

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

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### Question # 01.

A. Vaccines A vaccine is a biological preparation that involves improvement of immunity to a particular disease. ~~while an antibiotic is a chemical~~

Antibiotic An antibiotic is a chemical compound used to kill or inhibit the growth of infectious organisms

#### Vaccines

1. Vaccines provide protection / immunization against virus and bacteria.

2. work: A vaccine typically contains an agent that resembles a disease-causing micro-organism and is often made from weakened or killed

#### Antibiotics

Antibiotics only treat bacterial diseases.

work: Antibiotics work in two ways (a) They kill bacteria by disrupting one of the processes they need to survive such as turning

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forms of microbes,  
its toxins or one of  
its surface proteins.

The agent stimulates  
the body's immune  
system to recognize  
it as foreign,

destroy it and  
remember it so  
that immune system  
can easily recognize  
and destroy any

of these micro organisms  
that it later encounters

glucose into energy.

(b) They prevent  
bacteria reproducing  
and spreading

for example  
by disrupting  
the processes

bacteria use to  
produce <sup>new</sup> cells  
such as growing  
~~the~~ new  
proteins.

B

	Cause	Location	Name.
(i) Tsunami	caused by underwater earthquakes, volcanic eruptions, landslides that displace a large volume of water.	affected coastal areas around the world.	a series of ocean waves with extremely long wavelengths and high energy. It is a result of seismic activity.
(ii) Cyclone	caused by warm ocean waters evaporating and rising creating low pressure systems. The earth's rotation causes the air to spin around the low pressure center.	South Pacific and Indian Ocean.	it is a generic term that refers to a large scale air mass that rotates around a strong center of low atmospheric pressure. Depending on region they are called hurricanes/cyclones/typhoons.

	Cause	Location	Name
(iii) Typhoon	Typhoons are formed over warm ocean waters with low pressure centers, fueled by release of latent heat from condensation of water and vapor.	Prevalent in North-Western Pacific, affecting countries like Japan, China, Philippines	used to describe a specific type of cyclone that occurs in the North-western Pacific Ocean.

C

## GALAXY:

A galaxy is a gravitationally bound system of stars, stellar remnants, and interstellar gas, dust and dark matter. Astronomers estimate that there are about 100 to 200 billion galaxies. Milky Way and Andromeda are examples of galaxy. Galaxies vary in size from dwarf (with a few thousand stars) to giants (with a hundred trillion stars). They also vary in morphological

visualization. Some galaxies are elliptical, some are irregular and some are spirals.

Galaxies are thought to have black holes active at their <sup>active</sup> center. Milky way galaxy is a large disc shaped galaxy that includes our solar system.

It is a spiral galaxy with a bulge in the center and arms spiraling outwards as it rotates. Milky way galaxy contains 200-400 million other stars in addition to sun.

It looks like a faint band of white in the sky.

## D Disaster Risk Management

Disaster Risk Management can be defined as the organization and management of resources and responsibilities for dealing with the humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters.

The aim is to prevent new and reduce existing disaster risk and vulnerability.



Four Major Phases of disaster management are

- (1) Mitigation Pre disaster mitigation efforts. e.g. building codes
- (2) Preparedness education, outreach training Emergency Management Planning
- (3) Response Immediate Response affected
- (4) Recovery Post disaster Recovery Plan.