Distance Education and Its Obscurities: Addressing the 'Inaccessibility' Conundrum In Mathematics and Other Disciplines

Editor: KAJAL DE

$$\nabla \cdot \nabla \psi = \frac{\partial^2 \psi}{\partial x^2} + \frac{\partial^2 \psi}{\partial y^2} + \frac{\partial^2 \psi}{\partial z^2}$$

$$= \frac{1}{r^2 \sin \theta}$$

$$\left[\sin \theta \frac{\partial}{\partial r} \left(r^2 \frac{\partial \psi}{\partial r} \right) + \frac{\partial}{\partial \theta} \left(\sin \theta \frac{\partial \psi}{\partial \theta} \right) + \frac{1}{\sin \theta} \frac{\partial^2 \psi}{\partial \varphi^2} \right]$$

$$f(z) = \sum_{n=0}^{\infty} \frac{f^{(n)}(a)}{n!} (z - a)^n$$

$$(1 - m_k) (w^T \phi(x_k) + b + 1) + m_k (1 - w^T \mu (x_k) - b)$$

$$-1 \le \lim_{n \to \infty} \left(1 + \frac{1}{n} \right)^n = e(x_k) + b \le 1$$

$$m_k (1 - w^T \phi(x_k) - b)$$

$$0 \le \alpha_k \le C m_k \text{ for } k = 1, \dots, N$$

$$0 \le \beta_k \le C (1 - m_k) \text{ for } k = 1, \dots, N$$

$$1 = \frac{1}{2\pi} \int_0^{2\pi} \frac{d\theta}{a + b \sin \theta} = \frac{1}{\sqrt{a^2 - b^2}}$$

$$1 - \eta \eta \psi (x_k) - b m_k (1 - w^T \eta x_k) - b) - 1 \le w^T \rho(x_k) + b \le 1$$

$$(a_1 x + b_1) (a_2 x + b_2) = a_1 a_2 x^2 + (a_1 b_2 + a_2 b_1) x + b_1 b_2$$



k=1

 $(d/dw)J = w - \sum \alpha_k \phi(x_k) + \sum \beta_k \phi(x_k) = 0$

DISTANCE EDUCATION AND ITS OBSCURITIES: ADDRESSING THE 'INACCESSIBILITY' CONUNDRUM IN MATHEMATICS AND OTHER DISCIPLINES

Editor

Kajal De



Distance Education and its Obscurities: Addressing the 'Inaccessibility' Conundrum in Mathematics and other Disciplines

by Kajal De

© Netaji Subhas Open University

No part of the book be reproduced either electronically or by any means without written permission from the publishier/editor.

First Published: November, 2018

Published by:

The Registrar,
Netaji Subhas Open University
DD 26, Salt Lake City,
Kolkata - 700064
Website: www.wbnsou.ac.in

ISBN: 978-93-82112-66-2

Price: ₹ 1000.00 \$ 20

Printed by:

Cyber Graphics 36/1, Nainan Para Lane, Baranagar Kolkata - 700036

Disclaimer:

The views expressed by the authors/contributors are personal and do not necessarily represent the views of the University. It is the sole responsibility of the authors/contributors for any legal ramifications for the contents in the research papers.

2

Contents

Message from the Vice-Chancellor

– Professor Subha Sankar Sarkar

Vice Chancellor, NSOU

Foreword

– Professor Nageshwar Rao	
Vice Chancellor, Uttarakhand Open University	
Foreword	
– Dr. Ajoy Ray	
Professor, Indian Institute of Technology Kharagpur	
Editor's Note	
– Professor Kajal De	
Professor of Mathematics & Director,	
School of Sciences, NSOU	
Section-I: Open & Distance Learning – Challenges & F	Resolution
Bridging the ICT Gap: A Study of ICT Accessibility and usage in the City of Kolkata — Sandeep Bhattacharya	17-30
Bridging the gap-meeting the challenges of quality assurance in the integration of ICT in ODL - Monita Mitra	31-48
Mitigation of 'Inaccessibility' in Open and Distance Learning (ODL) System: A Fuzzy Graph Approach - Kajal De, Basudeb Mondal	49-60
Application of a two-warehouse integrated inventory model with imperfect production process in Open and Distance Learning (ODL) system — Payel Mandal	61-74
Students retention in Open and Distance Learning (ODL) System: Some Mathematical and Computational Model to Analyze and Predict the Potential Risk of being Dropout - Mrinal Nath	75-88
Necessity of Library Support Service in Open and Distance Learning: An Ignored Part of the System – Madhusri Ghosh Upadhyay	89-102

Section-II: Modern Trends in Mathematical Research

Weaving Frames and Angle between two Operators in L(H) – Gapal Das	103-110
Sum and Product Theorems Depending on higher order relative growth indicators of entire algebroidal functions – Aditi Biswas, Sanjib Kumar Dutta	111-128
Numerical Approximation of Certain Singular Integrals in Complex Plane	129-146
– Arup Kumar Saha, Manoj Kumar Hota & Prasanta Kumar Mohanty	
Fuzzy Magnified Translation on Meromorphic Functions of Fuzzy Complex Variables	147-160
– Sanjib Kumar Dutta, Banani Dutta	
New volume formula for a general tetrahedron	161-168
– Shouvik Datta Choudhury, Santu Dey & Arindam Bhattacharyya	
A note on I-Convergence in Probability and Distribution – Sumit Som	169-180
Some Developmnt on Quasi Weighted Statistical Convergence – Avisek Ghosh	181-192
On Relative Deficiencies of Difference Polynomial — Sanjib Kumar Dutta & Sukalyan Sarkar	193-212
Special type of higher order exponent of convergence of zeros of entire functions	213-226
– Sanjib Kumar Dutta & Satavisha Dey	
Impact of density regulated growth in prey on a three-species food chain model — Bapi Saha	227-242
Strategic selection of a two-echelon supply chain model between admissible advanced and delayed payment mode — Rupak Bhattacharjee	243-256
Weighted Convergence in Probability — Sanjoy Kumar Ghosal & Nihar Sarkar	257-268