

**TELANGANA RESIDENTIAL EDUCATIONAL INSTITUTIONS RECRUITMENT BOARD  
(TREI-RB), HYDERABAD.  
NOTIFICATION NO.03/2018**

**JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES**

**(GENERAL RECRUITMENT)**

**PARA - I:**

- 1) Applications are invited Online from qualified candidates through the proforma Application to be made available on Board's WEBSITE ([www.treirb.telangana.gov.in](http://www.treirb.telangana.gov.in)) to the post of Junior Lecturers in Residential Educational Institutions Societies
  - i. Submission of ONLINE applications starts from Dt:09.08.2018.
  - ii. Last date for submission of ONLINE applications Dt: 08.09.2018.
  - iii. Examination schedule would be displayed in the Board Website.
  - iv. Hall Tickets can be downloaded 07 days before commencement of Examination.
  - v. All the question papers (Paper-I, II & III) except Languages will be supplied in English version only (Paper-I & II are common for all subjects).
- 2) Paper-I, II & III are Objective type. The Board reserves the right to conduct the Examinations in OFFLINE OMR mode.

**IMPORTANT NOTE:** Candidates are requested to keep the following documents ready while applying online.

- i) Aadhar number
  - ii) Educational Qualifications details i.e., SSC, INTERMEDIATE, DEGREE, POST GRADUATION, B.Ed., etc. and their Roll numbers, Year of passing etc.
  - iii) Community/ Caste Certificate obtained from Mee Seva/ E Seva i.e., Certificates number and date of issue etc.
  - iv) Other relevant certificates.
- 3) The candidates who possess requisite qualifications may apply online by satisfying themselves about the terms and conditions of this recruitment. The details of vacancies are given below:-

Sl. No.	Name of the Post	Name of the Society	No. of Vacancies	Age as on 01/07/2018 Min. Max.	Scale of Pay Rs.
1	Junior Lecturer	Mahatma Jyotiba Phule Telangana Backward Classes Welfare Residential Educational Institutions Society.	Nil	18-44*	35,120-87,130
2	Junior Lecturer	Telangana Tribal Welfare Residential Educational Institutions Society.	40		37,100-91,450
3	Junior Lecturer	Telangana Residential Educational Institutions Society.	3		35,120-87,130
4	Junior Lecturer	Telangana Social Welfare Residential Educational Institutions Society.	149		35,120-87,130
5	Junior Lecturer	Telangana Minorities Residential Educational Institutions Society.	89		35,120-87,130
<b>TOTAL</b>			<b>281</b>		

(The Details of Vacancies Society wise Community and Gender wise (General / Women) may be seen at Annexure-I.) (Pages 13 to 20)

**IMPORTANT NOTE:** The numbers of vacancies are subject to variation as per intimation being received from the concerned appointing authorities

**4) PRESCRIBED QUALIFICATIONS:**

Applicants must possess the qualifications from a recognized University/ Institution as detailed below or equivalent thereto, as specified in the relevant Bye Laws/ Service Regulations, indented by the Residential Educational Institutions Societies as on the Date of Notification.

Sl. No.	Name of the Post	Educational Qualifications
1	Mahatma Jyotiba Phule Telangana Backward Classes Welfare Residential Educational Institutions Society.	<p><b><u>Academic Qualifications</u></b></p> <p>A post Graduate Degree in the subject concerned (or its equivalent) (<b>Table-I</b>) with at least 50% marks in aggregate from a University recognized by the UGC.</p> <p><b>Incase of SC/ST/BC/ Differently abled candidates, the minimum marks shall be 45%.</b></p> <p style="text-align: center;"><b>And</b></p> <p>Bachelor of Education (B.Ed) or BA. B.Ed/B.Sc., B.Ed., from any institution recognized by NCTE with the subject concerned as a Methodology subject.</p>
2	Telangana Tribal Welfare Residential Educational Institutions Society.	
3	Telangana Residential Educational Institutions Society.	
4	Telangana Social Welfare Residential Educational Institutions Society.	
5	Telangana Minorities Residential Educational Institutions Society.	

**Table - I (Junior Lecturers)**

1. Academic Degree of Universities recognized by University Grants Commission (UGC)
2. Teacher Education Courses recognized by National Council for Teacher Education (NCTE)
3. The candidates who have obtained Degrees through Open Universities and Deemed Universities/Distance Education mode are required to have recognition by the University Grants Commission, Distance Education Council (DEC), All India Council for Technical Education and with Jurisdiction to operate such courses; in the State of Telangana/Andhra Pradesh as case may be. Unless such Degrees have been recognized by the relevant statutory Authority, they will not be accepted for purpose of Educational Qualification. The onus of proof of recognition by the relevant Statutory Authority that their Degrees/Universities have been recognized rests with the Candidates.

Sl. No.	Name of Post	Subjects in Post Graduation
01	Junior Lecturer in Telugu	M.A. in Telugu OR M.O.L. in Oriental Languages in the concerned subject
02	Junior Lecturer in English	M.A. in English
03	Junior Lecture in Urdu	M.A. in Urdu
04	Junior Lecturer in Mathematics	M.A./M.Sc.in Mathematics/ Applied Mathematics/ Statistics/ Applied Statistics/A.O. Maths of Nagarjuna University/Pure Mathematics of Central University of Hyderabad/ Maths & Computer Science  <b>Note:</b> Provided these candidates should have studied Mathematics as one of the subjects at B.A/B.Sc. level
05	Junior Lecturer in Physics	M.Sc. in Physics/ Applied Physics/ Electronics/ Applied

Sl. No.	Name of Post	Subjects in Post Graduation
		<p>Electronics of Osmania University / Nuclear Physics of Andhra University/ Meteorology and Oceanography / Engineering Physics and Instrumentation of Osmania University / M.Sc. (Tech) Co-Physics</p> <p><b>Note:</b> Provided these candidates should have studied the subject Physics at B.Sc. level. M.Sc. (Technology) Engineering Physics with any specialisation/ M.Sc. (Tech) Instrumentation/ Any Physics based on M.Sc. Course/M.Sc. (Engineering Physics with instrumentation) of Kakathiya University/ M.Sc. (Technical Engineering Physics) of S.V. University / M.Sc. Astro Physics of Osmania University.</p>
06	Junior Lecturer in Chemistry	<p>M.Sc. in Chemistry/ In organic Chemistry/Analytical Chemistry / Nuclear Chemistry/Organic Chemistry/ Physical Chemistry/ Environmental Chemistry/Mineral Chemistry/ Fertilisers and Agro Chemicals/Phyto Chemistry and Forest Products/ Chemistry of food and Drugs/Synthetic Chemistry/ Applied Chemistry/ Associate ship exam in Chemistry/ Medicinal Chemistry of Osmania University</p> <p><b>Note:</b> Provided these candidates should have studied the Chemistry subject at B.Sc. Level</p>
07	Junior Lecturer in Botany	<p>M.Sc. in Bio Science of Andhra University/Biological Sciences of Osmania University/Plant Science of Krishnadevaraya and Osmania University/ Environmental Biology of Nagarjuna University/ Modern Biology of Maratwada University/ Experimental Biology of Saurashtra University/Bio Technology/ Life Sciences of Indore University/ Marine Biology of Andhra University/ Botany/ Micro-Biology</p> <p><b>Note:</b> Provided these candidates should have studied Botany subject at their graduation level. M.Sc. Life Sciences of Berhampur University provided that the candidates opted for plant sciences in 2<sup>nd</sup> year/ M.Sc. Plant Science of University of Hyderabad.</p>
08	Junior Lecturer in Zoology	<p>M.Sc. in Zoology/Biological Sciences of Andhra University/Biological Sciences of Osmania University /Animal Biology of S.V. University/Environmental Biology of Nagarjuna University/Marine Biology of Karnataka University/Modern Biology of Marathwada University/Experimental Biology of Saurashtra University/Life Science of Indore University</p> <p><b>Note:</b> Provided these candidates should have studies Zoology as one of the subjects at their graduation level. M.Sc. in Animal Science of Central University of Hyderabad/Bio Sciences of Manguluru University/(Life Sciences) Specialization in Animal Science of Berhampur University</p>
09	Junior Lecturer in Economics	M.A. in Economics/ Applied Economics/ Mathematical Economics/Rural Development
10	Junior Lecturer in Commerce	M.Com. in Commerce/M.F.A. (Master of Financial Analysis) renamed as M.Com (Financial Accounting) of Kakathiya University having B.Com at graduation level should alone

Sl. No.	Name of Post	Subjects in Post Graduation
		be considered.
11	Junior Lecturer in Civics	M.A. in Political Science/Public Administration
12	Junior Lecturer in History	M.A. in History/Ancient History and Archaeology <b>Note:</b> Provided these candidates should have studies History as one of the subjects at B.A. Degree level. M.A. Indian Culture of S.V. University/M.A. History, Archaeology and culture of Dravidian University/M.A. Ancient Indian History and Archaeology of S.V. University/M.A. History, Archaeology of Andhra University.

**NOTE:-** Subject wise vacancy position is available at ANNEXURE-I (Pages 13 to 20) and candidates may apply as per the vacancy position in their concerned subject.

5) **AGE:** Minimum 18 years & Maximum 44\* years. The age is reckoned as on 01/07/2018(Rule- 12(1) (a) (v) of State and Subordinate Service Rules).

**\*As per G.O. Ms. No. 329, GA(Ser.A) Dept., Dt. 27/07/2015 read with G.O. Ms. No. 264, GA(Ser.A) Dept.,Dated: 26-07-2016, and G.O.Ms.No.190, GA (Ser.A) Dept., dt;08.08.2017 the upper age limit is raised up to 10 years.**

Note: 1) No person shall be eligible if he/she is less than 18 years of age.

2) No person shall be eligible if he/she crossed 58 years of age (Superannuation age).

**Age Relaxations:** The upper age limit prescribed above is however relaxable in the following cases:

Sl. No.	Category of candidates	Relaxation of age permissible
1	2	3
1.	Retrenched temporary employees in the State Census Department with a minimum service of 6 months.	3 Years
2.	Telangana State Government Employees (Employees of TSRTC, Corporations, Municipalities etc. are not eligible).	5 Years based on the length of regular service.
3.	Ex. Service Men	3 years & length of service rendered in the armed forces.
4.	N.C.C.(who have worked as Instructor in N.C.C.)	3 Years & length of service rendered in the N.C.C.
5.	SC/ST and BCs	5 Years
6.	Physically Handicapped persons	10 Years

6) **(a) FEE:** (Remittance of Fee) Each applicant must pay **Rs.1200/- (Rupees Twelve Hundred Only)** towards Application Processing Fee and Examination Fee. However, local applicants of Telangana State belonging to SC, ST, BC and PH have to pay **Rs.600/- (Rupees Six Hundred Only)** each towards application processing fee and examination fee.

Note: BCs, SCs and STs belonging to other States are not entitled for any fee concession and they are not entitled for any kind of reservation.

**b) Mode of Payment of Fee:**

The Fee mentioned above is to be paid online duly following online instructions displayed in the Board Website.

The fee once remitted shall not be refunded or adjusted under any circumstances. Failure to pay the application processing fee and examination fee will entail total rejection of application.

**PARA-II: CENTERS FOR THE WRITTEN EXAMINATION:**

- 1) The examinations will be held at **HYDERABAD (including HMDA Jurisdiction) only or all erstwhile District head quarters**. However, the Board reserves the right to either increase or decrease the number of Centers.
- 2) However, the Board reserves the right to abolish / create new centre or centers for administrative reasons. Request for change of the centre will not be entertained.

**PARA-III: HOW TO APPLY:**

**A) HOW TO UPLOAD THE APPLICATION FORM:**

- (i) The Applicants have to read the **User Guide** for Online Submission of Applications and then proceed further.

I STEP: The Candidate has to visit the WEBSITE [www.treirb.telangana.gov.in](http://www.treirb.telangana.gov.in) and apply online, candidates have to ensure that there are no mistakes in it. The Board bears no responsibility for the mistakes, if any, made by the candidates.

II STEP:- After entering the details in the Portal, the applicant will proceed to payment gateway.

III STEP:-The applicant should pay the prescribed fee as specified through any of the three modes viz. Debit Card, Credit Card and Net Banking. Separate instructions have to be followed for each mode of payment.

IV STEP:-After payment of fee and after filling the entire application form, the PDF Application will be generated which contains the particulars furnished by the candidates. The ID No in the PDF Application form has to be quoted for future reference/correspondence.

- i) Hand written/ Typed/ Photostat copies/ outside printed Application Form will not be accepted and liable for rejection.
- ii) For any Technical problems related to Online submission and downloading of Hall-Tickets please contact 7032619292 (Timings: 10.30 A.M to 1.00 P.M & 1.30 P.M to 5.30 P.M) or mail to [helpline.treirb@gmail.com](mailto:helpline.treirb@gmail.com).
- iii) For any General Queries please contact office of the TREI-RB Phone No.040-23317140 (Timings: 10.30 A.M to 1.00 P.M & 1.30 P.M to 5.30 P.M) or mail to [helpdesk-treirb@telangana.gov.in](mailto:helpdesk-treirb@telangana.gov.in).

**NOTE:**

1. The Board is not responsible, for any discrepancy in Bio-data particulars while submitting the application form through Online. The applicants are, therefore, advised to strictly follow the instructions and User guide in their own interest before submitting the application.

2. The particulars furnished by the applicant in the Application Form will be taken as final, and data is processed, based on these particulars only by Computer. Candidates should, therefore, be very careful in Uploading / Submitting the Application Form Online.
3. Incomplete/incorrect application form will be summarily rejected. The information if any furnished by the candidate subsequently in any form will not be entertained by the Board under any circumstances. Applicants should be careful in filling-up the application form and submission. If any lapse is detected during the scrutiny, the candidature will be rejected even though he/she comes through the final stage of recruitment process or even at a later stage.
4. Before Uploading/Submission of Application Form, the Candidates should carefully ensure his/her eligibility for this examination. No relevant column of the application form should be left blank, otherwise application form will not be accepted.

**PARA- IV GENERAL PROVISIONS**

1. Applicant must compulsorily fill-up all relevant columns of application and submit application through online only. The particulars made available in the website shall be processed through computer and the eligibility decided in terms of notification.
2. The applications will be received online in the prescribed proforma available in the website for a stipulated period of time and the Board will not be held responsible for any kind of discrepancy.
3. Applicant must upload his/her own scanned photo and signature through J.P.G format.
4. The applicants should not furnish any particulars that are false, tampered, fabricated or suppress any material / information while submitting an application through online. For such illegal activities, criminal action shall be initiated against them.
5. All the essential certificates issued by the competent authority of Telangana State shall compulsorily be kept with the applicants to produce as and when required to do so. Failure to produce the required certificates on the day of verification will lead to disqualification for further exams as well.
6. Important - The claim of the candidates with regard to the date of birth, educational / technical qualifications, experience and community are accepted only provisionally on the information furnished by them in their application form and is subject to verification and satisfaction of the Board. Mere admission to any test or interview or inclusion of the name of a candidate in a Merit List will not confer on the candidate any right for appointment. The candidature is, therefore, provisional at all stages and the Board reserves the right to reject candidature at any stage of the selection even after the advice has been made.
7. The applicants should be willing to serve anywhere in Telangana State.
8. This Recruitment is entrusted to TREI-RB by the Government of Telangana along with Finance clearance vide G.O.Ms. No. 49, Finance (HRM.II) Department, Dt:01.05.2018, G.O.Ms. No. 57 Finance (HRM.II) Department, Dt:18.05.2018, G.O.Ms. No.66, Finance (HRM.II) Department, Dt:30.05.2018, and G.O.Ms.No.84, Finance (HRM.II) Dept:25.06.2018.

**The following certificates must be kept ready by the candidates for the purpose of verification and also at the time of making online application.**

- i). Aadhar card.
- ii). Proof of Educational Qualifications.
- iii). Date of Birth Certificate / S.S.C.
- iv). School Study Certificate.

- v). No Objection Certificate from Employer (if anywhere employed)
- vi). Other certificates if any.

**The following Certificates should be obtained from Govt. of Telangana State in prescribed proforma for the purpose of verification.**

- i). Community Certificate.
- ii). Non-Creamy Layer Certificate as per Form- VIIB / Creamy Layer Certificate as per Form- VIIC.
- iii). Certificate of Residence / Nativity (where the Candidates not studied in School / Private Study).

**The following Certificates (whichever is applicable) should be obtained from Competent Medical authority for the purpose of verification.**

- i). a) Medical Certificate for the Blind.  
b) Certificate of Hearing Disability and Hearing Assessment.  
c) Medical Certificate in respect of Orthopaedically Handicapped Candidates.

