

UPRTOU

प्रवेश सूचना विवरणिका

Admission Information Brochure

पी-एच.डी.

Ph.D.

सत्र-2022-23



॥ सरस्वती नः सुभगा मयस्करत् ॥

उत्तर प्रदेश राजर्षि टण्डन मुक्त विश्वविद्यालय

शान्तिपुरम् (सेक्टर-एफ), फाफामऊ,

प्रयागराज-211021

www.uprtou.ac.in



Prof. Seema Singh
Vice-Chancellor
U.P. Rajarshi Tandon Open
University, Prayagraj

Message

University has been established in November, 1998 by the Govt. of U.P. with headquarter at Prayagraj. The university strives to fulfil its objectives by a diversity of means of open and distance learning (ODL) system and functions in co-operation with the existing universities and institutions of higher learning. This university makes full use of the latest scientific knowledge and ICT to offer a high quality of education which matches the needs of the day. As Indian Education Commission (1964-66) said about the higher education 'To seek and cultivate new knowledge, to engage vigorously and fearlessly in the spirit of truth and to interpret old knowledge and beliefs in the light of new needs and discoveries' the university offers various certificate, diploma, PG Diploma and degrees in total 127 programmes with Ph.D. To expand the access of higher education, the university established 12 regional centres and more than 1200 study centres in all districts of U.P.

One of the main objectives of the university is to provide instruction for various branches of knowledge, vocation and profession, along with provision for research. Keeping in view, the importance of research in higher education and the constant demand from the stakeholders of the state, the university has taken decision to launch research programmes leading to Ph.D. degree in regular mode in 12 subjects as per UGC norms and regulations. In this connection as per U.G.C. permission and direction necessary Ordinances and Guidelines have been framed. The Ordinances for research programmes have been considered by the State Govt. of U.P., and accordingly the guidelines have been made by the Executive Council of the University on the recommendation of the Academic Council. This booklet contains information on eligibility criteria, programme duration, fee structure and admission system etc. I am sure, the research students will be able to fulfil the knowledge gap in their respective subject with their research findings and enrich themselves academically and will get benefit in building their career as there will be ample job opportunities after completing the Ph.D. programme.

Buddha Poonima
16.05.2022

(Prof. Seema Singh)
Vice-Chancellor

स्वाध्याय

स्वमन्थन

स्वावलम्बन



U.P. Rajarshi Tandon Open Univeristy

UPRTOU

Research Programmes

Ph.D.

Admission Brochure – 2022-23

Sector-F, Shantipuram, Phaphamau, Prayagraj- 211021

www.uprtou.ac.in



University Grants Commission
Distance Education Bureau
35, Feroz Shah Road
New Delhi - 110001

15 FEB 2017

No.F.2-1/2017 (DEB-III)

February, 2017

✓ The Registrar
U.P. Rajarshi Tandon Open University
University Campus, Shantipuram (Sector-F)
Piaphaman
Allahabad-211013

Subject : *Permission to start M.Phil/Ph.D programmes under Regular Mode as per UGC (Minimum Standards and Procedure for Award of M.Phil./Ph.D Degrees) Regulations, 2016- reg.*

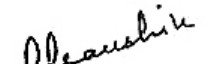
Sir,

This is with reference to your letter No. OU/695/2016 dated 02.09.2016 submitting therewith a duly notarized affidavit dated 02.09.2016 signed by Shri D.P. Tripathi, Registrar to the effect that University will strictly follow UGC (Minimum Standards and procedure for Award of M.Phil/Ph.D) Regulations 2016 and will abide by all its clauses in toto.

In this context, I am directed to convey the approval of UGC to start M.Phil/Ph.D programme under Regular/Part-Time mode by the University subject to the condition that the essential clauses of UGC (Minimum Standards and Procedure for Award of M.Phil/Ph.D Degrees) Regulations 2016 (copy enclosed) pertaining to eligibility criteria for admission to M.Phil/Ph.D programme, duration of programme, procedure for admission, allocation of Research Supervisor, Course Work, Research Advisory Committee, Evaluation and Assessment Methods and Depository with INFLIBNET must be followed in letter and spirit. It may be noted that as per Clause 11, of the Regulations, no university is permitted to conduct M.Phil and Ph.D programmes through distance education mode.

In case if there is any deviation in implementing the clauses of UGC Regulations, 2016, the permission would be deemed to be treated as withdrawn. Above permission is subject to the condition that Act/ Statute/ Ordinance/Rule of the University provide for the same.

Yours faithfully


(Megha Kaushik)
Education Officer



About the University

The Uttar Pradesh Rajaarshi Tandon Open University (UPRTOU) Prayagraj was established in November, 1998 by the Government of Uttar Pradesh to offer a wide range of educational Programmes related to general education, training, research and extension work through open and distance learning for the development of the State; to promote dissemination of learning and knowledge through distance education system to a large segment of the population; and to promote and advance the culture of the people of India and its human resources based on the rich heritage of the State. The concept of open learning and distance mode education system concentrates on providing open access to education and training which has no constraints of time and place. Open and distance learning (ODL) is one of the most rapidly growing fields of education now a days and has substantial impact on all education delivery systems.

The UPRTOU runs its academic activities through a diversity of means of distance and continuing education, and functions in co-operation with the existing universities, colleges and institutions of higher learning, and makes full use of the infrastructure of these organizations to impart education. It uses the latest scientific knowledge and information and communication technology for providing quality education to its students and strengthening the student-support services.

The University started functioning from the session 1999-2000 with 3344 distance learners and during 2020-21 session more than 50,000 distance learners were enrolled in 127 programmes with the help of more than 1200 Study centres and 12 regional centres located in the entire state of Uttar Pradesh. The UPRTOU programmes represent diversified areas of education, training and extension, and the range spans from spans from single subject proficiency to teacher education, management, computer, journalism, information technology, e- business, and health, Home Science, yoga and agriculture areas. The University has established 12 regional centres for making its activities more effective and convenient to the learners. The University took a judicious decision to follow the principles of collaboration and networking, and therefore adopted some of the programmes of IGNOU to ensure rich quality of self-learning materials and avoid duplication of efforts.

Based on the experiences gained in the field of ODL system and with the help of university faculty, consultants and part-time resource expertise the university has developed SLM for some certificate programmes, diploma programmes, under-graduate programmes, and post-graduate programmes. Along with traditional degree and diploma courses, efforts have been made to learners in different programmes are much more than satisfactory. The organization of varied types of extension activities have been a useful feature of this university. On the whole this university has showed an all-round growth and development in extending the facilities of quality distance education in the state of Uttar Pradesh. In fact the **Uttar Pradesh Rajarshi Tandon Open University** has achieved tremendous growth during the very short period of its existence the cumulative enrolment in the university is more than 800000. The university library is equipped with more than 25000 titles and about 10 journals are being subscribed regularly. The success rate of distance learners in UPRTOU ranges from about 30 to 80% and overall success rate has been about 60% during the last few years.

Certain salient features of the University are as following-

- (i) The University has three Green and Clean campuses namely; The Ganga Parisar (Administration Campus), The Saraswati Parisar (Academic Campus and Central Library) and The Yamuna Parisar (Residential Campus and Regional Centre).
- (ii) The entire educational system is student-centric;
- (iii) Self-instructional course material is provided to the students and also uploaded in the University website uprtou.ac.in.

- (iv) There is extensive application of ICT in the University such as; Online admission, Online payment, online admit card, online markseets, online assignments, online self-instructional course material, mobile messaging, mobile counseling, on-line counseling video conferencing etc,
- (v) There is generally no age bar in admission.
- (vi) Many options are available to students regarding completion of the course.
- (vii) Student has choice facility to select his/her course of study.
- (viii) Any employee serving anywhere can also study through ODL mode of this University;
- (ix) The student gets opportunity to take up a Diploma or Certificate course simultaneously while doing degree course from this university or from any other university, and similarly a student can study a Certificate course along with a Diploma course as well.
- (x) Organizing seminars, workshops, Training Programmers, Lectures on current and important topics is regular feature of the University.

Counselling is an important activity in distance education and is entirely different from the usual classroom teaching. Counsellors answer to the learners' questions in counselling sessions. Besides clarifying their doubts helping them to overcome difficulties they may face while going through the self-learning materials. Counselling is arranged in such a way that an in service candidate or any other working person can also carry on his/her study without hampering his/her job. Counseling sessions are conducted by efficient and experienced counsellors in accordance with the standards set by the University. Subject-experts from renowned institutions are also invited for the counseling and guidance of students.

The university follows two academic sessions; July to June and January to December, each of which is divided, into two semesters and the admissions are made in both the semesters. To shorten the period of admission process considerably, the online admission system is being used in the admissions. Except few programmes like B.Ed. B.Ed. (Special Education), MBA, MCA, and Ph.D. University have adopted open admission system. For admission to B.Ed., B.Ed. (Special Education), MBA, MCA and Ph.D. programmes, admission tests are conducted. University has been fully digitalized.

UPRTOU has adopted a three-tier evaluation system, the details of which are furnished below:

- (i) **Self-Evaluation** - In every course/program, a student evaluates every Unit himself/ herself. This kind of evaluation has no bearing on the examination results but motivates and helps student for improving his/her study.
- (ii) **Sessional Assessment**- The examiners do continuous evaluation of the home assignments. Besides, the courses having practicals, workshops, seminars, or projects are evaluated separately. Thirty percent Weightage in distribution of marks is given for the sessional assessment in the final examination to determine the overall result.
- (iii) **Terminal Assessment** - The evaluation of a student is done on the basis of his/her performance in the terminal examination. Seventy percent Weightage is given for the terminal assessment in the final examination to determine the overall result.

The examination system of this University is different from those of the conventional Universities. All examinations of this University are based on the semester system. Here a student is declared pass or fail in different papers/courses instead of in the terminal examination as a whole. As such a student gets the credit of all those papers/courses, which he/she completes successfully, and as and when he/she completes all the required papers/courses for the program, the pass mark sheet/ certificate indicating the division, is issued to the student. Every student is given home assignments for each course/program. If a student does not submit

completed home assignments within the stipulated period, he/she is not allowed to appear in the Terminal examination of that course/program.

UPRTOU has brought the higher education within the reach of a large segment of population, and caters to the needs of thousands of aspirants of higher education. The motto of the UPRTOU is “**reaching the unreached**”, and it aspires to achieve it as early as possible. Thus, the programmes of the University fulfill the educational and training needs of a wide segment of population from the professionally qualified to the general public, from corporate executives to unemployed youths, and from businessmen to homemakers.

The organization of convocation of the University is the regular feature of University. The First Convocation of the University was held on 25th March, 2004, in which Smt. Girija Devi, the celebrated singer and musician, and Sri. Kunwar Narayan, a famous poet in Indian literature, were conferred with the D. Litt, Degree (Honoris Causa). Prof. P. Ramchandra Rao, the Vice-Chancellor of Banaras Hindu University, delivered the Convocation address, and Prof. Vishnu Kant Shastri Ji, the then Hon’ble Governor of the State, distributed the Gold medals to meritorious students ad degrees and certificates to those students who has successfully completed their course. The University has been publishing its Newsletter named **Mukta Chintan**, since March 2003, offering information about various activities as well as important events and functions taking place here. The University is determined to meet the challenges of higher education as a consequence of changing global perspectives. The ultimate aim of the UPRTOU is to become a virtual University, and a University that can provide opportunity for higher education to thousands of aspirants of the state at their door-steps. The University is striving hard to realize this aim.

The University at a glance is as following:

Officers of the University:

Designation	Name	Cotact. No.
Vice-Chancellor	Prof. Seema Singh	7525048111
Registrar	Prof.P.P. Dubey	7525048005
Finance Officer	Mr. A. K. Singh	7525048006
Controller of Examination	Mr. D.P.Singh	7525048009

Objective of the University:

This university is governed under the Uttar Pradesh Rajarshi Tandon Open University Act 1999. Objectives of the University accordingly are as follow:

- (1) The University shall endeavor through education, research, training and extension to play a positive role in the development of the State, and, based on the rich heritage of the State to promote and advance the culture of the people of India and its human resources and towards this end, it shall; Strengthen and diversify the degree, diploma and certificate courses;
 - (I) Provide access to higher education for large segments of the population,
 - (II) Promote acquisition of knowledge in a rapidly developing and changing society
 - (III) Provide an innovative system of University level education, flexible and open,
 - (IV) Contribute to the improvement of the educational system by providing a non-formal channel
 - (V) Promote national integration and the integrated development of the human personality.

