MANGALMAY
INSTITUTE OF MANAGEMENT TECHNOLOGY

CERTIFICATION PROGRAMME

On

Cloud Computing

From

14th March - 17th May 2023

Convener: Mr. Abhay N Tripathi, Associate Professor, MIMT

For BCA VIth Semester

Resource Person

Dr. Himanshu Rastogi
Associate Professor, MIMT

Syllabus

Cloud Computing

Duration: 30hours

Module 1: Introduction to Cloud Computing: Definition of Cloud – Cloud Characteristics- EvolutionofCloudComputing

Module 2: Cloud Deployment Models- Private, Public, Hybrid and Community Cloud,Cloud Service Models- SaaS (Software as a Service), PaaS (Platform as a Service), IaaS(Infrastructure as aService

Module3: Cloud ComputingArchitecture–Introduction,Grid Framework andArchitecture, Challenges of Grid Computing, Key Design Aspects of Cloud Architecture on Basis of Load Balancing, On the Basis of Disk Provisioning, On the basis of StorageManagement,OntheBasis ofServiceRelocation

Module4: CloudDataCenters-CloudDataCenterCoreElements,CloudComputingApplications,CloudServiceProviders

Module 5: Virtualization Introduction- Features -Advantages of Virtualization- V Migration- Virtualization Technology At Network, Virtualization Technology at Desktop and Application

Schedule

Duration:30hours			
Session	**Content**	**Time**	**Date**
1.	Introductionto CloudComputing: DefinitionofCloud	3:00-4:30 PM	14/03/23
2.	CloudCharacteristics	3:00-4:30 PM	15/03/23
3.	EvolutionofCloudComputing	3:00-4:30 PM	21/03/23
4.	CloudDeploymentModels- Private, Public	3:00-4:30 PM	22/03/23
5.	CloudDeployment Models-Hybrid, Community	3:00-4:30 PM	28/03/23
6.	CloudServiceModels- SAAS, PAAS, IAAS	3:00-4:30 PM	29/03/23
7.	CloudComputingArchitecture–Introduction	3:00-4:30 PM	04/04/23
8.	GridFrameworkandArchitecture	3:00-4:30 PM	05/04/23
9.	ChallengesofGridComputing	3:00-4:30 PM	11/04/23
10.	KeyDesignAspectsofCloudArchitectureonBasisofLoadBalancing.	3:00-4:30 PM	12/04/23
11.	OntheBasisofDiskProvisioning,OnthebasisofStorage Management, Onthe BasisofService Relocation	3:00-4:30 PM	18/04/23
12.	Cloud Data Centers& its core elements	3:00-4:30 PM	19/04/23
13.	Cloud Data Centers core elements	3:00-4:30 PM	25/04/23
14.	CloudComputingApplications	3:00-4:30 PM	26/04/23
15.	CloudServiceProviders	3:00-4:30 PM	02/05/23
16.	VirtualizationIntroduction	3:00-4:30 PM	03/05/23
17.	Features-Advantagesof Virtualization	3:00-4:30 PM	09/05/23
18.	Migration-VirtualizationTechnologyAtNetwork	3:00-4:30 PM	10/05/23
19.	VirtualizationTechnologyatDesktopandApplication	3:00-4:30 PM	16/05/23
20.	Revision	3:00-4:30 PM	17/05/23

	Report
NameofActivity	Cloud Computing
Date	14th March2023 to 17th May 2023
Venue	BCAClassroom
Organizedby	ComputerApplicationsDepartment
Resourceperson	Dr.HimanshuRastogi,AssociateProfessor,MIMT
Beneficiaries	BCAIIIyear(22 students)
Convener	Mr. Abhay N Tripathi, AssociateProfessor,MIMT
Objective	This course's goal is to give students a thorough understanding of cloud computing principles, technologies, architecture, and applications by introducing and investigating cutting-edge cloud computing basic problems, technologies, applications, and implementations.
Content	Cloud Computing add-on certification course was organized by Mangalmay Institute of Management and Technology with the help of IQAC. The term "cloud computing" refers to the availability of computer system resources, particularly data storage, on demand. Day1:The introduction of cloud computing signaled the beginning of the session. Day2: Students learned about cloud properties in this lesson. Day3:The resource person talks about how cloud computing has changed in this session. Day4:The cloud deployment approach is introduced and also its types public and private deployment model. Day5: The resource person in this session presented the Hybrid & community approach of cloud deployment. Day6: The cloud service models are discussed in this session that is SAAS, PAAS,IAAS. Day7: The architecture for cloud computing is introduced. Day8: The Resource Person discussed grid framework. Day9. In this session, challenges of Grid Computing are discussed. Day 10: On the basis of load balancing, I introduced the essential design features of cloud architecture here. Day11: Here, I gave a lesson on disc basics. Provisioning, On the basis of storage management. Day 12: The resource person talks about service relocation in this session. Day13: cloud data centers are covered in class. Day14: The resource person talked about cloud computing applications. Day15: Cloud service providers were the topic of this session. Day16: This session included an introduction to virtualization. Day17: This discussion covered the benefits and features of virtualization. Day18: The resource person talked about Migration-Virtualization Technology At Network Day19: At Desktop and Applications, the expert resource provided classes on virtualization technologies. Day20:Cloud Service Providers is the final lecture topic in the course.

