



माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल

परीक्षार्थी द्वारा भरा जायें ↓

20 पृष्ठीय

विशेष नोट : - सिलाई खुली हुई अथवा मतिप्रस्त उत्तर पुस्तिका को न तो पर्यवेक्षक वितरण करे और न ही छात्र उपयोग में ले। ऐसी उत्तर पुस्तिका में लिखे उत्तरों का मूल्यांकन नहीं किया जायेगा।

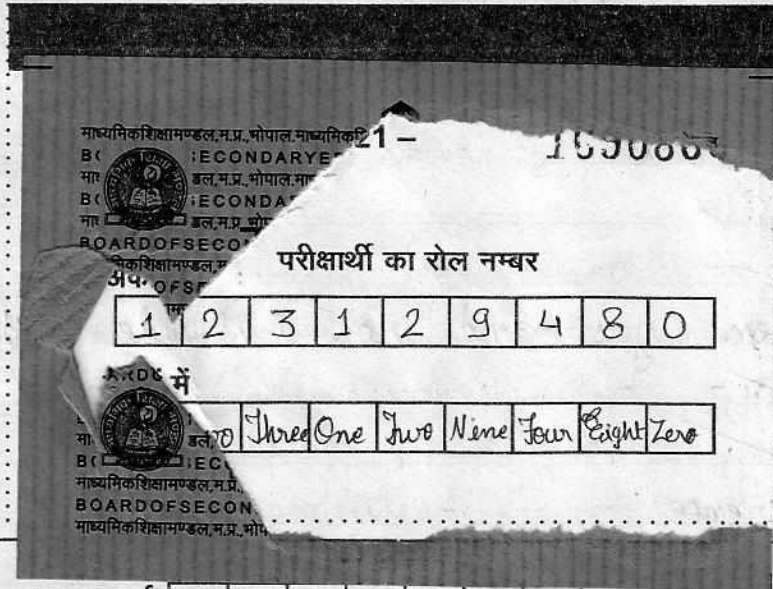
परिक्षार्थी द्वारा भरा जाये ↓

परिक्षक एवं उपमुख्य परिक्षक द्वारा भरा जाये ↓

केन्द्राध्यक्ष/सहायक केन्द्राध्यक्ष एवं पर्यवेक्षक द्वारा भरा जाये ↓

परीक्षा का विषय	विषय कोड			परीक्षा का माध्यम
Science	2	0	0	English Medium

स्टीकर तीर के निशान ↓ से मिलाकर लगायें



परीक्षार्थी का रोल नम्बर

1	2	3	1	2	9	4	8	0
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आर.डी. में

Three One Two Nine Four Eight Zero

माध्यमिकशिक्षामण्डल, म.प्र.,
BOARD OF SECOND
माध्यमिकशिक्षामण्डल, म.प्र.,

उदाहरणार्थ

1	1	2	4	3	9	5	6	8
एक	एक	दो	चार	तीन	नौ	पाँच	छः	आठ

क - पूरक उत्तर पुस्तिकाओं की संख्या अंको में शब्दों में

ख - परीक्षार्थी का कक्ष क्रमांक Hall-02

ग - परीक्षा की दिनांक

०२	०३	२०२२
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परीक्षा का नाम एवं परीक्षा केन्द्र क्रमांक की मुद्रा

हाईस्कूल सर्टिफिकेट परीक्षा 201... 311016

पर्यवेक्षक का नाम एवं हस्ताक्षर

મમતા અભિનેત્રી
Mamta

केन्द्राध्यक्ष/सहायक केन्द्राध्यक्ष के हस्ताक्षर

Q. 12

परीक्षक एवं उपमुख्य परीक्षक द्वारा भरा जायें ↓

प्रमाणित किया जाता है कि मूल्यांकन के समय पूरक उत्तर पुस्तिकाओं की संख्या उपरोक्तनुसार सही पाई हो। होला क्राफ्ट स्टीकर क्षतिग्रस्त नहीं पाया गया अन्दर के पृष्ठों के अनुरूप मुख्य पृष्ठ पर अंकों की प्रविष्टि अंकों का योग सही है।

निर्धारित मुद्रा : नाम, पदनाम, मोबाईल नम्बर, परीक्षक क्रमांक एवं पदाकित संस्था के नाम की मुद्रा लगाएं।