- (2) The University shall strive to fulfill the aforesaid objects by a diversity of means of distance and continuing education, and shall function in co-operation with the existing Universities and Institutions of higher learning and make full use of the latest scientific knowledge and new educational technology to offer a high quality of education which matches contemporary needs.

Statutory bodies of the University:

For planning, executing and monitoring of the academic and administrative affairs of the university the following statutory bodies have been constituted in the university:

Executive Council
Academic Council
Planning Board
Board of Recognition
Schools of Studies
Finance Committee
Examination Committee

Schools of Studies in the University: 10

For organizing its various academic activities the University has established the following ten schools of studies:

- School of Humanities
- School of Social Sciences
- School of Sciences
- School of Education
- School of Engineering & Technology
- School of Management Studies
- School of Health Sciences
- School of Computer & Information Science
- School of Vocational Studies
- School of Agricultural Sciences

Vision and Mission of the University:

The vision and mission of the Uttar Pradesh Rajarshi Tandon Open University, Prayagraj may be stated as below:

1. To reach the un-reached
2. To universalize the opportunities of higher education
3. To equalize opportunities in higher education

Ph.D. (Doctor of Philosophy)

Admission 2022

Note - U P Rajarshi Tandon Open University, Prayagraj (UPRTOU) announces Admission to PhD (Regular mode) Programme 2022 Session through a Pre-Ph. D. entrance test followed by other required process as per UPRTOU Ph. D. Guidelines & Ordinances. Apply online for Pre-Ph.D. entrance test till 25 June, 2022 and 30 June with late fee. Check out the details on eligibility criteria, selection process, application fee, online application form, syllabus for entrance test etc. in the University website - www.uprtou.ac.in. Applicants are also advised to see the UPRTOU Ph. D. Guidelines & Ordinances available in the University website www.uprtou.ac.in. For any ambiguity in this information brochure the UPRTOU Ph. D. Guidelines & Ordinances will be final.

IMPORTANT DATES FOR PRE-PH. D. ENTRANCE TEST

Particulars	Proposed Dates
Date for Online Registration, Application & Deposition of Entrance Examination Fee through University website : www.uprtou.ac.in	07 June, 2022
Last Date for Online Registration, Application & Deposition of Entrance Examination Fee	06 July, 2022
Last Date for Online Registration, Application & Deposition of Entrance Examination Fee with late fee	15 July, 2022
Online Application form correction period	From 16 July to 20 July, 2022
Availability of Admit Cards on University Website	From 26 July, 2022
Date of UPRTOU Ph. D. Entrance Test-2022	20 August, 2022
Declaration of UPRTOU Ph.D. Entrance Test Result on University Website	Last week of August, 2022

APPLICATION FEE

Pre-Ph. D. entrance test fee is **Rs.1500/-** and with late fee Rs. 2000/ for **General/OBC** candidates and **Rs.1000/-** and with late fee Rs. 1500/ for **SC/ST** candidates. The candidate will have to pay the entrance test fee via online mode only i.e. via **Net Banking/Credit Card/Debit Card** etc. This Pre-Ph. D. entrance test fee will be Non-refundable.

APPLICATION PROCEDURE

U P Rajarshi Tandon Open University, Prayagraj has released notification for the eligible candidates for admission into Ph.D. (Regular Mode) programme for the academic session 2022-23. One can register and apply online for **Pre-Ph. D. entrance test**. The Online Link for Ph.D. Entrance Portal is available in www.uprtou.ac.in. Candidates can follow the below mentioned step to fill the UPRTOU Pre-Ph. D. **entrance application form** :

Step 1	The candidate will have to visit the official website of UPRTOU i.e. www.uprtou.ac.in to register and apply online.
Step 2	On visiting the homepage of UPRTOU, you will have to search for the link ' Online Pre-Ph. D. Entrance Test 2022 '.
Step 3	On clicking the link, the candidate will be directed to a new page and will have to click on the link 'Click Here for Registration'.
Step 4	Once it's open, now you will have to fill up all the required information's such as personal and academic details.
Step 5	Once all the details are filled, you are required to upload desired scanned documents, images of your passport-sized photograph and signature. The image should be in JPG/JPEG format and its size should not exceed as per mentioned size.
Step 6	After the images have been successfully uploaded, you have to proceed for payment of the application fee.
Step 7	The General/OBC candidate has to pay Rs.1500/- and Rs.2000/ with late fee. The SC/ST candidate Rs.1000/- and Rs 1500/ with late fee. The mode of payment will have to pay for the application fee would be online mode only i.e. via Net Banking/Credit Card/Debit Card.
Step 8	Once the payment has been made, you will receive a confirmation mail and an SMS on the registered mobile number.
Step 9	After all the due formalities are completed, candidates are advised to take a print out of the confirmation page as it will come handy for future purposes.
Step 10	If there is any correction need in filled information's, the candidate will be able to correct them in the prescribed correction period.

ELIGIBILITY CRITERIA

The eligibility criteria for admission to **Ph.D. Programme** are -

Possesses Master's Degree in concern/Allied/Relevant subject/Area/Discipline from a University recognized by UGC or any other qualification recognized as equivalent thereto in such fields of study as are notified for the purpose from time to time by the University with at least 55% marks (50% marks in the case of SC,ST, OBC (Non –creamy Layer) and Differently-abled and other categories of candidates as per the decision of UGC from time to time, or for those who had obtained their Master's Degree prior to 19th September, 1991) excluding grace-mark.

Ph.D. PROGRAMME OFFERED

Uttar Pradesh Rajarshi Tandon Open University, Prayagraj has offered Ph.D. programme (Regular Mode) in various subjects for academic session 2022. The subjects, subject code for the particular subject and number of seats are given below-

Subjects	Sub. Code	Concern/Allied/Relevant Subject/Area/Discipline at Master's Degree Level	No. of Available Seats for 2022
Computer Science	001	Master's Degree in Computer Science/ Computer Application/ Information Technology/M.Sc. (CS)/M.Sc. (IT)/ MCA/ M. Tech. (CS) /M. Tech. (IT)	02+01 SC Backlog
Nutrition Food and Dietetics	003	Master's Degree in Food and Nutrition/ Nutritional Science/Home Science/Community Health/Public Health/Food Technology/Food Science	02+01 SC Backlog
Journalism and Mass Communication	004	Master's Degree in Mass Communication and Journalism/Advertising & Public Relations/Media Governance/Film Study/Visual Effects and Animation/Broadcast Journalism/ Convergent Journalism/Development Communication/Health Communication and YOGA/ Action Sociology/Social Work/Media Business Management/Corporate Communication/Hindi/English	02+01 EWS Backlog
Medieval and Modern History	005	Master's Degree in History/ Medieval and Modern History/ Ancient Indian History Culture and Archaeology/Political Science	02
Political Science	006	Master's Degree in Political Science/Defence Studies/ Gandhian Studies/Human Rights and Duties Education/ Peace Studies/ Women Studies.	03+01 OBC Backlog
Commerce	007	M. Com	02+01 SC Backlog
Business Administration and Business Management	008	MBA	02
Education	009	M.Ed./ M.Ed. (Special Education) or Master's Degree in Education/Psychology/Philosophy/Sociology/Yoga/Adult Education/Adult and Continuing Education/Distance Education/Lifelong Learning and Extension/ Population Education	07+01 SC Backlog
Sanskrit and Prakrit Language	010	Master's Degree in Sanskrit or Equivalent	02+01 SC Backlog
Statistics	011	M.Sc. (Statistics), M.Sc. (Bio-Statistics), M.Sc. (Mathematical Statistics), M.Sc. (Agricultural Statistics), M.Sc. (Applied Statistics), M.A. (Statistics)	02+01 SC Backlog
Hindi and Modern Indian Language	013	Master's Degree in Hindi or Equivalent	06+02 SC Backlog

Geography	014	Master's Degree in Geography/Environmental Science/Rural Development and Planning/Geology (Geomorphology)/Geophysics (Climatology, Hydrology, Water shade Management)/ Statistics (Population Studies)/ Economics (Regional and Area Development and Planning).	03
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Note: (1) The No. of Available Seats as mentioned above may be increased or decreased or cancelled as per availability of Eligible Research Supervisors or as per University Policy/Decision.

(2) Reservation rules/policy of U.P. Govt. will be followed for Ph.D. admission.

(3) Vertical and horizontal reservation rules/policy of U.P. Govt. will be implemented as per availability of seats in the particular subject under 100 point's roster rule.

DURATION OF Ph.D. PROGRAMME

The UPRTOU Ph.D. programme shall be for a minimum duration of three years, including course work and a maximum of six years duration except the conditions of UPRTOU Ph. D. Guidelines 12.3.

ENTRANCE TEST PROCEDURE

There will be an objective type question paper of one and half hour duration (90 minutes) in Pre-Ph.D. Entrance Test containing 70 Multiple Choice Answer questions. The items of the Entrance Test will consist of 50% of research methodology and 50% will be subject specific. The Entrance Test syllabus is mentioned in the next pages of this information brochure. The Entrance test will be conducted at the University campus or examination centre(s) situated in Prayagraj city only as per number of examinees. The candidates can download their Admit card of UPRTOU Pre-Ph.D. entrance test session 2022, from the University website www.uprtou.ac.in from **26 July, 2022**.

SELECTION PROCESS FOR ADMISSION

Candidates who will meet the required cut off will be called for an interview. The overall merit list would be prepared on the basis of marks obtained in the written test and interview. In the final merit, candidates would be given a weightage of 70% to the entrance test, 20% to the performance in the interview and maximum of 10% marks to the NET/SLET/JRF etc. qualified applicants. The procedure and criteria for declaration of result of UPRT Open University Pre-Ph.D. Programme, comprises the **following steps**:

Step I : <u>Ph.D. Entrance Test</u>	UPRT Open University Ph.D. Entrance Test will be merely qualifying for selection process to Ph.D. Programme. For this the candidates are required to obtain the minimum 50 percent marks on the Entrance Test to be conducted. A relaxation of 5% of marks (from 50% to 45%) shall be allowed for the candidates belonging to SC/ST/OBC (Non –creamy Layer)/Differently-abled category and other categories of candidates as per the decision of UGC from time to time
Step II : <u>Interview</u>	A research proposal in the area of research interest of the applicant's which will be submitted to the interview board. A power point presentation of the said research proposal by the applicant must be presented before the interview board. The presentation of tentative synopsis followed by an Interview shall be organized by the concerned school of studies. Candidates must bring all the relevant documents during interview.
Step III : <u>Merit List Preparation</u>	As per availability of seats, admission for Ph.D. course work shall be given to the candidates on the basis of merit list. The reservation policy of Uttar Pradesh State Government will be followed in admission and other process. Amongst those candidates who have cleared Step-I, a merit list in 100 Points comprise of Entrance Test Marks, weightage marks and presentation of tentative synopsis followed by an Interview shall be prepared subject-wise and category-wise. Break-up of 100 Merit Base Points shall be as below:

S.N.	Particulars	Maximum Marks	Maximum Point
1.	Entrance Test	70	70
2.	Weightage	10	10
	(i) UGC-JRF (including JRF UGC-CSIR /GATE in the Concern Subject)		
	(ii) UGC-NET (including NET, UGC-CSIR/GATE/ SLET/Teacher Fellowship Holder/have Passed M. Phil. Programme in the Concern Subject)		
3.	Presentation of Tentative Synopsis through PPT and Interview	20	20
Total		100	100

Note: (1) *In case of a tie, the first preference will be given to the candidate who secures higher percentage of marks in PG examination. If the marks secured in PG, UG, 12 class and 10 class marks are also same, then in that case the older candidate will be given priority.*

(2) *The merit list would be displayed on the University website.*

REGISTRATION

- After Selection, the candidate shall be admitted to Ph. D. course work and after successful completion of the Ph. D. course work; the candidate shall be provisionally enrolled for Ph. D. program.
- Candidates already holding M. Phil. Degree and having cleared the M. Phil Course work with at least 55% marks in aggregate and admitted to the Ph.D. Programme, shall be eligible to proceed to do research work leading to Ph.D. degree in an integrated programme. All other candidates admitted to the Ph.D. Programme shall be required to complete the Ph.D. course work prescribed by the concerned School of Studies. A relaxation of 5% of marks, from 55% to 50% may be allowed for those belonging to SC/ST/OBC (Non creamy layer)/ differently-abled and other categories of candidates as per decision of the U.G.C. from time to time.
- All those candidates who are offered a fellowship by the University or any other agency and registered with the University to pursue a research degree programme of the University on full time basis shall belong to the category of full- time students. In exceptional cases, the Research Degree Committee may allow registration of full time students who do not have fellowships. The full- time students shall work on their projects at Prayagraj only.
- Students who are employed in the UPRT Open University and desirous of pursuing a research degree programme may be permitted to register as part-time students. Generally, teachers and other academic staff of the University while continuing on their Jobs shall belong to this category.

