SCHEME OF VALUATION

(Scoring Indicators)

Revision : 15				Course Code : 6043
Course Title : Electronics Engg.				
Qst.No	**Scoring Indicator**	**Split up score**	**Sub Total**	**Total**
	PART - A			
1.	Mouse, keyboard,	0.5x4		2
2.	BIOS is basic input output system, a set of program stored in ROM chip. BIOS is a firmware			2
3.	ESD is the sudden flow of electricity between two electrically charged objects caused by contact, an electrical short or dielectric breakdown.			2
4.	Memory Refreshing is required to refresh DRAM storage cell. Without refresh DRAM data will be lost.			2
5.	The demand for Connectivity requires network. It make it			

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	Possible to communicate with large Geographical area.			2
	PART-B			
1.	Display adapters are VGA, SVGA, XGA.			
	VGA - Video Graphic Array 1. It use 15 pin Video Connector 2. uses analog signals. 3. Can produce a palette of 16 colocumns.	2x1 = 2		
	SVGA - Super Video Graphic array 1. It proride higher resolution and colour depth. 2. It can take super video modes called Video drivers. 3. Offer grand video performance	2x1 = 2		6.
	XGA 1. Used for rapid data transfer 2. Support for back ward compatability			
	3. photo realistic 65,536 Colours are available at 640x480 resolution.	2x1 = 2		

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2.	Inkjet printers are bit image non impact type of printers. These printers produce character shape and image by spreading ink from tiny nozzles onto the paper. This process places pattern of dots on the paper to generate required image. The force that drive ink out of the ink catridge can be piezo electric crystal or small resistor which heats when current is applied to it. Piezo electric crystal bends when electricity is applied in it. These prints produce very good quality print for relatively low price.			6.

3

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
3	Different memory modules are SIMM, DIMM and RIMM			
1	SIMM - Single in line memory module.			
2.	No. of memory chips soldered into a small expansion board.			
3.	The connector of this expansion board is plugged into speial SIMM socket on the mother board.			
4.	Multiple SIMMs are need to make single memory band.	3x2		6
	DIMM			
1.	DIMM is Dual in line memory module.			
2.	Permit wider addressing.			
3.	Provides greater storage Capacity.			
	RIMM			
1.	RIMM is Rombus in line memory module.			

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
2.	It is very fast memory.			
3.	It is 184 pin memory module.			
4	To improve the speed of the Computer, Cache memory is used.	1		
	classification.			
	1. Internal Cache (L_1 Cache) Increases the performance of cache system. It is internal to the processor. It is a part of same chip as the processor.	2.5	6	
	2. External Cache (L_2 Cache) It is the high speed memory. It is controlled by Cache Controller.	2.5		
5.	Track: Each side of the hard disk drives platter's surface is divided into Concentric Circle called track. These are magnetic informatio			

5

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	written during the formatting of the hard disk drive. Sector: Tracks can be divided into sectors. Sectors are not visible on the hard disk surface. The track number starts with zero. cylinder → Data is stored in the hard disk drive cylinder by cylinder. Once the cylinder becomes full, the read/write head moves to the next cylinder and write balance data to the next cylinder.	3x2		6.
6.	DSL System are deployed between telephone exchange and customer's premises to provide high speed data access.			

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	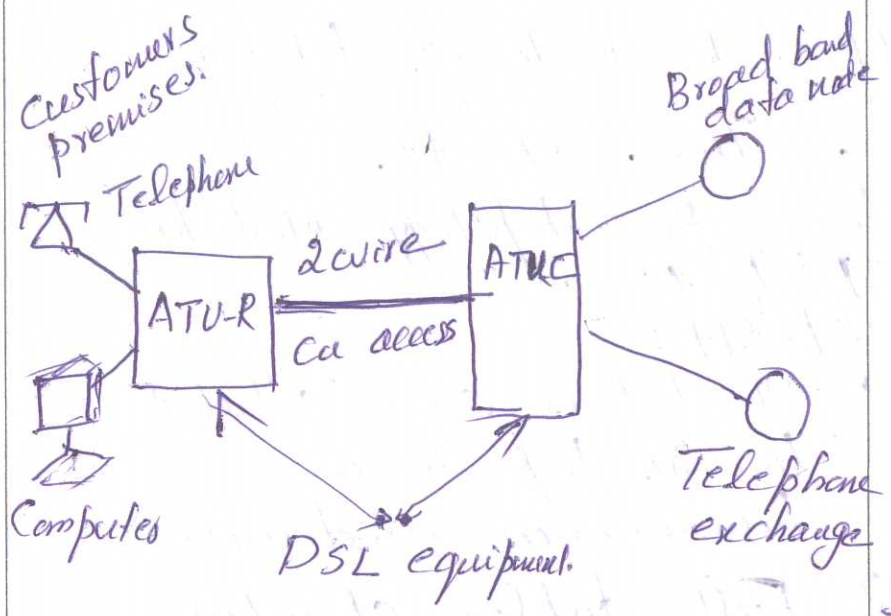 ATU-R → ADSL transmission (Remote) ATU-C → ADSL transmission (central office) There are several DSL technologies referred to as XDSL.	3+3		6

