SIR C.R.REDDY COLLEGE OF ENGINEERING, ELURU

DEPARTMENT OF INFORMATION TECHNOLOGY

LESSON PLAN

SUBJECT: IT 4.1.2 ClOUD COMPUTING

CLASS: IV/IV B.Tech, I SEMESTER, A.Y.2019-20

INSTRUCTOR: EBK MANASH

IT 4.1.2

Instruction: 3 Periods + 1 Tut/week, Univ. Exam: 3 Hours **Credits: 4**

Internal: 30 Marks **University Exam: 70 Marks** Total: 100 Marks

1. **Introduction to cloud computing:** Cloud computing components, Infrastructure services,storage applications, database services – introduction to Saas, Paas, Iaas, Idaas, data storage incloud.

2. **Virtualization:** enabling technologies, types of virtualization, server virtualization**,**desktop virtualization, memory virtualization, application and storage virtualization-tools and products available for virtualization.

3. **SAAS and PAAS:** Getting started with Saas, SaaS solutions,SOA , PaaS andbenefits.

4. **Iaas and Cloud data storage:** understanding Iaas, improving performance for load balancing,server types within Iaas, utilizing cloud based NAS devices, cloud based data storage, and backupservices, cloud based block storage and database services.

5. **Cloud Application development:** Client server distributed architecture for cloud designing cloud based solutions, coding cloudbased applications, traditional Appsvscloud Apps,client side programming, server side programming overview-fundamental treatment of web application frameworks.

6. **Cloud Governance and economics:** Securing the cloud, disaster recovery and business continuityin the cloud, Managing the cloud, migrating to the cloud, governing and evaluating theclouds business impact and economics.

7. **Inside Cloud**: Introduction to MapReduce and Hadoop-over view of big data and its impact on cloud

TextBooks:

1. Cloud Computing: SaaS, PaaS, IaaS, Virtualization, Business Models, Mobile, Securityand More, Kris Jamsa, Jones & Bartlett Publishers, Paper back edition,2013

2. Cloud Computing: A Practical Approach,Anthony T .Velte, Toby J.Velte, RobertElsenpeter, Tata McGraw Hill Edition

References:

1. HAdoopMapReduce cookbook, SrinathPerera and Thilina Gunarathne, Packtpublishing

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DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE SCHEDULE

The schedule for the whole Course/Subject is:

Unit No	Description of the Chapter	Description of the Topics	Total no of periods (L+T)
1	**Introduction to cloud computing**	Cloud computing components, Infrastructure services,storage applications, database services – introduction to Saas, Paas, Iaas, Idaas, data storage incloud.	7+3
2	**Virtualization**	Enabling technologies, types of virtualization, server virtualization**,**desktop virtualization, memory virtualization, application and storage virtualization-tools and products available for virtualization.	12+2
3	**SAAS and PAAS**	Getting started with Saas, SaaS solutions,SOA , PaaS andbenefits	15+2
4.	**Iaas and Cloud data storage**	Understanding Iaas, improving performance for load balancing,server types within Iaas, utilizing cloud based NAS devices, cloud based data storage, and backupservices, cloud based block storage and database services.	10+2
5.	**Cloud Application development**	Client server distributed architecture for cloud designing cloud based solutions, coding cloudbased applications, traditional Appsvscloud Apps,client side programming, server side programming overview-fundamental treatment of web application frameworks.	6+1
6.	**Cloud Governance and economics**	Securing the cloud, disaster recovery and business continuityin the cloud, Managing the cloud, migrating to the cloud, governing and evaluating theclouds business impact and	7+2

		economics.	
7.	**Inside Cloud**	Introduction to MapReduce and Hadoop-over view of big data and its impact on cloud	10

Total no of instructional periods available for the course : 80 periods

Total no of estimated periods : 80 periods

Signature of the H.O.D **Signature of the Faculty**

Date:

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DEPARTMENT OF INFORMATION TECHNOLOGY

IV / IV B.Tech – SEM – I

ACADEMIC YEAR 2019-20 **TOTAL HOURS: 80**

Sl. No	Topics to be covered	Reference	Teaching method	Outcomes
1	Introduction to cloud computing(CC)	TB	BB	a,c
2	Introduction to cloud computing	TB	BB	a,c
3	Overview of cloud computing	TB	BB	a,c
4	Overview of cloud computing	TB	BB	a,c
5	Overview of cloud computing	TB	BB	a,c
6	Cloud components	TB	BB	b,c
7	Cloud components	TB	BB	b,c
8	Cloud components	TB/RB/INTERNET	PPT with LCD	b,c
9	Application of cc	TB	BB	b,c
10	Application: Storage	TB	BB	b,c
11	Application: DB	TB	BB	b,c,d,e
12	Data services	TB	BB	b,c,d,e
13	Software as service	TB	BB	b,c,d,e
14	Platform as service	TB	BB	b,c,d,e
15	Idaa,Haas	TB	BB	b,c,d,e