COURSE WORK

The Course work for Ph.D. program is 16 credits. A student shall be deemed to have completed his/her course work successfully if he/she obtains a minimum of 50% marks in each internal and external assessment separately and 55% of marks aggregate in the course work in order to be eligible to continue in the programme. A relaxation of 5% of marks, from 55% to 50% may be allowed for those belonging to SC/ST/OBC (Non creamy layer)/ differently-abled and other categories of candidates as per decision of the U.G.C. from time to time. In each theory paper of Ph.D. Course work, 30% of the total marks shall be assigned for the sessional assessment, while rest 70% marks will be assigned through written Examination.

FINAL SYNOPSIS

The Three copies of synopsis duly forwarded by the proposed supervisor and Joint-supervisor (if any) have to be submitted between 3 to 6 months from the date of Research Degree Committee (RDC). Each page of the synopsis must be signed by the candidate and the supervisor both. The synopsis must include (i) the title of the problem (ii) the need of study (iii) the review of the related literature (iv) the methodology (v) the data sources (vi) the chapter plan and (vii) the bibliography.

FEE STRUCTER

The fee schedule for Doctor of Philosophy (Ph.D.) Programme is given below:

(1)	Entrance Test fee	Rs. 1500.00/	For all Except SC/ST
		Rs. 1000.00/	For SC/ST Applicants
(2)	Entrance Test fee with late payment	2000.00/	For all Except SC/ST
		1500.00/	For all SC/ST Applicants
(3)	Registration and examination fee for Ph.D. course work	Rs. 10,000.00/	Once
(4)	Ph.D. Registration fee	Rs. 3000.00/	Once
(5)	Programme fee	Rs. 20,000.00/	Per Annum
(6)	Pre-submission Viva fee	Rs. 10,000.00/	At the time of request for Pre-Submission Viva
(7)	Evaluation of Thesis and viva voce fees	Rs. 15,000.00/	At the time of Submission of Thesis
(8)	course work Back Paper fee, if required	Rs. 1000.00/	Per Paper

Syllabus (पाठ्यक्रम)

PART- A:

RESEARCH METHODOLOGY

(Compulsory for All Applicants)

- (i)** Research aptitude and research ethics.
- (ii)** Meaning, Scope and Aims of Research, steps of Scientific Method, Types of Scientific Method (Exploratory, Explanatory and Descriptive), Types of research (Fundamental, Applied and Action), Approaches to educational research (Quantitative, Qualitative and Blended), Designs in research (Descriptive, Experimental and Historical).
- (iii)** Research Problem : Meaning, need, sources of selection of Research Problem, Characteristics of a good research Problem
- (iv)** Variables: Meaning of Concepts, Constructs and Variables, Types of Variables (Independent, Dependent, Extraneous, Intervening and Moderator).
- (v)** Hypotheses - Concept, Sources, Types (Directional, Non-directional, Null), Formulating Hypothesis, Characteristics of a good hypothesis.
- (vi)** Concept of Universe and Sample, Characteristics of a good Sample, Techniques of Sampling (Probability and Non-probability Sampling).
- (vii)** Research Tools: Types (Rating scale, Attitude scale, Questionnaire, Schedule, Aptitude test and Achievement Test, Inventory etc.), Characteristics of a Good research tool, Techniques of Research (Observation, Interview and Projective Techniques)
- (viii)** Data : Types and Sources
- (ix)** ICT in Research: General abbreviations & terminology, Basics of internet & e-mailing, Social networking and search engines, Software for Data analysis and interpretation for research purposes.
- (x)** Meaning, aims, importance and sources of Review of Literature
- (xi)** Methods of writing Bibliography and References
- (xii)** Preparation of Research Proposal
- (xiii)** Basics of Research Report Writing.
- (xiv)** Structure of the Institutions for Higher Learning and Research in India.
- (xv)** Latest Policies and trends in research.

PART- B : SUBJECT SPECIFIC

Note : *The Subject specific syllabi for core subject intend to test the subject/concept mastery of the candidate in the respective subject. The candidate can chose any one of the following subject syllabi according to their applied Ph. D. subject.*

Subject: Computer Science (001)

विषय : कम्प्यूटर विज्ञान

Discrete Mathematics

- Propositional and first order logic. Sets, relations, functions, partial orders and lattices. Groups. Graphs: connectivity, matching, coloring. Combinatorics: counting, recurrence relations, generating functions.

Probability

- Random variables. Uniform, normal, exponential, poisson and binomial distributions. Mean, median, mode and standard deviation. Conditional probability and Bayes theorem.

Digital Logic

- Boolean algebra. Combinational and sequential circuits. Minimization. Number representations and computer arithmetic (fixed and floating point).

Computer Organization and Architecture

- Machine instructions and addressing modes. ALU, data-path and control unit. Instruction pipelining. Memory hierarchy: cache, main memory and secondary storage; I/O interface (interrupt and DMA mode).

Programming and Data Structures

- Programming in C. Recursion. Arrays, stacks, queues, linked lists, trees, binary search trees, binary heaps, graphs.

Algorithms

- Searching, sorting, hashing. Asymptotic worst case time and space complexity. Algorithm design techniques: greedy, dynamic programming and divide-and-conquer. Graph search, minimum spanning trees, shortest paths.

Operating System

- Processes, threads, inter-process communication, concurrency and synchronization. Deadlock. CPU scheduling. Memory management and virtual memory. File systems.

Databases

- ER-model. Relational model: relational algebra, tuple calculus, SQL. Integrity constraints, normal forms. File organization, indexing (e.g., B and B+ trees). Transactions and concurrency control.

Computer Networks

- Concept of layering. LAN technologies (Ethernet). Flow and error control techniques, switching. IPv4/IPv6, routers and routing algorithms (distance vector, link state). TCP/UDP and sockets, congestion control. Application layer protocols (DNS, SMTP, POP, FTP, HTTP). Basics of Wi-Fi. Network security: authentication, basics of public key and private key cryptography, digital signatures and certificates, firewalls.

Subject: Nutrition Food & Dietetics (003)

विषय : न्यूट्रीशन, फूड एण्ड डाइटेटिक्स

FOOD SCIENCE-

- Introduction to food science-evolution of food industry and allied industries.
- Understanding food groups for balanced diet, structure, composition, nutritive value and processing techniques of cereals, pulses and legumes, fruits and vegetables, nuts and oil seeds, milk and milk products, egg meat and fish.
- Food additives, food colour, emulsifiers, stabilizers and flavours.
- Food fortification, enrichment and supplements.
- Food spoilage and food poisoning.

NUTRITION AND DIETETICS

- Nutrition in food, their function, requirements, sources, digestion absorption and utilization. Effect of low and excess intake of nutrients on human body,
- RDA for different age sex and activities, methods of assessment of nutritional status.
- Nutrition during life span- growth and development, nutritional requirement, nutritional problems, feeding patterns and special needs of-

- | | | |
|----------------------|------------------------------|-----------------|
| • Infancy | • School age and adolescents | • Preschool age |
| • Adults and elderly | • Pregnancy and lactation | |

- Therapeutic modification of normal diet, special feeding methods.
- Causes, symptoms and principles of dietetic management of-

- | | | |
|----------------------------|---------------------------|--|
| • Fevers | • Peptic ulcer | • Gastritis, diarrhea and constipation |
| • Jaundice and hepatitis | • Cardiovascular diseases | • Nephritis and renal disorders |
| • Gout | • Arthritis | • Diabetes mellitus |
| • Obesity and under weight | • Cancer | |

- Nutritional management of eating disorders- anorexia nervosa, bulimia and binge eating.

COMMUNITY HEALTH-

- National and international agencies and various programs dealing with nutrition of community in India.
- Nutritional problems in India.
- Contagious diseases- causes, symptoms, prevention and management of-

- | | |
|----------------|---------------------------------|
| • COVID-19 | • Influenzas |
| • Meningitis | • Sexually transmitted diseases |
| • Tuberculosis | • Ebola |
| • AIDS | • Measles |

- Mental Health and Psychological disorders- nature, etiology, symptoms and management of-
Anxiety disorders- panic phobias generalized anxiety disorder, obsessive compulsive disorder, Conversion and dissociate disorder, Schizophrenia and paranoid, Mood disorders, Personality disorders
- Nature of psychotherapy- psychodynamic therapy, aversions therapy, cognitive behaviour therapy, gestalt therapy, psychodrama, sensitivity training.
- Infectious Disorders
- Health and hygiene

Subject: Journalism & Mass Communication (004)

विषय : पत्रकारिता एवं जनसंचार

- संचार - अर्थ, परिभाषा, प्रक्रिया, तत्व, आवश्यकता व महत्व, संचार के प्रकार, संचार के माडल, जनसंचार के विभिन्न स्कूल और सिद्धांत ।
- जनसंचार और विकास- विकास की अवधारणा, अर्थ, परिभाषा, विकास संचार का अर्थ, अवधारणा व स्वरूप ।
- अन्तर्राष्ट्रीय संचार-नई विश्व संचार व्यवस्था, विकसित एवं विकासशील देश, मैकब्राइड आयोग, भारत एवं न्यूको, प्रमुख भारतीय और अन्तर्राष्ट्रीय समाचार समितियाँ, अन्तर्राष्ट्रीय प्रिन्ट एवं इलेक्ट्रानिक मीडिया ।
- पत्रकारिता- अवधारणा, अर्थ, परिभाषा, हिन्दी पत्रकारिता का उद्भव और विकास भारत और विश्व के समाचार पत्र और पत्रकारिता के विविध रूप, पत्रकारिता का वर्तमान परिवेश, दायित्व, प्रशिक्षण, भाषायी पत्रकारिता की भूमिका, भाषायी पत्रकारिता का भविष्य, स्वातन्त्र्योत्तर भारत में हिन्दी पत्रकारिता का स्वरूप, हिन्दी पत्रकारिता और बदलते मूल्य, वर्तमान प्रमुख समाचार पत्र ।
- विविध जनमाध्यम- पारम्परिक लोक माध्यम की अवधारणा, मुद्रित माध्यम, रेडियो दूरदर्शन, इलेक्ट्रानिक मीडिया, फिल्म और फोटो पत्रकारिता ।
- कम्प्यूटर और इन्टरनेट-कम्प्यूटर और इन्टरनेट का इतिहास एवं विकास, सूचना प्रौद्योगिकी की अवधारणा, न्यू मीडिया का अर्थ, एवं उपयोगिता, महत्वपूर्ण वेबसाइट ।
- मीडिया और समाज - मीडिया और वैश्वीकरण, मीडिया साम्राज्यवाद, मीडिया और मानवाधिकार, पर्यावरण एवं मीडिया, मीडिया और संस्कृति, सोशल मीडिया के दौर में मीडिया की चुनौतियाँ ।
- प्रेस विधि- भारतीय संविधान का संक्षिप्त परिचय : प्रस्तावना, मूलअधिकार एवं कर्तव्य, राज्य नीति निर्देशक तत्व, स्वतंत्र भारत में प्रेस कानून, प्रेस आयोग, प्रेस परिषद् एवं आचार संहिता ।
- जनसंपर्क, विज्ञापन और विपणन -जनसम्पर्क, जनमत, प्रचार एवं विज्ञापन, बाजार अनुसन्धान एवं विपणन अनुसंधान, मीडिया प्रबन्धन, विज्ञापन नीति, विज्ञापन में नैतिकता, विज्ञापन हेतु आचार संहिता ।
- मीडिया के सामाजिक दायित्व- मीडिया और रोजगार, उपभोक्तावाद, महिला सशक्तीकरण,
- पर्यावरण संरक्षण, सामाजिक असामनता, आर्थिक विषमता, आधुनिक परिवेश में स्वास्थ्य चुनौतियाँ, ग्रामीण विकास की नीतियाँ एवं चुनौतियाँ, वर्तमान सामाजिक, सांस्कृतिक एवं राजनीतिक परिप्रेक्ष्य में मीडिया की भूमिका ।
- सरकारी एवं गैर सरकारी मीडिया संगठन- परिचय एवं कार्यप्रणाली ।
- मीडिया और शिक्षा -दूरस्थ शिक्षा व्यवस्था में मीडिया की भूमिका, उच्च शिक्षा एवं दूरस्थ शिक्षा प्रणाली की आवश्यकता एवं महत्व ।
- मीडिया की समसामयिक स्थिति और सामान्य ज्ञान- सम सामायिक घटनाओं पर आधारित ज्ञान एवं वर्तमान परिदृश्य में मीडिया की स्थिति ।

