Ans 1 – Inter cloud resource management refers to coordination and efficient utilization of resources across multiple cloud environments.

↳ (a) Load Balancing
(b) Cost optimization
(c) Resilience and Scalability

⇒ examples of multi cloud resource optimization for retail company –

(1) AWS – standard operations due to its strong global presence and support.

(2) Google cloud platform – running ML algo and model that analyses.

(3) Microsoft Azure – data storage and disaster recovery.

Ans 2 – (1) Static resource provisioning – fixed capacity, manual changes, stable workloads.

(2) Dynamic resource planning – automatic adjustment, cost efficiency, cloud native applications

(3) On demand resource provisioning – real time resource allocation

④ Auto Scaling – web applications

⑤ Over provisioning and elastic provisioning

⇒ Static Provisioning vs Dynamic Provisioning

Static Provisioning	Dynamic Provisioning
1. Fixed resource	1. Dynamic resource
2. Not Scalable	2. Highly scalable
3. Requires manual adjustment	3. Automatically managed.
4. Cost increase	4. Cost efficient
5. Predictable workloads	5. Unpredictable workload.

Ans 3 – Major security challenges –

① Data breached – for both CSPs and users. Unauthorized access to sensitive information can lead to financial loss, legal issues.

② Insufficient Identity and Access Management – for controlling who can access cloud resources.

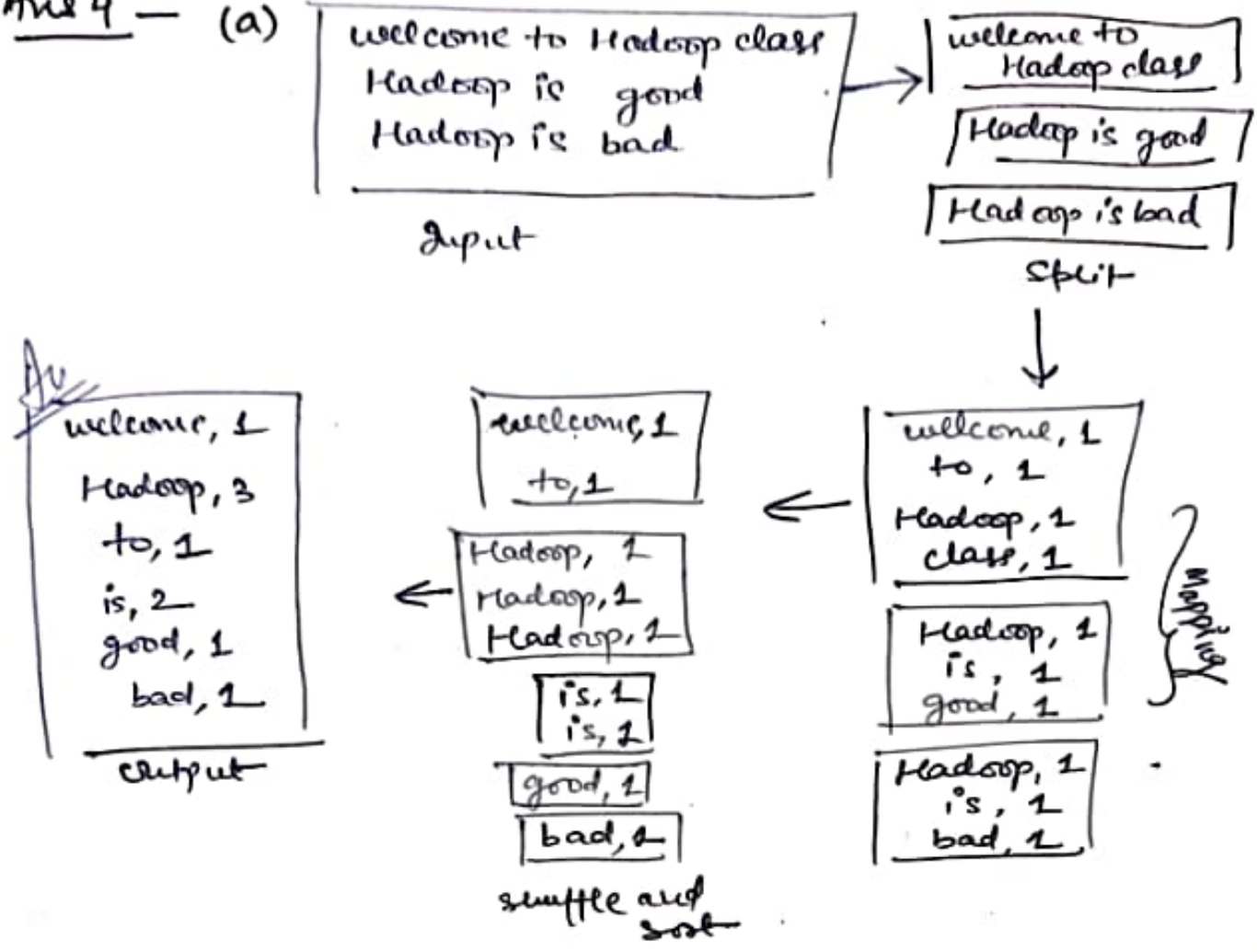
③ Insecure APIs – used in cloud environment for interaction between services, it can lead to Denial of service.

④ Data loss – occurs due to accidential deletion, updation or disaster

⑤ Compliance and legal issues – GDPR, HIPAA, etc.

(6) Lack of visibility and control – making it difficult to monitor and respond to security incidents effectively.

Ans 4 – (a)



(b) Similarly, final dictionary :

```
if, 1
you, 2
notice, 4
this, 2
will, 1
it, 1
not, 1
watch, 1
noticing, 1
```

(c)

```
red, 3
lorry, 6
yellow, 3
```

Ans 5 – Four levels of federation :

(1) Infrastructure – sharing physical and virtual infrastructure resources
↳ resource sharing, security.

(2) Platform – can incorporate. Host environments where applications are developed.

(3) Service – integration of services across various cloud environments, can achieved through APIs and SOA.

(4) Identity – on managing user identities and access across multiple cloud using federated (FIM) systems.

⇒ This leads to enhancing cloud interoperability –

↳ seamless integration, standard protocols (REST, SOAP), unified experience.