**PARA-V:- IMPORTANT LEGAL PROVISIONS GOVERNING THE RECRUITMENT PROCESS:**

1. **Vacancies:** The recruitment will be made to the vacancies notified before the examination only. There shall be no waiting list as per G.O.Ms.No. 81, General Administration (Ser.A) Department, Dated 22/02/1997. If additional vacancies are reported by the Government, an addendum to that effect will be issued.
2. **Recruitment:-** The recruitment will be processed as per the Notification and also as per the Byelaws / Service Regulations, B.O.G. resolutions of the Residential Educational Institutions Societies and orders / Instructions issued by the Government and also as decided by the Board from time to time.
3. **Government Orders:-** The TREI-RB is empowered for taking up recruitment for Teaching & Non-teaching posts in all the Residential Societies i.e, TREIS/TSWREIS/TTWREIS/MJPTBCWREIS/TMREIS under the orders of Government of Telangana vide G.O.Ms.No.22, dated:27.04.2018 of the Scheduled Castes Development (RS) Department. The Board will follow the relevant laws, rules, regulations and executive instructions and all enabling legal provisions of the Government of Telangana regarding the conduct of examinations for appointment to the posts notified herein by TREI-RB duly following the principle of order of merit with reference to relevant statutory provisions of the Government of Telangana and ensuring that the whole recruitment and selection process is carried out with utmost secrecy and confidentiality so as to ensure that the principle of merit is followed. A candidate shall be disqualified for appointment, if himself / herself or through relations or friends or any others has canvassed or endeavored to enlist for his candidature, extraneous support, whether from official or non-official sources for appointment to this service.
4. **Zonal/Local:-** The Zonal and Local Reservations shall be followed as per the Para -8 of A.P. Public Employment (Organization of Local Cadres and Regulation of Direct Recruitment) Order, 1975 (G.O.P. No. 674, G.A. (SPF-A) Dept., Dated: 20/10/1975) read with G.O. Ms. No. 124, General Administration (SPF-A) Department, dated: 07/03/2002 and other orders issued by the Government and within the meaning of Sections 3 and 97 of A.P. State Reorganization Act 06/2014.
5. **Employed:-** The persons already in Government Service/ Autonomous bodies/ Government aided institutions etc., whether in permanent or temporary capacity or as work charged employees are required to inform in writing to the Head of Office / Department, as the case may be and required to submit the "No objection" from the concerned Head of Office / Department to the Board as and when required to do so.
6. **Penal Action:-** The Board has taken decision to adopt the Telangana Public Examinations (Prevention of Malpractices and Unfair means) Act 25/97 and empowered to invoke its penal provisions for matters connected therewith or incidental thereto.

7. **Caste & Community:** Community Certificate issued by the competent authority (obtained from Government of Telangana State) in terms of G.O.Ms No. 58, SW (J) Dept., dt: 12/5/97 read with G.O.Ms.No. 5, Scheduled Castes Development (POA.A2) Dept., Dt. 08/08/2014, G.O.Ms.No.11, Scheduled Castes Development (POA.A2) Dept., Dt. 17/09/2014 and G.O.Ms. No.2, Scheduled Castes Development (POA.A2) Dept., Dt. 22/01/2015 should be submitted at appropriate time in respect of SC & ST Candidates. In respect of candidates belonging to Backward Classes are required to produce Community Certificate (BC-A, BC-B, BC-C, BC-D & BC-E) from Competent Authority i.e., from Tahsildars in the State of Telangana not below the rank of Deputy Tahsildar through E-seva/ Mee-seva (G.O.Ms.No.16, BCW(OP) Dept., Dt. 11/03/2015) and orders and instructions issued by the Government from time to time. As per General Rules for State and Subordinate Service Rules, **Rule-2(29)** Explanation: No person who professes a religion different from Hinduism the Sikhism or Buddhism shall be deemed a member of Schedule Caste.
8. **Reservation:-** (i) The Reservation and eligibility in terms of General Rule 22 & 22 (A) of State and Subordinate Service Rules are applicable.
- (ii) Reservation to Disabled persons is subject to their eligibility to any of the above category of posts and shall be subject to Telangana State and Subordinate Service Rules governing the posts. The required extent of deformity and the genuineness of the Medical Certificate and in the case of ambiguity or doubt, the same shall be referred to the Appellate Medical Boards as per the instructions of the Government.
- (iii) The Reservation to Women will apply as per Telangana State and Subordinate Service Rules and in terms of G.O.Rt.No.1274, G.A (Ser-B) Department, Dated 04-06-2016:
- (iv) As per G.O.Rt.No.1274, G.A (Ser-B) Department, Dated 04-06-2016:
- a) Women staff shall only be recruited in all cadres of posts in the Schools/ Institutions meant for Girls, in terms of Sub-Rule (3) of Rule 22-A of Telangana State and Subordinate Service Rules.
- b) The Schools / Institutions meant for Boys shall be treated as General Schools / Institutions and the posts in such Schools / Institutions shall be filled with men and women candidates, in terms of sub-rule (2) of Rule 22-A of Telangana State and Subordinate Service Rules.
- c) Separate rosters in each cadre shall be maintained for General (Boys) Schools / Institutions and for Girls Schools / Institutions, in accordance with sub-rules (2) and (3) of Rule 22-A of Telangana State and Subordinate Service Rules.
- (v) Reservation to BC-E group will be subject to the adjudication of the litigation before the Honorable Courts including final orders in Civil Appeal No: (a) 2628-2637 of 2010 in SLP. No. 7388-97 of 2010, dated. 25/03/2010 and orders from the Government.
- (vi) **Sports Quota:** - Sports reservations of (2%) to meritorious Sports persons in Direct Recruitment will be followed as per G.O.Ms.No.5, dated:14.05.2018 of the Youth Advancement, Tourism and Culture (Sports) Department, Government of Telangana and subsequent amendments to the Telangana State and Subordinate Service Rules, 1996 vide G.O.Ms.No.107, dated: 27.07.2018 of the General Administration (SER.D) Department, Govt. of Telangana.
9. **Distance Education:** - The Candidates who have obtained Degrees through Open Universities / Distance Education mode are required to have recognition by the University Grants Commission / AICTE / Distance Education Council as the case may be. Unless such Degrees had been recognised by the relevant Statutory Authority, they will not be



accepted for purpose of Educational Qualification. The onus of Proof of recognition by the relevant Statutory Authority that their Degrees / Universities have been recognised rests with the Candidate.

**PARA-VI: RESERVATION TO LOCAL CANDIDATES:**

Reservation to the Local candidates is applicable as provided in the Rules and as amended from time to time as in force on the date of notification. The candidates claiming reservation as Local candidates should obtain the required Study certificates (from IV Class to X Class or SSC) (OR) Residence Certificate in the Proforma only for those candidates who have not studied in any Educational Institutions as the case may be. The relevant certificates with authorized signature should be kept with the candidates to produce as and when required.

**DEFINITION OF LOCAL CANDIDATE:-**

In terms of Para-(7) of A.P. Public Employment (Organization of Local Cadres and Regulation of Direct Recruitment) Order, 1975 (G.O.P. No. 674, G.A. (SPF-A) Dept., Dated: 20/10/1975). "LOCAL CANDIDATE" means a candidate for direct recruitment to any post in relation to those Local area where he/she has studied in Educational Institution(s) for not less than four consecutive academic years prior to and including the year in which he/she appeared for S.S.C or its equivalent examination. If however, he/she has not studied in any educational institution and obtained SSC or its equivalent qualification from Open School or Private Study basis, he/she has to produce residential certificate issued by the Tahsildar.

- i) In case any Candidate who does not fall within the scope of above then, if he/she has studied for a period of not less than seven years prior to and inclusive of the year in which he/she has studied SSC or its equivalent qualification, he/she will be regarded as local candidate on the basis of the maximum period out of the said period of seven years and where the period of his/her study in two or more local areas or equal such local area where he/she has studied last in such equal periods will be taken for determining the local candidature. Similarly, if he/she has not studied during the above said period in any Educational Institution(s) and obtained private study the place of residence during the above period will be taken into consideration and local candidature will be determined with reference to the maximum period of residence or in the case of equal period where he/she has resided last in such equal periods.
- ii) If the claim for local candidature is based on study, the candidate is required to produce a certificate from the Educational Institution(s) where he/she has studied during the said 4/7-year period. If, however, it is based on residence, a certificate should be obtained from an officer of the Revenue Department not below the rank of Tahsildar or Deputy Tahsildar in independent charge of Mandal.
- iii) If, however, a candidate has resided in more than one Mandal during the relevant four/seven years period but within the same District or Zone as the case may be separate certificates from the Tahsildar exercising jurisdiction have to be obtained in respect of different areas.

**NOTE:**

- (A) Residence Certificate will not be accepted, if a candidate has studied in any educational institution upto S.S.C. or equivalent examination, such candidates have to produce study certificates invariably. The candidates, who acquired Degree from Open Universities without studying SSC / Matriculation or equivalent in Educational Institutions, have to submit Residence Certificate only. An educational institution means a recognized institution by the Government / University / Competent Authority.

(B) Each of the following Zones comprises the Districts mentioned against each Zone.

**The following are the Present Zones in the Telangana State:**

- V. Erstwhile districts of Adilabad, Karimnagar, Warangal and Khammam. (ADB, KRMN, WGL, KMM).
- VI. Erstwhile districts of Hyderabad, Ranga Reddy, Nizamabad, Mahaboobnagar, Medak and Nalgonda. (HYD, RRD, NZB, MBNR, MDK, NLG).

**PARA-VII: SCHEME OF EXAMINATION:-** The Scheme and Syllabus for the examination has been shown in **ANNEXURE-II**, and the same scheme and syllabus would be displayed in the Board Portal.

**PARA-VIII: PROCEDURE OF SELECTION:**

THE FINAL SELECTION FOR THE POST WILL BE BASED ON TOTAL MARKS SECURED IN THE WRITTEN EXAMINATION OF PAPER-I, II & III AND DEMONSTRATION.

1. The applicants will be subjected to written examination of Paper-I, Paper-II & Paper-III of Objective Type and the provisional selection will be made in order of merit based on the total marks secured in all the (03) papers. Candidates would be called for certificate verification and demonstration in the respective categories duly following the Rule of reservation in the ratio of 1:2.
2. There will be penalty for wrong answers marked in the objective tests of Paper-I, II & III. For each question for which a wrong answer is given by the candidate, one fourth (1/4) of the marks assigned to that question will be deducted as penalty to arrive at corrected score. If a question is left blank, i.e., if no answer is marked by the candidate, there will be no penalty for that question.
3. Marks secured in Paper-I, Paper-II and Paper-III and marks obtained in demonstration will be counted for preparation of final Merit list.
4. The candidates will be selected and allotted to the Residential Educational Institutions Societies in Telangana State as per the option exercised and as per their rank in the merit list and as per zonal preference for allotment of candidates against available vacancies after verification of Certificates, Community and Category wise for the vacancies available as required.
5. The appearance in all papers in the Written Examination and Demonstration as per rules is compulsory. Absence in any paper/ papers / Demonstration will automatically render his/her candidature as disqualified.
6. Candidates have to produce Original documents and other particulars on the day of verification itself. If candidate fails to produce any of the required certificates and if the particulars furnished by him / her in the Application do not tally with the Original documents produced by him / her, then his / her candidature will be rejected/ disqualified without any further correspondence. As candidature for the recruitment is processed through Computer/Electronic devices based on the particulars furnished in the Application Form, the candidate is advised to fill in all the relevant particulars carefully.

7. While the Board calls for preference of candidates in respect of posts/R.E.I. Societies etc., in the application form, it is hereby clarified that the said preferences are only indicative for being considered to the extent possible but not binding or limiting the Board's powers enjoyed under G.O.Ms.No.22, Scheduled Castes Development Department, dated 27.04.2018. Therefore, the Board has the power to assigning a successful candidate to any of the notified posts for which he is considered to be qualified and eligible, subject to fulfilling the selection criterion.
8. The appointment of selected candidates will be subject to their being found medically fit in the appropriate Medical Examination, and if he/she is of sound health, active habits free from any bodily defect or infirmity.

**PARA-IX:DEBARMENT:**

- a) Candidates should make sure of their eligibility to the post applied for and that the declaration made by them in the format of application regarding their eligibility is correct in all respects. Any candidate furnishing incorrect information or making false declaration regarding his/her eligibility at any stage or suppressing any information is liable to be debarred for five years from appearing for any of the examinations conducted by the Board, and their candidature for the recruitment would be summarily rejected.
- b) The Penal Provisions of Act 25/97 published in the Telangana Gazette No.130, Part-I.A Extraordinary dated: 01.06.2016 shall be invoked if malpractice and unfair means are noticed at any stage of the Recruitment.
- c) The Board is vested with the powers vide G.O.Ms.No.22, Scheduled Caste Development Department, dated 27.04.2018 of conducting recruitment and selection as per rules duly maintaining utmost secrecy and confidentiality in this process and any attempt by anyone causing or likely to cause breach of this duty cast on the Board by the Government of Telangana in such manner or by such action as to violate or likely to violate the fair practices followed and ensured by the Board will be sufficient cause for rendering such questionable means as ground for debarment and penal consequences as per law and rules and as may be decided by the Board.
- d) Any candidate is or has been found impersonating or procuring impersonation by any person or resorting to any other irregular or improper means in connection with his / her candidature for selection or obtaining support of candidature by any means, such a candidate may in addition to rendering himself/ herself liable to criminal prosecution, will be debarred permanently from any exam or selection held by the TREI-RB in the Telangana State.
- e) **MEMORANDUM OF MARKS:-** Memorandum of Marks will be issued on payment of Rs.200/- (Rupees Two Hundred Only) through Online Payment in favour of the E.O.(Convenor), TREI-RB, Hyderabad. Request for Memorandum of Marks from candidates will be entertained after one month from the date of publication of the final results in TREI-RB Website. The Memorandum of Marks will be issued to the candidates for a period of 90 days only. Request for revaluation or recounting will not be

undertaken under any circumstances. Invalid, disqualified, ineligible candidates will not be issued any Memorandum of Marks and fees paid by such candidates, if any, will be forfeited to TREI-RB account, without any correspondence in this regard.

In Offline examination, if any candidate fails to mark the Booklet Series, Roll Number etc., in the OMR Answer Sheet, the Board reserves the right to invalidate such Answer Sheets as Answer Sheets are valued by Optical Mark Scanner. No request for reconsideration of such rejected/invalidated cases will be entertained under any circumstances whatsoever.

**PARA-X:-** Please read the following Annexures appended to the Notification before filling the application form.

- |  |                         |
|--|-------------------------|
| <i>i) Breakup of Vacancies</i>             | <i>(Annexure - I)</i>   |
| <i>ii) Scheme and Syllabus</i>             | <i>(Annexure - II)</i>  |
| <i>iii) Instructions to the Candidates</i> | <i>(Annexure - III)</i> |
| <i>iv) List of Communities</i>             | <i>(Annexure - IV)</i>  |

**PARA XI: SPECIAL INSTRUCTIONS TO CANDIDATES:**

Candidates are directed to follow the TREI-RB's Website ([www.treirb.telangana.gov.in](http://www.treirb.telangana.gov.in)) regularly to know the latest developments of this Recruitment and any changes/ Modifications/ Addendum/ Corrigendum, dates of Examination, calling of candidates for verification of Certificates/ Interviews/ Results etc. Candidates are advised to go through the Instructions to Candidates enclosed to this Notification at Annexure-III.

**PARA-XII: TREI-RB'S DECISION TO BE FINAL:**

The decision of the Board in all aspects and in all respects pertaining to the application and its acceptance or rejection as the case may be, conduct of examination and at all consequent stages culminating in the selection or otherwise of any candidate shall be final in all respects and binding on all concerned, under the powers vested with it vide G.O.Ms.No.22, Scheduled Caste Development Department, dated 27.04.2018. Board also reserves its right to alter and modify terms and conditions laid down in the notification for conducting the various stages up to selection, duly intimating details thereof to all concerned, as warranted by any unforeseen circumstances arising during the course of this process, or as deemed necessary by the Board at any stage.

Hyderabad  
Date: 31.07.2018.

Sd/-  
Chairman, TREIRB  
  
Dr. E. Naveen Nicolas  
Executive Officer (Convenor)  
TREI-RB, Hyd.