Outcome ofActivity	Students were aware of the necessary theoretical underpinnings for cloud platforms for computing and storage. They learned about various techniques and tools for creating apps that can be made available through cloud computing platforms. The students were able to create cloud infrastructures using IaaS software and create cloud apps using PaaS software.

Certificate Template:

MANGALMAY

INSTITUTE OF MANAGEMENT TECHNOLOGY

Gr. NOIDA

CERTIFICATE OF COURSE COMPLETION

This is to certified the **ANKIT KUMAR** student of BCA **(Batch: 2020-23)** has successfully completed **30 Hours** course on *"Cloud Computing"* from **14-March-2023** to **17-May-2023**

PRINCIPAL
Mangalmay Institute of
Management & Technology

CONVENER
Mangalmay Institute of
Management Technology

Course: BCA

ADD-ON COURSE QUIZ
Course Name: Cloud Computing

Time: 30 Min
Date: 08/06/2023

Roll No:

Name: Amcit Kumar

Year/Sem: III/VI

Invigilator's Sign: _____

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

1) Out of these, which one is the most restrictive and refined service model?
   a.) Saas
   b.) Iaas
   c.) Caas
   d.) Paas ✓

2) The largest provider of .... CRM software is Salesforce.com.
   a.) SaaS ✓
   b.) CaaS
   c.) IaaS
   d.) PaaS

3) "Deep Web" does not provide which of the following?
   a.) Pages without links
   b.) Limited or Private Access Web pages
   c.) Database Generated Web pages
   d.) All of the above ✓

4) The topology that is useful for services using multicasting or broadcasting services is.........
   a.) Star ✓
   b.) Network
   c.) Hierarchical
   d.) Circular

5) ....is a second-level attribute related to scalability.
   a.) Geographic location
   b.) Expertise ✓
   c.) Caching
   d.) Fault management

6) Which one is a Managed cloud storage provider?
   a.) Smart Business Storage Cloud from IBM ✓
   b.) Simple Storage Service from Amazon.com
   c.) EMC Atmos
   d.) All of the above

7) The RSS module uses which of these file formats?
   a.) JSON
   b.) XML ✓
   c.) SMIL
   d.) All of the above

8) Find which of these services is the push technology's example?
   a.) HTTP streaming
   b.) Automated software updates
   c.) Comet
   d.) All of the above ✓

9) Choose the one that is the open-system, most popular alternative to systems such as BlackBerry OS or iOS?
   a.) Solaris
   b.) Android OS ✓
   c.) Symbian
   d.) All of the above

10) ....is Adobe's application suite for various cloud-based applications?
    a.) Open office
    b.) Gpdf
    c.) Acrobat.com ✓
    d.) All of the above

11) Which of the following is the Cloud Platform provided by Amazon?
    a.) AWS ✓
    b.) Cloudera
    c.) Azure
    d.) All of the above

12) Cloud computing is a concept that involves pooling physical resources and offering them as which sort of resource?
    a.) cloud
    b.) real
    c.) virtual ✓
    d.) None of these

13) Identify the wrong statement about cloud computing.
    a.) Virtualization assigns a logical name for a
    b.) Virtual appliances are becoming a very important

physical resource and then provides a pointer to that physical resource when a request is made   standard cloud computing deployment object

c.) Cloud computing requires some standard protocols   d.) None of the mentioned

14) All cloud computing applications suffer from the inherent _____ that is intrinsic in their WAN connectivity.