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
7	Different network topologies are Tree topology, Star topology Bus topology, Mesh topology Ring topology. Bus topology: 1. All stations are attached through tap to a transmission medium. 2. Full duplex operation. Tree topology. 1. The transmission medium has no closed loops. 2. stations transmit data in small blocks, known as frames. Ring topology 1. The network consist of a set of repeaters joined by point to point link in closed loop. 2. The datas are transmitted in frames.	2x3		6

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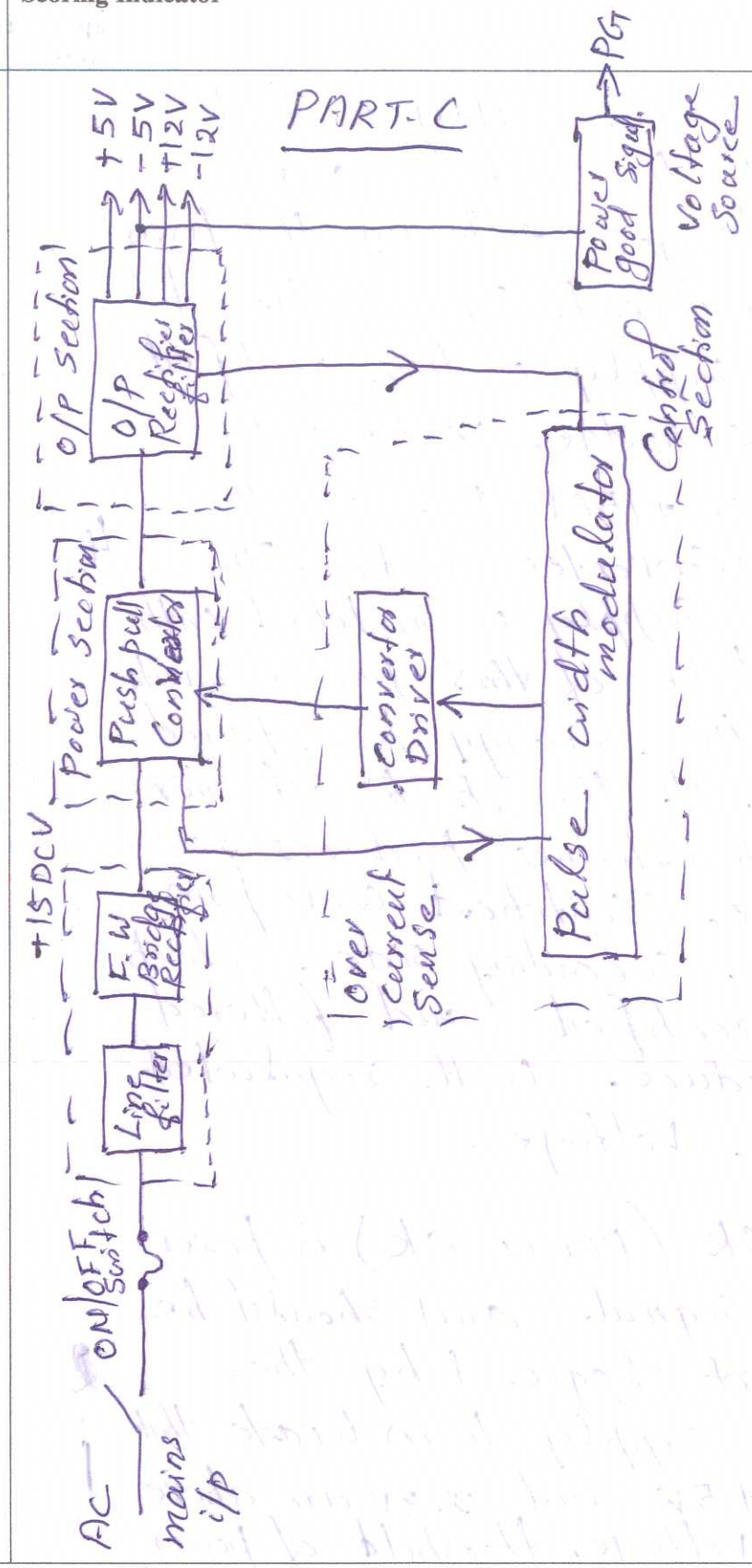
Qst.No	Scoring Indicator	Split up score	Sub Total	Total
III a,	PART-C 	fig (4)		