उप मुख्य परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा

Abha Arora 8530843

परीक्षक के हस्ताक्षर एवं निर्धारित मुद्रा

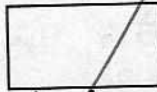
MKV
 Smt. Laxmi Gautam
 MKV1202/2022/18

नोट :- “हायर सेकेन्डरी परीक्षा में केवल वाणिज्य संकाय के विषयों तथा हाई स्कूल परीक्षा में प्रायोगिक विषय को छोड़कर शेष विषयों हेतु नियमित एवं स्वाध्यायी छात्रों के लिये प्रश्न पत्र 100 अंकों का होगा किन्तु नियमित छात्रों को 100 अंक के प्राप्तांक का 80% अधिभार एवं स्वाध्यायी छात्रों को 100 अंक के प्राप्तांक ही अंकसूची में प्रदर्शित किये जायेंगे।”

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

प्रश्न क्रमांक	पृष्ठ क्रमांक	प्राप्तांक (अंको में)
1		
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योग पूर्व पृष्ठ

2

प्रश्न क्र.

Question No. 1

Choose the correct options:-

Answers:-

(i) (a) Hydrogen gas and iron chloride product

(ii) (a) Na

(iii) (b) Yeast

(iv) (c) Vas deference

(v) (c) Diopter

(vi) (d) Retina

(vii) (c) Ciliary muscles

(viii) (a) Coal and Petroleum

M
P
B
S
E

Question No. 2

Fill in the blanks:-

Answers:-

(i) Octaves

(ii) Two

(iii) Food

(iv) Oxygen

Involuntary action like blood pressure.

(vi) Fertilization

(vii) Ampere

(viii) Food chain



प्रश्न क्र.

Question No. 3

Match the column:-

'A'

'B'

- | | | |
|---|---|--------------------------|
| (i) Formula of common salt | - | NaCl |
| (ii) Non metal Iodine | - | Lustrous |
| (iii) Alloy | - | Bronze |
| (iv) Blinking of eyelids | - | Reflex action |
| (v) Reproduction in Hydra | - | Budding |
| (vi) Genetic material | - | DNA |
| (vii) The unit of magnetic field strength | - | Oersted |
| (viii) Magnetic material | - | Iron |

M
P
B
S
E

Question No. 4

Answer in one word:-

Answer of Qno. (i)

The pH value of acidic solutions is less than 7.

Answer of Qno. (ii)

Homogenous mixture of two or more metal is called alloy.

Answer of Qno. (iii)

The gap between two nerve cells is called synapse. Synapse Synapse.



प्रश्न क्र.

Answer of Qno. (iv)

The period of menstruation is about
3 to 5 days approx.

Answer of Qno. (v)

Gregor Johann Mendel is known
as father of genetics.

Answer of Qno. (vi)

Lens formula :-

$$\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$$

where f is focal length v - is image distance u - is object distance

Answer of Qno. (viii)

A closed and continuous path of
electric current is known as
electric circuit. It has electric
source, wires, switch etc

Answer of Qno. (viii)

Magnet have two poles.
One north and one south pole.



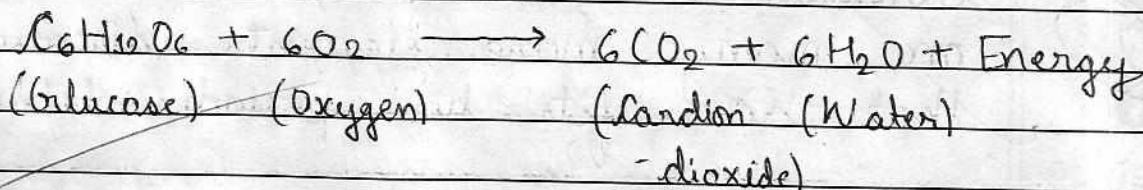
प्रश्न क्र.

Answer of Qno. 5 (or)

Respiration is an exothermic process:-

Respiration is a process of slow combustion in which energy is released in the form of ATP along with the formation of carbon dioxide and water. Therefore respiration is considered exothermic process.