**ANNEXURE - I  
(GENERAL RECRUITMENT)**

**BREAK UP OF VACANCY POSITION FOR THE POST OF JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES**

Society	Subject	Zone	OC		SC		ST		BC-A		BC-B		BC-C		BC-D		BC-E		PH-VH		HH		OH		Sports		Total		Grand Total (G+W)	
			G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	General	Women		
TTWREIS (Junior Lecturers - General)	Telugu	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
	English	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	
	Mathematics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	
	Zoology	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Botany	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Physics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Chemistry	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Economics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Civics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	Commerce	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
<b>Total</b>			<b>2</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>11</b>	<b>13</b>	



**ANNEXURE - I  
(GENERAL RECRUITMENT)**

**BREAK UP OF VACANCY POSITION FOR THE POST OF JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES**

Society	Subject	Zone	OC		SC		ST		BC-A		BC-B		BC-C		BC-D		BC-E		PH-VH		HH		OH		Sports		Total		Grand Total (G+W)	
			G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	General	Women		
TREIS	Commerce	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>Total</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	







**ANNEXURE - I  
(GENERAL RECRUITMENT)**

**BREAK UP OF VACANCY POSITION FOR THE POST OF JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES (WOMEN)**

Society	Subject	Zone	OC(W)	SC(W)	ST(W)	BC-A(W)	BC-B(W)	BC-C(W)	BC-D(W)	BC-E(W)	PH-VH(W)	HH(W)	OH(W)	Sports (W)	Total	
<b>TSWREIS (Junior Lecturers - Women)</b>	Telugu	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	4	
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	English	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	Mathematics	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	Zoology	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	Botany	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	Physics	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	Chemistry	Zone (V)	2	1	0	1	0	0	0	0	0	0	0	0	0	4
		Zone (VI)	3	1	0	1	0	0	0	0	0	1	0	0	0	6
	<b>Total</b>			<b>35</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>

**ANNEXURE - I  
(GENERAL RECRUITMENT)**

Junior Lecturers - General

**BREAK UP OF VACANCY POSITION FOR THE POST OF JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES**

Society	Subject	Zone	OC		SC		ST		BC-A		BC-B		BC-C		BC-D		BC-E		PH-VH		HH		OH		Sports		Total		Grand Total (G+W)		
			G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	General	Women			
TMREIS (Junior Lecturers - General)	Telugu	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
		Zone (VI)	2	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	5	8
	English	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
		Zone (VI)	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	
	Urdu	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5		
	Mathematics	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	5	8	
	Zoology	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	
	Botany	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	
	Physics	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	4	7	
	Chemistry	Zone (V)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
		Zone (VI)	2	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	4	6	
	Civics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Zone (VI)	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
	<b>Total</b>			<b>16</b>	<b>17</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>43</b>	<b>65</b>	

**ANNEXURE - I  
(GENERAL RECRUITMENT)**

Junior Lecturers - Women

**BREAK UP OF VACANCY POSITION FOR THE POST OF JUNIOR LECTURERS IN RESIDENTIAL EDUCATIONAL INSTITUTIONS SOCIETIES (WOMEN)**

Society	Subject	Zone	OC(W)	SC(W)	ST(W)	BC-A(W)	BC-B(W)	BC-C(W)	BC-D(W)	BC-E(W)	PH-VH(W)	HH(W)	OH(W)	Sports (W)	Total	
<b>TMREIS (Junior Lecturers - Women)</b>	Telugu	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	English	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Urdu	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Mathematics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Zoology	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Botany	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Physics	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	Chemistry	Zone (V)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Zone (VI)	2	1	0	0	0	0	0	0	0	0	0	0	0	3
	<b>Total</b>			<b>16</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>

**IMPORTANT NOTE:** The number of vacancies are subject to variation on intimation being received from the appointing authority.

**ANNEXURE-II**

**Scheme of examination for the post of Junior Lecturers in  
Residential Educational Institutions Societies as per  
G.O.Ms.No.31, SCD (RS) Dept, dated: 08.06.2018**

**Scheme of Examination**

Written Examination (Objective Type)		No. of Questions	Duration (Minutes)	Marks
<b>Paper-I</b>	General Studies, General Abilities and Basic Proficiency in English	100	120	100
<b>Paper-II</b>	Pedagogy Across the Curriculum (Common Syllabus)	100	120	100
<b>Paper-III</b>	Concerned Subject (PG Level)	100	120	100
Demonstration				25
			<b>Total</b>	<b>325</b>

**Written Examination Syllabus for the post of Junior Lecturers in  
Residential Educational Institutions Societies**

**Syllabus**

**Paper-I**

**General Studies, General Abilities and Basic Proficiency in English**

**Section-I: General Studies**

1. Current Affairs - Regional, National & International.
2. Indian Constitution; Indian Political System; Governance and Public Policy.
3. Social Exclusion; Rights issues such as Gender, Caste, Tribe, Disability etc. and inclusive policies.
4. Society Culture, Civilization Heritage, Arts and Literature of India and Telangana
5. General Science; India's Achievements in Science and Technology
6. Environmental Issues; Disaster Management- Prevention and Mitigation Strategies and Sustainable Development.
7. Economic and Social Development of India and Telangana.
8. Socio-economic, Political and Cultural History of Telangana with special emphasis on Telangana Statehood Movement and formation of Telangana state.

**Section-II: General Abilities**

9. Analytical Abilities: Logical Reasoning and Data Interpretation.
10. Moral Values and Professional Ethics in Education.
11. Teaching Aptitude

**Section - III: Basic Proficiency in English**

**i) School Level English Grammar:**

Articles; Tense; Noun & Pronouns; Adjectives; Adverbs; Verbs; Modals; Subject-Verb Agreement; Non-Finites; Reported Speech; Degrees of Comparison; Active and Passive Voice; Prepositions; Conjunctions; Conditionals.

**ii) Vocabulary:**

Synonyms and Antonyms; Phrasal Verbs; Related Pair of Words; Idioms and Phrases; Proverbs.

**iii) Words and Sentences:**

Use of Words; Choosing Appropriate words and Words often Confused; Sentence Arrangement, Completion, Fillers and Improvement; Transformation of Sentences; Comprehension; Punctuation; Spelling Test; Spotting of Errors.

**Written Examination Syllabus for the post of Junior Lecturers in  
Residential Educational Institutions Societies**

**Syllabus**

**Paper-II**

**Pedagogy Across the Curriculum (Common Syllabus)**

- I. The History and Nature of liberal disciplines of knowledge. Importance of Cognitive and Non-Cognitive areas in Education.
- II. Values, Aims and Objectives of Teaching Liberal and Creative Disciplines of Knowledge including Vocational subjects, Crafts, Performance and Fine arts etc.
- III. Psychology of Human Development; Psychology of Teaching and Learning.
- IV. Curriculum: Construction, Organization and Development
- V. Approaches, Methods and Techniques of Teaching Disciplines of Knowledge
- VI. Planning for Effective Instruction: Different Plans and Designing Learning Experiences.
- VII. Learning Resources and Designing Instructional Material; Labs; Teaching Aids; Textbooks; ICT integration; OERs (Open Educational Resources).
- VIII. Measurement and Evaluation: Continuous and Comprehensive Evaluation (CCE); Tools and Techniques of Evaluation; Achievement and Diagnostic Tests. Critical approach to assessment and evaluation.
- IX. Learning Disabilities; Learning Difficulties and Education of Exceptional and Disabled Children
- X. Disciplines of Knowledge and Everyday Life; Non-formal Education in the Institutions of Learning.
- XI. Pedagogical Concerns: Quality and Academic Standards; Teaching and Its relationship with Learning and Learner, Learners in Contexts: Situating learner in the Socio-Political and Cultural Context ; Managing Behavior problems, Guidance & Counseling, Punishment and Its legal implications, Rights of a Child, Time Management, Distinction between Assessment for Learning and Assessment of Learning, School Based Assessment, Continuous and Comprehensive Evaluation; Understanding Teaching and Learning in the context of NCF and Right to Education Act.

Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

Paper - III

Paper: తెలుగు

(ఎ) సంప్రదాయ సాహిత్యకవుల అధ్యయనం - కాలం - రచనలు

నన్నయ, తిక్కన, ఎర్రన, శివకవులు (నన్నెచోడుడు, మల్లికార్జున పండితారాధ్యుడు, పాల్కురికి సోమనాథుడు), నాచనసోమన - భాస్కర రామాయణ కావులు, రంగనాథ రామాయణ కవి - శ్రీనాథుడు - పోతన - పిల్లలమర్రి పినవీరభద్రుడు - గౌరన - అనంతామాత్యుడు - కొరవి గోపరాజు - నంది మల్లన, ఘంట సింగన - అష్టదిగ్గజ కవులు - తాళ్ళపాక కవులు - పొన్నగంటి తెలగన్న - చేమకూర వెంకటకవి - తంజావూరు రాజకవులు కవయిత్రులు - కందుకూరి రుద్రకవి, మడికి సింగన

(బి) వేమన తాత్వికత - సమకాలిక పరిశీలన, దృక్పథం - సమాజంపై వేమన కవిత్వ ప్రభావం.

సాహిత్య ధోరణుల అధ్యయనం - యుగప్రభావం - రూపాలు - మొదలైనవి. ఇతిహాసం - పురాణం ప్రబంధం - శతకం- సంకీర్తన సాహిత్యం - చారిత్రక కావ్యం - సంప్రదాయ, ఆధునిక గద్య రచనలు - నవల - కథానిక - వ్యాసం - ఏకాంకిక మొదలైనవి - వాదాలు (దళిత, హేతు, స్త్రీ, మైనారిటీ , బి.సి. ప్రాంతీయ)

జానపద విజ్ఞానం - గేయాలు - కతాగేయాలు - గద్యాభ్యాసాలు - (పురాణగాథలు - ఐతిహ్యాలు - కథలు), సామెతలు - పొడుపుకథలు - జానపద కళలు - (వీధి నాటకాలు, యక్షగానాలు, బొమ్మలాటలు,, పగటి వేషాలు, చిందు, ఒగ్గు, జాతర కళారూపాలు.

ఆధునిక కవులు అధ్యయనం - ఆధునిక ధోరణులు వారి రచనలు - గురజాడ - రాయప్రోలు - వీరేశలింగం - విశ్వనాథ - దేవులపల్లి - బసవరాజు - పింగళి - కాటూరి - దువ్వూరి - పుట్టపర్తి - శ్రీశ్రీ - కాళోజి, దాశరథి, సి. నారాయణ రెడ్డి , ఎన్. గోపి - ప్రసిద్ధ ఆధునిక కవులు - భావ, అభ్యుదయ, విప్లవ, - దిగంబర, చేతనావర్తన కవులు.

తెలుగు వ్యాకరణ, ఛందస్సు అధ్యయనం:

వ్యాకరణం - బాల వ్యాకరణం (సంజ్ఞ, సంధి, క్రియా, తత్సమ, ఆచ్ఛిక ప్రకరణాలు ఛందస్సు - వృత్తాలు, జాతులు, ఉపజాతులు (ఉత్పలమాల, చంపకమాల, శార్దూలం, మత్తేభం, ద్విపద, తరువోజ , సీసం, కందం, స్రగ్ధర , పంచచామరం) అలంకారాలు - అర్థాలంకారాలు, శబ్దాలంకారాలు తెలుగు భాషా చరిత్ర పరిణామం - (ప్రాజ్ఞన్నయ యుగం నుండి నేటి వరకు) - ద్రావిడ భాషా కుటుంబాలలో తెలుగు స్థానం - భౌగోళిక విభజన - మాండలికాలు.

భాషా విజ్ఞాన అధ్యయనం - భాషా శాస్త్రం, అర్థ విపరిణామం - ఆధునిక కాలం, శాసన భాష నుండి సాహిత్య భాష వరకు (వ్యావహారిక భాష ఉద్యమం వంటివి

తెలుగు సాహిత్య పరిణామం (ప్రాజ్ఞన్నయ యుగం నుండి నేటి వరకు) సౌందర్య, సాహిత్య విమర్శ అధ్యయనం (ఫ్రాక్, పశ్చిమ) ఆధునిక తెలుగు సాహిత్య విమర్శ. సంస్కృత వ్యాకరణం - కావ్యాలు - సంస్కృత వ్యాకరణం ప్రాథమిక విజ్ఞానం, సామాన్య ప్రామాణిక గద్య, పద్య పాఠ్యాంశాలు - హితోపదేశం, కాళిదాసుని కృతులు, సంస్కృత పంచకావ్యాల పరిచయం.



## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: English

#### I. Genres, Movements, Schools, Concepts.

- Renaissance-Reformation, Metaphysical poetry, Neo-classicism, Puritanism, Restoration, Romanticism, Victorian Age, Realism-Naturalism, Expressionism, Symbolism, Modernism, Postmodernism.
- Structuralism, Post structuralism, Feminism, Post colonialism, Diaspora, Race Gender and Caste.
- English Literary Criticism from Philip Sydney to Matthew Arnold
- New Criticism, Formalism, Archetypal criticism, New Historicism, Psychoanalytical criticism, Reader response criticism.
- Literary Genres: Poetry, Fiction, Prose, Drama (origins and development, elements, forms, types)

#### II. Writers and Texts

- |                       |  |
|-----------------------|--|
| • Christopher Marlowe | Doctor Faustus   |
| • William Shakespeare | Hamlet   |
| • John Milton         | Paradise Lost-Book 1   |
| • William Wordsworth  | “Immortality Ode”, Tintern Abbey                                     |
| • Robert Browning     | “My Last Duchess”, “Andrea del Sarto”                                |
| • Thomas Hardy        | Tess of the d’ Urbervilles   |
| • TS Eliot            | The Waste Land   |
| • G.B. Shaw           | Saint Joan   |
| • Virginia Woolf      | “A Room of One’s Own”  |
| • William Golding     | Lord of the Flies  |
| • Walt Whitman        | “When Lilacs Last in the Dooryard Bloomd”, “Crossing Brooklyn Ferry” |
| • Arthur Miller       | Death of a Salesman  |
| • Toni Morrison       | Beloved  |
| • Mulk Raj Anand      | Untouchable  |
| • Kamala Das          | “An Introduction”, “The Old Playhouse”                               |
| • Girish Karnad       | Hayavadana   |
| • Salman Rushdie      | Midnight’s Children  |
| • Chinua Achebe       | Things Fall Apart  |
| • Margaret Atwood     | Edible Woman   |
| • Derek Walcott       | Dream on Monkey Mountain   |

#### III English Language Teaching

1. ELT in India: (History and status of English in India; English as Second Language, English as Foreign Language, and English as Global Language).
2. Methods and Approaches: (Grammar Translation method, Direct method, Audio-Lingual method; Structural approach, Communicative language teaching)
3. Teaching of Language Skills: (Teaching of Listening, Speaking, Reading, and Writing Skills; Teaching of Grammar and Functional English; Teaching of Vocabulary; Classroom techniques; Use of authentic materials) Teaching literature.
4. Testing and Evaluation: (Principles, Types, Objectives of testing and evaluation)
5. Phonetics and Phonology; Syntax and Structure.

#### IV. Literary comprehension - (Excerpts from poetry and prose for comprehension)

**Written Examination Syllabus for the post of Junior Lecturers in  
Residential Educational Institutions Societies**

**Paper - III: Urdu**

**01. The study of the following Ten Authors and Poets:**

1. Mohammad Quli Qutub Shah
2. Wali.
3. Meer.
4. Anees.
5. Ghalib.
6. Sir Syed.
7. Hali.
8. Iqbal.
9. Premchand.
10. Krishna Chander.

**02. Appreciation of couplets of renowned poets.**

**03. The Study of the following eight trends of the History of Urdu Literature.**

1. Development of Urdu under the Qutubshahis, and the Adil Shahis.
2. Delhi School.
3. Lucknow School.
4. Fort William College.
5. Aligarh movement.
6. Iqbal and his Age.
7. The Contribution of Jamia Osmania.
8. Impact of progressive movement.

**04. Study of various aspects of Language and Literature.**

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Mathematics

#### I. Real Analysis

Finite, Countable and Uncountable sets - Real Number system  $\mathbb{R}$  - Infimum and Supremum of a subset of  $\mathbb{R}$  - Bolzano- Weierstrass Theorem- Sequences- Convergence- Limit Superior and Limit Inferior of a Sequence- Sub sequences- Heine- Borel Theorem- Infinite Series - Tests of Convergence- Continuity and Uniform continuity of a real valued function of a real variable- Monotonic Functions - Functions of Bounded Variation- Differentiability and Mean Value Theorems- Riemann Integrability- Sequences and Series of Functions.

