



केवल मूल्यांकनकर्ता के उपयोग हेतु!

माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल

32 पृष्ठीय

केवल परीक्षक द्वारा भरा जावे। प्रश्न क्रमांक के सम्मुख प्राप्तांकों की प्रविष्टि करें।

प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंकों में)	प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंकों में)
1			17		
2			18		
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परीक्षक एवं उपमुख्य परीक्षक द्वारा भरा जावे

प्रमाणित किया जाता है कि अन्दर के पृष्ठों के अनुरूप मुख्य पृष्ठ पर अंकों की प्रविष्टि एवं अंकों का योग सही है।
निर्धारित मुद्रा: नाम, पदनाम, मोबाईल नम्बर, परीक्षक क्रमांक एवं पदांकित संस्था के नाम की मुद्रा लगाएं।

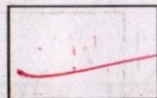
उप मुख्य परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा

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परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा

MR.DILIP ALEX
V.No. 27635

2



योग पूर्व पृष्ठ

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Question no. 1

True / False

Ans (i) - True.

Ans (ii) - False.

Ans (iii) - True.

Ans (iv) - False.

Ans (v) - True.

Ans (vi) - False.

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Question no. 2

Match the correct pair

(A)

(B)

- | | | |
|-------------------------|---|----------------|
| (i) Oxygenated Blood | - | Arteries |
| (ii) Deoxygenated Blood | - | Veins |
| (iii) Bisexual flower | - | Hibiscus |
| (iv) Unisexual flower | - | Papaya |
| (v) Orange | - | Citric Acid |
| (vi) Ant sting | - | Methanoic Acid |

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Question no. 3Answer in one word

Ans (i) - The common name of the compound CaOCl_2 is "Bleaching Powder".

Ans (ii) - Metals with low reactivity do not corrode easily.
For example → Gold (Au) & Platinum (Pt).

Ans (iii) - Alloys are the homogeneous mixture of two or more metals or a metal & non-metal. Alloys are prepared by melting the primary metal & then adding secondary substances in it.
Example → Brass is an alloy of Copper & Zinc.

Ans (iv) → The cerebrum of Fore brain detects the smell.

Ans (v) → At the synapse, between two neurons the

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electrical impulse get converted into chemical impulse, which is carried by neurotransmitters.

Ans (vi) -

The commercial unit of ~~to~~ power is Kilowatt hour or Kwh.

$$1 \text{ Kwh} = 3.6 \times 10^6 \text{ J}$$

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Question no. 4

Choose the correct option

Ans (i) - (b) Double Displacement Reaction

Ans (ii) - (c) 1

Ans (iii) - (c) Al_2O_3

Ans (iv) - (d) All of the above

Ans (v) - (c) Vas-deferens

Ans (vi) - (c) Ciliary muscles

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Question no. 5

Fill in the Blanks

Ans (i) - VoltmeterAns (ii) - Dispersion of lightAns (iii) - Plane or ConvexAns (iv) - GeneAns (v) - HydraAns (vi) - PituitaryB
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Question no. 6

Ans

Given → Radius of curvature of convex ~~lens~~ mirror is 38 cm

To Find → Focal length (f) of mirror

Calculation → We know that,
Focal length is half of Radius of curvature
means

$$f = \frac{R}{2}$$

so, $f = \frac{38}{2} \text{ cm}$ [Putting value of $R = 38$]

$$f = 19 \text{ cm}$$

so the focal length of ~~convex mirror~~ (whose Radius of curvature is ~~38 cm~~) is 19 cm ans.

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Question no. 7

Ans → Star are situated very far from earth, hence the light coming from them is almost a single ray. This starlight on entering into Earth's atmosphere undergoes constant refraction, hence we see a apparent position of star. This position of star & the amount of light entering into our eyes also differs (as the layers of atmosphere are not stagnant). This gives sometime fainter & sometime dull image of star producing a twinkling effect.

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Question no. 8

Ans

Electric Current → The rate of flow of charge from the conductor is known as electric current. It is measured by a device called Ammeter.

Electric Current is denoted by I . The SI unit of electric current is 'Ampere', which was given in the name of 'Andre Marie Ampere'.

Formula →

$$I = \frac{Q}{t}$$

, where I is current, Q is charge & t is time.

