**FACULTY OF INFORMATICS**

**B.E. 4/4 (I.T.) II - Semester (Main) Examination, May / June 2015**

**Subject : Cloud Computing**

**Time : 3 Hours Max. Marks: 75  
Note: Answer all questions of Part - A and answer any five questions from Part-B.**

**PART – A (25 Marks)**

1 Describe benefits of using a cloud model. (2)

Ans: cost savings, energy savings, rapid deployment and customer empowerment

2 Explain how a common protocol is established for this internet. (3)  
Ans: Using Web-based interface and IP protocol

3 Describe advantages of communication as a service (Cass). (2)  
Ans: Provides a wide range of collaborative tools for communication

4 Explain basic approach to a data center based service oriented architectures. (3)  
Ans: capacity planning, availability and security.

5 Write down the steps for the 7-zip archive tool. (3)  
Ans: 7-Zip is an [open source](https://en.wikipedia.org/wiki/Open_source) [file archiver](https://en.wikipedia.org/wiki/File_archiver), or an application used to compress files. 7-Zip operates with the [7z](https://en.wikipedia.org/wiki/7z) archive format, but can read and write several other archive formats.

6 Describe how encrypted federation differs from trusted federation. (2)  
Ans: In case of encrypted federation dialback is needed where as in trusted federation it is optional.

7 Explain standards for messaging. (3)  
Ans: SMTP, POP, IMAP, XMPP, HTTP

8 Describe hyper text transfer protocol. (2)  
Ans: Features of HTTP lightweight, stateless, simple.

9 What are the mobile operating systems for smart phones? (2)  
Ans: OS for with resource usage optimization

10 Explain vector processing. (3)

Ans: vector processing exploits regularities in the structure of computation, in this case, the fact that many codes contain loops that range over linear arrays of data performing symmetric operations.

**PART – B (50 Marks)**

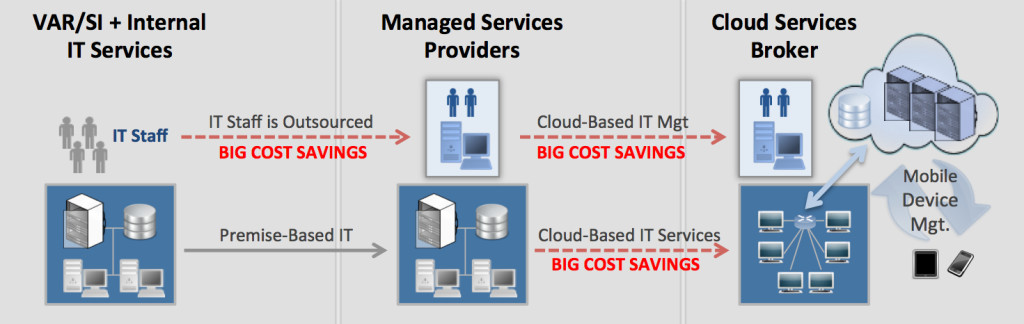
11 (a) Describe internet software evolution. (5)  
Ans: History of browsers and protocols used in internet

(b) Explain server virtualization. (5)

Ans: **Server virtualization** is the masking of **server** resources, including the number and identity of individual physical servers, processors, and operating systems, from **server** users. The **server** administrator uses a software application to divide one physical **server** into multiple isolated virtual environments.

12 (a) Describe communication as a service (Caas). (5)  
Ans: CAAS features for collaboration

(b) What are the layered components of infrastructure as a service (Iaas)? (5)  
Ans: virtualized compute, network, and storage

13 (a) Explain the evolution from the MSP model to cloud computing. (5)  
Ans: 

(b) What is the basic approach to a data center based SOA? (5)  
Ans: capacity planning, availability and security.

14 (a) Describe Adding a guest OS to Sun xVM virtual Box. (5)  
Ans:

mount /dev/cdrom /mnt # or any other mountpoint

cd /mnt

./VBoxLinuxAdditions.run

reboot

(b) Explain downloading Free Dos as a guest OS. (5)

Ans: FreeDOS is a free DOS-compatible operating system that can be used to play games, run legacy software, or support embedded systems. FreeDOS is basically like the old MS-DOS, but better! For example, FreeDOS lets you access FAT32 file systems and use large disk support (LBA) — a feature not available in MS-DOS, and only included in Windows 95 and newer.

15 (a) What are the four levels or federation? (5)  
Ans: permissive, verified, encrypted and trusted.