Process of respiration is given as follows:-



Answer of Qno. 6 (or)

Difference between metal and non metal :-

	Metals	Non-metal
*	They are good conductor of heat and electricity.	* They are generally bad conductor of heat and electricity. Except Graphite
*	They are electropositive in nature	* They are electronegative in nature
*	They are sonorous	* They are non-sonorous
*	They form basic oxides	* They form acidic or neutral oxides



पूर्व पृष्ठ

पृष्ठ

कुल पृष्ठ

6

प्रश्न क्र.

Answer of Qno. 5 & 7 (or)

Limitations of Newland's law of Octaves :-

* It was applicable upto calcium calcium only as after calcium every 8th element do not posses the property same as 1st element.

M * He said that there are only 56 elements in the world but later on many more elements discovered that does not fits his periodic table.

S * He put some unlike elements under
E same note.

Answer of Qno. 8

Haemoglobin is a pigment which is responsible for the transportation of oxygen in body.

Consequences of deficiency in haemoglobin:-
It reduce the oxygen carrying capacity of RBC's

* It causes a disease called anaemia.



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7

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Answer of Qno. 9

Reproduction is a process through which organisms produce morphologically and anatomically new organisms like them.

Reproduction is essential because:

Organism produce for continuation of life
lead to stability of population
an organism.

M

P

B

S

F

Answer of Qno. 10

Mendel chosen pea plant for his experiment because:

* It has number of contrasting characters.

It can grow twice in a year.
each plant do self pollination
self pollination but cross pollination
can be done.

*

It bears fruits and flowers early.



प्रश्न क्र.

Answer of Qno. 11

Laws of Reflections:-

* Angle of incidence is equal to angle of reflection.

* The incident ray, normal ray and reflected ray at the point of incidence all lie in a same plane.

M

P

B

S

E

Answer of Qno. 12

Resistance of conductor depends upon:-

* Length of the conductor - Resistance is directly proportional to length of the conductor.

$$R \propto l$$

* Area of cross section - Resistance is

inversely proportional to area of cross section of conductor

$$R \propto \frac{1}{A}$$

* Temperature - Resistance increase with temperature and resistance



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decrease with decrease in temperature.
apart from it resistance also depends
upon nature of material.

Answer of Qno. 13

Electric component	Symbol
Ammeter	
Voltmeter	
Wire joint	

M
P
B
S
E

Answer of Qno. 14

Two ways in which non-biodegradable substance would affect the environment are:

- * They are not decomposed by decomposers and affect fertility of soil.
- * They cause biological magnification.
- * They are responsible for pollution.



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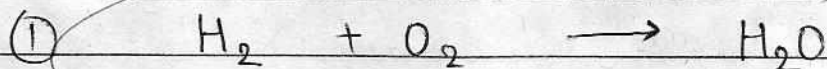
- * If they remain dumped in the open animal like cow will eat it and this increases chances of animal's death.

Answer of Qno. 15

M
P
B
S
E

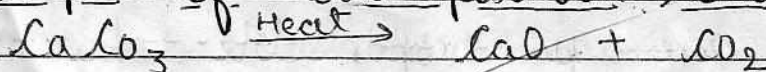
Combination Reaction:- Such a reaction in which two or more compound reacts to give single new substance is called combination reaction.

Example of combination reaction:-



Decomposition Reaction:- Such a reaction in which a compound breaks down to give simpler substance is called decomposition reaction:-