    a.) noise   b.) propagation

    c.) latency   d.) all of the mentioned

15) Which of the following is the correct statement?

    a.) Cloud computing presents new opportunities to users and developers   b.) Service Level Agreements (SLAs) is small aspect of cloud computing

    c.) Cloud computing does not have impact on software licensing   d.) All of the mentioned

Course: BCA

ADD-ON COURSE QUIZ
Course Name: Cloud Computing

Time: 30 Min
Date: 08/06/2023

Roll No:

Name: Dhirenalba Kumar

Year/Sem: III/VI

Invigilator's Sign:_____

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

1) Out of these, which one is the most restrictive and refined service model?
   a.) Saas
   b.) Iaas
   c.) Caas
   d.) Paas ✓ (1)

2) The largest provider of.................CRM software is Salesforce.com.
   a.) SaaS ✓ (1)
   b.) CaaS
   c.) IaaS
   d.) PaaS

3) "Deep Web" does not provide which of the following?
   a.) Pages without links
   b.) Limited or Private Access Web pages
   c.) Database Generated Web pages
   d.) All of the above ✓ (1)

4) The topology that is useful for services using multicasting or broadcasting services is..........
   a.) Star ✓ (1)
   b.) Network
   c.) Hierarchical
   d.) Circular

5) ....is a second-level attribute related to scalability.
   a.) Geographic location
   b.) Expertise ✓ (1)
   c.) Caching
   d.) Fault management

6) Which one is a Managed cloud storage provider?
   a.) Smart Business Storage Cloud from IBM
   b.) Simple Storage Service from Amazon.com
   c.) EMC Atmos
   d.) All of the above ✓ (1)

7) The RSS module uses which of these file formats?
   a.) JSON
   b.) XML ✓ (1)
   c.) SMIL
   d.) All of the above

8) Find which of these services is the push technology's example?
   a.) HTTP streaming
   b.) Automated software updates
   c.) Comet
   d.) All of the above ✓ (1)

9) Choose the one that is the open-system, most popular alternative to systems such as BlackBerry OS or iOS?
   a.) Solaris
   b.) Android OS ✓ (1)
   c.) Symbian
   d.) All of the above

10) ....is Adobe's application suite for various cloud-based applications?
    a.) Open office
    b.) Gpdf
    c.) Acrobat.com ✓ (1)
    d.) All of the above

11) Which of the following is the Cloud Platform provided by Amazon?
    a.) AWS ✓ (1)
    b.) Cloudera
    c.) Azure
    d.) All of the above

12) Cloud computing is a concept that involves pooling physical resources and offering them as which sort of resource?
    a.) cloud
    b.) real
    c.) virtual ✓ (1)
    d.) None of these

13) Identify the wrong statement about cloud computing.
    a.) Virtualization assigns a logical name for a
    b.) Virtual appliances are becoming a very important

physical resource and then provides a pointer to that physical resource when a request is made

    standard cloud computing deployment object

c.) Cloud computing requires some standard protocols

d.) None of the mentioned

14) All cloud computing applications suffer from the inherent _____ that is intrinsic in their WAN connectivity.
    a.) noise
    c.) latency
    b.) propagation
    d.) all of the mentioned

15) Which of the following is the correct statement?
    a.) Cloud computing presents new opportunities to users and developers
    b.) Service Level Agreements (SLAs) is small aspect of cloud computing
    c.) Cloud computing does not have impact on software licensing
    d.) All of the mentioned

---------------------For Departmental use only---------------------------

Max. Marks: 15

Marks Obtained: 15

Name of Evaluator:

Dr Himanshu Rastogi

Sign.

Course: BCA

ADD-ON COURSE QUIZ
Course Name: Cloud Computing

Time: 30 Min

Date: 08/06/2023

Roll No:

Name: Kushal Kumar

Year/Sem: III/VI

Invigilator's Sign: _____

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

1) Out of these, which one is the most restrictive and refined service model?
   a.) Saas
   b.) Iaas
   c.) Caas
   d.) Paas

2) The largest provider of .... CRM software is Salesforce.com.
   a.) SaaS
   b.) CaaS
   c.) IaaS
   d.) PaaS

3) "Deep Web" does not provide which of the following?
   a.) Pages without links
   b.) Limited or Private Access Web pages
   c.) Database Generated Web pages
   d.) All of the above

