DATE: __/__/____

Q.# 2

a. Key features of COP-28 held in UAE — in context of Loss and Damage fund and some financial issues of developing countries.

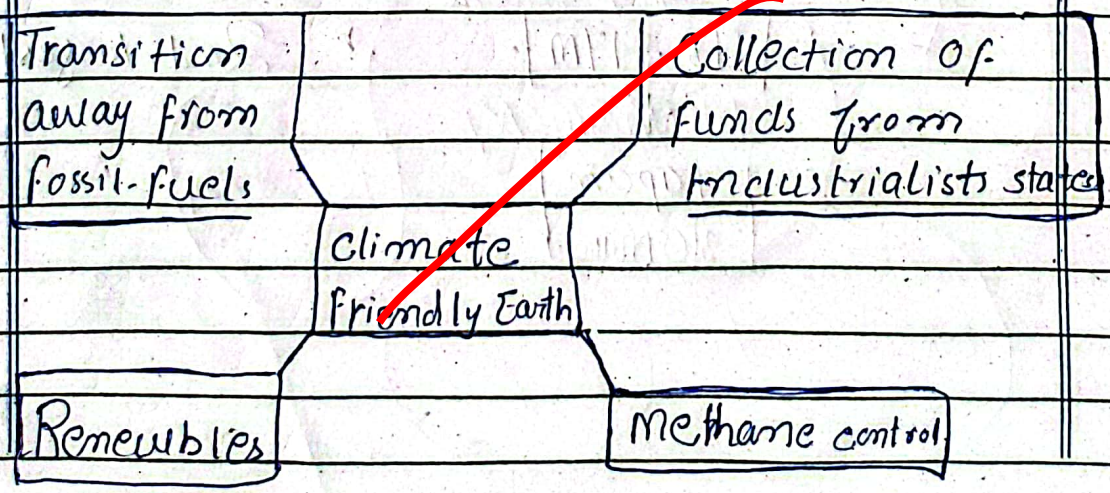
Good for theory portion
Increase length
Add more headings
Draw diagrams
Work on math portion

Ans

1. Introduction

Conference of Parties-28 held in UAE served as a formal place to determined nationally determined contributions to reduce emission of toxic gases which pollute environment. Its key features are including, formalizing loss and damage fund by collecting funds from developed states to use them for rehabilitation of losses made by climate catastrophe in vulnerable countries.

2. Key Features of COP-28.



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3. Loss and Damage Fund

Under loss and damage fund rich countries were compelled to contribute financially for the losses bear by prey countries like Pakistan. 8th vulnerable state to climate disasters whereas its contribution of CO_2 is 0.29%. Hence to compensate the losses this fund was formalized with its administrative body.

a. Pledges of Financial Contribution under COP28:

- UAE, Germany $100 million
- EU members $125 million
- UK $50M
- US $17M → 2nd largest
- Japan $10 Mill

Biggest Emitters of GHGs → 3rd largest

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4. **Financial Issues of Developing Countries:**

a. Global warming could cost poor countries Trillions of dollar. Due to heavy losses caused by weather variation. For instances, the recent floods 2022 in Pakistan have caused $3 trillion by devastating infrastructure resulted from heavy rain.

5. **Conclusion**

To sum it all up, it is pertinent to state that global warming has gathered nearly 190+ states in UAE to sort this grave issue out. In COP-28, countries have formalized loss and damage fund which was purposed in COP27 last year in Egypt. Developing countries are facing financial challenges due to natural disasters such as floods, droughts and heatwaves. Hence, to compensate their losses COP28 played constructive role in collecting funds.

