (3) Basic concepts of animal breeding, System of breeding, Heterosis, Progeny Test, Cloning, Transgenic animals. Genome and Human genome project, Gene Mapping, D.N.A. finger printing, An elementary idea of gene therapy.

XV. Organic Evolution : Evolutionary concepts and origin of life. Experimental verification of chemical origin of life. Theories of Evolution : Lamarckism or Inheritance of acquired characters, Natural Selection (Darwinism), Sexual selection, Artificial selection. Mutation theory of evolution, Synthetic theory of evolution or Neo-Darwinism. Hardy-Weinberg equilibrium and evolutionary process – Natural selection, Genetic load, Genetic Drift, Changes in Genotype frequencies and Speciation.

XVI. Applied Biology : (1) Aquaculture: List of animals of aquaculture importance, Fisheries – fish culture and rearing methods. (2) Poultry : Introduction to Poultry, Poultry farming, Poultry diseases. (3) Biotechnology : Recombinant DNA technology, Industrial use of micro organisms and DNA Technology, Vaccines, Enzymes, hormones, Interferons, Monoclonal anti bodies. (4) Cell cycle and its regulation, cancer biology, stem cells. (5) Bio medical technology : X-ray radiography, Definitions of Magnetic Resonance Imaging (MRI), Electro Cardiography (ECG), Electro Encephalography (EEG), Transplantation, ELISA (Enzyme Linked Immunosorbent Assay).

Subject – PHYSICS

I. MEASUREMENTS, UNITS AND DIMENSIONS : Introduction- units and Dimensions, Accuracy, precision of measuring instruments, Constant errors, systematic errors, environmental errors (errors due to external causes). Error due to imperfection, Random errors, Gross Errors, Absolute Errors, Mean absolute errors, Relative errors, percentage errors, Errors due to addition, subtraction, multiplication, division, powers of observed quantities, Significant figures, Fundamental and derived physical quantities / System of Units, definition of units in SI, Rules for writing units in SI, Derived units in SI, Multiple and submultiples of SI units, Dimensional formulae and dimensional equations, dimensional constants and dimensionless quantities. Principle of homogeneity of dimensions, Conversion of one system of units into another, to check correctness of an equation, to derive the relationship between different physical quantities.

II. ELEMENTS OF VECTORS : Classification of Physical quantities, geometrical representation of vectors, addition of vectors, equality of vectors, Resolution of a vector into components, null vector, unit vector in Cartesian co-ordinate system, position vector and its magnitude, Parallelogram law of addition of vectors, Derivation of expression for the magnitude and the direction of resultant vector, Special cases, Triangle law and polygon law of vectors, triangle law of addition of vectors, polygon law of addition of vectors, concept of relative velocity, application to relative motion of a boat in a river, motion of a boat across a river, shortest path, shortest time, Multiplication of vector with a scalar, product of two vectors, scalar product or dot product of two vectors, properties of scalar product, examples of scalar product, work done and energy, vector product of two vectors, properties of vector product of two vectors, examples of vector product of two vectors - torque, angular velocity and angular momentum.

III. KINEMATICS : Introduction : Motion in a straight line – displacement, speed and velocity, Uniform and non-uniform motion, average speed and instantaneous velocity, Uniformly accelerated motion, velocity-time and position-time graphs, equations for uniformly accelerated motion (graphical treatment), acceleration due to gravity, equations of motion of a freely falling body, Equations of motion of an object vertically projected upwards from the ground, Maximum height (H), Time of ascent, time of descent, velocity of the body on returning to the point of projection, Vertical projection of an object from a tower, Projectiles – oblique projection from ground, equation of trajectory, maximum height, time of ascent, time of flight, horizontal range, two angles of projection for the same range, velocity of projection at any instant, horizontal projection from the top of a tower, equation of trajectory, time of descent, range, velocity of the projectile (at any instant).

IV. DYNAMICS : Introduction- Newton's laws of motion, applications of Newton's laws. Objects suspended by strings, Atwood machine, blocks placed in contact with each other on frictionless horizontal surface, apparent weight in a lift, Impulse, law of conservation of linear momentum, conservation of linear momentum during collision, work, power, energy, K.E. & P.E. definition and derivation for both, Relation between KE and Linear momentum, conservative and non-conservative forces, work-energy theorem, Law of conservation of energy in case of freely falling body and vertically projected body.

V. COLLISIONS: Introduction – Elastic and inelastic collisions, Collisions in one dimension (Elastic collision only), body at rest, bodies moving in same direction and opposite directions, Co-efficient of restitution, definition, equation for height attained for freely falling body after number of rebounds on floor.

VI. CENTRE OF MASS (CM): Introduction- Centre of mass, difference between centre of mass and centre of gravity, coordinates of centre of mass, centre of mass of particles along a line, centre of mass of system of particles in a plane, center of mass of system of particles in space, motion of centre of mass (Velocity and acceleration of CM), characteristics of centre of mass, laws of motion of the centre of mass, velocity and acceleration, explosion.

VII. FRICTION : Introduction - cause of friction, advantages of friction, disadvantages of friction, methods of reducing friction, types of friction, static friction, kinetic (or) dynamic friction, rolling friction, Distinction between static and dynamic friction. Normal reaction, laws of friction, static friction, kinetic friction or Dynamic friction, Rolling friction, Angle of friction, motion of body on rough horizontal plane, motion of bodies on an inclined plane, Body at rest on the plane-Angle of repose-when the body is just ready to slide, when the body is sliding down. Motion of a body on smooth and rough inclined plane, body sliding down the plane, body sliding up the plane, pushing and pulling of a lawn roller. A lawn roller on a horizontal surface pulled by an inclined force, a roller on horizontal surface pushed by an inclined force.

VIII. ROTATORY MOTION : Introduction, uniform circular motion, concept of angular displacement, angular velocity and angular acceleration, relation between linear velocity and angular velocity, centripetal acceleration and force, torque, couple (concepts, units, dimensional formula and examples), Vector representation of torque, Moment of Inertia(MI), definition, units, parallel and perpendicular axes theorems. Expressions for MI of a thin rod, uniform disc, rectangular lamina, solid and hollow spheres, circular ring and cylinder (no derivations needed), angular momentum, relation between angular momentum and torque, law of conservation of angular momentum with examples, Motion in vertical circle.

IX. GRAVITATION: Introduction- Basic forces in nature, Nature of gravity, law of universal gravitation, Relation between Universal gravitational constant (G) and acceleration due to gravity (g), variation of 'g' with altitude, depth, latitude and shape of the earth, characteristics of gravitational force, limitations of Newton's third law, gravitational field, field strength, properties of gravitational fields, Origin of black holes, Chandrashekar limit, neutron star, Frames of reference, Inertial and Non- Inertial frames, Inertial and Gravitational mass & relation between them, Principle of equivalence, Escape and Orbital velocities, definition, derivation of expressions and relation between them, Geostationary satellites and their uses.

X. SIMPLE HARMONIC MOTION (SHM): Introduction- simple harmonic motion examples, SHM explanation by reference circle, expression for displacement, amplitude, velocity, acceleration, time period, frequency, phase, initial phase (epoch) - Simple pendulum, expression for time period, loaded spring, expression for time period, force constant, PE and KE of simple harmonic oscillator, Total Energy of Simple Harmonic Oscillator, Law of conservation of energy in the case of a simple pendulum.

XI. ELASTICITY: Introduction- Elasticity and plasticity, stress, strain, Hook's law, Moduli of elasticity, Poisson's ratio, definition and its limit, Behavior of a wire under gradually increasing load- Elastic fatigue, strain energy - experimental determination of Young's modulus of wire.

