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தமிழ் நாடு அரசு

தொழில்நுட்பக் கல்வித் துறை, சென்னை 600 025 - வாரியத் தேர்வுகள்
அடுத்தப் பக்கத்தில் கொடுக்கப்பட்டுள்ள குறிப்புகளை படிக்கவும் (Read the instructions given in the next page)

Q. No.	A	B	C	Q. No.	A	B	C	Q. No.	A	B	C	Q. No.	A	B	C
1.				9.				17.				25.			
2.				10.				18.				26.			
3.				11.				19.				27.			
4.				12.				20.				28.			
5.				13.				21.				29.			
6.				14.				22.				30.			
7.				15.				23.				31.			
8.				16.				24.				Total Marks			

For Revaluation

For Central Valuation

Q. No.	A	B	C	Q. No.	A	B	C	Q. No.	A	B	C	Q. No.	A	B	C
1.	0			9.	0			17.				25.			
2.	0			10.	0			18.				26.			
3.	0			11.	2+1			19.				27.			
4.				12.	0			20.				28.			
5.	0			13.		02		21.				29.			
6.	0			14.		2+1		22.				30.			
7.				15.				23.							
8.				16.				24.							

1684

591-1684-23506234



08

Question Paper Code No.

வினாத்தாளின் குறியீட்டு எண்

13 7 7

No. of Pages

எழுதப்பட்ட பக்க எண்ணிக்கை

23

Date of Examination : 14/11/2024
தேர்வு நாள்

Subject Name : CLOUD COMPUTING AND
பாடத்தின் பெயர் INTERNET OF THINGS

Perforations to tear fly slip

ii) ~~network~~ Security on a third party

- a) Hackers
- b) Denial of cloud services
- c) Security audits
- d) Bot attacks
- e) Logging

தேர்வாளர்களுக்கான அறிவுரைகள்
INSTRUCTIONS TO CANDIDATES

1. விடைத்தாள் மாற்றிப் பெறுவதற்கு.
Get the answer book replaced, if
 - விடைத்தாள் சரியாக சேர்ந்து பின் செய்யப்படாமல் இருந்தால்.
 - it is not stapled properly
 - விடைத்தாள் புத்தகப் பக்கங்களின் வரிசை எண் விடுபட்டிருந்தாலோ அல்லது வரிசையாக இல்லாமலிருந்தாலோ (மொத்தம் 30 பக்கங்கள்).
 - the page numbers are missing or not in order (there shall be 30 pages continuously numbered)
 - தலைப்பு பக்கத்தில் விடைத்தாள் புத்தகத்தின் கீழ்பகுதியில் வரிசை எண் அச்சிடப்படாமலிருந்தால்.
 - the serial number of the answer book is not printed at the bottom of the title page
2. உங்களுடைய பதிவு எண்ணையும், பெயரையும் அதற்காக கொடுக்கப்பட்டுள்ள தலைப்பு பக்கத்தின் கீழ்பகுதியில் மட்டும் எழுதவும்; அதைத் தவிர்த்து பதிவு எண், பெயர் ஆகியவற்றை விடைத்தாளில் மற்றப் பக்கங்களில் எழுதக்கூடாது. எந்தவிதமான அடையாளக் குறியீட்டையும் விடைத்தாளில் எழுதக்கூடாது.
You are prohibited from writing your REGISTER NUMBER or NAME in any part of the answer book, other than the space provided at the bottom of the title page. You are prohibited from writing or leaving any distinguishing marks so as to identify your answer book.
3. தலைப்புப் பக்கத்தில் கொடுக்கப்பட்டுள்ள அதற்குரிய கட்டங்களில் விவரங்களை எழுதவும்.
Fill up all the particulars, in the relevant boxes, in the title page.
4. கேள்விகளுக்கு பதில் எழுதும் போது விடைத்தாளில் இரண்டு பக்கங்களையும் பயன்படுத்த வேண்டும். பக்கங்களில் தொடர்ந்து விடை எழுதாமல் வெற்றிடம் விடக் கூடாது.
Use both sides of the paper for answering questions, without leaving spaces/ lines in between.
5. இந்த விடைத்தாள் புத்தகம் போதுமான பக்கங்களை கொண்டிருக்கிறது. இதைத் தவிர கூடுதல் விடைத்தாள் அளிக்கப்படமாட்டாது.
This answer book contains sufficient pages and no additional sheets will be issued.
6. கேள்விக்கு விடையளிக்கும் முன்பு வினாத்தாள் எண், வருடம், மாதம், காலம் இவைகளை சரிபார்க்கவும்.
Check the Code Number, Month and year of Examination, Duration etc., in the question paper before answering the questions.
7. கொடுக்கப்பட்டுள்ள வரைப்படத்தாள் / கிராப் ஷூட் தவிர வேறு எந்த விடைத்தாளையும் சேர்க்க கூடாது. விடைத்தாள் புத்தகத்திலிருந்து எந்த பக்கத்தையும் கிழிக்கக் கூடாது.
No extra sheet is to be attached except the drawing/graph sheets supplied and no sheet is to be teared from the answer book.
8. கைபேசி, துண்டுக் காகிதம் மற்றும் தடை செய்யப்பட்ட இதர பொருட்கள் வைத்திருத்தல், தேர்வுக்கு எதிரான முறைகேடுகளில் ஈடுபடுதல் அனைத்தும் தேர்வு வாரிய விதிகளின்படி தண்டனைக்குரிய குற்றமாகும்.
POSSESSION OF ANY PROHIBITED MATERIAL, CELL PHONE, BITS OF PAPERS, etc., AND INVOLVEMENT IN MALPRACTICE OF ANY NATURE SHALL BE PUNISHABLE AS PER BOARD'S RULES.

