

ANDHRA UNIVERSITY COMMON ENTRANCE TEST - 2009 ADMISSION INFORMATION BROCHURE

I. GENERAL:

1. Directorate of admissions, Andhra University, Visakhapatnam invites applications for admission through Andhra University Common Entrance Test (AUCET)-2009 into various courses offered in Campus Colleges of Science & Technology, Arts, Commerce & Management Studies and Engineering, A.U., Visakhapatnam; A.U. Campus, Kakinada (A.U. M.S. Naicker P.G. Centre); A.U. Campus, Vizianagaram, A.U. Campus, Tadepalligudem and Colleges affiliated to A.U. offering P.G. Courses for the academic year 2009-2010.
2. Candidates seeking admission into various courses of study for which tests are conducted (See Appendix – I) should appear for AUCET-2009.
3. Candidates who have already passed their qualifying examination or who have appeared / are appearing for the annual examination in 2009 only are eligible for AUCET-2009. Supplementary candidates of 2009 are not eligible.
4. Eligibility criteria and the syllabi for different courses and the syllabi for the different Tests to be conducted are given in Appendices-I & II.
 - * Candidates from other recognised universities are considered for admission into PG Arts and Science courses only if they possess a three year Bachelor Degree of 10+2+3 or 12+3 or 11+1+3 pattern, with the prescribed minimum percentage of marks, unless otherwise specified.
 - * Eligibility criteria for admission into various PG Arts and Science courses is with reference to the Common Core Scheme offered by Andhra University. Where group subjects (part-II) of degrees of other Universities do not have subjects of equal weightage, the subject enjoying the highest weightage shall be considered as the main, for the purpose of deciding the eligibility. Bachelor degrees of B.A./B.Sc./B.Com./B.A.Litt. and B.L. from Universities other than A.U. should be recognised by Andhra University as equivalent thereto.
5. The requirement for admission into all Science and Engineering Courses offered by Andhra University is a minimum aggregate of 50% marks in Group Subjects (Part II) of the qualifying examination unless or otherwise specified. For SC and ST candidates, a minimum aggregate of 45% marks in group subjects (Part II) is sufficient.
6. The requirement for Arts and Commerce courses is generally a pass in the appropriate qualifying examination, except in the case of admission into M.A./M.Sc. Quantitative Economics; M.Sc. Anthropology and 5 year Integrated MS Economics courses, for which, the requirement is a minimum aggregate of 50% marks in group subjects (Part-II) in the qualifying examination (B.Sc.) and for SC& ST candidates, a minimum aggregate of 45% marks in the group subjects (Part-II) is required.
7. ALLOWING A CANDIDATE FOR AUCET-2009 DOES NOT GUARANTEE A RIGHT OF ADMISSION INTO THE COURSE OF STUDY. A candidate must satisfy the admission criteria given in Appendix-I. Candidates allowed to take the entrance test and subsequently getting seats by furnishing false information are liable for prosecution and cancellation of seats without notice. The decision of the admitting authority is final.
8. Candidates are advised to go through the information brochure carefully and claim admission under appropriate categories of reservation by filling in the relevant boxes with appropriate code numbers in both Computer Data Sheet and Application form. Requests for inclusion or change of test, test centre and / or reservation category(ies) once claimed will not be entertained under any circumstances. The applications will be processed as per the claims of the candidates only and the admissions will be subject to the validity of their claims.
9. Candidates who have already completed one P.G. course or one Professional Degree course at Andhra University or elsewhere and who are now seeking admission into second P.G. or professional course respectively will not be provided hostel accommodation and will not be considered for any type of scholarship whatsoever, as per G.O.s. in force.
10. Candidates who have already studied / are studying a P.G. course are not eligible to write the test leading to admission into the same course. Such candidates are liable for disciplinary action.
11. The university reserves the right to fill or not to fill the seats earmarked for a particular course on administrative reasons. All admissions are purely provisional and the University reserves the right to cancel the admission at any stage. Further it also reserves the right to run or not to run a particular course depending on the number of candidates joined in it. A minimum of 10 candidates should join in any course to run it.
12. Information regarding P.G. courses offered by university and affiliated colleges is given in Appendix-III.

II. HOW TO APPLY:

1. **Applications can be had from the sale counters. Candidates have to submit a separate printed set of application for each test.** Candidates applying for M.A. Music, M.A. Dance and BFA. Courses should pay an additional amount of Rs. 150/- towards Practical fee in the form of D.D. drawn in favour of the Director, Directorate of Admissions on any nationalised bank payable at Visakhapatnam. The name of the applicant and application No. should be written on the reverse side of the D.D. The fee once paid will not be refunded.
2. Candidates seeking admission into any P.G./Diploma Course offered **without entrance test should also apply** to the Director, Directorate of Admissions in the prescribed Application form, separately for each course, unless and otherwise specified.
3. The candidates need not apply again for admission into University Colleges, P.G. Centres, A.U. Campuses and Colleges affiliated to Andhra University offering P.G. Courses except minority institutions. The admission into various courses is centralised under the supervision of the Director, Directorate of Admissions.
4. The duly filled-in application should be accompanied with attested copies of the following certificates:

- (i) Degree/diploma/provisional certificate of the qualifying examination in case of the candidates who have already passed the examination.
- (ii) Candidates who have appeared / are appearing for the qualifying examination should enclose a copy of the hall-ticket of 3rd year annual examination of 2009 or a certificate from the Principal of the college/Director, School of Distance Education, certifying that the candidate has completed the course and appeared/appearing for the qualifying examination of 2009.
- (iii) Date of birth extract from SSC/ICSE/CBSE/Matriculation certificate.
- (iv) Supporting evidence for claims of reservation under SC, ST, LBC, PH, NCC, Sports and Children of Armed Personnel (CAP) category.

III. LAST DATE FOR RECEIPT OF FILLED-IN APPLICATIONS:

1. Application forms completed in all respects should reach the Director, Directorate of Admissions (only in the cover provided with the application clearly writing the test number, test name and test centre) by registered post or in person **before 5-00p.m. on 07-04-2009.**
2. Office of Directorate of Admissions is not responsible for the non - receipt of applications sent by ordinary post or by courier or late receipt of applications due to postal delay or for any reason whatsoever.

IV. LATE APPLICATIONS:

Applications received after the last date (**07-04-2009**) will be treated as late applications and shall be accepted only on payment of late fee of Rs.500/- through D.D. in favour of the Director, Directorate of Admissions **till 5:00 p.m. on 14-04-2009.** Applications will also be accepted with a fine of Rs.1,000/- up to 5:00 p.m. on **23-04-2009 (candidates applying during this period will be allotted Visakhapatnam centre only).**

INCOMPLETE APPLICATIONS WILL BE REJECTED.

V. HALL-TICKETS:

1. Hall-Tickets will be sent to candidates under certificate of posting 10 days before the date of commencement of Entrance Test. In case of non-receipt of hall-ticket in time, candidates are advised to contact the Directorate of Admissions at **Tel No. (0891) 2573441 or 2706928** two days before the test date.
2. **The hall-ticket should be retained carefully as it has to be produced at the time of admission.**
3. Duplicate hall-ticket can be obtained by a candidate from the Directorate of Admissions or Chief Superintendent of the concerned test centres during the office hours only, one day before the commencement of Entrance Test, on production of: (i) one attested passport size photograph, (ii) Cash/Demand Draft for Rs.50/- drawn in favour of the Director, Directorate of Admissions, Andhra University, Visakhapatnam.

VI. TEST CENTRES:

AUCET-2009 will be conducted at the following Test Centres:

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|-------------------------|----------------------|------------------------|--------------------|-----------------------|
| 1. VISAKHAPATNAM | 2. SRIKAKULAM | 3. VIZIANAGARAM | 4. KAKINADA | 5. RAJAHMUNDRY |
| 6. ELURU | 7. BHIMAVARAM | 8. VIJAYAWADA | 9. GUNTUR. | |

- a. Candidate should mention the Centre of his / her choice in both Computer Data Sheet and application form. Candidate applying for more than one Test is advised to opt for the same Centre as there is a likelihood of clash of dates and timings. Request for change of Test Centre and Subject opted by the candidate in the application form will not be considered under any circumstances.
- b. When the number of registered candidates for any test are below 200, the test will be conducted at **Visakhapatnam centre only.** The Director, Directorate of Admissions reserves the right to: (i) allot a Centre other than the candidate's choice, (ii) conduct or not to conduct any test and (iii) cancel a Test/Test Centre.
- c. Test for 5 Year Integrated MS Programmes, Double Degree and Twinning Programmes will be conducted only at Visakhapatnam.

VII. TEST PROCEDURE:

1. Candidates are advised to come to the examination hall at least half-an hour before the commencement of the Test.
2. Candidates will not be admitted into the examination hall without hall-ticket or after the commencement of the Test. They will not be allowed to leave the examination hall before the stipulated time.
3. Calculators, pagers, cellular phones, books, papers, logarithm tables, slide-rule or any other calculating aids are **NOT ALLOWED** into the examination hall.
4. Candidates should answer only on the OMR ANSWER SHEET.
5. The Chief Superintendent of the test centre can take disciplinary action on candidates involved in indiscipline, malpractice, impersonation, etc., and the answer scripts of such candidates will not be valued.

VIII. RANK:

1. All candidates appeared for the entrance test will be awarded AUCET-2009 test-wise Rank as per marks secured in the test appeared. Each wrong answer entails a deduction of 1/4 mark.
2. In case of a tie between candidates securing the same marks in a test, the order of merit will be decided on the basis of marks obtained in Part-A of the Test. In case of a further tie, the marks obtained by the candidate in Part-B shall be taken into account. If the tie continues, the date of birth of the candidate shall be taken into account, with priority to older candidate.

3. Rank card will be sent to the candidates under certificate of posting. A duplicate Rank card can be obtained at Directorate of Admissions, Visakhapatnam on payment of Rs.50/- in cash or by D.D. in favour of the Director, Directorate of Admissions, Andhra University by furnishing a copy of the hall-ticket.

IX. ADMISSION INFORMATION:

1. Admission shall be based on the AUCET-2009 Rank, subject to the fulfillment of eligibility criteria as given in Appendix- I.
2. Admissions to all the courses offered at Andhra University Campus Colleges, its P.G. Centres and colleges affiliated to Andhra University shall be made at A.U.Campus, Visakhapatnam only through counseling. The venue and schedule will be intimated accordingly and also will be available in the website (website www.andhrauniversity.info/doa).
3. The university shall not be responsible for either non-receipt or delayed receipt of communications in this regard.
4. Information regarding college-wise, course-wise and reservation category-wise seat distribution and fee structure will be made available after declaration of AUCET-2009 results on web site www.andhrauniversity.info/doa.
5. At the time of admission candidates should submit the following original certificates in support of the qualification and reservations claimed in the application along with a draft for the requisite amount of fees taken on any Nationalised Bank in the name of Admission Account, Directorate of Admissions, Andhra University and payable at Visakhapatnam.
 - (i) AUCET-2009 Rank card & Hall Ticket.
 - (ii) Degree / Provisional Pass Certificate.
 - (iii) Marks statements of Qualifying Examination.
 - (iv) Transfer and Conduct Certificate from the institution where the candidate last studied for the qualifying examination. Candidates who have completed / studied already or discontinued and seeking admission to second PG or professional course should submit TC relating to first PG course only. Duplicate TC relating to UG / PG degree should be accompanied by proper evidence of loss of original TC and police complaint. Candidates submitting false TC are liable for cancellation of seat at any stage and are liable for prosecution.
 - (v) Migration Certificate, if applicable.
 - (vi) Date of Birth Certificate (SSC/Matriculation or equivalent Certificate).
 - (vii) Study Certificates for the last seven years or Residence Certificate for preceding seven years of the qualifying examination.
 - (viii) Intermediate original certificate.
 - (ix) Integrated Community Certificate issued by the competent authority in case of BC/SC/ST candidates.
 - (x) Valid latest income certificate issued by M.R.O., if fee concession is claimed (the validity of income certificate is for one year from the date of issue).
 - (xi) 4 attested recent passport size Photos.
 - (xii) Candidates opting for admission under NCC/Sports/CAP/PH/NSS quota shall produce relevant original certificate, in addition to the above.
 - (xiii) Physical fitness certificate from a Asst. Civil Surgeon.
 - (xiv) One set of Photostat copies of all the above certificates.
6. Once the admission procedure is completed, the admitted candidate will get all his/her Original certificates except T.C., C.C. and Migration certificate.
7. The university reserves the right to fill or not to fill the seats earmarked for a particular course on administrative reasons.
8.
 - (a) The University reserves the right to deny entry into AUCET-2009 if the University finds the antecedents of the candidate are bad. If the University finds the antecedents of the candidates are bad subsequent to the AUCET-2009, his/her rank can be cancelled and the candidate can be denied admission into any program under AUCET-2009.
 - (b) All the admissions are purely provisional and the University reserves the right to cancel the admission at any stage.
9. **Guidelines for admission:**
 - 1) Admission will be given to only those students who submit C.C, T.C, P.C. and D.D. at the time of counseling. Without any of these certificates admission will not be given.
 - 2) The conversion of reserved / special category seats into other category will not be made in the first phase.
 - 3) The student has to select the course of study at the time of counselling for admission. Sliding from one college to another college or from one course to another course in the same test will not be allowed in the first phase. However, sliding is allowed to a candidate joined in a particular course of one test to another course of a different test as per rank order in first counselling if any. An amount of Rs.300/- has to be paid for every sliding.
 - 4) Candidates who did not claim their reservation / special category at the time of submission of their applications will also be allowed under that particular category subject to production of original certificates.
 - 5) If seats under Other States quota in M.Sc. Agricultural Biotechnology, M.Sc. Coastal Aquaculture and Marine Biotechnology, M.Sc. Space Physics, M.Sc. (Tech.) VLSI Design and M.Sc. (Tech.) DSP & ESD are not filled they shall be converted as regular seats under open category.

- 6) Cancellation of seats: Cancellation of seats will be made with 10% deduction from the total fee collected before completion of first phase of counseling and 20% deduction before completion of second phase counseling and with no fee refund after second phase of counseling.
- 7) Late comers for the counseling on the scheduled date will be considered for counseling only for the remaining seats.

