माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल

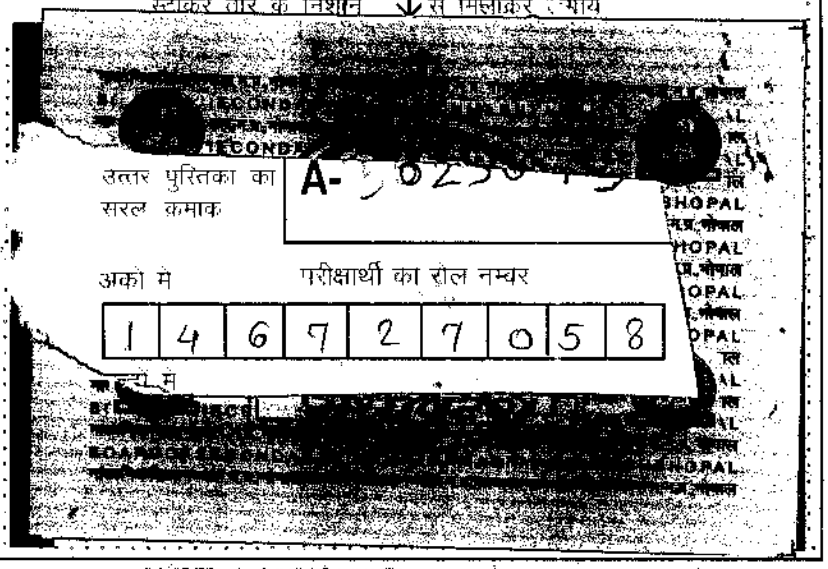
20 पृष्ठीय

परीक्षार्थी द्वारा भरा जाए

वर्ष 2014

परीक्षा का विषय: Science | विषय कोड: 210 | परीक्षा का माध्यम: English

स्टीकर तीर के निशान ↓ से मिलाकर लगाएं



उत्तर पुस्तिका का सरल क्रमांक: A-

अंको में परीक्षार्थी का रोल नम्बर

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उदाहरणार्थ

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परीक्षार्थी द्वारा भरा जावे

केन्द्राध्यक्ष / सहायक केन्द्राध्यक्ष एवं पर्यवेक्षक द्वारा भरा जावे

क पूरक उत्तर पुस्तिकाओं की संख्या अंकों में X शब्दों में X

ख परीक्षार्थी का कक्ष क्रमांक 8

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परीक्षा का नाम एवं परीक्षा केन्द्र क्रमांक की मुद्रा

हाई स्कूल सार्टीफिकेट परीक्षा

केन्द्राध्यक्ष
केन्द्र क्र. 672019

पर्यवेक्षक का नाम एवं हस्ताक्षर	केन्द्राध्यक्ष / सहायक केन्द्राध्यक्ष के हस्ताक्षर
Sandhya 20/3/14	

परीक्षक एवं उपमुख्य परीक्षक द्वारा भरा जावे

प्रमाणित किया जाता है कि मूल्यांकन के समय पूरक उत्तर पुस्तिकाओं की संख्या उपरोक्तानुसार सही पाई गई होलो क्राफ्ट स्टीकर क्षतिग्रस्त नहीं पाया गया तथा अन्दर के पृष्ठों के अनुरूप मुखपृष्ठ पर अंको की प्रविष्टी एवं अंको का योग सही है।

निर्धारित मुद्रा नाम पदनाम मोबाईल नम्बर परीक्षक का फर्म एवं पदाधिकारी संस्था के [illegible] की मुद्रा लगाए।

उपमुख्य परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा	परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा
Name : K.K Sharma, Principal Mob. : 9424656170 V.No. : DH/TD/231/025 School : G.H. School, Lunhera	अजय शर्मा अध्यापक शा. हाई स्कूल बांदेड़ी DH/TD/200/146 Mob.9826261875

केवल परीक्षक द्वारा भरा जावे।

प्रश्न क्रमांक के सम्मुख प्राप्तांकों की प्रविष्टी करें।

प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंकों में)
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कच्चा प्राप्तांक पृष्ठों में | स्कूल प्राप्तांक अंकों में