இந்த வினாத்தாள் மட்டும் மட்டும் வினா எழுத வேண்டும். கடைசி மணி அடித்த

PART-B

11) a) i) Explain the component of cloud with a neat diagram.

* Cloud computing involves Internet based services and resources that are Internet based oriented architecture. event-driven architecture.

* Cloud computing - its components are given -> network, security, etc.

i) network interface on a third party (APIs)

a) Hacked interface of insecure (APIs)

b) Breach attacks

c) Spoofing & meltdown

d) measured security

e)

ii) network security on a third party

a) Hackers

b) Denial of cloud services

c) Security audits

d) Bot attacks

e) Logging



f) Software improve attacks

g) Account hijackers

i) network interface on a Third party

Cloud computing-i network interface
 through Internet Cloud to L3 & coin
 through. This process is 2000. 2000
 2000, Cloud component-on 2000
 2000 2000 2000. Human interface 2000
 2000.

a) Hacked Security of a system

Cloud computing-i now most data-on
 Cloud Storage system, Third party
 data access system. 2000
 2000 for 2000 2000 2000
 have 2000 2000 2000. 2000
 2000 2000 2000 data-on
 Cloud 2000 2000.

b) Breach attacks

Cloud computing 2000 2000 Authorized
 2000 2000 data-on Cloud-on 2000
 2000 2000 Breach attacks 2000.



c) Specter & melt down

Cloud computing is Specter & melt down process where data may be stolen or leaked. Hackers can steal data, and this is a serious problem. Specter & melt down is a serious problem.

d) measured Security

Cloud computing is a component of cloud. Third party Security software can protect data processing and data. But there are many security issues.

ii) Security of third party

Cloud component is a third party data storage. Data is located in cloud storage. There are many security issues. For example, data controller can control data.

i) Hackers

Cloud components are Internet services. There are many security issues. For example, hackers can steal data.



Email Account, online media Account, etc. Easy-to-hack attack available. Therefore, need data-own security measures to protect them.

2) Denial Security of attacks

Denial Security involves on-demand security attacks involving interface cloud computing security and Denial Security of third party attack protection.

3) Security builds

Cloud components - software as a Service Environment cloud computing and security build.

