Page 86:-
Q1:- 1- a 2 – d 3- a 4- c 5- c 6- d 7- c 8- c 9- b 10- b 11- c
12- b 13- b 14- a 15- b 16- c 17- d 18- d 19-d 20-c 21-d

Q22- a- 300gram (no direction) b- w= mass X 10 = 300/1000 X 10 = 3 new ton
c- mass doesn't change ,weight change as place change

Q23:- 1- protect brain 2- protect lungs and heart
3- control voluntary motion , thinking and memory 4- control reflex action
5- protect spinal cord

Q24:- 1- to prevent mercury from back to bulb quickly to take reading
2- because its scale from 35 to 42 degree and boiling point of water 100 degree
3- because a0 it is only liquid metal b) regular expansion and contraction
C) doesn't stick with capillary tube
4- bec I protect living organisms from harmful rays com from sun
5- bec it combine with oxygen forming aluminum oxide
6- bec it react with it form calcium carbonate which insoluble in water
7- bec its volume doesn't change as temperature change

Q25:- 1- plant can't make protein and other living organisms
2- earth temperature increase and it causes suffocation of living organism
3- white powder formed dissolve in water forming ammonia
4- we can't move
5- it moves in all direction
6- effect the nervous system and causes harmful effect on it
7- causes harmful effect on nervous system as it effects in heart beats , causes sleepless and nervous tension
8- wrong question (by French)

Q26- 1- pass air over conc potassium or sodium hydroxide to absorb carbon dioxide gas then over hot copper to absorb oxygen and collect nitrogen under water

2- add dil hydrochloric acid over calcium carbonate then collect carbon dioxide by air up ward displacement
3- add hydrogen peroxide over manganese dioxide it will split in to water and oxygen, collect oxygen Under water by down displacement of water

Exam on first term (1) p90
Q1:- 1- axial – appendicular 2- kilogram – new ton 3- Celsius thermometer

Q2:- 1- X cerebral hemisphere 2- X weight 3- X

Q3- 1- prevent the friction between bones
2- transfer sense and responds from body to brain and from brain to body parts and communicate between body parts

3-thermometrical material help in determine temperature
4- protect us from hotness as it bad conductor of heat

Q4:- 1- to protect heart and lungs
2- because gravity effected by mass and earth mass 6time moon mass

Q5:- 1- we can' t move 2- reflex action make your hand move quickly
3- plant can't absorb nitrogen and it can't form protein

Q6:- 1- nervous system 2- balance scale 3- heat conductor 4- spinal cord

Exam(2) p 92
Q1- 1- a 2- 6/6 = 1newton 3- c 4- a 5- answer is carbon

Q2:- 1- to prevent mercury from back to bulb to take reading
2- because it has regular expansion and contraction by heating and cooling
3- because it is scarcely soluble in water
4- because it is inactive gas doesn't react easily with most substances
5- to protect bones from diseases as rickets and steomalicia

Q3:- 1- all living organisms will die
2- it will move in one direction only
3- you will die

(b) 1- connect between bones make its motion easily
2- communication system in body connect between different body parts

Q4:- 1- pass air over conc potassium or sodium hydroxide to absorb carbon dioxide gas then over hot copper to absorb oxygen and collect nitrogen under water
2- add dil hydrochloric acid over calcium carbonate then collect carbon dioxide by air up ward displacement

(b) 1- control body balance 2- measure the human body temperature
3- in filling (car tires – some type of lamps) – stainless steel industry

Q5:- 1- plastic 2- immovable 3- increase 4- but help in burning 5- nitrogen

Exam(3) p 94

Q1:- 1- a 2- c 3- a 4- d 5- d

Q2:- 1- control reflex action 2- measure body weight

(b) 1- spring scale 2- carbon dioxide gas 3- reflex action

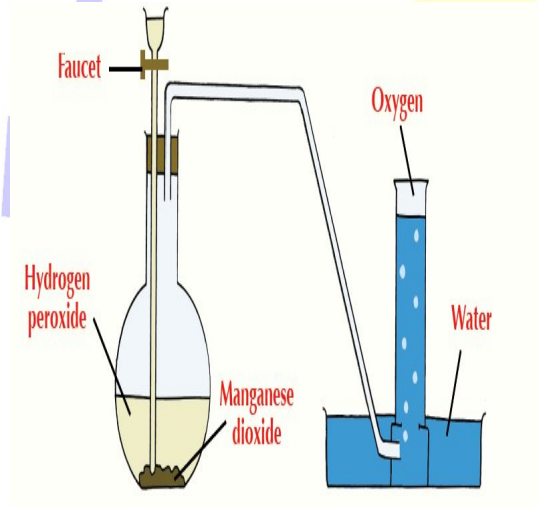
Q3:- 1- mass 2- oxygen and water vapour 3- white 4- carbon dioxide gas