#### II. Metric Spaces

Metric spaces - Completeness- Compactness- Connectedness - Continuity and Uniform continuity of a function from one metric space into another- Topological Spaces - Bases and Subbases - Continuous functions

#### III. Elementary Number Theory

Primes and Composite numbers - Fundamental Theorem of Arithmetic - Divisibility - Congruences - Fermat's theorem - Wilson's Theorem - Euler's Phi - Function

#### IV. Group Theory

Groups- Subgroups- Normal Subgroups- Quotient groups- Homomorphisms- Isomorphism Theorems- Permutation groups- Cyclic groups- Cayley's theorem. Sylow's theorems - Their applications

#### V. Ring Theory

Rings- Integral domain- Fields- Subrings - Ideals - Quotient rings - Homomorphisms - Prime ideals- Maximal ideals - Polynomial rings - Irreducibility of polynomials - Euclidean domains- Principal ideal domains

#### VI. Vector Spaces

Vector Spaces, Subspaces - Linear dependence and independence of vectors - basis and dimension - Quotient spaces - Inner product spaces - Orthonormal basis - Gram- Schmidt process

#### VII. Theory of Matrices

Linear Transformations - Rank and nullity - Change of bases- Matrix of a Linear Transformation - Singular and Non-singular matrices - Inverse of a matrix - Eigenvalues and Eigenvectors of a matrix and of a Linear Transformation - Cayley- Hamilton's theorem- Quadratic forms- Signature and Index

#### VIII. Complex Analysis

Algebra of Complex Numbers - The Complex Plane - Complex Functions and Their Analyticity - Cauchy-Riemann equations - Mobius transformations- Power Series-Complex Integration - Cauchy's Theorem - Morera's Theorem - Cauchy's Integral Formula - Liouville's Theorem - Maximum Modulus Principle - Schwarz's Lemma - Taylor's Series - Laurent's Series- Calculus of Residues - Evaluation of Integrals

#### IX. Ordinary Differential Equations

Ordinary Differential Equations (ODE) of First order and First degree - Different methods of solving them - Exact Differential equations and Integrating factors- ODE of First order and Higher degree - Equations solvable for  $p$ ,  $x$  and  $y$  - Clairaut's equations - Singular Solutions- Linear Differential Equations with Constant Coefficients and Variable Coefficients - Variation of Parameters

#### X. Partial Differential Equations

Formation of Partial Differential Equations (PDE) - Lagrange and Charpit's methods for Solving first order PDEs - Cauchy problem for first order PDEs- Classification of Second Order PDE's - General Solution of Higher Order PDEs with Constant Coefficients

#### XI. Solid Geometry

The Plane- Right line- Sphere- Cones and Cylinders

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Physics

#### I. Mathematical Methods of Physics

Dimensional analysis, vector algebra and vector calculus. Linear algebra, matrices, Cayley-Hamilton Theorem. Eigen values and eigenvectors. Linear ordinary differential equations of first & second order, special functions ( Hermite, Bessel, Laguerre and Legendre functions). Fourier series, Fourier and Laplace transforms. Elements of complex analysis, analytic functions; Taylor & Laurent series: poles, residues and evaluation of integrals. Elementary probability theory, random variables, binomial, Poisson and normal distributions. Central limit theorem.

#### II. Classical Mechanics

Newton's laws. Dynamical systems, Phase space dynamics, stability analysis. Central force motions. Two body collisions-scattering in laboratory and centre of mass frames. Rigid body dynamics-moment of inertia tensor. Non-inertial frames and pseudo forces. Variational principle. Generalized coordinates. Lagrangian and Hamiltonian formalisms and equations of motion. Conservation laws and cyclic coordinates. Periodic motion: small oscillations, normal modes. Special theory of relativity-Lorentz transformations, relativistic kinematics and mass-energy equivalence.

#### III. Electromagnetic Theory

Electrostatics: Gauss's law and its applications, Laplace and Poisson equations, boundary value problems. Magnetostatics: Biot-savart law, Ampere's theorem. Electromagnetic induction. Maxwell's equations in free space and linear isotropic media; boundary conditions on the fields at interfaces. Scalar and vector potentials, gauge invariance. Electromagnetic waves in free space. Dielectrics and conductors. Reflection and refraction, polarization, Fresnel's law, interference, coherence and diffraction. Dynamics of charged particles in static and uniform electromagnetic fields. Charges particles in inhomogeneous fields.

#### IV. Quantum mechanics

Wave-particle duality. Schrodinger equation (time-dependent and time-independent). Eigen value problems (particle in a box, harmonic oscillator, etc.). Tunnelling through a barrier. Wave function in coordinate and momentum representations. Commutators and Heisenberg uncertainty principle. Dirac notation for state vectors. Motion in a central potential: Orbital angular momentum, angular momentum algebra, spin, addition of angular momenta; Hydrogen atom. Stern-Gerlach experiment. Time independent perturbation theory and applications. Variational method. Time dependent perturbation theory and Fermi's golden rule. Selection rules. Identical particles. Pauli exclusion principle. spin-statistics connection.

#### V. Thermodynamics and statistical Physics

Laws of thermodynamics and their significance. Thermodynamic potentials, Maxwell relations, chemical potential, Phase equilibrium. Phase space. Micro and macro- states. Micro-canonical, canonical and grand-canonical ensembles and partition functions. Free energy and its connection with thermodynamic quantities. Classical and quantum statistics. Bose and Fermi gases. Principle of detailed balance. Black body radiation and Planck's distribution law

#### VI. Electronics

Semiconductor devices (diodes, junctions, transistors, field effect devices, homo- and hetero junction devices), device structure, device characteristics, frequency dependence and applications. Opto-electronic devices (solar cells, photo detectors, LEDs). Rectifiers and power supplies. Feedback amplifiers and their frequency response. Oscillators, Multivibrators. Operational amplifiers and their applications, Digital techniques and applications (Logic circuits, registers, counters and Comparators). A/D and D/A converters. Microprocessors, micro controller basics. Fundamentals of AM communication, FM communication and Fibre optic communication and their techniques.

**VII. Atomic & Molecular Physics**

Quantum States of an electron in an atom. Electron spin. Spectrum of Helium and alkali atom. Relativistic corrections for energy levels of hydrogen atom, hyper fine structure and isotopic shift, width of spectrum lines, LS & JJ couplings. Zeeman, Paschen-Bach & Stark effects. Frank-Condon principle. Electronic rotational, vibrational and Raman spectra of diatomic molecules. Selection rules. Lasers: spontaneous and stimulated emission, Einstein A & B coefficients. Optical pumping, Population inversion, rate equation. Modes of resonators and coherence length.

**VIII. Condensed Matter Physics**

Bravais lattice. Reciprocal lattice. Diffraction and the structure factor. Bonding of solids. Elastic properties, Phonons, lattice specific heat. Free electron theory and electronic specific heat. Response and Relaxation phenomena. Drude model of electrical and thermal conductivity. Hall Effect and thermoelectric power. Electron motion in a periodic potential, band theory of solids; metals, insulators and semiconductors. Super conductivity: Type-I and type-II super conductors. Josephson junctions. Superfluidity. Defects and dislocations. Ordered phases of matter: translational and orientation order, kinds of liquid crystalline order. Quasi crystals.

**IX. Nuclear and Particle Physics**

Basics of radio activity. Basic nuclear properties; size, shape and charge distribution, spin and parity. Binding energy, Semi-empirical mass formula, liquid drop model. Nature of the nuclear force, form of nucleon-nucleon potential, charge -independence and charge symmetry of nuclear forces. Deuteron problem. Evidence of shell structure, single-particle shell model, its validity and limitations. Elementary ideas of alpha, beta and gamma decays and their selection rules. Fission and fusion. Nuclear reactions. Reaction mechanism, compound nuclei and direct reactions.

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Chemistry

#### Inorganic Chemistry:

1. Atomic structure and chemical bonding - structure and bonding in homo and hetero nuclear molecules. Application of VSEPR, Valence Bond and Molecular orbital theories in explaining the structures of simple molecules.
2. Chemistry of main group (I to VII & Nobel gases) elements.
3. Chemistry of transition elements and inner transition elements.
4. General principles of metallurgy: Occurrence of metals , Concentration of ores - levigation, magnetic separation, froth floatation, leaching , Extraction of crude metal from concentrated ore-conversion to oxide, reduction of oxide to the metal , Thermodynamic principles of metallurgy-Ellingham diagramlimitations, applications. Extraction of iron, copper and zinc from their oxides, Electrochemical principles of metallurgy, Oxidation and reduction, Refining of crude metal-distillation, liquation poling, electrolysis, zone refining and vapour phase refining, Uses of aluminium, copper, zinc and iron. Alloys: Inter-metallic compounds
5. Coordination Chemistry -IUPAC nomenclature, bonding theories - Werner's theory, EAN rule, VBT, Crystal Field Theory - Crystal Field splitting patterns in various geometries, Factors affecting on CFT. Calculation of CFSE - John Teller effect -Isomerism in complexes. Spectral and magnetic properties of Coordination complexes - Russell Sanders coupling - term symbols - charge transfer spectra of complexes.
6. Stability of metal complexes - Stepwise and overall stability constants - Factors affecting the stability of metal complexes - Chelate effect. Pearson's theory of hard and soft acids and bases (HSAB).
7. Reaction mechanism of metal complexes-Inert and labile complexes - Ligand substitution reaction of octahedral complexes - Acid hydrolysis, Base hydrolysis - Conjugate base mechanism - Anation reactions - Substitution reactions of square planar complexes - Trans effect - Electron transfer reactions - Inner and outer sphere mechanisms.
8. Metal carbonyls, Nitrosyls and Metallocenes - Structure and bonding.
9. Bio-inorganic chemistry- Metal complexes as oxygen carriers-Hemoglobin and myoglobin-Oxygen transport - Non heme proteins - Hemerythrin and hemocyanin.
10. Analytical chemistry- Chromatography - General principles involved in separations by Paper, Thin layer, Column Chromatography, GC and HPLC.

#### Physical Chemistry:

11. Solutions and colligative properties: Types of solutions, Expressing concentration of solutions mass percentage, volume percentage, mass by volume percentage, parts per million, mole fraction, molarity and molality, Solubility: Solubility of a solid in a liquid, solubility of a gas in a liquid, Henry's law, Vapour pressure of liquid solutions: vapour pressure of liquid- liquid solutions. Raoult's law as a special case of Henry's law -vapour pressure of solutions of solids in liquids, Ideal and non-ideal solutions, Colligative properties and determination of molar mass - Relative lowering of vapour pressure, elevation of boiling point, Depression of freezing point, Osmosis and osmotic pressure-reverse osmosis and water purification. Abnormal molar masses - van't Hoff factor. Phase equilibria- Phase rule and its application to one component and two component systems.
12. Acids and bases: Acids, bases and salts- Arrhenius, Bronsted-Lowry and Lewis concepts of acids and bases. Ionisation of Acids and Bases -Ionisation constant of water and it's ionic product- pH scaleionisation constant of weak acids and weak bases-relation

between  $K_a$  and  $K_b$ . Di and poly basic acids and di and poly acidic Bases-Factors affecting acid strength-Common ion effect in the ionization of acids and bases-Hydrolysis of salts and pH of their solutions. Buffer solutions.

13. Thermodynamics: Brief review of concepts of I and II laws of thermodynamics. Concept of entropy. Entropy as a state function. Calculation of entropy changes in various processes. Entropy changes in an ideal gas. Entropy changes on mixing of ideal gases. Entropy as a function of V and T. Entropy as a function of P and T. Entropy change in isolated systems- Clausius inequality. Entropy change as criterion for spontaneity and equilibrium. Third law of thermodynamics. Evaluation of absolute entropies from heat capacity data for solids, liquids and gases. Standard entropies and entropy changes of chemical reactions. Helmholtz and Gibbs free energies (A and G). A and G as criteria for equilibrium and spontaneity. Physical significance of A and G. Driving force for chemical reactions- relative signs of  $\Delta H$  and  $\Delta S$ . Thermodynamic relations. Gibbs equations. Maxwell relations. Temperature dependence of G. Gibbs- Helmholtz equation. Pressure dependence of G. Chemical potential: Gibbs equations for non-equilibrium systems. Material equilibrium. Phase equilibrium. Clapeyron equation and Clausius-Clapeyron equation. Conditions for equilibrium in a closed system. Chemical potential of ideal gases. Ideal-gas reaction equilibrium-derivation of equilibrium constant. Temperature dependence of equilibrium constant - The Van't Hoff equation.
14. Electrochemistry: Conductance and its applications, Derivation of Nernst equation. Chemical and concentration cells (with and without transference). Liquid junction potential - derivation of the expression for  $L J P$  - its determination and elimination. Applications of EMF measurements: Solubility product, potentiometric titrations, determination of transport numbers, equilibrium constant measurements. Decomposition potential and its significance. Electrode polarization - its causes and elimination. Concentration over potential. Concept of activity and activity coefficients in electrolytic solutions. The mean ionic activity coefficient. Debye-Huckel theory of electrolytic solutions. Debye-Huckel limiting law. Calculation of mean ionic activity coefficient. Limitations of Debye-Huckel theory. Extended Debye-Huckel law. Theory of electrolytic conductance. Derivation of Debye-Huckel-Onsager equation - its validity and limitations. Concept of ion association - Bjerrum theory of ion association (elementary treatment) - ion association constant - Debye-Huckel-Bjerrum equation.
15. Quantum chemistry: Black body radiation-Planck's concept of quantization-Planck's equation, average energy of an oscillator. Wave particle duality and uncertainty principle - significance for microscopic entities. Emergence of quantum mechanics. Wave mechanics and Schrödinger wave equation. Operators - operator algebra: Commutation of operators, linear operators, Complex functions, Hermitian operators. Operators and Eigen functions and Eigen values. Degeneracy. Linear combination of Eigen functions of an operator. Well behaved functions. Normalized and orthogonal functions. Postulates of quantum mechanics. Physical interpretation of wave function. Observables and operators. Measurability of operators. Average values of observables. The time dependent Schrodinger equation. Separation of variables and the time-independent Schrodinger equation.
16. Chemical kinetics: Theories of reaction rates - Collision theory, Transition state theory, Reaction coordinate, activated complex and the transition state. Thermodynamic formulation of transition state theory. Unimolecular reactions and Lindeman's theory.
17. Photochemistry: Electronic transitions in molecules - The Franck Condon principle. Electronically excited molecules- singlet and triplet states. Radiative life times of excited states-theoretical treatment. Measured lifetimes. Quantum yield and its determination. Actinometry - ferrioxalate and uranyl oxalate actinometers. Derivation of fluorescence and phosphorescence quantum yields. E-type delayed fluorescence-evaluation of triplet energy splitting ( $\Delta E_{ST}$ ). Laws of photo chemistry, Photo physical processes, photo physical kinetics of unimolecular reactions. Calculation of rate constants of various photo physical processes, State diagrams, photochemical primary processes. Types of photochemical reactions- electron transfer, photo dissociation, addition, abstraction, oxidation and isomerisation reactions with examples. Effect of

light intensity on the rates of photochemical reactions. Photosensitization. Quenching-Stern Volmer equation. Experimental set up of a photochemical reaction. Introduction to fast reactions- Principles of flash photolysis.

18. Solid state chemistry: General characteristics of solid state. Classification of crystalline solids based on different binding forces, probing the structure of solids: X-ray crystallography, Crystal lattices and unit cells. Bravais lattices- primitive and centred unit cells, Number of atoms in a unit cell (primitive, body centred and face centred cubic unit cell), Close packed structures: Close packing in one dimension, in two dimensions and in three dimensions- tetrahedral and octahedral voids- formula of a compound and number of voids filled- locating tetrahedral and octahedral voids, Packing efficiency in simple cubic, bcc and in hcp, ccp lattice. Calculations involving unit cell dimensions density of the unit cell. Imperfections in solids-types of point defects-stoichiometric and non-stoichiometric defects. Magnetic properties of solids-classification of magnetic materials, Magnetic susceptibility, Langevin diamagnetism, Weiss theory of para magnetism. Magnetic properties of solids - classification of magnetic materials, Magnetic susceptibility, Langevin diamagnetism, Weiss theory of para magnetism Electronic properties of metals, insulators and semi conductors: Electronic structure of solids, Band theory, band structure of metals, insulators and semiconductors. Electrons holes and excitons. The temperature dependence of conductivity of extrinsic semi conductors. Photo conductivity and photovoltaic effect.