Cloud components - software as a Service Environment cloud computing and security build.

i) Software as a service (SaaS)

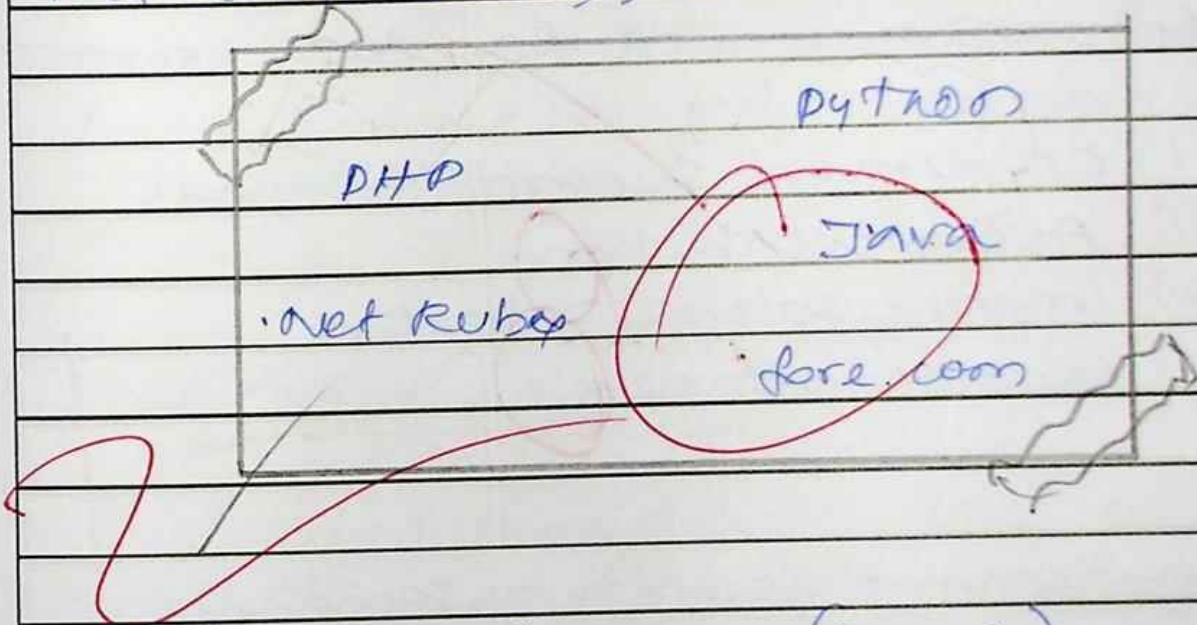
ii) Platform as a service (PaaS)



(iii) ^{Infrastructure} ~~Internet~~ as a service (IaaS)

i) Software as a service (SaaS)

Cloud computing - programming, Storage
Server in development Environment SaaS -
examples: PHP, Java, Python, .NET
Net Ruby Examples.



ii) Platform as service (PaaS)

Cloud computing platform as service
on location create various place
platform as a service examples.
Software on cloud - Storage
on various programming platform
Service examples (PaaS)



11(a)

ii) Describe the essential characters of cloud computing

Essential characteristics

Cloud computing - is essential character of cloud computing is that it is a distributed system which is managed centrally. It is a distributed system which is managed centrally.

- i) On-demand service & service
- ii) Account hijacking
- iii) Improper software updates
- iv) Breach attack.

i) On-demand service & service

cloud computing - is on-demand service internet based services security policy oriented components and subcomponents. It is a human interface. It is a distributed system which is managed centrally.

Characteristics



Travel portal-^o ^o ticket book also
Electronic ^o user-^o online ^o
^o ticket book ^o
.