ADDITIONAL INFORMATION FOR 5 YEAR INTEGRATED, DOUBLE DEGREE AND TWINNING PROGRAMMES:

1. 5 Year Integrated Programmes (with Test) (For Intermediate / 10+2 level):

- (i) Admissions into 5 Year Integrated P.G. Programmes will be processed as per rank order obtained in the entrance test conducted by Directorate of admissions, A.U.
- (ii) The programmes will be run in semester pattern with internal assessments and continuous evaluation in practicals. There will be ten semesters in all.
- (iii) There will be no provision for the students to discontinue at the end of 3rd or 4th year to claim an alternative degree.

2. 2 Year Double degree Masters Programmes in M.S. Digital Signal Processing and M.S. Software Engineering and M.S. Telecommunication Systems (with Test):

- (i) Double degree programmes (DDP) are designed for the advantage of Student Community through which students can get M.S. degree from Andhra University and M.Sc. degree from Blekinge Institute of Technology (BTH), Sweden. These degrees are recognized in India through Andhra University and also globally, mainly in Europe, through Blekinge Institute of Technology, Sweden. This special arrangement increases the face value of the degrees and makes them free from local recognition hurdles which students usually face at the time of employment or Ph.D. Studies in India or Sweden after pursuing degrees from a foreign university. These programmes protect the future of the students in a better way both in India and abroad.
- (ii) Admission into M.S. Digital Signal Processing, M.S. Software Engineering, or M.S. Telecommunication Systems under Double Degree Programmes will be processed as per rank order obtained in the respective entrance tests to be conducted by Directorate of admissions.
- (iii) The programmes are structured in four semesters in such a way that students pursue their education both in India and Sweden. The candidate shall attend first semester at Andhra University and second & third semesters at BTH, Sweden. Fourth semester can be pursued either at A.U. or BTH, Sweden as per the option of the candidate.
- (iv) Requirement for admission into these courses is a minimum of 55% marks in the qualifying examination.
- (v) Candidates should have their education in English as medium of instruction from secondary (10th class) level onwards.
- (vi) There will be no provision for the students to discontinue the course in the middle of the program and claim alternate degree.

3. 2 Year M.S. Molecular Biology & Biotechnology a twinning Post Graduate programme in collaboration with Kansas State University, USA (with Test):

- (i) M.S. Molecular Biology & Biotechnology program is designed as a twinning program of Andhra University in collaboration with Kansas State University for the advantage of student community.
- (ii) Admission into this programme will be processed as per rank order obtained in the entrance test conducted by Directorate of Admissions, Andhra University.
- (iii) Under this programme, students shall take instruction for first two semesters at Andhra University to complete eighteen credits and subsequently pursue the remaining credits required for course completion at Kansas State University.
- (iv) Only those candidates who complete the first two semesters at Andhra University with a minimum grade of B or 3.0 grade point average shall be allowed to register for the remaining credits at Kansas State University.
- (v) Each candidate must qualify in TOEFL examination and submit its score before the end of first semester without which the registration at Kansas State University can not be processed.
- (vi) Candidates should have their education in English as medium of instruction from secondary (10th class) level onwards.
- (vii) There will be no provision for the students to discontinue the course in the middle of the program and claim an alternative degree.

4. B.Engg. - Aircraft Engineering: A four year twinning programme with Perth College, UK. (with Test):

- (i) This programme is introduced to facilitate direct entry to second year of the B.Engg. - Aircraft Engineering course at Perth College, U.K. and to encourage collaborative activity with it.
- (ii) Admission into this course will be processed as per the rank order obtained in the entrance test conducted by Directorate of admissions, A.U.
- (iii) Under this programme, students will take instruction for first two semesters at A.U. and the remaining at Perth University, U.K.
- (iv) Each candidate must qualify in IELTS / TOEFL examination and submit its score before the end of first semester.

General Regulations during study of the course:

1. As per the UGC guidelines all Candidates admitted into the various courses of study are required to put in a minimum of 75% of class room attendance. Candidates not securing a minimum of 75% attendance should repeat the course. The name of a student who continuously remains absent for a period of 10 days from the date of admission without valid reason and intimation to the concerned Head of the department shall be removed from the rolls.
2. Candidates admitted into full-time (day) courses should not undertake any assignment /employment or study any other course simultaneously (except evening diploma course where he/she has to get no objection certificate) and any violation leads to cancellation of admission.
3. Payment of residential scholarships in respect of eligible students of all categories is conditional on their putting a minimum attendance of 75% in the college in each quarter. If the candidate puts in less than 75% of attendance for valid reasons, he/she shall be paid scholarship in proportion to the attendance. Those who are absent themselves without valid reasons will not be paid any scholarship.
4. Examinations shall be conducted at the end of each Semester. No supplementary examination will be conducted.
5. **RAGGING** in any form by any student will make him/her liable for expulsion/punishment as per A.P. Ragging Act 26 of 1997 and subsequent Supreme Court verdict.
6. Only **limited Hostel accommodation** is available. Hostel admission is subject to the rules in force from time to time. Candidates under self-finance category will be considered for hostel accommodation subject to availability of seats only after accommodating students under regular category.

X. RESERVATION OF SEATS:

Admission into various courses of study shall be made on the basis of AUCET-2009 Rank and eligibility criteria subject to the rule of reservation as detailed below:

A. LOCAL CANDIDATES:

In every course of study 85% of the available seats are reserved in favour of the Local Candidates from the districts of Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur and Prakasam belonging to Andhra University area and students from Kurnool Silver Jubilee College and Sri Padmavathi Mahila Viswavidyalayam (Tirupathi). The reservation, however, does not apply to any course of study in which the total number of available seats does not exceed three. While determining the number of seats reserved in favour of local candidates, any fraction of a seat is counted in favour of local candidates provided there is at least one unreserved seat for which locals and non-locals compete.

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; OR
 - 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 be regarded as a local candidate of AU/OU/SVU.
 - 2.1 If he/she has 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 has studied for the maximum period out of the 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; OR
 - 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 examinations, he/she 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 has resided last in such equal periods.

Candidates claiming reservation under local category should submit the relevant certificate by downloading the appropriate proforma from the **website www.andhrauniversity.info/doa**.

3. The remaining 15% of unreserved seats can be competed by the categories mentioned below:
 - a) All candidates defined as "Locals" of Andhra University area, and
 - b) The following categories of candidates who are defined as "Non-locals" for the present purpose: (i) All candidates, who are locals for Osmania and Sri Venkateswara University areas. (ii) Candidates who have resided in the State of Andhra Pradesh for a total period of ten years, excluding periods of study outside the State; or either of whose parents have resided in the State for a period of ten years excluding periods of employment outside the State. (iii) Candidates who are spouses/children of those in the employment of the State or Central Government, Public Sector Corporations, Local Bodies, Universities,

Educational Institutions recognised by the Government and similar State or quasi Government Institutions within the State. A Certificate to that effect from the Head of the Institution or Department should be enclosed.

B. OTHER CATEGORIES OF RESERVATION:

(The allocation of percentage of seats as detailed below is as per G.O.M.S.No.184, Education (EC-2) Department, dt. 20-8-1993, G.O.M.S.No.116 SW(CV-1) dt. 10-12-1999 and G.O.M.S.No.91 dated 23-12-2004 as amended upto date:

- (a) Scheduled Castes (SC):15%; Scheduled Tribes (ST): 6%; Listed Backward Classes (LBC): 29% (A-7%, B-10%, C-1%, D-7%, E-4%).
- (b) NCC: 1%; Sports: 0.5%; Children of Armed Forces Personnel (CAP): 2% of seats be filled by horizontal method of reservation.
- (c) PH: 3% of seats be filled by following horizontal method of reservation i.e., 3% within each category. This rule of reservation is as per the G.O.M.S.No.339, Education (EC.2) Department dated 15-12-1999. In the absence of suitable PH candidates in the respective categories, these seats will be filled-in with other candidates of the same category.
- (d) 33.33% of the seats in each course shall be **reserved in favour of women** candidates in each category. This rule of reservation shall not be applicable if women candidates selected on merit in each category form 33.33% or more of the seats therein.
 - i) In the absence of eligible women candidates in categories of SC, ST, BC Groups A, B, C, D, E, CAP, NCC, PH and Sports, those seats will be filled in with men candidates of the same category. (G.O.M.S.no.184, dt.20-8-1993);
- (e) The number of seats reserved under various categories shall be calculated on the total seats available in the respective units given below:
 - i) All Science courses offered by A.U. College of Science & Technology, Visakhapatnam and A.U. College of Engineering are taken as one unit.
 - ii) Diploma courses offered by A.U. College of Science & Technology, Visakhapatnam are taken as one unit.
 - iii) Science courses offered by all affiliated colleges under the Government and Private management are taken as one unit.
 - iv) All Arts courses offered by A.U. College of Arts & Commerce, Visakhapatnam; A.U. Campus, Kakinada; A.U. Campus, Vizianagaram and A.U. Campus, Tadepalligudem are taken as one unit.
 - v) Diploma courses offered by A.U. College of Arts & Commerce, Visakhapatnam are taken as one unit.
 - vi) Arts Courses offered by all Affiliated Colleges under Government & Private management are taken as one unit.
 - vii) M.Sc. Computer Science course offered by A.U. College of Engineering, Visakhapatnam is taken as one unit.
 - viii) M.Sc. Computer Science course offered by all affiliated colleges is taken as one unit.
 - ix) 5 year Integrated MS Programmes offered in A.U. Campus colleges are taken as one unit.

In the calculation of seats under reservation for various categories if there is any fraction it should be rounded off to the nearest or otherwise without affecting the sanctioned strength.
- (f) 1% supernumerary seats in each course are available in A.U. Campus to candidates belonging to NSS local candidates.
- (g) 5% supernumerary seats in each course are available in A.U. Campus to candidates belonging to Other States.
- (h) To consider a candidate under **Other States** category, the candidate should have studied in any state other than A.P. and be a native of a place outside A.P.
- (i) 15% supernumerary seats are available in A.U. Campus Colleges to **Foreign students** in each course as per the D.O.No.F.1-30/94 (CPP-11) of UGC subject to their eligibility. Such candidates need not appear for the Entrance Test. Their applications will be considered under separate fee structure applicable to foreign students.

C. PROCEDURE FOR ADMISSION TO RESERVED SEATS:

SC, ST and LBC (A, B, C, D, E) seats will be filled as per the order of merit (Rank) in each category.

In case of special reservation, University will constitute expert committees with competent authorities and they will fix the priority.

NCC:

Seats under NCC category will be considered in the following order of priority: (Lr. No. APSCHE.UM-651.UNI.Gen / 2001 dt 22-11-2001.

Priority-I: NCC cadet participants at International level selected for the youth exchange programme.

Priority-II: NCC cadet participants at National level in the following order of priority:

- i) Republic day camp at New Delhi ii) All India Thal Sainik camp/ Nau Sainik camp/ Vayu Sainik Camp for Republic day banner competition. iii) National Integration camp at A & N Islands. iv) Participants of parajumps/ skydiving / mountaineering at National level/medal winners at National shooting competition with National Rifle Association/ Award winner in NCC games at National level.

Priority-III: i) Participants of RD parade at State level ii) Participants of Independence Day parade at State level.

(priority with in the selected category will be given to C, B, A, certificate holders in that order)

Note: 1) If there are two or more candidates in any sub-category, the admission will be made based on the AUCET rank.

2) The relevant certificate should have been obtained by the candidate during the study for the qualifying examination.

SPORTS:

The candidates should have participated in Sports atleast at University level during their study for the qualifying examination. The seats will be filled as per the following order of preference: (i) represented the country and participated at International level; (ii) represented the State and participated at All-India level; (iii) represented the University and participated at Inter-University level.

No extra weightage shall be given to candidates for representation in more than one game or sport or representation for more than once in the same game or sport. The priority will be decided based on the highest entitlement from among the priorities admissible to a particular candidate based on his/her representation in different games/sports.

Participation in the following games and sports only shall be considered under this category **duly certified by recognized sports bodies or associations:** Cricket, Football, Hockey, Volley Ball, Basket Ball, Tennis, Kabadi, Shuttle-Badminton, Ball-Badminton, Table Tennis, Athletics, Swimming, Weight Lifting, Wrestling, Boxing, Gymnastics, Kho-Kho, Hand Ball, Chess, Cycling, Rowing, Body Building, Shooting, Squash Roquette and Tike Wonda.

Candidates applying under sports category shall have to produce the following documents:

1. Certificate issued by a recognised Sports Body or Association.
2. Duly attested photostat copy of the letter of the concerned institution which has directed the candidate to participate at the sports or games events along with other participants of the team.
3. Group photos or paper cutting, if any, as a proof of participation of the candidate at the sports or games events.

PHYSICALLY HANDICAPPED (PH):

The University will constitute a Committee with medical experts to assess the extent of handicap and the suitability of the candidate to pursue the course to which admission is sought. The decision of the Committee in the matter shall be final. The committee will decide the priorities in accordance with the Provisions of G.O.M.S.No.339 Education (EC-2) Department dated 15-12-1999 and as per the letter No.C2/4633/2000 dt. 28-9-2000 of the Commissioner, Disabled Welfare & State Commissioner under persons with Disability Act 1995, Hyderabad. As per the provisions of G.O. 3% of the seats are reserved horizontally for Physically handicapped in each group in the following cyclic order. (i) 1% for Visually Handicapped; (ii) 1% for Hearing Impaired and (iii) 1% for Orthopaedically Handicapped.

- (1) The above reservation shall be rotated in cyclic order as follows: (a) If candidates in Visually Handicapped category are not available, the vacancy can be filled up by the candidate in the category of Hearing Impaired; (b) In case of the hearing impaired candidates are also not available, the vacancy can be filled up by the candidates in the Orthopaedically Handicapped category.
- (2) In case, Physically Handicapped candidates are not available among the three categories mentioned above, the unfilled vacancies shall be filled with other candidates on the basis of merit in the respective categories.
- (3) The candidates with the following defects shall not be eligible for admission: (a) Mentally retarded; (b) Deaf and Dumb; (c) Chronic Heart, lung, kidney, liver diseases; (d) Muscular Dystrophy.