Q4:- 1- we will effect by hotness and we can't dial with it
2- it will rust
3- its effected by nervous tension which harms nervous system

(b) 1- mass 2- brain 3- medical thermometer

Q5:- 1- a- it moves in all direction as shoulder . it moves in one direction only as knee
2- its percentage 21% and other 78%
3- mass doesn't effect by change place but weight effected by change place

b) add hydrogen peroxide over manganese dioxide it will split in to water and oxygen, collect oxygen Under water by down displacement of water



Exam (4) p 96:-

Q1:- 1- balance scale – spring scale 2- copper – aluminum
3- 35 to 42 4- photosynthesis – burning and respiration
5- 56 pairs 6- skull – ribcage – back bone

Q2:- 1-c 2- b 3- c 4- c 5- a 6- b

Q3:- 1- mass 2- thermometer 3- carbon dioxide gas 4- ozone 5- spinal cord
6- joints

Q4:- 1- bec it give carbon dioxide gas which make bread pour and give it taste
2- bec it controls involuntary action as heart beats
3- bec it good conductor of heat

Exam (5) p98

Q1:- 1- wood –plastic 2- 33 b=vertebra 3- 12pairs , 31 pairs 4- wood or plastic
5- scale - spring scale 6- hydrogen peroxide – manganese dioxide

Q2:- 1- c 2- b 3- c 4- d 5- wrong question and answer is (spring scale)
6- b

Q3:- a- weight b- oxyacetylene flame c- nitrogen d- brain e- tendons f- cartilages

Q4:-

1-

	mass	weight
Definition	It is the amount of matter in an object. الكتلة تدل على الكمية	it is the force which a body is attracted to the Earth. الوزن يدل على القوة
Measuring tools	1.balance scale 2.Sensitive two arm scale 3.One arm digital scale 4.One arm scale with a pointer	Spring balance
Measuring units	Ton Kilogram gram	Newton = 100 gram
direction	Has no direction	It is towards the center of the Earth.
Effect of different places	Constant ثابتة (doesn't change with the change of place)	Changes from planet to another.

2

Medical (clinical) thermometer	Celsius thermometer
Glass bulb contains mercury; Capillary tube; Constriction; Thick glass tube	The lower fixed point is the melting point of ice which represents the freezing point; The upper fixed point is the water boiling point
there is a constriction above the bulb to prevent mercury from going back quickly when we read the temperature.	there is no constriction above the bulb.
The thermometer scale starts from 35°C to 42°C	The thermometer scale starts from zero Celsius until ..100 °Celsius.
It is used to measure the temperature of human being.	It is used to measure the temperature of liquids.

3- central nervous system consists of (brain and spinal cord)
Peripheral nervous system- consist of (12 pairs of cranial nervous - 31 pairs of spinal nervous)

Exercise (1) p 102:-

Q1:- 1- cranial nerves – spinal nerves 2- myelin 3- cerebrum – cerebellum –medulla oblongata
4- sleepless- nervous tension

Q2:- 1- d 2- b 3- a

Q3:- bec the weight change by changing place
2- bec they are bad heat conductor
3- bec its graduation from 35 to 42 it will broken in hot water because water boils at 100 degree and freezes at zero degree
4- bes a) it is only liquid metal b) doesn't stick with capillary tube
c) regular expansion and contraction by heating or cooling
5-bec it is scarcely soluble in water
6- bec oxygen is scarcely soluble in water
7- because plant compensate the used oxygen in respiration and burning and use carbon dioxide in photosynthesis process
8- bec the plant use it photosynthesis process to make food and give living organism oxygen for respiration
9- because it used in different industries and it is essential for make protein for plants and living organisms

	mass	weight
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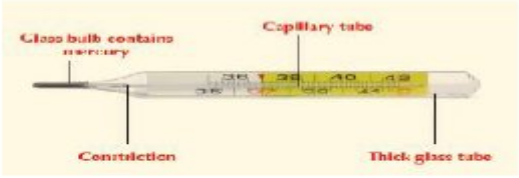
Medical (clinical) thermometer	Celsius thermometer
	
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The thermometer scale starts from 35°C to 42°C	The thermometer scale starts from zero Celsius until ..100 °Celsius.
It is used to measure the temperature of human being.	It is used to measure the temperature of liquids.