(ii) Breach Attack

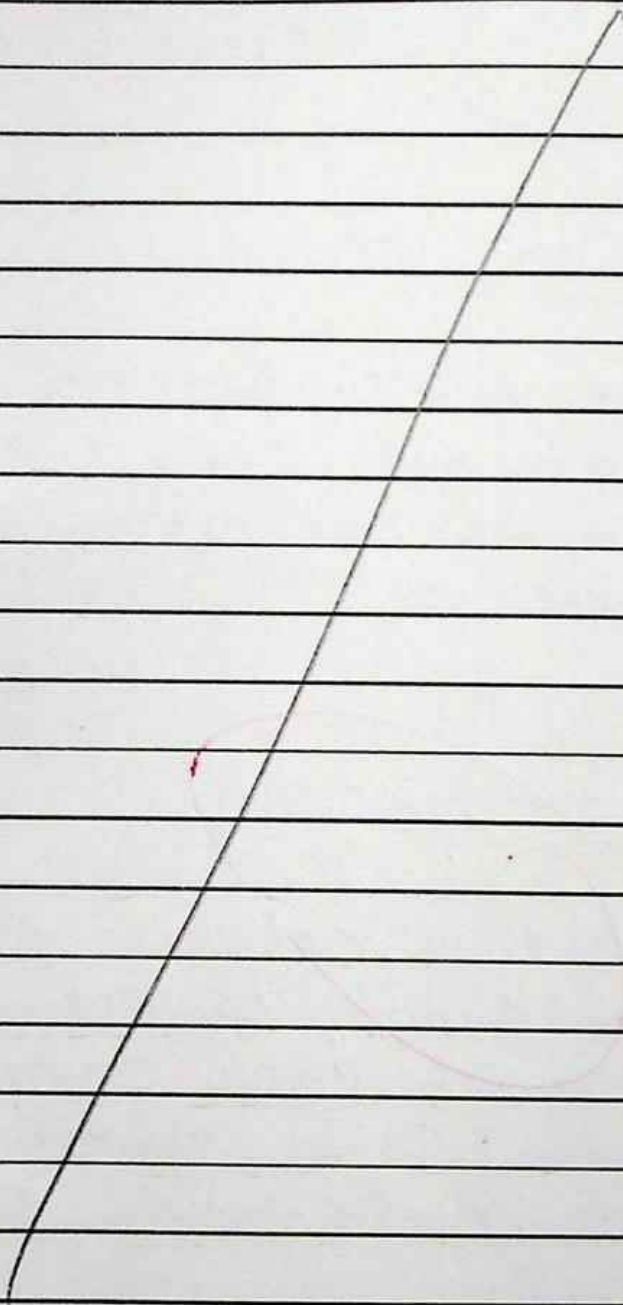
Third Authorization ^o
data-^o third party ^o
have ^o breach ^o
.

(iii) Account Hijack

cloud computing-^o ^o ^o
account, email account, media ^o
block mail ^o ^o
hijack ^o.

* data-^o ^o.

* Recovery-^o ^o ^o.





2) 1) Explain the benefits of Software as a Service (SaaS)

Cloud computing - Software as a Service Platform - new programming. Software languages PHP, Java, Python, JS, .NET, Node, NetRuby. Supporting Software Development.

Benefits

* Cloud Computing - Level of Service - new SaaS programming, coming Laas - etc. PaaS - etc. Fully automated services through programming.

* Cloud computing - Platform as Service. Shared Software - support other business programming. Supporting SaaS services through application Cloud - programming.

* Cloud computing - SaaS - shared programming. Computer - install new programming. Online web browser - new programming. Programming.

* Cloud computing - SaaS - application support. Storage and create new programming.



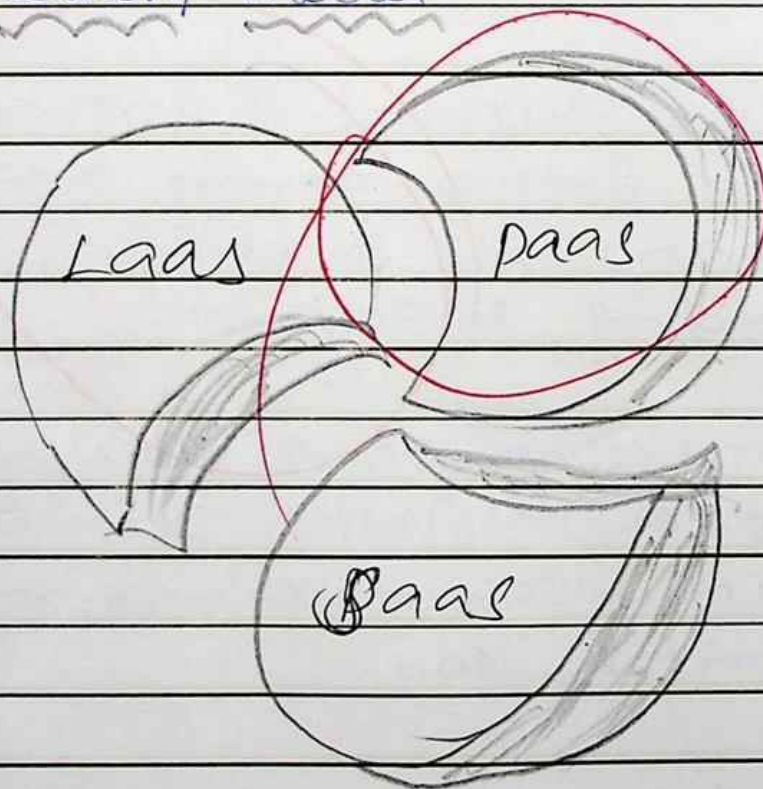
* Cloud computing SaaS - ന്റെ നോട്ട്
നോട്ട് Security Software ഉൾപ്പെടെ ഉൾക്കൊള്ളുന്നു.