CHILDREN OF ARMED FORCES PERSONNEL (CAP):

Candidates claiming reservation under this category should submit the certificate issued by the concerned authority by downloading the appropriate proforma from the **website www.andhrauniversity.info/doa/index.html** Admissions will be made from among the eligible candidates qualified at AUCET-2009 in the order of priority as decided by the Experts Committee.

NATIONAL SERVICE SCHEME (NSS):

(a) Service Certificate from the Principal of the College to that effect that he/she has served for 240 hours of regular NSS work, and (b) Participated in at least one special camp in the period of service in NSS during their study for qualifying examination. The relevant certificate duly signed by the Vice-Chancellor and the Coordinator only will be accepted.

APPENDIX-I: Courses offered and Eligibility Criteria for admission
All P.G. Courses are of two years duration unless otherwise specified

<i>Test & Course</i>	<i>Eligibility</i>	<i>Test & Course</i>	<i>Eligibility</i>
COURSES WITH TEST			
Test No. 101 Biochemistry		M.Sc. Applied Chemistry	B.Sc. Chemistry / Applied Chemistry / Industrial Chemistry (as main wherever applicable) as one of the subjects.
M.Sc. Biochemistry	B.Sc./B.Sc. (Vocational) Chemistry/Biochemistry as one of the three subjects (as main wherever applicable) and B.Sc.(Vocational) with Food Science & Quality Control.	Test No. 105 Computer Science & Statistics	
Test No. 102 Biotechnology		M.Sc. Computer Science & Statistics (offered at department of Statistics, A.U.)	B.Sc / B.A with any two of the following subjects: Mathematics, Statistics & Computers; B.C.A students with mathematics in Intermediate course.
M.Sc. Biotechnology	B.Sc./B.Sc. (Vocational) with any two of the following subjects: Biotechnology, Biochemistry, Botany, Zoology, Chemistry, Microbiology, Env. Science, Human Genetics, Fisheries, Aquaculture and Mathematics, B.Sc.(Vocational) with Food Science & Quality Control.	Test No. 106 Electronics	
M.Sc. Agricultural Biotechnology (4 Seats*) (offered at department of Botany, A.U.).	B.Sc./B.Sc. (Vocational) with any two of the following subjects: Botany, Biotechnology, Microbiology, Biochemistry, Horticulture, Agriculture, Forestry, Genetics, Chemistry, Environmental Science, Seed Technology, Zoology, B.Sc. (Vocational) Food Science and Quality control. or 4 years B.Sc. (Agriculture).	M.Sc. Electronics	B.Sc., with Electronics (as main wherever applicable) Mathematics and any other subject. B.Sc. Mathematics and any other subject with P.G. Diploma in Electronics, P.G. Diploma in Instrumentation.
M.Sc. Environmental Sciences (offered at department of Envi.Sciences, A.U.)	B.Sc. / B.Sc. (Vocational) with Chemistry and any two of the Life Science Subjects as Optionals. B.E.M / B.Sc.(Ag) / B.Sc. (Vocational) with Food Science & Quality Control.	M.Sc.(Tech.) Electronics & Instrumentation (3 years duration) (offered at department of Systems Design)	
M.Sc. Foods, Nutrition & Dietetics.	B.Sc. with any life science subject as one of the subjects in Part-II. Upto a maximum 50% of the total seats will be filled by students qualified under Biotechnology test.	M.Sc.(Tech.)VLSI Design# (20 Seats*)	B.Sc. Degree with Mathematics and any two of the following five subjects: Physics, Chemistry, Electronics, Computer Science and Statistics.
Test No. 103 Botany		Test No. 107 Foods, Nutrition & Dietetics	
M.Sc.Botany	B.Sc. Botany (as main wherever applicable) and any other two science subjects including vocational subjects.	M.Sc. Foods, Nutrition & Dietetics	B.Sc. Home Science, B.Sc. (Vocational) Food Science & Quality control and B.Sc. with Nutrition as one of the subjects. Upto a maximum 50% of the total seats will be filled by students qualified under Foods, Nutrition & Dietetics test.
M.Sc. Horticulture & Landscape Management.	B.Sc./B.Sc. (Vocational) with any two of the following subjects: Botany, Biotechnology, Microbiology, Biochemistry, Horticulture, Agriculture, Forestry, Genetics, Chemistry, Environmental Science, Seed Technology, Zoology, B.Sc. (Vocational) Food Science and Quality control. or 4 years B.Sc. (Agriculture).	Test No. 108 Geography	
Test No. 104 Chemistry		M.Sc. Geography	B.A. with Geography as one of the subjects or B.Sc. with any three science subjects.
M.Sc. Chemistry with the following specialisations (i) Analytical Chemistry (ii) Bio-Inorganic Chemistry (iii) Analysis of Foods, Drugs & Water (iv) Environmental Chemistry (v) Inorganic Chemistry (vi) Marine Chemistry (vii) Nuclear Chemistry (viii) Organic Chemistry (ix) Physical Chemistry	B.Sc. Chemistry/Applied Chemistry (as main wherever applicable) as one of the subjects.	Test No. 109 Geology	
		M.Sc. Geology	B.Sc. Geology (as main wherever applicable) with any other two subjects.
		M.Sc. Marine Geology	-do-
		M.Sc. (Tech.) Applied Geology (3 years duration)	B.Sc. Geology (as main wherever applicable) with any two of the following subjects; Mathematics, Physics, Chemistry, Mineral beneficiation and Materials Handling.
		Test No. 110 Human Genetics	
		M.Sc. Human Genetics	B.Sc. with any three of the following subjects: Botany, Zoology, Chemistry, Biochemistry, Genetics, Human Genetics, Biotechnology, Microbiology and Medical Lab Tech.
		M.Sc. Molecular Genetics	-do-

Vacant seats if any will be filled with candidates from Physics (Test No. 114), Computer Science (Test No. 301) and Mathematics (Test No. 112) tests in that order.

<i>Test & Course</i>	<i>Eligibility</i>	<i>Test & Course</i>	<i>Eligibility</i>
Test No. 111 Marine Living Resources M.Sc. Marine Biology and Fisheries M.Sc. Coastal Aquaculture & Marine Biotechnology (5 Seats*) M.Sc. Marine Biotechnology	B.Sc. Zoology (as main wherever applicable) and any other two science subjects.	Test No. 203 Commerce M.Com.	B.Com. (including vocational and restructured courses), B.B.M.
Test No. 112 Mathematics M.Sc. Applied Mathematics	B.Sc. Mathematics (as main wherever applicable) with Maths, Physical Sciences in Intermediate or 10+2 level.	Test No. 204 Economics M.A. Appl. Economics M.A. Economics	B.A. with Economics as one of the subjects.
M.A./M.Sc. Mathematics	B.A./B.Sc. Mathematics (as main wherever applicable).	Test No. 205 B.Ed. - Spl. Education - Biological Sci. ^B.Ed. Special Education Visual Impairment Biological Sciences	B.Sc. Biological Sciences
Test No. 113 Microbiology M.Sc. Microbiology	B.Sc./B.Sc. Vocational with a combination of any two of the following subjects: Microbiology, Biochemistry, Botany, Zoology, Chemistry, Human Genetics, Environmental Sciences, Home Science, Dairy Sciences, Fisheries, App. Nutrition, Nutrition & Dietetics, Biotechnology, Medical Lab. Technology, Public Health, Nursing, Plant Protection, Agriculture and Horticulture/Forestry, B.Sc. Agriculture, B.Sc. Home Science.	Test No. 206 B.Ed. Spl. Education - Mathematics ^B.Ed. Special Education Visual Impairment Mathematics	B.A./B.Sc. Mathematics
Test No. 114 Physics M.Sc. Physics M.Sc. Space Physics (10 Seats*) M.Sc. Nuclear Physics M.Sc. Meteorology M.Sc. Physical Oceanography	B.Sc. Physics (as main wherever applicable), Mathematics and any other subject.	Test No. 207 Education - Social Sciences ^B.Ed. Special Education Visual Impairment - Social Sciences M.A. Adult & Continuing Education	B.A./B.Com./B.F.A. B.A./B.Com./B.B.M.
M.Sc.(Tech.) Geophysics (3 years duration) M.Sc. Marine Geophysics M.Sc. Hydrology	B.Sc. Physics (as main wherever applicable), Mathematics and any other non biological science subjects.	^ B.Ed. Special Education completed students are eligible only for Special and integrated schools	
M.Sc.(Tech.) Electronics & Instrumentation (3 years duration) (offered at department of Systems Design)	B.Sc., with Electronics (as main wherever applicable) Mathematics and any other subject. B.Sc. Mathematics with P.G. Diploma in Electronics, P.G. Diploma in Instrumentation.	Test No. 208 English M.A. English	B.A. (special English)/B.A./B.Sc./B. Com./B.A. (O.L)/B.F.A./B.A.L. (with Part-I General English for a minimum of 200 marks or more).
Test No. 115 Statistics M.Sc. Statistics	B.A./B.Sc. Mathematics and Statistics (with one of them as main wherever applicable) and any other subject.	Test No. 209 Fine Arts B.F.A. (4 years duration)	A pass in higher secondary course (H.S.C.) 10+2 pattern or Intermediate examination or its equivalent.
Test No. 116 Zoology M.Sc. Zoology	B.Sc./B.Sc. Vocational Zoology (as main wherever applicable) and any other two science subjects.	Test No. 210 Hindi M.A. Hindi	Any bachelor degree in Arts, Science or Commerce with Hindi as one of the subjects or any bachelor degree holder in Arts, Science or Commerce without Hindi as one of the subjects, but having a diploma such as Sahitya Ratna, Bhasha Praveena or Vidwan or Equivalent to that.
M.Sc. Anthropology (offered at department of Anthropology, A.U.)		Test No. 211 History M.A. Ancient History & Archaeology M.A. History	B.A. with History or B.A.(O.L.) with History or B.F.A B.A with .History or B.A.(O.L) or B.A.L.
M.Sc. Fishery Science	B.Sc. Zoology (as main wherever applicable) and any other two science subjects /B.Sc. with Aquaculture, Fisheries and Industrial Fisheries.	Test No. 212 Human Resource Management M.H.R.M.	Any graduate (except B.F.A. / B.O.L.)
		Test No. 213 Human Rights & Duties M.A.(H.R.D.)	B.A./B.Com./B.Sc./B.Sc.(Home Science)/B.Sc. (Agriculture)/B.Sc. (Nursing)/B.B.M./B.C.A./B.L. / B.A.L.
		Test No. 214 Journalism & Mass Communication M.J.M.C.	B.A. /B. Com./B. Sc./B. B. M./B.C.A./B.A.L./B.A.(O.L.).
		Test No. 215 Library & Information Sciences M.L.I.Sc.	B.A./B.Com./B.Sc./B.A.L./B.B.M./B.C.A./B.A.(O.L.).

<i>Test & Course</i>	<i>Eligibility</i>	<i>Test & Course</i>	<i>Eligibility</i>	
Test No. 216 M.Ed.	M.Ed. B.Ed. Degree of this University or any other University recognised by A.U.	5-YEAR INTEGRATED MS PG PROGRAMMES		
Test No. 218 Philosophy	M.A. Philosophy B.A./B.Sc./B.Com. and B.A.(O.L.).	Test No. 501	A pass in Intermediate with Mathematics, Physics, Chemistry (MPC) / Biology, Physics, Chemistry (BiPC) or equivalent as recognized by Board of Intermediate Education, Andhra Pradesh with a minimum of 50% marks. In case of SC/ST candidates a minimum pass in the qualifying examination is sufficient.	
Test No. 219 Politics & Public Administration	M.A. Politics M.A. Public Administration Any degree general or professional or vocational or technical awarded after a minimum study requirement.	(i) M.S. Applied Chemistry (ii) M.S. Geology		
Test No. 220 Psychology	M.A. Psychology B.A./ B.Sc. or B.Com.	Test No. 502	A pass in Intermediate or its equivalent examination with 50 per cent of marks	
Test No. 221 Quantitative Economics	M.A./M.Sc. Quantitative Economics B.A./B.Sc. with Mathematics (Compulsory) and any one of the three as group subjects: Economics / Statistics/ Computer Science with a minimum of 50% aggregate marks in group subjects/ B.E./B.Tech. with minimum of 50% aggregate.	Test No. 503	A pass in Intermediate examination of Andhra Pradesh with Mathematics, Physics and Chemistry as subjects of study or its equivalent with a minimum of 50% marks.	
Test No. 222 Sanskrit	M.A.Sanskrit B.A./B.Sc./B.Com with Sanskrit or Vidya Praveena with P.O.L. or Bhasha Praveena with P.O.L. or B.A.(OL) with Sanskrit or Senior P.G.Diploma in Sanskrit.	(i) M.S. Computer Science & Information Technology (ii) M.S. Software Engineering (iii) M.S. Civil Engineering (iv) M.S. Mechanical Engineering (v) M.S. Electrical & Electronics Engineering		
Test No. 223 Social Work	M.A. Social Work M.A. Anthropology (offered at department of Anthropology, A.U.) B.A. Social Work / Social Sciences as one of the subjects / B.Sc./ B.C.A. / B.Com./B.A.L./B.F.A./ B.B.M. B.A./B.Com./B.B.M./B.F.A./B.A.L.	TWINNING PROGRAMMES		
Test No. 224 Sociology	M.A. Sociology B.A./B.Com./B.Sc./B.Sc.(Home Science)/B.Sc. (Agriculture) / B.Sc. (Nursing)/B.B.M./B.C.A./B.A.L.	Test No. 511	A pass in Intermediate examination of Andhra Pradesh with Mathematics, Physics and Chemistry as subjects of study or its equivalent with a minimum of 50% marks.	
Test No. 225 Telugu	M.A. Telugu B.A./B.Com./B.Sc./ with Telugu as a subject of study or B.A.(OL) or Bhasha praveena with Part I Telugu of B.A. or B.Com. or Bhasha Praveena with P.O.L.	B.Engg. Aircraft Engineering (4-Year Programme)	B.Sc. Graduates with a minimum of 50% aggregate marks in Chemistry along with any two of the following subjects: Biochemistry, Biotechnology, Microbiology, Botany, Zoology, Genetics, Human Genetics are eligible.	
Test No. 226 M.P.Ed.	M.P.Ed. (SF) (two year course) Candidates who have passed B.P.Ed. of this University or B.P.Ed. or B.P.E. of any other University recognized as equivalent there to.	Test No. 512		
Test No. 301 Computer Science	M.Sc.Computer Science (i) To have passed intermediate examination of state of A.P. with Mathematics as a course of study at 10+2 level; and (ii) Three year B.Sc. degree programme of Andhra University with Mathematics and computer science / Three year B.C.A. degree programme of Andhra University or an examination recognized by the Andhra University as equivalent.	M.S. Molecular Biology & Biotechnology (2-Year Programme)	2-YEAR DOUBLE DEGREE PROGRAMMES	
		Test No. 521	M.S. Digital Signal Processing	B.Tech. E.C.E./B.Tech. Instrumentation Technology / M.Sc. Instrumentation
		Test No. 522	M.S. Software Engineering	B.E. or B.Tech. Computer Science / Information Technology/ MCA./ M.Sc. Computer Science.
		Test No. 523	M.S. Telecommunication Systems	B.E./ B.Tech. (ECE/CSE) M.Sc. Electronics / MCA or equivalent.