विषय : मध्ययुगीन और आधुनिक इतिहास (005)

Subject: Medieval & Modern History (005)

मध्यकालीन एवं आधुनिक भारतीय इतिहास एवं उसके स्रोत

इकाई प्रथम : सल्तनत कालीन भारत - 1206 से 1707 ई० तक (विस्तार एवं सुदृढ़ीकरण)

- विजयनगर एवं बहमनी साम्राज्य, राजपूत साम्राज्य, मराठा साम्राज्य, शेरशाह का शासन- प्रशासन एवं आर्थिक सुधार।
- राज्य एवं धर्म।
- आर्थिक स्वरूप।
- प्रशासनिक ढाँचा।
- कला, साहित्य एवं वास्तु कला।

इकाई द्वितीय : हसन निजामी-ताजुल मआसीर, मिनहाज-तबकाते नासिरी, अमीर खुसरो-ऐतिहासिक ग्रन्थ, जियाउद्दीन बरनी-तारीखे फीराजशाही, फतवा-ए-जहाँदारी।

- बाबर-बाबरनामा, अबुल फजल-अकबरनामा, आईने अकबरी, बदरयूनी-मुन्तखाब उत् तवारीख।
- खाफ़ी खाँ-मुन्तखब-उल-लुवाब, यात्रा वृत्तान्त-इब्नेबतूता, बर्नियर।
- भक्ति साहित्य-कबीर एवं तुलसीदास।

इकाई तृतीय : ब्रिटिश शासन का सुदृढ़ीकरण।

- आर्थिक एवं सामाजिक नीति।
- राष्ट्रीय आन्दोलन एवं स्वतंत्रता के बाद भारत।

इकाई चतुर्थ : अभिलेखागार-राष्ट्रीय अभिलेखागार, क्षेत्रीय अभिलेखागार, रियासती

- अभिलेखागार, विदेशों में स्थित अभिलेखागार।
- समकालीन संस्मरण-यात्रियों के, प्रशासकों के, मिशनरियों के संस्मरण, डायरी, भाषण एवं लेखन-महात्मा गांधीजी, नेताजी सुभाषचन्द्र बोस, पं० जवाहर लाल नेहरू तथा भीमराव अम्बेडकर।
- समकालीन समाचार पत्र-पत्रिकाएँ एवं गजेटियर, जनगणना, विभिन्न कम्पनी रिकार्ड्स।
- मौखिक स्रोत-लोक गीत, लोककथाएँ, लोकोक्तियाँ, समकालीन प्रमुख साहित्य।

इकाई पंचम : इतिहास में शोध की आधुनिक प्रवृत्तियाँ एवं प्रमुख आयाम

- वस्तुपरक एवं विषयपरक शोध, सैद्धान्तिक अध्ययन।
- साम्राज्यवादी/औपनिवेशिक दृष्टिकोण, राष्ट्रवादी दृष्टिकोण।
- वामपंथी एवं उपाश्रयी प्रवृत्तियाँ, एकीकृत इतिहास लेखन।
- नवीन राजनीतिक, सामाजिक, आर्थिक, धार्मिक एवं सांस्कृतिक आयाम
- क्रांतिकारी एवं प्रगतिवादी आन्दोलन, जेंडर स्टडी, दलित, आदिवासी, विज्ञान एवं तकनीक, पर्यावरण आदि।

Subject: Political Science (006)

विषय : राजनीति विज्ञान

इकाई-I

1. राजनीतिक चिन्तन एवं सिद्धान्त, पाश्चात्य चिन्तन : प्लेटो, अरस्तू, ऑगस्टीन, एक्विनास, मैकियावेली, हॉब्स, लॉक, रूसो, बेन्थम, जे एस मिल, ग्रीन, हीगल, मार्क्स।
2. भारतीय चिन्तन : मनु, कौटिल्य, शान्तिपर्व, राजा राम मोहन राय, गोखले, तिलक, विवेकानन्द, एम एन रॉय, अरविन्द, अम्बेडकर, नेहरू, गाँधी, राजर्षि टण्डन, दीन दयाल उपाध्याय।
3. राजनीतिक सिद्धान्त : राजनीति विज्ञान का अर्थ, प्रकृति, क्षेत्र, अध्ययन के उपागम, राज्य, प्रभुसत्ता, शक्ति, प्राधिकार, वैधता, न्याय, स्वतंत्रता, समानता, व्यक्तिवाद, उदारवाद, समुदायवाद, मार्क्सवाद, सर्वाधिकारवाद, फौसीवाद, साम्राज्यवाद, राष्ट्रवाद, अन्तर्राष्ट्रवाद, नारीवाद, उत्तर-उपनिवेशवाद, उत्तर-आधुनिकतावाद, बहुसंस्कृतिवाद, उदारीकरण, वैश्वीकरण।

इकाई-II

4. भारतीय शासन एवं राजनीति : भारतीय संवैधानिक विकास, प्रस्तावना, नागरिकता, मूल अधिकार, नीति निदेशक तत्त्व, मूल कर्तव्य, संसद, संघीय एवं राज्य विधायिका एवं कार्यपालिका, भारतीय न्यायपालिका, विभिन्न आयोग, आपातकालीन उपबंध, विभिन्न संसदीय समितियाँ, संवैधानिक संशोधन इत्यादि, भारतीय संघवाद, भारतीय राजनीति में साम्प्रदायिकता, जातिवाद, भाषावाद एवं क्षेत्रवाद, राजनीतिक आन्दोलन एवं राजनीतिक समूह इत्यादि।

इकाई-III

5. तुलनात्मक राजनीति : अर्थ, प्रकृति, क्षेत्र, व्यवस्था विश्लेषण उपागम, संरचनात्मक-प्रक्रियात्मक उपागम, संचार उपागम, मार्क्सवादी उपागम, संविधानवाद, संसदीय एवं अध्यक्षीय शासन प्रणाली, एकात्मक एवं संघात्मक शासन प्रणाली, प्रजातंत्र एवं अधिनायकतंत्र, राजनीतिक विकास, राजनीतिक आधुनिकीकरण, राजनीतिक संस्कृति, राजनीतिक सहभागिता, राजनीतिक दल, दबाव समूह, प्रतिनिधित्व के सिद्धान्त इत्यादि।

इकाई-IV

6. लोक प्रशासन : लोक प्रशासन का अर्थ, प्रकृति, क्षेत्र, विकास के चरण, नवीन लोक प्रशासन, वैज्ञानिक प्रबंधन सिद्धान्त, नौकरशाही के सिद्धान्त, शास्त्रीय सिद्धान्त, मानव सम्बन्ध सिद्धान्त, व्यवस्था एवं पारिस्थितिकी उपागम, निर्णय निर्माण उपागम, लाइन एवं स्टाफ, पदसोपान, आदेश की एकता, प्रशासनिक व्यवहार, विशेषज्ञ बनाम सामान्यज्ञ, विकास प्रशासन का अर्थ, स्वरूप, क्षेत्र एवं मुद्दे, विकास अधिकारी तंत्र, सुशासन, प्रशासन पर विधायी, प्रशासनिक एवं न्यायिक नियंत्रण।

इकाई-V

7. अंतर्राष्ट्रीय सम्बन्ध एवं विदेश नीति : अंतर्राष्ट्रीय सम्बन्ध के सिद्धान्त एवं उपागम, आदर्शवाद, यथार्थवाद, व्यवस्था सिद्धान्त, खेल सिद्धान्त, संचार एवं निर्णय-निर्माण उपागम, शक्ति एवं हित, राष्ट्रीय हित, अंतर्राष्ट्रीय सम्बन्ध में विचारधारा, सामूहिक सुरक्षा, शक्ति संतुलन, निःशस्त्रीकरण, शीत युद्ध, गुट निरपेक्षता, गुट निरपेक्षता 2.0, वैश्वीकरण, नई अंतर्राष्ट्रीय आर्थिक व्यवस्था, उत्तर-दक्षिण संवाद, दक्षिण-दक्षिण सहयोग, डब्लू.टी.ओ., क्षेत्रीय संगठन, दक्षेस, आसिआन, ओपेक, संयुक्तराष्ट्र का लक्ष्य, उद्देश्य, संरचना, कार्य एवं मूल्यांकन, विदेश नीति के तत्त्व, भारतीय विदेश नीति की विशेषताएँ, भारत के विश्व की प्रमुख शक्तियों एवं पड़ोसियों से सम्बन्ध।

Subject: Commerce (007)

Business Administration & Business Management (008)

विषय : वाणिज्य/ व्यवसाय प्रशासन और व्यवसाय प्रबंधन

- 1 Indian Economy
- 2 Business Environment
- 3 Corporate Governance
- 4 Strategic Management
- 5 Accounting as a Tool for Decision Making
- 6 ICT & e-Advertising
- 7 Managerial Economics
- 8 Marketing Management
- 9 Human Resource Management
- 10 Management Principles
- 11 Production Management
- 12 Entrepreneurship and skill Development
- 13 Financial Management
- 14 Business Ethics
- 15 Quantitative Techniques

Subject: Education (009)

विषय : शिक्षाशास्त्र

Unit I : Philosophical and Sociological Perspective of Education

- (i) Concept and Functions of Philosophy and Education, Need and Scope of Educational Philosophy.
- (ii) Educational Contribution of Indian Schools of philosophy (Sankhya, Yoga, Vedanta, Buddhism, Jainism)
- (iii) Contribution of Western schools of thoughts (Idealism, Realism, Naturalism, Pragmatism, Marxism, Existentialism) and their contribution to Education with special reference to information, knowledge and wisdom.
- (iv) Sociology of Education (symbolic Interaction, Structural Functionalism and Conflict Theory), Concept and types of social Institutions and their functions (family, school and society), Concept of Social Movements, Theories of Social Movements (Relative Deprivation, Resource Mobilization, Political Process Theory and New Social Movement Theory, Socialization and education, education and culture education.
- (v) Contribution of thinkers (Swami Vivekananda, Rabindranath Tagore, Mahatma Gandhi, Aurobindo, J.Krishnamurthy, Gijju Bhai, Rajarshi Purusottam Das Tandon and Savitribai Phule) to the development of educational thought for social change.
- (vi) National Values as enshrined in the Indian Constitution- Socialism, Secularism, justice, liberty, democracy, equality, freedom with special reference to education.