XII. SURFACE TENSION: Introduction - surface tension, definition - Examples, molecular theory of surface tension. Surface energy, Angle of contact, capillarity-examples in daily life, Determination of surface tension by capillary rise method – theory and experiment. Effect of temperature on surface tension, excess pressure in liquid drops and soap bubbles.

XIII. FLUID MECHANICS: Introduction - Principle of Buoyancy- pressure in a fluid - Streamline flow – Bernoulli's theorem - equation with derivation – applications-aerodynamic lift, motion of a spinning ball, Illustrations of Bernoulli's theorem.

Viscosity – explanation, coefficient of viscosity, effect of temperature on viscosity, Poiseuille's equation, Motion of objects through fluids. Stokes formula, net force on the object, terminal velocity.

XIV. TEMPERATURE AND THERMAL EXPANSION OF MATERIALS: Introduction- concept of temperature, Measurement of temperature, Fahrenheit, Centigrade scales of temperature, their relation (only formulae)- Different types of thermometers (brief theoretical description). Vibration of atoms in a solid, PE curve, Anharmonicity of vibrations, explanation for expansion in solids. Coefficients of linear, areal and cubical expansion, definitions, Expressions & Relation between these coefficients of expansions, change of density with temperature, examples in daily life.

Introduction- coefficients of real and apparent expansion of liquids, relation between them with derivation, Determination of coefficient of apparent expansion of liquids by specific gravity bottle method, Anomalous expansion of water, its significance in nature.

Introduction - volume and pressure coefficients of gases, relation between them and derivation. Determination of volume coefficient-Regnault's method. Determination of pressure coefficient-Jolly's bulb method. Kelvin scale of temperature, Boyle's and Charle's laws. Ideal gas equation, derivation, significance of Universal gas constant.

XV. THERMODYNAMICS: Introduction - Quasi-static and cyclic process, reversible and irreversible processes, Heat and Temperature, Zeroeth law of Thermodynamics, definition of Calorie, Joule's law and mechanical equivalent of heat, Internal energy, First law of thermodynamics, equation and explanation. Heat capacity, specific heat, experimental determination of specific heat by the method of mixtures. Specific heats of a gas (C_p and C_v), External work done by a gas during its expansion. Relation between C_p and C_v derivation, Isothermal and adiabatic processes. Relation between P, V and T in these processes. Expression for work done in Isothermal process (no derivation), expression of work done in adiabatic process (no derivation). Heat engines and refrigerators (only qualitative treatment). Three phases of matter, Triple point – Triple point of water. Latent heat, Determination of latent heat of vaporization of water, Second law of thermodynamics – different statements.

XVI. TRANSMISSION OF HEAT: Introduction - conduction of heat, coefficient of thermal conductivity, convection- Type of convections, Nature and properties of Thermal radiation, Prevost's theory of heat exchange - emission power and absorptive power - Black body radiation, Kirchoff's law and its applications – Stefan's law – Newton's law of cooling.

XVII. WAVE MOTION: Longitudinal and transverse waves, Equation for a progressive wave, principle of superposition of waves, reflection of waves, Formation of waves on a stretched string, laws of vibrating strings, experimental verification by Sonometer, Sound: Characteristics of sound, speed of sound in solids, liquids and gases (only formula to be given), Forced Vibrations, Free Vibrations, Resonance with examples, standing waves in Organ Pipes, Open Pipes, Closed Pipes, Fundamental frequency-Overtones, Harmonics, definition and explanation, Beats definition and its importance. Doppler Effect, Definition, derivation of relation for apparent frequency of a sound note emitted by a source for the cases a) only source is moving, b) only listener is moving, c) both source and listener are moving. Applications and limitations of Doppler Effect-Echoes, Absorption of sound waves, Reverberation – Reverberation Time, Fundamentals of building Acoustics – Statement of Sabine's Law.

XVIII. OPTICS: Nature of Light, Newton's corpuscular Theory, Huygen's Wave Theory- Electromagnetic spectrum. Huygen's Explanation of Reflection and Refraction of plane waves at a plane surface. Refraction through prism, Derivation of Refractive index of material of prism for minimum deviation, critical angle, Total Internal Reflection, Relation between Critical angle and Refractive Index, application of total internal reflection to Optical fibers. Defects in Images: Spherical and Chromatic aberrations and reducing these defects, Different methods (qualitative treatment). Optical Instruments: Microscope, Telescope, Formula for magnification of Microscope, Astronomical and Terrestrial Telescopes. Construction of Ramsden's and Huygen's eye pieces with ray diagrams. Dispersion of light, dispersive power, pure and impure spectra, condition for obtaining pure spectrum, different kinds of spectra– Emission spectra, Line, Band and continuous spectra, absorption spectra, Fraunhofer lines and their significance.

XIX. PHYSICAL OPTICS: Interference – condition for interference, Young's double slit experiment – Derivation for Intensity and fringe width – Uses of interference, Diffraction: Fresnel and Fraunhofer diffraction (Qualitative only). Polarisation: Concepts of Polarisation. Plane Polarisation of Light by Reflection, Refraction and Double Refraction (Polaroids).

XX. MAGNETISM: Coulomb's Inverse Square Law, Definition of Magnetic Field, Magnetic Lines of Force- Uniform and Non – Uniform Magnetic Fields. Couple acting on a bar magnet placed in a uniform magnetic field, Definition of magnetic moment of magnet. Magnetic Induction due to a bar magnet on axial and equatorial lines. Superposition of magnetic fields, Tangent Law, Deflection Magnetometer. Comparison of Magnetic Moments in Tan A, Tan B positions by equal distance method and Null Method, Verification of Inverse Square Law. Vibration Magnetometer- Principle and Description, Experimental determination of M and B_H (earth's horizontal component) using Vibration Magnetometer. Types of magnetic materials – Para, Dia, and Ferro Magnetism – Definition and properties.

XXI. ELECTROSTATICS: Charges – conservation of charge and additive property of charges. Coulomb's Law : Permittivity of Free Space and Permittivity of Medium, Force between two point charges. Force due to multiple charges – Principle of superposition with examples. Electric field, Electric lines of force, their properties, Electric field intensity definition, electric intensity due to isolated charge and due to multiple charges. Electrostatic Potential, Definition of Electrostatic Potential in an electric field- Potential due to single charge and multiple charges, Electrostatic potential energy- Relation between electrostatic potential and electric intensity.

Electric Flux & Gauss Law: Electric Flux Definition, Gauss Law-Statement of Gauss Law, Application of Gauss Law to find electric intensity and electrostatic Potential due to continuous charge distribution of Infinite Long wire, Infinite Plane Sheet and Spherical Shell. Capacitance, Definition of Electrical Capacity of a Conductor, Capacitance, Dielectric constant, Definition of Condenser, its uses, Parallel plate Condenser, Formula for Capacitance of Parallel Plate Condenser, Dielectric, Dielectric Strength, Effect of dielectric on capacitance of capacitor. Capacitors in series and in parallel: derivation of the equivalent capacitance for the above cases. Energy stored in a Condenser, Effect of dielectric on Energy of Condenser, Types of capacitors, their uses.

XXII. CURRENT ELECTRICITY: Electric current – Flow of Electric charges in a metallic conductor, Drift velocity and mobility, Relation between electric current and drift velocity. Ohm's Law: Statement, Ohmic and Non-Ohmic elements with examples, Conductance, Specific resistance, Variation of resistivity with temperature, Variation of Resistance with temperature, Thermistor. E.M.F. of Cell – Internal resistance and back E.M.F., Difference between EMF of a Cell and potential difference. Electrical energy, Power definition of kWh. Kirchhoff's laws: Statement of Kirchhoff's voltage law, Kirchhoff's current law, their application to Wheatstone bridge, condition for balancing, Meter bridge, Determination of resistance of a conductor using meter bridge. Principle of Potentiometer determination of internal resistance and E.M.F. of a cell using potentiometer. Series and parallel combination of cells – Derivation of equivalent EMF for the above cases.