<i>Test & Course</i>	<i>Eligibility</i>	<i>Test & Course</i>	<i>Eligibility</i>
SCIENCE COURSES (WITHOUT TEST)			
Course No. 152 M.Tech. Atmospheric Science (5 Seats*) (2 Year course)	M.Sc. with 55% in Physics / Electronic / Meteorology / Physical Oceanography / Mathematics / Applied Mathematics / Nuclear Physics.	Course No. 154 M.Tech. Ocean Sciences (5 Seats*) (2 Year course)	M.Sc. with 55% in Meteorology / Physical Oceanography / Physics / Electronics / Mathematics / Applied Mathematics / Nuclear Physics / Computer Science & Applications / Geophysics / Environmental Science (Mathematics and Physics at the B.Sc. level is necessary) or B.Tech./B.E. in Civil Engg. / Mechanical Engg. / Computer Science & Engg. / Industrial Engg. / Electronics / Electrical Engg. / Environmental Engg.
Course No. 153 M.Tech. Petroleum Exploration (14 Seats*) (2 Year course)	M.Sc./M.Sc.Tech. Geology, Marine Geology, Applied Geology, Geophysics, Marine Geophysics, B.Tech. Chemical / Mechanical / Petroleum Engineering.		
ARTS COURSES (WITHOUT TEST)			
Course No. 251 M.A. Dance (Self finance)	B.A. Dance / B.A./ B.Com./ B.Sc./ B.C.A. /B.E./M.B.B.S. Preference will be given those who have passed Diploma / Certificate. Selection will be strictly based on the performance in Dance at the time of counselling.	Course No.253 M.Ed. Special Education Visual Impairment (V.I)	B.Ed.(VI) Special Education or B.Ed with Diploma in Special Education (VI) (Admissions will be made on All India basis for the vacant seats after the normal procedure of admission).
Course No. 252 M.A. Music	(i) Candidates with B.A.Music or B. Music or (ii) Candidate of B.A./ B.Com./B.Sc./B.C.A./B.E./M.B.B.S. should have passed diploma / certificate in Music. or (iii) Any graded artist in AIR in Carnatic Classical Music with any degree. Note: "Music" means Carnatic Classical Music". Maximum age limit is 50 yrs.	Course No. 254 M.A.Women Studies & Computer Applications (for women only)	Any graduate or any other degree recognised as equivalent.
		Course No. 901 M.Phil. Counseling Psychology (Professional) (2 Semesters) (SF)	M.A. Psychology with 55% aggregate.
PG DIPLOMAS			
PGD-611. P.G. Diploma in Phytopharma Technology (offered at MVR P.G. College, Vsp.)	M.Sc. Botany / Microbiology / Biochemistry	PGD-621. P.G.Diploma in Cooperation & Rural Studies (One year course)	B.A./B.Com./B.Sc./B.A.L.
		PGD-622 P.G.Diploma in Rajabhasha in Hindi (two year course)	B.A. / B.Sc. / B.Com./B.B.M./ B.E. with Hindi or a diploma in Hindi treated as equivalent to graduate course of this University.

* Seats mentioned in the parentheses will be filled on all India basis in addition to regular seats.
Note:The University has the right to offer or not to offer any of the courses notified.

APPENDIX-II

SYLLABI FOR ENTRANCE TESTS IN SCIENCES, ENGINEERING, ARTS & COMMERCE

The syllabus prescribed hereunder for the tests is generally the same as the one followed for B.Sc./B.Com. / B.A. Degree under Common Core Scheme effective from 2004-07, unless otherwise specified.

Test No. Subject	Part - A	Part - B	Part - C
101. Biochemistry	<p>Structure and functions of liver, kidney, Composition of blood, blood coagulation, Digestion and absorption of proximate principles, Biological value of proteins, protein malnutrition disorders, Chemistry and physiological role of vitamins, Role of minerals in living systems, Structure and physiological roles of hormones, Basic features of immune response, Lymphoid system, T and B lymphocytes, Cellular and humoral immunity, Classes and structure of immunoglobulin, RIA, ELISA, Vaccines.</p> <p>Bacteria, Viruses, Organisation of genome in prokaryotes and eukaryotes, DNA replication, Biosynthesis of RNA, Protein synthesis, Genetic code, Inhibitors of DNA replication, transcription and translation, Basic concepts of regulation of gene expression, principles and applications of recombinant DNA technology.</p>	<p>Principles of enzymology, Bioenergetics, Biological oxidations, Metabolism of carbohydrates, lipids, proteins, amino acids and nucleic acids.</p>	<p>Classification, chemistry and physico-chemical properties of amino acids, proteins, nucleic acids, carbohydrates, lipids, porphyrins, P^H and Buffers, Biomembranes – composition and organisation, Basic principles of biochemical separation methods – paper, thin layer, ion-exchange, affinity chromatography, gel filtration, Centrifugation, Electrophoresis – paper, polyacrylamide, agarose gels. Basic principles of Colorimetry and spectrophotometry. Radio isotopes and their use in Biochemistry.</p>
102. Biotechnology	<p>Basic concepts of free energy, entropy and enthalpy. First and second laws of thermodynamics. Chemical equilibrium - Law of mass action. Principles of chemical kinetics - Zero order and first order reactions. Effect of concentration, temperature and catalyst on the rate of reaction. The ascent of sap in plants. Circulation and excretion in mammals. Composition and functions of blood. Structure and functions of kidney. Physiological role and biochemical actions of hormones in human body. Phytohormones.</p> <p>Enzymes & coenzymes - Factors effecting enzyme action - Specificity. enzyme inhibition. Digestion and absorption of carbohydrates, Glycolysis and TCA cycle. oxidative phosphorylation and electron transport. Photosynthesis and photorespiration. Synthesis and degradation of fatty acids and triglycerides. Biological nitrogen fixation. Essential amino acids. Urea cycle. DNA - structure, replication, damage and repair. Types of RNA, Genetic code and protein synthesis. Role of trace elements (Ca, P, Fe, Cu, Zn, I and Co) in living systems.</p>	<p>Acid - base theories, pH and buffers, normality and molarity. types of solutions, solubility of solids in liquids. Viscosity, osmosis and osmotic pressure. Properties of colloids. Principles of oxidation and reduction. Isomerism - Stereo, structural and geometrical isomers. Optical activity. Classification of viruses. Ultra structure of bacteria, cyanobacteria, eukaryotic algae, yeast and fungal cells. Straining techniques. Economic importance of algae and fungi. Anotomy of stem leaf and root. Outlines of apomixis, parthenocarp and polyembryony - History and scope of immunology. Vaccination and types of vaccines. Blood groups.</p>	<p>Ultra structure of cell and cell organelles. Mitosis and meiosis. Mendelian principles of segregation and independent assortment. Gene interactions. Multiple alleles, linkage and crossing over and outlines of chromosome mapping. Sex linked inheritance. Natural selection, types of mutation and their significance in evolution. Genetic drift. Principles of isolation methods for proteins and nucleic acids - Precipitation, dialysis, sedimentation and adsorption. Basic principles and applications of chromatographic, electrophoretic & spectrophotometric techniques. General concepts of recombinant DNA technology, cloning vectors. Applications of Biotechnology. Isotopes (stable and radioactive) and their applications.</p>
103. Botany	<p>Taxonomy, Palynology, Embryology and utilization of Plants; Physiology, Cell Biology, Genetics and Biotechnology.</p>	<p>Gymnosperm Diversity, Structure and Development of Flowering Plants & Ecology.</p>	<p>Diversity of Microbes and Cryptogams.</p>
104. Chemistry	<p>Paper III of B.Sc. - Inorganic Chemistry, Organic Chemistry and Physical Chemistry of B.Sc.</p>	<p>Paper II of B.Sc. - Inorganic Chemistry, Organic Chemistry and Physical Chemistry of B.Sc.</p>	<p>Paper I of B.Sc. - Inorganic Chemistry, Organic Chemistry and Physical Chemistry of B.Sc.</p>

Test No. Subject	Part - A	Part - B	Part - C
105. Computer Science & Statistics	<p>Statistics: Measures of central tendency: Mean, Median and Mode. Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Coefficient of Variation.</p> <p>Random Experiment, Random Event, Elementary Events, Exhaustive Events, Mutually Exclusive Events, Independent Events. Classical definition of Probability-Relative Frequency approach to Probability-Sample Space, Sample Events. Addition and Multiplication Theorems. Random variable; Distribution functions, Probability density functions, Mean and Variance of Random Variables. Theoretical discrete distributions like Binomial, Poisson distribution-Mean and Variance of above distributions (without derivations).</p> <p>Reasoning and Mental Ability: According to GMAT syllabus.</p>	<p>Calculus : Differentiation: Definition, Differentiation of a function at a point and on an interval. Derivative of a function. Differentiation of Sum, Difference, Product and Quotient of function, Derivatives of Composite, Implicit, Parametric, Inverse circular, Hyperbolic and Inverse Hyperbolic functions, Logarithmic differentiation, Derivative of a function with respect to another function. Successive differentiation: Leibnitz theorem; Applications of Leibnitz theorem; Applications of Differentiation: Errors and approximations, geometrical interpretations of derivative, equations of tangent and normal at a point on the curve ; Lengths of tangent, normal, subtangent, subnormal at a point; derivative as a rate measure; increasing and decreasing functions; criteria for maxima and minima of functions in single variable- Partial differentiation of the first and second orders only.</p> <p>Integral Calculus : Integration as the inverse process of differentiation-Indefinite and definite integral - standard integral covering algebraic, trigonometric, exponential and hyperbolic functions - methods of integration, substitution methods - integration by parts - evaluation of definite integral, properties of definite integral. Reduction Formulae.</p> <p>Definition of ordinary differential equations - degree and order of an ordinary differential equations - formation of differential equation - general and particular solution and primitive - solution of first order differential equations.</p>	<p>Matrix Theory : Types of matrices, addition and multiplication of matrices, inverse of a matrix, determinant of a matrix, determinant of second and third order - singular and non-singular matrices. Solution of simultaneous linear equations in two and three variables by Cramer's rule - matrix inversion method and Gauss Jordan method.</p> <p>Trigonometry : Trigonometric ratios in compound angles, trigonometric ratios of multiple - sub multiple angles. Inverse circular functions, hyperbolic functions. Properties of triangles. Complex numbers and De Moivre's Theorem.</p>
106. Electronics	Paper III -Solid State Electronics Circuits and Digital Electronics.	Paper II - Electronic Devices and Circuits.	Paper I - Passive components and Circuit Analysis.
107. Foods, Nutrition & Dietetics	Family and Community Nutrition and Principles of diet in disease and Home Science extension (Papers 3 & 5 of III year)	Nutrition, Biochemistry, Microbiology (Papers 1, 4 & 5 of II year)	Food Science and Human Physiology (Papers 1, 3 of I year)
108. Geography	Regional Geography of India; - Regional Geography of Asia.	Social and Economic Geography.	Principles of Physical Geography.
109. Geology	Paleontology, Indian Geology and Economic Geology.	Petrology and Structural Geology.	Physical Geology, Crystallography and Mineralogy.
110. Human Genetics	Human Population Genetics.	Basics of Human Biology.	Elements of Human Genetics and Molecular Genetics.
111. Marine Living Resources	Paper III - (of Zoology) Animal Physiology. Paper III - (of Fisheries) Aquatic Biology.	Paper II (of Zoology) Biology of chordates and Genetics only; Paper II (of Fisheries) Capture Fisheries.	Paper I (of Zoology) Biology of Invertebrates and Cell Biology only; Paper I (of Biochemistry) Principles of Biochemistry (Amino acids, Nucleic acids, Carbohydrates).
112. Mathematics	Paper III - Rings and Linear Algebra.	Paper II - Solid Geometry and Real Analysis.	Paper I - Differential Equations, abstract Algebra.

