

## COURSE TITLE: CLOUD COMPUTING

Question no	Scoring indicators	Split up score	Sub total	Total
<b>PART -- A</b>				
I 1.	<b>Define cloud computing.</b> Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, services, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.	2	2	10
2.	<b>Why cloud computing is not PC centric?</b> With cloud computing, the software programs you use aren't run from your personal computer, but are rather stored on servers accessed via the Internet. If your computer crashes, the software is still available for others to use.	2	2	
3.	<b>Give two names popular cloud based email services.</b> Gmail, Yahoo, Hotmail	2	2	
4.	<b>Give two cloud based calendar applications.</b> Google Calendar, Yahoo! Calendar, Windows Live Calendar, Apple MobileMe Calendar, AOL Calendar	2	2	
5.	<b>What do you mean by blogs?</b> A blog (short for "web log") is a kind of online journal that its author updates frequently with new musings and information.	2	2	
<b>PART - B</b>				
II . 1	<b>Write a short history of cloud computing.</b> <ul style="list-style-type: none"> <li>• Client/Server Computing: Centralized Applications and Storage</li> <li>• Peer-to-Peer Computing: Sharing Resources</li> <li>• Distributed Computing: Providing More Computing Power</li> <li>• Collaborative Computing: Working as a Group</li> <li>• Cloud Computing: The Next Step in Collaboration</li> </ul>	6	6	
2	<b>What are different types of cloud computing developments? Explain each service briefly?</b> <ul style="list-style-type: none"> <li>• Software as a Service</li> </ul>	6	6	

	<ul style="list-style-type: none"> <li>• Platform as a Service</li> <li>• Infrastructure as a Service</li> <li>• Web Services</li> <li>• On-Demand Computing</li> </ul>			
3.	<p><b>Explain centralized email communication system using cloud computing.</b></p> <p>The key here is to enable anywhere/anytime access to email. These services place your email inbox in the cloud; you can access it from any computer connected to the Internet. The messages you receive are stored on the web, as are the messages you send, so nothing depends on a single PC.</p> <p>The joy of using web-based email is that it doesn't matter what PC you use, your messages are always where they should be and they're always in sync. It's easy to check your home email from work, or from anywhere you happen to be—in a coffeehouse, at a hotel, or even in an airport terminal. Use your work PC, your home PC, your notebook PC, or a friend's PC, it doesn't matter; your messages are in the cloud, not on any of those PCs.</p>	6	6	
4.	<p><b>How do cloud computing applications help to manage schedules of events and projects?</b></p> <ul style="list-style-type: none"> <li>• Collaborating on To-Do Lists</li> <li>• Collaborating on Task Management</li> <li>• Collaborating on Event Management</li> <li>• Collaborating on Event Marketing</li> <li>• Collaborating on Budgets</li> </ul>	6	6	30
5.	<p><b>Explain web based calendar applications in cloud computing with examples.</b></p> <p>A web-based calendar service stores your calendars on the Internet, where they can be accessed from any computer that has an Internet connection. This lets you check your schedule when you're on the road, even if your assistant in the office or your spouse at home has added new appointments since you left. Web-based calendars are also extremely easy to share with other users in any location, which make them great for collaborative projects.</p> <ul style="list-style-type: none"> <li>• Google Calendar</li> <li>• Yahoo! Calendar</li> <li>• Windows Live Calendar</li> <li>• Apple MobileMe Calendar</li> </ul>	6	6	
6.	<p><b>How can we manage contact list by the help of cloud computing?</b></p>			

A good solution for managing contacts from multiple family members is to use a web-based program for contact management. There are few different ways to approach this. First, you can use your web-based email program (Gmail, Yahoo! Mail, and so on) as a contact management program. All of these programs let you create and store complete information about your contacts— mail address, postal address, phone number, and so forth. The only problem with using this approach, however, is that both you and your spouse have to use the same email program and the same email address. So, it might not work for you. A more robust and individualized solution is to use a dedicated web-based contact management program. Some of these programs, such as MyEvents (www.myevents.com) are targeted at home users and ideal for holiday card lists; other programs, such as Highrise (www.highrisehq.com) will manage your holiday card list and do a lot more. These latter programs include the robust customer resource management (CRM) features needed for business and sales force management.