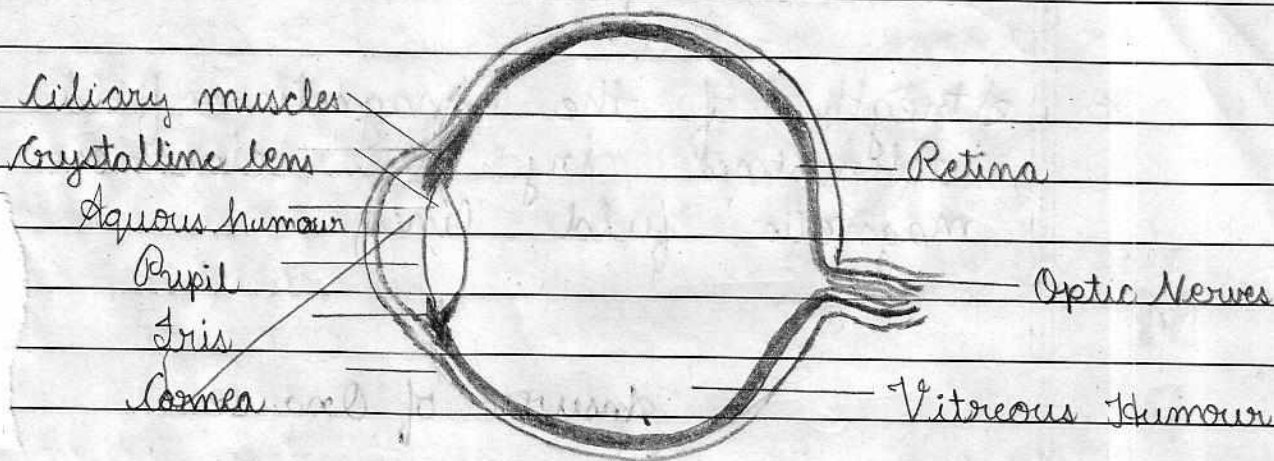
Example of decomposition reaction



प्रश्न क्र.

Answer of Qno. 16

Human eye is like a camera which has a screen and lens.



B
S
E

Diagram :- HUMAN EYE

Answer of Qno. 17

* Properties of Magnetic field lines:-
Magnetic field lines are closed curves.

They arise from north pole and terminates at south pole outside the magnet.

* Inside the magnet they arise from south pole and terminates at north pole.



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* Two magnetic field lines never intersect each other because if they do so there will be two direction at a point which is not possible.

* Strength of the magnetic field is determined by the closeness of magnetic field lines.

M

P

Answer of Qno. 18

B

Advantages of solar cooker:

S

* It can cook four food at a time

E

* Fuel and electricity is not required that means it is economically good.

* Food cooked by so solar cooker is healthy and tasty.

* They do not develop any chances of burning of food.

* Solar cooker donot cause any pollution.



प्रश्न क्र.

Answer of Qno. 19

Difference between acid and base:-

	Acid	Base
	* They are sour in taste.	* They are bitter in taste.
	* They do not have soapy touch.	* They have soapy touch.
M		
P	* They neutralize base.	* They neutralize acid.
B		
S	* In aqueous solution they give H^+ or H_3O^+ ions.	* In aqueous solution they give OH^- ions.
	* Their pH is less than 7.	* Their pH is more than 7.
	* They turn blue litmus to red.	* They turn red litmus to blue.
	* HCl is an example of strong acid.	* NaOH is an example of strong base.



प्रश्न क्र.

Answer of Qno. 20

Difference between soap and detergents:-

M
P
B
S
E

Soaps	Detergents
* Soaps are sodium and potassium salts of long chain carboxylic acid.	* Detergents are sodium salt of sulphonic acid and ammonia with chloride and bromide ions.
* They do not form good lather in hard water.	* They form good the lather in hard water.
* Soaps are weak in cleansing action.	* Detergents are strong in cleansing action.
* It forms scum in hard water.	* It does not form scum in hard water.
* They are non-biodegradable.	* They are non biodegradable.
* They are made from oil or fats of animal.	* They are made from petrochemicals.



प्रश्न क्र.

Ans. Answer of Qno. 21

Difference between xylem and phloem.M
P
B
S
E

Xylem	Phloem
* Xylem is responsible for transport of water in plants.	* Phloem is responsible for flow of food in plants.
* Transport of water is done by xylem only in upward direction.	* Transport of food is done by phloem in upward & downward direction.
Xylem cells transport the water and mineral taken from the roots from soil.	* Phloem transport the food made by leaves during photosynthesis.
Transportation of water takes place with the physical force like transpiration.	* Transport of food requires the expenditure of energy in the form of ATP.



Answer of Qno. 22

(a) Two uses of a concave mirror:-

(1) They are used as a shaving mirror.

(2) They are used in solar furnace.

(3) They are used in the headlights of vehicles.

(4) They are used in torches and searchlights.

(b) Focal length of convex mirror = ?

Given that Radius of curvature of convex mirror = 32 cm

Radius of curvature = $2 \times$ Focal length

$$32 = 2 \times \text{Focal length}$$

$$\frac{32}{2} = \text{Focal length}$$

$$16 \text{ cm} = \text{Focal length}$$

M
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योग पूर्व पृष्ठ

पृष्ठ 17 के अंक

कुल अंक

17

प्रश्न क्र.

Hence focal length of concave mirror
is 16 cm.

M
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