16	Virtualization:Before and After	TB	BB	b,c,d,e
17	Server virtualization	TB/RB/INTERNET	PPT with LCD	b,c,d,e
18	Tutorial on –desktop virtualization	TB	BB	b,c,d,e
19	Memory virtualization	TB	BB	b,c,d,e
20	Application Virtualization	TB	BB	b,c,d,e
21	Application Virtualization	TB	BB	b,c,d,e
22	Storage Virtualization			b,c,d,e
23	Storage Virtualization tools	TB	BB	b,c,d,e
24	Products for Virtualizations	TB	BB	b,c,d,e
25	Products for Virtualizations	TB	BB	b,c,d,e
26	Letting starting with Saas	TB	BB	b,c,d,e
27	Saas Introduction	TB	BB	b,c,d,e
28	Saas solution	TB/RB/INTERNET	PPT with LCD	b,c,d,e
29	SOA	TB	BB	b,c,d,e
30	Introduction to paas	TB	BB	b,c,d,e
31	paas	TB	BB	b,c,d,e
32	paas	TB	BB	b,c,d,e
33	Paas benefits	TB	BB	b,c,d,e
34	Paas benefits	TB/RB/INTERNET	PPT with LCD	b,c,d,e

35	Revision of unit 3	TB	BB	b,c,d,e
36	Revision of unit 3	TB	BB	b,c,d,e
37	Tutorial class	TB	BB	
38	Iaas	TB	BB	b,c,d,e
39	Performance improving through load balancer	TB	BB	b,c,d,e
40	Performance improving through load balancer	TB	BB	b,c,d,e
41	exam	EXAM	exam	
42	Server types	TB	BB	b,c,d,e
43	Server types with IAAS	TB	BB	b,c,d,e
44	Revision	TB	BB	b,c,d,e
45	Revision	TB	BB	b,c,d,e
46	MID I	EXAM	EXAM	
47	NAS	TB	BB	b,c,d,e
48	Initializing Cloud based NAS	TB/RB/INTERNET	PPT with LCD	b,c,d,e
49	Initializing Cloud based NAS	TB	BB	b,c,d,e
50	tutorial	TB	BB	b,c,d,e
51	Cloud based Data storage	TB	BB	b,c,d,e
52	Backup services	TB	BB	b,c,d,e
53	Backup services	TB/RB/INTERNET	PPT with LCD	b,c,d,e
54	Cloud based block storage	TB	BB	b,c,d,e
55	tutorial	TB	BB	b,c,d,e

56	Cloud based block storage	TB	BB	b,c,d,e
57	Cloud based block storage	TB	BB	b,c,d,e
58	Backup services revision	TB	BB	b,c,d,e
59	tutorial	TB	BB	b,c,d,e
60	Distributed architecture for cloud	TB	BB	b,c,d,e
61	Designing cloud based application	TB	BB	b,c,d,e
62	Coding cloud based application	TB	BB	b,c,d,e
63	Web app vs cloud apps	TB	BB	b,c,d,e
64	tutorial	TB	BB	
65	Client side and server side programs	TB/RB/INTERNET	PPT with LCD	b,c,d,e
66	Client side and server side programs	TB	BB	b,c,d,e
67	Fundamental treatment of web app framework	TB	BB	b,c,d,e
68	Securing cloud, disaster recovery	TB	BB	b,c,d,e
69	Business continuity in cloud	TB	BB	b,c,d,e
70	Migrating and managing cloud	TB/RB/INTERNET	PPT with LCD	b,c,d,e
71	Governing cloud	TB	BB	b,c,d,e

72	tutorial	TB	BB	b,c,d,e
73	Business impact on cloud	TB	BB	b,c,d,e
74	Map reduse	TB	BB	b,c,d,e
75	Hadoop overview	TB/RB/INTERNET	PPT with LCD	b,c,d,e
76	Big data overview	TB	BB	b,c,d,e
77	Big data overview	TB	BB	b,c,d,e
78	Impact of big data on cloud	TB	BB	b,c,d,e
79	Impact of big data on cloud	TB	BB	b,c,d,e
80	Mid 2	exam	exam	exam
	Total classes	80		