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**Explain social network groups.**

7. The typical social network is a hosted site that aims to create a community of users, each of whom posts his or her own personal profile on the site. Each user includes enough person information in her profile to enable other users with similar interests to connect as “friends”; one’s collection of friends helps to build a succession of personal communities.

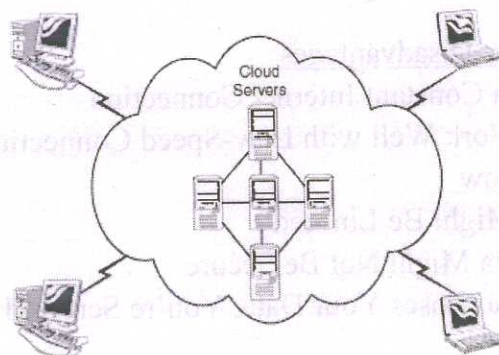
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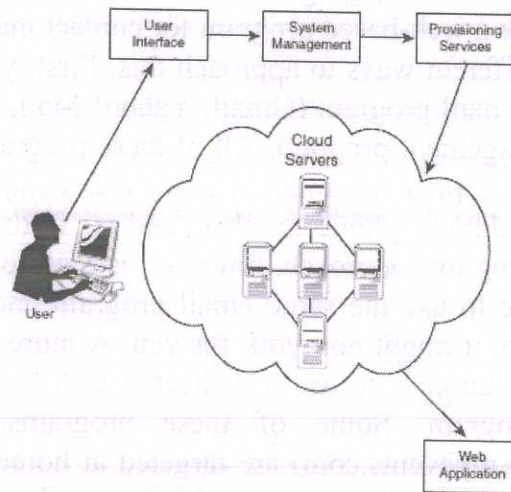
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**PART -- C**

III. (a)

**Describe the architecture of cloud computing system with a figure.**





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**Compare advantages and disadvantages of cloud computing.**

III. (b)

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Cloud Computing: Advantages

- Lower-Cost Computers for Users
- Improved Performance
- Lower IT Infrastructure Costs
- Fewer Maintenance Issues
- Lower Software Costs
- Instant Software Updates
- Increased Computing Power
- Unlimited Storage Capacity
- Increased Data Safety
- Improved Compatibility Between Operating Systems
- Improved Document Format Compatibility
- Easier Group Collaboration
- Universal Access to Documents
- Latest Version Availability
- Removes the Tether to Specific Devices

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Cloud Computing: Disadvantages

- Requires a Constant Internet Connection
- Doesn't Work Well with Low-Speed Connections
- Can Be Slow
- Features Might Be Limited
- Stored Data Might Not Be Secure
- If the Cloud Loses Your Data, You're Screwed

<p>IV. (a)</p>	<p><b>What are the advantages for developing web-based applications using cloud computing?</b></p> <p>Cloud services, in the form of centralized web-based applications, also appeal to the IT professional. One instance of an application hosted in the cloud is cheaper and easier to manage than individual copies of similar software installed on each user's desktop PC. Upgrading a cloud app only has to be done one time, where upgrading traditional software has to be done for each PC on which that software is installed. Then, of course, we have the promise of cloud-enabled collaboration, which just can't be done with traditional desktop apps. The advantages of cloud services development are particularly notable to smaller businesses, who otherwise wouldn't have the budget or resources to develop large-scale applications. By hosting locally developed web applications within the cloud, the small business avoids the cost of purchasing expensive hardware to host similar software.</p>	<p>8</p>	<p>8</p>
<p>IV (b)</p>	<p><b>What do you meant by on-demand computing?</b></p> <p>As the name implies, on-demand computing packages computer resources (processing, storage, and so forth) as a metered service similar to that of a public utility. In this model, customers pay for as much or as little processing and storage as they need. Companies that have large demand peaks followed by much lower normal usage periods particularly benefit from utility computing. The company pays more for their peak usage, of course, but their bills rapidly decline when the peak ends and normal usage patterns resume. Clients of on-demand computing services essentially use these services as offsite virtual servers. Instead of investing in their own physical infrastructure, a company operates on a pay-as-you-go plan with a cloud services provider. On-demand computing itself is not a new concept, but has acquired new life thanks to cloud computing. In previous years, on-demand computing was provided from a single server via some sort of time-sharing arrangement. Today, the service is based on large grids of computers operating as a single cloud.</p>	<p>7</p>	<p>7</p>
<p>V. (a)</p>	<p><b>Explain collaboration on to-do list using cloud computing.</b></p> <p>A grocery list is just one type of to-do list. If you have a lot of household chores and repairs, it's likely that you have a larger to-do list for your household. And, if your household is like mine, that list grows every day! You and your spouse can collaborate on your to-do list by using a web-based word processing application, as we just discussed, or you can use a</p>	<p>8</p>	<p>8</p>