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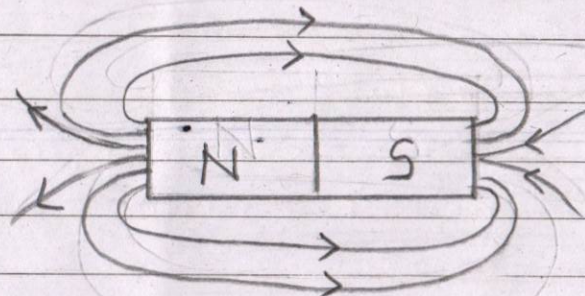
Question no. 9

OR

Ans →

Following are the properties of Magnetic Field Lines :-

- 1] Magnetic Field Lines are closed curve. They exist outside as well as inside the magnet.
- 2] The direction of magnetic field Lines is from North pole to South pole outside the magnet & South pole to North pole inside the magnet.
- 3] Magnetic Field Lines never intersect each other.



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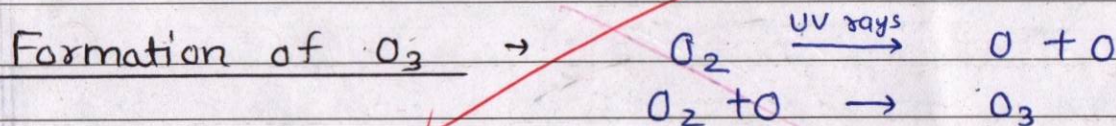
Question no. 10 OR

Ans

Ozone (O_3)

Ozone is a poisonous gas, which is formed when a single oxygen atom (produced by breakdown of O_2 molecule by UV rays) is added to a oxygen molecule. This gas is present at the higher levels, where it exists as a layer & filters the ultraviolet rays.

It affects an ecosystem by preventing the living beings from harmful UV rays. If the layer of Ozone (O_3) get depleted then organism ~~could die~~ would be affected adversely.

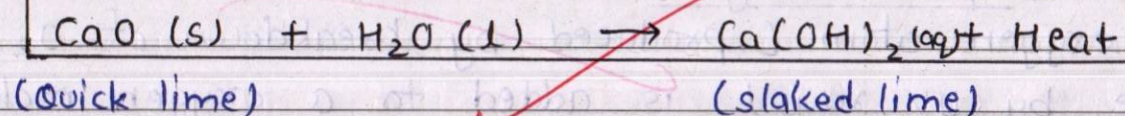


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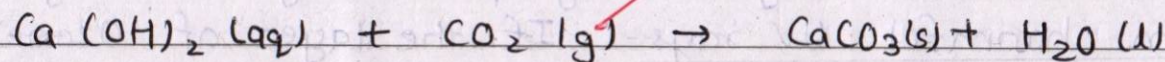
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Question no. 11

A solution of Slaked lime $[Ca(OH)_2]$ is used for whitewashing. This Slaked lime is formed by the reaction of Quick lime with water.



After whitewashing the walls get a shiny look due to the formation of calcium carbonate.

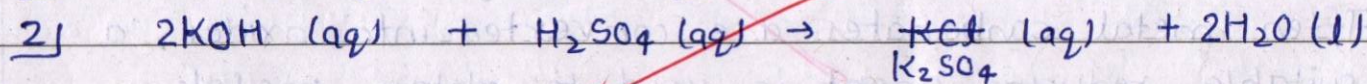
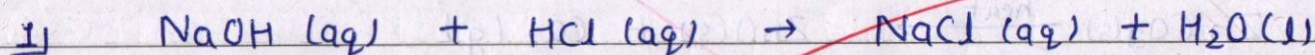
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Question no. 12

OR

Ans

Neutralisation Reaction → When the acid & base react with each other to neutralise their effect & to give out a salt & water, then the reaction taking place is known as Neutralisation reaction.

Example →B
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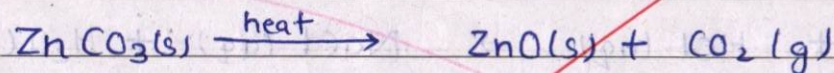
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Question no. 13

Calcination → The process of obtaining oxide of metals by heating their carbonate ores in limited amount of air, is known as calcination.

The metals of medium reactivity are converted into oxides by this method. which exist in carbonate ores

For example →



After metal carbonates are converted into oxides, a suitable reducing agent is used to obtain metals.

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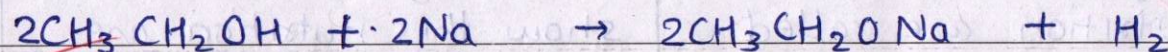
Question no. 14

Ans →

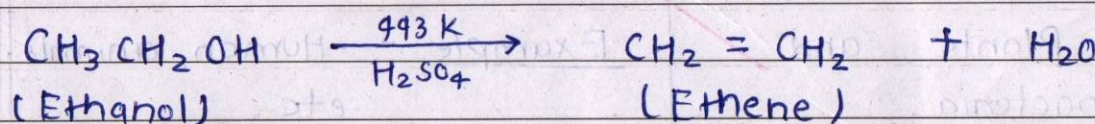
Following are the properties of Ethanol $[CH_3CH_2OH]$

1) Ethanol is a hydrocarbon of alcohol group, which is used as in liquors for drinking purpose. It is also used as a solvent.