9

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	The i/p AC supply is first filtered to suppress any spikes/surges entering the power supply circuit. The filtered main supply is then rectified by FW bridge rectifier to produce +150V DC for the power converter section. The input supply is switched with the help of this power converter and the energy transferred to the o/p through transformer. The transformer produces low voltage switched waveform on the secondary side which are rectified and filtered to produce well regulated o/p dc voltage.	4		8
b,	PW-OK (power ok) is power good signal and should be set at logic 1 by the power supply to indicate that the +5V and 3.3V are above under voltage threshold of power supply.	2 1		

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Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	3.3Vdc (11) — (1) 3.3Vdc -12Vdc (12) — (2) 3.3Vdc GND (13) — (3) GND PS ON (14) — (4) +5Vdc GND (15) — (5) GND GND (16) — (6) +5Vdc GND (17) — (7) GND -5VDC (18) — (8) Power ok +5Vdc (19) — (9) 5V SB +5Vdc (20) — (10) +12V Vdc OR II a, Different mouse Connectors are Serial, PS/2, USB and wireless.	6		7

11

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	PS/2 mouse Connector • used to connect keyboard and moase to Computer system. • The port for this Connecta was originally designed by the IBM personal system/2 Series of persual Computer. USB Connector. • It offer good speed. • It is easy to Connect. Serial mouse Connector. • Serial mouse Connects to the Serial port by communicaton 1 or 2 port. • Easy to Connecta. • Speed is less.	4x2		8

2/

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
b,	As the mouse is moved, it Compares the ~~imp~~ image of its current position with the image of previous position stored in its memory. The difference between two images inform about the direction, the mouse is moved. LED illuminate the surface on which the mouse is used. A sensor is used to detect the pattern in the surface. DSP is used for pattern recognition purpose. Based on the information from the DSP, mouse informs about the new position to the Computer and Computer moves on screen mouse pointer to the new position.	7		7
	UNIT - II			
V a,	The PC industry has come together to develop a set of			

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	Standards dimension for key PC components. The dimensions and mounting pts are defined by form factor.	2		
1	LPX form factor - It covers physical layout, power requirment, and electrical issues. It provide IDE drive Controllers, 72 pin SIMM Socket	Any three 6		8
	ATX form factor: Expansion slots are placed at easer access, Reduced wiring, Simple Case design.	2x3z 6		
	NLX form factor: cised for low profile PC System. Easy to maintain. It suppost AGP.			
	WTX form factor Intended for large PC based workstations. mother board size is 14 inche by 16.75 inches.			
b,	ATX mother board is introduced by Intel.			

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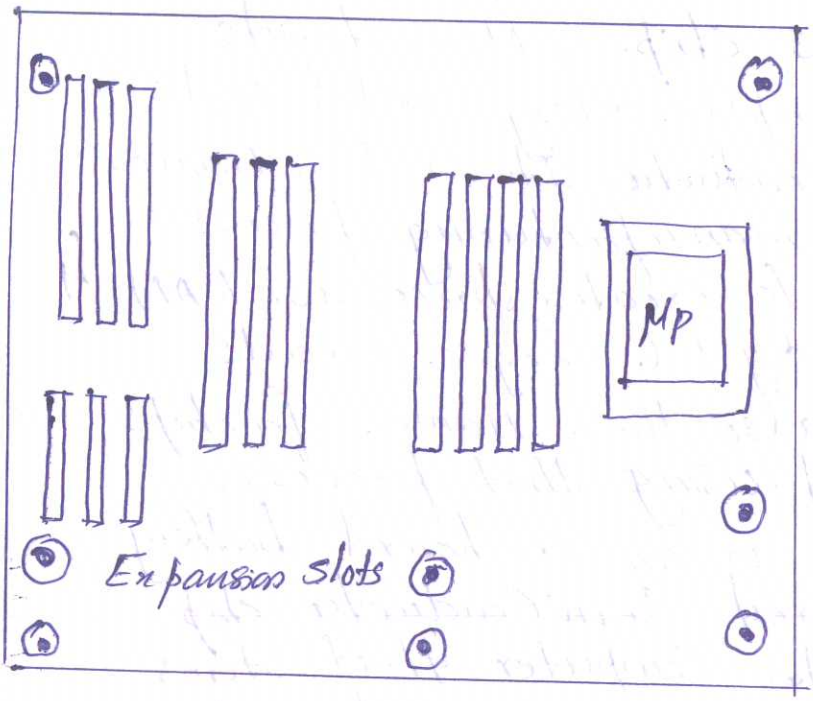
Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	12 inch 9.6 inches  ATX defines the no. and position of mounting holes. It gives recomendation about Component, expansion board and port connector placement. MP is located near power supply and cooling fan. The memory sockets can be placed b/w the MP and expansion slots. ATX mother board has space for 7 expansion slots.	fig 4+ expl (4)		8