Test No. Subject	Part - A	Part - B	Part - C
113. Microbiology	Paper III - Immunology and Medical Microbiology.	Paper II - Microbial metabolism and Molecular Biology.	Paper I- General Microbiology.
114. Physics	Paper III - Electricity, Magnetism and Electronics.	Paper II - Thermodynamics and Optics	Paper I - Mechanics, Waves and Oscillations.
115. Statistics	Paper III - Applied Statistics.	Paper II - Statistical Methods and Inferences.	Paper I- Probability and Distributions.
116. Zoology	Paper III - Animal physiology, Behaviour and Ecology	Paper II - Biology of Chordates, Genetics, Evolution and Zoogeography.	Paper I - Biology of Invertebrates and Cell Biology
203. Commerce	Business Laws; Income Tax & Practical Auditing; Cost & Management Accounting; Business Correspondence & Report Writing.	Banking & Financial Systems; Financial Accounting-II; Fundamentals of Computers.	General English; Financial Accounting-I; Industrial Organisation & Management.
204. Economics	Indian Economy and Environmental Economics.	Macro Economics.	Micro Economics.
Special Education and Adult & Continuing Education:			
205. B.Ed.Spl.Edn. Biological Sciences	Paper I (of Botany) Nonvascular plants. Paper I (of Zoology) Biology of Invertebrates and Cell Biology	Paper II (of Botany) Gymnosperms, Anatomy, Genetics & Ecology. Paper III (of Zoology) Animal Physiology, Behaviour and Ecology	<p>Note : Part C is common for Social Studies, Mathematics and Biological Sciences.</p> <p>Educational Philosophy: Meaning of Education - Aims of Education - Types of Education - Great Educators: Plato, Gandhiji, Tagore, Vivekananda, Rousseau, Pestalozzi, Froebel, Montessori, John Dewey, Constitutional Provisions.</p> <p>Educational Psychology: Nature and Functions of Educational Psychology - Individual and Needs - Learning process - Laws and theories of learning - mental hygiene - Intelligence tests - Personality test.</p> <p>Educational Trends: Democracy and Education - Socialism and Education - Universalisation of Elementary Education (UEE) - Operation Black Board (OBB) - Andhra Pradesh Primary Education Project (APPEP) - District Primary Education Project (DPEP) - (EGS) - Barefoot Teachers - Sarvasiksha Abiyan - Child Centred Approach - Activity based teaching - Joyful learning - Community Participation - Community Mobilization.</p>
206. B.Ed.Spl.Edn. Mathematics	Paper III - Rings and Linear Algebra.	Paper II - Solid Geometry and Real Analysis. Paper I - Differential Equations, abstract Algebra and Vector Calculus.	
207. B.Ed.Spl.Edn. Social Sciences & M.A. Adult & Continuing Education	Paper II - Indian History and Culture (of B.A.History) from 1526 to 1964 AD; Paper III - Regional Geography of India (of B.A. Geography)	Paper III - Political thought (of B.A. Politics) Paper I - Economic Theory (of B.A. Economics)	
208. English	Literary terms, genres, Literary Movements and Trends, Critical concepts.	Verb, Verb patterns and structures, phrasal verbs, Concord, Active and Passive Voice, Prepositions, question tags, Articles, Synonyms and antonyms, one word substitutes, Note taking, confusables.	Comprehension - unknown poem and passage, Letter Writing, Idioms and phrases.
209. Fine Arts	<p>1. Theory : General Knowledge in History of Arts (30 minutes - 50 marks)</p> <p>2. Practical : (a) Painting (90 minutes - 50 marks); (b) Drawing(90 minutes - 50 marks); (c) Sculpture (90 minutes - 50 marks)</p> <p>Note : The Department of Fine Arts will provide only Paper for drawing & painting and clay for sculpture tests. Candidates are instructed to bring their own pencils, erasers, water colours, brushes, tumbler, drawing board/pad and some instruments to work with clay. Practical Tests will be conducted on the same day after the theory examination.</p>		

Test No. Subject	Part - A	Part - B	Part - C
210. Hindi	History of Hindi Literature-General trends of Old, Medieval and Modern periods	1. <u>Hindi Gadya Sanchayan</u> :- (i)Atma Nirbharata (ii) Mitrata (iii) Padosi (iv) Bharat Ekhai (v) Samay per Milnevale. 2. <u>Hindi Katha Setu</u> :-(i) Dipti Colleter (ii) Sakh (iii) Chief Ki dawat (iv) Kafan (v) Rasapriya. 3. <u>Hindi Kavya Kusum</u> :- (i) Kabir Sakhis - (from 1-10) (ii) Surdas (Bala Leela only) (iii) Rahim (1-10 dohas) (iv) Mithilishanan Gupta - Mathru Bhoomi (v) Sumitra-nandam Pant - Sukh-Dukh (vi) Harivamsh Rai Bachhan - Madhushala (vii) Girjakumar Mathur - Itihas, Vikrut Satya (viii) Dharma Veer Bharati - Thake Huae Kalakar Se.	Translation of sentences - Change of Number - Tense - gender - Correction of Sentences - usage of 'Nae', 'Mat', 'Chahiye', Ka, Ke, Ki, Construction of Sentences, in Hindi. Phrases - their meanings.
211. History	Paper - III: History of Modern Europe (1789-1960 AD).	Paper - II: History of India (1526 to 1964 AD).	Paper - I: History of India upto 1200 AD.
212. Human Resource Management	Logical and Analytical Reasoning	HRM Aptitude & General Awareness: (B.A. I.R. Syllabus along with recent Human Resources Management Trends)	Reading Comprehension and Writing ability :Quantitative Ability
213. H.R.D.	Social and Philosophical conceptions of individual property, freedom, justice and rights; Slavery, feudalism, capitalism, socialism and globalisation; Law, society, custom, social justice; Indian constitution and Human Rights. Indian society : Ethnic and social diversity; Religion, caste and tribe; Villages : Social and Economic civilisation; Cities, migration, urbanization and slums.	Problems of poverty and unemployment; Social inequalities in India: Role of class, caste, race, culture, gender and age; concept of weaker sections : SC's, Backward classes, ST's and minorities; protective discrimination and state intervention through law and administration.	Problem of women, aged, children, tenants, agricultural workers and industrial workers; Problems of Ecological imbalance and environment; Deforestation, tribal and alienation, Development & Environment, Social Action and Social movements.
214. M.J.M.C.	General Knowledge : Mass Media related events-Origin and growth of different media i.e., Press-Radio-Television-Cinema-Advertising-Popular authors and Books.	Current Affairs : Regional - National -International significant events and issues.	Language efficiency and skills.
215. M.L.I.Sc.	Different types of libraries and their uses, Newspapers & Periodicals, Books - Their subjects and authors; Popular technical terms in various fields, abbreviations etc., Basics of Computer components - History.	National and International awards; famous persons and their fields of activities; Sports and Games; Inventions, discoveries and explorations. (Learned National & International Institutions, Societies, Associations - Their activities, Location etc.)	International and National events; Geographical names Cities, Countries, Rivers, Mountains, Parks etc.; Current Social, Political & Economic affairs.
216. M.Ed.	Teacher and Education in Emerging Indian Society; School Management	Educational Psychology and Statistics	Education Technology & Computer Education.
218. Philosophy	Paper III - Logic & Scientific Method	Paper II - Western Philosophy	Paper I - Indian Philosophy
219. Politics and Public Administration	Political Science - Concept, Theories and Institutions; Indian Government and Politics.	Public Administration – Concepts and Theories; Indian Administration.	---
220. Psychology	General Psychology Paper-I and II	Reasoning: Coding, Analogies, Odd man out, Missing series, General Knowledge, Relationships, Logical reasoning.	English: Comprehension, Grammar and Vocabulary.

Test No. Subject	Part - A	Part - B	Part - C
221. Quantitative Economics	Part A : Rings and Linear Algebra; Solid Geometry and Real Analysis; Differential Equations, abstract Algebra and Vector Calculus. Part B : Indian Economy and Environmental Economics; Macro Economics; Micro Economics. Part C : Statistics : Applied Statistics, Statistical Methods and inference, Probability and Distribution Part D : 1. (i) Fundamental of Computer Organization (ii) M S Office (iii) M S Access (iv) Programming in C; 2. (i) Basics of Programming in C++ (ii) IO Streams (iii) Arrays (iv) Templates / Abstraction.; 3. (i) Database Concepts (ii) Data Models (iii) Database Design (iv) Design Implementation Network DBMS, RDBMS, Database operations / maintenance. Note: Part A Mathematics is compulsory. Student should select any one part from the remaining Parts B, C and D.		
222. Sanskrit	Alankaras from the Chandraloka: 1. Upama, 2. Ananvaya, 3. Utpreksa, 4. Dipaka, 5. Aprastutaprasamsa, 6. Drustanta, 7. Arthantaranyasa, 8. Virodhabhasa, 9. Ullekha, 10. Svabhavokti. Sarvanamasabdhas: Asmad, Yusmad, Idam, Tad, Yad, Etad and Kim. Dhatus: In Lat, Lan, Lrt, Lot and Vidhilin only Bhu, Gaml, Stha, Drusir, Tru, Labh, Mud, Bhash, Ramu, Vadi, As, Divu Yudh, Santush, Pravis, Mucl, Ish, Lish, Dukrui, Kriy, Cur and Kath. Krt pratyayas: Ktva, Lyap, Tumum, Kta, Ktavatu, Satru, Sanac and Tavya.	1. Dasarathasya Rajyapalanam 2. Aparnajatilam 3. Dvijopakrtih 4. Caturasasakah Topics from the History of Sanskrit Literature: Magha, Bharavi, Jayadeva, Sriharsha, banabhatta, Vishnusarma, Bhattanarayana and Sankara-charya. Ajantasabdhas: Deva, Kavi Bhanu, Pitru, Dhatri, Go, Ramaa, Mati, Nadi, Tanu, Vadhu and Matru. Sandhis: Sandhibhedah, Savarnadeergha, Ayavayava, Guna, Vruddhi, Yanadesa, Scutva, Stutva, Gamudagama, Anunasika, Latva, Jastva sandhis and types of the Visargasandhi.	1. Naganandam, 2. Urubhangam, 3. Visvamitrasya Brahmar-shitvam, 4. Bhishajo Bhaishjyam. Halatasabdhas: Jalamuc, Vac, Marut, Bhagavt, Bhavat, Pacat, Rajan, Naaman, Gunin, Vidvas and Manas. Samasas: Avyayibhava, Tatpurusha, Karmadhraya, Dvigu, Dvandva and Bahuvrihi.
223. Social work	Paper II - Social Work Intervention - Methods and Strategies	Paper I - Social Work Profession, Philosophy & Concepts	Paper III - Social Science concepts for Social Workers
224. Sociology	Paper - III: Social Change and Planning	Paper - II: Indian Society	Paper -I: Principles of Sociology
225. Telugu	Paper III- History of Telugu language & Grammer. Paper IV - History of Telugu Literature, Literary criticism.	Part I(ii) : Based on paper II of II year - Prose, Chandas.	Part I(ii) : Based on paper I of I year - Old Prose, Modern Prose.
226. M.P.Ed.	1) Anatomy, Physiology and Physiology of Exercise; 2) Principles, Psychology and Methods of Physical Education; 3) Organization and Administration of Physical Education and Health Education; 4) Kinesiology; 5) Officiating and Coaching of Physical Education; 6) Test and Measurements; 7) Rules and Regulations of various Games and Sports, current sports events and some general questions related to Physical Education and Sports.		
301. Computer Science	1. Fundamental of Computer Organization. 2. M S Office. 3. M S Access. 4. Programming in C	1. Basics of Programming in C++; 2. IO Streams. 3. Arrays. 4. Templates / Abstraction.	1. Database Concepts. 2. Data Models. 3. Database Design. 4. Design Implementation Network DBMS, RDBMS, Database

SYLLABI FOR ENTRANCE TESTS OF 5 YEAR INTEGRATED P.G. PROGRAMMES

Test Code. & Subject	Part - A	Part - B	Part - C	Part - D
Test No. 501. (i) M.S. Applied Chemistry* (ii) M.S. Geology*	Mathematics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	Physics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	Chemistry syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	Biology syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)

Test Code. & Subject	Part - A	Part - B	Part - C	Part - D
Test No. 502. M.S. Economics	There will be five parts viz. Economics, Civics, Commerce, History and Mathematics and the candidate may choose to answer any three parts. Syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh will be followed for these subjects. (Each part consists of 30 questions)			
Test No. 503.				
(i) M.S. Computer Science & Information Technology	Mathematics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	Physics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	Chemistry syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (30 Q)	---
(ii) M.S. Software Engineering				
(iii) M.S. Civil Engineering				
(iv) M.S. Mechanical Engineering				
(v) M.S. Electrical & Electronics Engineering				

SYLLABI FOR ENTRANCE TESTS OF TWINNING PROGRAMMES

Test No. 511. B.Engg. Aircraft Engineering	Articles / prepositions, verb forms, words often confused, structures, correction of sentences, phrasal verbs. (15 Q)	Mathematics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (25 Q)	Physics syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (25 Q)	Chemistry syllabus prescribed for Intermediate course by Board of Intermediate Education, Andhra Pradesh. (25 Q)
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Test No. 512. M.S. Molecular Biology and Biotechnology

Isomerism – Stereo, structural and geometrical isomers, p^H and buffers, Chemistry and properties of amino acids, proteins, nucleic acids, carbohydrates and lipids. Basic principles of biochemical separation methods – paper, thin layer ion exchange, affinity chromatography, gel filtration, centrifugation, paper, polyacrylamide and agarose gel electrophoresis Basic principles of colorimetry and spectrophotometry Radioisotopes and their use is Biology Ultrastructure of cell and cell organelles and their functions Biomembranes – composition, organization and transport of molecules across membranes. Mendelian principles of segregation and independent assortment. Linkage and crossing over, Chromosomal mapping, Sex linked inheritance Types of mutations Enzymes and coenzymes, Factors affecting enzyme activity, enzyme specificity, enzyme inhibition. Biological oxidations, Electron transport system and oxidative phosphorylation Glycolysis, TCA cycle, Gluconeogenesis, HMP shunt, photosynthesis Biosynthesis and catabolism of fatty acids Essential amino acids, urea cycle, Biological nitrogen fixation Basic features of immune response, lymphoid system, T and B lymphocytes, classes and structure of immunoglobulines, RIA, ELISA. Vaccination and types of vaccines Bacteria and virus, organization of genome in prokaryotes and eukaryotes. DNA structure, replication, damage and repair Types of RNA, Genetic code, Protein synthesis Inhibitors of DNA replication, transcription and translation Basic concepts of regulation of gene expression Principles and applications of recombinant DNA technology.

SYLLABI FOR ENTRANCE TESTS OF DOUBLE DEGREE MS PROGRAMMES

TEST No. 521. M.S. DIGITAL SIGNAL PROCESSING

Differential Equations: First order equation (Linear and Non-Linear), Higher order Linear Differential Equations with constant coefficients, Method of Variation of Parameters, Cauchy's and Euler's Equations, Initial and Boundary Value Problems, Partial Differential Equations and Variable Separable Method.

