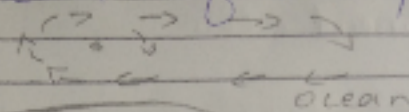


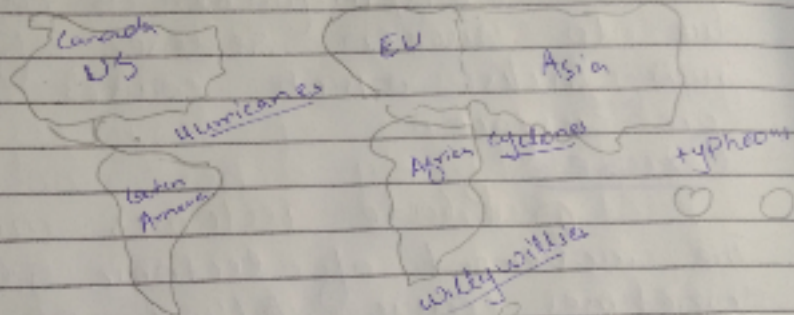
Q.No. 3

Q Cyclone

When winds ^{move} from high pressure zone to low pressure zone, it spins at highest speed causing storms at lower level of atmosphere

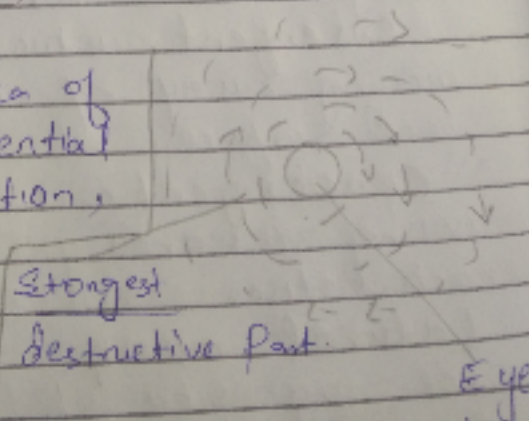


- Types: (1) Cyclone (2) Typhoons
(3) Hurricanes (4) Willy Willy



Strongest and destructive part of cyclone:

The surrounding area of a cyclone has potential of most destruction, while the central part. Eye is the calmest part of cyclone



In Pakistan the last cyclone with highest damage came in 1993. Moreover

recently, Cyclone Biparjoy which
swept in a part of time had
the potential of the same of
1993 which damaged infrastructure
and cost more than 200 lives
along with loss of economic
loss due to demographic
movement.

Q3. b

Earthquake-

Earthquake is caused
due to sudden release of ^{strain} energy
from ^{land} faults which causes vibration
on surface.

Causes

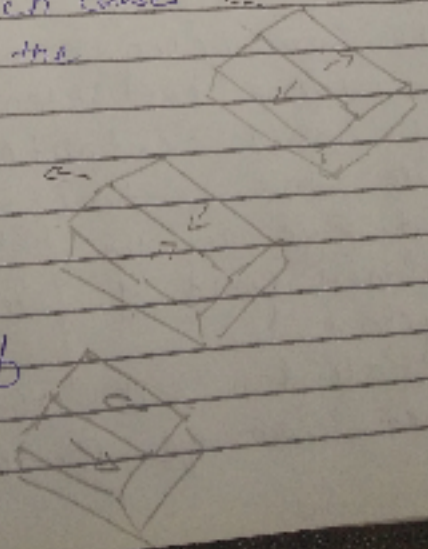
① Plate Tectonics movement:-

The movement of tectonic plates
sometimes cause hitting of the
plates with each other in many
ways such as

Divergent which causes
moving away of the
land surface.

Convergent:
moving towards
each other

lateral moving
side by side of
to each other
but in opposite



direction.

Elastic Rebound - This above mentioned movement then to reverse in sudden way like elastic which cause the energy stored in the rocks to release.

② Volcanic Eruption - also cause seismic energy to release suddenly.

③ Mining also sometimes cause disturbance in the lower level of tectonic plates causing earthquake.

Shallow focus - Deep focus

The point of the tilting of plates which is called fault line varies in depth.

Shallow focus depth is 0-70 km

Intermediate focus depth is 70-300 km

Deep focus depth from 300 to 1000 km

Measurement of Earthquake

Earthquake is measured through seismograph in unit of Richter scale.