XXIII. THERMOELECTRICITY: Introduction- Seebeck effect, Peltier and Thomson effects and their coefficients. Variation of thermo EMF with temperature, Neutral and Inversion Temperatures. Applications of Thermo- Couple.

XXIV. ELECTROMAGNETICS: Oersted's Experiment, Biot – Savart Law, Ampere's Law, Magnetic field near a long straight wire and magnetic field at the Center of a circular coil carrying current (with derivations). Field on the axis of circular coil carrying current (expression only). Tangent Galvanometer (TG), Principle and working, Definition of Reduction Factor. Force on a moving charge in a magnetic field, Force on a current carrying conductor placed in a magnetic field, Force between two long straight parallel conductors carrying current, Definition of Ampere, Fleming's Left Hand Rule, Current loop as a magnetic dipole, force and Torque on Current loop in an uniform magnetic field, magnetic dipole moment of a revolving electron. Principle, Construction and working of Moving Coil Galvanometer (MCG), Converting MCG into ammeter and voltmeter, comparison of MCG with TG. Electromagnetic induction, Magnetic Flux, Induced EMF, Faraday's and Lenz's Laws. Fleming's Right Hand Rule, Self Inductance, Mutual Inductance, Principle of Transformer.

Growth & decay of current in L-R circuit with DC source, Growth and decay of charge in R.C. Circuit connected to DC source, Equations for charge on condenser – Current in inductor, Time constant, Definition and its significance. Alternating current

(A.C), Introduction – Instantaneous, maximum and RMS value of A.C. current, Alternating Voltage applied to a pure resistor, pure inductor, pure capacitor, AC through C-R, L-R and L-C-R series circuits.

XXV. ATOMIC PHYSICS: Discovery of electron, e/m of electron by Thomson's method, Charge of the electron by Millikan's Oil Drop Method (Principle Only). Photo Electric Effect : Definition, Laws of Photoelectric Emission, Einstein's explanation of Photoelectric effect, Einstein's Photo electric equation and its experimental verification by Milikan's method. Photo Electric Cells, working and uses. X- Rays- Production of X- Rays, Coolidge tube, X- ray spectrum, Continuous X- Ray Spectra, Characteristic X – Ray Spectra, Moseley's Law and its importance. Compton effect (Statement only), Dual nature of matter, de Broglie's hypothesis (concept only).

XXVI. NUCLEAR PHYSICS: Composition and size of nucleus, mass defect and binding energy and their relation (Explanation with examples). Natural radio activity – alpha, beta and gamma radiations and their properties, radio active decay law, half life and average life of a radio active substance, Nuclear forces – Their Properties, Artificial Transmutation of elements, Discovery of Neutron, Radio Isotopes and their uses. Nuclear Fission, Chain Reaction, Principle and Working of a Nuclear Reactor, Nuclear Radiation Hazards, Protective shielding, Types of reactors – Breeder Reactor, Power Reactor and their uses. Nuclear Fusion, Energy of Sun and stars, Carbon – Nitrogen cycle and proton – proton cycle, Elementary particles.

XXVII. SEMI CONDUCTOR DEVICES: Introduction- Intrinsic and extrinsic semi conductors (n and p type). Junction diode, p -n junction, depletion layer and barrier potential, Forward and Reverse bias, and Current -voltage characteristics of junction diode, p –n Diode as half wave and full wave rectifier (only qualitative treatment), Zener Diode as a voltage regulator. Transistor Function of Emitter, Base and Collector, p-n-p and n-p-n Transistors, Biasing of Transistors, Current –Voltage Characteristics of Transistor in CE configuration, Transistor as common emitter amplifier (qualitative treatment), Logic Gates -OR, AND , NOT, NOR, NAND

XXVII. COMMUNICATION SYSTEMS: Elements of communication systems (block diagram only), Bandwidth of signals (Speech, TV and digital data), bandwidth of Transmission medium. Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation, Modulation, Need for modulation.

Subject: CHEMISTRY

I. ATOMIC STRUCTURE: Characteristics of electron, proton and neutron. Rutherford model of an atom. Nature of electromagnetic radiation. Planck's quantum theory. Explanation of photo electric effect. Dual behavior of electromagnetic radiation. Features of atomic spectra – Emission and absorption spectra. Characteristics of hydrogen spectrum. Bohr's theory of the structure of atom – Postulates. Bohr's theory of hydrogen atom, Energy of an electron. Bohr's explanation of spectral lines. Failure of Bohr's theory. Wave-particle nature of electron. De Broglie's hypothesis, Heisenberg's uncertainty principle. Important features of the quantum mechanical model of an atom – Meaning and significance of wave function. Quantum numbers, concept of orbitals, definition of atomic orbital in terms of quantum numbers - shapes of s, p and d orbitals, Aufbau principle, Pauli's exclusion principle and Hund's rule of maximum multiplicity. Electronic configuration of atoms. Explanation of stability of half filled and completely filled orbitals.

II. CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES: Concept of grouping the elements in accordance to their properties – Mendeleef's Periodic Table. Periodic law – Mendeleef's classification of elements. Significance of atomic number and electronic configuration as the basis for periodic classification. Classification of elements into s, p, d, f blocks and their main characteristics. Periodic trends in physical and chemical properties of elements: Atomic radii, Ionic radii, Inert gas radii, Ionization energy, Electron gain energy, Electronegativity and Valency. Variation of oxidation states, Electropositivity – Metallic and Non-metallic nature, Nature of Oxides, Diagonal relationship. Variation of atomic radii in inner transition elements.

III. CHEMICAL BONDING AND MOLECULAR STRUCTURE: Kossel -Lewis approach to chemical bonding. Factors favorable for the formation of ionic bond, energy changes in ionic bond formation. Crystal lattice energy - calculation of lattice energy – Born - Haber cycle. Crystal structure of sodium chloride and Caesium chloride, Coordination number. Properties of ionic compounds. Covalent bond - VSEPR theory – Lewis representation of covalent compounds, Formal charge, geometry of simple molecules. The valence bond approach for the formation of covalent bonds. Directional properties of covalent bond. Properties of covalent bond. Hybridization - different types of hybridization involving s, p and d orbitals. Shapes of simple covalent molecules. Definition of coordinate covalent bond with examples. Molecular orbital theory of homonuclear diatomic molecules. Symmetry and energy of sigma and pi bonding and antibonding molecular orbitals. Molecular orbital energy diagram of H_2 , N_2 and O_2 . Concept of hydrogen bond and its types with examples. Effect of hydrogen bonding on properties of compounds.

IV. STOICHIOMETRY: Laws of chemical combination – Principles and examples. Molar mass, concept of equivalent weight with examples. Percentage composition of compounds and calculation of empirical and molecular formulae of compounds. Chemical reactions and Stoichiometric equations. Oxidation number concept. Balancing of redox reactions by ion electron method and oxidation number method. Types of redox reactions. Applications of redox reactions in titrimetric quantitative analysis. Redox reactions and electrode processes.

