NASO
NATIONAL ASTRONOMY & SCIENCE OLYMPIAD

Navars Edutech

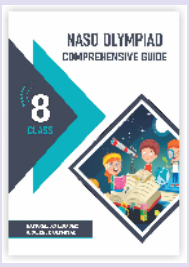
10 CLASS

MOCK TEST SERIES

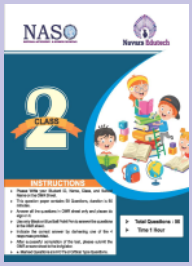
- All the questions are in MCQ format.
- In-depth analysis of each topic, followed by relevant practical and illustrative examples, with MCQ based Questions.
- Comprising questions prepared by teachers from various schools of India and abroad.
- Comprising questions of various National and International Olympiads.
- Model Test Papers with Answer Key.
- Special emphasis on concepts building and improving problem solving skills.

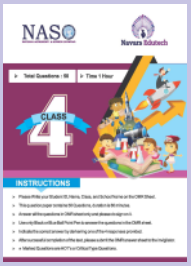
- **National Olympiad's**
- **Quizzes**
- **International Olympiad's**

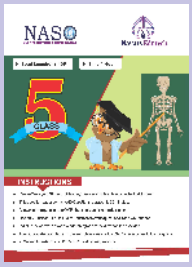
NASO OLYMPIAD COMPREHENSIVE GUIDE

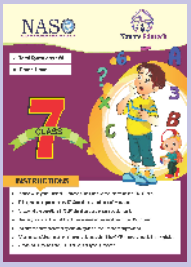


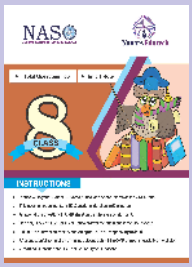
NASO QUESTION PAPER 2018

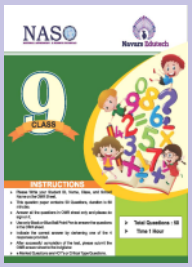




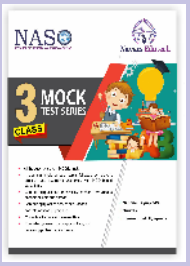


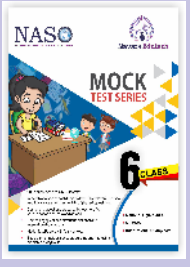






NASO MOCK TEST SERIES





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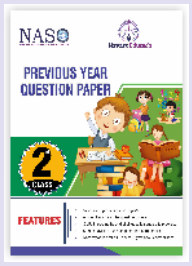
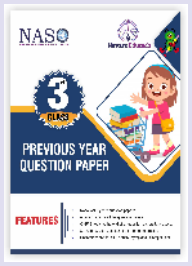
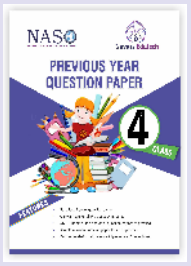
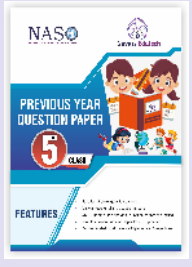
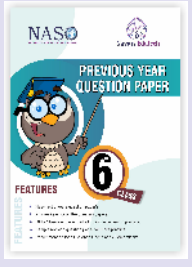
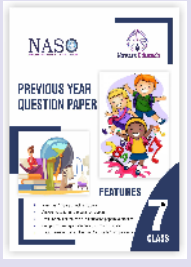


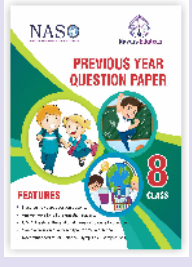


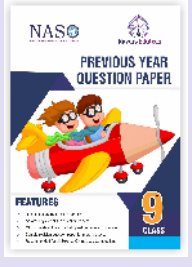


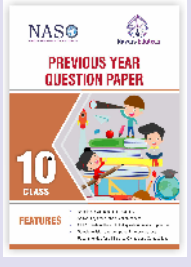




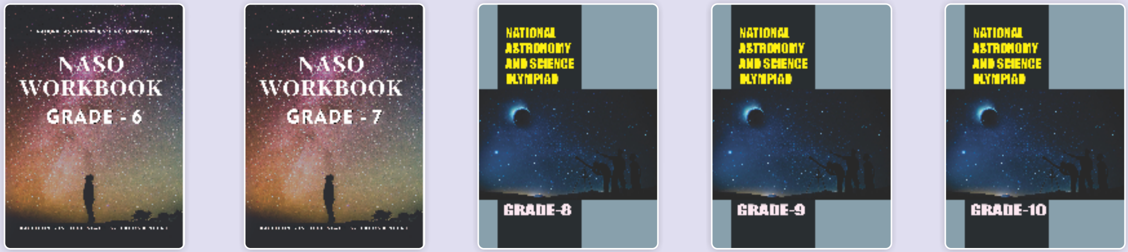




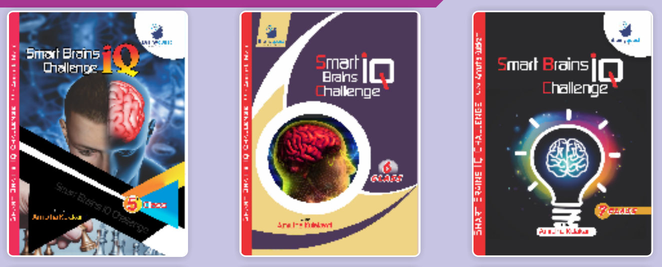




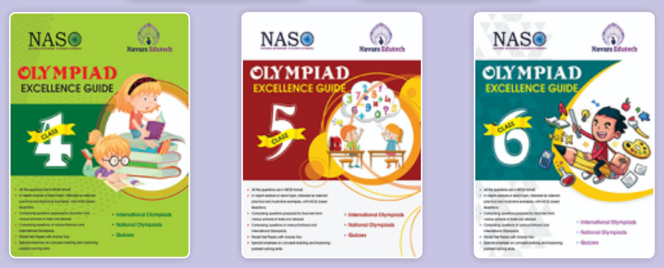
NASO WORKBOOK



SMART BAIN IQ PUZZLE



NASO EXCELLENCE GUIDE



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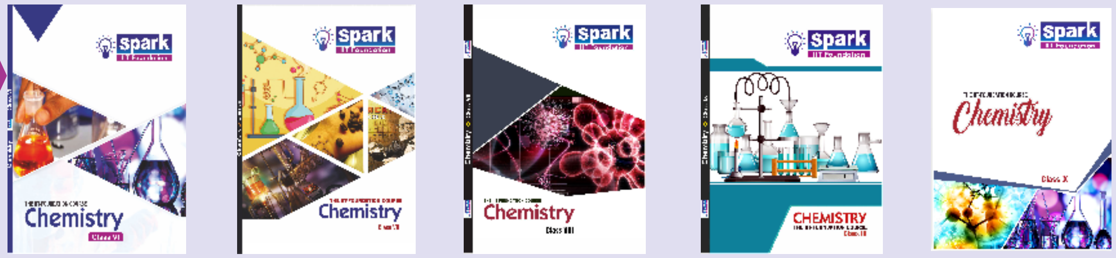
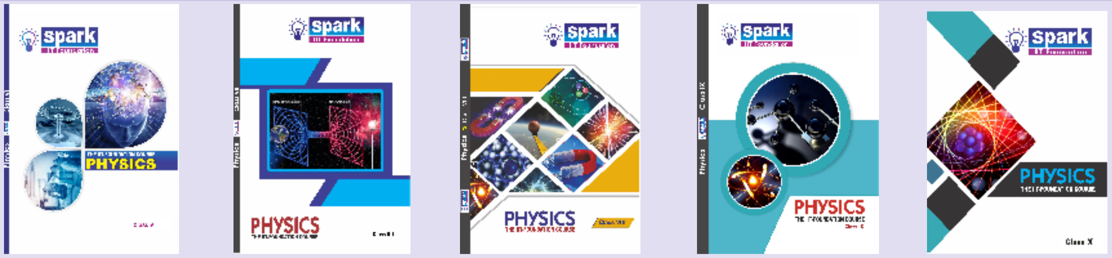
CHEMISTRY



MATHEMATICS

PHYSICS



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GRADE 10

MOCK TEST-1

1. Consider the following table:

Metal	ZnSO4 (aq)	FeSO4(aq)	CUSO4(aq)	Al2(SO4)3 (aq)
Zn	----------	Displaced		Displaced
Fe	No reaction	----------	Displaced	No reaction
Cu	No reaction	No reaction		----------
Al	Displaced	Displaced		Displaced

From the above data, the decreasing order of reactivity of metals is

A. Al > Cu > Fe > Zn
B. Al > Zn > Fe> Cu
C. Al > Zn > Cu > Fe
D. Al > Fe > Cu > Zn

2. Read the given statements and mark the correct option.
Statement 1: The balancing of chemical equations is based on law of conservation of mass.
Statement 2: Total mass of reactants is equal to total mass of products in chemical reaction.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Both statements 1 and 2 are false

3. Three students were given colourless liquids X, Yand Z of water, lemon juice and a mixture of water and lemon juice respectively. After testing these liquids with pH paper, following sequences in colour change of pH paper were reported___?

(i) Blue, red and green.
(ii) Orange, green and green.
(iii) Green, red and red.
(iv) Red and green acid can react with

A. AgCl
B. Na2 CO3
C. PbSO4
D. Na2 SO4

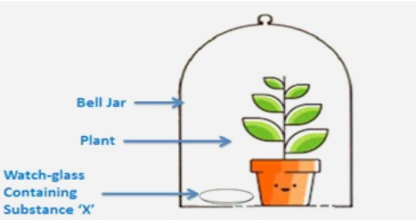
4. Acetic acid was added to a solid X kept in a test tube. A colourless and odourless gas Y was evolved. The gas was passed through lime water, which turned milky. It was concluded that_?

