

Q. No. 4

- a. What are main causes of floods? How floods of 2022 were different from super floods of 2010? Explain role of NDMA in this regard.
- b. Differentiate star & planet. How a star becomes a black hole?
- c. Why do atoms form chemical bonds? Explain structure of water.

GSA

Part - II

Section - I

Q NO. 4

Floods

According to UNODRR, flood refers to natural catastrophe which harms every activity of the humans and animals.

Causes of floods

There are numerous causes responsible for floods:

1. Excessive rainfall:

Excessive rainfall especially monsoon causes floodings. The massive rainfalls continuously break infrastructure and cause floods. This was the dry land with excessive water.

2. Breakege of dams:

Breakege of deepest dams brings floodings during excessive rain.

3. Deforestation:

Deforestation is responsible for floodings. Plants absorb CO₂ without plants, the temperature gets warm often causes catastrophes.

4. Weak drainage system:

Weak drainage system always cause the urban floodings. The vulnerable drainage systems break out during the rain and cause urban floodings.

Variation table

Flooding 2022	Flooding 2010
lost 1700 individuals	less casualties
Economic losses 15 US \$ billion	7 billion lost
Displacement 36-2%	16 % displacement
Vanished infrastructure	Vanished infrastructure

NDMA'S role

NDMA played tremendous role in spite of limited resources and equipments. NDMA was the first institution to response to the affected regions. National Disaster management Authority carried step wise operations. The first operation was based on protecting, rescuing humans, animals and valuable infrastructures. Second operation was transferring the flood victims to camps. The third operation was providing nations, medical & services, financial funds and education. The last operation was based on safe return of the victims to homes. Therefore, NDMA played enormous role in the floodings.

(3)

Difference between Star and planet

Star is giant aspect which consists different gases. The temperature on stars is hot. Also, stars give lightness. Moreover, stars produce radiations. One of the most prominent example of a star is Sun. On the other hand, planets also have different gases but do not produce lightness. The temperature on the planets is cooler than stars. Moreover, planets do not produce radiations like stars.

The process of star to become black hole

Some stars are six times larger than earth known as massive star. Massive stars have short span of life. Massive stars exist by the help of Hydrogen. The Hydrogen is existing in the core of the giant star. Massive star blasts when the hydrogen gets end. The materials of blast massive stars become so dense which does not allow anything to be emitted. Later, the region of the massive stars become black hole.

(c)

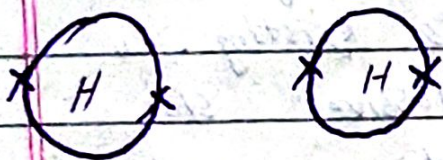
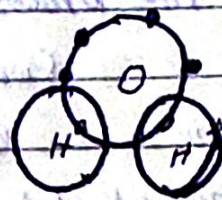
Atoms and formation of chemical bond

Atoms form bonds to complete its octet and duplet holes. In easy words, atoms form chemical bond to stable themselves.

Water structure:

water consists one oxygen atom and two hydrogen atoms.

molecule closeness



Structure of water