DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS
KURUKSHETRA UNIVERSITY, KURUKSHETRA

Session: 2023-24			
Part A - Introduction			
Subject	COMPUTER SCIENCE		
Semester	II		
Name of the Course	Cloud Computing Skills		
Course Code	B23-SEC-201		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	SEC		
Level of the course (As per Annexure-I			
Pre-requisite for the course (if any)			
Course Learning Outcomes(CLO):	After completing this course, the learner will be able to: 1. Get acquainted with the term Cloud computing. 2. Understand various types of free and commercial clouds. 3. Understands various types of cloud services like SaaS. PaaS and IaaS. 4. Know how the Cloud Computing is changing software industry _____ 5*. to create and use Cloud.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks:75(50(T)+25(P)) **Internal Assessment Marks:20(15(T)+5(P))** **End Term Exam Marks: 55(35(T)+20(P))**	**Time: 3 Hrs.(T), 3Hrs.(P)**		
Part B- Contents of the Course			
Instructions for Paper- Setter Examiner will set a total of nine questions. Out of which first question will be compulsory. Remaining eight questions will be set from four unit selecting two questions from each unit. Examination will be of three-hour duration. All questions will carry equal marks. First question will comprise of short answer type questions covering entire syllabus. Candidate will have to attempt five questions in all, selecting one question from each unit. First question will be compulsory.			

Practicum will be evaluated by an external and an internal examiner. Examination will be of three-hour duration.

Unit	Topics	Contact Hours
I	Basic Concepts of Cloud Computing Computer Network Basics. Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity. Cloud Service Providers in use and their Significance.	6
II	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.	6
III	Cloud Storage Management Concept of Virtualization and Load Balancing. Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information. Identifying the problems of scale and management in big data.	6
IV	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service. Amazon Web Services (AWS). Google Cloud Platform.	6
V*	Practicum: • Creating & using Amazon(AWS) Account • Creating & using Google Account	25

Suggested Evaluation Methods

	End Term Examination:
Internal Assessment: ➢ **Theory** • Class Participation: 4 • Seminar/presentation/assignment/quiz/class test etc.: 4 • Mid-Term Exam: 7 ➢ **Practicum** • Class Participation: 2 • Seminar/Demonstration/Viva-voce/Lab records etc.: 3 • Mid-Term Exam: NA	A three hour exam for both theory and practicum.

Part C-Learning Resources

Recommended Books/e-resources/LMS:
• Cloud Computing: Concepts, Technology & Architecture By Thomas Erl, Ricardo
• Cloud computing a practical approach Anthony T.Velte, Toby J.Velte Robert Elsenpeter, TATA McGraw-Hill, New Delhi– 2010
• Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online -Michael Miller-Que2008
• Moving to Cloud by Dinkar Sitaram, Geetha Manjunath, Publication: Syngress Elsevier Inc, 2014(2ndEdition)
• Cloud Computing Second Edition by Dr Kumar Saurabh, Publication Willy INDIA (2013)
• Cloud Computing Bible by Barrie Sosinsky, Publisher Willy INDAI (2014)
• Cloud computing for Dummies-Judith Hurwitz, Robin Bloor, Marcia Kaufman, Fern Halper, Wiley Publishing, Inc, 2010
• Cloud Computing(Principles and Paradigms),Edited by Rajkumar Buyya, James Broberg, Andrzej Goscinski, John Wiley & Sons, Inc. 2011

*Applicable for courses having practical component.