Unit 2: History, Politics and Economics of Education

- (i) Committees and Commissions on Education : Secondary Education Commission (1952-54), Kothari Education Commission (1964-66), National Policy of Education (1986-1992), National Commission on Teachers (1999), National Curriculum Framework 2005, National Knowledge Commission (2007), Yashpal Committee Report (2009), National Curriculum Framework for Teacher Education (2009), Justice Verma Committee Report (2012).
- (ii) Relationship between Policies and Education, Linkage between Educational Policy and National Development, Determinants of Educational Policy and Process of Policy formulation: Analysis of the existing situation, generation of policy options, evaluation of policy options, making the policy decision, planning of policy implementation, policy impact assessment and subsequent policy cycles.
- (iii) Concept of Economics of Education: Cost Benefit Analysis Vs Cost Effective Analysis in Education, Economic returns to Higher Education, Signaling Theory Vs Human Capital Theory, Concept of Educational Finance; Educational finance at Micro and Macro Levels, Concept of Budgeting.
- (iv) Relationship Between Politics and Education, Perspectives of Politics of Education Liberal, Conservative and Critical, Approaches to understanding Politics (Behaviouralism, Theory of Systems Analysis and Theory of Rational Choice), Education for Political Development and Political Socialization.

Unit 3: Learner and Learning Process

- (i) Growth and Development: Concept and principles, stages of development, Cognitive Processes and stages of Cognitive Development.
- (ii) Personality: Definitions and theories (Freud, Carl Rogers, Gordon Allport, Max Wertheimer, Kurt Koffka), Assessment of Personality, Mental health and Mental hygiene.

- (iii) Approaches to Intelligence from Unitary to Multiple: Concepts of Social intelligence, multiple intelligence, emotional intelligence, Theories of Intelligence, Assessment of Intelligence.
- (iv) Concepts of Problem Solving, Critical thinking, Metacognition and Creativity.
- (v) Learning: Concept, types, Principles and Theories of learning (Behaviouristic, Cognitive and Social theories of learning) Factors affecting learning, social competence, Concept of social cognition, understanding social relationship and socialization goals.
- (vi) Guidance and Counselling: Nature, Principles and Need, Types of guidance (educational, vocational, personal, health and social & Directive, Non-directive and Eclectic), Approaches to counselling – Cognitive-Behavioural (Albert Ellis – REBT) & Humanistic, Personcentred Counselling (Carl Rogers) - Theories of Counselling (Behaviouristic, Rational, Emotive and Reality).

Unit 4: Teacher Education

- (i) Meaning, Nature and Scope of Teacher Education; Types of Teacher Education Programs, The Structure of Teacher Education Curriculum and its Vision in Curriculum Documents of NCERT and NCTE at Elementary, Secondary and Higher Secondary Levels, Organization of Components of Pre-service Teacher Education Transactional Approaches (for foundation courses) Expository, Collaborative and Experiential learning.
- (ii) Understanding Knowledge base of Teacher Education from the view point of Schulman, Deng and Luke & Habermas, Meaning of Reflective Teaching and Strategies for Promoting Reflective Teaching, Models of Teacher Education – Behaviouristic, Competency-based and Inquiry Oriented Teacher Education Models
- (iii) Concept, Need, Purpose and Scope of In-service Teacher Education, Organization and Modes of In-service Teacher Education, Agencies and Institutions of In-service Teacher Education at District, State and National Levels (SSA, RMSA, SCERT, NCERT, NCTE and UGC), Preliminary Consideration in Planning in-service teacher education programme (Purpose, Duration, Resources and Budget).
- (iv) Concept of Profession and Professionalism, Teaching as a Profession, Professional Ethics of Teachers, Personal and Contextual factors affecting Teacher Development, ICT Integration, Quality Enhancement for Professionalization of Teacher Education, Innovation in Teacher Education.

Unit 5: Curriculum Studies

- (i) Concept and Principles of Curriculum, Strategies of Curriculum Development, Stages in the Process of Curriculum development Foundations of Curriculum Planning - Philosophical Bases (National, democratic), Sociological basis (socio cultural reconstruction), Psychological Bases (learner's needs and interests), Bench marking and Role of National level Statutory Bodies – UGC, NCTE and University in Curriculum Development.
- (ii) Models of Curriculum Design: Traditional and Contemporary Models (Academic / Discipline Based Model, Competency Based Model, Social Functions / Activities Model [social reconstruction], Individual Needs & Interests Model, Outcome Based Integrative Model, Intervention Model, C I P P Model (Context, Input, Process, Product Model).
- (iii) Instructional System, Instructional Media, Instructional Techniques and Material in enhancing curriculum Transaction, Approaches to Evaluation of Curriculum : Approaches to Curriculum and Instruction (Academic and Competency Based Approaches), Models of Curriculum Evaluation: Tyler's Model, Stakes' Model, Scriven's Model, Kirkpatrick's Model d) Meaning and types of Curriculum change, Factors affecting curriculum change, Approaches to curriculum change, Role of students, teachers and educational administrators in curriculum change and improvement, Scope of curriculum research and

Types of Research in Curriculum Studies.

Unit 6: Pedagogy, Assessment and Evaluation

- (i) Pedagogy, Pedagogical Analysis - Concept and Stages, Critical Pedagogy- Meaning, Need and its implications in Teacher Education, Organizing Teaching: Memory Level (Herbartian Model), Understanding Level (Morrison teaching Model), Reflective Level (Bigge and Hunt teaching Model).
- (ii) Assessment and Evaluation – Meaning, nature, types and perspectives (assessment for Learning, assessment of learning and assessment in Learning) - Types of Assessment (Placement, formative, diagnostic, summative) Relations between objectives and outcomes, Assessment of Cognitive, Affective and psychomotor domains of learning.
- (iii) Assessment in Pedagogy of Education: Feedback Devices: Meaning, Types, Criteria, Guidance as a Feedback Devices: Assessment of Portfolios, Reflective Journal, Field Engagement using Rubrics, Competency Based Evaluation, Assessment of Teacher Prepared ICT Resources.
- (iv) Measuring Tool- Need, Construction and standardization, Characteristics of good measuring tool.
- (v) Specific Psychological tests for measurement and evaluation- Personality, Intelligence, Creativity, Aptitude and Attitude.

Unit 7: Technology in/ for Education

- (i) Concept of Educational Technology (ET) as a Discipline: (Information Technology, Communication Technology & Information and Communication Technology (ICT) and Instructional Technology, Applications of Educational Technology in formal, non formal (Open and Distance Learning), informal and inclusive education systems, Overview of Behaviourist, Cognitive and Constructivist Theories and their implications to Instructional Design (Skinner, Piaget, Ausubel, Bruner, Vygotsky), Relationship between Learning Theories and Instructional Strategies (for large and small groups, formal and non formal groups).
- (ii) Systems Approach to Instructional Design, Models of Development of Instructional Design (ADDIE, ASSURE, Dick and Carey Model Mason's), Gagne's Nine Events of Instruction and Five E's of Constructivism, Nine Elements of Constructivist Instructional Design, Application of Computers in Education: CAI, CAL, CBT, CML, Concept, Process of preparing ODLM, Concept of e learning, Approaches to e learning (Offline, Online, Synchronous, Asynchronous, Blended learning, mobile learning).
- (iii) Emerging Trends in e learning: Social learning (concept, use of web 2.0 tools for learning, social networking sites, blogs, chats, video conferencing, discussion forum), Open Education Resources (Creative Common, Massive Open Online Courses; Concept and application), E Inclusion - Concept of E Inclusion, Application of Assistive technology in E learning, Quality of E Learning – Measuring quality of system: Information, System, Service, User Satisfaction and Net Benefits (D&M IS Success Model, 2003)
- (iv) Ethical Issues for E Learner and E Teacher – Teaching, Learning and Research.
- (v) Use of ICT in Evaluation, Administration and Research: E portfolios, ICT for Research - Online Repositories and Online Libraries, Online and Offline assessment tools (Online survey tools or test generators) – Concept and Development.

Unit 8: Educational Management, Administration and Leadership

- (i) Educational Management and Administration– Meaning, Principles, Functions and importance, Institutional building, POSDCORB, CPM, PERT, Management as a system, SWOT analysis, Taylorism,

Administration as a process, Administration as a bureaucracy, Human relations approach to Administration, Organisational compliance, Organisational development, Organisational climate.

- (ii) Leadership in Educational Administration: Meaning and Nature, Approaches to leadership: Trait, Transformational, Transactional, Value based, Cultural, Psychodynamic and Charismatic, Models of Leadership (Blake and Mouton's Managerial Grid, Fiedler's Contingency Model, Tri-dimensional Model, Hersey and Blanchard's Model, Leader-Member Exchange Theory).
- (iii) Concept of Quality and Quality in Education: Indian and International perspective, Evolution of Quality: Inspection, Quality Control, Quality Assurance, Total Quality Management (TQM), Six sigma, Quality Gurus: Walter Shewart, Edward Deming, C.K Pralhad.
- (iv) Change Management: Meaning, Need for Planned change, Three Step-Model of Change (Unfreezing, Moving, Refreezing), The Japanese Models of Change: Just-in-Time, Poka yoke, Cost of Quality: Appraisal Costs, Failure costs and Preventable costs, Cost Benefit Analysis, Cost Effective Analysis, Indian and International Quality Assurance Agencies: Objectives, Functions, Roles and Initiatives (National Assessment Accreditation Council [NAAC], Performance Indicators, Quality Council of India [QCI] , International Network for Quality Assurance Agencies in Higher Education [INQAAHE].

Unit 9: Inclusive Education

- (i) Inclusive Education: Concept, Principles, Scope and Target Groups (Diverse learners; Including Marginalized group and Learners with Disabilities), Evolution of the Philosophy of Inclusive Education: Special, Integrated, Inclusive Education.
- (ii) Legal Provisions: Policies and Legislations (National Policy of Education (1986), Programme of Action of Action (1992), Persons with Disabilities Act (1995), National Policy of Disabilities (2006), National Curriculum Framework (2005), Concession and Facilities to Diverse Learners (Academic and Financial), Rehabilitation Council of India Act (1992), RPWD Act-2016, Inclusive Education under Sarva Shiksha Abhiyan (SSA), Features of UNCPRD (United Nations Convention on the Rights of Persons with Disabilities) and its Implication.
- (iii) Concept of Impairment, Disability and Handicap, Classification of Disabilities based on ICF Model, Readiness of School and Models of Inclusion, Prevalence, Types, Characteristics and Educational Needs of Diverse learners' Intellectual, Physical and Multiple Disabilities, Causes and prevention of disabilities, Identification of Diverse Learners for Inclusion, Educational Evaluation Methods, Techniques and Tools.
- (iv) Planning and Management of Inclusive Classrooms: Infrastructure, Human Resource and Instructional Practices, Curriculum and Curricular Adaptations for Diverse Learners, Assistive and Adaptive Technology for Diverse learners: Product (Aids and Appliances) and Process (Individualized Education Plan, Remedial Teaching), Parent Professional Partnership: Role of Parents, Peers, Professionals, Teachers, School.
- (v) Barriers and Facilitators in Inclusive Education: Attitude, Social and Educational, Current Status and Ethical Issues of inclusive education in India, Research Trends of Inclusive Education in India.