प्रश्नांक

Question No. 1

1) Spiral
2) Crust
3) Sputnik - 1
4) Decibel
5) Triphala

Question No. 2

1) Pour Dioptre - Power of lens
2) Domestic electric circuit - Parallel
3) Bio-gas - Methane
4) Slaked lime - Calcium Hydroxide
5) Potential difference - Volt

Question No. 3

1) Hydrogen is the lightest element.
2)
2) Wohler made Urea in the laboratory fi
3) Due to the deficiency of blood, disease call Anaemia is caused.
4) Urea is formed in liver in the body.
5) Grinding of food occurs in gizzards in grasshopper.

प्रश्न क्र.

Question No. 4

1) Sulphur
2) 4
3) Cockroach
4) Darwin
5) Aluminium

Answer No. 5

The planets outside the orbit of Mars, are called Jovian planets. They have the following features :-

1) They are gaseous or liquid bodies.
2) They have ring systems around them.
3) Have many satellites (moons).

Answer No. 6 "or"

Short-Sightedness -

A person suffering from short-sightedness or Myopia can see nearer objects clearly, but can't see far away objects clear.

This happens when the image is formed in front of the Retina. Concave lens is used to correct this defect.

प्रश्न क्र

Answer No. 7

Fermentation -

The process in which complex organic compounds, in the presence of enzymes, gradually convert into simple organic compounds is called Fermentation.

Eg. :-

$$C_6H_{12}O_6 \xrightarrow{\text{Zymase Enzyme}} 2C_2H_5OH + 2CO_2$$

Answer No. 8

Thermal Effect of Electric Current -

In the thermal effect of electric current, the electrical energy is converted into thermal energy.

When electric current is passed through a conductor continuously for a long time, then the conductor becomes hot.

When current I flows through a conductor for t seconds with R resistance, then,

Heat = I^2Rt. (Joules Law)

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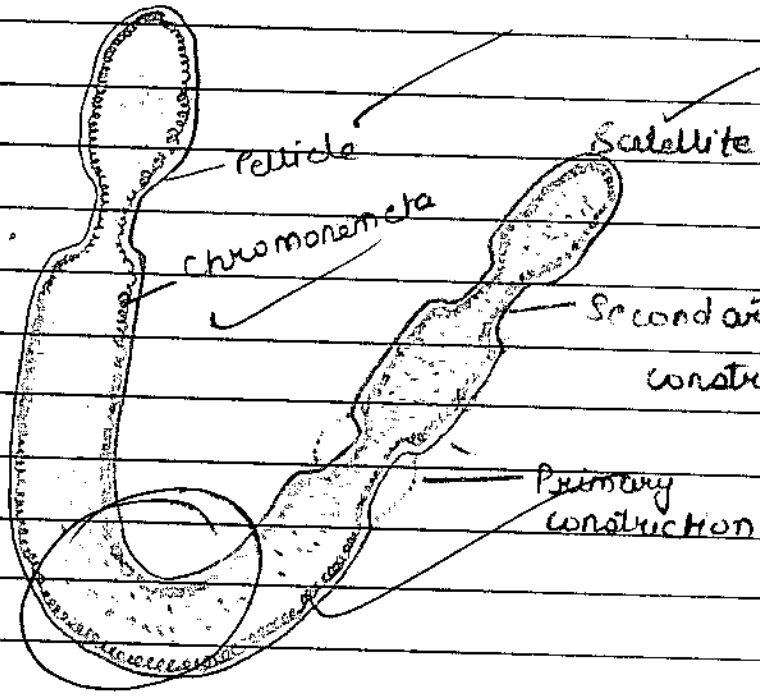
Answer No. 9 "or"

Chromosome -

The chromosome is a filamentous linkage structure which carries a linear sequence of genes.