(b) Describe the interrelation of identify presence and location in the cloud. (5)  
Ans: Presence is most often associated with real-time communications systems such as IM and describes the state of a user’s interaction with a system, such as which computer they are accessing, whether they are idle or working, and perhaps also which task they are currently performing (reading a document, composing email etc.). -Location refers to the user’s physical location and typically includes latitude, longitude, and (sometimes) altitude. Authentication and authorization mechanisms generally focus on determining the “who” of identity, location defines the “where,” and presence defines the “what”—all critical components of the identity-based emerging technologies listed above, including cloud computing.

16 (a) Explain the distributed management task force. (5)

Ans: Enables more effective management of millions of IT systems worldwide by bringing the IT industry together to collaborate on the development, validation and promotion of systems  
management standards. • 160 member companies and organizations, and more than 4,000 active participants crossing 43 countries. The DMTF board of directors is led by 16 innovative, industry-leading technology companies. • The DMTF started the Virtualization Management Initiative (VMAN), enabling IT managers to deploy preinstalled, preconfigured solutions across heterogeneous computing networks and to manage those applications through their entire  
life cycle.

(b) Describe communication HTTP, SIMPLE and xMPP. (5)  
Ans:

* HTTP is a request/response communications standard based on a client/server model.
* SIMPLE, the Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions, is an instant messaging (IM) and presence protocol suite based on Session Initiation Protocol
* Extensible Messaging and Presence Protocol (XMPP) is also an open, XML-based protocol originally aimed at near-real-time, extensible instant messaging and presence information

17 Write short notes on the following:  
Ans:

1. Google (Android) (4)

Ans: **Android** is a [mobile operating system](https://en.wikipedia.org/wiki/Mobile_operating_system) (OS) based on the [Linux kernel](https://en.wikipedia.org/wiki/Linux_kernel) and currently developed by [Google](https://en.wikipedia.org/wiki/Google). With a [user interface](https://en.wikipedia.org/wiki/User_interface) based on [direct manipulation](https://en.wikipedia.org/wiki/Direct_manipulation_interface), Android is designed primarily for [touchscreen](https://en.wikipedia.org/wiki/Touchscreen) mobile devices such as [smartphones](https://en.wikipedia.org/wiki/Smartphone) and [tablet computers](https://en.wikipedia.org/wiki/Tablet_computer), with specialized user interfaces for televisions ([Android TV](https://en.wikipedia.org/wiki/Android_TV)), cars ([Android Auto](https://en.wikipedia.org/wiki/Android_Auto)), and wrist watches ([Android Wear](https://en.wikipedia.org/wiki/Android_Wear)). The OS uses touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a [virtual keyboard](https://en.wikipedia.org/wiki/Virtual_keyboard). Despite being primarily designed for touchscreen input, it has also been used in [game consoles](https://en.wikipedia.org/wiki/Video_game_console), [digital cameras](https://en.wikipedia.org/wiki/Digital_camera), regular [PCs](https://en.wikipedia.org/wiki/Personal_computer), and other electronics. As of 2015, Android has the largest [installed base](https://en.wikipedia.org/wiki/Installed_base) of all operating systems.

1. Black berry (3)

Ans: **BlackBerry** is a line of [wireless](https://en.wikipedia.org/wiki/Wireless) [handheld devices](https://en.wikipedia.org/wiki/Handheld_device) (commonly called [smartphones](https://en.wikipedia.org/wiki/Smartphone)) and services designed and marketed by [BlackBerry Limited](https://en.wikipedia.org/wiki/BlackBerry_Limited), formerly known as Research In Motion Limited (RIM).

1. Windows mobile (3)

Ans: **Windows Mobile** was a family of [mobile operating systems](https://en.wikipedia.org/wiki/Mobile_operating_system) developed by [Microsoft](https://en.wikipedia.org/wiki/Microsoft) for [smartphones](https://en.wikipedia.org/wiki/Smartphone) and [Pocket PCs](https://en.wikipedia.org/wiki/Pocket_PC).[[2]](https://en.wikipedia.org/wiki/Windows_Mobile#cite_note-infoworld2005-2)Its origins dated back to [Windows CE](https://en.wikipedia.org/wiki/Windows_CE) in 1996, though Windows Mobile itself first appeared in 2000 as *PocketPC 2000*. It was renamed "Windows Mobile" in 2003, at which point it came in several versions (similar to the desktop versions of Windows) and was aimed at business and enterprise consumers. By 2007, it was the most popular smartphone software in the U.S., but this popularity faded in the following years. In February 2010, facing competition from rival OSs including [iOS](https://en.wikipedia.org/wiki/IOS) and [Android](https://en.wikipedia.org/wiki/Android_%28operating_system%29), Microsoft announced [Windows Phone](https://en.wikipedia.org/wiki/Windows_Phone) to supersede Windows Mobile.