* Cloud computing - ൽ bundle കൾക്ക്
Security policy ഉൾക്കൊള്ളുന്നു.

* Cloud computing - ൽ ഉൾപ്പെടെ നോട്ട് ഉൾക്കൊള്ളുന്നു
Service Software as a Service ഉൾക്കൊള്ളുന്നു.

ii) Describe about the cloud delivery model

Cloud delivery model





i) Platform as a service (PaaS)

ii) Software as a service (SaaS)

iii) ^{Infrastructure} ~~Internet~~ as a service (IaaS)

i) Platform as a service (PaaS)

Cloud computing - computer as service
software as a service, this service - IaaS - only
PaaS - providing the environment for the user.

Example: program - user's function - environment
user can locate - environment - user's environment PaaS
environment.

ii) Software as a service (SaaS)

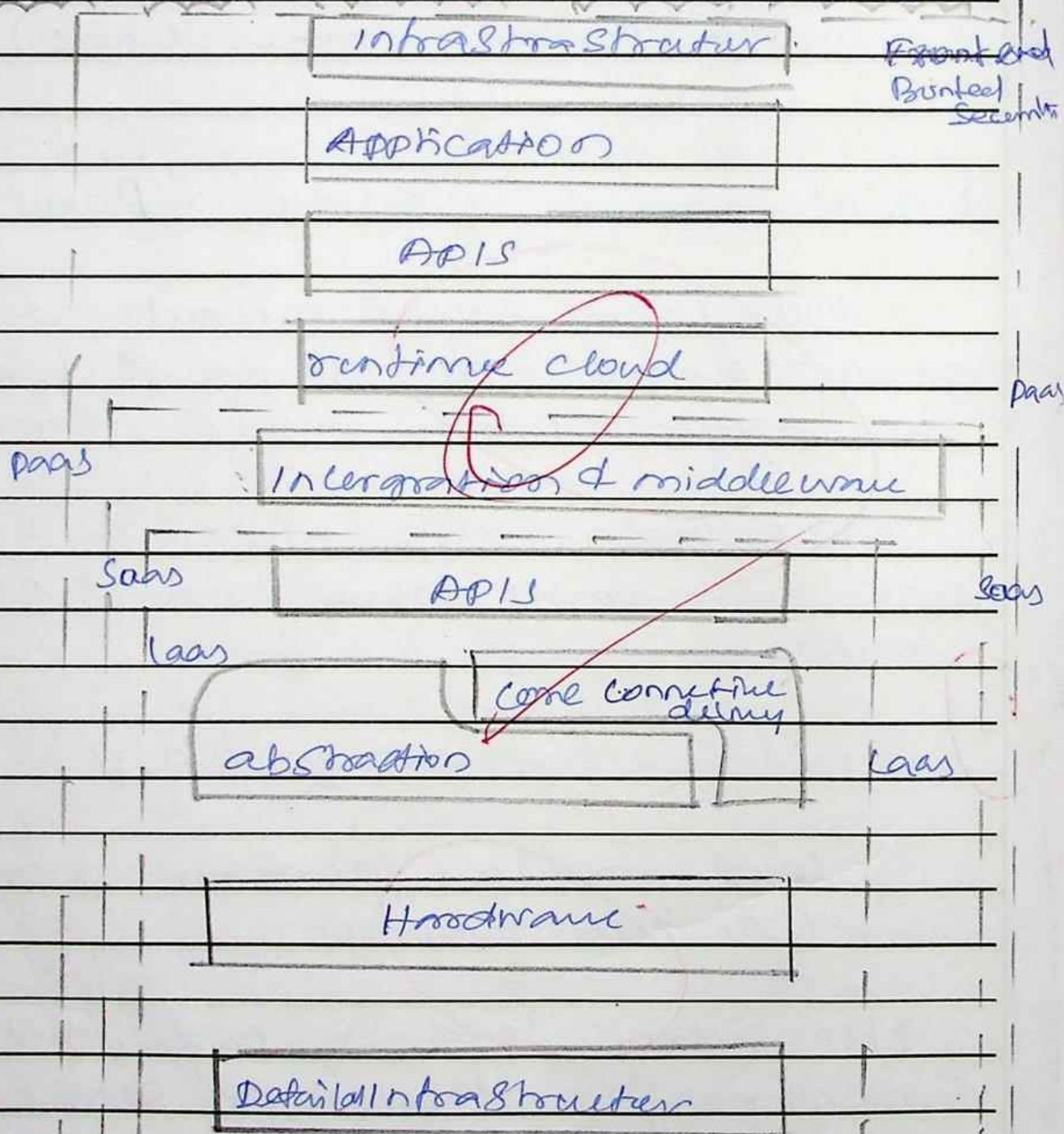
Cloud computing programming as a
Service environment - environment.