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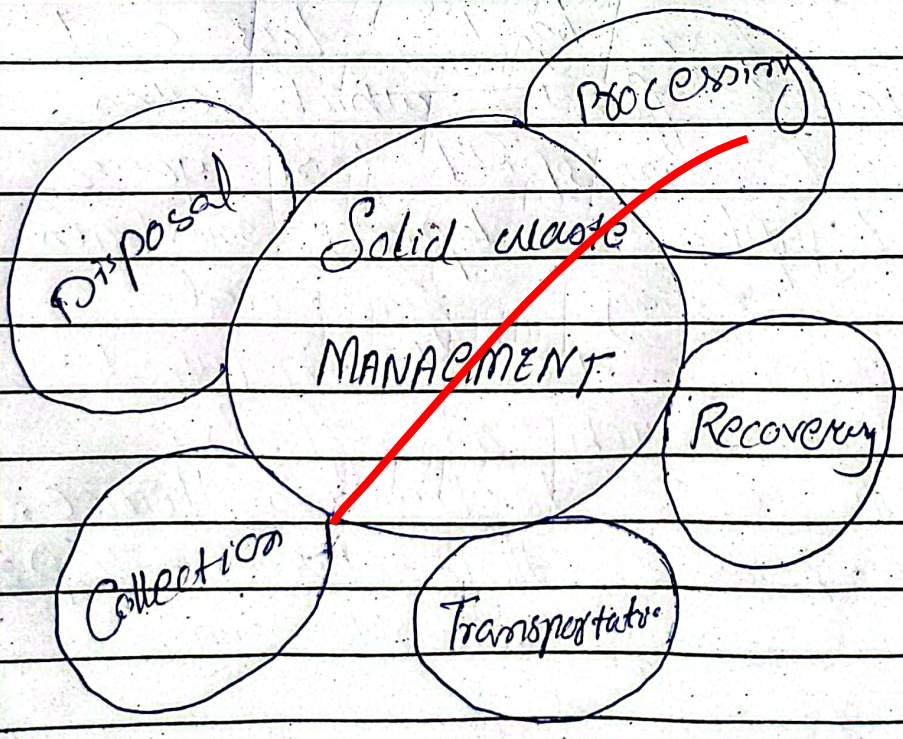
b.) What is Solid waste management. Discuss different methods

1. Solid Waste Management:

Solid waste management refers to the management of solid waste materials. It is a process of treating waste in proper way by recycling waste, reducing the use of waste, landfilling and conservations waste into productive things.

For example, Starbucks brand pledge of reducing use of straws to eliminate plastic globally etc.



2. Methods of Solid waste Management:

It can be done in a number of ways. However, some effective methods of solid waste management are discussed below:

3. Recycling:

It involves collecting of solid waste and processing it in such a way that it can be used again, For instance, making vase out of plastic bottles.

4. Reducing Source of waste:

Another effective method in reduction of the source of solid waste. This strategy is very useful. The world has been working on it. For example, plastic going-out

campaign which banned the use of shoppers etc.

5. **Landfilling:**

When waste can not be recycled or reduce, the best method for solid waste management is disposition of it in landfills. In present time, modern landfills are designed to reduce impacts (harmful) of solid waste volume.

6. **Conservation of waste-to Energy:**

Last but not the least, one of the efficient methods of solid waste in turning it into energy. It can be done by the process of incineration. It helps to generate electricity or heat out of the solid waste. In many cities this method is proved helpful in Pakistan. For example, in Sukkur, Sindh thousands of the tonns of waste has been gathered in side areas to conserve it. Therefore, it can be concluded that solid waste management can be done in various ways.

DATE: __/__/____

c) Balanced Diet Note

1 Describing Balance diet

Balance diet refers to the fulfilment of all nutritional needs required by human body. It comprises of essential food components which protects human body against many disease such as malnutrition etc.

2. Importance of Balance Diet

Balance diet is very crucial for humans to work and live healthy life. In order to maintain good health and balance diet is prerequisite.

'Let thy food be thy medicine.'

3. Components of Balance Diet

Group I: Diary products (milk, cheese)
Group II: Grains (rice, bread)
Group III: proteins (beans, eggs)
Group IV: Vegetables/Fruits
Group V: Oils/Fats

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4. Functions of Balance Diet

a. Boosts Immune system

b. Protects against diseases

c. Helps to meintein body temprature

d. Help in building tissus and muscles.

e. Gives energy to work

f. Regulate growth of body

g. provides all nutrients

h. Meinteins healthy living

5. Disadvantages of Imbalanced Diet

a. Dificiency of vitamens lead to accute disease like scurvey and Beri Beri

b. Taking unbalanced diet result in poor growth and health.

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d. Discuss any 3 renewable energy resources under CPEC.

1. **Introduction:**

The main three renewable energy resources under CPEC are including Quid Azam Solar Park, Hydro China Dawood Wind Farm, and Karot hydro power plant. These projects aim at providing environment free electricity (clean) and cheaper to Pakistan under CPEC projects.

2. **Sources of Renewable Energy: A General Overview:**

Renewable energy sources are refers to the sources that can be driven from natural sources that can be replenished at a higher rate for human benefit.

for example:

Sun Energy
Wind Energy
Geothermal etc.

a. **Renewable Sources Under CPEC:**

CPEC is a mega project

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signed between China and Pakistan in 2013. Under this project China pledge to invest in differ sectors in Pakistan including rail infrastructure, transportation and energy sector.

