

DATE: ___/___/___

Part - II

Section - I

Q. 3

a.

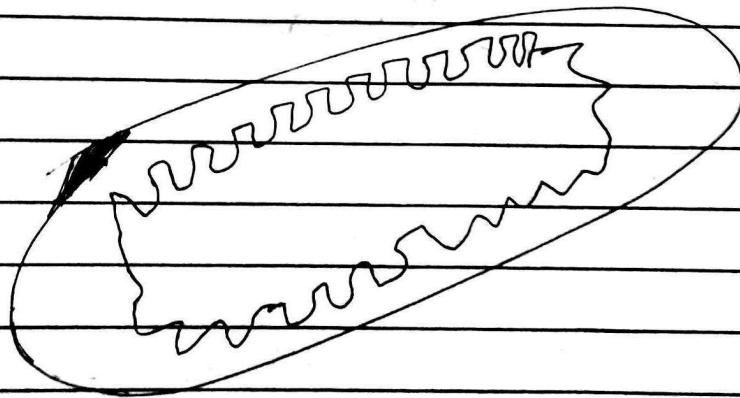
Answer

Mitochondria:

Mitochondria is an organelle present in ~~cell~~ the cytoplasm of cell.

It is responsible for the synthesis of the Adenosine Triphosphate (ATP), an energy currency of the body which provides energy to the body.

Structure of Mitochondria



Why Mitochondria is called power house of the cell?

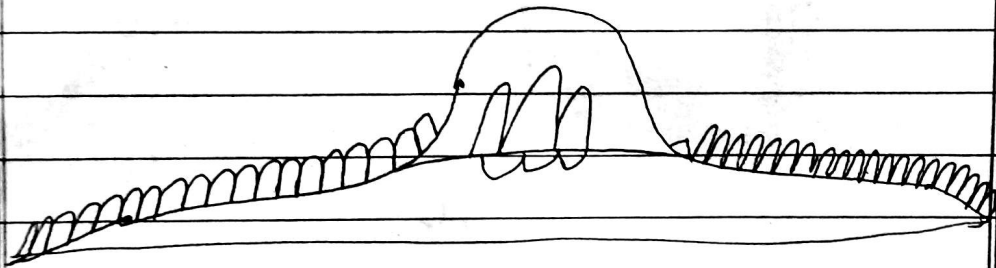
Mitochondria is known as power house of the cell because it is responsible for providing energy to

the body by synthesizing the ATP-
an energy currency.

Ribosomes

Ribosomes are membrane-bound organelles present in the cytoplasm of the cell. These are attached with Endoplasmic Reticulum. Moreover, ribosomes are involved in the synthesis of the protein.

Structure of Ribosomes



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b)

Answers

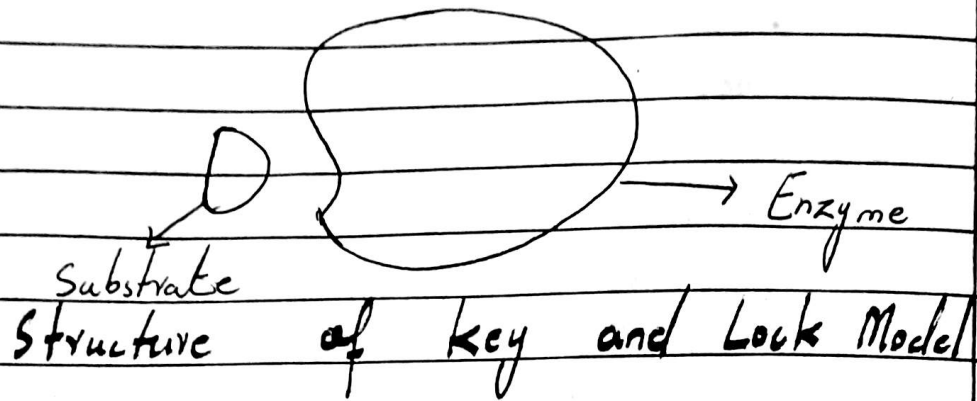
Enzymes:

Enzymes are biological catalysts which enhance the function of biological chemical reactions.

Enzymes are ^{mainly} proteinous in nature; however, there are also enzymes which are non-proteinous in nature, known as ribozymes.

Key and Lock ~~Enzyme~~ Model

Key and Lock Model of enzyme was given by the German biologist Emil Fischer. Key and Lock Model argues that enzymes work as lock and empty side of ~~lock~~ ^{enzyme} is where a substrate ~~attach~~ ^{attaches} with it. According to this model, enzyme work as lock and substrate as key. Moreover, like every ~~key~~ lock there is particular key, the same goes for enzymes and substrates as for every enzyme, there is particular substrate.