The normal range is 0-4.5

The intense range is 5-8

The earthquake of Kashmir²⁰⁰⁸ was 7.8 Richter scale. In the of

Afghanistan 2015 was 7.6 richter scale

Moyullo Earthquake

Happened on 8 September 2023. Killed nearly 3000 people.

Its intensity was 5.8 richter scale.

C Dengue fever:-

It is a mosquito born disease which transmit dengue virus through biting.

Symptom The person infected has the symptoms of high fever, chills, body aches and joint pain.

Risk:- In some case it even leads to death.

Global concern:- It has many times converted into ^{endemic and even} pandemic causing concerns worldwide.

Causes:- (1) As the disease is spread through the mosquito Aedes Aegypti Prevention which grows mostly around stagnant water thus the chances of stagnant water must be reduced or covered.

(2) Full cloths should be worn

along with anti mosquito bite lotions application.

(3) Mosquito nets should be used.

(4) The person infected must be kept hydrated to prevent risk of death.

Acc to WHO around 20000 have died from it.

d Distinguish ionic & covalent bonds

Atoms make bonds with other atoms or molecules to complete its octate or duplete rule.

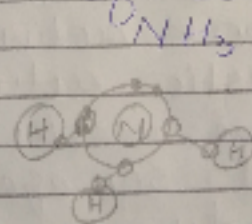
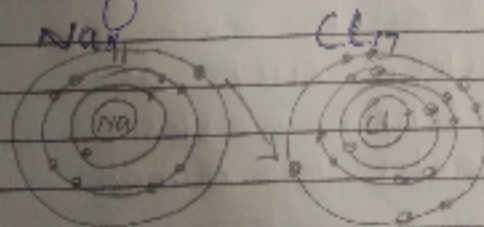
Ionic bond

Covalent

bond.

In ionic bond there is complete sharing of electron.

In there is partial sharing of electron.



In this example, Sodium gives its electron of outer shell to Chlorine which has deficiency of one electron to complete its octate rule.

In this bonding of Nitric Acid Nitrogen has deficiency of three electrons to complete its octet rule which is catered through partial sharing with three

Ionic

Usually formed between metal and non metal.

Stronger bond

Cannot be formed between identical or elements

Covalent

Hydrogen atoms which has deficiency of one atom to complete its duplet rule.

formed between non-metals only.

normal bond.

can be formed between identical atom elements.

Q.4-a.

Causes of land Pollution:-

Land pollution is the contamination of soil and surface of the land. Most of its cause are human activities such as:-

Domestic activities:- such as home wastes, kitchen wastes and sewage wastes of human body.

Commercial and industrial wastes:- the poisonous materials that are come out of industries and commercial places

Deforestation:- the same waste which could be naturally deposit through forests keeps accumulating

due to absence of forests. Moreover the left over of deforestation also cause ~~to~~ undeposited waste, adding to the pollution. In the same way deforestation also cause degrading quality of the quality of soil, leaving it with lesser capacity for productivity.

Pesticides/herbicides/intense agriculturing:- The use of such chemicals also degrades the quality of land.

Acid rain:- The ^{hazardous} chemicals present in air due to human activity is deposited on soil through rain.

Floods:- Floods brings with it harmful sediments and pathogens from frozen mountains which contaminate the land.

b:- COP 27.

COP 27 was held at Sharm-el Sheikh Egypt under the UN Framework convention on climate change.

Its purpose is to unite the world against global warming and climate change

under one umbrella and aim for concerted action collectively as Angela Merkel, Vice Chancellor of Germany said: "We all must agree on a binding mechanism to fight climate change."

Aims:-

Cop 27 agreed on so the major following major goals this year. i.e.

Reduce carbon emission as soon as to limit the global warming to 1.5° above pre industrial era.

Help developing countries financially to bear the damage inflicted upon them due to climate change who have least contribution to global warming but are bearing the reversal of nature indiscriminately.

Provide technology to developing countries.

Apart from giving financial assistance it aimed to provide technological assistance to these countries to transform their energy needs from non-renewable sources to renewable ones.

d. Fundamentals of AI

Artificial Intelligence is a system that incorporates machines with the intelligence feature of human beings.

- It has the ability to learn, from data available to it, thinking process, language, perception and other multiple forms of information.

- Moreover it has the feature of NLP i.e. Natural Language Processing which were ~~to~~ inherently supposed to be human quality also.

