Theory Paper

Part A Introduction				
Program: Degree		Class : UG	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAB2T		
2	Course Title	Cloud Computing		
3	Course Type (Core Course/ Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	MINOR		
4	Pre-requisite (if any)			
5	Course Learning outcomes (CLO)	On successful completion of this course, the students will be able to: 1. Learn fundamentals of cloud computing 2. Understand cloud architecture, types and services. 3. Apply concepts of cloud computing in real applications 4. Gain deep insight of security in cloud computing 5. Have knowledge of market Based management of Clouds		
6	Credit Value	6		
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks:35	

Part B- Content of the Course

Total No. of Lectures- 90 Tutorials-Practical (in hours per week):4-0-0
L-T-P:

Unit	Topics	No. of Lectures (1 Hour Each)
I	Cloud Computing Fundamental: Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds	18
II	Basics Of Service Management in Cloud Computing, Data Management in Cloud Computing. Cloud Computing Architecture: Cloud Reference Model, Layer and Types of Clouds, Architectural design of Compute and Storage Clouds	18
III	Overview Of cloud management &Virtualization: Fundamental concepts of compute ,storage, networking, desktop and application virtualization,role of virtualization in enabling the cloud Virtualization benefits, server virtualization, Block and file level storage virtualization	18
IV	Cloud Security: Cloud Information security fundamentals, Cloud security services, Design principles, Secure Cloud Software Requirements, Policy Implementation, Cloud Computing Security Challenges,	18

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	Virtualization security Management, Cloud Computing Security Architecture	
V	Market Based Management of Clouds , Federated Clouds/Inter Cloud: Characterization & Definition ,Cloud Federation Stack , Third Party Cloud Services . Case study : Google App Engine, Microsoft Azure , Hadoop , Amazon , Aneka	**18**

Keywords/Tags:

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. A. Srinivasan, J.Suresh, Cloud Computing – A Practical approach for learning and implementation, Pearson India, [ISBN-978131776513]
2. GautamShroff, Enterprise Cloud Computing Technology Architecture Applications [ISBN: 978-0521137355]
3. Kumar Saurabh "Cloud Computing – insights in to New-Era Infrastructure", Wiley India,2011
4. Dimitris N. Chorafas, Cloud Computing Strategies [ISBN: 1439834539]
5. Buyya, Selvi , Mastering Cloud Computing ,TMH Pub
6. Krutz , Vnes, Cloud Security , Wiley Pub
7. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

2. Suggestive digital platforms/ web links

1. https://onlinecourses.nptel.ac.in/noc22_cs20/preview
2. https://nptel.ac.in/courses/106105223
3. https://nptel.ac.in/courses/106104182
4. https://www.tutorialspoint.com/cloud_computing/index.htm
5. https://www.classcentral.com/course/swayam-cloud-computing-10027

Suggested equivalent online courses:

1. https://www.mygreatlearning.com/cloud_iot/certification
2. https://www.intellipaat.com/cloud-computing/certification
3. https://www.edureka.co/
4. https://www.coursera.org/browse/information-technology/cloud-computing

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE):70 Marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30

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External Assessment : University Exam Section Time : 03.00 Hours	**Section(A)** : Very Short Questions **Section (B) :** Short Questions **Section (C) :**Long Questions	70
Any remarks/ suggestions:		

Department of Higher Education

Dr. Goswami