A. Solid X is sodium hydroxide and the gas Y is CO2
B. Solid X is sodium hydrogen carbonate and the gas Y is CO2
C. Solid X is sodium acetate and the gas Y is CO2
D. Solid X is sodium hydrogen carbonate and the gas Y is SO2

5. Read the given statements and mark the correct option.
Statement 1: According to Dobereiner's a group of three similar elements arranged in their increasing atomic weights show that weight of the element in the middle is equal to the arithmetic mean of the other two elements. Statement 2: Atomic weight is equal to one twelfth of mass of a carbon atom

A Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Both statements 1 and 2 are false

6. The given figure is a demonstration of an experiment to show that carbon dioxide is essential for photosynthesis. What is the substance 'X', kept in watch-glass?



A. Potassium hydroxide B. Sodium bicarbonate

C. Sodium carbonate D. Potassium sulphate

7. When an organism breaks into a number of parts and each part develop into an individual, it is called_____?

A. Budding B. Binary fission C. Regeneration D. Spore formation

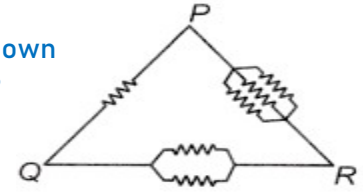
8. Read the passage carefully and answer. A monochromatic light of wavelength 589 nm is incident from air onto water surface such that the refractive index of water is 1.33. What is the wavelength and frequency of refracted light?

A. 589 nm, 3×10^8 Hz B. 5×10^{14} nm, 3×10^8 Hz
C. 1.7 nm, 5.7×10^{14} Hz D. 589 nm, 5.1×10^{14} Hz

9. Read the given statements and mark the correct option.
Statement 1: A normal human eye can clearly see all the objects at the different distances.
Statement 2: The human eye has the capacity to suitably adjust the focal length of its lens to a certain extent

A. Both statements I and 2 are true and statement 2 is the correct explanation of statement 1
B.Both statements I and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true, but statement 2 is false.
D. Both statement 1 and statement 2 are false.

10. Six equal resistances are connected between points P, Q and R as shown in the figure. Then the net resistance will be maximum between ____?

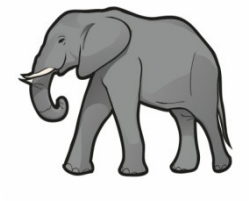


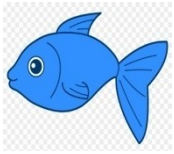
A. P and Q. B. Q and R.
C. P and R. D. Any two points.

11. Read the passage carefully and answer. Ocean waves are derived sources of energy. Wind is the agent which transfers the Sun's energy to the surface of the sea. The unequal solar heating of the earth generates wind and wind blowing over water generates waves. The energy possessed by ocean and sea waves is called wave energy. Various systems have been designed to use wave energy for commercial production of electricity. The main disadvantage of wave energy is?

A. Wave power project is expensive.
B. Seabird population could be affected by wave energy structures.
C. Some designs are noisy.
D. All of these.

12. The figure shows the different trophic levels of the food chain in a grassland ecosystem. Which of the given organisms belong to third trophic level?

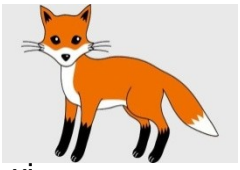
i. 

ii. 

Iii 

iv 

v 

vi 

A. (i) & (ii) B. (ii), (iii) & (iv) C. (iii) & (vi) D. (i), (v) & (vi)

13. Select a group from the following which consists of all non-biodegradable wastes_____?

A. D.D.T., plastics, animal bones, polythene bags
B. Ball-point pen refill, vegetable peels, Synthetic fibres, Glass
C. Aluminium cans, Iron nails, Silver foil, D.D.T
D. Radioactive wastes, Wool, Leather, Plastics

14. Which of the following statements about food chain is/are true?

(i) It includes repeated eating i.e., each group eats the other and is subsequently eaten by some other group of organisms.
(ii) It shows a series of branching lines and unidirectional flow of energy.
(iii) It shows the unidirectional flow of energy and proceeds in a progressive straight line
(iv) It may consists of more than ten trophic levels depending upon the type of ecosystem

A. (i)&(ii) B. (i)&(iii) C. (ii) & (iv) D. (i) only.

15 . Match both the columns and mark the correct option from the codes given below.

Column I	Column II
(a) C + O2 → CO2	(i) Displacement
(b) AgBr ¾¾® Ag + Br	(ii) Combination
(c) Zn + CuSO4 -* ZnSO4 + Cu	(iii) Decomposition
(d) CH_3 CH $_2$OH ¾¾® CH $_3$CHO + H $_2$	(iv) Oxidation

Options	column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(i)	(iv)
C	(iii)	(i)	(ii)	(iv)
D	(iii)	(ii)	(i)	(iv)

16. A drop of liquid sample was put on the pH paper. The colour of the pH paper turned blue. The liquid sample could be that of_____?

A. Lemon juice
B. Hydrochloric acid
C. Sodium bicarbonate.
D. Ethanoic acid

17. Which of the following statements is false?

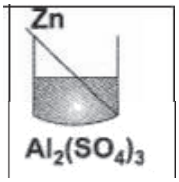
A. Placenta allows exchange of materials between mother and foetus
B .The foetal part of the placenta consists of the cells of the chorion which produce projections called chorionic villi
C. Antibody cannot cross the placenta from mother to foetus Placenta
D. Also secretes pregnancy hormones in greater amounts

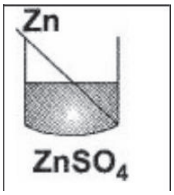
18. Which of the following pairs are incorrectly matched?

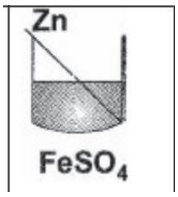
(i) Implantation – Uterus
(ii)Fertilization - Seminiferous tubule
(iii)Spermatogenesis - Fallopian tube
(iv)Oogenesis - Ovarian follicle

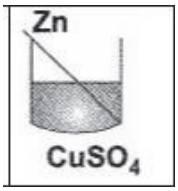
A. (i) & (iii)
B. (ii) & (iii)
C. (i) & (iv)
D. (ii) only

19. Four students P, Q, R and S noted the initial colour of the solutions kept in beakers I, II, III and IV. After inserting zinc rods in each solution and leaving it undisturbed for two hours, the colour of each solution was again note

1. 

2. 

3. 

4. 

They recorded their observations in the form of tale given below:

Student	Colour of the solution	I	II	III	IV
P	Initial	Colourless	Colourless	Lijht green	Blue
	Final	Colourless	Colourless	Colourless	Colourless
Q	Initial Final	Colourless	Light yellow	Liht green	Blue
		Colourless	Colourless	Light green	Colourless
R	Initial Final	Colourless	Colourless	Light green	Blue Light
		Light blue	Colourless	Colourless	blue
S	Initial Final	Light green	Colourless	Light green	Blue
		Colourless	Colourless	Dark green	Colourless

Which student noted the colour change in all the four beakers correctly?

A.P B.Q C. R D.S

20. Which of the following is not a balanced equation?

A. Fe +Cl2 ® FeCl3
B. Mg +CuSO4 ® MgSO4 +C4
C. NaOH + HCl ® NaCl + H2 O
D. Zn + S ® ZnS

Answer Keys

QUESTION NO	ANSWER	SOLUTION
QUESTION -1	B	The decreasing order of reactivity of metals is Al > Zn > Fe> Cu
QUESTION -2	A	The correct option is Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
QUESTION -3	B	The pH paper were reported as Na2 CO3
QUESTION -4	B	It was concluded that Solid X is sodium hydrogen carbonate and the gas Y is CO2
QUESTION -5	B	The correct option are Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
QUESTION -6	A	Kept in watch-glass Potassium hydroxide
QUESTION -7	C	It is called as regeneration
QUESTION -8	D	The wavelength and frequency of refracted light is 589 nm, 5.1×10^{14} Hz
QUESTION -9	C	Its certain extent is Statement 1 is true, but statement 2 is false
QUESTION -10	A	The resistance will be maximum between P and Q
QUESTION -11	D	The disadvantages of wave energy is all of them mentioned in the options.
QUESTION -12	C	Third tropic level they are cat and fox.
QUESTION -13	C	Non-biodegradable wastes are Aluminium cans, Iron nails, Silver foil, D.D.T
QUESTION -14	B	Four students P, Q, R and S noted the initial colour of the solutions kept in beakers I, II, III and IV. After inserting zinc rods in each solution and leaving it undisturbed for two hours, the colour of each solution was again note
QUESTION -15	B	The codes are Combination, Decomposition, Displacement, Oxidation.
QUESTION -16	B	The liquidsample will be Hydrochloric acid
QUESTION -17	C	Antibody cannot cross the placenta from mother to foetus Placenta
QUESTION -18	B	The incorrectly matched are Fertilization - Seminiferous tubule, Spermatogenesis - Fallopian tube.
QUESTION -19	A	P student note that correct four beakers correctly
QUESTION -20	A	Not balanced equation is Fe +Cl2 ® FeCl3

NASO
NATIONAL ASTRONOMY & SCIENCE OLYMPIAD

ANSWER SHEET

National Astronomy & Science Olympiad

Filling of all columns completely & accurately is important.

Candidate's Name

INSTRUCTIONS FOR FILLING THE SHEET

1. This sheet should not be folded or crushed.
2. Use only blue/black ball point pen to fill the circles.
3. Use of pencil is strictly prohibited.
4. Circles should be darkened completely and properly
5. Cutting and erasing on this sheet is not allowed.
6. Do not use any stray marks on the sheet.
7. Do not use marker or white fluid to hide the mark.

WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

Mobile No.

Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-2

1. Iron filings were added to a solution of copper sulphate. After 10 minutes, it was observed that the blue colour of the solution changed and a deposit at the bottom of the beaker was observed. The colour of the solution and that of the deposit would respectively be

   A. Yellow and green
   B. Brown and blue
   C. Red and greenish-blue
   D. Green and reddish-brown

2. Acetic acid was added to a solid X kept in a test tube. A colourless an odourless gas was evolved. The gas was passed through lime water which turned milky. It was concluded that

   A. Solid X is sodium hydroxide and the gas evolved CO_2
   B. Solid X is sodium bicarbonate and the gas evolved is CO_2
   C. Solid X is sodium acetate and the gas evolved is CO_2
   D. Solid X is sodium chloride and the gas evolved is CO_2

3. Read the following passage and answer
   Metals are usually hard. Hence metals are strong and can withstand heavy loads over them. Due to this property they are difficult to cut and can be used in the construction of heavy machines, buildings, etc.On the other hand, non-metals are usually brittle. On hammering them they break into small pieces converting themselves into fine powder.Identify the element that is relatively brittle

   A. Sulphur B. Diamond C. Iron D. Magnesium

4. Read the given statements and mark the correct option.
   Statement 1: Alkali metals have least value of ionisation energy within a period.
   Statement 2: They precede halogens in the periodic table

   A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
   B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
   C. Statement 1 is true and statement 2 is false
   Both statements 1 and 2 are false

5. In the periodic table, the metallic character of elements

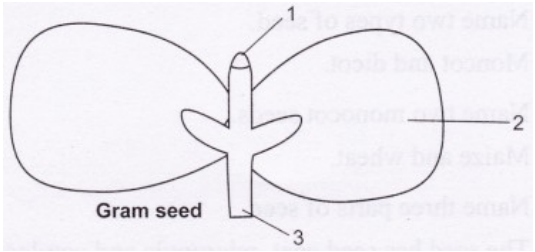
A. Decreases from left to right across a period and on descending a group
B. Decreases from left to right across a period and increases on descending a group
C. Increases from left to right across a period and on descending a group
D. Increases from left to right across a period and decreases on descending a group

6. The sensitive plant Mimosa pudica (as in figure) shows siesmonastic movement as a result of which the whole leaf droops down.

A. Loss of turgidity of the basal part of the leaf
B. Swelling of the basal part of the leaf
C. Change in direction of the leaf growth
D. None of the above.

7. In the given figure of gram seed, which labelled part will be used as food in the future?

A. 1
B. 2
C. 3
D. Both 2 & 4



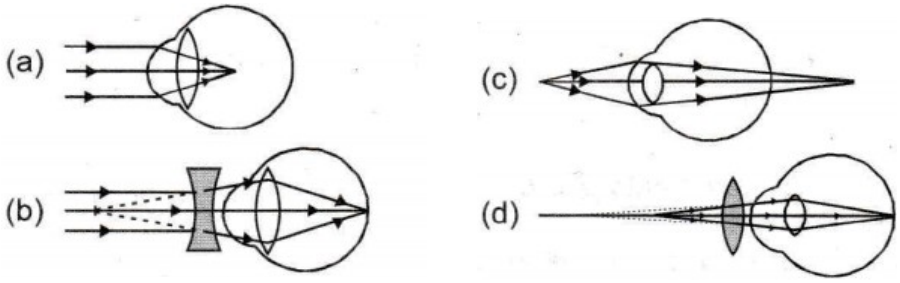
8. According to the evolutionary theory formation of a new species occurs generally due to___?

A. Sudden creation by nature.
B. Accumulation of variations over several generations.
C. Clones formed during asexual reproduction.
D. Movement of individuals from one habitat to another.

9. How will the image formed by a convex lens be affected if the central portion of the lens is wrapped in black paper?

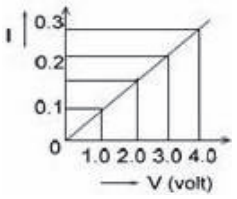
A. No image is formed by the remaining portion of the lens.
B. The central portion of the image will be absent.
C. There will be no effect.
D. The full image will be formed but it will be less bright.

10. Figures (a), (b), (c) and (d) respectively correspond to_____?



A. The short-sighted eye, the correction of long-sight, the long-sighted eye and the correction of short-sight
B. The short-sighted eye, the correction of short-sight, the long-sighted eye and the correction of long-sight
C. The long-sighted eye, the correction of short-sight, the short-sighted eye and the correction of long-sight
D. None of these

11. In an experiment ohms law a student obtained a graph as shown in the diagram. The value of resistance of the resistor is



A. 0.1 Ω
B. 1.0 Ω
C. 10 Ω
D. 100Ω

12. Read the given statements and mark the correct option.
Statement 1: Solar cookers require neither fuel nor attention while cooking.
Statement 2: Cooking takes comparatively lesser time

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true but statement 2 is false.
D. Statement 1 is false but statement 2 is true.

13. Match the traditional water harvesting systems of column I with the corresponding states in column II and select the correct answer using the codes given below____?

Column-1	Column-2
(a) Kattas	(i)Rajasthan
(b) Khadin	(ii)Karnataka
(c) Kulhs	(iii) Kerala
(d) Surangams	(iv) Himachal Pradesh

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(i)	(iv)
C	(ii)	(i)	(iv)	(iii)
D	(i)	(iv)	(iii)	(ii)

14. In natural ecosystems, decomposers include_____?

A. Only bacteria and fungi
B. Only microscopic animals
C. Herbivores and carnivores
D. Both (b) and (c)

15. Which of the following is not a double displacement reaction?

A. $BaCl2 + H2SO4 \rightarrow BaSO4 + 2HCl$
B. $CuSO4 + H2S \rightarrow CuS + H2SO4$
C. $NaOH + HCl \rightarrow NaCl + H2O$
D . $Mg3N2 + 6H2O \rightarrow 3Mg(OH)2 + 2NH3$

16. In the reaction PbO + C ® Pb + CO

A. Pbo is oxidised
B. C act as an oxidising agent
C. C act as a reduction agent
D. Reaction does not represent redox reaction

17. Most of the sources of energy we use represent stored solar energy. Which of the following is not ultimately derived from the Suns energy?

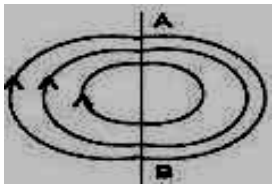
A. Geothermal energy Wind energy.
B. Wind energy.
C. Hydro power.
D. Bio-mass.

18. A solar cooker may not cook food if_____?

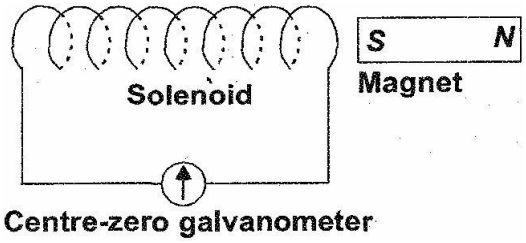
A. Interior of the box and the container of food are perfectly shining.
B. Glass sheet over the box is not closed.
C. Solar cooker is placed in the shade.
D. All the above.

19. Concentric circles with arrows centred at the wire AB are shown in figure_____?

A. No current in AB
B. Current flows from B to A
C. Current - flows from A to B
D. None of these



20. Read the passage carefully and answer. In the given diagram, when the magnet is pushed into the solenoid, the pointer galvanometer deflects slightly to the left.



Which of the following changes would cause the pointer to deflect through a larger angle?

A. Move the magnet faster.
B. Move the magnet away from the solenoid
C. Unwind some of the turns of the solenoid
D. Keep the magnet stationary

ANSWER KEYS

QUESTION NO	ANSWER	SOLUTION
QUESTION -1	D	The colour of the solution and that of the deposit would respectively be Green and reddish-brown
QUESTION -2	B	It was concluded that Solid X is sodium bicarbonate and the gas evolved is CO2
QUESTION -3	A	The element that is relatively brittle is Sulphur
QUESTION -4	C	The correct option statement 1 is true and statement 2 is false
QUESTION -5	B	The metallic character of elements decreases from left to right across a period and increases on descending a group
QUESTION -6	A	which the whole leaf droops down Loss of turgidity of the basal part of the leaf
QUESTION -7	D	which labelled part will be used as food in the future Both 2 & 4
QUESTION -8	B	The new species occurs generally due to accumulation of variations over several generations
QUESTION -9	D	The central portion of the lens is wrapped in black paper The full image will be formed but it will be less bright
QUESTION -10	B	It is respectively correspond to The short-sighted eye, the correction of short-sight, the long-sighted eye and the correction of long-sight
QUESTION -11	C	The value of resistance of the resistor is 10 Ω
QUESTION -12	C	The correct options are Statement 1 is true but statement 2 is false
QUESTION -13	C	The codes has been matched like(i) Karnataka,(ii)rajasthan, (iii)himachal Pradesh,(iv)kerala
QUESTION -14	A	decomposers include only bacteria and fungi.
QUESTION -15	C	It is NaOH + HCl → NaCl + H2O
QUESTION -16	C	The reaction C act as a reduction agent
QUESTION -17	A	The following is not ultimately derived from the Suns energy Geothermal energy Wind energy
QUESTION -18	D	The solar cooker may not cook food in all the above mentioned
QUESTION -19	B	Those are current flows from B to A
QUESTION -20	A	The following changes would cause the pointer to deflect through a larger angle are Move the magnet faster

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ANSWER SHEET

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

Mobile No.

Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-3

1. A student added dilute HCl to a test tube containing zinc granules. Which of the following observations are correct?
I. Zinc surface became dull and black.
II A gas was evolved which burnt with a pop sound.
III. The solution remained colourless

A. I & II B. I & III C. II &III D. I, II & III

2. Given below are certain chemical properties of a substance___?

(i) It turns blue litmus red.
(ii) It turns red litmus blue.
(iii) It reacts with zinc and a gas is evolved.
(iv) It reacts with solid sodium carbonate to give brisk effervescence

Which out of the following properties are shown by dilute HCL?

A. (i) & (ii) B. (i) & (iii) C. (i), (iii) & (iv) D. (iii) & (iv)

3. Heating pyrites to remove sulphur is called_____?

A. Smelting B. Calcination C. Liquation D. Roasting

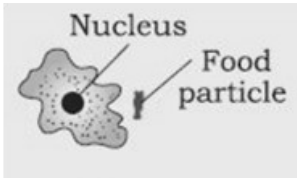
4. Read the given statements and mark the correct option.
Statement 1: Diamond is a bad conductor of electricity.
Statement 2: There are no free electrons in it

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Both statements 1 and 2 are false

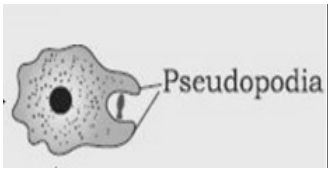
5. Element with atomic number 15 and mass number 31 is present in_____?