V. STATES OF MATTER: GASES AND LIQUIDS : Graham's law of diffusion, Dalton's law of partial pressures, Avogadro's law. Ideal behavior, empirical derivation of gas equation, ideal gas equation. Kinetic molecular theory of gases. Kinetic gas equation (No derivation) - deduction of gas laws. Distribution of molecular velocities and types of molecular velocities – Average, Root Mean Square and Most Probable Velocity. Behavior of real gases, deviation from ideal behaviour, compressibility factor versus pressure diagrams of real gases. Conditions for liquification of gases, critical temperature. Liquid state – Properties of liquids in terms of intermolecular attractions. Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivation)

VI. SOLUTIONS: Classification of solutions, molarity, normality, molality and mole fraction. Dilute solutions, vapour pressure, Raoult's law, Limitations of Raoult's law. Colligative properties – (i) Relative lowering of vapour pressure (ii) Elevation of B.P (iii) Depression in freezing point and their relation to molar mass. Osmosis and osmotic pressure - theory of dilute solutions. Determination of molar mass using colligative properties: Ostwald's dynamic method, Cottrell's method, Rast's method and Berkeley Hartley's method. Abnormal molecular mass.

VII. ELECTRO CHEMISTRY: Conductance in electrolytic solutions. Specific, Equivalent and Molar conductance - variation of conductance with concentration, Kohlrausch's law and its application to calculation of equivalent conductance of weak electrolytes. Electrolytes and non-electrolytes, redox reactions. Electrolysis. Some typical examples of electrolysis viz; Fused Sodium hydroxide, Fused sodium chloride, Brine solution, Fused Magnesium chloride. Faraday's laws of electrolysis and applications. Galvanic and voltaic cells. Representation and notation of electrochemical cells with and without salt bridge. Standard hydrogen electrode, electrode potentials, electrochemical series. EMF of the cell, Nernst equation and its application to calculate EMF of electrochemical cells. Primary cell - dry cell / Leclanche cell. Secondary cells - Fuel cells: Hydrogen - Oxygen fuel cell and Hydrocarbon - Oxygen fuel cell. Corrosion: mechanism, factors to promote corrosion and prevention of corrosion, passivity. Lead accumulator.

VIII. SOLID STATE: Classification of solids based on different binding forces as molecular, ionic, covalent, and metallic solids. Elementary treatment of metallic bond. Metallic solids, amorphous and crystalline solids. Unit cell in two dimensional and three dimensional lattices. Seven crystal systems, Bravais lattices.

Bragg's equation, X-ray study of crystal structure, Bragg's method. Calculation of density of unit cell, packing in solids, voids, number of atoms per cubic unit cell. Point defects - Schottky and Frenkel defects. Electrical and magnetic properties.

IX. CHEMICAL KINETICS: Concepts of reaction rate, factors affecting reaction rates. Rate law, Units of rate constant. Order and molecularity. Methods of determination of order of a reaction. Integrated rate equations and half lives for zero and first order reaction. Collision theory of reaction rates (elementary ideas).

Concept of activation energy. **Equilibrium:** Equilibrium in physical and chemical processes, dynamic nature of equilibrium, Law of mass action, equilibrium constant. Factors affecting equilibrium. Relation between K_p and K_c . Le Chatelier's principle, application to industrial synthesis of (i) Ammonia (ii) Sulphur trioxide. **Acids and Bases:** Lowry-Bronsted acid base theory. Lewis theory, limitation of Lewis theory, Ionic equilibrium. Ionization of acids and bases, strong and weak electrolytes, degree of ionization. Ionic product of water. Concept of pH. Hydrolysis of salts (elementary idea), hydrolysis constant, buffer solutions. Solubility product and common ion effect with illustrative examples.

X. THERMODYNAMICS: Concept of system, types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics - Internal energy and Enthalpy. Heat capacity and Specific heat, Exothermic and Endothermic reactions, measurement of ΔE and ΔH , Enthalpy of bond dissociation, combustion, neutralization, formation, atomization, sublimation, phase transition, ionization and dilution. Thermo chemical equations. Hess's law of constant heat summation. Driving force for a spontaneous process. Thermodynamic representation of criteria of spontaneity in terms of entropy, entropy as a state function. Gibbs free energy, Gibbs free energy change for spontaneous, non spontaneous and equilibrium processes.

XI. SURFACE CHEMISTRY: Adsorption: Physical and chemical adsorption, adsorption of gases on solids, factors affecting it - pressure (Langmuir and Freundlich Isotherms) and temperature. Catalysis - types of catalysis, autocatalysis. Colloidal state: colloidal solutions, classification of colloidal solutions, protective colloids and Gold number, Properties of colloids - Tyndall effect, Brownian movement. Coagulation. Emulsions, classification of emulsions, micelles, cleansing action of soap.

XII. HYDROGEN AND ITS COMPOUNDS: Position of hydrogen in periodic table. Occurrence, isotopes of hydrogen. Hydrogen - Preparation, properties and uses including as a fuel. Reactions of hydrogen leading to ionic, molecular and non - stoichiometric hydrides. Physical and Chemical properties of water and heavy water. Hardness of water and its removal Hydrogen peroxide – methods of preparation, physical and chemical properties - oxidation, reduction, decomposition, disproportionation and addition reactions. Detection, structure and uses of Hydrogen Peroxide.

XIII. ALKALI AND ALKALINE EARTH METALS: Electronic configuration, occurrence, Anomalous properties of the first element in each group. Diagonal relationship. Trends in properties like ionization enthalpy, atomic and ionic radii, reactivity with oxygen, hydrogen, halogens and water, uses of alkali and alkaline earth metals. Preparation, properties and uses of sodium hydroxide, salts of oxo acids, sodium carbonate, sodium hydrogen carbonate and sodium chloride. Preparation and uses of Calcium oxide, Calcium carbonate and Calcium sulphate. Biological importance of Na, K, Mg and Ca.

XIV. p-BLOCK ELEMENTS: GROUP 13 ELEMENTS: (IIIA GROUP ELEMENTS): Electronic configuration, occurrence. Variation of properties and oxidation states, trends in chemical reactivity. Anomalous properties of first element of the group. Boron- Physical and chemical properties and uses of boron. Borax, boric acid and boron hydrides. Preparation, structure and properties of diborane. Aluminum: uses, reactions with acids and alkalis. Potash alum.

XV. p-BLOCK ELEMENTS: GROUP 14 ELEMENTS: (IVA GROUP ELEMENTS): Electronic configuration, occurrence. Variation of properties and oxidation states, trends in chemical reactivity. Anomalous behavior of first element. Carbon - catenation, allotropic forms, physical and chemical properties and uses.

Similarities between carbon and silicon, uses of oxides of carbon. Important compounds of Silicon - Silicon dioxide, Silicon tetrachloride, silicones, silicates and zeolites. Manufacture and uses of Producer gas and Water gas.

XVI. p-BLOCK ELEMENTS: GROUP 15 ELEMENTS (VA GROUP ELEMENTS): Occurrence - physical states of nitrogen and phosphorous, allotropy, catenation electronic configuration, oxidation states. General characteristics and structure of hydrides. General characteristics of oxides and halides. Oxoacids of nitrogen and phosphorous. Preparation and uses of nitric acid and Ammonia. Super phosphate of lime.

XVII. p- BLOCK ELEMENTS: GROUP 16 ELEMENTS (VIA GROUP ELEMENTS): Occurrence, electronic configuration, oxidation states, physical states of oxygen and sulphur, their structure and allotropy. General characteristics of hydrides, oxides and halides. Structural aspects of oxy acids of chalcogens. Preparation, properties and uses of Ozone and sodium thiosulphate. Industrial process for manufacture of sulphuric acid.