2) Reaction of Ethanol with Metal (Na)
Ethanol reacts with sodium to give sodium ethoxide & Hydrogen gas.



Ethanol is heated at 443 K with sulphuric acid to give Ethene, & water.

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Question no. 15

Ans

B
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Autotrophic
Nutrition

- 1] The nutrition in which ~~are~~ organism prepare their own food.
- 2] The organism which show this nutrition are called ~~heterotrophs~~ ^{autotrophs} & they are at producer level in a food chain.
- 3] Example → Plants, and some bacteria.

Heterotrophic
Nutrition

- The nutrition in which organism is dependent on other for its food.
- The organism which show this nutrition are called heterotrophs & they are at consumer level.
- Example → Human, animals etc.

Question no. 16

Ans Following are the functions of the hormones :-

1) Growth Hormone → This hormone is secreted by Pituitary gland & it controls the growth of body. If it is secreted in less amount then ~~the~~ dwarfism occurs or if it is secreted in large amount then Giantism occurs.

2) Insulin → This hormone is secreted by pancreas, and it controls the blood sugar level in the body blood. Less amount of Insulin secretion can cause a disease called Diabetes.

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Question no. 17

Ans → Following are the two modes of reproduction used by single celled organisms.

1) Binary Fission → Amoeba uses this type of reproduction in which a single parent Amoeba divides to form two daughter amoeba.

2) Multiple Fission → A malarial parasite called Plasmodium reproduces through this mode in which it divides to form many daughter cells at one time.

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Question no. 18

Ans → The reasons for which Mendel selected pea plants for his experiments were :-

- 1) Contrasting Characters → The pea plants have many contrasting characters like - tallness, shortness, seed shape, seed colour, pod shape etc. These characters are helpful to study the transfer of traits.
- 2) Short Life span → Pea plants are very easy to grow & cultivate. The life span of a pea plant is also short. Also a pea plant produces large amount of seeds at a time hence its cultivation becomes easy.
- 3) Bisexual Plant → The flower of pea plant passes both male and female gametes hence it is a bisexual plant. That's why it can be easily crossed through self pollination.

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Question no. 19

OR

Ans

- (i) - Two magnetic force lines never intersect each other because if they intersect then at the point of intersection there will be two directions of lines simultaneously which is not possible.

The unit of magnetic field strength is 'Oersted'.

- (ii) - The use of fuse wire is to protect the appliances from extraordinary current. The fuse wire is made up of some alloys, which melts when a high current (higher than rated) passes through it. In this way the circuit got broken & the appliances are prevented from any damage. Fuse wires are usually installed at the main switch of home.

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Question no. ~~20~~ 20

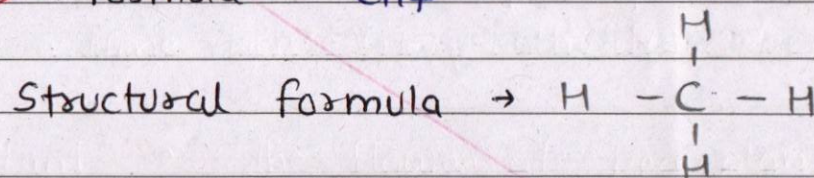
Hydrocarbons → The compounds that are formed when carbon atom shares its electrons with Hydrogen atoms to become stable, are known as hydrocarbons.

The Hydrocarbons which have single bonds are known as saturated hydrocarbons or Alkanes.

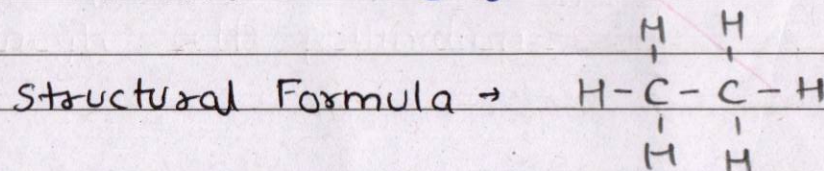
The Hydrocarbons which have double or triple covalent bonds are called unsaturated hydrocarbons (alkenes & alkynes).