PHP, Python, Java, JS, Node, Net Ruby
Programming Software as a service -
environment.



- 13) Draw and explain about the CSA Cloud reference model

CSA Cloud reference model - in image





CSA involves cloud security alliance
motivated by cloud computing resources
CSA reference model is as follows.

CAS - is Coating Service on 2nd floor

- i) Software as a Service (SaaS)
- ii) Platform as a Service (PaaS)
- iii) Infrastructure as a Service (IaaS)

CSA code model-19 short members.

- i) Application
- ii) APIs
- iii) Runtime cloud
- iv) Integration & middleware
- v) Core connection delivery
- vi) abstraction
- vii) Hardware
- viii) Detailed infrastructure.

- ### i) Application

Cloud Computing - ^{CSA}~~CSA~~ Model

CSA

Chlorophyll



Cloud Security Alliance (CSA) reference model consisting of:

* Cloud computing: Storage, Servers, Client Internet Browser, mobile devices, Applications, etc.

* Google App, Firefox, Internet Explorer, Google App Engine (GAE) Browser, etc.

* Boundary Security - of PaaS environment

* PaaS controls: SaaS and PaaS environment boundary.

ii) APIs

Cloud computing - of API - based platform - in the application - use Internet based environment.

iii) Runtime Cloud

Cloud computing - of Internet based Third Party Cloud Storage Environment, etc.



എന്നിവിടെ locate ന്നിവിടെ ഉദാഹരണമായി US-ന്
2000-ൽ UK-ന് locate ചെയ്തു. ന്നിവിടെ
UP-ന് 2000-ൽ UK-ന് locate ചെയ്തു.

* എന്നിവിടെ Hardware ന്നു കൂടുതൽ

* എന്നിവിടെ Limited Storage എന്നിവയ്ക്കായി
ഉപയോഗിക്കുന്നു.

iv) Integration & middleware

* Cloud computing-ന് Integration &
middleware എന്നിവ ഉപയോഗിച്ച് Server-ന്
Integration ചെയ്യാനുള്ള ഒരുങ്ങിയ ഉപകരണം.

* Cloud Server ഉപയോഗിച്ച് ഉപയോഗിക്കാൻ
locate ചെയ്യാനുള്ള ഒരുങ്ങിയ Integration
middle software.

* ഇവിടെ ഇവിടെ data-ന് ന്നിവിടെ കൂടുതൽ
ഉപയോഗിക്കാൻ ന്നിവിടെ data-ന് ഉപയോഗിക്കാൻ
ഉപയോഗിക്കാൻ ഉപയോഗിക്കാൻ middle
software.

v) Core connecting delay



Cloud computing platform does not
core connectivity defines service
provisioning.

vi) abstraction

Cloud computing is abstraction
application service for various
environments abstract resource management
model.

vii) Hardware

Cloud computing is hardware using
computer, mobile device, switch, rack
server, etc. environment. Model,