Under CPEC following are major energy projects falls under renewable:

I. HydroPower Plants

Under CPEC hydropower plant are key to mention. For example, Karot project located on the Jhelum River. The instalment capacity of karot hydroproject is 720mw. It is designed to generate some 3billion kilowat-hours of clean electricity annually.

II. Quid-Azam Solar Park.

Solar energy sources is another project under CPEC which is renewable. located in Bahawalpur it instellation capacity is 400 to 600 MW of solar energy.

It will light up Pakistan future by displacing thousands of tunnes of coal burning

2. Wind Farm in Charo Thatta

Hydro China Dawood wind farm is also renewable energy project under CPEC. It aims to provide nearly 50mw of electricity to Pakistan through wind turbines installed under the auspicious of China. RBT.

Reportedly it is sufficient to provide electricity to some 100.000 households in the local area.

3. Conclusion

Promoting Green and clean Pakistan is an agenda of our policy. In this regard CPEC has aided us by assisting in developing green energy infrastructure. Renewable sources of energy under CPEC are ranging from solar parks to wind turbines in Pakistan. It will not only gives Pakistan clean electricity but also promote green infrastructure in the country.

DATE: __/__/____

Q.# 34

a) How does earthquakes are generated? Distinguish with Tsunami

1. Generation of Earthquakes

Earthquake forms when ~~tecto~~ tectonic plates move slowly. Due to the sudden movement along faults within the earth. The heater magma in lower mantle shows movement it release energy and heat up magnetic current which results in earthquake.

a Movement of Faultlines

A fault is a fracture between two blocks of rocks. These faults allow the blocks to move relative to each other. This movement generate earthquake

2. Understanding Tsunami

Tsunami is a series of waves in a water body caused by the displacement of water

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Earthquake Vs Tsunami Generation

Tsunami is occured due to the sudden displacements of seafloor, whereas earthquakes occur due the movements of tectonic plates in the earth crust.

Tsunami occurs in water

Earthquake occurs in land

The former forms waves of water

The letter shakes the earth.

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b. Coriolis force ? How Hurricanes are generated ?

1. Coriolis Science

In physics Coriolis is a force that acts on objects in motion within a frame of reference that rotates with respect to inertial frame.

- In its simpler definition coriolis force is a force caused by the earth's rotation.

- It is responsible for deflecting winds towards northern hemisphere in the right and southern hemisphere in the left

When the wind velocity is high deflection is more

2. Generation of Hurricanes

Hurricans are tropical cyclones with strong wind and heavy rainfall. They form over warm ocean

waters when the conditions are right.

- Warm moist air rises from surface of ocean, it creates pressure.

- As more warm air rises it creates spinning motion due to the rotation of earth and the ~~Coriolis~~ force
Coriolis

3. Relation between Coriolis Force and Hurricane

- The coriolis forces play a key role in formation and structure of hurricane.

- These forces causes moving objects such as air and water to curve due to Earth" rotation.

- This force helps to give hurricanes spinning motion

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c) Distinguish between solar and lunar eclipses

1 Key Characteristics of:

Solar Eclipse	Lunar Eclipse
• In solar eclipse the moon comes between the Earth and the sun.	In lunar eclipse the earth comes between the moon and the sun.
• Occurs once in 18 months	Occurs twice a year
• Lasts about 5-7 minutes	Lasts for an hour
• Occurs during day	Occurs during night
• Happens in new moon	happens during full moon
• Risky to see	Harmless to bare eye

