

Day: Wednesday

Date: 05/06/24

AMMAR YASIR  
OR 54 (Rwp)  
GSA mock II

### Section I

Q<sub>2</sub>

a) According to a report by United Nation, some countries will be more vulnerable than others to climate change. Pakistan comes under the category of these countries. Consequently, Pakistan faced a huge flood in 2022 with an estimated loss of \$30 bn to economy. Another flood alert is being given in the year 2024. Hence, it is very important that urgent measures should be taken <sup>in COP 29</sup> which are as follow:

i) Monetary compensation and aid  
Countries like Pakistan has raised this issue on international forum to help Pakistan recover or minimize its losses. COP-29 can form a fund raising setup to include those country who are mainly responsible for Carbon emissions.

ii) ~~Debt~~ Ease in debt  
International leaders like IMF and world Bank should provide debt on easy and payable that include low interest rate, huge sum of money and a relaxation in repayment time.

3) Focus on reduction in ~~cars~~ emission of greenhouse gases

The capacity/limitations on ~~Carbon Hydro-Carbon~~ emissions should be monitored for the countries to actually act on it. A goal should be setup to introduce more environmentally friendly way to generate energy. One such example is switch to electric cars that has reduced emissions. Hence, a goal can be set to ~~int~~ and emphasise on electric and hybrid cars to be introduced fully in the market.

4.) Renewable Sources

More focus should be directed to utilising Renewable energy sources, of hydel, wind and solar power that, ~~we~~ has minimal affect on our atmosphere with no emission of greenhouse gases.

b) The common function of arteries, veins and capillaries is that blood passes through it. Arteries carry oxygenated blood from the heart throughout the body where as deoxygenated blood from heart to lungs. They are thicker than veins to withstand blood pressure from heart.

Veins carry deoxygenated blood from the body into the heart and oxygenated

Day: \_\_\_\_\_

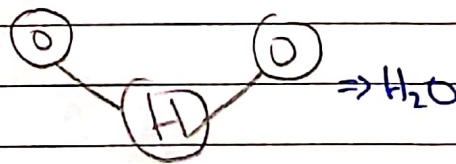
Date: \_\_\_\_\_

blood from lungs into the heart.

Capillaries are tiny pathways that carry blood to all the cells of the body. They are arteries that were divided minutely for effective and efficient access of blood to the vital cells. Blood contains oxygen, red in red blood cells, white blood cells and plasma which are essential for the cell to function.

- c) Atoms form chemical bond by two ways
- 1) transferring its electrons to other atoms
  - 2) Sharing a common electron with them.

This results in chemical reaction in which energy is released. As a result, a compound is formed from an element.



The chemical name of water is  $H_2O$ . It contains two oxygens and one hydrogen that are chemically bonded forming a compound.

Conductor:

d)

Conductor ~~can~~ have the ability to let <sup>heat</sup> ~~electron~~ flow through it. Hence, it can easily attain and lose heat.

For example, Copper

Semi-Conductor:

Semi-Conductor partially allow heat to flow through it. They take time to gain and lose heat.

For example, Plastic

Q3.

a)

Technological advancement has decreased the quality of food especially in terms of the ~~nutrient~~ nutrients composition. This can lead to malnutrition which will result in various diseases among human beings.

Firstly, genetic engineering in seeds of agricultural product may have reduced reliance on pesticides and insecticides. It may also have increased the overall production. However, it has resulted in food low on nutrients. This is why organic food has been given a separate category which are more expensive to buy.

Secondly, poultry farms give hormonal feed to the chickens which result in a quick increase in size of chicken to meet the rising demand of the world. However, it has shown health concern in humans, due to less nutrients or more contaminants than organic chicken.

Lastly, the excessive use of pesticides and insecticides on agricultural produce can be consumed by humans resulting in health issues.

Day: \_\_\_\_\_

Date: \_\_\_\_\_

b) Solid waste can be divided into two broad categories: biodegradable and non-biodegradable.

Non biodegradable poses to the most serious threat in terms of plastic. World is heavily dependent on plastic because of its durability and cheap. It can be hard and soft both. Hence its use is prevalent. Unfortunately, its cannot be decomposed resulting in rise in plastic level in land and sea. Hence, it is a serious challenge to waste management.

However, biodegradable substances also need a proper place of dumping. Rising population and lack of technological and human resources in various part of technical the world has made it a challenge. Moreover, the cost involved in the process cannot be ignored.