#### Organic Chemistry:

19. IUPAC nomenclature of organic molecules. Isomerism - classification of isomers.
20. Classification, preparations and properties of alkane, alkenes, alkynes, cyclo alkanes, aromatic hydrocarbons, halogen compounds, hydroxy compounds, carbonyl compounds, carboxylic acids and its derivatives.
21. Stereo chemistry: Molecular representations (Wedge, Fisher, Newman and Saw-horse projection formula) their description and interconversions. Stereoisomers - classification-configuration- R,S- Nomenclature, criteria for chirality, Axial chirality of allenes, spiranes, alkylidenes, Cycloalkanes, chiral biaryls - Atropisomerism. Planar chirality of ansa compounds and trans- cyclooctene. Helical chiral compounds. Determination of absolute configuration by chemical correlation methods. Determination of configuration in E,Z- nomenclature. Spectral and chemical methods for determination of E, Z configuration, including aldoxime and ketoximes.
22. Introduction to conformational isomerism, Klyne - Prelog terminology for conformers and torsion angles, dihedral angle, Steric strain and the concept of dynamic stereoisomerism. Study of conformations of acyclic compounds like ethane, butane, dihalobutanes, halohydrin, ethylene glycol, butane-2, 3-diol, amino alcohols and 1,1,2,2-tetrahalobutanes.
23. Nature of bonding in organic molecules and aromaticity, delocalized chemical bonding, conjugation, cross conjugation, resonance, hyperconjugation, tautomerism, Huckel's Rule and the concept of aromaticity-Aromaticity, non-aromaticity and anti aromaticity.
24. Reactive intermediate: Generation, detection, structure, stability and reactivity of carbocation, carbanion, free radical, carbene and nitrene. Molecular rearrangements: definition and classification, molecular rearrangements involving 1). Electron deficient carbon: Wagner - Meerwein, Pinacol-Pinacolone, allylic and Wolf rearrangement. 2). Electron deficient Nitrogen: Hofmann, Lossen, Curtius, Schmidt and Beckmann rearrangements. 3) Electron deficient Oxygen: Baeyer-Villiger oxidation. 4). Base catalysed rearrangements: Benzylic acid, Favourski, Tran annular, Sommelet-Hauser and Smile rearrangement.
25. Organic reaction mechanism: Mechanism, stereochemistry and energy profile diagram of Addition reactions to polar and non polar double bonds. Substitution reactions: Mechanism, rate law, stereochemistry and factors affecting on aliphatic and aromatic reactions. Elimination reactions- mechanism, rate law, stereochemistry, orientation and factors affecting on E1, E2, E1CB, pyrolytic syn elimination and a-elimination,



- elimination vs substitution. Detection of reaction mechanism by product isolation, isotopic labelling, chemical trapping and crossover experiments.
26. Oxidation- Swern, Cr (VI) oxidants, Oxidative cleavage of 1,2-diols - Periodic acid and Lead tetra acetate. Reductions - Wilkinson's catalytic hydrogenation, LiAlH<sub>4</sub>, NaBH<sub>4</sub>, BH<sub>3</sub>, AlH<sub>3</sub> and DIBAL.
  27. Heterocyclic chemistry: importance as drugs, nomenclature, classification based on size of the ring, number and nature of hetero atoms. Synthesis and reactivity of Pyrrole, furan, Thiophene, pyridine, Indole, Benzothiophene, Quinoline, Isoquinolines.
  28. Alkaloids and Terpenoids- importance as drugs, isolation of natural products by steam distillation, solvent extraction and chemical methods. Structure determination and synthesis of papaverine, nicotine and quinine. General methods in the structure determination of Terpenes, isoprene rule, special isoprene rule, structure determination of a-Terpeniol and camphor.
  29. Organic photochemistry: photochemical energy, Frank-Condon principle, Jablonski diagram, Electronic transitions, photosensitization, quenching, quantum efficiency, quantum yield, photochemistry of carbonyl compounds n

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 transitions. Norrish type-I and Norrish type-II cleavages. Paterno-Buchi reactions, Photoreduction, photochemistry of enones- hydrogen abstraction, rearrangements of  $\alpha,\beta$ -unsaturated ketones and cyclohexadienones, photochemistry of pbenzoquinones, Dienes - photochemistry of 1,3- butadiene, (2+2) additions, Di-p-methane rearrangement, photochemistry of aromatic compounds, excited states of benzene and its 1,2-, 1,4-additions.
  30. Pericyclic reactions: Classification, Stereochemistry of pericyclic reactions, Molecular Orbitals and Symmetry of ethelene, 1,3-butadiene, 1,3,5-hexatriene, allylic, 1,3-pentadienyl and 1,3,5-heptatrienyl p- systems. Analysis of pericyclic reactions by PMO, FMO and orbital correlation methods.
  31. Basic principles, concepts of UV, IR, H1NMR, C13NMR and Mass spectroscopic methods - structure determination of organic compounds by UV, IR, H1NMR, C13NMR and Mass spectroscopic methods.
  32. Green chemistry: Principles of Green chemistry, and its approaches.

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Botany

#### I Phycology, Mycology, Bacteria and Viruses

Phycology : Thallus organization ; cell ultra structure ; reproduction (vegetative, sexual, asexual) ; criteria for classification of algae : pigments, reserve food, flagella ; classification, salient features of Chlorophyta, Charophyta, Xanthophyta, Bacillariophyta, Phaeophyta and Rhodophyta ; algal blooms and toxic algae, algal biofertilizers ; algae as food and feed and role of algae in industry.

Mycology : General characters of fungi ; substrate relationship in fungi ; cell ultrastructure ; unicellular and multicellular organization ; cell wall composition ; nutrition (saprobic, biotrophic, symbiotic) ; reproduction (vegetative, asexual, sexual) ; heterothallism ; heterokaryosis parasexuality ; Molecular aspects in classification.

General account of Mastigomycotina, Zygomycotina, Ascomycotina, Basidiomycotina, Deuteromycotina ; fungi in industry, medicine and as food ; fungal diseases in plants and humans ; Mycorrhizae ; fungi as biocontrol agents.

Bacteria- ultrastructure and biochemistry of cell wall, nutritional types, reproduction, Plasmids.

Viruses- Characters and ultrastructure of virions and symptomatology and transmission of plant viruses. Mollicuties general characters of spiroplasmas and phytoplasmas Importance of micro organisms: Microbes in medicine, agriculture and environment.

#### II Bryophyta, Pteridophyta and Gymnosperms

Bryophyta : Morphology, structure, reproduction and life history ; distribution ; classification., of Marchantiales, Junger maniales, Anthocerotales, Sphagnales, Funariales and Polytrcales ; economic and ecological importance.

Pteridophyta : Morphology, anatomy and reproduction ; classification of Psilo psida, Lycopsida, Sphenopsida and Pteropsida; evolution of stele ; heterospory and origin of seed habit; general account of fossil pteridophyts.

Gymnosperms- Introduction and classification, Structure and reproduction of Cycadales, Ginkgoales, Coniferales, Ephedrales, Welwitschiales and Gnetales.

#### III Taxonomy of Angiosperms

The species concept: Taxonomic hierarchy, species, genus, family and other categories; principles used in assessing relationship, delimitation of taxa and attribution of rank.

Salient features of the International Code of Botanical nomenclature.

Taxonomic tools: Herbarium; floras; histological, cytological, phytochemical, serological, biochemical and molecular techniques ; computers and GIS.

Systems of angiosperm classification : Phenetic versus phylogenetic systems ; cladistics in taxonomy ; relative merits and demerits of major systems of classification.

Study of the following families- Magnoliaceae, Malvaceae, Rutaceae, Apocynaceae, Asclepiadaceae, Lamiaceae, Amaranthaceae and Poaceae.

#### IV Plant Anatomy and Embryology

Shoot development: Organization of the shoot apical meristem (SAM); control of cell division and cell to cell communication; control of tissue differentiation especially xylem and phloem ; secretory ducts and laticifers.

Phyllotaxy and leaf differentiation

Root development : Organization of root apical meristem (RAM); vascular tissue differentiation; homeotic mutants in Arabidopsis and Antirrhinum,

Male gametophyte: Structure of anthers; microsporogenesis, role of tapetum; pollen development and gene expression; male sterility; sperm dimorphism and hybrid seed production; pollen germination, pollen tube growth and guidance ; pollen storage ; pollen allergy, pollen embryos.

Female gametophyte: Ovule development; megasporogenesis; organization of the embryo sac, structure of the embryo sac cells.

Pollination, pollen - pistil interaction and fertilization : Floral characteristics, pollination mechanisms and vectors; self-incompatibility; double fertilization.

Seed development and fruit growth: Endosperm development during early, maturation and desiccation stages; embryogenesis, cell lineages during late embryo development; storage proteins of endosperm and embryo; polyembryony; apomixes; embryo culture; fruit maturation.

Dormancy: Seed dormancy; overcoming seed dormancy; bud dormancy.

## **V Plant Resource Utilisation and Conservation**

Origin, evolution, botany, cultivation and uses of (i) Food forage and fodder crops (ii) fibre crops (iii) medicinal and aromatic plants and (iv) vegetable oil-yielding crops. Ethnobotany - Scope and objectives of ethnobotany.

Important fire-wood and timber - yielding plants and non-wood forest products (NWFPs) such as bamboos, rattans, raw materials for paper-making, gums, tannins, dyes, resins and fruits.

Role of plants in Medicine- morphology, active principles and medicinal value of the following plants-Andrographis, Asparagus, Phyllanthus, Gymnema..

Strategies for conservation - in situ conservation : International efforts and Indian initiatives ; protected areas in India - sanctuaries, national parks, biosphere reserves, wetlands, mangroves and coral reefs for conservation of wild biodiversity.

Strategies for conservation - ex situ conservation : Principles and practices; botanical gardens, field gene banks, seed banks, in vitro repositories, cryobanks; general account of the activities of Botanical Survey of India (BSI), National Bureau of Plant Genetic Resources (NBPGR), Indian Council of Agricultural Research (ICAR), Council of Scientific and Industrial Research (CSIR) and the Department of Biotechnology (DBT) for conservation, non-formal conservation efforts.

## **VI Plant Ecology**

Climate, soil and vegetation patterns of the world: Life zones; major biomes and major vegetation and soil types of the world.

Vegetation organization: Concepts of community; analytical and synthetic characters of community.

Population characters, interactions of species- positive and negative interactions of species.

Ecological succession: types, changes involved in succession, concept of climax

Biotic and abiotic interactions, habitat and niche, allopatric and sympatric speciation.

Ecosystem organization: Structure and functions; primary production methods of measurement of primary production, ; energy dynamics (trophic organization, energy flow Pathways, ecological efficiencies); food chains, food web and ecological pyramids, global biogeochemical cycles of C,N, in terrestrial and aquatic ecosystems.

Biological diversity: Concept and levels; speciation and extinction; IUCN categories of threat; distribution and global patterns, hot spots; endemism, inventory.

Air, water and soil pollution: Kinds, sources, effects on plants and ecosystems.

Climate change: Green house gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, CFCs: sources, trends and role); ozone layer and ozone depletion ; consequences of climate change (CO<sub>2</sub> fertilization, global warming, sea level rise, UV radiation).

Biogeographical zones of India, Flora of Telangana - vegetational types.

## VII Cell Biology

Ultrastructure and functions of cell organelles. Cell wall, Plasma membrane Plasmodesmata, Chloroplast, Mitochondria, Plant Vacuoles, Nucleus, Ribosomes,

Cell cycle and apoptosis : Control mechanisms; role of cyclins and cyclin dependent kinases; retinoblastoma and E2F proteins; cytokinesis and cell plate formation; mechanisms of programmed cell death. Mitosis and meiosis its significance

Other cellular organelles: Structure and functions of microbodies, Golgi apparatus, lysosomes, endoplasmic reticulum.

## VIII Cytogenetics

Chromatin organization : Chromosome structure and Packaging of DNA, molecular organization of centromere and telomere; nucleolus and ribosomal RNA genes ; euchromatin and heterochromatin ; karyotype analysis ; banding patterns ; specialized types of chromosomes ; polytene, lampbrush, B chromosomes and sex chromosomes ; molecular basis of chromosome pairing.

Structural and numerical alterations in chromosomes : Duplication, deficiency, inversion and translocation ; autopolyploids ; allopolyploids ; evolution of major crop plants.

Genetics of prokaryotes and eukaryotic organelles : genetic recombination in phage ; genetic transformation, conjugation and transduction in bacteria ; genetics of mitochondria and chloroplasts cytoplasmic male sterility.

Gene structure and expression : Genetic fine structure ; cis - trans test ; Benzer's experiment; introns and their significance ; RNA splicing ; regulation of gene expression in prokaryotes and eukaryotes.

Mutations : Spontaneous and induced mutations ; physical and chemical mutagens ; molecular basis of gene mutations ; transposable elements in prokaryotes and eukaryotes ; mutations induced transposons; site-directed mutagenesis ; DNA damage and repair mechanisms.

Plant Breeding : Principles and methods of plant breeding ; Marker assisted breeding.

## IX Plant Physiology

Fundamentals of enzymology : General aspects, allosteric mechanism, regulatory and active sites, isoenzymes, kinetics of enzymatic catalysis, Michaelis - Menton equation and its significance.

Membrane transport and translocation of water and solutes : Plant water relations, mechanism of water transport through xylem, passive and active solute transport, membrane transport proteins.

Photochemistry and photosynthesis : Photosynthetic pigments and light harvesting complexes, photo oxidation of water, mechanisms of electron and proton transport, carbon assimilation - the Calvin cycle, photorespiration and its significance, the C4 cycle, the CAM pathway, biosynthesis of starch and sucrose.

Respiration and lipid metabolism : Glycolysis, the TCA cycle, electron transport and ATP synthesis, pentose phosphate pathway, glyoxylate cycle, alternative oxidase system, structure and function of lipids, fatty acid biosynthesis, synthesis of membrane lipids, structural lipids and storage lipids and their catabolism.

Nitrogen fixation and metabolism : Biological nitrogen fixation, nodule formation and nod factors, mechanism of nitrate uptake and reduction, ammonium assimilation.

Photobiology : Photochromes and cryptochromes, photophysiology of light -induce responses, cellular localization.

Plant growth regulators and elicitors : Physiological effects and mechanism of action of auxins, gibberellins, cytokinins, ethylene, abscisic acid, brassinosteroids, polyamines, jasmonic acid and salicylic acid.

The flowering process : Photoperiodism, endogenous clock and its regulation, floral induction and development - genetic and molecular analysis, role of vernalization.

**X Biotechnology and Genetic Engineering**

Plant Biotechnology - Principles, scope and applications.

Plant cell and tissue culture : General introduction, scope, cellular differentiation, and totipotency.

Organogenesis and adventives embryogenesis : Morphogenesis; somatic embryogenesis.

Somatic hybridization : Protoplast isolation, fusion and culture.

Applications of plant tissue culture : Clonal propagation, artificial seed, production of hybrids and soma clones, production of secondary metabolites / natural products, cryopreservation and germplasm storage.

Recombinant DNA technology : Gene cloning principles and techniques, genomic / c DNA libraries, vectors, DNA synthesis and sequencing, polymerase chain reaction, DNA fingerprinting and DNA markers.

Genetic engineering of plants : Transgenic plants, Methods of gene transfer - Agrobacterium - mediated and microprojectile, chloroplast transformation, intellectual property rights, ecological risks and ethical concerns.

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Zoology

#### I General Concepts:

1. Levels of structural organization: Unicellular, Multi cellular and Colonial forms, Prokaryotic and Eukaryotic cells, Levels of organization of Tissues, Organs & Systems.
2. Acoelomata, Pseudocoelomata, Coelomata, Proterostomia and Deuterostomia.
3. Concepts of species and Hierarchical taxa, Biological nomenclature, Classical methods of taxonomy of animals.

#### II Non-Chordata:

1. General characters and classification of invertebrates up to class level.
2. Protozoa - Locomotion, Nutrition and Reproduction in Protozoa, Protozoan diseases of man - Amoebiasis, Malaria, Trypanosomiasis.
3. Porifera - Canal system in Porifera, Skeleton in Porifera, Reproduction in sponges.
4. Coelenterata - Polymorphism, Metagenesis, Coral formation, Obelia.
5. Helminthes - Common Helminthic parasites of Man -Fasciola hepatica, Schistosoma, Taenia solium, Echinococcus granulosus, Ascaris, Ancylostoma, Trichinella - their life cycles, Pathogenescity and clinical significance. Parasitic adaptations in Helminths.
6. Annelida - Excretory system in Annelida, Coelom formation. Coelom and coelomoducts, Metamerism.
7. Arthropoda - Mouthparts of insects, Ommatidium, Useful and harmful insects, Metamorphosis in insects, Apicultur and Sericulture in India, Crustacean larvae, Peripatus.
8. Mollusca - Torsion and Detorsion, Pearl formation.
9. Echinodermata - Echinoderm larvae, Water vascular system.

#### III Chordata:

1. General characters and classification of chordates up to class level, Origin of chordates, Phylogeny and Affinities of Hemichordata, Retrogressive metamorphosis.
2. Vertebrate integument and its derivatives, Comparative account of Digestive, Respiratory, Circulatory, Excretory and Reproductive systems of vertebrates.
3. Pisciculture in India, Common edible fishes.
4. Origin and evolution of Amphibia, Neoteny or Paedogenesis.
5. Important snakes of India, Identification of Poisonous and non- Poisonous Snakes, Poisonous Apparatus, Dinosaurs.
6. Flight adaptations and Migration in birds. Archeopteryx, Poultry.
7. Adaptive radiation in Mammals, Dentition in Mammals.

#### IV Cell Biology:

1. Prokaryotic and Eukaryotic cell, Plasma membrane-Ultra structure & function.
2. Structure and function of intracellular organelles- Mitochondria, Golgi bodies, Lysosomes, Endoplasmic reticulum, Peroxisomes, Vacuoles, Nucleus.
3. Chromosomes structure & function; Heterochromatin, Euchromatin.
4. Cell division - Mitosis and meiosis, Cell cycle & its regulation.
5. Recombinant DNA technology, Transgenesis & Cloning.
6. Protein synthesis - Genetic code, Initiation, Elongation and Termination.
7. Regulation of gene expression - Lac operon.

**V Genetics:**

1. Mendel's law of inheritance.
2. Gene mapping methods - Linkage-complete and Incomplete linkage, Linkage maps, Recombination, Mapping with molecular markers, somatic cell hybrids.
3. Crossing over - Types (Somatic or Mitotic crossing over and Germinal or Meiotic crossing over).
4. Mutations - Types (Spontaneous and Induced), Causes and detection.
5. Chromosomal aberrations (Deletion, Duplication, Inversion and Translocation, Ploidy and their genetic implications); Autosomal abnormalities (Down's syndrome, Trisomy-13, 18); Sex anomalies (Turner's syndrome, Klinefelter's syndrome, Hermaphroditism).
6. Human genetics - Human karyotyping, Genetic disorders due to mutant genes (Huntington's chorea), Sickle-cell anaemia (SCA), Inborn errors of metabolism- Phenylketonuria, Alkaptonuria .