A. Group 5 and period 4 B. Group 15 and period 3
C. Group 5 and period 3 D. Group 15 and period 4.

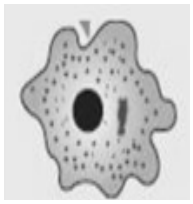
6. The given figures show holozoic nutrition in Amoeba. Arrange figures in correct sequence so as to give complete steps of nutrition



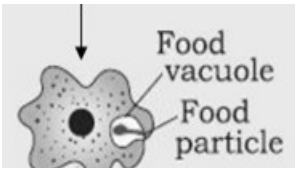
A.



B.



C.



D.

A. b,c,a&d B. a,b,d&c C. d,c,a&b D. d,a,c&b

7. A common feature of reproduction in Amoeba, spirogyra and yeast is that_____?

A. Asexual reproduction occurs after sexual reproduction
B. Asexual reproduction occurs before sexual reproduction
C. Asexual reproduction does not involve gametes
D. Asexual reproduction involves only one parent

8. Which of the following is not correct?

A. For every hormone there is a gene
B. For every protein there is a gene
C. For production of every enzyme there is a gene
D. For every molecule of fat there is a gene

9. Read the passage carefully and answer. A monochromatic light of wavelength 589 nm is incident from air onto water surface such that the refractive index of water is 1.33. What is the speed of refracted light?

A. $2.256 \times 10^8\ ms^{-1}$ B. $8.356 \times 10^8\ ms^{-1}$
C. $3 \times 10^8\ ms^{-1}$ D. $9.23 \times l0^8\ ms^{-1}$

10. Which of the following observations help us to determine that the chemical reaction has taken place?

I. Change in state
II Change in colour
III. Evolution of a gas
IV. Change in Temperature.

A. I & II only B. II & III only C. II & IV only D. All of these.

11. Earlier 'it' was used for street lightning. Now 'it' is used as a source of heat rather than light. 'It' is____?

A. Coal gas B. Coal tar C. Coal D. Coke.

12. The problem of desertification and deforestation is the result of_____?

A. Overgrazing.
B. Indiscriminating felling of trees.
C. Over exploitation of land resources.
D. All of these.

13. Plant cells can usually be distinguished from animal cells because only plant cells possess_____?

A. Mitochondria and lysosomes
B .Chloroplast and cell wall
C. Chromosomes and lysosomes
D. Chloroplast and Golgi complex

14. The point of origin of an earthquake, from where the seismic waves are said to spread out is_____?

A. Fault point B. Epicenter C. Focus point D. None of these

15. In the balanced equation a Fe_2O_3+b H_2→c Fe+d H_2O
The values of a, b, c and d are respectively____?

A. 1, 1, 2,3 B. 1, 1, 1,1
C. 1, 3, 2 , 3 D. 1,2,2,3

16. In the reaction $3MnO_2 + 4Al \rightarrow 3Mn + 2Al_2O_3$
The oxidising agent is_____?

A. MnO_2 B. Al C. Al_2O_3 D. Mn

17. Dilute hydrochloric acid is added to solid sodium carbonate. It is observed that

A. No change takes place B. A loud sound is produced
C. Brisk effervescence occurs D. The solution turns blue

18. Match both the columns and mark the correct option from the codes given below?.

Column I	Column II
(a) Ductility	(i)The property of making resonating sound
(b) Malleability	(ii) A substance can be drawn into wires
(c) Sonority	(iii) The substance can be beaten, into thin sheets
(d) Tensile strength	(iv) Ability to withstand the longitudinal pull

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(i)	(iv)
C	(i)	(iii)	(ii)	(iv)
D	(iv)	(i)	(ii)	(iii)

19. Read the following passage and answer?
Metals are usually hard. Hence metals are strong and can withstand heavy loads over them. Due to this property they are difficult to cut and can be used in the construction of heavy machines, buildings, action the other hand, non-metals are usually brittle. On hammering them they break into small pieces converting themselves into fine powder. An element that is relatively strong is relatively

A. Brittle B. Malleable
C. Hard D. Ductile

20. Read the given statements and mark the correct option.
Statement 1: Sodium reacts with water, producing a hissing sound
Statement 2: Sodium reacts with water and produces hydrogen gas

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Both statements 1 and 2 are false

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	D	C	D	A	B	C	D	D	A	D
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	A	D	B	C	C	A	C	B	C	A

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
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5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

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GRADE 10

MOCK TEST-4

1. Which of the following statements is correct?

   A. A chemical equation tells us about the substances involved in a reaction
   B. A chemical equation informs us about the symbol and formulae of substances involved in a reaction
   C. A chemical equation tells us about the atoms or molecules of the reactants and products involved in a reaction
   D. All are correct

2. When the stopper of a bottle containing colourless liquid was removed the bottle gave a smell like that of vinegar. The liquid in the bottle could be_____?

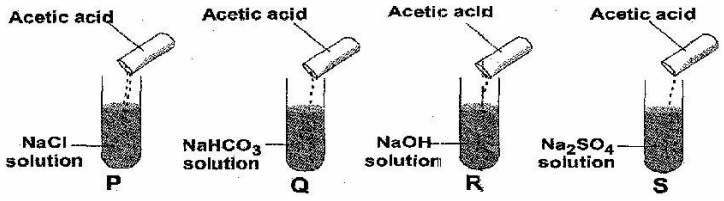
   A. Hydrochloric acid solution
   B. Sodium hydroxide solution
   C. Acetic acid solution
   D. Saturated sodium bicarbonate solution

3. An element reacts with oxygen to give a compound with a high melting point. This compound is also soluble in water. The element is likely to be_____?

   A. Calcium B. Carbon C. Silicon D. Iron

4. In which of the following tubes effervescence will occur?

   A.P
   B.Q
   C.R
   D.S



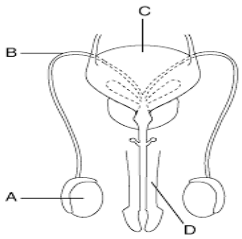
5. Read the following passage and answer P, Q and R are three elements with atomic numbers. Z - 1, Z and Z + 1 respectively. Q is an inert gas. Identify the group to which P and R belong___?

   A. Alkali metal, Alkaline earth metal. B. Halogen, Alkali metal.
   C. Inert gas, Alkali metal. D. Halogens, inert gas.

6. The cornea is a transparent structure which_____?

A. Refracts light
B. Reflects light
C. Absorbs light
D. Focuses light.

7. Which labelled part in the given figure secrete an alkaline fluid which also contains nutrients, an energy source for the sperm?



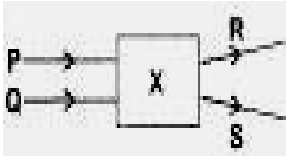
A. A
B. B
C. C
D. D

8. During the early stages of development, the embryos of reptiles, birds and mammals look very similar. This suggests that reptiles, birds and mammals_____?

A. Have evolved from common ancestor
B. Live in the same types of environment
C. Have undergone parallel evolution
D. Are no longer undergoing evolution

9. Light rays P and Q fall on optical component: X and come out as R and S?

A. The optical component is a
B. Concave lens
C. Convex lens
D. Convex mirror
E. Prism



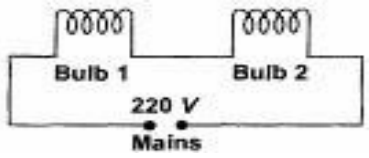
10. Rainbow is formed due to____?

A. Reflection and dispersion of light through a water droplet
B. Refraction, reflection and dispersion of light
C. Only dispersion of light
D. Only refraction of light

11. Read the passage carefully and answer. An electric bulb rated 220 V, 60 W is working at full efficiency. Another identical bulb is connected across the mains as shown below?
What will be the total power if the bulbs are connected in parallel?

A. 120W B. 60W

C. 200W D. 160W



12. Read the passage carefully and answer. Geothermal energy is heat of earth and is the naturally occurring thermal energy formed within rock formations and the fluids held within those formations. It is underground water which gets converted into hot water and steam when it comes in contact with hot rocks. There are only certain places, called hot spots. These hot spots are formed when geological changes push the molten rocks, called magma. Which of the following is not correct regarding geothermal energy?

A. Geothermal energy is most versatile
B. The source of energy is free and renewable
C. Electricity can be generated round the clock
D. Electricity produced is not cheap

13. Match the two columns and select the correct option from the codes given below?

Column I	Column II
(a) Montreal Protocol	(i) 1988
(b) Ganga Action Plan	(ii) 1972
(c) Chipko Movement	(iii) 1985
(d) National Forest Policy	(iv) 1987

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(iii)	(ii)	(iv)
B	(i)	(ii)	(iii)	(iv)
C	(iv)	(iii)	(ii)	(i)
D	(i)	(ii)	(iv)	(iii)

14. Although UV radiation of certain wavelengths has a beneficial effect in the production of vitamin D, over-exposure to strong sunlight is known to increase the risk of skin cancer. The atmosphere provides a thermal blanket and radiation shield to the earth. Which of the following statements are correct about radiation absorption?

(i) Zone shield is present in the troposphere and shields the surface of earth from UV radiation from the sun.
(ii) Ozone is produced high in atmosphere by the action of sunlight on oxygen molecule.
(iii) Thickness of ozone layer is proportional to the protection from the UV radiations.
(iv) Ozone filters out harmful UV radiations, and is intimately connected with the life sustaining process

A. (i), (ii), & (iii) B. (ii), (iii) & (iv) C. (iii) & (iv) D. All of these

15. Sometimes back 'kulhads' were introduced for serving tea in trains. But now the use of these kulhads has been discouraged. What is the most probable reason for his act?

A. These kulhads remain as such and pollute the environment.
B. Burning of these kulhads produces toxic gases & cause air pollution.
C. Kulhads release some metal ions which react with tea and make it toxic to drink.
D. Production of these kulhads results in the loss of the fertile top soil.