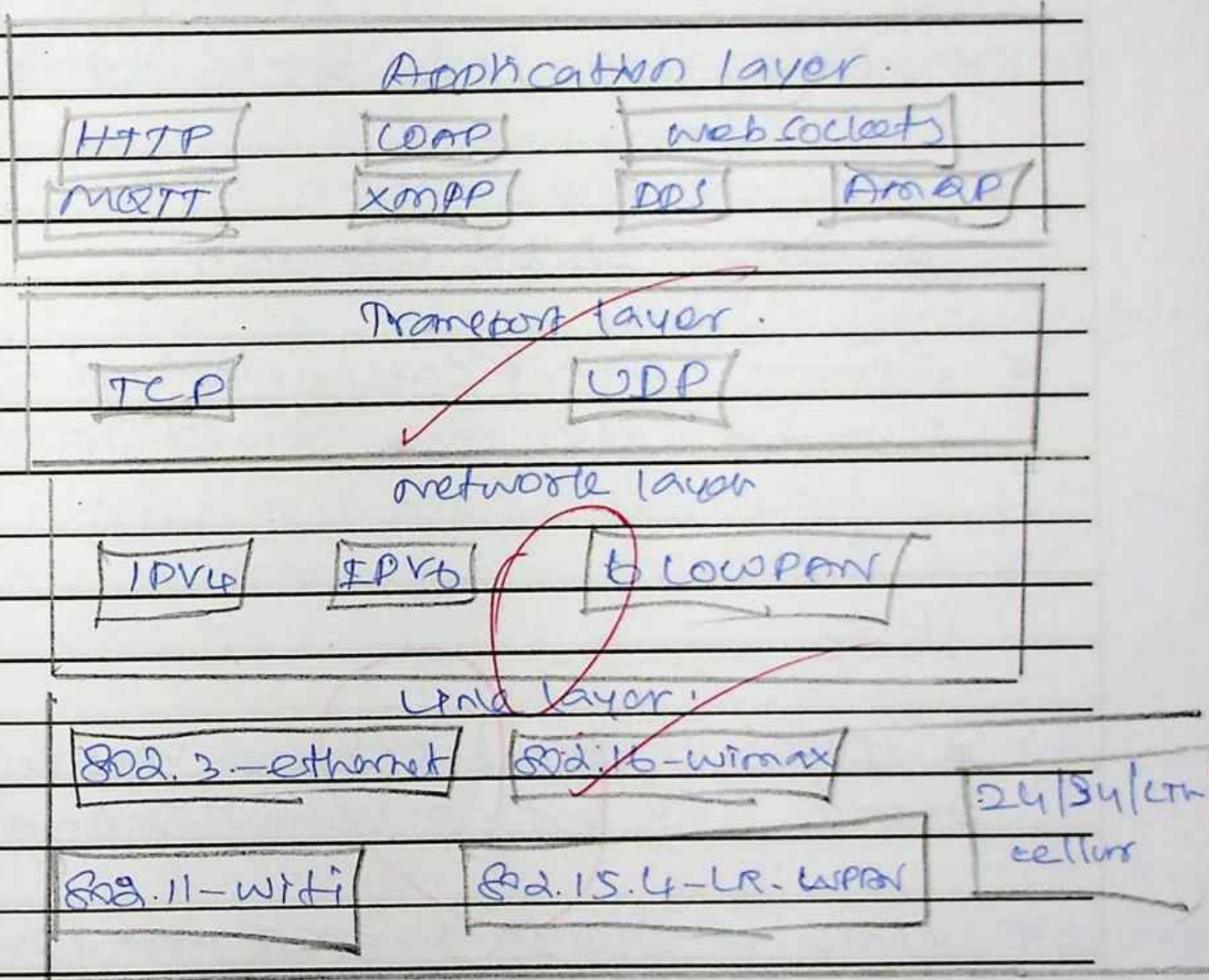
* Internet-based application run over
integrated device hardware environment.

14) Explain the Network Layer of IoT protocol

5) IoT network layer consists of various
sub-components.



- i) Application layer
- ii) Transport layer
- iii) network layer
- iv) Link layer.



i) network layer →

- i) IPv4
- ii) IPv6
- iii) 6 LowPAN.