Eukaryotic Chromosome

Structure of chromosome consists of the following:-

1) Pellicle
2) Matrix
3) Chromatid
4) Chromomere
5) Centromere
6) Satellite

प्रश्न क्र

~~Question~~

Answer No. 10

Differences between Nuclear fission and Nuclear fusion are as follows :-

	Nuclear Fusion	Nuclear Fission
1)	In this, two light nuclei combine to form a heavy nucleus.	1) In this, a heavy nucleus is splitted into two lighter nuclei.
2)	This requires very high temperature.	2) This is possible at room temperature.
3)	It is hard to control this reaction.	3) This reaction can be controlled.
4)	Hydrogen bombs use this principle.	4) Atom bombs are based on this principle.

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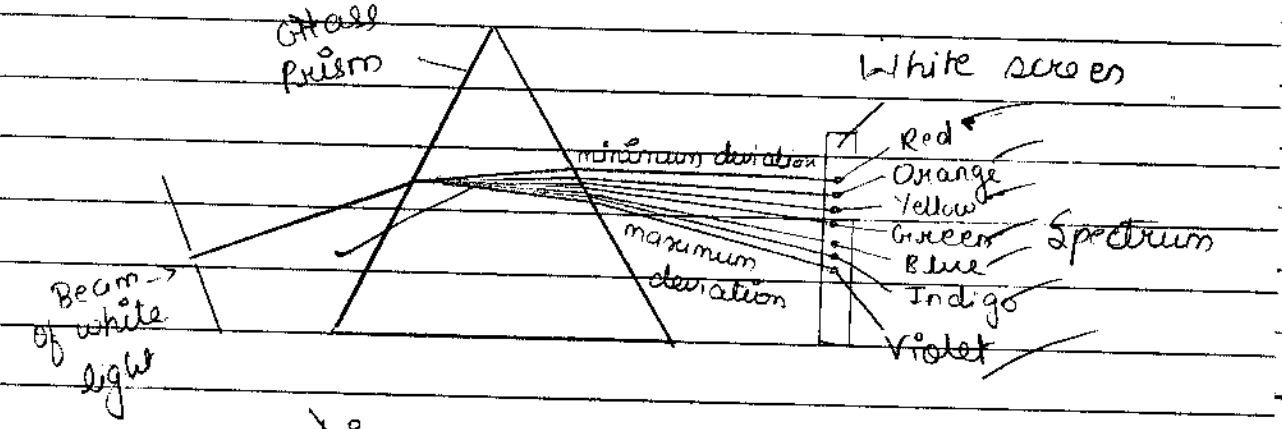
Question No. 11 "or"

When white light is passed through a glass prism, it splits into seven colours. This is called 'Dispersion of light'.



Dispersion of light

While dispersion of light, following colours are obtained :-

1) Violet
2) Indigo
3) Blue
4) Green
5) Yellow
6) Orange
7) Red

They are shortly known as 'VIBGYOR'.

On putting another prism in front of the splitted colours, again white light can be obtained.