16. Match both the columns and mark the correct option from the codes given below?

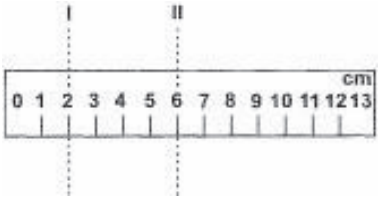
Column-1	Column- 11
(a) Acetic acid	(i) Tomato
(b) Citric acid	(ii)Tamarind
(c) Tartaric acid	(iii) Oange
(d) Oxalic acid	(iv)Vinegar

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(i)	(iv)
C	(iii)	(iv)	(i)	(ii)
D	(iv)	(iii)	(ii)	(i)

17. Two long parallel conductors I are II placed at right angles to a metre scale, at the 2 cm and 6 cm marks, as shown.

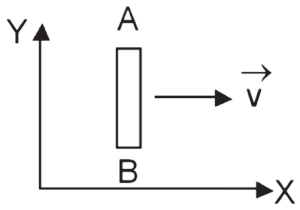
They carry currents of IA and 3A respectively in same direction. They will produce zero magnetic field at the

A. Zero mark
B. 10 cm mark
C. 3 cm mark
D. 6 cm mark.



18. A conducting rod PQ moves parallel to X-axis in a uniform magnetic field, pointing in the positive Z-direction. The end P of the rod gets__?

A. Positively charged.
B. Negatively charged.
C. Neutral.
D. First positively charged and then negatively charged.



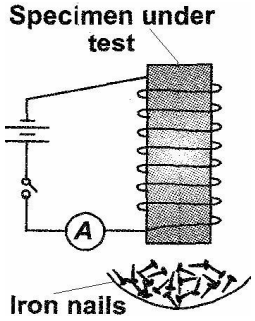
19. Match column I with column II and select the correct option from the codes given below____?

Column I	Column II
(a) Unlike poles	(i) Soft iron
(b) Like poles	(ii) Steel
(c) Permanent magnet	(iii) Repel each other
(d) Temporary magnet	(iv) Attract each other

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(iv)	(iii)	(ii)
B	(ii)	(i)	(iv)	(iii)
C	(iv)	(iii)	(ii)	(i)
D	(iii)	(ii)	(i)	(iv)

20. Read the passage carefully and answer. Three specimens of magnetic material were tested using the apparatus shown in the diagram. When the switch is closed, the specimen picks up some of the iron nails but when the switch is opened, many or most of the nails fall off. The number of nails picked up and left on was found for three specimens. The table shows the results?

Speci men	Number of nails picked up	Numbers of nails retained by the specimen
X	35	4
Y	20	10
Z	40	3



Which material is the best electromagnet among the three?

A. X B. Y C. Z D. All of these.

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	D	C	A	B	B	A	A	A	A	B
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	A	D	C	B	D	D	C	B	C	C

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

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Invigilator's Signature

GRADE 10

MOCK TEST-5

1. Substance which oxidizes itself and reduces other is known as____?

   A. Oxidising agent
   B. Reducing agent
   C. Both (a) and (b)
   D. None of these

2. A teacher gave two test tubes, one containing water and the other containing sodium hydroxide, to the students and asked them to identify the test tube containing sodium hydroxide solution. Which one of the following can be used for the identification?

   A. Blue litmus
   B. Red litmus
   C. Sodium carbonate solution
   D. Dilute hydrochloric acid

3. A mineral is known as ore if metal____?

   A. Cannot be produced from it
   B. Can be produced from it
   C. Can be extracted from it profitably
   D. Is very costly

4. Match both the columns and mark the correct option from the codes given below?

Column I	Column II
(a) Carbon dioxide	(i) Carboxy haemoglobin
(b) Carbon monoxide	(ii) Global warming
(C) Fossil fuels	(iii) Carat
(d) Biogas	(iv) Natural gas, petroleum
(e) Diamond	(v) Organic manure

Option	Column-A	Column-B	Column-C	Column-D	Column-E
A	(i)	(ii)	(iii)	(iv)	(v)
B	(ii)	(i)	(iii)	(iv)	(v)
C	(ii)	(i)	(iv)	(v)	(iii)
D	(ii)	(i)	(iv)	(iii)	(v)

5. Given below are the events of photosynthesis. Identify which of the following is/are not correct?

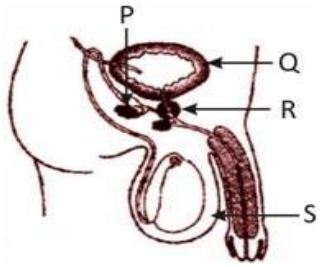
(i) Absorption of light energy by chlorophyll.
(ii) Conversion of light energy to chemical energy and splitting of carbon dioxide into carbohydrates and oxygen.
(iii) Reduction of carbon dioxide to carbohydrates.
(iv) Conversion of chemical energy to radiant energy and splitting of water molecules into hydrogen and oxygen

A. (i) & (ii) B. (ii) only C. (ii) & (iii) D. (ii) & (iv)

6. Which of the following statements is false about anaerobic respiration?

A. It takes place in the micro-organisms like yeast
B. It produces a considerable large amount of energy
C. It favors partial breakdown of food
D. In animal muscles, lactic acid are the end product.

7. Which labelled part in the given figure keeps the testes at a temperature lower than the normal body temperature?



A. P
B. Q
C. R
D. S

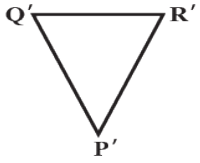
8. If an enzyme responsible for the production of phytohormone (for plant height) becomes active then that phytohormone brings phenotypic change. If the gene for that enzyme has an alteration it makes the enzyme less efficient and the amount of hormone will be less, consequently the plant will be short. This shows that____?

A. Traits are controlled by genes.
B. Traits are controlled by hormones.
C. Enzymes control characters.
D. Traits get expressed by plant part.

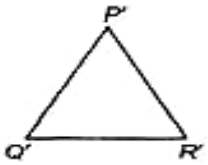
9. Read the given statements and mark the correct option.
Statement 1: If refractive index of one medium is equal to refractive index of second medium, then beam does not bend at all
Statement 2: The bending of light does not depend on refractive indices of media

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
C. Statement 1 is true but statement 2 is false.
D. Statement 1 is false but statement 2 is true.

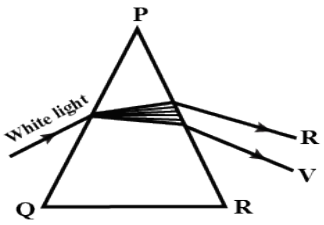
10. Two identical prisms PQR and P'Q'R' are given. White light is passed through PQR as shown below. In which of the following positions P'Q'R' will again yield white light?

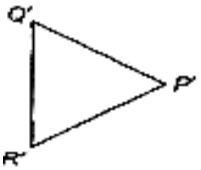


A.

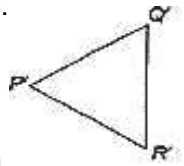


B.





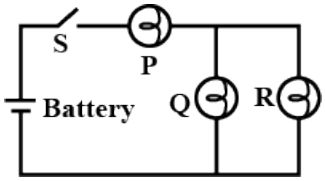
C.



D.

11. Three identical bulbs are connected to a battery as shown in figure.
When the circuit is closed by means of the switch S, it is found that_____?

A.R will be bright, but Q and P dim
B.P, Q and R, all will be equally bright
C.Q and R will immediately burn out
D.P will be bright, but Q and R dim



12. Match column I with column II and select the correct option from the codes given below____?

Column I	Column II
(a) Nuclear fusion	(i) $^{235}_{92}U + {}^{1}_{0}n \rightarrow {}^{141}_{56}a + {}^{92}_{36}Ba + {}^{92}_{36}Kr + 3{}^{1}_{0}n + Q$
(b) Nuclear fission	(ii)Liquid nitrogen
(C) Nuclear fuel	(iii) Hydrogen
(d) Rocket fuel	(iv) $^{1}_{1}H + {}^{2}_{1}H \rightarrow {}^{4}_{2}He + Q$

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iv)	(iii)
B	(iv)	(i)	(iii)	(ii)
C	(ii)	(iv)	(i)	(iii)
D	(iii)	(ii)	(iv)	(i)

13. Match the columns and select the correct option from the codes given below.

Column I	Column II
(a) Herbivores	(i) Orobanche
(b) Producers	(ii) Hippopotamus
(c) Carnivores	(iii) Crocodile
(d) Omnivores	(iv) Cyanobacteria
(e) Parasites	(v) Ant
	(vi) Phytoplanktons
	(vii) Tortoise
	(viii) Kingfisher

Options	Column-A	Column-B	Column-C	Column-D	Column-E
A	(i),(iv)	(ii),(iii)	(vi)	(vii)	(viii)
B	(i),(ii)	(iii)	(iv)	(v),(vi)	(vii), (viii)
C	(iv)	(ii),(vi)	(vii)	(i),(v)	(viii)
D	(ii),(vii)	(iv),(vi)	(iii),(viii)	(v)	(i)

14. What will happen if deer is missing in the given food chain?
Grass ® Deer ® Tiger

A. The population of tiger decreases and the population of grass increases.
B. The population of grass decreases.
C. Tiger will start eating grass.
D. The population of tiger increases.

15. Select among the following the artificial self sustaining ecosystems?

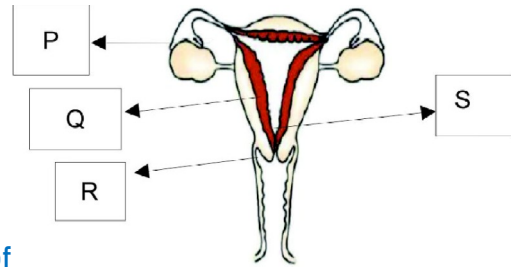
(i)Estuaries	(ii) Mountain	(iii) Cropfield	(iv) Grassland
(v)Coral reefs	(vi) Park	(vii) Mangroves	(viii) Aquarium

A. (i), (ii) & (v) B. (ii), (iv) & (vi) C. (iii), (vi) & (viii) D. (ii), (vi) & (vii)

16. Some species of dinosaurs had feathers, although they could not fly using the feathers. What was the purpose of this adaptation by some of the reptiles?