विषय : संस्कृत और प्राकृत भाषा (010)

1. वैदिक संस्कृत साहित्य का इतिहास (सामान्य परिचय)
संहिता, ब्राह्मण, आरण्यक, उपनिषद् एवं वेदांग
2. पुराणों का सामान्य परिचय
3. लौकिक संस्कृत साहित्य का इतिहास (सामान्य परिचय)
 - (i) रामायण, महाभारत, महाकाव्य, खण्डकाव्य, (गीतिकाव्य) नाट्यकाव्य एवं कथा साहित्य
 - (ii) संस्कृत काव्यशास्त्र का सामान्य परिचय
4. आधुनिक संस्कृत साहित्य का सामान्य परिचय
5. भारतीय प्राच्य दर्शन (सामान्य परिचय)-सांख्य, योग, न्याय, वैशेषिक, पूर्व मीमांसा, उत्तर मीमांसा, जैन, बौद्ध एवं चार्वाक।
6. संस्कृत-व्याकरण का सामान्य परिचय-संज्ञा, सन्धि, समास, कारक, स्त्री प्रत्यय, कृत् एवं तद्धित
7. भारतीय आर्य भाषाओं का सामान्य परिचय

Subject: Statistics (011)

विषय : सांख्यिकी

Probability Distributions:

- Bernoulli Distribution, Binomial Distribution, Mean and Variance of Binomial Distribution, Moments, Moments Generating Function, Additive and Multiplicative property, Recurrence relation for moments, Fitting of Binomial Distribution, Poisson Distribution, Poisson Distribution as a limiting case of Binomial Distribution, Mean and Variance of Poisson Distribution, Moments, Moment Generating Function, Additive and Reproductive property, Recurrence relation for moments, fitting of Poisson Distribution.
- Geometric Distribution, Mean and Variance, Moment Generating Function of Geometric Distribution, Negative Binomial Distribution, Moment Generating Function, Mean and Variance, Recurrence formulae for Negative Binomial Distribution, Poisson Distribution as a limiting case of Negative Binomial Distribution, Hyper Geometric Distribution, Mean and Variance, Recurrence relation for Hyper Geometric distribution..
- Normal Distribution and its Parameters, Standard Normal Distribution, Moments, Moments Generating Function, Area Property, properties of Normal Curve, Standard Scores, Advantages and Characteristics of Z Scores.
- Uniform Distribution, Moment Generating Function, Distribution Function, Moments of Uniform Distribution, Exponential Distribution, Moments, Moment Generating Function, Lack of Memory Property.
- Sampling distribution of a statistic, Parameter, Derivation of χ^2 , t, F, z distributions, Beta, Gamma, Chauchy densities.

Estimation and Testing of Hypothesis:

- Point Estimation, properties of a good estimator, Consistency, Unbiasedness, Efficiency, Sufficiency, Confidence Interval Estimation.
- Procedures of Estimation, Method of Moments, Method of Maximum Likelihood, Method of Scoring, Properties of Estimators.
- Statistical Hypothesis, Simple and Composite Hypothesis, Critical Region, Two kinds of Error, One-tailed and Two-tailed tests, Test of Significance, Most Powerful Test, Uniformly Most Powerful Test.
- Tests of Significance based on Chi-Square Distribution, Tests of Significance based on t – Distribution, Tests of Significance based on F – Distribution, Tests of Significance based on Fisher's Z - Distribution.
- Testing Significance of Mean, Testing Equality of Means, Testing Significance of Proportion, Testing Equality of Proportions, Testing Significance of Standard Deviation, Testing Equality of Standard Deviation.
- Non Parametric Tests, Sign Test, Wilcoxon Signed- Rank Test, Mann- Whitney U-Test, Run Test.

Sampling Theory:

- Simple Random Sampling Without Replacement (SRSWOR). Stratified Sampling, Reasons & Advantages of Stratification, Equal Allocation, Proportional Allocation, Variance of Stratified Mean under Proportional Allocation, Optimum Allocation, and Variance of Stratified Mean under Neyman Allocation, Relationship among Three Variances, Impact of Arbitrary Allocation, and Practical difficulties in Implementing Neyman Allocation, Systematic Random Sampling, Mean and Variance of Systematic Sampling.
- Introduction, Ratio and Regression Estimators, Approximate Variances of the Ratio Estimators, Ratio and Regression estimators, product method of estimation, double sampling in ratio estimation and double sampling in regression estimation, sub sampling. Cluster Sampling (Equal Cluster- Size), Estimation of Mean with SRS at both Stages, Relative Efficiency of Cluster Sampling, Two Stage Sampling, Estimation of Mean, Optimum Allocation when Cost Fixed and when Variance Fixed, Two-Phase (Double) Sampling for Stratification, Estimation of Mean, Difference between Multistage Sampling and Two Phase Sampling. Cluster sampling with equal clusters, Cluster sampling with varying size of clusters, Two Stage sampling and multi-stage sampling.

Analysis of Variance, Design of Experiment:

- Analysis of Variance, Linear Models and Analysis of Variance, Design of Experiment, Basic Principles of Design of Experiments, Completely Randomized Design.
- Randomized Block Design, Efficiency of RBD, Missing Plot Technique, Latin Square Design, and Efficiency of LSD.
- Definition, 2^2 and 2^3 factorial experiments with its ANOVA table, Analysis of Covariance.
- Introduction, Balanced Incomplete Block Design (BIBD).

Time Series and Determination of Trends:

- Introduction, Utility of Time Series Analysis, Component of Time Series, Mathematical Models for Time Series Analysis.
- Introduction, Graphic Method, Method of Semi Averages, Method of Curve Fitting by the Principle of Least Squares, Method of Moving Averages (when Period is Even & Odd).
- Introduction, Measurement of Seasonal Indices, Method of Simple Averages, Ratio to Trend Method, Ratio to Moving Average Method, Method of Link Relatives.

Demography:

- Introduction, Demography & Vital Statistics, Sources of Demographic Data, Errors in Data Collection, Evaluation & its Adjustments, Rates & Ratios.
- Introduction, Measures of Mortality, CDR, SDR, StDR, MMR, IMR., Fertility, Measures of Fertility, CBR, GFR, ASFR, TFR. GRR, NRR.
- Description & Construction of Complete Life Table, Uses of a Life Table, Migration and its measurements.

विषय : हिन्दी और आधुनिक भारतीय भाषाएँ (013)

1. हिन्दी साहित्य के प्रमुख इतिहास ग्रंथ, हिन्दी साहित्य के इतिहास का काल-विभाजन और नामकरण।
2. आदिकालीन हिन्दी साहित्य की पृष्ठभूमि, आदिकालीन हिन्दी का जैन साहित्य, सिद्ध और नाथ साहित्य, फुटकर लौकिक साहित्य, रासो काव्य, विद्यापति और उनकी पदावली।
3. भक्ति आन्दोलन के उदय की पृष्ठभूमि, प्रमुख निर्गुण एवं सगुण सम्प्रदाय, भक्ति आन्दोलन का अखिल भारतीय स्वरूप, हिन्दी सन्त काव्य, सूफी काव्य, कृष्ण काव्य एवं रामकाव्य : प्रमुख कवि एवं उनका योगदान।
4. रीतिकाल : सामाजिक-सांस्कृतिक परिप्रेक्ष्य, प्रमुख काव्यधाराएँ-रीतिबद्ध, रीतिसिद्ध, रीतिमुक्त, रीतिकाल के प्रमुख कवि एवं उनका काव्य-वैशिष्ट्य, रीतिकालीन शृंगारेतर काव्य।
5. आधुनिक हिन्दी कविता का विकास : भारतेन्दु युग, द्विवेदी युग, छायावाद, प्रगतिवाद, प्रयोगवाद, नई कविता एवं समकालीन कविता प्रमुख कवि एवं उनकी काव्यगत विशेषताएँ।
6. हिन्दी गद्य की प्रमुख विधाएँ-नाटक, निबन्ध, उपन्यास, कहानी, आलोचना : उद्भव एवं विकास, प्रमुख रचनाकार एवं उनका योगदान।
7. अन्य गद्य विधाएँ - जीवनी, आत्मकथा, संस्मरण, रेखाचित्र, यात्रावृत्त, डायरी, रिपोर्टाज : सामान्य परिचय
8. भारोपीय भाषा-परिवार की विशेषताएँ और वर्गीकरण (फॉर्म और केण्टुम् वर्ग), भारत में बोले जाने वाले प्रमुख भाषा- परिवार।
9. भारतीय आर्यभाषाओं का क्रमिक विकास : सामान्य परिचय, साहित्यिक भाषा के रूप में खड़ी बोली का उदय और विकास, हिन्दी की बोलियाँ-वर्गीकरण तथा क्षेत्र, नागरी लिपि का विकास और उसका मानकीकरण।
10. हिन्दी प्रसार के आन्दोलन, प्रमुख व्यक्तियों तथा संस्थाओं का योगदान, राजभाषा के रूप में हिन्दी, कार्यालयी हिन्दी के प्रकार्य (सरकारी पत्राचार, टिप्पण, प्रारूपण, संक्षेपण, पल्लवन)।
11. काव्य-लक्षण, काव्य-प्रयोजन एवं काव्य हेतु पर भारतीय एवं पाश्चात्य काव्य शास्त्रियों के मत, भारतीय काव्य-शास्त्र के प्रमुख सम्प्रदायों का सामान्य परिचय, रसनिष्पत्ति एवं साधारणीकरण।
12. प्लेटो, अरस्तू, लॉजाइनस, क्रोचे, टी.एस.इलियट तथा आई.ए. रिचर्ड्स के काव्य-सिद्धान्त।
13. हिन्दी आलोचना की प्रवृत्तियाँ-सैद्धान्तिक और व्यावहारिक समीक्षा का स्वरूप, शैली, वैज्ञानिक समीक्षा, समाजशास्त्रीय समीक्षा (विभिन्न समकालीन विमर्श), तुलनात्मक साहित्य के अध्ययन की उपयोगिता (तुलनात्मक समीक्षा)

विषय : भूगोल (014)

Subject: Geography (014)

UNIT-I

Geomorphology

Continental Drift, Plate Tectonics, Endogenetic and Exogenetic forces. Denudation and Weathering, Geomorphic Cycle (Davis and Penck), Theories and Process of Slope Development, Earth Movements (seismicity, folding, faulting and vulcanicity), Landform Occurrence and Causes of Geomorphic Hazards (earthquakes, volcanoes, landslides and avalanches)

UNIT –II

Climatology

Composition and Structure of Atmosphere; Insolation, Heat Budget of Earth, Temperature, Pressure and Winds, Atmospheric Circulation (air-masses, fronts and upper air circulation, cyclones and anticyclones (tropical and temperate), Climatic Classification of Koppen & Thornthwaite, ENSO Events (El Nino, La Nina and Southern Oscillations), Meteorological Hazards and Disasters (Cyclones, Thunderstorms, Tornadoes, Hailstorms, Heat and Cold waves Drought and Cloudburst, Glacial Lake Outburst (GLOF), Climate Change: Evidences and Causes of Climatic Change in the past, Human impact on Global Climate.

UNIT-III

Oceanography

Relief of Oceans, Composition: Temperature, Density and Salinity, Circulation: Warm and Cold Currents, Waves, Tides, Sea Level Changes, Hazards: Tsunami and Cyclone

UNIT –IV

Geography of Environment

Components: Ecosystem (Geographic Classification) and Human Ecology, Functions: Trophic Levels, Energy Flows, Cycles (geo-chemical, carbon, nitrogen and oxygen), Food Chain, Food Web and Ecological Pyramid, Human Interaction and Impacts, Environmental Ethics and Deep Ecology, Environmental Hazards and Disasters (Global Warming, Urban Heat Island, Atmospheric Pollution, Water Pollution, Land Degradation), National Programmes and Policies: Legal Framework, Environmental Policy, International Treaties, International Programmes and Policies (Brundtland Commission, Kyoto Protocol, Agenda 21, Sustainable Development Goals, Paris Agreement)

UNIT –V

Population and Settlement Geography Population Geography

Sources of population data (census, sample surveys and vital statistics, data reliability and errors). World Population Distribution (measures, patterns and determinants), World Population Growth (prehistoric to modern period). Demographic Transition, Theories of Population Growth (Malthus, Sadler, and Ricardo). Fertility and Mortality Analysis (indices, determinants and world patterns). Migration (types, causes and consequences and models), Population Composition and Characteristics (age, sex, rural-urban, occupational structure and educational levels), Population Policies in Developed and Developing Countries.