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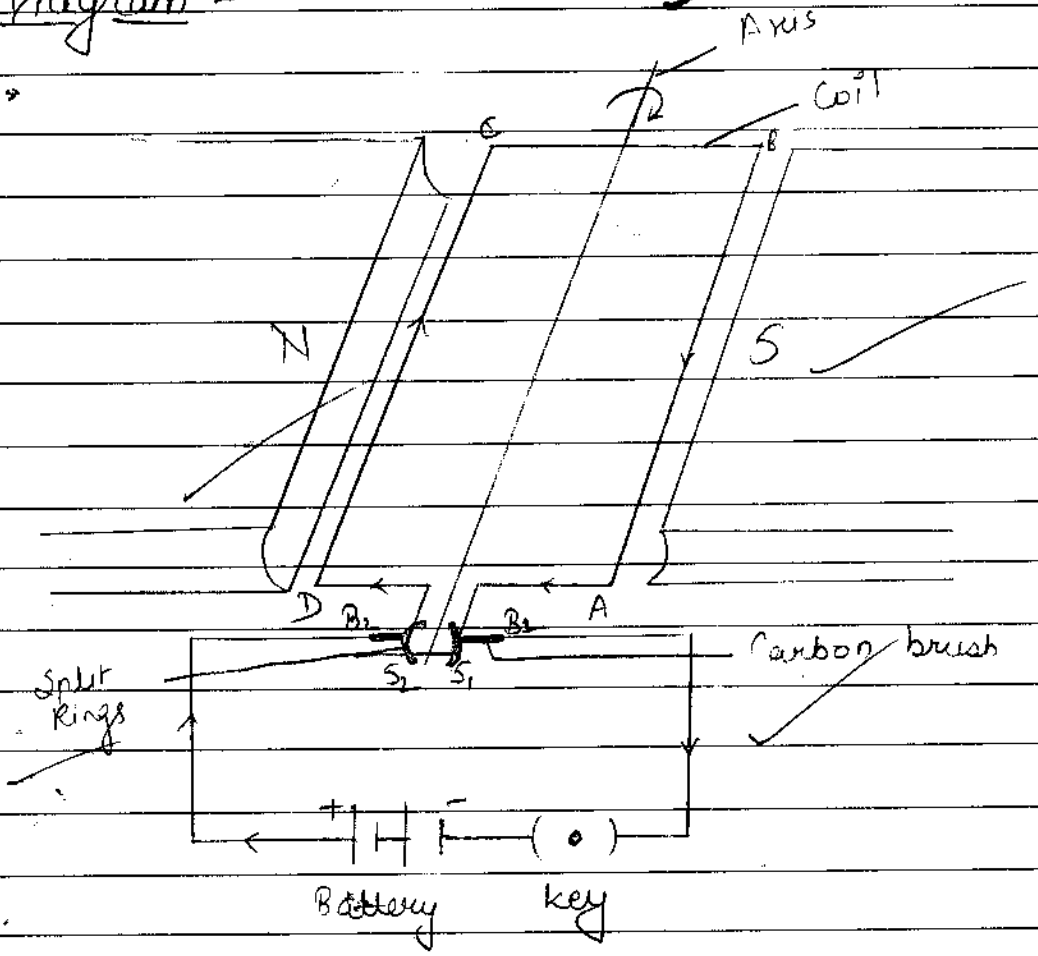
Answer No. 12

Electric Motor –

Electric Motor is a device which converts the electrical energy into mechanical energy.

(i) **Diagram** –



Electric Motor

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(iii) Main parts of Electric Motor -

1) Field Magnet NS - Magnets of concave poles.

2) Coil or Armature - Insulated copper wire wound on soft iron.

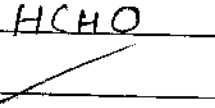
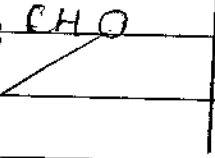
3) Commutator (Split Rings) - Half metallic rings connected to coil.

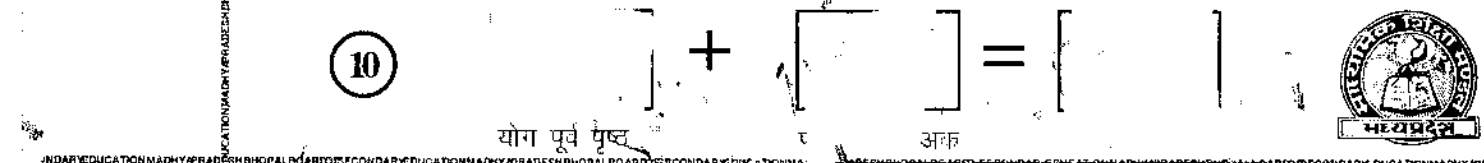
4) Brushes (B_1 and B_2) - Carbon brushes connected to a battery.

Answer No. 13 "or"

Aldehyde -

The organic compounds which have -CHO functional group attached to their alkyl group are called Aldehydes.