XVIII. P- BLOCK ELEMENTS: GROUP 17 ELEMENTS (VIIA GROUP ELEMENTS): Occurrence, electronic configuration and oxidation states. Physical states of halogens. Ionization Potential, Electro negativity, Electron affinity, bond energies, chemical reactivity, oxidizing power of fluorine and chlorine. Structural aspects of oxy acids of chlorine. Preparation, properties and uses of fluorine, chlorine and bleaching powder. Structures of Inter halogen compounds.

XIX. GROUP 18 ELEMENTS: (ZERO GROUP ELEMENTS): Electronic configuration, occurrence and isolation. Trends in physical and chemical properties and uses. Structures of Xenon oxides and halides.

XX. TRANSITION ELEMENTS: General introduction, electronic configuration, occurrence and characteristics of transition metals. General trends in properties of first row transition elements - metallic character, ionization energy, variable oxidation states, atomic and ionic radii, color, catalytic property, magnetic property, interstitial compounds and alloy formation. **Lanthanides:** Electronic configuration, variable oxidation states, chemical reactivity and lanthanide contraction. **Coordination compounds:** Introduction, ligands, coordination number, Werner's theory of coordination compounds, shapes of coordination compounds - Valence bond theory, IUPAC nomenclature of mono nuclear coordination compounds, bonding, isomerism, EAN rule, importance of coordination compounds in qualitative analysis, extraction of metals and biological systems (chromo proteins, haemoglobin, chlorophyll: structures only).

XXI. GENERAL PRINCIPLES OF METALLURGY: Principles and methods of extraction - concentration, reduction by chemical and Electrolytic methods and refining. Occurrence and principles of extraction of Copper, Zinc, Iron and Silver. Molten electrolysis processes of Aluminium, Magnesium and Sodium.

XXII. ENVIRONMENTAL CHEMISTRY: Definition of terms, types of Pollution, Air, Water and Soil pollution. Oxides of carbon, carbon monoxide, oxides of nitrogen and sulphur, chloro fluoro carbons. Chemical reactions in atmosphere, smogs, major atmospheric pollutants, acid rain. Ozone and its reactions, effects of depletion of ozone layer. Green house effect and global warming. Pollution due to industrial wastes. Green chemistry as an alternative tool for reducing pollution with two examples.

XXIII. BASIC PRINCIPLES AND TECHNIQUES IN ORGANIC CHEMISTRY:

Methods of purification, qualitative and quantitative analysis of organic compounds. Classification and IUPAC nomenclature of organic compounds. Homolytic and heterolytic fission of covalent bond. Types of reagents – electrophiles, nucleophiles and free radicals with examples. Reactive intermediates. Types of organic reactions - substitution, addition, elimination and rearrangement reactions with examples. Inductive effect, electromeric effect, resonance and hyperconjugation.

XXIV. HYDROCARBONS: Classification of hydrocarbons. **Alkanes** - Nomenclature, isomerism. Methods of preparation of ethane. Conformations of ethane. Physical properties, chemical reactions including free radical mechanism of halogenation, Combustion and Pyrolysis of ethane. **Cycloalkanes** : Preparation and properties of cyclohexane. **Alkenes** - Nomenclature, structure of ethene, geometrical isomerism and physical properties of geometrical isomers. Ethylene: Methods of preparation, physical properties and chemical reactions - addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), Ozonolysis and oxidation. Mechanism of electrophilic addition.

XXV: ALKYNES & AROMATIC HYDROCARBONS: Nomenclature, structure of triple bond. Acetylene - Methods of preparation, Physical properties and chemical reactions: acidic character of acetylene, addition reaction of - hydrogen, halogens, hydrogen halides and water. **Aromatic hydrocarbons:** Introduction, IUPAC nomenclature; Benzene: resonance and aromaticity, Chemical properties: Mechanism of electrophilic substitution - Nitration, Sulphonation, Halogenation, Friedel Craft's alkylation and Acylation. Directive influence of functional group in mono substituted benzene. Carcinogenicity and toxicity of aromatic compounds.

XXVI: STEREO CHEMISTRY: Optical activity-discovery, determination using a polarimeter, specific rotation. Asymmetric carbon, elements of symmetry. Chirality - Chiral objects, Chiral molecules. Compounds containing one chiral centre, enantiomers, Fischer projections and Configuration. D-L and R-S nomenclature, racemic forms, racemisation and resolution. Compounds containing two chiral centers, diastereomers, meso form.

XXVII : HALOALKANES & HALOARENES: Haloalkanes: Nomenclature, nature of C-X bond, Preparation, physical and chemical properties of ethyl chloride and chloroform. Mechanism of S_N1 , and S_N2 reactions. **Haloarenes:** Nature of C-X bond, Preparation and Substitution reactions of chlorobenzene (directive influence of halogen for mono substituted compounds only).

XXVIII. ALCOHOLS , PHENOLS AND ETHERS: Alcohols: Nomenclature, methods of preparation, physical and chemical properties of ethyl alcohol. Mechanism of dehydration. Identification of primary, secondary and tertiary alcohols. Uses of methanol and ethanol. **Phenols:** Nomenclature, methods of preparation and physical and chemical properties of phenol, acidic nature of phenol. Electrophilic substitution reactions and uses of phenol. **Ethers:** Nomenclature, methods of preparation, physical and chemical properties and uses of diethyl ether.

XXIX: ALDEHYDES AND KETONES: Nomenclature, and nature of carbonyl group. Methods of preparation, physical and chemical properties and uses of acetaldehyde and acetone. Mechanism of nucleophilic addition. Aldol and crossed aldol condensation, Cannizzaro reaction.

XXX. CARBOXYLIC ACIDS: Nomenclature and acidity of carboxylic acids. Methods of preparation, Physical and chemical properties and uses of acetic acid.

XXXI. ORGANIC COMPOUNDS CONTAINING NITROGEN: Nitrobenzene: Preparation, properties and uses. **Amines:**

Nomenclature and classification of amines. Structure, methods of preparation, physical and chemical properties and uses of Aniline. Identification of primary, secondary and tertiary amines. **Diazonium salts:** Preparation, chemical reactions and importance of diazonium salts in synthetic organic chemistry. Azo dyes and their uses.

XXXII. POLYMERS & BIOMOLECULES: Classification of polymers. Addition and condensation polymerization. Copolymerization. Natural rubber, vulcanization of rubber, synthetic rubber – Neoprene and Buna- S. Molecular weights of polymers - Number average and weight average molecular weights (definition only) Biopolymers – Carbohydrates and Proteins. Biodegradable polymers and some commercially important polymers – Polythene, nylon, polyesters and bakelite. **Carbohydrates:** Importance. Classification into (a) aldoses and ketoses and (b) mono (glucose and fructose), oligo (sucrose, lactose, maltose) and polysaccharides (starch, cellulose, glycogen). Structure determination and properties of glucose. Structural features of oligo and polysaccharides mentioned above. **Proteins:** Elementary idea of Alpha amino acids, peptide bond, polypeptides and proteins. Primary, secondary, tertiary and quaternary structures of Proteins (Qualitative idea only). Denaturation of proteins; enzymes. **Vitamins:** Classification and functions of vitamins in biosystems. **Nucleic Acids:** Types of nucleic acids, primary building blocks of nucleic acids. Chemical composition of DNA & RNA, Primary structure of DNA and its double helix. Replication. Transcription, protein synthesis and genetic code. **Lipids:** Classification, structure and functions of lipids in biosystems. **Hormones:** Classification, structural features and functions of hormones in biosystems.