A. Providing adaptation in the limb.
B. Providing insulation in cold weather.
C. Providing skin folded stretch in arms.
D. None of these.

17. In which labelled part of the given figure does the fertilization of an ovum by a sperm take place?



A.P B.Q
C.R D.S

18. Which of the following are the demerits of Mendeleev's periodic table?
(i) No proper position for hydrogen is given (ii) Grouping of chemically dissimilar elements
(iii) Position given to isotopes (iv) Presence of anomalous pairs

Correct statements are_____?
A. (i) & (ii) B. (i), (ii) & (iii) C. (i), (ii) & (iv) D. All of these

19. Read the given statements and mark the correct option.
Statement 1: Bio-gas is also called renewable source of energy.
Statement 2: Fossil fuels are non-renewable source of energy

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Both statements 1 and 2 are false

20. A student puts one big iron nail each in four test tubes containing solution of zinc sulphate, aluminium sulphate, copper sulphate and iron sulphate. A reddish brown coating was observed only on the surface of iron nail which was put in the solution of

A. Zinc sulphate
B. Iron sulphate
C. Copper sulphate
D. Aluminium sulphate

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	B	B	C	C	D	B	D	A	C	B
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	D	B	D	D	B	B	A	C	B	C

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

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Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-6

1. The reaction between lead nitrate and potassium iodide present in aqueous solutions is an example of__?

A. Decomposition Reaction
B. Displacement Reaction
C. Double Displacement Reaction
D. Neutralisation Reaction

2. Read the given statements and mark the correct option?
Statement 1: pH of hydrochloric acid solution is less than that of acetic acid solution of the same concentration.
Statement 2: In equimolar solutions, the number of titrable protons present in hydrochloric acid is less than that present in acetic acid.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true and statement 2 is false
D. Statement 1 is false and statement 2 is true

3. Many metals occur in native state in nature because____?

A. They are very active
B. They do not form ionic compounds
C. They are not reactive
D. They have low density

4. Mark the wrong statement_____?

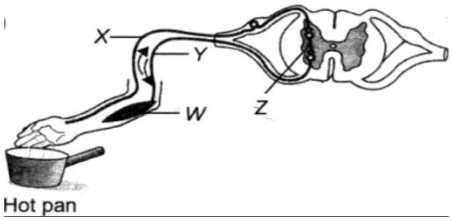
A. People sleeping in closed room with coal fire burning inside have died due to CO2 poisoning
B. Carbon monoxide combines with haemoglobin of the blood to give carboxyhaemoglobin which is not an oxygen carrier
C. Concentration of 1 part of CO in 800 volumes of air will produce death in 30 minutes
D. Carbon monoxide is of poisonous nature

5. Elements are classified:
(i)To correlate their properties with some fundamental property
(ii)To study the elements better
(iii)To find relationship among elements
(iv) To formulate a table.

Correct statements is/are_____?

A. (i) only B. (i), (ii) & (iii) C. (i) & (iv) D. All of these.

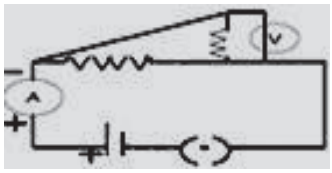
6. Given figure is showing the pathway taken by a nerve impulse in a reflex action. Which part serves as a link between other neurons?



A. W B. X

C.Y D. Z

7. Which two circuit components are connected in parallel in the following circuit diagram?



A. R1 & R2 only B. R1, R2 & V

C. R2 & V only D. R1 & V only

8. Two electric bulbs, one of 200 volt 40 watt and the other 200 volt 100 watt are connected in a house wiring circuit_____?

A. They have equal current flowing through them
B. The resistance of the filaments in both the bulbs is same
C. The resistance of the filament in 40 watt bulb is more than the resistance in 100 watt bulb
D. The resistance of the filament in 100 watt bulb is more than the resistance of 40 watt bulb

9. Read the given statements and mark the correct option.
Statement 1: The solar cells are used to convert solar energy into electrical energy.
Statement 2: The solar cells are made from semiconductor elements

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
B .Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
C.Statement 1 is true but statement 2 is false.
D.Statement 1 is false but statement 2 is true.

10. The site of a hydroelectric plant should be chosen carefully because it_____?

A. Produces a large amount of carbon monoxide and carbon dioxide
B. Produces a large amount of electricity
C. Affects the organisms of the region
D. Is expensive

11. Although charcoal is a clean and deter source of heat energy yet it cannot be used as a domestic fuel because it____?

A. Cause environmental pollution.
B. Produce less heat energy.
C. Cannot be stored easily.
D. Is expensive fuel.

12. The purpose of the glass cover on top of a box-type solar cooker is to

A. Allow one to see the food being cooked
B. Allow more sunlight into the box
C. Prevent dust from entering the box.
D. Reduce heat loss by radiation

13. Chipko Movement was the tree hugging movement in which the villagers compel the axeman to stop tree felling by embracing and forming circle around the marked trees. Which of the following person was not related with this movement?

A. Amrita Devi Bisnoi
B. Gaura Devi
C. Sunderlal Bahugana
D. Chandi Prasad Bhatt.

14. Canal systems leading from large dams can transfer large amounts of water to greater distances. Which of the following canals brought greenery to considerable areas of Rajasthan?

A. Jawahar canal.
B. Indira Gandhi canal.
C. Ganga river water canal.
D. Narmada canal

15. Which of the following maintains the stability of the ecosystem by providing alternate source of food and allowing the endangered population to grow in size?

A. Food chain
B. Food energy
C. Food web
D. Trophic levels

16. Read the following paragraph and answer. On heating gypsum at 373 K, it gives X. X is used for supporting fractured bones, for making toys, materials for decoration, etc.What is X?

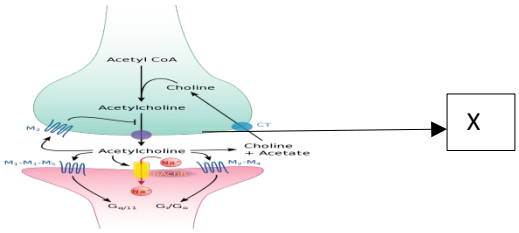
A. CaSO4.
B. CaSO4.2H2O
C. CaSO4.H2O
D. CaSO4 H 2O

17. Tropism is the movement of a part of a plant in response to an external stimulus. The growth of pollen tube towards the ovule during the Process of fertilization in a flower is an example of_____?

A. Geotropism. B. Hydrotropism. C. Chemotropism. D. Phototropism.

18. What does the X represents?

A. Gap junction
B. Synapse
C. Interneural bridge
D. Tight junction



19. Match the methods of asexual reproduction in column I with the related organisms in column II and select the correct option from the codes given below____?

Column I	Column II
(a) Rhizopus	(i) Binary fission
(b) Planaria	(ii) Budding
(c) Leishmania	(iii) Spore formation
(d) Yeast	(iv) Regeneration

Option	Column-A	Column-B	Column-C	Column-D
A	(iii)	(iv)	(i)	(ii)
B	(iii)	(i)	(iv)	(ii)
C	(ii)	(iii)	(i)	(iv)
D	(ii)	(iv)	(i)	(iii)

20. In the given flow chart what is the position of fruit?

Ovary	→	X
Ovule	→	Y
Z	→	Embryo

A. X B. Y C. Z D. BOTH X & Y.

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	C	C	C	A	B	D	B	C	B	C
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	D	D	A	B	C	D	C	B	A	B

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

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Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-7

1. Match both the columns and mark the correct option using the code given below.

Column-1	Column-11
(a) Action of dilute sulphuric acid on Zn	(i) Ammonia
(b) Heating limestone	(ii) Oxygen
(c) Heating potassium chlorate	(iii) Hydrogen
(d) Heating ammonium chloride	(iv) Carbon dioxide

Option	Column-A	Column-B	Column-C	Column-D
A	(ii)	(iv)	(i)	(iii)
B	(iii)	(iv)	(ii)	(i)
C	(iv)	(iii)	(i)	(ii)
D	(iii)	(i)	(iv)	(ii)

2. The pH of three solutions a, B and C is 6, 4 and 8 respectively. Which of the following is the correct option?

A. A> B> C; decreasing acidic strength
B. B > C > A; decreasing acidic strength
C. B > A> C; decreasing acidic strength
D. C > B >A; decreasing acidic strength

3. The common method for extraction of metals from the oxide one is____?

A. Reduction with carbon
B. Reduction with hydrogen
C. Reduction with aluminium
D. electrolytic method

4. Read the following passage and answer?
When superheated steam is passed through red hot wood charcoal, it gets reduced to a mixture of X and Y and this mixture is named a Z. Identify the mixture Z

A. Producer gas
B. Water gas
C. Coal gas
D. Soda water

5. As per the modern periodic law, the physical and chemical properties of elements are periodic functions of their___?

A. Atomic volume
B. Electronic configuration
C. Atomic weight
D. Atomic numbers

6. In which of the following group/ groups of animals, heart does not pump oxygenated blood to different parts of the body?

A. Pisces only.
B. Amphibians only.
C. Amphibians and reptiles only.
D. Pisces and amphibians.

7. Farmers have produced (or evolved) entirely different looking vegetables' from wild cabbage. Below are given some evolved types along with their characteristics. Select the incorrect match among them___?

A. Sterile flowers – Cauliflower
B. Swollen parts – Kohlrabi
C. Arrested flower development – Broccoli
D. Large leaves - Kohlrabi

8. Two pea plants one with round green seeds (RRyy) and another with wrinkled yellow (rrYY) seeds produce F1 progeny having round, yellow (RrYy) seeds. When F1 plants are selfed, the F2 progeny will have the following combination of characters?

A. 15:1
B. 9:3:3:1
C. 9:3:4
D. 12:3:1

9. Read the given statements and mark the correct option?
Statement 1: For observing traffic at our back, we prefer to use a concave mirror.
Statement 2 A concave mirrors has a much larger field of view than a plane mirror or a convex mirror.