S.No.	IUPAC Name	Common Name	Molecular Formula	Structural Formula
1)	Methanal	Formaldehyde	HCHO	
2)	Ethanal	Acetaldehyde	CH_3CHO	



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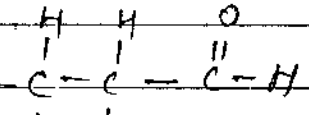
S.No.	IUPAC Name	Common Name	Molecular Formula	Structural Formula
3)	Propanal	Propanaldehyde	CH_3CH_2CHO	

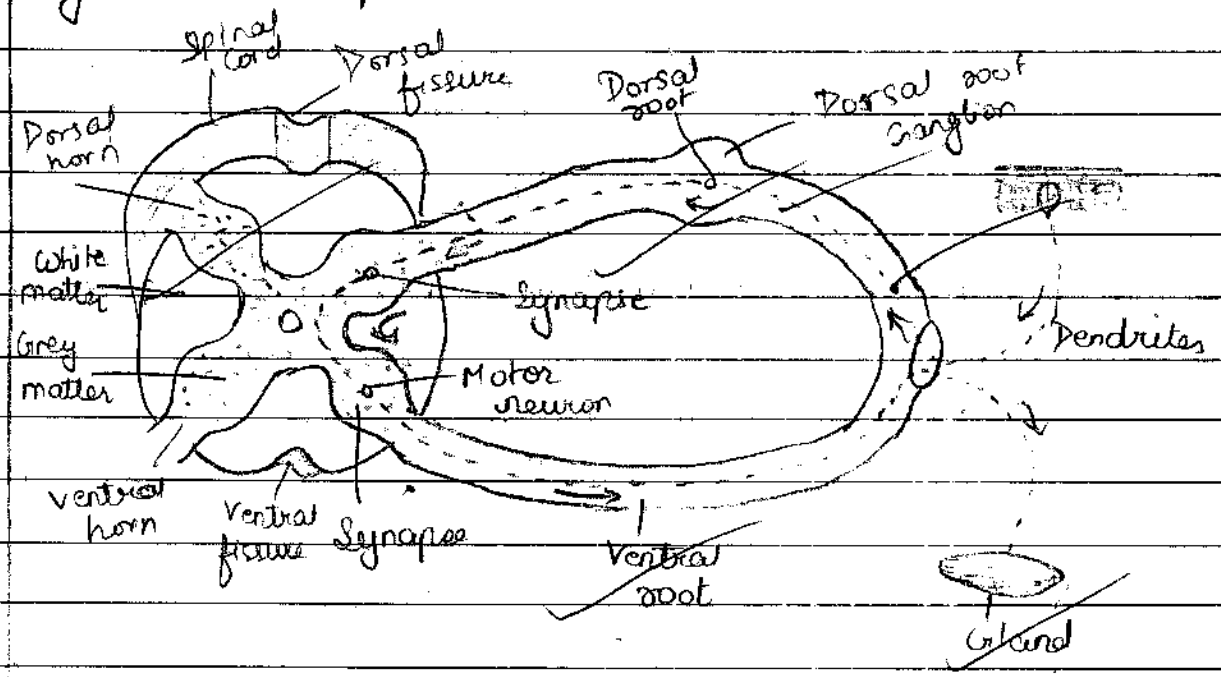
Answer No. 14 "or"

Reflex Action –

The immediate, involuntary response to any external stimulus is called the Reflex Action.

Eg, we pull away our hand quickly ~~after~~ when a needle pricks in the finger.

The Reflex Action is carried out by the Spinal Cord.



Mechanism of Reflex Action

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Mechanism -

In the Reflex Action, the impulse or stimulus reaches the spinal cord by sensory nerves. In the spinal cord, the impulse enters through the dorsal root and by sensory fibres. Axon of cyton carries the impulse to the grey matter. From the grey matter, the impulse is sent to the motor nerve. The Motor nerve emerging out from the ventral root reaches the muscle and divides there. Muscle functions according to the impulse.

This is the Reflex Action.

Answer No. 15 "or"

Photosynthesis -

Photosynthesis is the process in which green plants, in the presence of sunlight and chlorophyll convert Carbon dioxide and Water into glucose and oxygen. In this way they produce their food and release energy.