4) The topology that is useful for services using multicasting or broadcasting services is.........
   a.) Star
   b.) Network
   c.) Hierarchical
   d.) Circular

5) ....is a second-level attribute related to scalability.
   a.) Geographic location
   b.) Expertise
   c.) Caching
   d.) Fault management

6) Which one is a Managed cloud storage provider?
   a.) Smart Business Storage Cloud from IBM
   b.) Simple Storage Service from Amazon.com
   c.) EMC Atmos
   d.) All of the above

7) The RSS module uses which of these file formats?
   a.) JSON
   b.) XML
   c.) SMIL
   d.) All of the above

8) Find which of these services is the push technology's example?
   a.) HTTP streaming
   b.) Automated software updates
   c.) Comet
   d.) All of the above

9) Choose the one that is the open-system, most popular alternative to systems such as BlackBerry OS or iOS?
   a.) Solaris
   b.) Android OS
   c.) Symbian
   d.) All of the above

10) ....is Adobe's application suite for various cloud-based applications?
   a.) Open office
   b.) Gpdf
   c.) Acrobat.com
   d.) All of the above

11) Which of the following is the Cloud Platform provided by Amazon?
   a.) AWS
   b.) Cloudera
   c.) Azure
   d.) All of the above

12) Cloud computing is a concept that involves pooling physical resources and offering them as which sort of resource?
   a.) cloud
   b.) real
   c.) virtual
   d.) None of these

13) Identify the wrong statement about cloud computing.
   a.) Virtualization assigns a logical name for a
   b.) Virtual appliances are becoming a very important

physical resource and then provides a pointer to that physical resource when a request is made   standard cloud computing deployment object

c.) Cloud computing requires some standard protocols   d.) None of the mentioned

14) All cloud computing applications suffer from the inherent _____ that is intrinsic in their WAN connectivity.

a.) noise   b.) propagation

c.) latency   d.) all of the mentioned

15) Which of the following is the correct statement?

a.) Cloud computing presents new opportunities to users and developers

b.) Service Level Agreements (SLAs) is small aspect of cloud computing

c.) Cloud computing does not have impact on software licensing

d.) All of the mentioned

-----------------For Departmental use only-----------------

Max. Marks: 15   Marks Obtained: 12

Name of Evaluator:
Dr. Himanshu Rastogi

Sign.

Course: BCA

ADD-ON COURSE QUIZ
Course Name: Cloud Computing

Time: 30 Min

Date: 08|06| 2023

Roll No:

Name: Prashant Singh

Year/Sem: III/VI

Invigilator's Sign: _____

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

1) Out of these, which one is the most restrictive and refined service model?
   - a.) Saas
   - b.) Iaas
   - c.) Caas
   - d.) Paas ✓

2) The largest provider of .... CRM software is Salesforce.com.
   - a.) SaaS ✓
   - b.) CaaS
   - c.) IaaS
   - d.) PaaS

3) "Deep Web" does not provide which of the following?
   - a.) Pages without links
   - b.) Limited or Private Access Web pages
   - c.) Database Generated Web pages
   - d.) All of the above ✓

4) The topology that is useful for services using multicasting or broadcasting services is.........
   - a.) Star ✓
   - b.) Network
   - c.) Hierarchical
   - d.) Circular

5) ....is a second-level attribute related to scalability.
   - a.) Geographic location
   - b.) Expertise ✓
   - c.) Caching
   - d.) Fault management

6) Which one is a Managed cloud storage provider?
   - a.) Smart Business Storage Cloud from IBM
   - b.) Simple Storage Service from Amazon.com
   - c.) EMC Atmos
   - d.) All of the above

7) The RSS module uses which of these file formats?
   - a.) JSON
   - b.) XML ✓
   - c.) SMIL
   - d.) All of the above

8) Find which of these services is the push technology's example?
   - a.) HTTP streaming
   - b.) Automated software updates
   - c.) Comet
   - d.) All of the above ✓

9) Choose the one that is the open-system, most popular alternative to systems such as BlackBerry OS or iOS?
   - a.) Solaris
   - b.) Android OS ✓
   - c.) Symbian
   - d.) All of the above

10) ....is Adobe's application suite for various cloud-based applications?
    - a.) Open office
    - b.) Gpdf
    - c.) Acrobat.com ✓
    - d.) All of the above