XXXIII. CHEMISTRY IN EVERYDAY LIFE: Uses of Chemicals in medicine: Analgesics : Narcotics (morphine, codeine). Non-narcotics (Aspirin, Ibuprofen). Antipyretics (Analgin, phenacetin and paracetamol). Tranquilizers (Barbituric acid, Luminal, seconal, valium). Antiseptics (Chloroxylenol, bithional), Disinfectants (formalin). Antimicrobials (lysozyme, lactic acid, hydrochloric acid in stomach). Antibiotics (pencillin, chloramphenicol, sulphadiazine). Chemicals in food preservatives (sodium benzoate, potassium metabisulphite). Artificial sweetening agents (Aspartame, alitame, sucralose).

ANNEXURE - II

MODEL QUESTIONS – BOTANY

- Assertion (A):** In the leaves of the sugarcane C_3 and C_4 cycles are spatially separated.
Reason (R): Hatch and Slack pathway occurs in bundle sheath cells and Calvin cycle in mesophyll cells.
 - Both (A) and (R) are true. (R) is the correct explanation of (A)
 - Both (A) and (R) are true, but (R) is not the correct explanation of (A)
 - (A) is true but (R) is false
 - (A) is false but (R) is true
- Arrange the following in the order of their occurrence in the life cycle of an angiospermic plant:

I. Primary Endosperm Nucleus	II. Generative cell
III. Xenogamy	IV. Mericarp

 The correct sequence is:

1) I, III, II, IV	2) III, I, IV, II
3) II, III, I, IV	4) IV, I, II, III
- If one strand of DNA molecule has the nucleotide sequence TAC AAT CGG TAA, the new stand synthesized by heterocatalysis of it will have the nucleotide sequence as:

1) ATG TTA GCC ATT	2) TAC AAT CGG TAA
3) AUG UUA GCC AUU	4) TUC UUT CGG TUU
- Study the following lists:

List I	List II
A) Monarch	I.. Gossypium
B) Tetrarch	II. Nicotiana
C) Diarch	III. Ricinus
D) Octarch	IV. Trapa
	V. Castanea

The correct match is:

- | | (A) | (B) | (C) | (D) |
|----|-----|-----|-----|-----|
| 1. | I | IV | V | II |
| 2. | IV | I | III | V |
| 3. | II | III | IV | I |
| 4. | IV | I | II | V |

5. The vegetative free floating filaments of Spirogyra have:

- I. 1-16 chloroplasts in each cell
- II. Many pyrenoids in each cell
- III. Many nuclei in each cell
- IV. Differentiation of base and apex

The correct combination is:

- 1) I and II
- 2) II and III
- 3) I and III
- 4) II and IV

MODEL QUESTIONS – ZOOLOGY

1. In rabbit obturator foramen is present on

- 1) Sternum
- 2) Skull
- 3) Pectoral girdle
- 4) Pelvic girdle

2. Identify the sequence of leg parts of cockroach from base to tip of the leg

- A) Tibia
- B) Coxa
- C) Tarsus
- D) Femur
- E) Trochanter

Correct sequence is

- 1) B-A-D-E-C
- 2) B-E-D-A-C
- 3) A-D-C-B-E
- 4) A-C-B-E-D

3. Multiple selection type

- A) Ribs are double headed with capitulum and tuberculum
- B) A Complete bony secondary palate is present
- C) Heart is three chambered
- D) Foramen of Panizza connects left and right systemic arches

Which of the above are true about Crocodiles.

- 1) All
- 2) Only A, B & D
- 3) Only A, B & C
- 4) Only B, C & D

4. Matching type

SET-I

Scientific names

- A) Pinctada
- B) Teredo
- C) Dentalium
- D) Aplysia

SET-II

Common Names

- I) Elephant tusk shell
- II) Sea hare
- III) Pearl Oyster
- IV) Marine mussel
- V) Ship worm

Identify the correct match between SET-I and SET-II

- | | A | B | C | D |
|----|-----|----|----|----|
| 1) | III | IV | II | I |
| 2) | III | I | II | V |
| 3) | III | V | I | II |
| 4) | III | V | II | IV |

5. Statement and Reason type

Statement (S): During favourable conditions Euglena undergoes longitudinal binary fission.

Reason (R): Binary fission in Euglena is described as symmetrogenic division as daughter individuals are like mirror images.

- 1) Both S and R correct and R is the correct explanation to 'S'.
- 2) Both S and R are correct but R is not correct explanation to 'S'.
- 3) S is correct but R is not correct.
- 4) S is not correct but R is correct.

MODEL QUESTIONS - PHYSICS

- If the force is given by $F=at+bt^2$ with 't' as time, then dimensions of 'a' and 'b' are:
 - MLT^{-4}, MLT^{-2}
 - MLT^{-3}, MLT^{-4}
 - ML^2T^{-3}, ML^2T^{-2}
 - ML^2T^{-3}, ML^3T^{-4}
- A bomb moving with velocity $(40\hat{i} + 50\hat{j} - 25\hat{k})$ m/sec explodes into two pieces of mass ratio 1:4. After explosion the smaller piece moves away with velocity $(200\hat{i} + 70\hat{j} + 15\hat{k})$ m/sec. The velocity of larger piece after explosion is:
 - $45\hat{j} - 35\hat{k}$
 - $45\hat{i} - 35\hat{j}$
 - $45\hat{k} - 35\hat{j}$
 - $-35\hat{i} + 45\hat{k}$
- A ray of light passes through an equilateral prism such that the angle of incidence is equal to the angle of emergence and each one is equal to $3/4^{\text{th}}$ the angle of prism. The angle of deviation is :
 - 45°
 - 39°
 - 20°
 - 30°
- Four charges of magnitude $-Q$ are placed at the four corners of a square and a charge 'q' is at its centre. If the system is in equilibrium the value of 'q' is :
 - $-\frac{Q}{4} (1 + 2\sqrt{2})$
 - $\frac{Q}{4} (1 + 2\sqrt{2})$
 - $-\frac{Q}{2} (1 + 2\sqrt{2})$
 - $\frac{Q}{2} (1 + 2\sqrt{2})$
- The intensity of the magnetic induction field at the center of a single turn circular coil of radius 5 cm carrying current of 0.9 A:
 - $36\pi \times 10^{-7} \text{ T}$
 - $9\pi \times 10^{-7} \text{ T}$
 - $36\pi \times 10^{-6} \text{ T}$
 - $9\pi \times 10^{-6} \text{ T}$

MODEL QUESTIONS – CHEMISTRY

- Which one of the following cannot be determined experimentally?
 - Order
 - Rate
 - Rate constant
 - Molecularity
- Which one of the following elements exhibits highest oxidation state?
 - Zn
 - Fe
 - Cu
 - Mn
- Assertion (A):** At 300 K, Kinetic energy of 16 grams of methane is equal to the kinetic energy of 32 grams of oxygen.

Reason (R) : At constant temperature, kinetic energy of one mole of all gases is equal.

The correct answer is:

- Both (A) and (R) are true and (R) is the correct explanation of (A).
 - Both (A) and (R) are true and (R) is not the correct explanation of (A).
 - (A) is true but (R) is not true.
 - (A) is not true but (R) is true.
- Match the following :

List I	List II
A) Ethane	1. 2 sp carbons
B) Ethylene	2. 6 sp ² carbons
C) Acetylene	3. 2 sp ³ carbons
D) Benzene	4. 2 sp ² carbons
	5. 1 sp and 1 sp ² carbons

The correct answer is:

	(A)	(B)	(C)	(D)
1)	3	4	1	2
2)	4	5	3	2
3)	3	1	2	5
4)	2	3	4	5

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. Material to be brought on the date of examination.

Hall Ticket along with filled in application form with duly affixed recent colour photograph attested by Gazetted Officer (or) Principal of the College where candidate has studied the qualifying examination, Signature of the candidate and left hand thumb impression in the respective spaces provided in the filled application form.