	Good conductors of heat	***Bad conductors of heat***
definition	these are the materials that conduct heat and let heat flow through.	these are known as insulators عوازل كهربية that do not let heat flow through.
examples	Copper then aluminium then iron. All metals	wood, glass, plastic, paper, liquids and gases especially air.
usage	Aluminium, copper and stainless steal are used to make cooking pots and kettles in houses and factories.	* Plastic and wood are used to make handles of cooking pots, kettles and utensils الأواني . * Plastic is used to make the iron handle. * Heavy blankets and wool clothes are bad conductors of heat so, they are used in winter to keep the body warm.

What happened if:

All substances, that the man uses are good conductor of heat.
We cannot use them without insulators.

p.o.c	Oxygen	Carbon dioxide	Nitrogen
Properties	- color less , tasteless and odor less - neutral effect in litmus paper - heavier them air - doesn't burn but help in burring - lightning magnesium ribbon (give white powder from magnesium oxide) - doesn't dissolve in water (scarcely) - react with element * oxidation slow combination with moisture oxygen + element Element oxide * Burning rapid combination with hcat and light	Color less , dour less and tastes less * heavier than air * doesn't burn and doesn't help in burning * lighting magnesium ribbon (give white powder of magnesium oxide and black carbon deposit in wall of (cylinder) * easily dissolve in water * react with element 1s : - lime water (calcium hydroxide -turbid lime water (carbonate)	Color less , odour less and tastes less * neutral effect in litmus * heavier than air * doesn't burn and doesn't helping burning * lightning magnesium ribbon (white powder dissolve in water gives ammonia " alkaline effect in litmus " (turn red to blue) * ammonia has pungent smell * scarcely dissolve in water * react with elements: Doesn't react with elements

Q5:- 1- it will harmed may leads to friction or cut in tendons of knee
2- it has bad effect on nervous system as (sluggishness – loss of time – retardation of memory and study- nervous tension)
3- it causes nervous tension , sleep less and effects heart beats

Q6:- 1-generate the mechanical energy for motion
2- keep exercise ,eat healthy food . avoid dangerous motion .avoid carry heavy things
3- a) blinking eye at which some thing come cloth to it
b) try to keep body balance in sliding
c) run away at which you see fast car come to ward you

4- keep exercise ,eat healthy food . avoid dangerous motion .avoid carry heavy things

Q7:- 1- work as catalyst decompose hydrogen peroxide in to water and oxygen
2- thermometric substance help to measure temperature
3- transfer the sense to ward brain and spinal cord then take respond to ward body cell(communication between body parts)

Ex 2:-
1- gram – Newton 2- (body mass – planet at which body found . distance from planet center
3- 1/6 4- mass 5- weight – weight
6- gravitational force by which body attracted to ward earth center
7- energy 8- hotness – coldness 9- allows heat to pass through – copper

10- doesn't allows heat to pass through – plastic
11- food 12- volume – temperature 13- clinical – Celsius (centigrade)
14- liquid temperature 15- green plants – photosynthesis process
16- respiration – combustion 17 – nitrogen – oxygen 18- diving – climbing mountains
19- organic material – coal - respiration 20- colorless , tasteless, odorless
21- 78%(4/5 from air volume) 22- stainless steel 23- central – peripheral
24- cerebrum – cerebellum – medulla oblongata 25- skull- ribcage- vertebral column

Q 2:- 1- X 2-X (mass) 3- X (good) 4- X (copper faster than aluminum)
5- X (good) 6- X (clinical) 7- √ 8- X (lifeless) 9- √ 10 – X (cerebrum)
11- X (12) 12- X (immovable – slightly – freely) 13-√ 14- X (brain) 15- √

