UNIVERSITY GRANTS COMMISSION

NET BUREAU

Paper - 1

SYLLABUS

Teaching Aptitude

- Teaching : Concept , objectives , levels of teaching(memory , understanding and reflective), characteristics and basic requirements.
- Learner's characteristics : Characteristics of adolescent and adult lerners 9 academic , social , emotional and cognitive), individual differences
- Factors affecting teaching related to : Teacher , Learner , Support material , Instructional facilities , Learning environment and Institution.
- Methods of teaching in higher learning Institutions : Teacher centred vs learner - centred methods ; offline vs online methods (Swayam , Swayamprabha , MOOC;s etc.)
- Teaching support system : Traditional , modern and ICT based
- Evaluation systems : Elements and types of evaluation , evalution in choice Based Crdit Systems in Higher Eduation, Computer - based testing , innovations in evaluation systems.

Research Aptitude

- Research : Meaning types and characteristics , positivism and post - positivistic approach to reseach.
- Mehods of reseach : Experimental , descriptive , Hostorical , qualitative and quantitative methods
- Steps of reseach
- Thesis and article writing : Format and styles of referencing
- Application of ICT in Research
- Research ethics

Comprehension

- A passage of text is given . Questions are asked from the passage which needs to be answered.

Communication

- Communication : Meaning , types and characteristics of communication
- Effective Communication : Verbal and non - verbal, inter-cultural and group communications, classroom communication

- Barriers to effective communication
- Mass-media and society

Mathematical Reasoning and Aptitude

- Types of reasoning
- Number series , letter series codes and relationships
- Mathematical aptitude (fraction , time and distance , ratio , propotion and percentage , profit and loss , interest and discounting , averages etc.)

Logical Reasoning

- Understanding the stricture of arguments : Argument forms , the structure of categorical propositions , mood and figure , formal and informal fallacies , uses of language , connotations , and denotations of terms , the classical square of opposition
- Evaluating nd distinguishing deductive and inductive reasoning
- Analogies
- Venn diagrom : Simple and Multiple uses for establishing the validity of arguments
- Indian Logic : Means of Knowledge
- Pramanas : Pratyaksha (Perception) , Anumana(Interence), Upamana(Comparison) , Shabda (Verbal testimony), Arthapatti (Implication) and Anupalabddhi (Non- apprehension)
- Structure and kinds of Aunmana (inference), Vyapti(invariable relation), Hetvabhasa (fallacies of inference)

Data Interpretation

- Sources , acquisition and classification of data
- Quantitative and qualitative data
- Graphical representation(bar-chart, histograms, pie-chart, table-chart and line-chart) and mapping of data
- Data interpretation
- Data and governance

Information and Communication Technology (ICT)

- ICT : General abbreviations and terminology
- Basics of Internet , Email , Audio and Video confrencing
- Digital initiatives in higher education

People , Development and Environment

- Development and environment : Millennium development and Sustainable development foals
- Human and environment interaction : Anthropogrnic activities and their impacts on the environment

- Environment Issus : Local , refional and global , air pollution , water pollution , soil pollution , noise pollution , waste (solid , liquid , biomedical , hazardous , electronic), climate change and its socio-economic and political dimensions
- Impacts of pollutions on human helth
- Natural and energy resources : Solar , Wind , Soil , Hydro , Geothermal , Biomass , Nuclear and Forests
- Natural hazards and disasters : Mitigation strategies
- Environmental Protection Act(1986), National Action Plan on Climate Change , International Agreements / efforts - Montreal Protocol , Ria Summit , Convention on Biodiversity , Kyoto Protocal , Paris Agreement , International Solar Alliance.

Higher Education System

- Institutions of higher learning and education in ancient india
- Evolution of higher learning and research in post-inependence India
- Oriental, convrntional and non-conventional learning programmers in India
- Professional , technical and skill-based education
- Value education and environmental education
- Policies , governance and administration.