PART-A

② Big data generated by IOT systems:

eg:- weather monitoring systems will have big data about the different locations and their climatic conditions. sensors will be placed all over the location and it should predict temperature and it should detect whether it is rainy, cloudy or windy.

③ Different kinds of alert sent by an intrusion detection:

⇒ Intrusion detection use sensor and cameras to detect any harmful things happening inside house.

Alerts

① Through sms
② Through gmail
③ sends images or video clip in advanced devices
④ voice messages

④ Structural health monitoring system :-

Structural health monitoring system analyze the structural health of building and give emergency alerts if there any building crack happened.

- cracks in the building
- Damages in the building
- monitor its structure

* If any collapse in the building, it will immediately sents alerts.

(5) Ans :-

yes, IOT can play play a role in both prognostics and diagnostics of industrial machines.

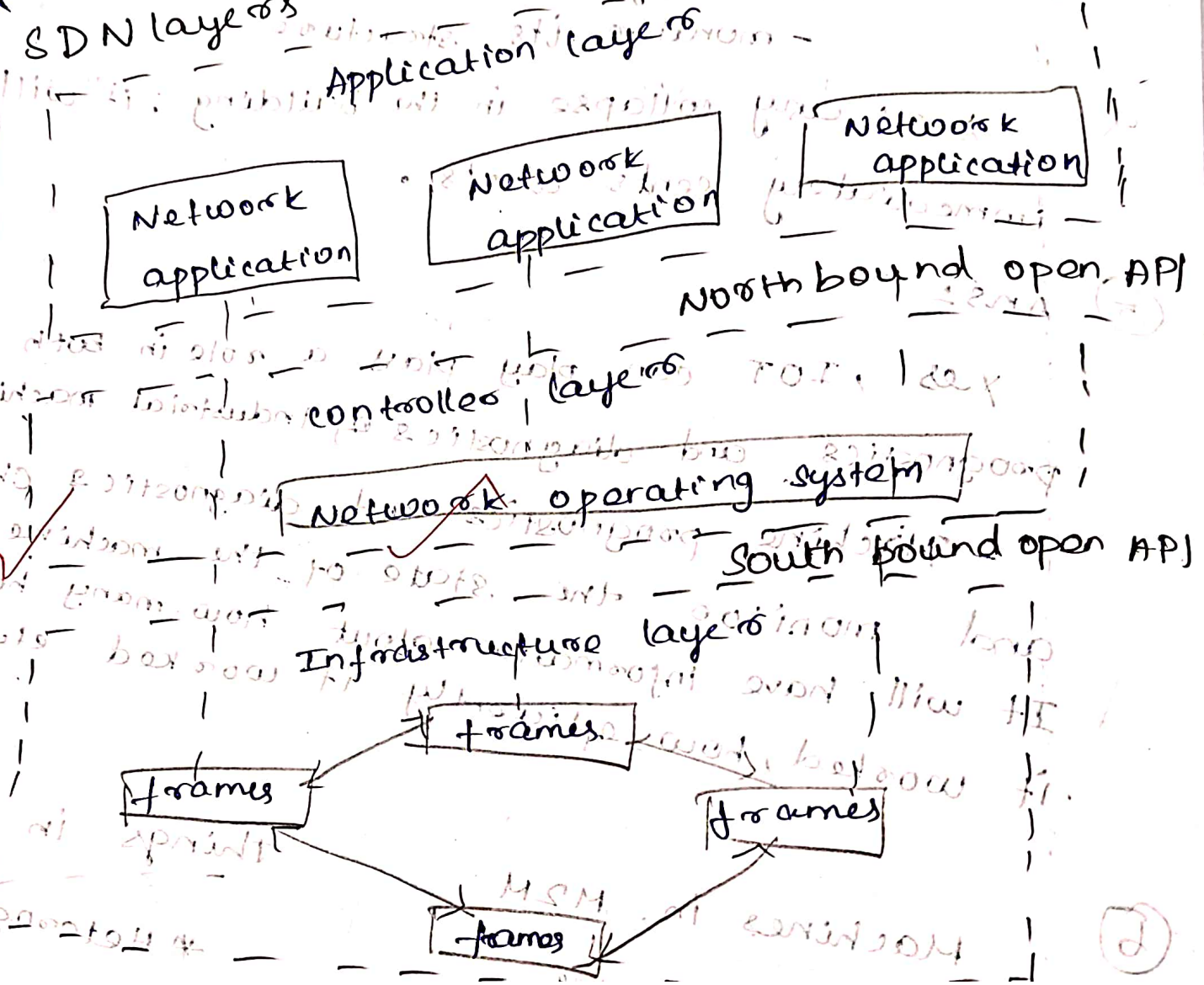
Machine prognostics and diagnostics checks and monitor the state of the machine. It will have information about how many hours it worked, how efficiently it worked etc...

(6)

Machines in M2M	Things in IOT
* Homogeneous	* Heterogeneous
* embedded with hardware	* embedded with software
* eg :- HTTP, COAP, websockets etc.	* eg :- zigbee, bluetooth, M-bus, mod-bus etc...
* Point to point solutions	* cloud-based solutions.