Moreover, there is a lack of awareness on the part of public on ways to dispose waste. In countries like Pakistan, people conveniently dispose trash in sewage, rivers and land. This further increases the cost since the management has to take extra efforts in waste disposal from these areas other than those assigned for the management.

In addition, the lack of recycling waste and its competency by both the administration and public further add to the issue.

Day: \_\_\_\_\_

Date: \_\_\_\_\_

c) Dengue Fever is the result of mosquitoes that ~~breases~~ act as carriers to Dengue virus. ~~vesel~~ These mosquito bites on the human skin thereby releasing these viruses.

The symptoms of dengue virus include an increase in body temperature, excessive shivering, pain behind the eyes, pain in joints and muscles, fatigue and severe headache. The person feels restless and has bleeding in gums. There is a severe pain in Abdominal Region. Fortunately, it can be treated.

d) Tsunami has been derived from Japanese term Tsu which means "harbor" and Nami which means "waves". Tsunami can result from the movement of tectonic plates resulting in transmission of energy from the plates into the ocean. This results in displacement of water and formation of wavelengths that could carry debris with them in the process. Moreover, they can reach to a ~~height~~ height of 100ft and a speed of 700km/h. Hence, when they hit the land, they prove to be very destructive with huge loss of land and infrastructure.

Richter Scale calculates the magnitude

Day: \_\_\_\_\_

of an ~~earth~~ earthquake on surface  
whereas Volcanic Explosivity Index  
measures the intensity of a volcanic  
eruption.



## Section II

Q7.

a) Intelligence Quotient (I.Q) defines the ability of a person's intelligence. IQ is affected by food nutrient, inheritance, upbringing, etc.

b)

$$\begin{aligned} \text{Circumference} &= 2\pi r \\ &= 2 \times \frac{22}{7} \times 4 \\ &= 25.14 \text{ cm} \end{aligned}$$



Day: \_\_\_\_\_

Date: \_\_\_\_\_

$$\boxed{= 78943.9 R}$$

Tahir's Profit = 406000 - (50750 + 78943.9)

$$= 276306.1$$

50750  
 78944  
 129694  
 406000  
 129694  
 276306

Q1.

a) A B C D E F G H I  
 J K L M N O P Q R  
 S T U V W X Y Z

BROTHER  
 QDGSNQA

The relation pattern of BROTHER with QDGSNQA starts in opposite direction with one letter backward. Therefore SISTER will be coded as follow:

S I S T E R  
 Q D S R H R

b) 1, 2, 6, 21,

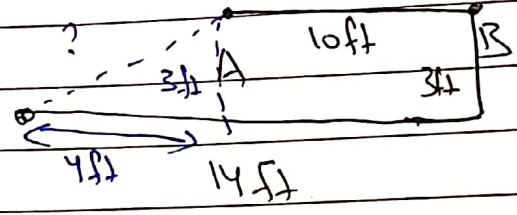
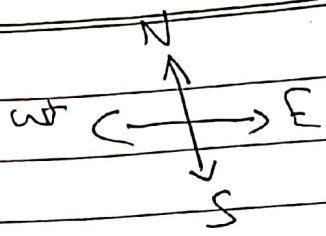
1:2, 1:3 2:7      1x1+2

$$1 \times 2 + 2 = 2$$

$$2 \times 2 + 2 = 6$$

$$3 \times 3 + 6 = 15$$

c)



Using Pythagoras Theorem,

$$(\text{Hyp})^2 = (\text{Base})^2 + (\text{Height})^2$$

$$x = \sqrt{(4)^2 + (3)^2}$$

$$= \sqrt{16 + 9}$$

$$= \sqrt{25}$$

$$x = 5$$

Naseem is 5 feet away from A.

we assume that

d)  $\text{Avg (7 days)} = \frac{M + T + W + Th + F + Sat + Sun}{7}$

$$\frac{233}{7} = 33 \frac{1}{7}$$

★ We assume Thursday to be fourth day

$$\text{Avg (7)} \cdot 33 = \frac{\text{Sum (7)}}{7} \Rightarrow 231 \Rightarrow (x)$$

★ let first 3 sum be y

$$\text{Avg (first 3)} \Rightarrow 35 = \frac{y}{3} \Rightarrow 90$$

$$\frac{165}{3} = 55$$

★ let last 3 sum be z

$$\text{Avg (last 3)} \Rightarrow 35 = \frac{z}{3} \Rightarrow 105$$

Thursday  $\Rightarrow \text{Thur} = 231 - (90 + 105) \Rightarrow 36$

$$\frac{195}{3} = 65$$

Ans

$$\frac{231}{3} = 77$$