Q3:- 1- mass 2- weight 3- good conductor of heat 4 bad conductor of heat
5- thermometer 6- carbon dioxide 7- oxygen 8- carbon dioxide 9- nitrogen
10- neuron 11- skull 12- neuron 13- vertebral column 14- immovable muscles
15- slightly moveable 16- tendons

Q4:- 1- freely 2- tendons 3- 12 pairs 4- medulla oblongata
5- under cerebrum behind medulla oblongata 6- myelin 7- denterities – axon terminals
8- doesn't dissolve 9- three 10 – 35: 42 11- different rates 12- 6 kg 13- 1000 gram
14- mercury

Q5:- 1- b 2- b 3- b 4- c 5- b 6- b 7- a 8- b 9- c 10- c 11- c 12- a
13- c 14- c 15- wrong (21%)

Q6:- 1- bec the mass of earth greater than moon mass by 6 times and gravity increase as mass increase
2- due to earth gravity works all time to ward earth center
3- bec aluminum is good conductor of heat but plastic and wood are bad conductors of heat
4- bec a) only liquid metal good conductor of heat
b) doesn't stick with capillary tube wall
c) regular expansion and contraction by heating or cooling
5- to take the true reading and makeweight effect to ward earth center
6- due to body weight works to ward earth center
7-bec weight change as place change
8- bec the weight effects by the distance from planet center
9- bec copper is good conductor of heat but plastic and is bad conductors of heat
10- bec metals differ in conductivity of heat energy
11- to prevent mercury from back to bulb quickly at take accurate read
12- bec the green plants compensate the consumed oxygen through photosynthesis process
13- bec it works only as catalyst still with same quantity and properties
14-bec it has neural effect in litmus papers
15- bec it protect earth from harmful radiation come from outer space
16- due to increase cutting forests trees and increase combustion of fossil fuel
17- due to formation insoluble substance called calcium carbonate
18- bec it doesn't burn and doesn't help in burning 7

19- to make it pours and tasty
20- bec the plant need it for photosynthesis process
21- due to the formation of ammonia gas
22- bec it doesn't use on respiration or combustion process
23- bec it has constant volume at different temperature and doesn't effect by change temperature
24- bec they harms nervous system causes nervous tension , effect heartbeats and sleepless
25- bec it help in control body balance
26- bec it controls involuntary action as heart beats
27- due to reflex action
28- to protect and give strength to our bones
29- bec they are involuntary muscles
30- bec it helps us to move search for benefit or away of danger
31- bec it generate mechanical energy necessary for bones motion
32- to prevent friction of vertebra during motion
33- to protect brain
34- bec plant absorb carbon dioxide gas to make photosynthesis process and prevent increase in earth temperature
35- due to shortage of oxygen at top of mountains

Q7:- 1- keep all things on earth with out fly in air
2- to measure temperature for body and liquids
3- measure mass 4- measure weight of body
5- prevent hotness from reaches our hands 6- plant use it in photosynthesis process
7- for combustion and respiration 8- help plant to make protein
9- communication between body parts
10- centers of thinking . memory and voluntary motion
11- communication between body parts
12- control involuntary motion as heart beats
13- reflex action
14- protect brain 15- protect spinal cord and help body in motion
16- protection of heart . to lungs and help in respiration
17- to prevent friction of vertebra during motion
18- tie muscles with bones
19- connect between two bones and help in motion
20- connect between nerve cells from synapse

Q8:	mass	weight
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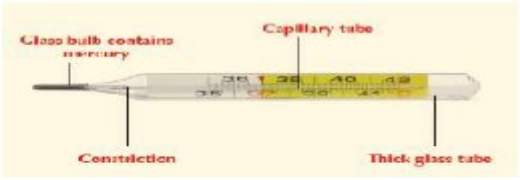	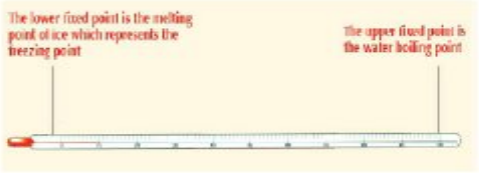
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definition	these are the materials that conduct heat and let heat flow through.	these are known as insulators عوازل كهربية that do not let heat flow through.
examples	Copper then aluminium then iron. All metals	wood, glass, plastic, paper, liquids and gases especially air.
usage	Aluminium, copper and stainless steal are used to make cooking pots and kettles in houses and factories.	* Plastic and wood are used to make handles of cooking pots, kettles and utensils الأواني . * Plastic is used to make the iron handle. * Heavy blankets and wool clothes are bad conductors of heat so, they are used in winter to keep the body warm.

