Government PG College, Ambala Cantt

Course File(Session 2023-24)

Name of Professor: karmjitkaur

Class: BCA-1/2nd Semester

Subject code and Name: B23-SEC-201 / Cloud Computing Skills

SYLLABUS

Maximum Marks: 50   **External: 35**

Minimum Pass Marks: 14   **Internal: 15**

Time: 3 hours

Note: Examiner will be required to set Nine Questions in all. FirstQuestion will be compulsory, consisting of objective type/short-answertype questions covering the entire syllabus. In addition to that eightmore questions will be set, two questions from each Unit. A candidatewill be required to answer five questions in all, selecting one questionfrom each unit in addition to compulsory Question No. 1. All questionswill carry equal marks.

UNIT – 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.

UNIT –II

Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.

UNIT – 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

UNIT – IV

Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service. Amazon Web Services (AWS). Google Cloud Platform

TEXT BOOK:

1.Cloud Computing: Concepts, Technology• & Architecture By Thomas Erl, Ricardo

2. Cloud computing a practical approach Anthony T.Velte, Toby J.Velte Robert Elsenpeter,• TATA McGraw-Hill, New Delhi– 2010

REFERENCE BOOK:

1. Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online -Michael Miller-Que2008•

2. Moving to Cloud by Dinkar Sitaram, Geetha Manjunath, Publication: Syngress Elsevier• Inc, 2014(2ndEdition) .

3. Cloud Computing Second Edition by Dr Kumar Saurabh, Publication Willy INDIA (2013)• Cloud Computing Bible by Barrie Sosinsky, Publisher Willy INDAI (2014)•

4. Cloud computing for Dummies-Judith Hurwitz, Robin Bloor, Marcia Kaufman, Fern• Halper, Wiley Publishing, Inc, 2010

5. Cloud Computing(Principles and Paradigms),Edited by Rajkumar Buyya, James Broberg,• Andrzej Goscinski, John Wiley & Sons, Inc. 2011

COURSE OBJECTIVES

The course objectives outlined are as follows:

- Define cloud computing and explain essential characteristics, history, the business case for cloud, and the emerging technologies enabled by cloud
- Describe the cloud service models- IaaS, PaaS, SaaS, and cloud deployment models- Public, Private, Hybrid; explain cloud infrastructure components
- Explain emerging Cloud related trends including HybridMulticloud, Microservices, Serverless, Cloud Native, DevOps, and Application Modernization
- List and describe services of popular cloud platforms including AWS, Microsoft Azure, Google Cloud, IBM Cloud, Alibaba Cloud, and others

COURSE OUTCOMES

After the successful completion of the course, students will be able to:

- Get acquainted with the term Cloud computing.
- Understand various types of free and commercial clouds.
- Understands various types of cloud services like SaaS. PaaS and IaaS.
- Know how the Cloud Computing is changing software industry
- Create and use Cloud

Lesson Plan

Week No	Scheduled Dates	Topics to be covered
1	15-20 January	Basic Concepts of Cloud Computing Computer Network Basics.
2	22-29 January	Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity.
3	30-05 February	Cloud Service Providers in use and their Significance.
4	06-12 February	Cloud Infrastructure Cloud Pros and Cons.
5	13-19 February	Cloud Delivery Models.
6	20-26 February	Cloud Deployment Models.Redundancy and Update Anomalies, ,
7	27-04 March	Cloud Storage Management Concept of Virtualization and Load Balancing
8	5-11 March	Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information

9	**12-18 March**	Identifying the problems of scale and management in big data.
10	**19-23 March**	Building Cloud Networks
11	**1-8April**	Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service
12	**9-15 April**	Amazon Web Services (AWS).,Creating & using Amazon(AWS) Account
13	**16-22 April**	Google Cloud Platform, Creating & using Google Account
14	**23-27 April**	Test, Assignments and REVISION of Contents
15	**Till Session End**	Previous Year Question Papers Discussion