**VI System and Cell physiology:**

1. Blood and circulation - Blood corpuscles, Haemopoiesis, Plasma function, Blood groups, Haemoglobin, Haemostasis.
2. Cardiovascular system - Neurogenic, Myogenic heart, Cardiac cycle.
3. Respiratory system - Transport of gases, Exchange of gases.
4. Nervous system - Neuron, Conduction of nerve impulse, Synaptic transmission, Neurotransmitters.
5. Muscle - Ultra structure of skeletal muscle, Mechanism of muscle contraction.
6. Sense organs - Eye and Ear.
7. Excretory system - Structure & function of mammalian Kidney and Nephron, Micturition.
8. Osmoregulation - Osmoregulation in Aquatic & Terrestrial animals.
9. Digestive system - Digestion, absorption, assimilation and egestion.
10. Endocrinology and Reproduction - Endocrine glands, Types of hormones & Mechanism of hormonal action, Hormonal regulation of reproduction in mammals.
11. Outline classification of organic compounds (Carbohydrates, Proteins and Lipids).
12. Glycolysis (EMP), Krebs's cycle (TCA CYCLE), Electron transport system (Oxidative phosphorylation), Pentose phosphate pathway, Gluconeogenesis.

**VII Evolution:**

1. Origin of life - Theories and Evidences of organic evolution, The modern synthetic theory.
2. Population genetics - (Gene pool, Gene frequency), Hardy weinberg's law.
3. Isolation and speciation.
4. Evolution of Man.
5. Zoogeographical realms of the world.

**VIII Developmental Biology:**

1. Spermatogenesis and Oogenesis.
2. Fertilization, Cleavage, Gastrulation, Formation of germ layers, Parthenogenesis.
3. Formation and Function of Foetal membranes.
4. Types of placenta.
5. Development of Frog and Chick.

**IX Histology:**

1. Histology of mammalian tissues and organs - Epithelial, connective, blood, bone, cartilage, skin, stomach, intestine, liver, pancreas, kidney, testis and ovary.

**X Ecology:**

1. Concepts of Ecosystem.
2. Biogeochemical cycles (Carbon, Nitrogen and Phosphorous).
3. Influence of environmental factors on animals, Energy flow in Ecosystem, Food chains, Food web and Tropic levels.
4. Animal Associations (Neutralism, Mutualism, Symbiosis, Commensalism, Parasitism, Predation and Competition).
5. Ecological succession.
6. Environmental pollution- Air, water, land, noise, radioactive, thermal, Effects of pollution on ecosystem, Prevention of pollution.
7. Wildlife in India- Conservation, Chipco movement.
8. Biodiversity- Economic significance, Conservation, Hot spots of India.

**XI Immunology:**

1. Cells of the immune system- Lymphoid cells, Mono nuclear cells, Granulocytic cells, Mast cells.
2. Organs of the immune system- Primary and Secondary lymphoid organs, Lymphatic system.
3. Antigens- Antigenic determinants or Epitopes, Immunogenicity, Haptens.
4. Humoral immunity - Immunoglobulin (Fine structure of immunoglobulin and Immunoglobulin classes).
5. Innate (Non-specific immunity) - Anatomical barriers, Phagocytosis, Natural killer cells (NK cells), Interferons.
6. Cell mediated immunity - Mechanism of cell mediated immunity.



**Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies**

**Paper - III: History**

**I Ancient India:**

1. Definition of History, Scope, Nature, Sources.
2. Pre and Proto History - Stone ages and Chalcolithic Cultures.
3. Harappan Civilization - Characteristic features, Major cities - Socio-Economic conditions, Harappan Script, Religious practices -Decline.
4. Iron Age -Aryan Migrations - Second Urbanization.
5. India in 6th Century BC; Early States, Sixteen Mahajanapadas, Rise and Growth of Magadha - Society, Economy - Jainism, Buddhism, Ajivikas and Lokayatas.
6. Mouryan Age: Chandragupta Mourya and Ashoka, Mouryan Polity, Administration, Dhamma, Socio-Economic conditions - Decline.
7. Satavahana Age; Political History, Administration, Society, Economy and Culture.
8. Gupta Age: Political History, Administration, Socio-Economic conditions, Growth of Culture, Arts and Architecture, Literature - Decline.
9. India in the Seventh Century A.D.; Pushyabhutis (Harsha), Pallavas, Chalukyas and Rashtrakutas - Political History, Society, Economy and Culture.

**II Medieval India:**

10. India between 650 A.D. to 1200 A.D.- Rajputs, Arab and Turkish Invasions - Later Pallavas, Chalukya, Chola Art, Architecture and Chola Administration - Society, Economy and Culture.
11. Age of Delhi Sultanate 1206 A.D. -1526 A.D. - Political History, Administration, Changes in Society and Economy- Bhakti and Sufi Movements.
12. Age of Vijayanagara - Origin, Political History, Krishnadevaraya, Socio- Economic Conditions, Culture, Art, Architecture, Decline - Bahamanis.
13. Moghul Age (1526-1707) - Political History, Shershah, Akbar, Administration, Society, Economy, Culture- Decline - Marathas, Shivaji.

**III. Modern India**

14. Establishment of British Power in India -Early Resistance - Hyder Ali, Tippu Sultan.
15. British paramountcy in India-Policies of Governor Generals, Impact of British Policy on Indian Agriculture and Economy.
16. Socio - Religious Reforms Movements -Brahmo Samaj -Arya Samaj, Satyashodhak Samaj and others.
17. 1857 Revolt; causes, results and significance.
18. Rise and Growth of Indian National Movement -Nationalist Movement I Phase from 1885 A.D. -1905 A.D. - Indian National Congress; Moderates, Extremists and Early Revolutionaries II phase at 1905-1920 - Vande Mataram Movement Home Rule - Role of Tilak and Anie Beasant- Later phase of Revolutionary Movement. III Phase 1920-1947 - Non Co-operation Movement, Emergence of Gandhi, Civil Disobedience, Salt Satyagraha, Quit India Movement- Subhash Chandra Bose - Constitutional Reforms- Dr.B.R.Ambedkar - Declaration of Independence - Role of Women in Indian National Movement.

**IV Modern World:**

19. Industrial Revolution- Significance and Results.
20. American War of Independence - Causes, Results, Significance.

21. French Revolution - Causes, Effects, Significance
22. National Liberation Movements in Italy and Germany in the 19th Century - Mazzini, Cavour, Garibaldi, Bismarck.
23. World War-I - Causes and Effects - League of Nations.
24. The Russian Revolution of 1917 - Causes, Results and Significance.
25. The world between the Two World Wars - Nazism in Germany, Fascism in Italy, Turkey under Mustafa Kamal Pasha.
26. Developments in China 1911-1949 - Nationalist Revolution of 1911 - Communist Revolution of 1948.
27. World War-II - Causes and Effects - United Nations Organisation.

## **V History of Telangana**

28. Pre History
29. Pre-Satavahana, Satavahana, Post-Satavahana - Ikshvakus, Vakatakas, Abirasa and Vishnukundis.
30. Telangana from 7th Century to 11th Century- Chalukyas of Badami, Vemulavada, Mudigonda and Kalyana.
31. Age of Kakatiya's; Origin, Political History, Administration, Socio Economic, Religious conditions, Art and Architecture and Literature and their Subordinates.
32. Padma Nayaka's and Musunoori.
33. Qutubshahis - Administration, Religion, Art, Architecture and Literature.
34. Asafjahis - Administration, Economy, Culture and Society, British Paramountcy on Hyderabad State. Freedom Movement in Telangana, Telangana Armed Struggle.

## Written Examination Syllabus for the post of Junior Lecturers in Residential Educational Institutions Societies

### Paper - III: Economics

#### I. Micro Economics

##### 1. Demand Analysis

Definitions, Nature and Scope of Economics - Micro and Macro Economic Analyses - Concepts of Demand and Law of Demand - Determinants and Types of Demand - Demand Function - Concepts of Supply and Law of Supply - Market Equilibrium - Elasticity of Demand : Concept and Types -Measurement Methods of Price Elasticity of Demand

##### 2. Utility Analysis

Cardinal and Ordinal Utility Approaches - Law of Diminishing Marginal Utility - Law of Equi-Marginal Utility - Consumer Surplus - Indifference Curve Analysis: Consumer's Equilibrium - Derivation of Demand Curve with the help of Indifference Curves - Price, Income and Substitution Effects - Revealed Preference Theory

##### 3. Production Analysis

Production, Production Function and Factors of Production - Law of Variable Proportions - Isoquant, Isocost Curves and Producer's Equilibrium - Laws of Returns to Scale - Economies of Scale - Cost Analysis: Cost Curves in Short Run and Long Run - Revenue Analysis - Relationship among Average Revenue, Marginal Revenue and Elasticity of Demand

##### 4. Market Structure Analysis

Concepts of Firm, Industry and Market - Classification of Markets - Objectives of the Firm - Equilibrium of a Firm - Shut-Down Point - Perfect Competition: Concept, Characteristics, Equilibrium of Firm and Industry - Optimum Firm - Monopoly: Concept, Types, Characteristics and Equilibrium of the Firm - Price Discrimination - Monopolistic Competition: Concept, Characteristics and Equilibrium of the Firm

##### 5. Oligopoly, Duopoly and Factor Pricing Analysis

Oligopoly: Concept, Characteristics and Price Rigidity - Kinky Demand Curve - Duopoly: Concept and Characteristics - Cournot Model - Marginal Productivity Theory of Distribution - Distribution Theories of Rent, Wages, Profit and Interest

#### II. Macro Economics

##### 1. National Income Analysis

Concept, Nature & Scope and Importance of Macro Economics - Concept of Circular Flow of Incomes - National Income Analysis: Concepts and Components - Methods of Measurement of National Income - Importance of and Difficulties in the Estimation of National Income - Limitations of National Income as a Measure of Welfare

##### 2. Theories of Income and Employment

Classical Theory of Employment: Say's Law of Markets and Pigou's Wage Cut Policy - Keynesian Theory of Income and Employment: Effective Demand, Aggregate Demand Function and Aggregate Supply Function - Consumption Function - Factors Determining Consumption Function - Savings Function - Concepts of Multiplier, Accelerator and Super-Multiplier

##### 3. Theories of Investment and Interest Rate

Capital and Investment - Types and Determinants of Investment - Marginal Efficiency of Capital - Classical, Neo-Classical and Keynesian Theories of Interest - Simultaneous Determination of Interest and Real Income through IS-LM Framework

##### 4. Supply of Money and Demand for Money

Meaning, Functions and Classification of Money - Meaning and Measures of Money Supply - Demand for Money - Classical Theories of Money: Fisher's and Cambridge Versions of

Quantity Theory of Money - Keynesian and Milton Friedman Approaches to Demand for Money

## **5. Inflation and Trade Cycles**

Inflation: Concept, Types, Causes and Measurements - Effects of Inflation - Measures to Control Inflation - Phillips Curve, Deflation and Stagflation - Trade Cycles: Concept, Nature and Causes - Phases and Remedial Measures of Trade Cycles

## **III. Public Finance**

### **1. Introduction to Public Finance**

Role of State in Economic Activities, Planning and Development - Nature, Scope and Evolution of Public Finance - Public, Private and Merit Goods - Multiple Theory of Public Household - Principle of Maximum Social Advantage

### **2. Public Revenue and Taxation**

Public Revenue: Sources and Classification - Direct and Indirect Taxes - Progressive, Proportional and Regressive Taxes - Canons of Taxation - Characteristics of a Good Tax System - Impact and Incidence of Taxation - Effects of Taxation

### **3. Public Expenditure and Public Debt**

Public Expenditure: Classification and Principles - Determinants of Public Expenditure - Theories of Public Expenditure: Wagner and Peacock-Wiseman - Effects of Public Expenditure - Public Debt: Nature, Sources and Classification - Effects and Redemption of Public Debt - Debt Trap

### **4. Fiscal Policy and Federal Finance**

Fiscal Policy: Concept, Objectives and Tools - Fiscal Policy and Monetary Policy - Federal Finance: Concept and Features - Centre-State Financial Relations - Transfer of Resources from Centre to State and Local Bodies - Functions of Finance Commission - Current Finance Commission's Recommendations

### **5. Budget**

Budget: Concepts, Classification and Types - Revenue Account and Capital Account - Budget Deficits: Concepts, Types and Implications - Fiscal Responsibility and Budget Management (FRBM) - Budgeting in India

## **IV. International Economics**

### **1. Theories of International Trade**

International Trade, Inter-Regional Trade and Inter-Industry Trade - Gains from Trade - Trade as an Engine of Economic Growth - Role of International Trade in Economic Development - Classical and Neo-Classical Theories of International Trade - Heckscher-Ohlin Theory of International Trade

### **2. Terms of Trade and Barriers to Trade**

Concepts of Terms of Trade - Factors Affecting Terms of Trade - Uses and Limitations of Terms of Trade - Secular Deterioration Hypothesis of Terms of Trade: Singer and Prebisch - Tariffs, Quotas and Subsidies: Their Effects - Impact of Tariffs on Partial and General Equilibrium Analyses - Political Economy of Non-Tariff Barriers and Their Implications

### **3. Balance of Payments**

Concepts of Balance of Trade and Balance of Payments - Factors Affecting Balance of Trade - Differences Between Balance of Trade and Balance of Payments - Components of Balance of Payments - Equilibrium and Disequilibrium in Balance of Payments - Types of Disequilibrium - Causes and Consequences of Disequilibrium in Balance of Payments - Remedial Measures for Correcting Disequilibrium in Balance of Payments - Recent Trends in India's Balance of Payments

#### **4. Exchange Rates**

Foreign Exchange Market - Exchange Rates: Concept and Types - Relative Merits and Demerits of Fixed and Flexible Exchange Rates - Theories of Exchange Rates Determination: Mint Parity and Purchasing Power Parity (PPP) - An Overview of Different Methods of Exchange Rate Determination in India

#### **5. International Monetary System and International Finance**

Lending Operations of International Financial Institutions: IMF, World Bank (IBRD), IDA, IFC, ADB and BRICS - Euro-Dollar and Euro-Currency Markets - International Trade Institutions: GATT and WTO - Impact of WTO on Indian Economy

#### **V. Economics of Development and Growth**

##### **1. Socio-Economic and Institutional Aspects of Economic Development**

Concepts of Economic Growth, Development and Underdevelopment - Distinction Between Growth and Development - Objectives of Economic Development - Sustainable Development and Inclusive Growth - Indicators of Economic Development

##### **2. Factors of Economic Development**

Factors Hindering Economic Development - Factors Promoting Economic Development - Population and Economic Development - Population Explosion - Theories of Demographic Transition - Malthusian Population Theory - Optimum Theory of Population - Natural Resources and Economic Development

##### **3. Theories of Growth and Development**

Classical Theories of Economic Growth: Adam Smith, Ricardo and J. S. Mill - Karl Marx Theory of Economic Development - Schumpeter's Theory of Economic Development - Rostow's Theory of Economic Growth

##### **4. Strategies of Economic Development and Growth**

Big Push Theory - Balanced Growth Strategies of Rodan, Nurkse and Lewis - Unbalanced Growth Strategy of Hirschman - Critical Minimum Effort Thesis - Low Level Equilibrium Trap - Theories of Social and Technological Dualism

##### **5. Growth Models Harrod-Domar Growth Model - Kaldor's Growth Model - Joan Robinson's Growth Model - Gunnar Myrdal's Model - Choice of Techniques: AK Sen - Technical Progress: Hick and Harrod**

#### **VI. Indian Economy**

##### **1. Basic Structure and Demographic Features of Indian Economy**

Basic Features of Indian Economy: Growth, Trends and Structural Changes in Indian Economy - Demographic Features of Indian Population - Size, Growth and Composition of Population and Their Implications on Indian Economy - Sectoral and Occupational Distribution of Population in India - Population Policy of India - Human Resource Development: Education and Health - Human Development Index

##### **2. National Income, Income Inequalities, Poverty and Unemployment**

Estimation of National Income in India - Trends and Composition of National Income in India - Income Inequalities in India: Magnitude, Causes, Consequences and Remedial Measures - Poverty in India: Concept, Types, Trends, Causes and Consequences - Unemployment in India: Concept, Types, Trends, Causes and Consequences - Poverty Alleviation and Employment Generation Programmes in India

##### **3. Planning and Public Policy**

Concept, Types and Importance of Planning - Major Objectives of Five Year Plans in India - Review of Five Year Plans : Achievements and Failures - Current Five Year Plan - NITI Aayog - Economic Reforms: Liberalisation, Privatisation and Globalisation - A Critical Evaluation of Economic Reforms