11) Which of the following is the Cloud Platform provided by Amazon?
    - a.) AWS ✓
    - b.) Cloudera
    - c.) Azure
    - d.) All of the above

12) Cloud computing is a concept that involves pooling physical resources and offering them as which sort of resource?
    - a.) cloud
    - b.) real
    - c.) virtual
    - d.) None of these

13) Identify the wrong statement about cloud computing.
    - a.) Virtualization assigns a logical name for a
    - b.) Virtual appliances are becoming a very important

physical resource and then provides a pointer to that physical resource when a request is made

standard cloud computing deployment object

c.) Cloud computing requires some standard protocols

d.) None of the mentioned

14) All cloud computing applications suffer from the inherent _____ that is intrinsic in their WAN connectivity.

a.) noise

b.) propagation

c.) latency

d.) all of the mentioned

15) Which of the following is the correct statement?

a.) Cloud computing presents new opportunities to users and developers

b.) Service Level Agreements (SLAs) is small aspect of cloud computing

c.) Cloud computing does not have impact on software licensing

d.) All of the mentioned

---------------------For Departmental use only-----------------------

Max. Marks: 15

Marks Obtained: 13

Name of Evaluator:

Sign.

Dr. Himanshu Rastogi

Course: BCA

ADD-ON COURSE QUIZ
Course Name: Cloud Computing

Time: 30 Min
Date: 08/06/2023

Roll No:

Name: Shivam Kumar

Year/Sem: III/VI

Invigilator's Sign: _____

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

1) Out of these, which one is the most restrictive and refined service model?
   a.) Saas
   b.) Iaas
   c.) Caas
   d.) Paas

2) The largest provider of .... CRM software is Salesforce.com.
   a.) SaaS
   b.) CaaS
   c.) IaaS
   d.) PaaS

3) "Deep Web" does not provide which of the following?
   a.) Pages without links
   b.) Limited or Private Access Web pages
   c.) Database Generated Web pages
   d.) All of the above

4) The topology that is useful for services using multicasting or broadcasting services is.........
   a.) Star
   b.) Network
   c.) Hierarchical
   d.) Circular

5) ....is a second-level attribute related to scalability.
   a.) Geographic location
   b.) Expertise
   c.) Caching
   d.) Fault management

6) Which one is a Managed cloud storage provider?
   a.) Smart Business Storage Cloud from IBM
   b.) Simple Storage Service from Amazon.com
   c.) EMC Atmos
   d.) All of the above

7) The RSS module uses which of these file formats?
   a.) JSON
   b.) XML
   c.) SMIL
   d.) All of the above

8) Find which of these services is the push technology's example?
   a.) HTTP streaming
   b.) Automated software updates
   c.) Comet
   d.) All of the above

9) Choose the one that is the open-system, most popular alternative to systems such as BlackBerry OS or iOS?
   a.) Solaris
   b.) Android OS
   c.) Symbian
   d.) All of the above

10) ....is Adobe's application suite for various cloud-based applications?
    a.) Open office
    b.) Gpdf
    c.) Acrobat.com
    d.) All of the above

11) Which of the following is the Cloud Platform provided by Amazon?
    a.) AWS
    b.) Cloudera
    c.) Azure
    d.) All of the above

12) Cloud computing is a concept that involves pooling physical resources and offering them as which sort of resource?
    a.) cloud
    b.) real
    c.) virtual
    d.) None of these

13) Identify the wrong statement about cloud computing.
    a.) Virtualization assigns a logical name for a
    b.) Virtual appliances are becoming a very important

physical resource and then provides a pointer to that physical resource when a request is made
standard cloud computing deployment object

①

c.) Cloud computing requires some standard protocols

d.) None of the mentioned ✓

14) All cloud computing applications suffer from the inherent _____ that is intrinsic in their WAN connectivity.

a.) noise
b.) propagation

①

c.) latency
d.) all of the mentioned

15) Which of the following is the correct statement?

a.) Cloud computing presents new opportunities to users and developers
b.) Service Level Agreements (SLAs) is small aspect of cloud computing

c.) Cloud computing does not have impact on software licensing
d.) All of the mentioned ①

--------------------For Departmental use only--------------------

Max. Marks: 15

Marks Obtained: 13

Name of Evaluator:

Dr. Himanshu Rastogi

Sign.