15

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
	OR			
VI a,	CMOS chip. CMOS stands for Complementory metal oxide Semiconductor. It is the name of a manufacturing process used to create processors, RAM and digital logic circuits and also the name for chips created using that process. CMOS is an on-board battery powered Semiconductor chip inside Computer that stores information. This information ranges from the system time and date to system hardware setting for Computer.	4		8
b,	BIOS (Basic input output system) BIOS is a firmware and it is stored in the ROM. BIOS lets application program and the hardware to Communicate with each other. The BIOS Contains program called POST.	4		

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
VII a)	Unit III FAT 32 - For FAT 32 file systems, the reserved sectors include a file system information sector at sector 1 and a Back up Boot Sector at sector 6. Data region expands as per the requirement. FAT 32 uses 32 bit numbers to represent clusters. FAT 32 is created to eliminate Slack space and fragmentation. It uses less cluster space. New technology file system. This system is Created for operating system called NTFS. It is Complex. Designed for Co-operative and business environment. Built for network with high Security reliability and efficiency. It support large files.	4 4		8.

17

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
VII b	All hard disk drivers need to be formated to write the basic directory structure into the disk, so that other directories and files can be added.	1		7
	High level formating: Generate new file system. It makes it possible to save data and should be done on a partition. It is the process of writing a file system, cluster size, partition label etc for newly created partition.	3		
	Low level formating: It is the process of marking out cylinders and tracks for a blank hard disk and then dividing tracks into multiple sectors. It creates the physical format that dictates where data is stored on the disk.	3		

8/

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
VIII a,	Anti static devices reduces electro static discharge Antistatic bag: This bag is used for storing electric components. These bags are usually distinctive in colour. Multiple layers of protection are used. The protected device can be packaged inside film bag. ESD Wrist strap : It safely channels the static electricity to a proper ground. Anti static mat It safeguards an individual or piece of equipment like a PC from ESD. These can be used under keyboards or mice and may be placed under other equipment. Anti static spray: is a liquid spray that can be used to eliminate static electricity and prevent static cling. Anti static spray help to repel dust and eliminate static build up on optics, disc drives etc.	4x2		8

Qst.No	Scoring Indicator	Split up score	Sub Total	Total
b,	Different types of ESD are Corona discharge and Brush discharge Corona discharge : It occurs at sharp points and edges. Some industrial equipment contain sources of corona discharges which affect service personal. Electro static discharge from Coronas can be very large and can reach as high as about 20kV. Brush discharge : It takes place at an electrode with a high voltage applied to it. It is characterised by multiple luminous writting sparks. The streamers spread out giving the appearance of brush. Brush discharge occurs at curved electrode.	1 3 3		7

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IX a,	End System. 7 Application layer 6 Presentation layer 5 Session layer 4 Transport layer 3 N/w layer 2 Data link layer 1 Physical layer 0 Application layer: It is the highest layer in the OSI model. It provides services to the user of OSI environment	1		

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Presentation layer: The purpose of the presentation layer is to present the information to the communicating application. It resolves syntax differences.

Session layer: It provides fns which are necessary for opening a communication relationship called a session, for carrying it in an orderly fashion and for terminating it.

Transport layer: The fn of transport layer is to provide transport service in a cost effective manner.

Network layer: N/W layer provides the means to access the subnetwork for routing the messages to the destination end system. Routing decisions are taken by n/w layer.