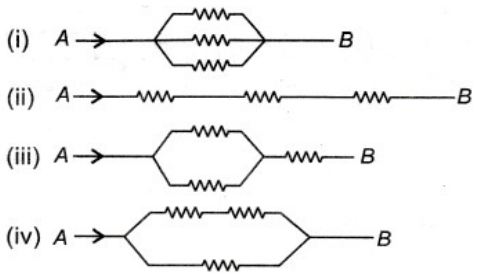
A. Both statements 1 and 2 are true and statement 2 is 1:he correct explanation of statement 1
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1
C. Statement 1 is true but statement 2 is false
D. Both statements 1 and 2 are false

10. Sky appears to be red colour at the time of sunset. The reason is____?

A. Blue colour of sun rays is scattered away by the atmosphere
B. As sun emits out only red colour in the morning
C. White light is made to appear red by atmosphere
D. None of the above

11. Arrange the order of power dissipated in the given circuits, if the same current is passing through all three resistance and each resistor is r.

A. (ii)> (iii)> (iv) > (i)
B. (ii)> (ii) > (iv) > (i)
C. (ii)> (iii) > (ii) > (i)
D. (i)> (ii) > (iii) > (iv)



12. Read the passage carefully and answer. Ocean waves are derived sources of energy. Wind is the agent which transfers the Sun's energy to the surface of the sea. The unequal solar heating of the earth generates wind and wind blowing over water generates waves. The energy possessed by ocean and sea waves is called wave energy. Various systems have been designed to use wave energy for commercial production of electricity. Which of the following is wrong regarding to wave energy?

A. Wave energy is renewable source of energy.
B. Wave power projects require a specific site.
C. The total amount of power available in the world from wave energy is 2 to 3 .
D. Million MW Wave power project require large land area.

13. It is important to make small check dams across the flooded gullies because They

(i) Hold water for irrigation (ii) Hold water and prevent soil erosion
(iii)Recharge ground water (iv) Hold water permanently

A. (i) and (iv) B. (ii) and (iii) C. (iii) and (iv) D. (ii) and (iv)

14. In a terrestrial ecosystem, only about 1% of the energy of sunlight is fixed by green plants and converted into food energy. How much amount of this food energy is available to the next level of herbivores?

A. 1% B. 2% C. 5% D. 10%

15. A major programme called 'silviculture' has been started to replenish the forests. Which of the following is not an advantage of this programme?

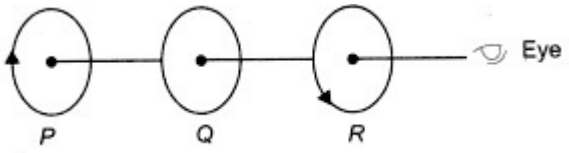
A. It maintains a perfect water cycle in nature.
B. It prevents soil erosion.
C.It encourages plantation of multipurpose trees in open lands of.
D. Urban area It produces a large quantity of raw materials for industry.

16. Match both the columns and mark the correct option from the codes given below.

Column I	Column II
(a) Ductility	(i)The property of making resonating sound
(b) Malleability	(ii) A substance can be drawn into wires
(c) Sonority	(iii) The substance can be beaten, into thin sheets
(d) Tensile strength	(iv) Ability to withstand the longitudinal pull

Option	Column-A	Column-B	Column-C	Column-D
A	(ii)	(i)	(iv)	(iii)
B	(i)	(ii)	(iii)	(iv)
C	(ii)	(iii)	(iv)	(i)
D	(i)	(iv)	(ii)	(iii)

17. Three closed similar coils P, Q and R are placed such that their planes are parallel. In the coil P, and R, current of same magnitude flows as shown in the figure. Coils Q and R are static while coil P is moved with a uniform speed towards Q, then



A. Clockwise current will be induced in coil Q as seen by eye
B. Anti-clockwise current will be induced in coil Q, as see by eye
C. No current will flow in coil P
D. Current induced in coil Q will be equal to P and R, but in opposite direction, hence net current in Q will be zero.

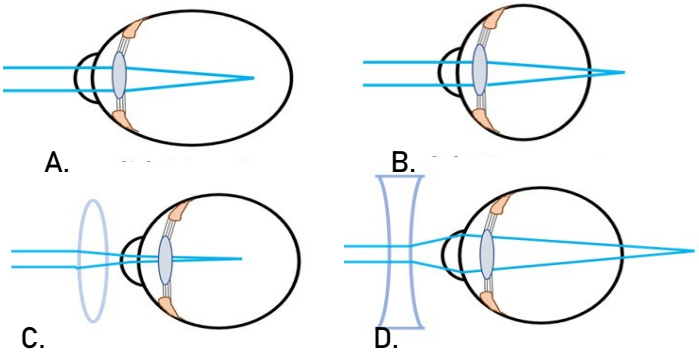
18. Read the following passage and answer

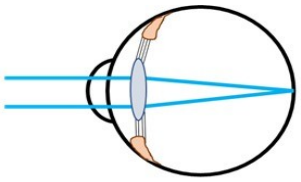
Metals are usually hard. Hence metals are strong and can withstand heavy loads over them. Due to this property they are difficult to cut and can be used in the construction of heavy machines, buildings, etc.

On the other hand, non-metals are usually brittle. On hammering them they break into small pieces converting themselves into fine powder. An element that is relatively strong is relatively

A. Brittle B. Malleable C. Hard. D. Ductile.

19. Observe the following diagram and answer question




Normal eye view

A. Myopia B. Hyperopia
C. Lens-induced myopic defocus D. Lens-induced hyperopic defocus

A. People with hypermetropia often need reading glasses because
B. The eye's lens cannot bring distant objects into focus on the retina
C. The eye's lens does not bulge enough to bend the light rays reflected from he print on the page Corrective lenses will make the retina more sensitive to light
D. The curvatures of the lens and retina do not match each other, causing letters on the page to appear distorted.

20. Light travels from diamond to glass, glass to water and water to air. In this context when can total internal reflection take place?
(i) When light travels from diamond to glass.
(ii) When light travels from glass to water.
(iii) When light travels from water to air

A. (ii) & (iii)
B. (i) & (ii)
C. (i), (ii) & (iii)
D. (i) (iii).

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	B	C	A	B	D	A	D	B	D	A
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	A	D	B	D	C	A	B	C	B	C

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National Astronomy & Science Olympiad

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

Mobile No.

Candidate's Signature

Invigilator's Signature

GRADE 10

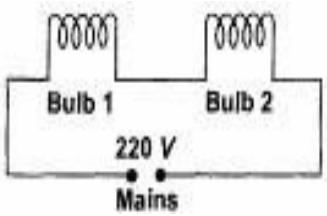
MOCK TEST-8

1. Match different organisms in column - I with their related characteristics in column - II and select the correct option from the codes given below.

Column - I	Column - II
(a) Entamoeba histolytica	(i) an alga which carries out photosynthesis
(b) Bacteriophage	(ii) A protozoan that causes disease in human beings By living in the large intestine of humans
(c) Rhizopus	(iii) A virus which infects a bacterial cell
(d) Chlamydomonas	(iv) A common black bread mould

A. (a) - (ii), (b) - (iii), (c) - (iv), (d) – (i)
B. (a) - (iii), (b) - (ii), (c) - (iv), (d) – (i)
C. (a) - (ii), (b) - (i), (C) - (iii), (d) – (iv)
D. (a) - (iv), (b) - (ii), (c) - (i), (d) - (iii)

2. Read the passage carefully and answer. An electric bulb rated 220 V, 60 W is working at full efficiency. Another identical bulb is connected across the mains as shown below



The total power is

A. 20W
B. 40W
C. 30W
D. 60W.

3. Match column I with column II and select the correct option from the codes given below.

List I	List II
(a) Electric current	(i) Volts
(b) E.m.f	(ii) Ohm
(c) Resistance	(iii) Ohm-meter
(d) Resistivity	(iv) Helps to focus light as it enters the eye

Option	Column-A	Column-B	Column-C	Column-D
A	(iv)	(ii)	(i)	(iii)
B	(iii)	(iv)	(i)	(ii)
C	(iv)	(i)	(ii)	(iii)
D	(iii)	(i)	(ii)	(iv)

4. Which one of the following types of medicines is used for treating indigestion?

A. Antibiotic B. Analgesic C. Antacid D. Antiseptic.

5. Read the following paragraph and answer. On heating gypsum at 373 K, it gives X. X is used for supporting fractured bones, for making toys, materials for decoration, etc. Ratio of water molecules in gypsum Plaster of Paris is

A. 4: 1 B. 2: 1 C. 1:1 D. 1: 4

6. In addition to iron, stainless steel contains_____?

A. Nickel and chromium
B. Copper and tin.
C. Aluminium and magnesium.
D. Carbon and magnesium.

7. The slag obtained during the extraction of copper pyrites is composed mainly of_____?

A. Cu2 S B. FeSiO3 C. CuSiO3 D. SiO2

8. An example of soap is_____?

A. C1 5 H3 1 COONa
B. CH3 COONa
C. C6 H5 COONa
D. C17 H35 OSO3 Na

9. What happens when the left ventricle of human heart contracts?

A. The oxygenated blood is forced into the main artery
B. The deoxygenated blood is forced into the pulmonary artery
C. The deoxygenated blood is pumped into the lungs through pulmonary artery
D. The oxygenated blood go into different body organs through pulmonary vein

10. Male gamete is the reproductive cell that fuses with female gamete to form zygote. Usually male gametes differ from female gametes as they are_____?

A. Small and contain stored food.
B. Large and motile.
C. Large and contain stored food.
D. Small and motile.

11. If the pollen grains are transferred from anther to the stigma of the different flower of another plant of same or different species, it is known as_____?

A. Allogamy.
B. Autogamy.
C. Cross pollination.
D. Both (A) & (C)

12. Biogas is produced from bio matter by?

A. Anaerobic fermentation.
B. Fractional distillation.
C. Destructing distillation.
D. Mixing petrol distillation.

13. Which of the following problems led to the opposition to the construction of Tehri dam on the river Ganga and Sardar Sarovar projet on the river Narmada?

A. Large areas of agricultural land and human habitation submerged.
B. Destruction of large ecosystem and loss of biological diversity.
C. Displacement of large number of local population without adequate.
D. Rehabilitation All of the above.