→ First Four member of hydrocarbons are :-

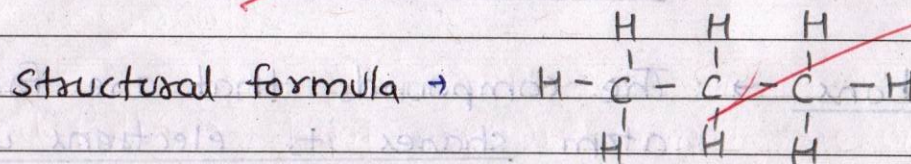
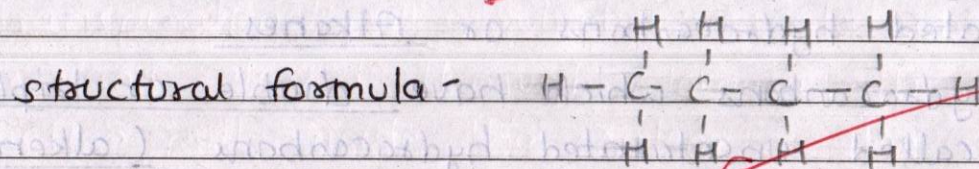
1) Methane Formula → CH_4



2) Ethane Formula → C_2H_6



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3) PropaneFormula $\rightarrow$ ~~C_3H_8~~ 4) ButaneFormula $\rightarrow$ ~~C_4H_{10}~~ B
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Question no. 21

OR

Ans →

The components of the transport system in plants is Vascular tissue, which comprises of Xylem tissue & Phloem tissue.

Xylem helps in the transportation of water & minerals, while Phloem helps in the transportation of food.

Transportation of Water & Minerals

Water & minerals are transported through Xylem which is a part of vascular bundle. This transportation is unidirectional (only upward) & it does not require any energy. It takes place with the help of two vital forces which are as under :-

- 1) Root pressure → The roots that are in contact with soil constantly takes up ions from the soil, this creates a ion difference between root & soil. As a result water moves into the roots to remove this

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difference. In this way there is a constant movement of water into the roots.

2) Transpirational Pull → Root pressure is not the only force that helps in the transport of water and minerals. There is another force known as Transpirational pull, which is created when water vapours are released through stomata. This creates a suction pull inside the xylem & the water is pulled upward along with minerals.

In this way water & minerals are transported all over the plant's part. This transportation is known as ascent of sap.

Question no. 22

OR

Ans → i) Refraction → The phenomenon of bending of light when it enters into another medium is called refraction.

ii) Following are the two laws of the refraction:-

1) The incident ray, refracted ray and the normal at the interface of two media in point of incidence, all lie on same plane.

2) The ratio of sine of angle of incidence to sine of angle of refraction is a constant for a given colour of light & for a given pair of media. This is known as Snell's Law.

$$\frac{\sin i}{\sin r} = \text{constant}$$

This constant is the refractive index of second medium with respect to first medium.

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(ii) - Following are the uses of concave mirror :-

1) It is used in search lights, torches, headlight of vehicles to get a strong beam of light.

2) It is used by dentist to see the teeth of patient & it is also used as shaving mirror as it gives an enlarged image.

3) It is used in solar furnaces to concentrate the sunlight at a point.

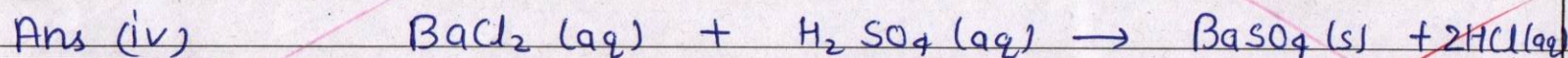
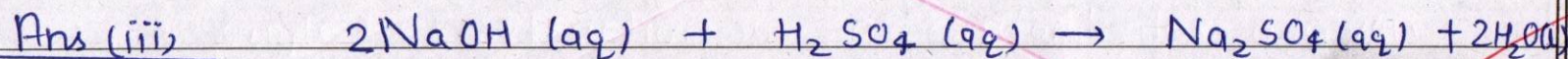
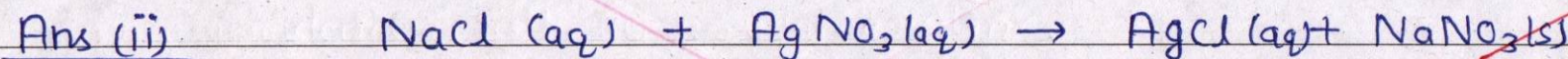
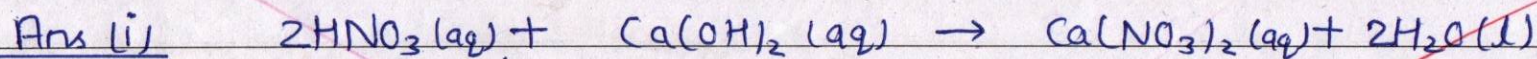
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Question no. 23OR

Ans → Following are the balanced chemical equations:-

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