Complex Variables: Analytic Functions, Cauchy's Integral Theorem and Integral Formula, Taylor's and Laurent Series, Residue Theorem, Solution Integrals.

Probability and Statistics: Sampling Theorems, Conditional Probability. Mean, Median, Mode and Standard Deviation, Random Variables, Discrete and Continuous distributions, Poisson, Normal and Binomial Distribution, Correlation and Regression Analysis.

Electronic Devices: Energy bands in Silicon. Intrinsic and Extrinsic Silicon. Carrier transport in Silicon: Diffusion current. Drift current, Mobility and Resistivity. Generation and re-combination of carriers, P-N Junction Diode, Zener Diode, Tunnel Diode, BJT, JFET, MOS capacitor, MOSFET, LED, P-I-N and Avalanche Photo Diode, Basics of LASERS Device Technology: Integrated Circuits Fabrication Process, Oxidation, Diffusion, Ion-Implantation, Photolithography, n-tub, p-tub and twin-tub CMOS process.

Analog Circuits: Small Signal Equivalent Circuits of Diodes, BJTs, MOSFETs and Analog CMOS. Simple Diode Circuits, Clipping, Clamping, Rectifier, Biasing and bias stability of transistor and FET amplifiers. Amplifiers: Single-stage, Multi-stage, Differential, Operational, Feedback and Power amplifiers. Frequency response of Amplifiers. Simple Op-Amp circuits, Filters. Sinusoidal Oscillators, Criterion for Oscillation, Single transistor and op-amp configuration. Function generators and wave-shaping circuits, 555 Timers. Power supplies.

Digital Circuits: Boolean Algebra, Minimization of Boolean Functions, Logic gates, Digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinational Circuits; Arithmetic Circuits, Code Converters, Multiplexers, Decoders, PROM and PLAS. Sequential Circuits: Latches and Flip-flops, Counters and Shift registers. Sample and Hold Circuits, ADCs, DACs, Semiconductor memories. Microprocessor (8085): Architecture, Programming, Memory & I/O interfacing.

Signals and Systems: Definitions and Properties of Laplace Transform, Continuous-Time and Discrete-time Fourier Series, Continuous-Time and Discrete-time Fourier Transform, DFT and FFT, Z-transform, Sampling Theorem, Linear Time Invariant (LTI) Systems: definitions and properties, Causality, Stability, Impulse Response, Convolution, Poles and Zeros, Parallel and Cascade Structure, Frequency Response, Group Delay, Phase Delay, Signal Transmission through LTI systems.

Digital Signal Processing: Transfer function and Frequency Response of First and Second Order Discrete Systems, Convolution, Correlation, Analog filter Approximations, IIR and FIR filters.

Control Systems: Basic Control System Components, Block Diagrammatic description, Open Loop and Closed Loop (feedback) systems and stability analysis of these systems. Signal flow graphs and their use in determining transfer functions of systems, Transient and steady state analysis of LTI control systems and frequency response tools and techniques for LTI control system analysis: Root Loci, Routh-Hurwitz criterion, Bode and Nyquist plots. Control system compensators:

Communications: Random Signals and Noise: Probability, Random Variable, Probability Density Function, Auto-correlation and Power Spectral Density. Analog Communication systems: Amplitude and Angle Modulation and De-Modulation systems, Spectral Analysis of these Operations, Super-Heterodyne Receivers, Elements of Hardware, Realizations of Analog Communication Systems, Signal-to-Noise Ratio (SNR) calculations for Amplitude Modulation (AM) and Frequency Modulation (FM) for low noise conditions. Fundamentals of Information Theory and Channel Capacity Theorem, Digital Communication Systems: Pulse Code Modulation (PCM), Differential Pulse Code Modulation (DPCM), Digital Modulation Schemes: Amplitude, Phase and Frequency Shift Keying Schemes (ASK, PSK, FSK), Matched Filter Receivers, Bandwidth consideration and Probability of Error Calculations for these schemes. Basics of TDMA, FDMA and CDMA and GSM.

Electromagnetics: Elements of vector calculus: Divergence and Curl; Gauss' and Stokers' Theorems, Maxwell's Equations: Differential and Integral Forms. Wave Equations, Poynting Vector. Plane waves: propagation through various media, Reflection and Refraction, Phase and Group Velocity, Skin Depth. Transmission lines: Characteristic Impedance, Impedance transformation, Smith Chart, Impedance Matching, S Parameters, Pulse excitation. Waveguides: Modes in Rectangular Waveguides, Boundary Conditions, Cut-off Frequencies, Dispersion Relations, Basics of Propagation in Dielectric Waveguide and Optical Fibers. Basics of Antennas: Dipole Antennas. Radiation Pattern, Antenna Gain. Microwave active and passive devices, fundamental radar systems.

Electrical and Electronic Measurement: Bridges and Potentiometers, measurement of R.L. and C, Measurement of voltage, current, power, power factor and energy, AC and DC current probes. Extension of instrument ranges. Q-meter and waveform analyzer. Digital voltmeter and multi-meter. Time, phase and frequency measurements. Cathode ray oscilloscope. Serial and parallel communication. Shielding and grounding.

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TEST No. 522. M.S. SOFTWARE ENGINEERING

ENGINEERING MATHEMATICS: (30 Marks)

Mathematical Logic: Propositional Logic; First Order Logic.

Probability: Conditional Probability; Mean, Median, Mode and Standard Deviation; Random Variables; Distributions; uniform, normal, exponential, Poisson, Binomial.

Set Theory & Algebra: Sets; Relations; Functions; Groups; Partial Orders; Lattice; Boolean Algebra.

Combinatorics: Permutations; Combinations; Counting; Summation; Generating functions; recurrence relations; asymptotics.

Graph Theory: Connectivity; spanning trees; Cut vertices & edges; covering; matching; independent sets; Colouring; Planarity; Isomorphism.

Linear Algebra: Algebra of matrices, determinants, systems of linear equations, Eigen values and Eigen vectors.

Numerical Methods: LU decomposition for systems of linear equations; numerical solutions of non-linear algebraic equations by Secant, Bisection and Newton-Raphson Methods; Numerical integration by trapezoidal and Simpson's rules.

Calculus: Limit, Continuity & differentiability, Mean value Theorems, Theorems of integral calculus, evaluation of definite & improper integrals, Partial derivatives, Total derivatives, maxima & minima.

COMPUTER SCIENCE AND ENGINEERING: (60 Marks)

Theory of Computation: Regular languages and finite automata, Context free languages and Push-down automata, Recursively enumerable sets and Turing machines, Undecidability; NP-completeness.

Digital Logic: Logic functions, Minimization, Design and synthesis of combinational and sequential circuits; Number representation and computer arithmetic (fixed and floating point).

Computer Organization and Architecture: Machine instructions and addressing modes, ALU and data-path, CPU control design, Memory interface, I/O interface (Interrupt and DMA mode), Instruction pipelining, Cache and main memory, Secondary storage.

Programming and Data Structures: Programming in C; Functions, Recursion, Parameter passing, Scope, Binding; Abstract data types, Arrays, Stacks, Queues, Linked Lists, Trees, Binary search trees, Binary heaps.

Algorithms: Analysis, Asymptotic notation, Notions of space and time complexity, Worst and average case analysis; Design; Greedy approach, Dynamic programming, Divide-and-conquer; Tree and graph traversals, Connected components, Spanning trees, Shortest path; Hashing, Sorting, Searching.

Compiler Design: Lexical analysis, Parsing, Syntax directed translation, Runtime environments, Intermediate and target code generation, Basics of code optimization.

Operating System: Processes, Threads, Inter-process communication, Concurrency, Synchronization, Deadlock, CPU scheduling, memory management and virtual memory, File systems, I/O systems, Protection and security.

Databases: ER-model, Relational model (relational algebra, tuple calculus), Database design (integrity constraints, normal forms), Query languages (SQL), File structures (sequential files, indexing, B and B+ trees), Transactions and concurrency control.

Computer Networks: ISO/OSI stack, LAN technologies (Ethernet, Token ring), Flow and error control techniques, Routing algorithms, Congestion control, TCP/UDP and sockets, IP (v4), Application layer protocols (icmp, dns, smtp, pop, ftp, http); Basic concepts of hubs, switches, gateways, and routers.

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TEST No. 523. M.S. TELECOMMUNICATION SYSTEMS

B.E. / B.Tech. (ECE) syllabus of Andhra University.

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FOR TEST No. 503 - M.S. COMPUTER SCIENCE & INFORMATION TECHNOLOGY; M.S. SOFTWARE ENGINEERING; M.S. CIVIL ENGINEERING; M.S. MECHANICAL ENGINEERING; AND M.S. ELECTRICAL & ELECTRONICS ENGINEERING

Time: 75 Min

Max. marks: 90

The test paper consists of 3 Parts. Each part contains 30 multiple choice questions. Answer all questions in each part.

Part - A: Mathematics (30 Marks)

1. If $P = (1, 1)$ and PA, PB are tangents to a circle where A, B are points of contact and if $A = (2, 0)$, $B = (0, 0)$ then the centre of the circle is
(a) $(1, -1)$ (b) $(4/3, 4/3)$ (c) $(1/3, 1/3)$ (d) $(2, -2)$

Part - B: Physics (30 marks)

31. The horizontal range of a projectile is twice the maximum height reached by it for the given angle of projection. Then the ratio of potential energy to kinetic energy of this projectile at the highest point of its path is
(a) 4:1 (b) 1:4 (c) 1:2 (d) 2:1

Part - C: Chemistry (30 Marks)

61. The total number of structural isomers that are possible with the formula $C_3H_5Cl_3$ is
(a) 2 (b) 3 (c) 4 (d) 5
* * *

FOR TEST No. 511 - B.Engg. AIRCRAFT ENGINEERING.

Time: 75 Min

Max. marks: 90

The test paper consists of 4 parts. Part-A consists of 15 multiple choice questions; Parts B, C & D consists of 25 multiple choice questions each. Answer all questions in each part.

Part - A: English (15 Marks)

1. Last time, we met _____ a birthday party in Bombay.
(a) At (b) On (c) In (d) Through

Part - B: Mathematics (25 Marks)

16. If the line $lx + my = 1$ is a tangent to the parabola $y^2 = 2(x + 1)$ then the locus of (l, m) is
(a) $2x^2 + y^2 + 2x = 0$ (b) $x^2 + 2y^2 = 2x$ (c) $x^2 + y^2 = 2x$ (d) $x^2 - y^2 = 2x$

Part - C: Physics (25 marks)

41. Two point masses of 2 kg and 3 kg are placed at positions $(1 \text{ m}, 2 \text{ m}, 4 \text{ m})$ and $(2 \text{ m}, 3 \text{ m}, 0)$ respectively. The moment of inertia of the system about z - axis is
(a) 41 kg m^2 (b) 81 kg m^2 (c) $5 \times 10^{10} \text{ N/m}^2$ (d) $5 \times 10^{12} \text{ n/m}^2$

Part - D: Chemistry (25 Marks)

66. The temperature at which the RMS velocity of O_2 be equal to the most probable velocity of SO_2 at 27°C is
(a) 100°C (b) 100°K (c) 150°K (d) 600°K
* * *

FOR TEST No.512 M.S. MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Time: 75 Min.

Max. marks 90

1. Which amino acid among the following is not basic
(1) Tryptophan (2) Lysine (3) Histidine (4) Arginine
2. On treatment with mineral acid, sugars give a characteristic colour reaction due to the formation of furfurals. The furfural is formed by
(1) Oxidation of sugar (2) Isomerisation of sugar
(3) Dehydration of sugar (4) Degradation of sugar
* * *

TEST No. 521 DOUBLE DEGREE M.S. DIGITAL SIGNAL PROCESSING

Time: 75 Min

Max. marks: 90

1. A vector A with initial point P $(3, 1, 4)$ and terminal point Q $(1, -2, 4)$ has a length equal to
(1) "14 (2) "15 (3) "13 (4) "11
2. FIR filter offers
(1) constant amplitude response (2) constant phase response
(3) linear phase response (4) linear amplitude response
* * *

FOR TEST No. 522 DOUBLE DEGREE M.S. SOFTWARE ENGINEERING

Time: 75 Min

Max. marks: 90

1. The generating function of the sequence $0, 1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \dots$ is given by
(1) $\log(1-X)$ (2) $\log X$ (3) $-\log(1-X)$ (4) $-\log X$
2. How many 5 digit number are there composed only of 6's and 7's ?
(1) 32 (2) 35 (3) 30 (4) 36
* * *

FOR TEST No. 523 M.S. TELECOMMUNICATION SYSTEMS

Time: 75 Min

Max. marks: 90

1. Over modulation may arise in
(1) Amplitude modulation (2) Frequency modulation
(3) Phase modulation (4) Both in frequency and phase modulation
2. In L section filter ripple
(1) Increase with increasing load resistance (2) Decreases with increasing load resistance

APPENDIX - III

M.A., M.Com. and Diploma Courses offered in A.U. Colleges of Arts and Commerce, Visakhapatnam; A.U. M.S. Naicker P.G. Centre, Kakinada, A.U. Campus, Vizianagaram, A.U. Campus, Tadepallegudem and Colleges affiliated to Andhra University for the Academic Year 2009-2010 (Through AUCET)

A.U. College of Arts and Commerce: M.A. Adult & Continuing Education; M.A./ M.Sc. Anthropology; M.Com.; M.A. Applied Economics; M.A. Economics; B.Ed. Special Education (one year); M.A. English; Bachelor of Fine Arts (B.F.A.); M.A. Hindi; M.A. Ancient History & Archeology; M.A. History; M.H.R.M.; M.A. Human Rights & Duties (H.R.D.); M.J.M.C.; M.L.I.Sc.; M.Ed.; M.A. Philosophy; M.A. Politics; M.A. Public Administration; M.A. Psychology; M.A./M.Sc. Quantitative Economics; M.A. Sanskrit; M.A. Social Work; M.A. Sociology; M.A. Telugu; M.A. Dance; M.A. Music; M.Ed. Special Education; M.P.Ed.; P.G. Diploma course in Cooperation & Rural Studies (one year); P.G. Diploma course in Rajabhasha in Hindi and M.Phil. Counseling Psychology; 5 Year Integrated M.S. course in Economics.