The reaction of Photosynthesis is as follows :-

$$6CO_2 + 12H_2O \xrightarrow[\text{Chlorophyll}]{\text{Sunlight}} C_6H_{12}O_6 + 6O_2 + 6H_2O$$

+673 kg Cal Energy

$$[\quad] + [\quad] = [\quad]$$

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Factors affecting Photosynthesis -

The following factors affect the rate of Photosynthesis :-

1) Carbon dioxide
2) Water
3) Light
4) Temperature

1) Carbon dioxide -

Carbon dioxide is an essential element of Photosynthesis. Thus, the rate of photosynthesis increases with the increase of carbon dioxide; but after a certain aggregate, it affects adversely.

2) Temperature -

The rate of photosynthesis is the highest between the temperature range 10°C - 30°C. Below 10°C and above the 30°C, adverse effects in the rate of photosynthesis can be seen.

प्रश्न क्र

Answer No. 16

Chemical Equilibrium -

The state of reversible chemical reaction where the concentration of reactants and products remains contant is called Chemical Equilibrium.

Characteristics of Chemical Equilibrium :-

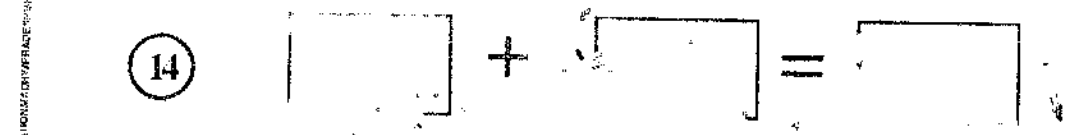
The Chemical Equilibrium has the following characteristics :-

1) Chemical Equilibrium can be obtained only when reaction is carried out in a closed manner.

2) The reactions in chemical equilibrium do not stop, but rate of backward and forward reactions becomes equal.

3) Equilibrium can be shifted on either sides by changing the temperature, pressure and concentration.

4) Catalysts do not alter the equilibrium, but help to attain equilibrium at the earliest



प्रश्न 17

Answer No. 17

Differences between Metals and Non-Metals are as follows :-

S.No.	Cause of differentiation	Metals	Non-Metals
1.	Nature	Metals are electro-positive in nature.	Non-metals are electronegative.
2.	State	Metals are found in solid state. (Except - Mercury - liquid)	Non-metals are found in solid liquid and gaseous state.
3.	Lustre	Metals have a shiny surface.	Non-metals do not shine. (Ex. - Iodine is lustrous)
4.	Ductility	Metals can be drawn into wires.	Non-metals cannot be drawn into wires.
5.	Reaction with acid	Release hydrogen gas on reaction with acids.	Do not release hydrogen gas on reaction with acids.
6.	Reaction with Oxygen	Form basic metal oxides on reaction with oxygen.	Form acidic and neutral oxides on reacting with Oxygen

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Answer No. 18

Global Warming -
The temperature of the atmosphere of earth is increasing day by day due to various reasons. This rising temperature causes melting of snow, hampered growth of plants, vapourization of water resulting water shortage, etc. This has become a grave problem of the time.

This phenomenon is known as 'Global Warming'.

Some of the human activites responsible for it are swimming, breathing, walking etc.

Causes of Global Warming -
Following are the causes of global warming :-

1) Smoke and dust
2) Pollution
3) Depletion of ozone layer
4) Deforestation
5) Incomplete combustion of fossil fuels
6) Some biotic components
7) Green house effect

1) Deforestation -

Trees play a major role in cooling the atmosphere. Due to recklessly cutting of trees, more and more heat is increasing in the atmosphere.

2) Incomplete combustion of fossil fuels -

The fossil fuels are unable to be combusted completely. Thus, the matter which remains after combustion causes harm to the environment.

3) Depletion of ozone layer -

Due to harmful gases, the ozone layer in the atmosphere has got holes. This is allowing the harmful radiations of the sun to enter the atmosphere.

4) Green house effect -

Green house effect forms a shield around the earth which doesn't allow the heat of the earth to escape the atmosphere. Thus, global warming increases.

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5) Some biotic reasons -
The dead and decaying matter like vegetables, etc. cause harmful gases release in the atmosphere which encourage green house effect, causing global warming.