What happened if:

All substances, that the man uses are good conductor of heat.
We cannot use them without insulators.

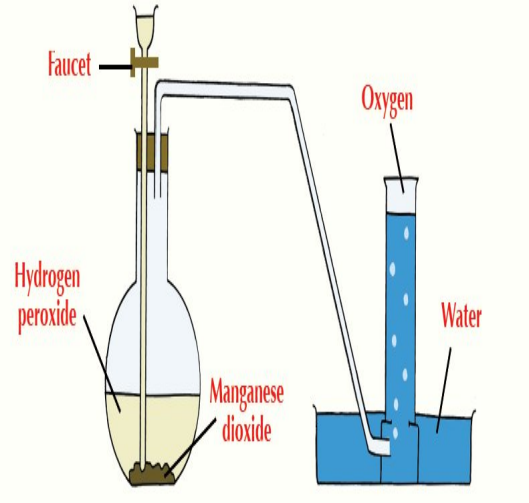
Q9:- 1- cooking pots and kettles
2- handles of cooking pots and kettles – heavy woolen blankets – insulating glass window
3- indicate the acidity or alkaline property of substance
4- cut and weld metals
5- indicate the presence of carbon dioxide gas
6- work as catalyst 7- photosynthesis process by plant
8- help plant in make protein

Q10:- 1- amount of matter in an object
2- gravitational force by which body attracted to earth center
3- form of energy which transfer from body of high temperature to of low temperature
4- indicator show us the degree of hotness or coldness of body
5- materials allows heat to flow though
6- materials doesn't allows heat to flow though

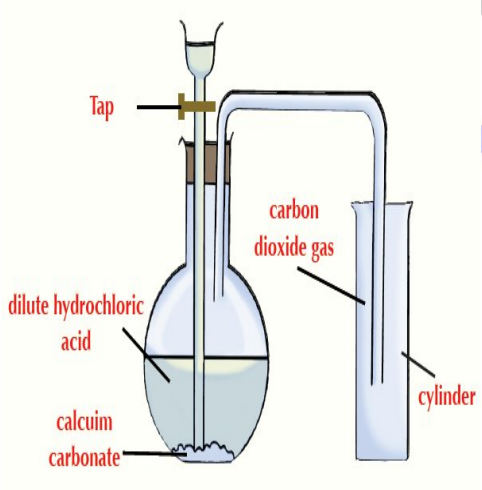
Q11- 1- tools : spring scale – body
Steps :- hold body on the end of spring sale
Obs :- the spring starch
Conc:- the starch on spring = body weight

2- bring basin from transparent glass- clay – three spoons from(aluminum- copper – wood)
And fix them as figure
Obs:- copper fill firstly then aluminium but wood doesn't fall
Conc :- materials differ from each other on conducting heat