dedicated webbased planning program. These applications, such as Zoho Planner (planner.zoho.com) let you create multiple to-do lists on the web, which you and your spouse can both add to from any computer, at any time. You can even set email reminders to refresh your memory when a task is due. Add your tasks one at a time, and then mark them off as they're completed. If these applications are too advanced for your needs, consider using a simpler web-based to-do list application. These applications, such as Remember the Milk (www.rememberthemilk.com) and Ta-da List (www.tadalist.com), operate more like a simple notepad-based list. Some even let you add tasks via email or access the list when you're on the go with your mobile phone.

**What are the advantages of centralized cloud based email system over precloud email system?**

V (b)

The key here is to enable anywhere/anytime access to email. Precloud computing, your email access was via a single computer, which also stored all your email messages. For this purpose, you probably used a program like Microsoft Outlook or Outlook Express, installed on your home computer. If you wanted to check your home email from work, it took a bit of juggling and perhaps the use of your ISP's email access web page. That web page was never in sync with the messages on your home PC, of course, which is just the start of the problems with trying to communicate in this fashion. A better approach is to use a web-based email service, such as Google's Gmail (mail.google.com), Microsoft's Windows Live Hotmail (mail.live.com), or Yahoo! Mail (mail.yahoo.com). These services place your email inbox in the cloud; you can access it from any computer connected to the Internet. The messages you receive are stored on the web, as are the messages you send, so nothing depends on a single PC. The joy of using web-based email is that it doesn't matter what PC you use, your messages are always where they should be and they're always in sync. It's easy to check your home email from work, or from anywhere you happen to be—in a coffeehouse, at a hotel, or even in an airport terminal. Use your work PC, your home PC, your notebook PC, or a friend's PC, it doesn't matter; your messages are in the cloud, not on any of those PCs.

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**Write the benefits from the cloud computing for the community.**

VI (a)

Alliteration aside, one of the key components of any community collaboration is communication. This isn't as easy as it sounds, because many community activities are undertaken by people in their spare time—outside of normal work and home activities.

	<p>Therefore, they might be communicating during office hours on their work computer, after hours on their home computer, or during any spare moment wherever they may happen to be. That makes using traditional desktop email, such as Microsoft Outlook or Windows Mail, problematic. The better solution when communication on community issues is to use a web-based email program, such as Gmail (mail.google.com), Microsoft Windows Live Hotmail (mail.live.com), or Yahoo! Mail (mail.yahoo.com). These programs can be accessed from any computer connected to the Internet. You use your web browser to send and view email messages hosted on the web. You can send and receive messages at work, at home, or from wherever you happen to be. Everything you send and receive is stored in the cloud, accessible from anywhere at any time.</p> <ul style="list-style-type: none"> <li>• Communicating Across the Community</li> <li>• Collaborating on Schedules</li> <li>• Sports Team Schedules</li> <li>• School Schedules</li> <li>• Community Group Schedules</li> <li>• Event Schedules and Management</li> <li>• Collaborating on Group Projects and Events</li> <li>• Collaborating on To-Do Lists</li> <li>• Collaborating on Task Management</li> <li>• Collaborating on Event Management</li> <li>• Collaborating on Event Marketing</li> <li>• Collaborating on Budgets</li> </ul> <p><b>Write collaboration in group project and events by cloud computing.</b></p>	8	8
VI (b)	<p>Community groups often have a lot on their plates. Someone has to schedule the next fundraiser, someone else needs to print up flyers, someone else is in charge of recruiting new members...there's just a lot of stuff to do!</p> <p>How does your community group manage all these activities? In the new world of cloud computing, the best way is with a web-based application—which anyone in the group can access.</p> <ul style="list-style-type: none"> <li>• Collaborating on To-Do Lists</li> <li>• Collaborating on Task Management</li> <li>• Collaborating on Event Management</li> <li>• Collaborating on Event Marketing</li> <li>• Collaborating on Budgets</li> </ul>	7	7
VII (a)	<p><b>Explain various online scheduling applications in cloud.</b></p> <p>As anyone in a large office knows, scheduling a meeting can be a frustrating experience. Not only do you have to clear time from</p>		15