Data link layer: To improve the quality of serive data link layer is used. It is used for error correction.

Physical layer. For the conversion of bits into electrical signals for transmission over the media.

Different guided transmission media are Co-axial, twisted pair and optical fibre 1

b, Twisted pair.

- 2 conductors (copper), own insulation twisted.
- One Conductor is used to carry signal, other used for ground reference. 3
- It is relatively inexpensive
- Flexible 7
- Easy to install.
- Span significant distance before needing a repeator.
- Easily accomadates difficulty topologies.

Co-axial.

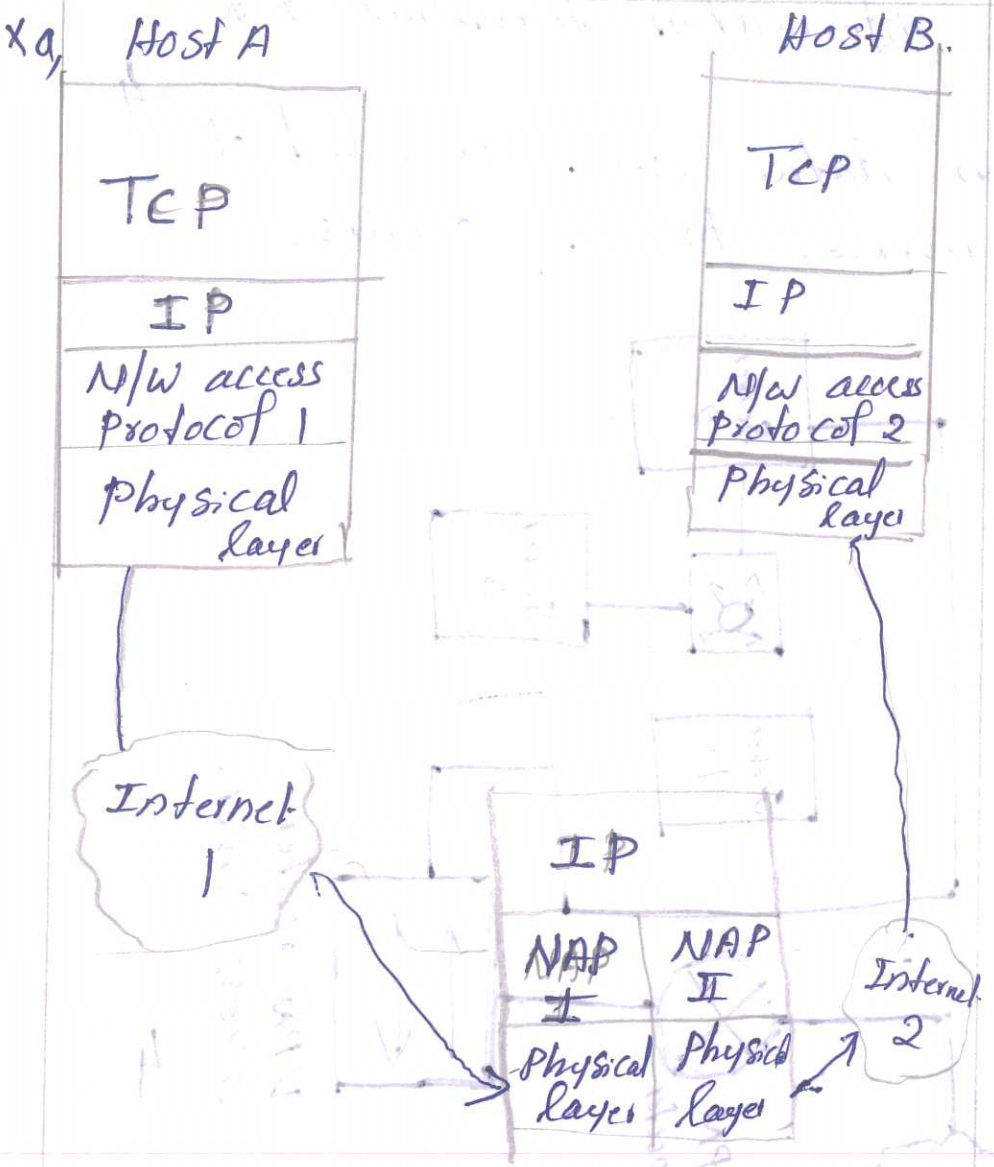
- High resistance to noise
- Carry signals to larger distance than twisted pair.
- More expensive 23

used to guide radio frequencies in broad band.