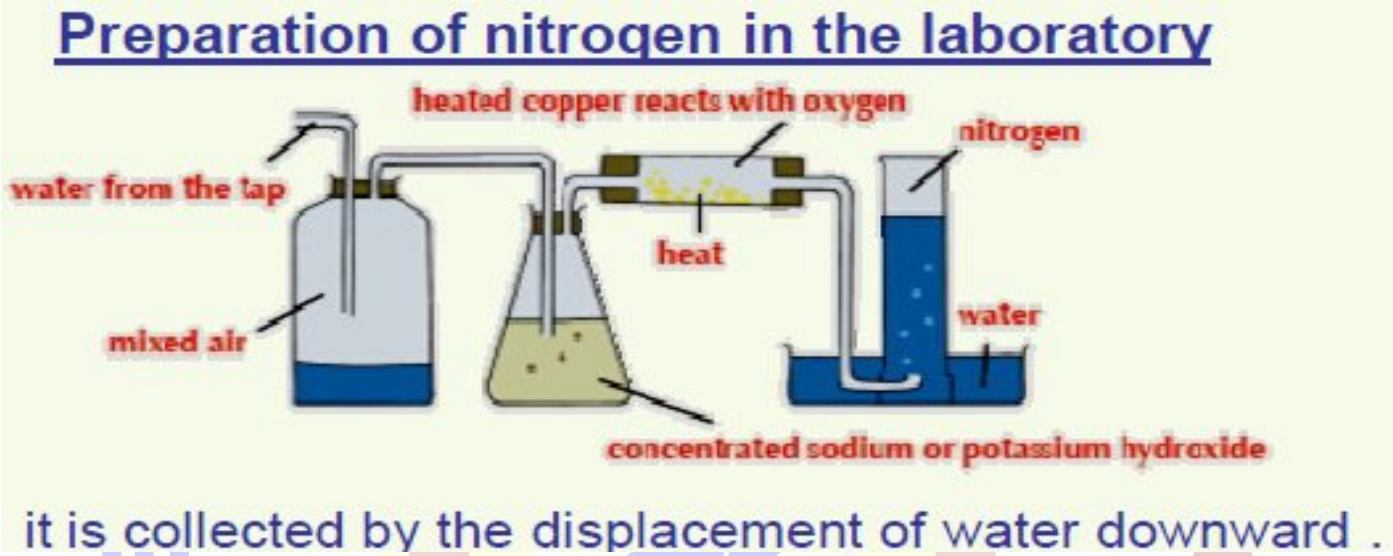
3- add hydrogen peroxide over manganese dioxide it will split in to water and oxygen, collect oxygen Under water by down displacement of water



4- add diluted hydrochloric acid to calcium carbonate it give carbon dioxide gas



5-pass atmospheric air through concentric potassium or sodium hydroxide to absorb carbon dioxide
The over hot copper to absorb oxygen



Q12:-

p.o.c	Oxygen	Carbon dioxide	Nitrogen
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Q13:- 1- its mass increases after heating as it combine with oxygen
2- the green plants can't make photosynthesis process
3- the living organism will die as they use it in respiration

4- green plants can't make the protein as nitrogen essential in make protein
5- all things fly on air and stability of bodies finished
6- causes the sleepless. Effects heart beats . and cause nervous tension
7- it causes fractions for skeletal system

Q14:- 1- a- 4 b-3 c- 1 d- 2 and correct unit to device

2- a- 2 b-1 c- 3 d- 4

3- a- 5 b-4 c- 1 d- 3 e-7 f- 6 g-2

4- a- 4 b-5 c- 3 d- 2 e-1 f- 6 g-7

Q15- 1- w= mass X 10 = 10 X 10 = 100 new ton

2- a) weight = mass X 10 = 6 X10 = 60 new ton
B) weight on moon = weight on earth / 6 = 60/ 6 = 10 new ton

3- mass = weight / 10 = 300/10 = 30kg

4-
5) a) keep exercise b) away from noisy places
6) a) keep exercise b) avoid dangerous motion as jump from high places

Exam (1)

Q1:- 1- weight – mass 2- medical –Celsius 3- burning – respiration
4- brain – skull 5- axial – appendicular

Q2:- 1- mass 2- good conductor of heat 3- reflex action 4- nervous system
5- atmospheric air

Q3:- 1- 100 2- medulla oblongata 3- hydrogen peroxide – oxygen
5- weight = mass x 10 = 60 X10 = 600 Newton
weight on moon = weight on earth / 6 = 600/ 6 = 100 Newton

Q4:- 1- because it is scarcely dissolve in water
2- because it harms the nervous system
3- because earth mass greater than moon mass by 6 times
4- because it doesn't burn and doesn't help in burning
5- to protect them

Exam(2)

Q1:- 1- √ 2- X hot to cold 3- X 78% 4-√ 5- X 33

Q2:- 1- peripheral – central 2- slightly (limited) - freely 3- carbon dioxide – oxygen

4- 35 to 42 5- balance scale - spring scale

Q3:- 1- bec it allows heat to flow through but wood doesn't allows heat to flow through

2- bec it protect us from harmful radiation come from outer space and it helps in regulate earth Temperature

3- bec it harms the nervos system as it causes nervous tension , sleepless and effects heart beats

4- bec it generate the mechanical energy for bones help the bones in motion

5- bec planets differ from each other in gravity and mass

Q4:- 1- Celsius thermometer 2- nervous system 3- spinal cord 4- ozone

5- temperature