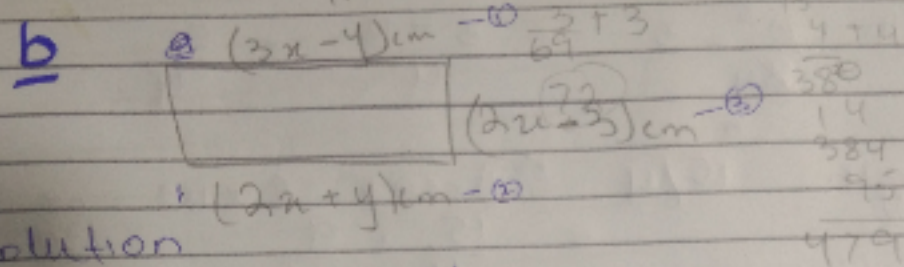
- In the same way it has the capacity of storing large amount of data, and process and sift through it for different purposes.

- Meanwhile it can also solve ^{problems} almost vast ~~small~~ nature.

Sec-II

Q.6. a $10, 100, 200, 310, \underline{420}$

b $3, 7, 23, 95, \underline{479}$



Solution

$$3x - 4 = 2x + 3$$

$$3x - 2x = 2 + 4$$

$$x = 2 + 4 = 6$$

Put * in eq (1)

$$3x - 4 = y$$

$$3(6) - 4 = y$$

$$18 - 4 = y \Rightarrow 14 = y$$

Put * in eq (2)

$$2x + y = 2(6) + 14$$

$$12 + 14 = 26$$

Put * in eq (3)

$$2(14) - 3 = 25$$

$$28 - 3 = 25$$

$$y = 25$$

length is $5 \times \frac{3}{4} = 15/4$

value of x

$$3x - 4 = 2x + y$$

$$3x - 2x = 2 + 4$$

$$x = 6$$

$$2(2y) + y$$

$$4y + y = 26$$

$$5y = 26$$

$$3(2y) - y = 25$$

$$6y - y = 25$$

$$5y = 25$$

$$2(2y) - 3 = 25$$

$$4y - 3 = 25$$

$$\frac{2x + 4}{4} = \frac{8x + 3}{4}$$

$$2x = +3$$

$$x = \frac{3}{8}$$

$$2x - 3$$

$$2\left(\frac{3}{8}\right) - 3$$

width $\frac{6^3 - 3}{8u} = \frac{3 - 12}{4} = \frac{9}{4}$

length $15/4$ Area = $l \times w = \frac{15}{4} \times \frac{9}{4} = \frac{135}{16}$

Area = $\frac{65}{8} m^2$ Ans

C

Nisha = y
Romi = x

Nish $x + 15$
Romi x

Nisha = $x + 15$

5 years ago.

~~net~~ $y - 5 = 3x$

$x + 15 - 5 = 3x$

$x + 10 = 3x$

$3x - x = 10$

$2x = 10$
 $\frac{2x}{2} = \frac{10}{2}$

$x = 5$

$y = x + 15 \Rightarrow 5 + 15 =$

Nisha age $\Rightarrow 20$ year Answer

d

Biggest possible number
of ⁰⁰ cartons needs is
42.

2	210	252	280
2	105	126	
3	70	84	
7	35	42	
	5	3	

2, 3, 7, 42

2	210
3	105
5	35
7	7

Q. 7. a

Solution.

$$20\% \text{ of } n = 80$$

$$\frac{20}{100} (n) = 80 \times 5$$

$$n = 80 \times 5$$

$n = 400$ The original
price of shirt

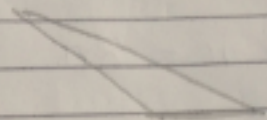
b:-

BROTHER = QDGŠNIQA

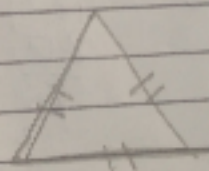
SISTER = TITSPA

or
ZIZVNA.

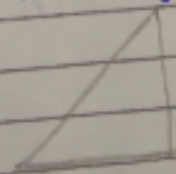
c i-Scalene triangle.



ii Equilateral



iii Isosceles of right



d

3 pieces of slice pizza with
margin.

Probability.

$$\frac{3}{8} = \frac{3 \times 100}{8} = \frac{300}{8} = 37.5\%$$