Settlement Geography

Rural Settlements (types, patterns and distribution), Contemporary Problems of Rural Settlements (rural-urban migration;

land use changes; land acquisition and transactions), Theories of Origin of Towns (Gordon Childe, Henri Pirenne, Lewis Mumford), Characteristics and Processes of Urbanization in Developed and Developing Countries (factors of urban growth, trends of urbanisation, size, structure and functions of urban areas). Urban Systems (the law of the primate city and rank size rule) Central Place Theories (Christaller and Losch), Internal Structure of the City, Concepts of Megacities, Global Cities and Edge Cities, Changing Urban Forms (peri-urban areas, rural-urban fringe, suburban , ring and satellite towns), Social Segregation in the City, Urban Social Area Analysis, Manifestation of Poverty in the City (slums, informal sector growth, crime and social exclusion).

Unit–VI:

Geography of Economic Activities and Regional Development

Economic Geography

Factors affecting spatial organisation of economic activities (primary, secondary, tertiary and quaternary), Natural Resources (classification, distribution and associated problems), Natural Resources Management. World Energy Crises in Developed and Developing Countries.

Agricultural Geography

Land capability classification and Land Use Planning, Cropping Pattern: Methods of delineating crop combination regions (Weaver, Doi and Rafiullah), Crop diversification, Von Thunen's Model of Land Use Planning. Measurement and Determinants of Agricultural Productivity, Regional variations in Agricultural Productivity, Agricultural Systems of the World.

Industrial Geography

Classification of Industries, Factors of Industrial Location; Theories of Industrial Location (A. Weber, E. M. Hoover, August Losch, A. Pred and D. M. Smith). World Industrial Regions, Impact of Globalisation on manufacturing sector in Less Developed Countries, Tourism Industry, World distribution and growth of Information And Communication Technology (ICT) and Knowledge Production (Education and R & D) Industries.

Geography of Transport and Trade

Theories and Models of spatial interaction (Edward Ullman and M. E. Hurst) Measures and Indices of connectivity and accessibility; Spatial Flow Models: Gravity Model and its variants, World Trade Organisation, Globalisation and Liberalisation and World Trade Patterns. Problems and Prospects of Inter and Intra Regional Cooperation and Trade.

Regional Development

Typology of Regions, Formal and Fictional Regions, World Regional Disparities, Theories of Regional Development (Albert O. Hirschman, Gunnar Myrdal, John Friedman, Dependency theory of Underdevelopment, Global Economic Blocks, Regional Development and Social Movements in India

Unit – VII:

Cultural, Social and Political Geography Cultural and Social Geography

Concept of Culture, Cultural Complexes, Areas and Region, Cultural Heritage, Cultural Ecology. Cultural Convergence, Social Structure and Processes, Social Well-being and Quality of Life, Social Exclusion, Spatial distribution of social groups in India (Tribe, Caste, Religion and Language), Environment and Human Health, Diseases Ecology, Nutritional Status (etiological conditions, classification and spatial and seasonal distributional patterns with special reference to India) Health Care Planning and Policies in India, Medical Tourism in India.

Political Geography

Boundaries and Frontiers (with special reference to India), Heartland and Rimland Theories. Trends and Developments

in Political Geography, Geography of Federalism, Electoral Reforms in India, Determinants of Electoral Behaviour, Geopolitics of Climate Change, Geopolitics of World Resources, Geo-politics of India Ocean, Regional Organisations of Cooperation (SAARC, ASEAN, OPEC, EU). Neopolitics of World Natural Resources.

Unit VIII:

Geographic Thought

Contributions of Greek, Roman, Arab, Chinese and Indian Scholars, Contributions of Geographers (Bernhardus Varenius, Immanuel Kant, Alexander von Humboldt, Carl Ritter, Scheafer & Hartshorne), Impact of Darwinian Theory on Geographical Thought. Contemporary trends in Indian Geography: Cartography, Thematic and Methodological contributions. Major Geographic Traditions (Earth Science, man- environment relationship, area studies and spatial analysis), Dualisms in Geographic Studies (physical vs. human, regional vs. systematic, qualitative vs. quantitative, ideographic vs. nomothetic), Paradigm Shift, Perspectives in Geography (Positivism, Behaviouralism, Humanism, Structuralism, Feminism and Postmodernism).

Unit IX:

Geographical Techniques

Sources of Geographic Information and Data (spatial and non-spatial), Types of Maps, Techniques of Map Making (Choropleth, Isarithmic, Dasymetric, Chorochromatic, Flow Maps) Data Representation on Maps (Pie diagrams, Bar diagrams and Line Graph, GIS Database (raster and vector data formats and attribute data formats). Functions of GIS (conversion, editing and analysis), Digital Elevation Model (DEM), Georeferencing (coordinate system and map projections and Datum), GIS Applications (thematic cartography, spatial decision support system), Basics of Remote Sensing (Electromagnetic Spectrum, Sensors and Platforms, Resolution and Types, Elements of Air Photo and Satellite Image Interpretation and Photogrammetry), Types of Aerial Photographs, Digital Image Processing: Developments in Remote Sensing Technology and Big Data Sharing and its applications in Natural Resources Management in India, GPS Components (space, ground control and receiver segments) and Applications, Applications of Measures of Central Tendency, Dispersion and Inequalities, Sampling, Sampling Procedure and Hypothesis Testing (*chi* square test, *t* test, ANOVA), Time Series Analysis, Correlation and Regression Analysis, Measurement of Indices, Making

Indicators Scale Free, Computation of Composite Index, Principal Component Analysis and Cluster Analysis, Morphometric Analysis: Ordering of Streams, Bifurcation Ratio, Drainage Density and Drainage Frequency, Basin Circularity Ratio and Form Factor, Profiles, Slope Analysis, Clinographic Curve, Hypsographic Curve and Altimetric Frequency Graph.

Unit – X:

Geography of India

Major Physiographic Regions and their Characteristics; Drainage System (Himalayan and Peninsular), Climate: Seasonal Weather Characteristics, Climatic Divisions, Indian Monsoon (mechanism and characteristics), Jet Streams and Himalayan Cryosphere, Types and Distribution of Natural Resources: Soil, Vegetation, Water, Mineral and Marine Resources. Population Characteristics (spatial patterns of distribution), Growth and Composition (rural-urban, age, sex, occupational, educational, ethnic and religious), Determinants of Population, Population Policies in India, Agriculture (Production, Productivity and Yield of Major Food Crops), Major Crop Regions, Regional Variations in Agricultural Development, Environmental, Technological and Institutional Factors affecting Indian Agriculture; Agro-Climatic Zones, Green Revolution, Food Security and Right to Food. Industrial Development since Independence, Industrial Regions and their characteristics, Industrial Policies in India. Development and Patterns of Transport Networks (railways, roadways, waterways, airways and pipelines), Internal and External Trade (trend, composition and directions), Regional Development Planning in India, Globalisation and its impact on Indian Economy, Natural Disasters in India (Earthquake, Drought, Flood, Cyclone, Tsunami, Himalayan Highland Hazards and Disasters.)

U.P. R.T. Open University, Prayagraj

Ph.D. Guidelines

1. Ph.D. Programmes shall be offered in various subjects as per prior approval of the Academic Council of the UPRTOU from time to time in regular mode.
2. Every student registered for the Ph.D. Programme shall be required to pursue the Programme under a supervisor from the University.
3. The allocation of Research Supervisors for a selected scholar shall be decided by the University Research Degree Committee depending on the number of scholars per Research Supervisor, the available specialization among the Supervisors and research interests of the scholars as indicated by them at the time of interview/viva voce.
4. The Academic Counsel shall decide on an annual basis a predetermined and manageable number of Ph.D. scholars to be admitted depending on the number of available Research Supervisors. The University Shall notify well in advance on the UPRTOU website and through advertisement in at least two national newspapers, of which at least one shall be in the Hindi language, the number of seats for admission, subject/ discipline and category wise distribution of available seats, criteria for admission, procedure for admission, Entrance test centre(s) and other relevant information's for the candidates.

5. Research Supervisor

- 5.1 Those Full time regular teachers of the university who have already guided/ produced Ph.D., they will be deemed to be the approved supervisors of the University. Other regular faculty member has to apply to be recognized as the Research Supervisor. After considering their applications, the concerned school board shall recommend within 15 days, a panel of experts to be recognized as the Research Supervisors for the final approval of the Academic Council.
- 5.2 Only a full time regular teacher (Professor/Associate Professor/Assistant Professor) of the UPRT Open University will act as a supervisor. The external supervisors are not allowed. However, Co-supervisor can be allowed in inter-disciplinary areas from other departments of the UPRT Open University or from other related institutions with the approval of the Research Degree Committee (RDC).
- 5.3 Any regular Professor of the University with at least five research publications in refereed journals and any regular Associate/Assistant Professor of the University with a Ph.D. degree in concern/Allied/Relevant subject/Area/Discipline and at least two research publications in refereed journals may be recognized as Research Supervisor, provided that in areas/disciplines where there is no or only a limited number of refereed journals, the University may relax the above condition for recognition of a person as Research Supervisor with reasons recorded in writing.
 - A. A Regular teacher of the University, fulfilling all criteria to be a research supervisor, can be the Supervisor of a Ph.D. student if he/she has more than three years of service before superannuation. Teachers having less than three years to superannuate may be research Co-supervisors and in such cases a research supervisor from the regular teachers in the Subject shall be allotted to the concerned research student. In case of research students who are already allotted supervisor who are to superannuate in less than three years, the RDC of the Subject concerned will make necessary arrangements for re-allocating supervisor.
 - B. Research Supervisors shall be allotted to students only after successful completion of their coursework. Research topics and Supervisors shall be allocated within one year of completion of coursework. The

Supervisor allotted by the DRC of the Subject concerned can be changed on the request of the student or the concerned supervisor on academic, administrative ground or any other exigency with valid justification. The DRC will consider such applications and will send its recommendations to the School Board. The recommendation of the School Board will be placed before RDC for approval.

6. Eligibility criteria for admission in Ph.D. Programme

A candidate will be eligible for admission and registration for the Ph.D. programme, provided he/she:

- 6.1 Possesses Master's Degree in concern/Allied/Relevant subject/Area/Discipline from a University recognized by UGC or any other qualification recognized as equivalent thereto in such fields of study as are notified for the purpose from time to time by the University with at least 55% marks (50% marks in the case of SC,ST, OBC (Non –creamy Layer) and Differently-abled and other categories of candidates as per the decision of UGC from time to time, or for those who had obtained their Master's Degree prior to 19th September, 1991) excluding grace-mark.
- 6.2 Qualifies in the entrance examination conducted by UPRT Open University.

7. Fees-

- 7.1 Candidates having applied or admitted to Ph.D. programme of the University shall pay the fees as determined by the Academic Council.
- 7.2 The fees shall be payable on such dates and such mode as may be notified.
- 7.3 A Candidate, who has been offered registration, shall deposit the prescribed registration fee within a period of three months from the date of registration, failing which his/her registration may be treated as cancelled.

8. Entrance Test and Procedure for Admission

There shall be a objective type paper of one and half hour in Ph.D. Entrance Test containing 70 Multiple Choice Answer questions. The items of the Entrance Test shall consist of 50% of research methodology and 50% shall be subject specific. The Entrance test shall be conducted at the centre(s) notified in advance by the University.

9. Selection Process

The procedure and criteria for declaration of result for UPRT Open University Ph.D. Programme, comprises the following steps:

<u>Step I:</u>	UPRT Open University Ph.D. Entrance Test will be a merely qualifying for selection process for Ph.D. Programme. For this the candidates are required to obtain the minimum 50 percent marks on the Entrance Test to be conducted. A relaxation of 5% of marks (from 50% to 45%) shall be allowed for the candidates belonging to SC/ST/OBC (Non –creamy Layer)/Differently-abled category and other categories of candidates as per the decision of UGC from time to time
<u>Step II:</u>	As per availability of seats, admission for Ph.D. course work shall be given to the candidates on the basis of merit list. Amongst those candidates who have cleared Step-I, a merit list in 100 Points comprise of Entrance Test Marks, weightage marks and presentation of tentative synopsis followed by an Interview shall be prepared subject-wise and category-wise.