- used in analog telephone networks
- used in digital data
- Cable TV network.

3

Xa,



4

- Host A send message to host B.
- The sending process generate block of data and passes to TCP. The TCP will break this block into smaller pieces.
- To each of these pieces TCP forms TCP Signal.
- The TCP hands each segment over to IP

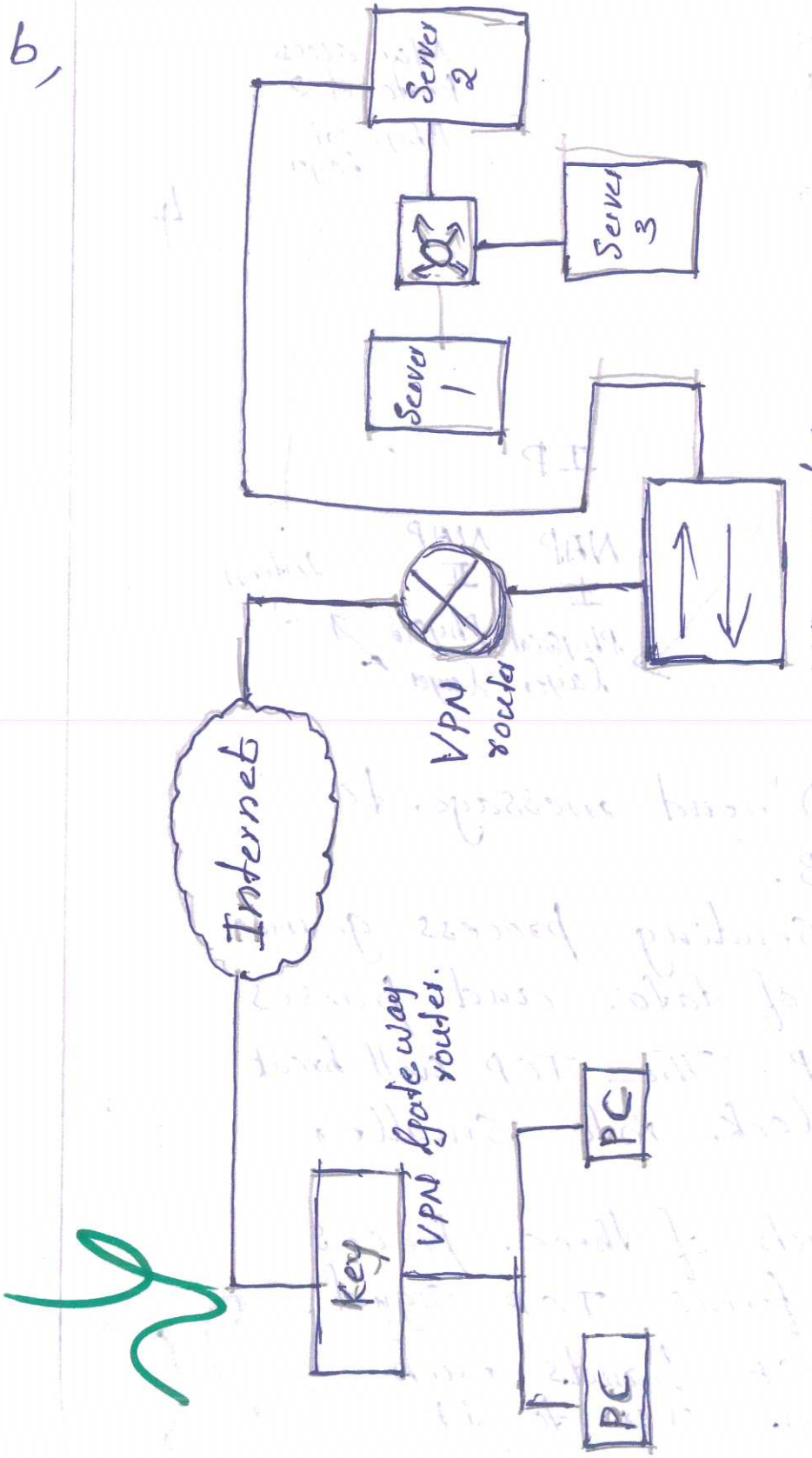
with information transmit it to B.

- When data are received at B, reverse process occurs.

4

8

b,



4

A VPN client on a remote user's computer or mobile device connects to a VPN gateway on the organisation's n/w. The gateway requires the device to authenticate its identity. Information travelling between a connected device and a VPN server is encrypted. and

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