	<p>all the attendees' individual schedules, you also have to make sure that the right-sized meeting room is available at the designated time. Experts claim that it takes seven emails or voice mails to arrange a single meeting; a typical businessperson can spend more than 100 hours each year just scheduling meetings.</p> <ul style="list-style-type: none"> <li>• Jiffle</li> <li>• Presdo</li> <li>• Diarised</li> <li>• Windows Live Events</li> <li>• Schedulebook</li> <li>• Acuity Scheduling</li> <li>• AppointmentQuest</li> <li>• hitAppoint</li> </ul>	8	8	
VII (b)	<p><b>Explain various online planning and task management applications in cloud.</b></p> <p>Planning and task applications let you manage everything from simple to-do lists to complex group tasks, all over the Internet and collaboratively with other users. Some eg are:</p> <ul style="list-style-type: none"> <li>• iPrioritize</li> <li>• Bla-Bla List</li> <li>• Hiveminder</li> <li>• Remember the Milk</li> <li>• Ta-da List</li> <li>• Tudu List</li> <li>• TaskTHIS</li> <li>• Zoho Planner</li> </ul> <p>Cloud computing offers many advantages when you're trying to keep your life in order. First, of course, you can add and view the things you need to do wherever you are—from any Internet-connected computer and, in many cases, from your handy-dandy cell phone. This is much more useful than it might sound at first blush; always having your todo list with you is a tremendous productivity boon, possible because of the web-based nature of cloud computing.</p>	7	7	15
VIII (a)	<p><b>Explain web based word processing in cloud.</b></p> <p>Microsoft Word is a software program that is installed on your computer's hard disk. Web-based word processors, in contrast, are hosted in the cloud, not on your hard drive—as are the documents you create with these applications. And these web-based applications mimic the key features of Microsoft Word, so you don't give up much in the way of functionality. With a web-based word processing application, you'll never discover that the document you need is located on your office PC when you're at</p>			

	<p>home or away. Also nice is that, by being web based, you can easily share your documents with others. That makes real-time workgroup collaboration possible from anywhere around the globe, which is something you don't have with Microsoft Word and similar desktop software programs. Another benefit of being web based is that you can't lose your work—theoretically, anyway. After you've named the document you're working on, the webbased word processor saves your file on its cloud of servers. From that point on, every change you make to the document gets saved to the cloud servers automatically. Nothing gets lost if you close your web browser, navigate to another website, or even turn off your computer. Everything you do is saved on the web. Best of all, most of these web-based applications are free. That's free, as in it costs zero dollars, unlike the ever increasingly expensive Microsoft Office suite. Being free makes it easy to take for a test drive, and even easier to add to your bag of applications. Many early users who've tried these web-based applications have said that they're likely to switch from Microsoft Word. These cloud services can perform nearly all of Word's basic functions, which make them perfect for corporate and small business environments.</p> <p><b>Write a short note on online file storing and sharing.</b></p>	8	8	
VIII (b)	<p>The servers used for cloud storage are typically hosted by third-party companies who operate large data centers. When you subscribe to a cloud storage service, you lease storage capacity from the cloud storage service. You then have access to the contracted amount of storage space, which you access via the Internet.</p>			15
IX (a)	<p><b>Explain various instance message service available in cloud.</b></p> <p>Email is just one way to communicate online. For many users, instant messaging is a better way to talk; it's more immediate, because you can send text messages in real time to your friends and coworkers. No more waiting for people to respond to your emails—when both parties are online at the same time, it's just like having a one-on-one conversation! Instant messaging, however, doesn't use servers at all. When you send an instant message to another user, that message goes directly to that user's PC; it's not filtered by or stored on any servers. The technical name for this type of connection is peer-to-peer (P2P), because the two computers involved are peers to each other. All instant messaging needs to work is a piece of client software and the IP addresses of each computer. The messages go directly from one IP address to another, with no servers in the middle to slow things down.</p>	7	7	