- Regional Imbalances - Rural-Urban Disparities: Migration

#### **4. Agricultural Sector**

Nature and Importance of Agriculture in Indian Economic Development - Trends in Agricultural Production and Productivity - Agricultural System in India and Land Reforms - Green Revolution - Cropping Pattern - Agricultural Finance and Rural Indebtedness - Agricultural Marketing - Agricultural Pricing - Food Security in India

#### **5. Industrial and Service Sectors**

Structure, Growth, Trends and Importance of Indian Industry - Problems of Indian Industry - Medium, Small Scale and Micro Enterprises (MSME) : Growth, Role and Problems (Including Sickness Problem) - Industrial Policies of 1948 and 1991 - FEMA and Competition Commission of India - Disinvestment Policy - Foreign Direct Investment - Concept and Components of Service Sector - Infrastructural Development: Transport, Energy, Communication and Information and Technology

### **VII. Telangana Economy**

#### **1. Telangana Economy: Human Resources**

Economic History of Telangana - Economic Features of Telangana - Demographic Features of Telangana - Occupational Distribution of Population in Telangana - Sectoral Distribution of Population - Human Resource Development: Education and Health

#### **2. Gross State Domestic Product, Poverty and Unemployment**

Growth and Trends in Gross State Domestic Product and Per Capita Income in Telangana: District wise Analysis - Sectoral Contribution to Gross State Domestic Product - Inequalities in the Distribution of Income and Wealth - Poverty in Telangana: Trends, Causes and Consequences - Unemployment in Telangana: Trends, Causes and Consequences - Poverty Alleviation and Employment Generation Programmes in Telangana - Other Welfare Programmes in Telangana State

#### **3. Agricultural Sector**

Growth of Agriculture in Telangana Economy - Trends in Agricultural Production and Productivity - Determinants of Agricultural Productivity - Cropping Pattern - Agrarian Structure and Land Reforms - Irrigation: Sources and Trends - Mission Kakatiya - Agricultural Credit and Rural Indebtedness - Agricultural Marketing

#### **4. Industrial Sector**

Structure of Telangana Industry - Growth and Pattern of Industrial Development in Telangana - Industrial Policy of Telangana State - Special Economic Zones (SEZ) - Role of Small Scale Industries in Telangana Economy - Problems & Remedial Measures of Small Scale Industries: Issue of Sickness - Industrial Finance in Telangana

#### **5. Service and Infrastructural Sectors**

Growth and Trends in Tertiary Sector in Telangana - Growth and Pattern of Development of Service Sector in Telangana - Infrastructural Development in Telangana: Transport, Energy, Communications, Information Technology and Tourism

### **VIII. Quantitative Methods for Economic Analysis**

#### **1. Mathematical Foundations of Economic Analysis**

Need and Importance of Quantitative Methods in Economics - Meaning and Basic Concepts of Mathematics: Constants and Variables - Functions: Linear, Non-Linear Functions - Equations and Graphs of Linear, Quadratic and Cubic Functions - Concept of Derivative -- Rules of Differentiation with respect to Cost, Revenue, Price and Demand Functions - Application of Maxima and Minima in Economic Analysis

#### **2. Introduction to Statistics**

Meaning, Basic Concepts and Uses of Statistics - Population and Sample - Frequency Distribution, Cumulative Frequency - Graphic and Diagrammatic Representation of Data - Types of Data: Primary and Secondary Data - Methods of Data Collection: Census and Sampling Methods (Random and Non-Random Sampling Methods)

### **3. Measures of Central Tendency and Dispersion**

Measures of Central Tendency: Mean, Median, Mode, Geometric Mean and Harmonic Mean  
- Properties of Good Average - Comparison of Different Averages - Measures of Dispersion  
- Absolute and Relative Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation and Variance

### **4. Correlation and Regression**

Correlation: Meaning and Types - Karl Pearson's Correlation Co-efficient - Spearman's Rank Correlation - Regression: Meaning and Uses of Regression - Estimation and Interpretation of Regression Line

### **5. Index Numbers and Time Series Analysis**

Index Numbers: Meaning and Uses - Types of Index Numbers - Methods of Index Numbers: Laspeyres, Paasche and Fisher - Analysis of Time-Series: Meaning and Uses - Components of Time Series Analysis: Secular, Seasonal, Cyclical and Irregular Variations - Methods of Measurement of Secular Trends: Graphic, Semi-Averages, Moving Averages and Least Squares Methods

## **IX. Banking and Economics of Infrastructure**

### **1. Commercial and Central Banking**

Commercial Banks: Concept and Types - Functions and Principles of Commercial Banks - Balance Sheet of Commercial Banks - Process of Credit Creation - Social Responsibility, Importance and Growth of Commercial Banks in India - Central Banking - Functions of Reserve Bank of India - Concept and Objectives of the Monetary Policy - Instruments of Monetary Policy - Financial Sector Reforms in India

### **2. Financial and Investment Banking**

Concept, Types, Functions and Growth of Non-Banking Financial Intermediaries - Their Impact on Indian Economy - Measures Taken to Control Their Operations - Development Bank: Concept, Functions and Importance - Functioning of Different Development Banks - Investment Banking - Merchant Banking

### **3. Money Market and Capital Market (Financial Markets)**

Money Market: Concept and Characteristics - Components and Sub-Markets of Money Market - Functions of Money Market - Recent Trends and Importance of Money Market in India - Capital Market: Concept, Functions and Importance - Components of Capital Market: Primary and Secondary Markets - Stock Exchange: Concept and Functions - SEBI and Its Functions

### **4. Infrastructure and Economic Development**

Concept of Infrastructure - Infrastructure as a Public Good - Special Characteristics of Public Utilities - Importance of Infrastructure in Economic Development - Trends in the Growth of Infrastructure in India - Classification of Infrastructure: Social and Physical Infrastructure - Social Infrastructure: Education, Health and Hygiene - Human Resource Development: Concept, Scope and Importance - Education in India: Planning, Policies and Financing - Trends in the Growth of Education in India - Health in India: Planning, Programmes and Importance

### **5. Physical Infrastructure**

Types of Physical Infrastructure - Concept of Energy - Sources of Energy: Renewable & Non-Renewable and Conventional & Non-Conventional Energy - Sources of Commercial Energy: Coal, Oil & Gas and Electric Power - Transport - Modes / Categories of Transport: Roadways, Railways, Airways and Waterways - Role of Transportation in Economic Development - Information and Communication Technology (ICT): Concept, Growth, Trends and Importance

## **X. Economics of Environment**

### **1. Introduction to Environmental Economics**

Concepts of Ecology and Environment - Interaction Among Ecology, Environment and Economy - Micro Economic Theory of Environment - The Pricing of the Environmental Variables - Pareto Optimality and Market Failure in the Presence of Externalities - Bio-Diversity: Meaning, Uses, Effects and Conservation

### **2. Resource Allocation**

Natural Resources: Meaning, Features, Classification and Importance - Economics of Exhaustible, Non-Exhaustible Resources - Problems of Resource Allocation - Natural Resources Depletion: Optimal Rate of Depletion - Common Property Resources: Problems - Conservation of Resources - Implications of Ecological Imbalances

### **3. Environmental Valuation**

Valuation of Non-Market Goods and Services: Measurement Methods - Environmental Degradation: Concept and Causes - Valuation of Environmental Degradation - Direct and Indirect Methods - Degradation of Land (Soil), Forest and Natural Resources: Causes and Effects - Cost-Benefit Analysis of Environmental Policies and Regulations

### **4. Sustainable Development**

Impact of Environment on GNP - Limits to Growth - Sustainable Development: Concept and Rules - Modern and Neo-Classical Views on Sustainable Development - Peoples Movement for Sustainable Development - Development vs Sustainable Development

### **5. Environmental Pollution and Policies**

Environment and Economy Interaction - Industrial and Agricultural Technology: Its Impact on Environment - Different Types of Pollution: Their Causes and Effects - Environmental Policy and Conservation and Protection of Eco-System - Implementation of Environmental Policies in India - Global Environmental Issues.



**Written Examination Syllabus for the post of Junior Lecturers in  
Residential Educational Institutions Societies**

**Paper - III: Civics**

**I. Public Policy**

- a) Introduction to Public Policy : Nature, Scope and Importance of Public Policy, Public Policy as a Policy Science
- b) Theories: Systems, Structural-Functional, Incremental, Elite, Group Theory
- c) Public Policy Making: Role of Legislature, Executive, Judiciary, Bureaucracy, Political Parties, Pressure Groups, Mass Media
- d) Policy Impact and Policy Evaluation: Land Reforms, Irrigation, Education, Health, Food Security and Social Security Policies

**II. Research Methodology**

- a) Social Science Research : Importance and Objectivity in Social Science Research - Scientific Method
- b) Research Methods - Historical, Analytical, Descriptive, Exploratory, Case Study Method
- c) Research Design : Selection of Research Problem and Hypotheses
- d) Data Collection : Primary and Secondary Sources
- e) Data Analysis, Interpretation and Report Writing

**III. Public Administration**

- a) Introduction : Meaning, Nature, Scope and Importance of Public Administration
- b) Evolution of Public Administration : Classical, Human Relations, Behavioural, Ecological , Socio-Psychological Approach, New Public Management
- c) Principles of Organisation - Hierarchy, Span of Control, Unity of Command, Centralisation Decentralisation - Bases of Departmental Organisation - Line Agencies and Staff Agencies, Leadership
- d) Union Government : Parliament, President, Prime Minister, Council of Ministers, Cabinet, Cabinet Secretariat, Prime Minister's Office (PMO)
- e) State Government : State Legislature, Governor, Chief Minister and Council of Ministers, Secretariat and Directorates
- f) District Administration : District Collector, Special Agencies - District Rural Development Agency, Integrated Tribal Development Agency
- g) Local Government: Rural - Panchayati Raj Institutions - Gram Panchayat, Mandal Parishad, Zilla Parishad. Urban - Municipal Corporation, Municipalities, Urban Development Authorities, District Planning Committee
- h) Constitutional Bodies : Comptroller & Auditor General, Finance Commission, Election Commission, Commissions for SC, ST, BCs, Women and Minorities

**IV. Political Science**

- (a) Introduction : Definition, Meaning, Nature, Scope and Importance of Political Science
- (b) State : Essential Elements - Sovereignty and Theories of Sovereignty : Monistic and Pluralistic Theories of Sovereignty - Theories of Origins of State : Divine Origin, Social Contract, Historical and Evolutionary - Sphere of State Activity : Laissez Faire, Anarchist, Fascist, Socialist, Marxist, Welfare State
- (c) Basic concepts : Law, Liberty, Equality, Rights and Justice
- (d) Governments : Classification of Governments - Traditional and Modern - Forms Governments : Unitary, Federal, Presidential and Parliamentary
- (e) Democracy: Direct Democracy and Indirect Democracy - Direct Democratic Devices
- (f) Theory of Separation of Powers - Legislature, Executive and Judiciary and their functions
- (g) Social and Political Movements : Separate Telangana Statehood Movement - Dalit and Tribal Movements, Women's Movement and Environmental Struggles

**V. India's Foreign Policy: Determinants and Features, Non-Alignment and U.N.O.**

**Written Examination Syllabus for the post of Junior Lecturers in  
Residential Educational Institutions Societies**

**Paper- III: Commerce**

- I. Financial Management: Meaning, Nature, Objectives and Scope of Financial Management - Capital Budgeting, Process, Techniques - Sources of Finance, Cost of Capital - Cost of various sources of finance -  
Leverages: Operating and Financial leverages - Capital Structure Theories - Dividend decisions - Working Capital Management - Cash, Receivables and Inventory Management.
- II. Financial and Management Accounting: Accounting concepts and conventions - GAAP - Indian Accounting Standards - Accounting process- Final Accounts (Sole Trade, Partnership and Company) - Depreciation Accounting - Accounts from Incomplete Records - Accounts of Non-Trading Organisations - Analysis of Financial Statements - Techniques: Comparative and Common Size statements, Trend analysis, Ratio analysis, Funds Flow and Cash Flow analysis - Marginal Costing and Decision Making.
- III. Cost Accounting and Control: Cost concepts and Classification - Installation of costing system - Elements of Cost: Material, Labour and Overheads - Methods of Costing - Techniques of costing: CVP, Standard Costing and Budgetary control - Uniform costing, Inter-firm comparisons and Activity Based costing - Cost Control, Cost Reduction and Cost Audit.
- IV. Managerial Economics: Meaning, Nature and Scope of Managerial Economics - Demand Analysis, Production and Cost Analysis- Market Structure: Perfect and Imperfect Markets.
- V. Organisation Theory and Behaviour: Organisation concept and theories - Individual vs. Group Behaviour -Motivation and Morale - Communication: Types and Barriers - Leadership: Styles and Theories.
- VI. Marketing Management: Meaning, Concepts, Nature and Scope - Marketing Environment - Consumer Behaviour and Market Segmentation - Product, Price, Promotion and Channel management.
- VII. Quantitative Techniques: Measures of Central Tendency - Measurers of Variation - Measurers of Skewness - Correlation and Regression Analysis - Time Series Analysis - Index Numbers - Sampling and Sampling methods.

ANNEXURE - III

INSTRUCTIONS TO CANDIDATES:

**A) GENERAL INSTRUCTIONS TO CANDIDATES**

- 1) The candidates must note that his/her admission to the examination is strictly provisional. The mere fact that an Admission to the examination does not imply that his/her candidature has been finally cleared by the Board or that the entries made by the candidate in his/her application have been accepted by the Board as true and correct. The candidates have to be found suitable after verification of original certificates; and other eligibility criteria. The Applicants have to upload his/her scanned recent colour passport photo and signature to the Application Form. Failure to produce the same photograph, if required, at the time of interview/ verification, may lead to disqualification. Hence the candidates are advised not to change their appearance till the recruitment process is complete.
- 2) **The candidates are not allowed to bring any Electronic devices such as mobile / cellphones, Calculators, tablets, iPad, Bluetooth, pagers, watches to examination centre.** Loaning and interchanging of articles among the candidates is not permitted in the examination hall and any form of malpractice will not be permitted in the exam hall.
- 3) The candidates are expected to behave in orderly and disciplined manner while writing the examination. If any candidate takes away Answer Sheet of OMR based examination, the candidature will be rejected and in case of impersonation/ disorder/ rowdy behaviour during Examination, necessary F.I.R. for this incident will be lodged with concerned Police Station, apart from disqualifying his / her candidature.
- 4) Candidates trying to use unfair means shall be disqualified from the selection. No correspondence whatsoever will be entertained from the candidates.
- 5) The Penal Provisions of Act 25/97 published in the A.P. Gazette No. 35, Part-IV.B Extraordinary dated: 21/08/1997 shall be invoked if malpractice and unfair means are noticed at any stage of the Examination.

**B) INSTRUCTIONS REGARDING OFFLINE OMR BASED EXAMINATION FOR CANDIDATES**

- 1) The candidates have to report 30 minutes before to the examination venue to record their thumb impression on Biometric system.
- 2) The candidates should go through the instructions given on the cover page of test booklet and carefully write his/her Register Number, Subject / Subject Code, Booklet Series, Name of the Examination Centre etc., in the Answer Sheet, which will be provided to him/her in the examination hall.
- 3) Since the answer sheets are to be scanned (valued) with Optical Mark Scanner system, the candidates have to **USE BALL POINT PEN (BLUE/BLACK) ONLY FOR MARKING THE ANSWERS.** The candidates will be supplied OMR Sheet consists of two copies i.e., the Original Copy (Top Sheet) and Duplicate Copy (Bottom Sheet). The candidate is required to use Ball Point Pen (Blue or Black) for filling the relevant blocks in the OMR Sheet including bubbling the answers. **After writing the examination the candidate has to handover the original OMR sheet (Top Sheet) to the invigilator in the examination hall, if any candidate takes away the original OMR Sheet (Top Sheet) his/her candidature will be rejected. However, the candidate is permitted to take away the duplicate (Bottom Sheet) OMR Sheet for his/her record.** The candidates should bring Ball Point Pen (Blue/Black and smooth writing pad) to fill up relevant columns on the Answer Sheet. The candidate must ensure encoding the Register Number, Subject/Subject Code, Booklet Series, Name of the Examination Centre, Signature of the Candidate and Invigilator, etc., on the O.M.R. Answer sheet correctly, failing which the Answer sheet will be rejected and will not be valued. **Use of whitener on OMR Sheet will lead to disqualification.**
- 4) The OMR Sheet is to bubble only by Ball Point Pen (Blue/Black). Bubbling by Pencil / Ink Pen / Gel Pen is not permitted in this examination.
- 5) The candidates should satisfy the Invigilator of his identity with reference to the signature and photographs available on the Nominal Rolls and Hall Ticket.
- 6) No candidate should leave the examination hall till expiry of fulltime.
- 7) The Board would be analyzing the responses of a candidate with other appeared candidates to detect patterns of similarity. If it is suspected that the responses have been shared and the scores obtained are not genuine/ valid, the Board reserves the right to cancel his/ her candidature and to invalidate the Answer Sheet.
- 8) (i) Wherever Written Examination is held, only those candidates who are totally blind are allowed to write the examination with the help of scribe and 10 minutes extra time is permitted to them per hour.  
(ii) An extra time of 20 minutes per hour is also permitted for the candidates with locomotor disability and CEREBRAL PALSY where dominant (writing) extremity is affected for the extent slowing the performance of function (Minimum of 40% impairment). No scribe is allowed to such candidates.  
(iii) Scribe will be provided to those candidates who do not have both the upper limbs for Orthopedically Handicapped. However, no extra time will be granted to them.  
(a) The scribe should be from an academic discipline other than that of the candidate and the academic qualification of the scribe should be one grade lower than the stipulated eligibility criteria.