Break –up of 100 Merit Base Points shall be as below:

01	Entrance Test* 70 Marks	70 Point
02	Weightage	Maximum 10 Marks
	(iii) UGC-JRF (including JRF UGC-CSIR /GATE/ in the Concern Subject	10 Point
	(iv) UGC-NET (including NET, UGC-CSIR /GATE/SLET/ Teacher Fellowship Holder/ have Passed M. Phil. Programme in the Concern Subject	05 Point
03	Presentation of Tentative Synopsis through PPT and Interview	20 Point
	Total Merit Base Points	100Point

The presentation of tentative synopsis followed by an Interview shall be organized by the concerned school of studies.

10. Registration :

- 10.1 After Selection the candidate shall be admitted to Ph. D. course work and after successful completion of the Ph. D. course work the candidate shall be provisionally enrolled for Ph. D. program.
- 10.2 Candidates already holding M. Phil. Degree and having cleared the M. Phil Course work with at least 55% marks in aggregate and admitted to the Ph.D. Programme shall be eligible to proceed to do research work leading to Ph.D. degree in an integrated programme. All other candidates admitted to the Ph.D. Programme shall be required to complete the Ph.D. course work prescribed by the concerned School of Studies. A relaxation of 5% of marks, from 55% to 50% may be allowed for those belonging to SC/ST/OBC (Non creamy layer)/ differently –abled and other categories of candidates as per decision of the U.G.C. from time to time.
- 10.3 All those candidates who are offered a fellowship by the University or any other agency and registered with the University to pursue a research degree programme of the University on full time basis shall belong to the category of full- time students. In exceptional cases, the Research Degree Committee may allow registration of full time students who do not have fellowships. The full- time students shall work on their projects at Prayagraj.
 - (i) Students who are employed in the UPRT Open University and desirous of pursuing a research degree programme may be permitted to register as part-time students. Ordinarily, teachers and other academic staff of the University while continuing on their Jobs shall belong to this category.

11. Final Synopsis:

The Three copies of synopsis duly forwarded by the proposed supervisor and Joint-supervisor (if any) have to be submitted between 3 to 6 months from the date of Research Degree Committee (RDC). Each page of the synopsis must be signed by the candidate and the supervisor both. The synopsis must include :

- (i) The title of the problem,
- (ii) The need of study,
- (iii) The review of the related literature,
- (iv) The methodology,
- (v) The data sources,
- (vi) The chapter plan and
- (vii) The bibliography.

12. Duration of the Programmes:

- 12.1** Ph.D. Programme shall be for a minimum duration of three years, including course work and a maximum six years.
- 12.2** The women candidates and persons with Disability (more than 40% disability) may be allowed a relaxation of two years for Ph.D. in the maximum duration. In addition, the women candidate may be provided Maternity Leave/Child Care Leave once in the entire duration of Ph.D. for up to 240 days.
- 12.3** Commencing from the date of registration a student shall submit progress reports periodically (once in six months) in the prescribed format to the supervisor(s) who shall forward them along with his/her remarks about and assessment of the work done so far to the Research Advisory Committee.
- 12.4** There shall be a Research Advisory Committee, for each Ph.D. scholar. The Research Supervisor of the scholar shall be the Convener of this Committee which shall consist of two senior most teachers of the subject. However if there is no subject teacher, the other member(s) will be nominated by the Vice-Chancellor from outside. This committee shall have following responsibilities-
 - a.** To review the research proposal and finalize the topic of research.
 - b.** To guide the research scholar to develop the study design and methodology of research and identify the course(s) that he/she may have to do.
 - c.** To periodically review and assist in the progress of the research work of the research scholar.
 - d.** A research scholar shall appear before the Research Advisory Committee once in six Months to make a presentation of the progress of his/her work for evaluation and further guidance. The six monthly progress reports shall be submitted by the Research Advisory Committee to the Research Cell with a copy to the Research Scholar.
 - e.** In case the progress of the research scholar is unsatisfactory; the Research Advisory Committee shall record the reasons for the same and suggest corrective measures. If the research scholar fails to implement this corrective measure, the Research Advisory Committee may recommend to the Research Degree Committee with specific reasons for cancellation of the registration of the research scholar.

13. Evaluation and Awards for Pre- Ph.D. Course Work.

- 13.1** The School Board concerned shall prescribe an evaluation scheme for the course work to be done by the students. Depending on the nature of the course and the specific needs, the evaluation methodologies may include:
- 13.2** Evaluation system or a comprehensive examination as applicable to the prescribed credit-based courses.
- 13.3** A term paper on a theme or presentation of an assignment at a seminar.
- 13.4** Oral examination
- 13.5** Any combination of these methods
- 13.6** A Student shall be deemed to have completed his/her course work successfully if he/she obtains a minimum of 55% of marks in the course work in order to be eligible to continue in the programme and submit the dissertation/thesis
- 13.7** The Course work of 16 credits shall be prescribed by the School Board Concerned for Ph.D.
- 13.8** In each theory paper of Ph.D. Course work 30% of the total marks shall be assigned for the sessional assessment, while rest 70% marks will be assigned through written Examination.

- 13.9** Ph.D. scholars must publish at least one (1) research paper in refereed journal and make two paper presentations in conference/seminars before the submission of the dissertation/thesis for adjudication, and produce evidence for the same in the form of presentation certificates and / or reprints.
- 13.10** While submitting for evaluation, the dissertation/ thesis shall have an undertaking from the research scholar and a certificate from the Research Supervisor attesting to the originality of the work, vouching that there is no plagiarism and that the work has not been submitted for the award of any other degree/diploma of the same University where the work was carried out or to any other Institution/ University.

14. Change of Topic/Title of the Thesis

Change in the Topic/Title of the Thesis will be approved in the following manner:

- 14.1** Change in the Topic/ Title in nature of grammatical corrections/syntax will be approved by the Director, Research Unit on the proposal of the concerned supervisor through the Director of the School Concerned and recommended by the RDC.
- 14.2** On the request of the candidate for Minor change in the Topic of the thesis, the matter will be considered by the DRC and on the recommendations of the DRC and the School Board the change will be approved by the Vice Chancellor. However, the minor change in the title of Ph.D. thesis can be effected within two years of provisional registration for Ph.D.
- 14.3** A request for a major change of topic may be considered within one year from the date of approval of the original topic. Such request for a major change in the topic will be considered and recommended by the DRC, concerned School Board and finally will be approved by the RDC. Such a student will be required to pay the additional Fee of one year duration.

15. Submission of Final Dissertation/Thesis

- 15.1** On the successful completion of the course work, a student shall be required to pursue his research work under the guidance of his/her supervisor(s) at the end of which he/she shall be required to write a dissertation/thesis as the case may be in accordance with the format and the guidelines prescribed by the School Board concerned.
- 15.2** Each research student will attend and present research paper in at least two seminars/conferences **prior** to the Pre-submission presentation.
- 15.3** Before submitting his/her thesis, the candidate shall have to give a pre-submission presentation of his/her thesis before the Departmental Research Committee (DRC) of the concerned subject, and the supervisor of the candidate. The Pre-submission presentation shall be open for all and relevant suggestions can be invited from the audience after the presentation by the candidate. The suggestions, which shall be relevant and necessary as felt by the Departmental Research Committee shall be recorded and will be incorporated by the candidate in the thesis before its submission.
- 15.4** The Pre-submission presentation to be organized by the Research Programme Coordinator concerned will be before the Subject Group / DRC to be chaired by the Director of the School concerned and will be open to all. The minutes of the Pre-submission presentation containing the suggestions by the faculty present in the Seminar will be recorded by the Supervisor concerned and the copy of the same will be forwarded to the Research Unit for the record. A written certificate from the Supervisor that the suggestions made by the faculty in the pre-submission presentation have been duly incorporated in the thesis will be submitted by the supervisor at the time of submission of the thesis. The thesis shall be submitted by the student to his/her research supervisor between 15 to 90 days of the pre-submission presentation.

- 15.5** The Ph.D. thesis submitted by a research scholar shall be evaluated by his/her Research Supervisor and at least two external examiners, who are not in employment of the University, of whom one examiner may be from outside the country. The viva-voce examination, based among other things, on the critiques given in the evaluation report, shall be conducted by the Research Supervisor and at least one of the two external examiners, and shall be open to be attended by Members of the Research Advisory Committee, all faculty members of the Department, other research scholars and other interested experts/ researchers.
- 15.6** The Public viva-voce of the research scholar to defend the dissertation/ thesis shall be conducted only if the evaluation report(s) of the external examiner(s) on the dissertation/ thesis is/are satisfactory and include a specific recommendation for conducting the viva-voce examination. If the evaluation report of the external examiner one of the evaluation reports of the external examiner of Ph.D. thesis, is unsatisfactory and does not recommend viva-voce, the University shall send the dissertation/ thesis to another external examiner out of the approved panel of examiners and the viva-voce examination shall be held only if the report of the latest examiner is satisfactory, if the report of the latest examiner is also unsatisfactory, the dissertation/ thesis shall be rejected and the research scholar shall be declared ineligible for the award of the degree.
- 15.7** The entire process of evaluation of Ph.D. thesis shall be completed within a period of six months from the date of submission of the dissertation/ thesis.

16. Cancellation of Registration & Refund of Fee

- 16.1** The registration of a student for Ph.D. Programme may be cancelled for any of the following reasons.
- (a) Non-Payment of fees.
 - (b) Unsatisfactory progress.
 - (c) Non-compliance with the provisions of the ordinances
 - (d) Failure to submit the Thesis within the time limit prescribed.
- 16.2** The Research Degree Committee may consider requests for re-registration from students whose registration is cancelled. An application for re-registration, if made within a period not exceeding one year from the cancellation of the student's registration, may be considered only on the recommendation of the Director concerned.
- 16.3** Generally any prescribe fees by the candidate will be non-refundable. In specific case or condition, the Vice Chancellor will take a decision in the light of university rules or UGC (Minimum Standards and Procedure for awards of M. Phil. /Ph.D. Degree) Regulations 2016 which shall be final.



उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय

प्रवेश परीक्षा समिति

- | | | |
|--|-----------------|-------------|
| (1) प्रो० पी० के० पाण्डेय | संयोजक | 07525048011 |
| प्रभारी निदेशक, शिक्षा विद्याशाखा एवं ऑफीसर्स इंचार्ज,
शोध विकास एवं समन्वयक, उ० प्र० राजर्षि टण्डन मुक्त
विश्वविद्यालय, प्रयागराज | | |
| (2) प्रो० संतोषा कुमार | सदस्य | 07525048032 |
| प्रभारी निदेशक, समाज विज्ञान विद्याशाखा,
उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय, प्रयागराज | | |
| (3) डॉ० श्रुति | सदस्य | 07525048051 |
| एसोसिएट प्रोफेसर, विज्ञान विद्याशाखा
उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय, प्रयागराज | | |
| (4) डॉ० मीरा पाल | सदस्य | 07525048052 |
| एसोसिएट प्रोफेसर, स्वास्थ्यविज्ञान विद्याशाखा
उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय, प्रयागराज | | |
| (5) डॉ० दिनेश सिंह | सदस्य | 07525048013 |
| एसोसिएट प्रोफेसर, शिक्षा विद्याशाखा
उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय, प्रयागराज | | |
| (6) डॉ० सतीश चन्द्र जैसल | सदस्य | 07525048149 |
| असि. प्रोफेसर, मानविकी विद्याशाखा
उ० प्र० राजर्षि टण्डन मुक्त, विश्वविद्यालय, प्रयागराज | | |
| (7) श्री डी.पी.सिंह | सदस्य/सचिव | 07525048009 |
| परीक्षा नियंत्रक
उ० प्र० राजर्षि टण्डन मुक्त विश्वविद्यालय, प्रयागराज | | |
| (8) श्री धीरज रावत | तकनीकी
सहायक | 07525048090 |
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॥ सरस्वती नः सुभगा मयस्करत् ॥

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