

Q. 1(A)① Vaccine and antibiotics:-

Vaccines are the substances which produce immunity against a certain type of pathogens.

While antibiotics are the substances which either retard the growth of bacteria or kill them.

② Difference between antibiotics and vaccines:

A Vaccines contain attenuated or killed viruses of that virus which can cause disease while bacteria contain chemicals which aim at retarding the growth of bacteria only.

B Vaccines ~~are~~ produce immunity while antibiotics cannot produce immunity.

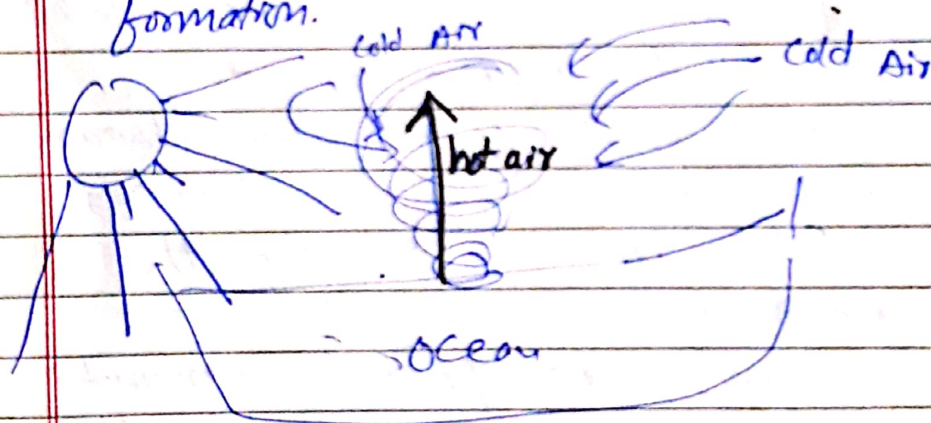
C Vaccines are used ~~for~~ against viruses while antibiotics are majorly specified for bacteria or other pathogens.

D Vaccines can be taken orally or by injections while antibiotics ~~are~~ can be taken as pills and syrups as well.

(B)

Cyclones:

Cyclones are large mass of rotating column around a centre of low pressure on oceanic surface. They create when temperature is above 26.5°C . They mostly occur in tropical zone where there is a high temperature on ocean surface which causes its formation. Similarly Coriolis effect is also behind its formation.

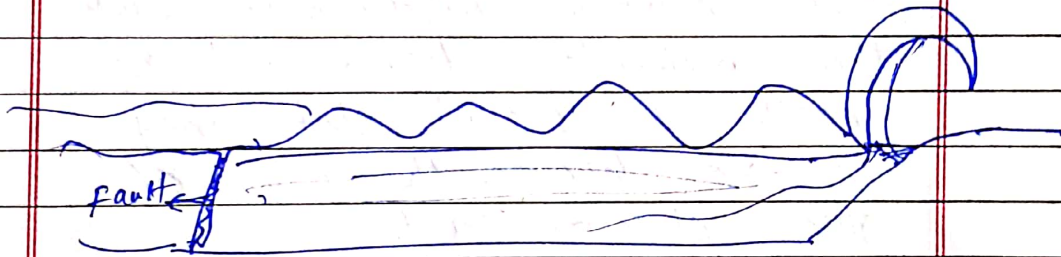


Typhoon:-

These are also actually cyclones with varying speed of movement. However, one thing that differentiates the typhoon from cyclones is in its region of formation. Because typhoons occur in south west pacific and atlantic region.

Tsunami:

When earth quake occurs in oceanic, or tectonic plates collide with each other in ocean belt they produce huge potential energy, which causes devastating waves on ocean surface. These waves on reaching to sea shore convert into mighty waves owing to stop and speed difference. Such waves cause huge losses to human kind every year.



Tsunami Formation



Galaxy:

Galaxies are the ^{huge} group of stars having a strong centre, on which galaxy moves. Galaxies are also considered as the unit of universe. As a galaxy contains all heavenly bodies inside it such as stars, planets, asteroids, comets.

ate: _____

Meteoroids, dust, black holes, and other celestial bodies. The galaxy in which we live is called Milky way galaxy. Another galaxy near to it is Andromeda Nebula. The diameter of Milky way galaxy is around 1 lakh light years.

Q. ~~1~~ 2

(A) Good fats and bad fats?

Good fats are the fats which contain unsaturation inside their molecular chain, and are mostly in liquid state. They do not become the cause of rising cholesterol level.

While bad fats are those which are mostly in solid state due to saturation. They cause increase in cholesterol level in human body.

(B)

(i) Uses of Vitamin B-complex -

1. used for growth of skin cells.
2. used as anti-oxidant
3. used for nourishment of tissues

(ii) uses of Vitamin E:

- ① used for curing night blindness.
- ② used as anti-sterile agent.
- ③ Also used as anti-oxidant.

(iii) uses of Vitamin D:

- ① Helps in strengthening of bones
- ② Helps in calcium metabolism
- ③ strengthens the teeth
- ④ Helps in mineralization of phosphorus

⑤

(iv) uses of Iron:-

- ① Iron is essential for transport of oxygen e.g. Haemoglobin
- ② Iron is needed for muscle growth
- ③ Iron is essential for transportation of ~~&~~ Oxygen and CO₂ in tissues.
- ④ Helps in normal metabolism of the body

⑤

① Food adulteration: Food adulteration is a process by which the quality of food is spoiled by subtraction or addition of something.

② Types

There are two main types of adulteration.

(i) Subtraction adulteration:

Type of adulteration in which the important substances are removed from the main substance. It causes compromising the quality of a pure substance. eg. removing essentials from milk, removing fibres from fine flour.

(ii) Addition adulteration:

In this type substances are adulterated by adding impure substances to them. For instance, adding chemicals in milk, ~~or~~ adding borax-powder in spices, etc.

③ Effects:

Adulteration of food results in several health-related problems.

(i) Diarrhoea

adulteration of milk sometimes causes diarrhoea.

(ii) Acidity of stomach:-

Adulteration by adding acidic substances causes acidity in stomach.

(iii) Kidney failures

Addition of colourings in food products can cause kidney failure and sometimes stones.

(iv) Cardiac problems:

Adulterated food may also cause ~~eat~~ heart-related problems.

(4) Solutions:

Adulteration of food can be solved by taking following measures.

(i) Testing food samples in Laboratories: -

For purity assurance, food products should be properly tested in laboratories.

(ii) Monitoring the food shops:

Monitoring teams should be made to ~~to~~ have a watching eye on food producers.

(iii) Introducing of punishment:

Strong punishments should be given to ~~those~~ ^{such} people who involve in adulteration.

1. Food preservation:

Process by which food is stored and protected from any biological or environmental impact, so that it can be used for a longer period of time.

2. Methods of preservation:

Here are the following five main methods of preserving the food.

(i) Boiling of food:

Boiling liquid substances such as milk can help kill the pathogens. Therefore, ~~for~~ milk can be preserved.

(ii) Drying & salting:

This is an ancient method, which is mainly used for preserving meat.

(iii) Freezing:

By this method foods are stored at temperatures below 0°C . Because at this temperature bacteria cannot function properly.

(iv) Pasteurization:

In this method food is heated for around 15 seconds at 71°C to preserve it for a longer period of time.

(v) Pickling:

It is another method of preserving foods. By this method, the substance to be preserved is stored in a pickling agent such as acetic acid.