- (b) The candidate as well as the scribe will have to give a suitable undertaking confirming the rules applicable
- 9) If the candidate noticed any discrepancy printed on Hall ticket as to community, date of birth etc., they may immediately bring to the notice of Board's officials/Chief Superintendent in the examination centre and necessary corrections be made in the Nominal Roll, in the Examination Hall against his/her Hall Ticket Number for being verified by the Board's Office.

**ANNEXURE-IV**  
**LIST OF SCHEDULED CASTES AND SCHEDULED TRIBES**

(G.O. MS. NO. 5 Scheduled Castes Development (POA.A2) Dept., Dt. 08/08/2015 read with G.O. Ms. No. 11, Scheduled Castes Development (POA.A2) Dept., Dt. 17/09/2014 and G.O. Ms. No. 2 Scheduled Castes Development (POA.A2) Dept., Dt. 22.01.2015)

**LIST OF SCHEDULED CASTES**

1. Adi Andhra
2. Adi Dravida
3. Anamuk
4. Aray Mala
5. Arundhatiya
6. Arwa Mala
7. Bariki
8. Bavuri
9. Beda (Budga) Jangam
10. Bindla
11. Byagara, Byagari
12. Chachati
13. Chalavadi
14. Chamar, Mochi, Muchi, Chamar-Ravidas, Chamar- Rohidas
15. Chambhar
16. Chandala
17. Dakkal, Dokkalwar
18. Dandasi
19. Dhor
20. Dom, Dombara, Paidi, Pano
21. Ellamalawar, Yellammalawandlu
22. Ghasi, Haddi, Relli, Chanchandi
23. Godari
24. Gosangi
25. Holey
26. Holey Dasari
27. Jaggali
28. Jambuvulu
29. Kolupulvandlu, Pambada, Pambanda, Pambala
30. Madasi Kuruva, Madari Kuruva
31. Madiga
32. Madiga Dasu, Mashteen
33. Mahar
34. Mala, Mala Ayawaru
35. Mala Dasari
36. Mala Dasu
37. Mala Hannai
38. Malajangam
39. Mala Masti
40. Mala Sale, Nethani
41. Mala Sanyasi
42. Mang
43. Mang Garodi
44. Manne
45. Mashti
46. Matangi
47. Mehtar
48. Mitha Ayyalvar
49. Mundala
50. Paky, Moti, Thoti
51. Pamidi
52. Panchama, Pariah
53. Relli
54. Samagara
55. Samban
56. Sapru
57. Sindhollu, Chindollu
58. Yatala
59. Valluvan

**LIST OF SCHEDULED TRIBES**

1. Andh, Sadhu Andh
2. Bagata
3. Bhil
4. Chenchu
5. Gadabas, Bodo Gadaba, Gutob Gadaba, Kallayi Gadaba, Parangi Gadaba, Kathera Gadaba, Kapu Gadaba
6. Gond, Naikpod, Rajgond, Koitur
7. Goudu (in the Agency tracts)
8. Hill Reddis
9. Jatapus
10. Kammara
11. Kattunayakan
12. Kolam, Kolawar
13. Konda Dhoras, Kubi
14. Konda Kapus
15. Kondareddis
16. Kondhs, Kodi, Kodhu, Desaya Kondhs, Dongria Kondhs, Kuttiya Kondhs, Tikiria Kondhs, Yenity Kondhs, Kuvinga
17. Kotia, Benthoriya, Bartika, Dulia, Holya, Sanrona, Sidhopaiko
18. Koya, Doli Koya, Gutta Koya, Kammara Koya, Musara Koya, Oddi Koya, Pattidi Koya, Rajah, Rasha Koya, Lingadhari Koya (ordinary), Kottu Koya, Bhine Koya, Rajkoya
19. Kulia
20. Manna Dhora
21. Mukha Dhora, Nooka Dhora
22. Nayaks (in the Agency tracts)
23. Pardhan
24. Porja, Parangiperja
25. Reddi Dhoras
26. Rona, Rena
27. Savaras, Kapu Savaras, Maliya Savaras, Khutto Savaras
28. Sugalis, Lambadis, Banjara
29. Thoti (in Adilabad, Hyderabad, Karimnagar, Khammam, Mahbubnagar, Medak, Nalgonda, Nizamabad and Warangal districts)
30. Yenadis, Chella Yenadi, Kappala Yenadi, Manchi Yenadi, Reddi Yenadi
31. Yerukulas, Koracha, Dabba Yerukula, Kunchapuri Yerukula, Uppu Yerukula
32. Nakkala, Kurvikaran.

**LIST OF SOCIALLY AND EDUCATIONALLY BACKWARD CLASSES**

As per G.O. Ms. No. 16 Backward Classes Welfare (OP) Department, Dated:11.03.2015 and read with G.O.MS.No. 34, Backward Classes Welfare (OP) Department, Dated: 08/10/2015, G.O. Ms. No. 4 Backward Classes Welfare (OP) Department, Dated: 30/01/2016

**STATE LIST OF BCs  
(List of Backward Classes of Telangana State)**

**GROUP-A**

**(Aboriginal Tribes, Vimuktha Jathis, Nomadic and Semi-Nomadic Tribes etc.)**

- 1 Agnikulakshatriya, Palli, Vadabaliya, Bestha, Jalari, Gangavar, Gangaputra, Goondla, Vanyakulakshatriya (Vannekapu, Vannerreddi, Pallikapu, Pallireddi) Neyyala, Pattapu.
- 2 Balasanthu, Bahurupi
- 3 \*[Bandara]
- 4 Budabukkala
- 5 Rajaka (Chakali, Vannar)
- 6 Dasari (formerly engaged in Bikshatana i.e., Beggary)
- 7 Dommara
- 8 Gangiredlavaru
- 9 Jangam (whose traditional occupation is begging)
- 10 Jogi
- 11 Katipapala
- 12 \*[Korcha]
- 13 Lambada or Banjara in Telangana area (deleted and included in ST list vide. G.O.Ms.No.149, SW, Dt.03.05.1978)
- 14 Medari or Mahendra
- 15 Mondivaru, Mondibanda, Banda
- 16 Nayi-Brahmin/Nayee-Brahmin (Mangali), Mangala and Bhajantri
- 17 Nakkala (deleted vide. G.O.Ms.No.21, BCW (C2) Dept., Dt.20.06.2011, since it is included in the list of Scheduled Tribes at Sl.No.34 vide. Scheduled Castes and Scheduled Tribes Order (Amendment) Act, 2002 (Central Act No.10 of 2003)
- 18 Vamsha Raj / Pitchiguntla
- 19 Pamula
- 20 Pardhi (Nirshikari)
- 21 Pambala

- 22 Peddammavandlu, Devaravandlu, Yellammavandlu, Mutyalammavandlu, Dammali / Dammala / Dammula / Damala
- 23 Veeramushti (Nettikotala), Veerabhadreeya
- 24 Valmiki Boya (Boya, Bedar, Kirataka, Nishadi, Yellapi, Pedda Boya), Talayari, Chunduvallu (Yellapi and Yellapu are one and the same as clarified vide. G.O.Ms.No.61, BCW (M1) Dept., Dt.05.12.1996)
- 25 Yerukalas in Telangana area (deleted and included at Sl.No.31 in the list of STs)
- 26 Gudala
- 27 Kanjara - Bhatta
- 28 \*[Kalinga]
- 29 Kepmare or Reddika
- 30 Mondepatta
- 31 Nokkar
- 32 Pariki Muggula
- 33 Yata
- 34 Chopemari
- 35 Kaikadi
- 36 Joshinandiwalas
- 37 Odde (Oddilu, Vaddi, Vaddelu), Vaddera, Vaddabhovi, Vadiyaraj, Waddera
- 38 Mandula
- 39 Mehtar (Muslim)
- 40 Kunapuli
- 41 Patra
- 42 \*[Kurakula]
- 43 \*[Pondara]
- 44 \*[Samanthula /Samantha/ Sountia / Sauntia]
- 45 Pala-Ekari, Ekila, Vyakula, Ekiri, Nayanivaru, Palegaru, Tolagari, Kavali (area confined to Hyderabad and Rangareddy Districts only)
- 46 Rajannala, Rajannalu (area confined to Karimnagar, Warangal, Nizamabad and Adilabad Districts only)
- 47 Bukka Ayyavars
- 48 Gotrala
- 49 Kasikapadi / Kasikapudi (area confined to Hyderabad, Rangareddy, Nizamabad, Mahaboobnagar and Adilabad Districts only)
- 50 Siddula
- 51 Sikligar/ Saikalgar
- 52 Poosala (included vide. G.O.Ms.No.16, BCW(C2) Dept., Dt.19.02.2009 by deleting from Sl.No.24 under Group-D)
- 53 \*[Aasadula / Asadula]
- 54 \*[Keuta / Kevuto / Keviti]
- 55 Orphan and Destitute Children who have lost their parents before reaching the age of ten and are destitute; and who have nobody else to take care of them either by law or custom; and also who are admitted into any of the schools or orphanages run by the Government or recognised by the Government.

**GROUP-B**  
**(Vocational Groups)**

- 1 \*[Achukatlavandlu]
- 2 Aryakshatriya, Chittari, Giniyar, Chitrakara, Nakhas
- 3 Devanga
- 4 Goud [Ediga, Gouda (Gamalla), Kalalee, Gounda, **[\*Settibalija of Visakhapatnam, East Godavari, West Godavari and Krishna districts]** and Srisayana (Segidi)
- 5 Dudekula, Laddaf, Pinjari or Noorbash
- 6 Gandla, Telikula, Devathilakula
- 7 Jandra
- 8 Kummara or Kulala, Salivahana
- 9 Karikalabhakthulu, Kaikolan or Kaikala (Sengundam or Sengunther)
- 10 Karnabhakthulu
- 11 Kuruba or Kuruma
- 12 \*[Nagavaddilu]
- 13 Neelakanthi
- 14 Patkar (Khatri)
- 15 Perika (Perika Balija, Puragiri kshatriya)
- 16 Nessi or Kurni
- 17 Padmasali (Sali, Salivan, Pattusali, Senapathulu, Thogata Sali)
- 18 Srisayana (Segidi) (deleted vide. G.O.Ms.No.63, BCW (M1) Dept., Dt.11.12.1996 and added to Sl.No.4 of Group-B)
- 19 Swakulasali
- 20 Thogata, Thogati or Thogataveerakshatriya
- 21 Viswabrahmin (Ausula, Kamsali, Kammari, Kanchari, Vadla or Vadra or Vadrangi and Silpis), Viswakarma
- 22 \*[Kunchiti / Vakkaliga / Vakkaligara / Kunchitiga]
- 23 Lodh/ Lodhi/ Lodha (area confined to Hyderabad, Rangareddy, Khammam and Adilabad Districts only)
- 24 Bondili

- 25 Are Marathi, Maratha (Non-Brahmins), Arakalies and Surabhi Natakavallu
- 26 Neeli (included vide. G.O.Ms.No. 43, BCW (C2) Dept., Dt.07.08.2008 by deleting from Group D at Sl.No.22)
- 27 Budubunjala / Bhunjwa / Bhadbhunja (area confined to Hyderabad and Rangareddy Districts only)
- 28 \*[Gudia / Gudiya]

**GROUP-C**  
**(Harijan Converts)**

- 1 Scheduled Castes converts to Christianity and their progeny

**GROUP-D**  
**(Other Classes)**

- 1 \*[Agaru]
- 2 Arekatika, Katika, Are-Suryavamshi
- 3 \*[Atagara]
- 4 Bhatraju
- 5 Chippolu (Mera)
- 6 \*[Gavara]
- 7 \*[Godaba]
- 8 Hatkar
- 9 \*[Jakkala]
- 10 Jingar
- 11 \*[Kandra]
- 12 Koshti
- 13 Kachi
- 14 Surya Balija (Kalavanthula), Ganika
- 15 Krishnabalija (Dasari, Bukka)
- 16 \*[Koppulavelamas]
- 17 Mathura
- 18 Mali (Bare, Barai, Marar and Tamboli)
- 19 Mudiraj, Mutrasi, Tenugollu
- 20 Munnurukapu
- 21 \*[Nagavasam (Nagavamsa)]
- 22 Nelli (deleted vide. G.O.Ms.No.43, BCW(C2) Dept., Dt.07.08.2008 and added at Sl.No.26 in Group 'B')
- 23 \*[Polinati Velamas of Srikakulam and Visakhapatnam districts]
- 24 Poosala caste (deleted vide. G.O.Ms.No.16, BCW(C2) Dept., Dt.19.02.2009 and included at S.No.52 under Group-A)
- 25 Passi
- 26 Rangarez or Bhavasara Kshatriya
- 27 Sadhuchetty
- 28 Satani (Chattadasrivaishnava)
- 29 Tammali (Non-Brahmins) (Shudra caste) whose traditional occupation is playing musical instruments, vending of flowers and giving assistance in temple service but not Shivarchakars
- 30 \*[Turupukapus or Gajulakapus]
- 31 Uppara or Sagara
- 32 Vanjara (Vanjari)
- 33 Yadava (Golla)
- 34 Are, Arevallu and Arollu
- 35 \*[Sadara / Sadaru]
- 36 \*[Arava]
- 37 Ayyaraka (area confined to Khammam and Warangal Districts only)
- 38 Nagaralu (area confined to Hyderabad and Rangareddy Districts only)
- 39 Aghamudian, Aghamudiar, Agamudivellalar and Agamudimudaliar (including Thuluva Vellalas) (area confined to Hyderabad and Rangareddy Districts only)
- 40 \*[Beri Vysya / Beri Chetty]
- 41 \*[Atirasa]
- 42 Sondi / Sundi
- 43 Varala
- 44 Sistikaranam
- 45 Lakkamarikapu
- 46 Veerashaiva Lingayat / Lingabalija
- 47 Kurmi

**GROUP-E**  
**(Socially and Educationally Backward Classes of Muslims)**

(Subject to outcome of Civil Appeal No(s).2628-2637/2010 etc., pending before the Hon'ble Supreme Court of India)

- 1 Achchukattalavandlu, Singali, Singamvallu, Achchupanivallu, Achchukattuvaru, Achukatlavandlu
- 2 Attar Saibulu, Attarollu
- 3 Dhobi Muslim/ Muslim Dhobi/ Dhobi Musalman, Turka Chakla or Turka Sakala, Turaka Chakali, Tulukka Vannan, Tsakalas, Sakalas or Chakalas, Muslim Rajakas
- 4 Faqir, Fhakhir Budbudki, Ghanti Fhakhir, Ghanta Fhakhiru, Turaka Budbudki, Darvesh, Fakeer

- 5 Garadi Muslim, Garadi Saibulu, Pamulavallu, Kani-Kattuvallu, Garadollu, Garadiga
- 6 Gosangi Muslim, Phakeer Sayebulu
- 7 Guddi Eluguvallu, Elugu Bantuvallu, Musalman Keelu Gurravallu
- 8 Hajam, Nai, Nai Muslim, Navid
- 9 Labbi, Labbai, Labbon, Labba
- 10 Pakeerla, Borewale, Deera Phakirlu, Bonthala
- 11 Qureshi, Kureshi/ Khureshi, Khasab, Marati Khasab, Muslim Katika, Khatik Muslim
- 12 Shaik/ Sheikh
- 13 Siddi, Yaba, Habshi, Jasi
- 14 Turaka Kasha, Kakkukotte Zinka Saibulu, Chakkitakanevale, Terugadu Gontalavaru, Thirugatigantla, Rollaku Kakku Kottevaru, Pattar Phodulu, Chakketakare, Thuraka Kasha

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\* omitted vide G.O Ms.No.3, BCW(OP) Dept., Dated:14.08.2014

- N.B.:
1. The above list is for information and subject to confirmation with reference to G.O.Ms.No. 58, SW(J) Department, dated 12.05.1997 and time to time orders.
  2. On account of any reason whatsoever in case of any doubt/ dispute arising in the matter of community status (SC/ST/BC/OC) of any candidate, subject to satisfaction with regard to relevant rules and regulations in force the decision of the Board shall be final in all such cases.