Examples: AOL Instant Messenger, Google Talk, ICQ, Windows Live Messenger, Yahoo! Messenger

**What are the various features of web conferencing services?**

Here are some of the most common:

IX (b)

- \_ Application sharing, where the presenter and participants can all access and use the same application in real time. This is useful for smaller group meetings, when all participants are collaborating on a project.
- \_ Desktop sharing, similar to application sharing, but with the presenter's entire desktop visible and accessible to participants.
- \_ File and document sharing, with individual files and documents open for all to edit, also useful for group collaboration.
- \_ PowerPoint presentations, the core component of large presentations; the presenter gives a PowerPoint presentation in real time, complete with slide transitions and animations, using audio conferencing tools to narrate the presentation. Presenter notes, which let the presenter take notes during the course of the conference for future action.
- \_ Annotation, which lets the presenter mark up the document or presentation being shared or given, typically by drawing or highlighting on the screen.
- \_ Whiteboard, which is a blank screen on which the presenter or participants can draw or highlight objects.
- \_ Text-based chat, which lets participants discuss the presentation with each other in real time.
- \_ Audio conferencing, which adds the spoken words of the presenter to a PowerPoint presentation. With two-way audio, all participants can speak—assuming that they all have microphones, of course.
- \_ Video conferencing, which puts a picture of the presenter in a corner of the conference webtop, typically generated via webcam. With twoway video, conference participants can also show pictures of themselves onscreen.
- \_ Polling, which lets the presenter ask questions of the audience.
- \_ Quizzes, which lets participants answer test questions, typically with results tabulated in real time.

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**Explain collaboration via blogs with examples.**

X (a)

A blog (short for "web log") is a kind of online journal that its author updates frequently with new musings and information. In terms of organization, a blog is a collection of individual posts or messages. The posts are arranged in reverse chronological order, with the newest posts at the top— which makes it easy to keep track of the latest developments. Older posts are relegated to the blog archives, which are generally accessible via a link in the

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sidebar column. And, at the end of each post, you'll find a link to comments; this is where blog readers can register their own personal comments about any given post. But here's what makes blogs really powerful. A blog doesn't have to be the work of a single author; it can include posts from multiple contributors, as well as comments on each of those posts. This makes a blog ideal for keeping track of progress on a group project.  
Examples: Blogger, TypePad, WordPress.

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**Write about the collaboration on Wikis.**

X (b)

Wikipedia is, in essence, a giant online encyclopedia—but with a twist. Wikipedia's content is created solely by the site's users, resulting in the world's largest online collaboration. Wikipedia articles are written, edited, and elaborated on by people of all types, from students, to subject-matter experts and professional researchers, to interested amateurs. It's a true group collaboration. Which is, in fact, what a wiki is—a collection of web pages where any users can contribute or modify content. The first wiki was WikiWikiWeb, a website founded in 1995 to facilitate the exchange of ideas between computer programmers. Wikis enable all users not only to write new articles, but also to comment on and edit existing articles.

Today, many organizations use wikis as collaborative applications. A group wiki can be public (open to all users), as Wikipedia is, or private—which is ideal for project groups, businesses, and other organizations. A private wiki invites all group members to create new pages on the wiki site or to edit any existing page. All writing and editing is done within the web browser, no extra software or tools necessary. In most instances, there is no review of the articles or edits before they're accepted. The result is a collection of articles or documents, written collaboratively. The wiki software organizes the articles behind the scenes and manages the versioning for each article.

Examples: Wikipedia, PBwiki, Versionate, wikihost.org, Wikispaces, Zoho Wiki

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