1) ~~IPv4~~ IPv4

* Internet protocol version 4
 ଇଣ୍ଟରନେଟ ପ୍ରୋଟୋକଲ୍ (IPv4)

* IEEE - ମାନକ IPv4 ଡାଟା ଶ୍ରେଣୀ ଶୁଦ୍ଧ

* IPv4 - ୦୧ ୧୫/୫ - ମିନିଟ୍ ୫୦ ୫୫/୫ ମିନିଟ୍
 ଡାଟା ୩୨ bit ଡାଟାମିନିଟ୍.

* ଡାଟା କୋକାଲ୍ କାବ୍ଲ, ଓପ୍ଟିକାଲ୍ ଫାଇବର
 କୁରୁମିଂ କାବ୍ଲ ଡାଟା କନେକ୍ଟ ନାହିଁ ଥାଏ

ii) IPv6

* IPv6 - Internet protocol version 6
 ଡାଟା ୧୨୮ bit - ୧୫ ମିନିଟ୍ ୫୫/୫ ମିନିଟ୍.

* IPv4 - ୦୧ ୧୫/୫ ମିନିଟ୍ version - ୦୦୮ IPv6
 ଡାଟା

* IPv6 ଡାଟା ୫୦ ୫୫/୫ - ମିନିଟ୍ ୧୦୦ ୫୫/୫
 ଡାଟାମିନିଟ୍.



iii) 6LoWPAN

* 6LoWPAN providing full-up modern Internet access over wireless.

* Data speed 64B/second approx.
4000B/second approx.

b) ii) Describe the role of a wireless sensor network in IOT systems

Wireless network sensor network without cable-wired connectivity provides distributed data.

* Data speed 144B/second approx 64B/second approx.

* Wireless sensor connectivity through laptop, mobile device, smart device, various wireless connectivity sensor data collection.

* IOT - Internet of Things - wireless



Computer system-into service provider.

PART-A

① Define cloud computing

* Cloud computing is a model of computing in which computing resources are provided as a service over the internet. In this model, data is stored in the cloud and accessed over the internet. This model is known as cloud storage and is used for storing data in the cloud.

* In this model, data is stored in the cloud and accessed over the internet. This model is known as cloud storage and is used for storing data in the cloud.

② Define security in security computing

* Cloud computing is a model of computing in which computing resources are provided as a service over the internet. In this model, data is stored in the cloud and accessed over the internet. This model is known as cloud storage and is used for storing data in the cloud.

* In this model, data is stored in the cloud and accessed over the internet. This model is known as cloud storage and is used for storing data in the cloud.



10) List any three commands in Raspberry-Pi

Raspberry-Pi-nin English 2000 2000

i) HDMI Port

ii) Audio Jack

iii) Ethernet Port

iv) Signal LED

v) RVC Input

6) Define Infrastructure as a Service (IaaS)

* Cloud computing of Internet component
 provides SubComponent-an organization
 connect their services through cloud
infrastructure as a Service organization
(IaaS)

* Paas organization to Paas in form
connecting Service from organization

* Long online connection and data



Download and run the
application.

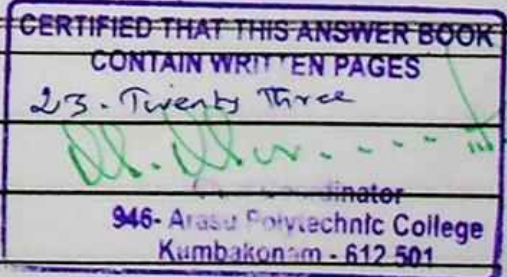
Ex: Chrome, Firefox, Internet Explorer, etc.

Write note on Virtualization Security Management

Cloud computing or virtualization
Security management involves, US or other
locate from UK or locate issues,
India or other locate, Germany or locate
issues, etc. Virtualization Security
Management involves.

* Monitor track and control.

* von Wam, Cloud, web server, etc.
Virtualization Security management involves.





A series of horizontal lines for writing, with a large 'X' drawn across the page. The 'X' is formed by a black line and a red line. The black line starts near the top right and extends towards the bottom left. The red line starts near the middle left and extends towards the bottom right. At the bottom left, there is a rectangular stamp area containing the following text (mirrored/bleed-through from the reverse side):

CERTIFIED TRUE AND FAITHFUL COPY
FOR THE RECORD
JAN 11 2011
JAN 11 2011
JAN 11 2011