Factors that affect enzyme activity.

1. An increase in temperature affect the enzyme activity.
2. Addition of chemical can also affect the activity of enzyme.

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C.

Answer

There are two different types of energy i.e., renewable and non-renewable energy.

Renewable Energy:

Renewable energy is one which can be recycled and reused once used in an activity.

It is commonly less costly energy.

Moreover, it is also ~~environmentally~~ friendly for the environment due to ~~presence~~^{absence} of pollutants.

Renewable Energy Resources

1. ~~Earth~~ Wind energy
2. ~~Exhaustion~~ Hydro energy
3. ~~Exhaustion~~ Biofuel energy
4. Solar energy

Non-Renewable Energy

Non-renewable energy is one which once used cannot be reused in an activity.

It is commonly costlier energy.

It is also hazardous for the environment due to absence of pollutants.

Non-renewable Energy Resources

1. Coal
2. Diesel
3. Petroleum

Wind Energy as a sustainable source for the future

Wind energy is gained by installing wind mills ~~are~~ commonly near the coastal regions. It has the sufficient potential to overcome the energy crisis. Moreover, it is a cheaper energy compared to energy gained through fossil fuels. Furthermore, it is so much sustainable source that its supply is not disrupted by any international chaos or disorder. Additionally, it is believed that fossil fuels energy is unsustainable, and ~~the~~ fossil fuel resources are slowly ceasing from the earth; hence, wind energy can play a vital role as a sustainable source of energy for the future.

d)

Answer

Dengue Fever

Dengue fever is caused by the bite of a female mosquito known as Anophele.

✱

Vector responsible for its transmission

The vector responsible for the transmission of dengue fever is a mosquito known as Anophele.

Moreover, the stand still and contaminated water is also responsible for its transmission.

Common symptoms

1. A person may feel dizziness.
2. Diarrhea is also a common symptom of dengue fever.

Preventive measures

1. Drinking clean and boiled water.
2. Ensuring ~~that~~ efficient drainage system, so that all contaminated water is drained out.
3. ~~Prescribing~~ Taking antibiotics on the prescription of the doctor.

Q: 2

C.

Answer

Global Warming

Global warming is an average increase in temperature of an earth's atmosphere.

Mechanism of Greenhouse Effect

Greenhouse effect is a normal and natural process. It traps heat by the help of ozone layer.

List of three major greenhouse gases

1. Methane (CH_4)
2. Carbon dioxide (CO_2)
3. Chlorofluoro Carbons (CFCs)

d.

AnswerTsunami

Tsunami is a large and unpredictable wave of water which raises in the ocean.

Natural Process of a Tsunami

The natural process which triggers tsunami is believed to be an earthquake because when tectonic plates move, they cause disruption in the stability of sea water, which initially takes the form of small waves, and converts into big long waves commonly known as tsunami.

It is also known as Oceanic flood.

Impact on coastal areas

1. It initially causes infrastructural losses.
2. It may also cause loss of human lives.
3. It disrupts the life of the population living on coastal sides.
4. It poses potential risk for ~~one~~ population and they suffer from psychological trauma.

Section - II

Q. 8

a

ROAD $\rightarrow$ UQDQ
 LAKE $\rightarrow$ OCNH

b

Man is ~~so~~ maternal uncle of the woman's husband.

Therefore, the relationship of the woman with the man is ~~to~~ that man is maternal uncle-in-law of the woman.

c

i) 4, 12, 6, 18, 9, 27
36

Pattern:

The pattern starts with 4×3 which equals 12, and then goes to 6×3 which equals 18, and after that it goes to 9×3 which equals 27. Therefore, now the pattern will start from 12 by multiplying it with 3 which equals 36.

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ii) 1, 2, 6, 24, 120, 720

Pattern:

Now here, the pattern is that
 $1 \times 2 = 2$, $2 \times 3 = 6$, $6 \times 4 = 24$,
 $24 \times 5 = 120$, so the pattern is
multiplication order of each
number increases by one.

Therefore, 120 will multiply
with 6, and the answer
will be 720.

d)

The third tallest among the
friends is Q.

Range

$$\begin{aligned}\text{Range} &= \text{maximum} - \text{minimum} \\ &= 180 - 150 \\ &= 30\end{aligned}$$

So, the maximum possible
range of their heights is 30
cm.