2. Other important Instructions

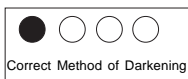
- a. Hall Ticket issued to you is an important document. Please preserve it carefully.
- b. Hall Ticket is not transferable. Any tampering of hall ticket will automatically lead to the disqualification of the candidate.
- c. Candidate shall arrive at the examination hall atleast half an hour before commencement of the examination. This will enable the candidate to familiarize himself/herself with the OMR response sheet.
- d. Candidates will not be allowed to enter examination hall once the examination has commenced.**
- e. Sharpened HB pencil will be supplied in the examination halls to all candidates appearing for EAMCET – 2012. Candidates are advised to use the HB pencils supplied by the Convener.
- f. Candidates are permitted to carry the following to the examination hall.
 - i) Hall-Ticket
 - ii) A good Ball Point Pen (Blue or Black)
 - iii) A Sharpener
 - iv) A good Eraser
- g. Besides the items listed in serial No. f above, the candidate should not bring any other material. **This instruction sheet also should not be brought into the examination hall. Candidates should not bring Log books, Tables, Calculators, pagers, Cell Phones etc., into the examination hall. Any candidate found in possession of any forbidden material will be sent out of the examination hall.**
- h. **Candidate shall first fill in the details concerning the question paper booklet and booklet code on the data card supplied and return to the invigilator. Read carefully the instructions before they start answering the questions.**
- i. Candidates must remain seated in their allotted places till the completion of the examination. **In no case they will be allowed to leave the examination hall till the end of the examination. Before leaving the examination hall, the candidates must ensure to return both the data card and the OMR response sheet to the invigilator. Candidate is permitted to leave the examination hall only when the invigilator satisfies with the complete receipt of data card and OMR sheet and allow you to leave the hall. The candidate will be permitted to carry the question booklet along with him/her after the completion of examination.**
- j. **Every candidate appearing for EAMCET – 2012 shall be provided with a specially designed Optical Mark Reader (OMR) response sheet (Answer Sheet), on which the candidate shall have to mark his or her answers and other relevant data. The method of marking the answers is illustrated in this section. Candidates are advised to go through the instructions given for marking the answers and other entries on the Optical Mark Reader (OMR) response sheet thoroughly and practice the same at their residence which should make it easy for them to answer in the examination hall.**
- k. **The Optical Mark Reader (OMR) response sheet should be handled carefully by the candidates. They are advised not to fold, wrinkle, or tear the response sheet under any circumstances. Further the candidates are advised not to scribble or make any marks on the response sheet except marking the answers and other relevant data at the appropriate place on the response sheet. Any violation of these instructions will automatically lead to the disqualification of the candidate.**
- l. i) **Candidate shall note that they will not be given under any circumstances a second blank Optical Mark Reader (OMR) response sheet. Hence they are advised to be careful while handling their response sheet.**
 ii) **In EAMCET – 2012, the candidate name, Hall-ticket Number and photograph are printed by the Convener on OMR sheet. Candidate shall ensure that he/she received his/her own OMR sheet. If there is any discrepancy in details or damage to the sheet the same shall be brought to the notice of the invigilator immediately.**
- m. The question paper booklet given to the candidate shall consist of 160 multiple choice type questions in three different sections with four responses given to each question out of which only one response is correct for the given question. **Candidates shall mark the correct answer in the Optical Mark Reader (OMR) response sheet by shading in Dark the appropriate circle with HB Pencil supplied to the candidate in the examination hall by the invigilator. They should not use under any circumstances Ball Point Pen for this purpose.**
- n. Candidates are required to answer all questions. All questions carry equal marks. There is no negative marking for incorrect answers.

INSTRUCTIONS TO FILL UP OMR RESPONSE SHEET

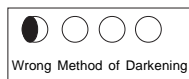
1. Follow the INSTRUCTIONS given on the OMR Response Sheet. Fill up information and darken all the Relevant Circles on the OMR response sheet carefully, otherwise your Response Sheet will be invalid.
2. Use HB Pencil only for darkening the circles for information and answering on the response sheet. Use Ball Point Pen wherever directed on the response sheet to write information.

Example: 

Please darken completely one circle only for each question as shown above. If you darken more than one circle against a question, the response to that question will be invalidated and no mark will be assigned to you for that question.



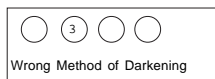
Correct Method of Darkening



Wrong Method of Darkening

REASON

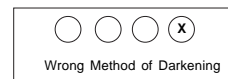
Circle only partly darkened. It should be darkened completely.



Wrong Method of Darkening

REASON

Circle only partly darkened. No other marks as ✓ is not to be put.



Wrong Method of Darkening

REASON

Circle is not darkened. Putting mark like X for the correct answer is treated as wrong.

3. Please darken the most appropriate response chosen by you, only in the corresponding circle against the number corresponding to the question, you are attempting.

4. Please do not make any stray marks any where on the Response Sheet or else the Response Sheet will be invalidated.

5. If you wish to change an Answer, please ERASE COMPLETELY the already darkened Circle and then darken a new circle.

6. Marking of SEX and Category : If the candidate is male and belongs to BC - A category darken the circles corresponding to Male under SEX and BC - A under category as shown below:

MALE	FEMALE	BC-A	BC-B	BC-C	BC-D	BC-E	SC	ST
<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Darken the digits corresponding to the hall-ticket number as indicated below:

0	6	1	2	1	4	8
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ANNEXURE – III

DEFINITION OF LOCAL / NON - LOCAL STATUS

1. A Candidate shall be regarded as a local Candidate in relation to a local area (AU/OU/SVU)
 - 1.1 If he/she has studied in an Educational Institution or Educational Institutions in such local area for a period of not less than four consecutive academic years ending with the academic year in which he/she appeared or first appeared in the relevant qualifying examination as the case may be.
 - 1.2 Where, during the whole or any part of the four consecutive academic years in which he/she appeared, or first appeared in the relevant qualifying examination, he/she has not studied in any educational institutions, if he/she resided in that local area for a period of not less than four years immediately preceding the date of commencement of the relevant qualifying examination in which he/she appeared, or first appeared, as the case may be.
2. A candidate who is not regarded as local candidate under clause (1.1) above in relation to any local area shall
 - 2.1 If he/she studied in the educational institutions in the state for a period of not less than seven consecutive academic years ending with the academic year in which he/she appeared or first appeared for the relevant qualifying examination as the case may be, be regarded as a local candidate in relation to
 - i. Such local area where he/she studied for the maximum period out of period of seven years.

OR

 - ii. Where the period of his/her study in two or more local areas is equal, such local area where he/she studied last in such equal periods.
 - 2.2 If during the whole or any part of the seven consecutive academic years ending with the academic year in which he/she appeared or first appeared for the relevant qualifying examination, he/she has not studied in the educational institutions, in any local area, but has resided in the state during the whole of the said period of seven years, be regarded as a local candidate in relation to
 - i. Such local area where he/she has resided for the maximum period out of the said period of seven years.

OR

 - ii. Where the period of his/her residence in two or more local areas is equal such local area where he/she had resided last in such periods.

- Note:** 1. Local area in respect of Andhra University (A.U. area) includes Nagarjuna University area. In respect of Sri Venkateswara University (S.V.U. area), it includes Sri Krishnadevaraya University area. In respect of Osmania University (O.U. area), it includes Kakatiya University area.
2. The Candidate belonging to PIO / OCI category will be considered as under non local category only.
3. Candidates coming under any of the categories given below and not satisfying the conditions mentioned in 1 or 2 above are treated as 'Non-Local' to all the three University areas specified above.
- a. Candidates who have resided in the state of A.P. for a total period of 10 years or more excluding the period of study outside this state.