A.U. M.S. Naicker P.G. Centre, Kakinada: M.A. English; M.A. Politics; M.A. Public Admn.; M.A. Economics; M.H.R.M.

A.U. Campus, Vizianagaram: M.A. English; M.A. Hindi; M.A. Politics.

A.U. Campus, Tadepallegudem: M.Com.; M.A. English; M.A. Hindi.

A.U. AFFILIATED COLLEGES

203 - COMMERCE

Srikakulam Dist: (1) Government Degree College for Men, Srikakulam (Code-072).

Vizianagaram Dist: (2) M.R. P.G. College, Vizianagaram (Code-139).

Visakhapatnam Dist: (3) Pydah College, Vsp. (Code-092); (4) A.M.A.L. College, Anakapalle (Code-004); (5) Sri Gowri Degree College, Vsp. (Code-088); (6) Chaitanya Deg. College for Women, Gajuwaka (Code-146); (7) Mrs. A.V.N. College, Visakhapatnam (Code-082)

East Godavari Dist: (8) V.S.M. College, Ramachandrapuram (Code-065); (9) Government Degree College, Rajahmundry (Code-059); (10) P.V.R. Trust Deg. College, Kakinada (Code-028).

West Godavari Dist: (11) D.N.R. College, Bhimavaram (Code-118); (12) Sir C.R.R. College, Eluru (Code-123).

204 - ECONOMICS

Srikakulam Dist: (1) Government Degree College, Narasannapeta (Code-126).

Vizianagaram Dist: (2) M.R. P.G. College, Vizianagaram (Code-139);

Visakhapatnam Dist: (3) G.V.P. Degree College, Visakhapatnam (Code-089);

East Godavari Dist: (4) Ideal College of Arts & Science, Kakinada (Code-025); (5) S.K.R. College for Women, Rajahmundry (Code-062);

West Godavari Dist: (6) D.N.R. College, Bhimavaram (Code-118); (7) Sir C.R.R. College, Eluru (Code-123); (8) Ch.S.D.St. Theresa's College for Women, Eluru (Code-124).

211 - HISTORY

Vizianagaram Dist: (1) M.R. P.G. College, Vizianagaram (Code-139);

East Godavari Dist: (2) V.S.M. College, Ramachandrapuram (Code-065).

212 - M.H.R.M.

Vizianagaram Dist: (1) M.R. P.G. College, Vizianagaram (Code-139); (2) Pragathi Degree College, Kothavalasa (Code-192); (3) Sri Vivekananda Degree & PG College, S.Kota (Code-190)

Visakhapatnam Dist: (4) Pydah College, Vsp. (Code-092); (5) G.V.P. Degree College, Vsp. (Code-089); (6) A.G.L. Degree College, Vsp. (Code-083); (7) Dr. L.B. College, Vsp (Code-085); (8) Chaitanya Degree College for Women, Gajuwaka (Code-146).

East Godavari Dist: (9) Rajiv Gandhi Degree College, Rajahmundry (Code- 061);

West Godavari Dist: (10) K.G.R.L. College, Bhimavaram (Code-011); (11) Sir C.R.R. College, Eluru (Code-123).

216 - M.Ed.

Srikakulam Dist: (1) G.E.S. College of Education, sklm;

Vizianagaram Dist: (2) M.R. College of Education, Vizianagaram;

East Godavari Dist: (3) S.G.S. Govt. I.A.S.E., Rajahmundry; (4) St. Mary's College of Education, Sarpavaram (Minority).

West Godavari Dist: (5) D.N.R. Coll. of Education, Bhimavaram; (6) G.T.P. College of Education for Women, Bhimavaram; (7) Nova College of Education, Janagareddigudem (Code-260).

208 - ENGLISH

Srikakulam Dist: (1) Government Degree College, Tekkali (Code-078).

Vizianagaram Dist: (2) M.R. P.G. College, Vizianagaram (Code-139); (3) Rajah R.S.R.K. Ranga Rao College, Bobbili (Code-015)

Visakhapatnam Dist: (4) Pydah College, Vsp. (Code-092); (5) Dr. L.B. College, Vsp. (Code-085); (6) A.G.L. Degree College, Vsp. (Code-083);

East Godavari Dist: (7) MVNJS & RVR College of Arts & Science, Malikipuram (Code-036).

West Godavari Dist: (8) Sir C.R.R. College, Eluru (Code-123); (9) K.G.R.L. College, Bhimavaram (Code-011); (10) Sri Y.N. College, Narsapur (Code-046); (11) Ch.S.D.St. Therasas College for Women, Eluru (Code-124); (12) Luthern Degree College, Bhimavaram (Code-013); (13) Dr. C.S.N. College, Bhimavaram (Code-009); (14) Bh. S.R.V.L.M. Degree College, Devarapally (Code-017).

219 - POLITICS

Srikakulam Dist: (1) Government Degree College, Narasannapeta (Code-126);

West Godavari Dist: (2) Sir C.R.R. College, Eluru (Code-123).

219 - PUBLIC ADMINISTRATION

West Godavari Dist: (1) Sri Y.N. College, Narsapur (Code-046)

223 - SOCIAL WORK

Vizianagaram Dist: (1) M.R. P.G. College (Code-139); (2) Rangumudri Degree College, Balijipeta (Code-217); (3) Gayathri Mahila Degree College, Parvathipuram; (4) Pragathi Degree College, Kothavalasa (Code-192)

Visakhapatnam Dist: (5) Visakha Govt. Degree College for Women, Visakhapatnam (Code-138); (6) S.V.V.P. V.M.C. Mahilavidyapeeth Degree College

West Godavari Dist: (7) D.N.R. College, Bhimavaram (Code-118); (8) Luthern Degree College, Bhimavaram (Code-013); (9) Dr. C.S.N. Degree College, Bhimavaram (Code-009).

225 - TELUGU

Srikakulam Dist: (1) Government Degree College for Men (Code-072); (2) Govt. Degree College for Women (Code-072); (3) Govt. Degree College, Narasannapeta (Code-126)

Visakhapatnam Dist: (4) Aditya Degree College, Gopalapatnam (Code-181);

East Godavari Dist: (5) Government Degree College, Rajahmundry (Code-059); (6) Aditya Degree College, Kakinada (Code-172)

West Godavari Dist: (7) D.N.R. College, Bhimavaram (Code-118); (8) BH.S.R.& V.L.M. Degree College, Devarapally (Code-017); (9) Luthern Degree College, Bhimavaram (Code-013).

M.Sc. and Diploma Courses offered in A.U. College of Science & Technology and College of Engineering, Visakhapatnam and Colleges affiliated to Andhra University for the Academic Year 2009-2010 (Through AUCET)

A.U. COLLEGE OF SCIENCES & TECHNOLOGY: M.Sc. Biochemistry; M.Sc. Biotechnology; M.Sc. Agricultural Biotechnology; M.Sc. Botany; M.Sc. Horticulture & Landscape Management; M.Sc. Chemistry with (i) Organic Chemistry (ii) Chemistry & Analysis of Foods, Drugs & Water (iii) Inorganic Chemistry (iv) Analytical Chemistry (v) Bio-Inorganic Chemistry (vi) Environmental Chemistry (vii) Marine Chemistry (viii) Physical Chemistry (ix) Nuclear Chemistry specialisations; M.Sc. Computer Science & Statistics; M.Sc. Electronics; M.Sc.(Tech.) Electronics & Instrumentation; M.Sc. (Tech.) VLSI Design; M.Sc. (Tech.) DSP & ESD; M.Sc. Environmental Science; M.Sc. Foods, Nutrition & Dietetics; M.Sc. Geography; M.Sc. Geology; M.Sc. Marine Geology; M.Sc.(Tech) Applied Geology; M.Sc. Human Genetics; M.Sc. Molecular Genetics; M.Sc. Marine Biology & Fisheries; M.Sc. Coastal Aquaculture & Marine Biotechnology; M.Sc. Marine Biotechnology; M.Sc. Applied Mathematics; M.A./M.Sc. Mathematics; M.Sc. Microbiology; M.Sc. Physics; M.Sc. Space Physics; M.Sc. Nuclear Physics; M.Sc. Meteorology; M.Sc. Physical Oceanography; M.Sc. (Tech.) Geophysics; M.Sc. Marine Geophysics; M.Sc. Hydrology; M.Sc. Statistics; M.Sc. Zoology; M.Sc. Fishery Science; Advanced P.G. Diploma in Genetic Counseling; M.Tech. Atmospheric Science; M.Tech. Petroleum Exploration; M.Tech. Ocean Science; Advanced P.G. Diploma in Genetic Counseling (Part-time); MS Twinning Programme in Molecular Biology and Biotechnology; 5 Year Integrated M.S. Course in Geology.

A.U. COLLEGE OF ENGINEERING: M.Sc. Computer Science; M.Sc. Applied Chemistry; 5 Year Integrated M.S. Courses in - Applied Chemistry; Computer Science & Information Technology; Software Engineering; Civil Engineering; Electrical & Electronics Engineering; and Mechanical Engineering; M.S. Double Degree Programmes in - Software Engineering; Digital Signal Processing; and Telecommunication Systems; B.Engg. in Aircraft Engineering .

A.U. AFFILIATED COLLEGES

101 - BIOCHEMISTRY

Vizianagaram Dist: (1) M.R. P.G. College, Vizianagaram (Code-139);

Visakhapatnam Dist: (2) Pydah College, Vsp. (Code-092); (3) A.Q.J. Degree College, Gudilova, Vsp. (Code-144); (4) Dr. L.B. College, Vsp.(Code-085); (5) M.V.R. College, Gajuwaka (Code-091); (6) TSR. & T.B.K. Deg. College, Gajuwaka(Code-100); (7) Chaitanya Degree College for Women Gajuwaka (Code-146); (8) PRISM Degree College, Dwarakanagar, Vsp.(Code-225); (9) Krishna Degree College, Gajuwaka (Code-253);

East Godavari Dist: (10) D.L.R. Degree College, Gollalamadada (Code-021); (11) Rajiv Gandhi Degree College, Rajahmundry (Code-061); (12) V.S.Lakshmi College for Women, Kakinada (Code-030); (13) Al-Ameer Institute of Management & Technology, Rajahmundry (Code-196); (14) Rajiv Gandhi Institute of Management & Sciences, Kakinada (Code-029); (15) Aditya Degree College, Kakinada (Code-172); (16) Aditya Degree College for Women, Kakinada (Code-209);

West Godavari Dist: (17) K.G.R.L. College, Bhimavaram (Code-011); (18) RITAMS College, Tanuku (Code-075); (19) Sir C.R.R. College for Women (PG), Eluru (Code-018); (20) Dr. C.S.N. College, Bhimavaram (Code-009).

102 - BIOTECHNOLOGY

Vizianagaram Dist: (1) M.R. PG College, Vizianagaram (Code-139);

Visakhapatnam Dist: (2) Dr. V.S. Krishna Government Degree College, Maddilapalem (Code-086); (3) Dr. L.B. College, Visakhapatnam (Code-085); (4) T.S.R. & T.B.K. College, Gajuwaka, Visakhapatnam (Code-100)

East Godavari Dist: (5) S.K.B.R. College, Amalapuram
West Godavari Dist: (6) D.N.R. College, Bhimavaram (Code-118); (7) Sri Y.N. College, Narasapur (Code-046); (8) SVKP& Dr.K.S.Raju College, Penugonda (Code-053).

103 - BOTANY

Vizianagaram Dist: (1) Rangumudri Degree College, Balijipeta (Code-217)

Visakhapatnam Dist: (2) Pydah College, Vsp.(Code-092); (3) Dr. L.B. College, Vsp. (Code-085); (4) M.V.R. College, Gajuwaka(Code-091); (5) T.S.R. & T.B.K. Degree College, Gajuwaka (Code-100); (6) Dr. V.S.Krishna Govt. College, Vsp. (Code-086); (7) Mrs. A.V.N. College, Vsp. (082);

East Godavari Dist: (8) V.S.M. College, Ramachandrapuram (Code-065);

West Godavari Dist: (9) SVKP& Dr. K.S.Raju Arts & Science College, Penugonda (Code-053); (10) A.K.R.G. Degree College, Nallajerla (Code-042)

104 - APPLIED CHEMISTRY

East Godavari Dist: (1) Ideal College of Arts & Science (PG), Kakinada (Code-025)

104 - PHYSICAL CHEMISTRY

East Godavari Dist: (1) Government Degree College, Rajahmundry (Code-059)

104 - ORGANIC CHEMISTRY

Srikakulam Dist: (1) Gayatri College of Science & Management, Munasabpetta (Code-040); (2) Government Degree College for Men (PG Courses), Srikakulam (Code-072); (3) Aditya Degree College (PG Courses), Srikakulam (Code-202); (4) Chaitanya E.S. Degree College, Srikakulam (Code-071); (5) Sai Sivarohit Degree College, Srikakulam (Code 179); (6) Government Degree College for Women, Srikakulam (Code-072).

Vizianagaram Dist: (7) M.R. P.G. College, Vizianagaram (Code-139); (8) Rajah R.S.R.K.Ranga Rao College (PG Courses), Bobbili (Code-015); (9) A.G.L. Memorial Degree College, Vizianagaram (Code-193); (10) Sree Chaitanya Degree College (PG), Vizianagaram (Code-204); (11) Gayatri Degree College, Thotapalem, Vizianagaram

(Code-203); (12) Pragathi Degree College, Kothavalasa (Code-192); (13) Rangumudri College, Balijipeta (Code-217); (14) Sri Vivekananda Degree College, S.Kota (Code-190); (15) S.K. Degree College, Ayyannapeta (Code-116); (16) Gayatri Degree College, Parvathipuram, Vizianagaram; (17) Maharshi Degree college, Gajapathi nagaram, Vizianagaram; (18) M.S.N. Degree College, Thotapalem, Vizianagaram.