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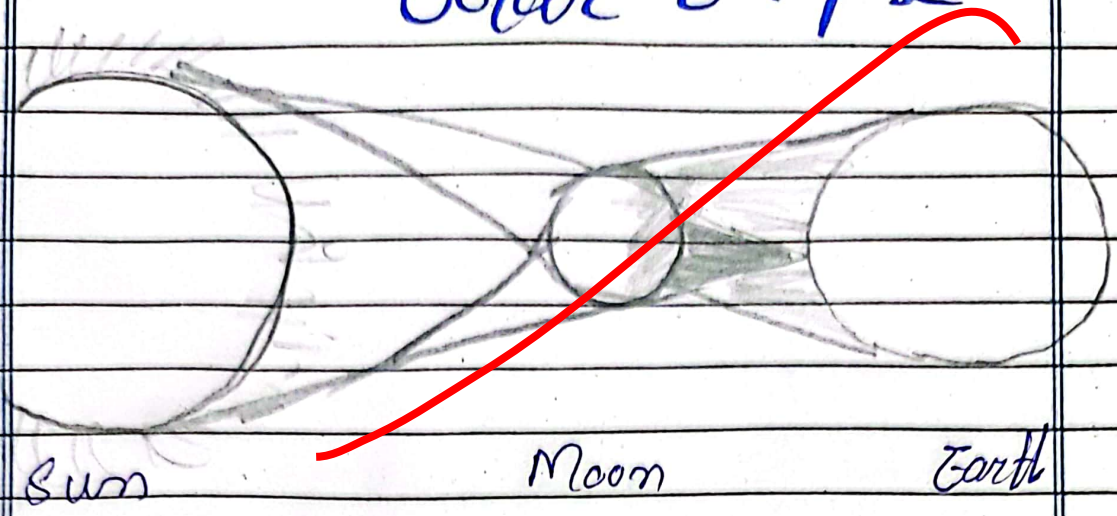
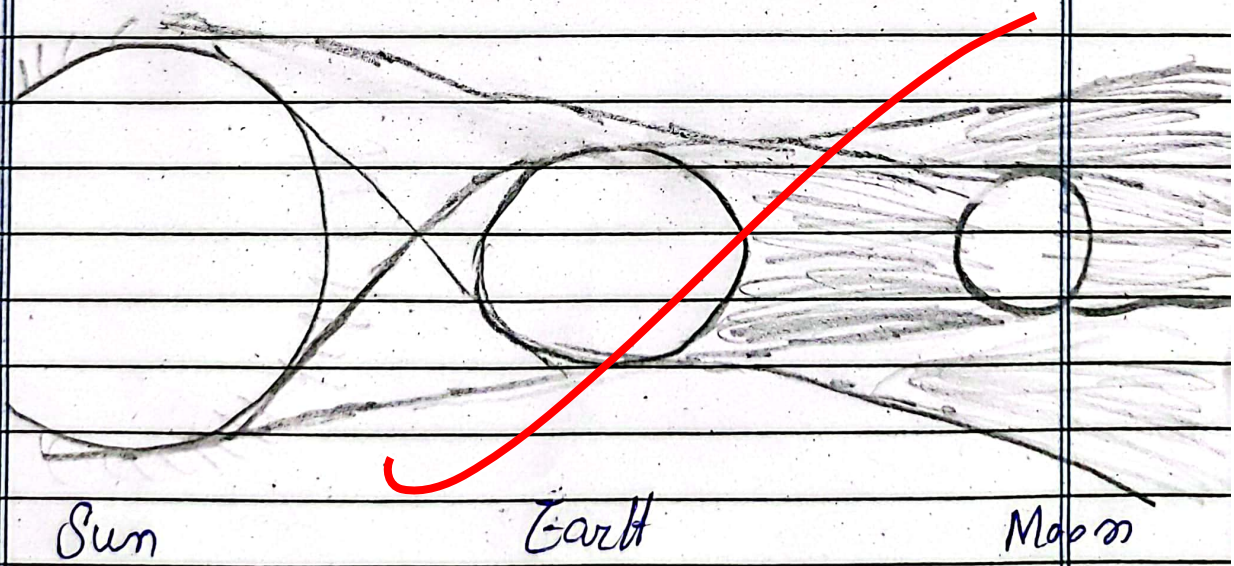
Solar Eclipse



Lunar Eclipse



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4) What is doping in semi-conductors Discuss different types of Ceramics

1 Explaining Dopping

Dopping in semi-conductors refers to the process of adding impurities to modify their electrical properties.

a. Reason behind Dopping semiconductors:

By adding specific atoms to the semiconducts such as ~~extra~~ electrons phosphorus and boron scientist aim at either introducing extra electrons or create holes to control its conductivity.

Other reasons are:

Creation of various devices such as diodes and transistors etc.

b. Types of Dopping

1) n-type dopping
2) p-type dopping

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2 Types of Ceramics

following are various types of ceramics

a. Stoneware:

ceramic material is fired at a higher temperature. It results in a denser and more durable material.

b. Earthenware:

It is fired at low temperature. It is used for dishes, pottery etc..

c. Porcelain:

It is known for its translucent appearance. It is made of clay and fired at high degree.

d. Refractory:

These ceramics are used in applications such as kiln lining, areospace material etc. It withstand high temperature

e. Technical:

These ceramics are used in ~~me~~ electronics and automotive. They have mechanical, thermal and electrical properties

Q# 6

Five years ago age of father was thrice the age of son, If son is 30 years old now what is current age of father

a) Ans

F. $x \times 3 = 5$

So, x 30

Son five years ago was 25

$25 + 30$

$75 + 80$

The present age of father is 80