



**SCHOOL OF PEDAGOGICAL SCIENCES
MAHATMA GANDHI UNIVERSITY
Priyadarsini Hills P.O., Kottayam,
Kerala, India, PIN: 686560**

**ADD-ON COURSE ON TEACHING &
RESEARCH APTITUDE**

Course Core Team Details:

Course Developer	Dr. Muhammed K. V., Assistant Professor, School of Pedagogical Sciences, Mahatma Gandhi University Ph: 9847585258, Email: mohammedoasis@gmail.com
Course Coordinator	Dr. Ismail Thamarasseri, Assistant Professor, School of Pedagogical Sciences, Mahatma Gandhi University Ph: 9446154254, Email: ismail@mgu.ac.in
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Course Schedule:

Day	Module(s)
1.	Teaching Aptitude
2.	Research Aptitude
3.	Comprehension
4.	Communication
5.	Mathematical Reasoning and Aptitude
6.	Logical Reasoning
7.	Data Interpretation
8.	ICT
9.	People, Development and Environment
10.	Higher Education System

Course Details:

Course Name	Add-On Course on Teaching & Research Aptitude (ACTRA)
Duration	10 Days (3 Hours per day)
Start Date	16 th August 2022
End Date	25 th August 2022
Type of Course	Online
Mode of Delivery	Video, Text, Discussion forum, FAQ, Virtual interaction using WhatsApp and Google Classrooms, MCQs
Medium of Instruction	English
Nature of Course	Elective
Type of Course	Certificate

Course Objective	to assess the teaching and research capabilities of the students. The course aims at assessing the teaching and research aptitude as well. Candidates are expected to possess and exhibit cognitive abilities, which include comprehension, analysis, evaluation, understanding the structure of arguments, deductive and inductive reasoning.
Course Summary	This course is designed to enhance the teaching and research skills of students. These self-paced lessons, MCQs, and the practice tests will help the students to understand the topics covered. The learners can find helpful discussions on various topics. This course contains teaching and research aptitude notes useful for those preparing for various competitive exams.
Pre-requisites	Any Master's degree. The candidates are also expected to have a general awareness about teaching and learning processes in higher education system. Further, they should be aware of interaction between people, environment, natural resources and their impact on the quality of life.
Evaluation Methodology	Daily MCQ (10 MCQs per day each carries 1 mark) 10 MCQ x 10 Days = 100 MCQs Total Mark 100 Minimum Pass % =50 No negative marking Practical exam: 0%

Register to the course at <https://forms.gle/cfPCgk9eLh8DTN4q7>

Detailed Syllabus

Module(s)	Topics
Teaching Aptitude	Teaching: Concept, Objectives, Levels of Teaching (Memory, Understanding, and Reflective), Characteristics, and Basic Requirements. Learner's Characteristics: Characteristics of Adolescent and Adult Learners (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 Institutions of Higher Learning: Teacher-centered vs. Learner-centered Methods; Offline vs. Online Methods (Swayam, Swayamprabha, MOOCs, etc.). Teaching Support System: Traditional, Modern, and ICT-based. Evaluation Systems: Elements and Types of Evaluation, Evaluation in Choice Based Credit System in Higher education, Computer-based Testing, Innovations in Evaluation Systems.
Research Aptitude	Research: Meaning, Types, and Characteristics, Positivism, and Postpositivistic Approach to Research. Methods of Research: Experimental, Descriptive, Historical, Qualitative and Quantitative Methods, and Steps of Research. Thesis and Article Writing: Format and Styles of Referencing, Application of ICT in Research, Research Ethics.
Comprehension	A passage of text is given. Questions related to the passage are asked.
Communication	Communication: Meaning, Types, and Characteristics of Communication. Effective Communication: Verbal and Non-

	<p>verbal, Inter-Cultural and Group Communications, Classroom Communication, Barriers to Effective Communication, Mass-Media, and Society.</p>
<p>Mathematical Reasoning and Aptitude</p>	<p>Types of Reasoning: Number series, Letter series, Codes, and Relationships. Mathematical Aptitude: Fraction, Time & Distance, Ratio, Proportion and Percentage, Profit and Loss, Interest and Discounting, Averages, etc.</p>
<p>Logical Reasoning</p>	<p>Understanding the Structure of Arguments: Argument Forms, Structure of Categorical Propositions, Mood and Figure, Formal and Informal Fallacies, Uses of Language, Connotations and Denotations of Terms, Classical Square of Opposition, Evaluating and Distinguishing Deductive and Inductive Reasoning, and Analogies.</p> <p>Venn Diagram: Simple and multiple uses for establishing the validity of arguments. Indian Logic: Means of Knowledge, Pramanas- Pratyaksha (Perception), Anumana (Inference), Upamana (Comparison), Shabda (Verbal testimony), Arthapatti (Implication) and Anupalabdhi (Non-apprehension), Structure and Kinds of Anumana (Inference), Vyapti (Invariable Relation), Hetvabhasas (Fallacies of Inference).</p>
<p>Data Interpretation</p>	<p>Sources, Acquisition, and Classification of Data. Quantitative and Qualitative Data. Graphical Representation (Bar-chart, Histograms, Pie-chart, Table-chart, and Line-chart) Mapping of Data, Data Interpretation. Data and Governance.</p>
<p>ICT</p>	<p>General Abbreviations and Terminology, Basics of the Internet, Intranet, E-mail, Audio and Video-conferencing, Digital initiatives in Higher Education, ICT and Governance.</p>

<p>People, Development and Environment</p>	<p>Development and Environment: Millennium Development and Sustainable Development Goals. Human and Environment Interaction: Anthropogenic activities and their impacts on the environment. Environmental Issues: Local, Regional and Global issues; 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 Pollutants on Human Health. 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, Rio Summit, Convention on Biodiversity, Kyoto Protocol, Paris Agreement, International Solar Alliance.</p>
<p>Higher Education System</p>	<p>Institutions of Higher Learning and Education in Ancient India. Evolution of Higher Learning and Research in Post-Independence India. Oriental, Conventional, and Non-conventional Learning Programs in India. Professional, Technical, and Skill-Based Education. Value Education and Environmental Education. Policies, Governance, and Administration.</p>