(7)

SDN layers


Application layers
Network application
Network application
Network application
Northbound open API
controller layers
Network operating system
Southbound open API
Infrastructure layers
frames
frames
frames
frames

(8) Ans:

- SDN and NFV are related because both monitor and configure the different network devices like

- Switches
- Routers
- Hub

etc...

- can have RPC protocol

SASTRA

9. Ans:-

* SNMP is not suitable for configuration management because it is stateless and connectionless.

* SNMP doesn't have information about the request sent.

* only request will be sent by client not by servers.

* SNMP does not suits for new technologies.

10. Ans:-

- Management API
- Transportation manager
- configuration validator
- configuration API
- configuration manager
- Data model API
- Data provider
- Root manager
- Authentication modules.

(1) Ans:-

- MQTT is the application layer protocol
- 2.4 to 250 Kb/ps
- 10 to 100 m
- used to communicate btw different network devices.

Examination : CIA-1 Feb-2024 Date

S. Sindhuja
Signature of Student

Signature of Invigilator

35/50

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a																				
b																				
c																				
Total																				

Grand Total -

Begin Answering Here

PART-B

11. IOT level - 6

* IOT level that suits smart industry

IOT - level 6

* IOT level 6 suits more because it has intelligent device manager, multiple nodes to connect with industry

* To create a more connected, automated and intelligent industrial landscape, we can also use IOT-level 5 & 6.

Node: multiple node - end node & controller

Device: Stores data in cloud

- Multiple node and node is used to transfer data from source node to Destination SASTRA node.
- controller node will be there to control the network and to act as a intermediate between the local and cloud data.

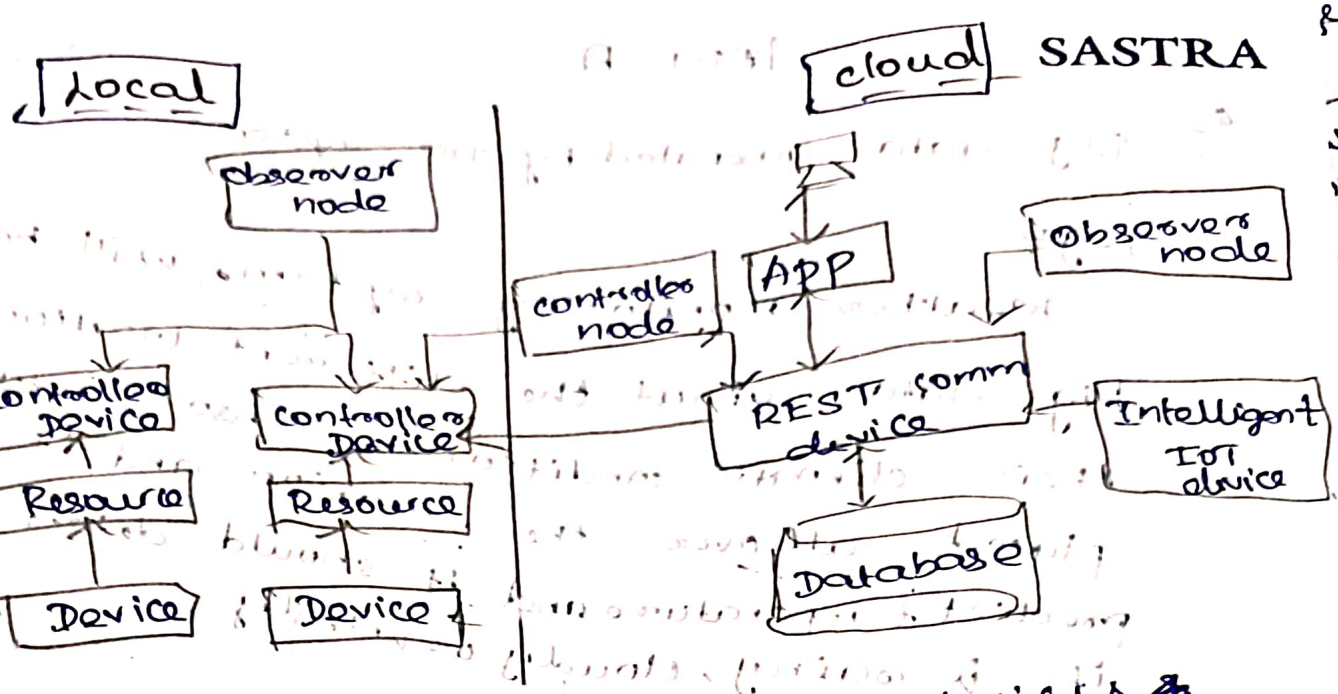
- Data - big
- Analyze Requirements - conventional intensive

eg:- Smart industry, Weather monitoring system.

Device connect more digital & technological industries network together.

In smart industry using IoT technologies we can monitor machines, diagosis that machine, we can build a network to transfer industrial practices and more.

In weather monitoring, we can setup sensor in different places and predict the weather and alert people. we can avoid any natural disastors by predicting.



Controller Device : monitors all devices

Application:

* We can make more connection
* Data will be stored in cloud and can be retrieved and used later.

* cloud database will be there to store all the informations
* Apart from other levels of IOT here we have extra nodes on both local and cloud that is controller node at centre and observer node at both