OR

- b. Candidates either of whose parents has resided in this state for a total period of 10 years or more excluding the periods of employment outside the state

OR

- c. Candidates either of whose parents is employed in the State of A.P. in the State or Central Government Public Sector Corporations, Local Bodies, Universities and other similar quasi Government Institutions within this state, at the time of submitting the application

OR

- d. Candidates who are spouses of those employed in the State of A.P. in the State or Central Government, Public Sector Corporations, Local Bodies, Universities and other similar quasi Government Institutions within this state, at the time of submitting the application.

For full details refer G.O.No. 646, dated 10.07.1979.

Note: Blank proforma III is provided for submitting relevant information regarding Local/Non-Local status of candidates.

ANNEXURE – IV

CRITERIA FOR RANKING (EAMCET – 2012 “AM CATEGORY”)

As per G.O.Ms.No 73 of Higher Education(EC.2) Department, dated 28-07-2011, the candidates who have secured qualifying marks in EAMCET and candidates belonging to the category of Scheduled Caste and Schedule Tribe, for whom qualifying marks have not been prescribed, shall be assigned ranking in the order of merit on the basis of combined score obtained by giving 75% weightage to the marks secured in EAMCET and 25% weightage to the marks secured in the relevant group subjects namely Biology, Physics and Chemistry of the qualifying examination.

For the preparation of merit list, in case of more than one student securing the same combined score obtained as mentioned above, the tie shall be resolved to decide the relative ranking by successively considering the following :

- i) The total marks secured in EAMCET
- ii) The marks secured in Biology in EAMCET
- iii) The marks secured in Physics in EAMCET
- iv) The Percentage of Aggregate marks secured in the qualifying examination
- v) If the tie still persists the date of birth of the concerned candidates, the older being given preference over the younger.

The weightage of marks in the case of candidates belonging to the category of Persons of Indian Origin (PIO) / Overseas Citizen of India (OCI) Card Holders, will be decided by a committee constituted by the competent authority.

Form - DM (Declaration of Marks) shall be downloaded by the candidates other than Board of Intermediate Education, A.P. at the time of issue of EAMCET-2012 Hall Ticket. The candidates are required to fill in the form and submit along with attested photo copies of the marks memos of the qualifying examination that includes Bridge Course Marks Memo if any on or before 30th May 2012 failing which the rank will not be awarded.

ANNEXURE-II
EAMCET - 2012 (AM)
SAMPLE OMR ANSWER SHEET

SIDE - II
(PART - A)



Date of Birth :

MAKE SURE THAT THE OMR ANSWER SHEET
GIVEN TO YOU CONTAINS YOUR
HALL TICKET NO., NAME & PHOTOGRAPH.

READ INSTRUCTIONS GIVEN ON SIDE - I
CAREFULLY BEFORE ANSWERING.

Hall Ticket No. :
Name :
Father's Name :
Test Centre Code & Name :

(PART - A)

1. Write the
Booklet Code



(A,B,C or D)

3. Booklet Serial Number

--	--	--	--	--	--

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

4. Gender

Male Female

Signature of the candidate

6. Minority

MUSLIM
CHRISTIAN
BUDDHIST
SIKH
ZOROASTRIAN

5. Category

OC <input type="radio"/>	BC-A <input type="radio"/>	BC-B <input type="radio"/>	BC-C <input type="radio"/>
BC-D <input type="radio"/>	BC-E <input type="radio"/>	SC <input type="radio"/>	ST <input type="radio"/>

(PART - B)

2. Shade the
Booklet Code

(A) (B) (C) (D)

Do not write anything in this box

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Signature of the Invigilator
across the dotted line

(PART - B)

1	1	2	3	4
2	1	2	3	4
3	1	2	3	4
4	1	2	3	4
5	1	2	3	4
6	1	2	3	4
7	1	2	3	4
8	1	2	3	4
9	1	2	3	4
10	1	2	3	4
11	1	2	3	4
12	1	2	3	4
13	1	2	3	4
14	1	2	3	4
15	1	2	3	4
16	1	2	3	4
17	1	2	3	4
18	1	2	3	4
19	1	2	3	4
20	1	2	3	4
21	1	2	3	4
22	1	2	3	4
23	1	2	3	4
24	1	2	3	4
25	1	2	3	4
26	1	2	3	4
27	1	2	3	4
28	1	2	3	4
29	1	2	3	4
30	1	2	3	4
31	1	2	3	4
32	1	2	3	4
33	1	2	3	4
34	1	2	3	4
35	1	2	3	4
36	1	2	3	4
37	1	2	3	4
38	1	2	3	4
39	1	2	3	4
40	1	2	3	4

Questions 01 - 40

41	1	2	3	4
42	1	2	3	4
43	1	2	3	4
44	1	2	3	4
45	1	2	3	4
46	1	2	3	4
47	1	2	3	4
48	1	2	3	4
49	1	2	3	4
50	1	2	3	4
51	1	2	3	4
52	1	2	3	4
53	1	2	3	4
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58	1	2	3	4
59	1	2	3	4
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67	1	2	3	4
68	1	2	3	4
69	1	2	3	4
70	1	2	3	4
71	1	2	3	4
72	1	2	3	4
73	1	2	3	4
74	1	2	3	4
75	1	2	3	4
76	1	2	3	4
77	1	2	3	4
78	1	2	3	4
79	1	2	3	4
80	1	2	3	4

Questions 41 - 80

ANSWERS

(Shading should be
neat and dark)



81	1	2	3	4
82	1	2	3	4
83	1	2	3	4
84	1	2	3	4
85	1	2	3	4
86	1	2	3	4
87	1	2	3	4
88	1	2	3	4
89	1	2	3	4
90	1	2	3	4
91	1	2	3	4
92	1	2	3	4
93	1	2	3	4
94	1	2	3	4
95	1	2	3	4
96	1	2	3	4
97	1	2	3	4
98	1	2	3	4
99	1	2	3	4
100	1	2	3	4
101	1	2	3	4
102	1	2	3	4
103	1	2	3	4
104	1	2	3	4
105	1	2	3	4
106	1	2	3	4
107	1	2	3	4
108	1	2	3	4
109	1	2	3	4
110	1	2	3	4
111	1	2	3	4
112	1	2	3	4
113	1	2	3	4
114	1	2	3	4
115	1	2	3	4
116	1	2	3	4
117	1	2	3	4
118	1	2	3	4
119	1	2	3	4
120	1	2	3	4

Questions 81 - 120

121	1	2	3	4
122	1	2	3	4
123	1	2	3	4
124	1	2	3	4
125	1	2	3	4
126	1	2	3	4
127	1	2	3	4
128	1	2	3	4
129	1	2	3	4
130	1	2	3	4
131	1	2	3	4
132	1	2	3	4
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136	1	2	3	4
137	1	2	3	4
138	1	2	3	4
139	1	2	3	4
140	1	2	3	4
141	1	2	3	4
142	1	2	3	4
143	1	2	3	4
144	1	2	3	4
145	1	2	3	4
146	1	2	3	4
147	1	2	3	4
148	1	2	3	4
149	1	2	3	4
150	1	2	3	4
151	1	2	3	4
152	1	2	3	4
153	1	2	3	4
154	1	2	3	4
155	1	2	3	4
156	1	2	3	4
157	1	2	3	4
158	1	2	3	4
159	1	2	3	4
160	1	2	3	4

Questions 121 - 160

USE HB PENCIL TO SHADE THE CIRCLES