Visakhapatnam Dist: (19) A.Q.J. Degree College, Gudilova (Code-144); (20) Pydah College, Vsp.(Code-092); (21) Dr. L.B. College, Vsp. (Code-085); (22) A.M.A.L. Degree College, Anakapalle (Code-004); (23) M.V.R. Degree College, Gajuwaka (Code-091); (24) Sri Gowri Deg.College, Vsp. (Code-088); (25) DVN.College, Anakapalle (Code-005); (26) T.S.R. & T.B.K. Degree College, Gajuwaka (Code-100); (27) Aditya Degree College, Gopalapatnam(Code-181); (28) M.S.R.S. Sidhartha Degree College, Vsp. (Code-155); (29) Dr. Himasekhara Degree College, Anakapalle (Code-158); (30) Dr. V.S. Krishna Government College, Maddilapalem (Code-086); (31) St. Joseph's College for Women, R.S. Waltair (Code-147); (32) B.V.K. College, Dwarakanagar (Code-084); (33) PRISM College, Dwarakanagar (Code-225); (34) Poomasai Degree College, Yellamanchili (Code-232); (35) Konatala Arts & Science Degree, Anakapalle (Code-006); (36) B.R.B.M. Degree College, Kancharapalem (Code-249); (37) Raghu Degree College, Dakamarri (Code-156); (38) Sri Sai Srinivasa Degree College, Paravada, Visakhapatnam;

East Godavari Dist: (39) V.S.M. College, Ramachandrapuram (Code-065); (40) Governement Degree College, Rajahmundry (Code-059); (41) G.B.R. Degree College, Anaparthi (Code-007); (42) D.L.R. Degree College, Gollalamamidada (Code-021); (43) Rajiv Gandhi Degree College, Rajahmundry (Code-061); (44) Ideal College of Arts & Science, Kakinada (Code-025); (45) Rajiv Gandhi Institute of Management & Science, Kakinada (Code-029); (46) Chaitanya Degree College, Kakinada (Code-024); (47) S.K.B.R. Degree College, Amalapuram (Code-003); (48) V.S. Lakshmi Women's Degree College, Kakinada (Code-030); (49) Aditya Degree College, Kakinada (Code-172); (50) Aditya Degree College for Women, Kakinada (Code-209); (51) Ln.G.V.Rao Modern Degree College, Ramachandrapuram (Code-066); (52) Government Degree College (PG Courses), Tuni (Code-136); (53) S.K.V.T. College, Rajahmundry (Code-063); (54) Al-Ameer Institute of Management & Tech., Rajahmundry (Code-196); (55) Avanti Deg.College, Rajahmundry (Code-057); (56) S.R.R. Degree College, Peddapuram (Code-234); (57) Mother Deg.College, Jagannadhapuram, Kotanandur Mandal (Code-210); (58) P.R.Govt. College, Kakinada (Code-027); (59) Smt. Jasti Bullemmai Deg. College, Rajahmundry (Code-149); (60) P.S.N. Murthy Deg. College, Gollaprolu (Code-256); (61) Little Rose Deg. College, Draksaramam (Code-257); (62) LAMP Degree College, Mummidivaram (Code-152); (63) Samitha Degree College, Rajahmundry (Code-161); (64) Harward Degree College, K. Perumallapuram; (65) C.B.R. Degree College, Pithapuram (Code-279)

West Godavari Dist: (66) D.N.R. College, Bhimavaram (Code-118); (67) KGRL. College, Bhimavaram (Code-011); (68) SVKP& Dr. K.S. Raju Arts & Science College, Penugonda (Code-053); (69) Sir C.R.R. College, Eluru (Code-123); (70) Ch.S.D.St. Theresa' College for Women, Eluru (Code-124); (71) A.K.R.G. Degree College, Nallajerla (Code-042); (72) RITAMS College, Tanuku (Code-075); (73) Sir C.R.R. College for Women, Eluru (Code-018); (74) Dr. C.S.N. College, Bhimavaram (Code-009); (75) St. Vincent De-Paul Degree College, Pinakadimi, Eluru (Code-164); (76) A.B.N.& P.R.R. College of Science, Kovvur (Code-197); (77) BH.S.R.& V.L.M. Degree College, Devarapalli (Code-017); (78) S.K.S.D. Mahila Kalasala, Tanuku (Code-076); (79) Sree Rama Degree College, Pydiparru, Tanuku (Code-166); (80) V.S.K. Degree College, Bhimavaram (Code-012); (81) B.G.B.S. Women's College, Narsapur (Code-044); (82) Nova Degree College, Jangareddygudem (Code-260); (83) Padmasri Dr. B.V. Raju Institute of Computer Education, Bhimavaram.

104 - ANALYTICAL CHEMISTRY

Srikakulam Dist: (1) Gayatri College of Science & Management, Munasabpeta (Code-040); (2) Aditya Degree College, Srikakulam (Code-202);

Vizianagaram Dist: (3) Rajah R.S.R.K.Ranga Rao College, Bobbili(Code-015); (4) A.G.L.Memorial Degree College, Vizianagaram (Code-193); (5) S.D.S. College, Garividi (Code-133); (6) M.R. P.G. College, Vizianagaram (Code-139);

Visakhapatnam Dist: (7) Pydah College, Vsp. (Code-092); (8) Dr. L.B. College, Vsp. (Code-085); (9) A.M.A.L. College, Anakapalle (Code-004); (10) M.V.R. College, Gajuwaka (Code-091); (11) T.S.R. & T.B.K. Degree College, Gajuwaka (Code-226); (12) Aditya Degree College, Gopalapatnam (Code-181); (13) MSRS.Sidhartha Degree College, Vsp. (Code-155); (14) Dr. V.S. Krishna Govt. Degree College, Maddilapalem (Code-086); (15) A.Q.J. Degree College, Gudilova (Code144); (16) St. Joseph's College for Women, R.S. Waltair (Code-147); (17) Krishna Degree College, Gajuwaka (Code-253); (18) PRISM Degree College, Dwarakanagar (Code-225)

East Godavari Dist: (19) V.S.M. College, Ramachandrapuram (Code-065); (20) Government Degree College, Rajahmundry (Code-059); (21) G.B.R. College, Anaparthi (Code-007); (22) D.L.R. Degree College, Gollalamamidada (Code-021); (23) Rajiv Gandhi Degree College, Rajahmundry (Code-061); (24) Rajiv Gandhi Institute of Management & Science, Kakinada (Code-029); (25) Chaitanya Degree College, Kakinada (Code-024); (26) V.S.Lakshmi Women's Degree College, Kakinada (Code-030); (27) Aditya Degree College, Kakinada (Code-172); (28) Aditya Degree College for Women, Kakinada (Code-209); (29) Ln. G.V. Rao Modern Degree College, Ramachandrapuram (Code-066); (30) S.K.V.T. College, Rajahmundry (Code-063); (31) Ideal College of Arts & Sci., Kakinada (Code-025); (32) Al Ameer Institute of Management & Technology, Rajahmundry (code-196); (33) Avanthi Degree College, Rajahmundry (Code-057);

West Godavari Dist: (34) D.N.R. College, Bhimavaram (Code-118); (35) K.G.R.L. College, Bhimavaram (Code-011); (36) A.K.R.G. Degree College, Nallajerla (042); (37) Sir C.R.R. College for Women, Eluru (018); (38) Dr. C.S.N. College, Degree Bhimavaram (009); (39) St. Vincent De-Paul Degree College, Pinakadimi, Eluru (164); (40) A.B.N.& P.R.R. College of Science, Kovvur (197); (41) BH.S.R.& V.L.M. Degree College, Devarapally (017); (42) Sree Rama Degree College, Pydiparru, Tanuku (Code-166); (43) Sir. C.R.R. PG College, Eluru (Code-123).

106 - ELECTRONICS

Visakhapatnam Dist: (1) G.V.P. Degree College, Vsp. (Code-089).

East Godavari Dist: (2) Rajiv Gandhi Institute of Management & Science, Kakinada (Code-029)

112 - APPLIED MATHEMATICS

Visakhapatnam Dist: (1) M.V.R. Degree College, Vsp. (Code-091);

East Godavari Dist: (2) Ideal College of Arts & Sciences, Kakinada (Code-025).

112 - MATHEMATICS

Srikakulam Dist: (1) Sri G.C.S.R.Degree College, Rajam (Code-064);

Vizianagaram Dist: (2) M.R. P.G. College, Vizianagaram (Code-139);

Visakhapatnam Dist: (3) Pydah College, Vsp. (Code-092); (4) Dr. L.B. College, Vsp. (Code-085); (5) G.V.P. Degree College, Vsp. (Code-089); (6) Sri Gowri Degree College, Kancharapalem (Code-088); (7) Chaitanya Degree College for Women, Gajuwaka (Code-146); (8) St. Joseph's College for Women, R.S. Waltair (Code-147).

East Godavari Dist: (9) Government Degree College, Rajahmundry (Code-059); (10) G.B.R. College, Anaparthi (Code-007); (11) Rajiv Gandhi Institute of Management & Science, Kakinada (Code-029); (12) V.S. Lakshmi Women's Degree College, Kakinada (Code-030); (13) Smt. Sri G.K.R.V.M. Degree College, Rajahmundry (Code-148);

West Godavari Dist: (14) Sri Y.N. College, Narsapur (Code-046); (15) Sir C.R.R. College, Eluru (Code-123); (16) Ch.S.D.St. Theresa's College for Women, Eluru (Code-124); (17) RITAMS College, Tanuku (Code-075).

113 - MICROBIOLOGY

Vizianagaram Dist: (1) M.R. P.G. College, Vizianagaram (Code-139); (2) Gayatri Degree College, Thotapalem, Vzm. (Code-203);

Visakhapatnam Dist: (3) A.Q.J. Degree College, Gudilova, Vsp. (Code-144); (4) Dr. L.B. College, Vsp. (Code-085); (5) M.V.R. College, Gajuwaka (Code-091); (6) T.S.R. & T.B.K. Degree College, Gajuwaka (Code-226); (7) Chaitanya Degree College for Women, Gajuwaka (Code-146); (8) Visakha Govt. Degree College for Women, Vsp. (Code-138); (9) Raghu Degree College, Vsp. (Code-156)

East Godavari Dist: (10) V.S.M. College, Ramachandrapuram (Code-065); (11) Rajiv Gandhi Institute of Management, Kakinada (Code-029); (12) V.S.Lakshmi College for Women, Kakinada (Code-030); (13) Aditya Degree College, Kakinada (Code-172); (14) Aditya Degree College for Women, Kakinada (Code-209); (15) Al-Ameer Institute of Management & Technology, Rajahmundry (Code-196);

West Godavari Dist: (16) K.G.R.L. College, Bhimavaram (Code-011); (17) Sri Y.N. College, Narsapur (Code-046); (18) Ch.S.D.St. Theresa's College for Women, Eluru (Code-124); (19) Sir C.R.R. College for Women, Eluru (Code-018); (20) Dr. C.S.N. Deg. College, Bhimavaram (Code-009); (21) D.N.R. College, Bhimavaram (Code-118).

114 - PHYSICS

Srikakulam Dist: (1) Gayatri College of Science & Management, Munusabpetta (Code-040);

Vizianagaram Dist: (2) M.R. P.G. College, Vzm. (Code-139); (3) Rajah RSRK. Ranga Rao Coll., Bobbili, (Code-015);

Visakhapatnam Dist: (4) Dr. L.B. College, Vsp. (Code-085); (5) Dr. Himasekhar Degree College, Anakapalle (Code-158);

East Godavari Dist: (6) Government Degree College, Rajahmundry (Code-059); (7) Rajiv Gandhi Institute of Management & Science, Kakinada (Code-029); (8) V.S. Lakshmi Women's Degree College, Kakinada (Code-030); (9) Smt. & Sri G.K.R.V.M. Degree College, Rajahmundry (Code-148);

West Godavari Dist: (10) D.N.R. College, Bhimavaram (Code-118); (11) Sir C.R.R. College, Eluru (Code-123); (12) Ch.S.D.St. Therasas College for Women, Eluru (Code-124); (13) Sri Rama Degree College, Pydiparru, Tanuku (Code-166); (14) V.S.K. Degree College, Bhimavaram (Code-012).

115 - STATISTICS

Visakhapatnam Dist: (1) Pydah College, Visakhapatnam (Code-092).

116 - ZOOLOGY

Visakhapatnam Dist: (1) TSR.&TBK. Degree College, Gajuwaka (Code-226); (2) Pydah College, Vsp. (Code-092); (3) Chaitanya Degree College for Women, Gajuwaka (Code-146)

East Godavari Dist: (4) V.S.M. College, Ramachandrapuram (Code-065); (5) Government Degree College, Rajahmundry (Code-059); (6) Smt. K. Rajyalakshmi College for Women, Rajahmundry (Code-062);

West Godavari Dist: (7) SVKP& Dr.K.S. Raju Arts & Science College, Penugonda.

612 - PHYTOPHARMA TECHNOLOGY

Visakhapatnam Dist: (1) M.V.R. Degree & P.G. College, Visakhapatnam (Code-091).

301 - COMPUTER SCIENCE

Visakhapatnam Dist: (1) Samata Degree College, M.V.P. Colony, Vsp. (Code-093); (2) Dr. L.B. College, Vsp. (Code-085); (3) G.V.P. Deg. College, Vsp. (Code-089); (4) Chaitanya Deg. College for Women, Gajuwaka; (Code-146)

East Godavari Dist: (5) Ideal College of Arts & Science, Kakinada; (Code-025) (6) Rajiv Gandhi Institute of Management & Sciences, Kakinada (Code-029);

West Godavari Dist: (7) D.N.R. College, Bhimavaram (Code-118); (8) Sri Y.N. College, Narsapur (Code-046); (9) RITAMS College, Tanuku (Code-075); (10) Dr. C.S.N. Degree College, Bhimavaram (Code-009).

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COURSES OFFERED BY DR. B.R. AMBEDKAR UNIVERSITY, SRIKAKULAM, ETCHERLA-532410

ARTS

203-M.Com.; 204-M.A. Economics; 208-M.A. English; 215-M.L.I.Sc.; 216-M.Ed.; 223-M.A. Social Work

SCIENCE

102-M.Sc. Bio-Technology; 104-M.Sc. Organic Chemistry; 112-M.Sc. Mathematics;