14. There are generally a greater number of individuals at the lower trophic level of an ecosystem. In a grassland ecosystem, which of the following are least in number?

A. Grasses
B. Grasshoppers
C. Rats
D. Snakes

15. CPCB runs a project on prevention and control of pollution of Ganga. The acronym CPCB stands for?

A. Control of Pollution and Co-ordination Board
B. Central Pollution Control Board
C. Central Pollution Control of Ganga Basin
D. Central Pollutant Control Boar

16. Match both the columns and mark the correct option from the codes given below.

Column I	Column II
(a) Highest electronegativity	(i) Caesium
(b) Highest electron affinity	(ii) Ruthenium
(c) Highest electropositivity	(iii) Pluorine
(d) Highest oxidation number	(iv) Chlorine

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(iv)	(i)
C	(iii)	(iv)	(i)	(ii)
D	(iv)	(i)	(ii)	(iii)

17. Which of the following position of elements have same number of valence electrons as that of element of atomic number 6?

(i) Group 14 and period 5
(ii)Group 14 and period 4
(iii)Group 6 and period 4
(iv) Group 14 and period 3

Correct statements are _____?

A. (i) & (ii)
B. (i), (ii) & (iii)
C. (i), (ii) & (iv)
D. All of these

18. Match the phytohormones of column I with role played by them in column II and select the answers using the codes given below.

Column I	Column II
(a) Auxins	(i) Cell division
(b) Gibberellins	(ii) Dormancy in seeds
(c) Cytokines	(iii) Cell enlargement and differentiation
(d) ABA	(iv) Ripening of fruits
(e) Ethylene	(v) Breaking seed dormancy

Option	Column-A	Column-B	Column-C	Column-D	Column-E
A	(v)	(ii)	(i)	(iii)	(iv)
B	(iii)	(v)	(i)	(ii)	(iv)
C	(v)	(iv)	(ii)	(i)	(iii)
D	(ii)	(v)	(iii)	(i)	(iv)

19. A sharp knife enables us to cut through things more easily because_____?

A. The pressure exerted in lesser when the same force is used
B. The pressure exerted is greater when the same force is used
C. The sharp edge can pass through the material slowly
D. The sharp edge is not felt when cutting through the material.

20. Why is it not advisable to wear clothes made up of synthetic fibres in hot and humid weather?

A. Synthetic fibres catch fire very easily
B. Synthetic fibres do not absorb sweat
C. Synthetic fibres stick to the body
D. Both (B) & (C)

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	A	C	C	C	A	A	B	A	A	A
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	D	A	C	D	B	C	C	B	B	D

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

Mobile No.

Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-9

1. A student added dilute HCl to a test tube containing zinc granules. Which of the following observations are correct.
   i. Zinc surface became dull and black.
   ii. A gas was evolved which burnt with a pop sound.
   iii. The solution remained colourless

   A. I & II B. I & III C. II &III D. I, II & III

2. Given below are certain chemical properties of a substance_____?
   (i) It turns blue litmus red. (ii) It turns red litmus blue.
   (iii) It reacts with zinc and a gas is evolved.
   (iv) It reacts with solid sodium carbonate to give brisk effervescence.

   Which out of the following properties are shown by dilute HCL?

   A. (i) & (ii) B. (i) & (iii) C. (i), (iii) & (iv) D. (iii) & (iv)

3. Heating pyrites to remove sulphur is called_____?

   A. Smelting B. Calcination C. Liquation D. Roasting

4. Read the given statements and mark the correct option.
   Statement 1: Diamond is a bad conductor of electricity.
   Statement 2: There are no free electrons in it

   A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
   B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
   C. Statement 1 is true and statement 2 is false.
   D. Both statements 1 and 2 are false.

5. Element with atomic number 15 and mass number 31 is present in_____?

   A. Group 5 and period 4 B. Group 15 and period 3
   C. Group 5 and period 3 D. Group 15 and period 4

6. Which of the following statements is correct about weeds?

A. Weeds cannot be removed manually
B. Cochineal insects are used to eradicate weed Opuntia
C. Weeds adversely affect plant growth as they compete with the crop plant for nutrients, space, water and light.
D. Both (B) and (C).

7. A common feature of reproduction in Amoeba, spirogyra and yeast is that_____?

A. Asexual reproduction occurs after sexual reproduction
B. Asexual reproduction occurs before sexual reproduction
C. Asexual reproduction does not involve gametes
D. Asexual reproduction involves only one parent.

8. Which of the following is not correct?

A. For every hormone there is a gene
B. For every protein there is a gene
C. For production of every enzyme there is a gene
D. For every molecule of fat there is a gene

9. Read the passage carefully and answer. A monochromatic light of wavelength 589 nm is incident from air onto water surface such that the refractive index of water is 1.33. What is the speed of refracted light?

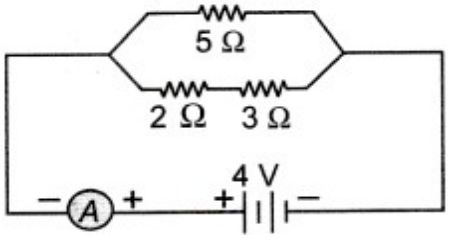
A. $2.256 \times 10^8\ ms^{-1}$ B. $8.356 \times 10^8\ ms^{-1}$ C. $3 \times 10^8\ ms^{-1}$ D. $9.23 \times 10^8\ ms^{-1}$

10. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
(a) Choroid	(i) Detects light stimulus
(b) Retina	(ii) Absorbs light and prevent it from being reflected within the eyeball
(c) Cornea	(iii) Controls the size of the pupil
(d) Iris	(iv) Helps to focus light as it enters the eye

Option	Column-A	Column-B	Column-C	Column-D
A	(ii)	(i)	(iv)	(iii)
B	(i)	(ii)	(iii)	(iv)
C	(ii)	(iii)	(iv)	(i)
D	(i)	(iv)	(ii)	(iii)

11. Observe the following circuit diagram and answer What is the current shown by the ammeter?



A. 2A B. 1A
C. 1.6A D. 5A

12. Consider the following statements: In nuclear power reactors
(i) Uranium-23 is used as the fission material
(ii) Graphite is used as a moderator
(iii) Rods of lead are used to control the rate of nuclear reaction

Which of the above statements are correct?

A. (i), (ii) & (iii) B. (i) & (ii) C. (ii) &(iii) D. (i) & (iii)

13. Canal systems leading from large dams can transfer large amounts of water to greater distances. Which of the following canals brought greenery to considerable areas of Rajasthan?

A. Jawahar canal
B. Indira Gandhi canal
C. Ganga river water canal
D. Narmada canal

14 . The main purpose of water harvesting is not to hold rain water on the surface of the earth but to make rain water percolate under the ground so as to recharge ground water. Which of the following sentences is/are true for water stored in the ground?

(i) It does not evaporate.
(ii) It spreads out to recharge wells and provides moisture for crops over a wide area.
(iii) It does not promote breeding of mosquitoes.
(iv) It is protected from contamination by human and animal wastes.
(v) It is utilised for benefit of the local population.

A. (i), (ii) & (iii) B. (i), (iii) & (v) C. (ii), (iii) & (iv) D. All of these

15. Iron nail clipped in a solution kept in a test tube. After half an hour it was observed that the colour of the solution was changed. The solution in test tube was that of_____?

A. Zinc sulphate
B. Copper sulphate
C. Iron sulphate
D. Aluminium sulphate

16. 10 mL of a solution of NaOH is found to be completely neutralised by 8 mL of a given solution of HCl. If we take 20 mL of the same solution of NaOH, the amount HCl solution (the same solution as before) required neutralizing it will be__?

A. 4 mL B. 8 mL C. 12ML D. 16 mL

17. The reaction $H_2 + Cl_2$ ® 2HCl represents_____?

A. Oxidation.
B. Reduction.
C. Decomposition.
D. Combination.

18. Match both the columns and mark the correct option from the codes given below.___?

Column I	Column II
(a) Brass	(i) Aircrafts, pressure cooker
(b) Bronze	(ii) Utensils, automobile parts, cutlery
(c) Duralumin	(iii) Ornaments, bolts, utensils
(d) Stainless steel	(iv) Statues, coins

Option	Column-A	Column-B	Column-C	Column-D
A	(i)	(ii)	(iii)	(iv)
B	(ii)	(iii)	(iv)	(i)
C	(iii)	(i)	(ii)	(iv)
D	(iii)	(iv)	(i)	(ii)

19. Read the given statements and mark the correct option.
Statement 1: Metals are sonorous.
Statement 2: Metals are generally brittle in the solid state; they break into pieces when hammered.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
C. Statement 1 is true and statement 2 is false.
D. Both statements 1 and 2 are false.

20. Read the following passage and answer?
Metals are usually hard. Hence metals are strong and can withstand heavy loads over them. Due to this property they are difficult to cut and can be used in the construction of heavy machines, buildings, etc. On the other hand, non-metals are usually brittle. On hammering them they break into small pieces converting themselves into fine powder. Among the following, the strongest one is_____?

A. Hydrogen
B. Oxygen
C. Manganese
D. Chlorine

ANSWER KEYS

QUESTION NO.	1	2	3	4	5	6	7	8	9	10
ANSWERS	D	C	D	A	B	B	D	D	A	A
QUESTION NO.	11	12	13	14	15	16	17	18	19	20
ANSWERS	C	A	B	D	B	D	D	D	B	C

NASO
NATIONAL ASTRONOMY & SCIENCE OLYMPIAD

ANSWER SHEET

National Astronomy & Science Olympiad

Filling of all columns completely & accurately is important.

Candidate's Name

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WRONG METHODS CORRECT METHOD

Grade

2nd 3rd 4th 5th 6th 7th 8th 9th 10th

Gender

Male
Female

RollNo.

Father's Name

School Name

E-mail Id

City

School Code

MARK YOUR ANSWERS HERE

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1	○	○	○	○	6	○	○	○	○	11	○	○	○	○	16	○	○	○	○
2	○	○	○	○	7	○	○	○	○	12	○	○	○	○	17	○	○	○	○
3	○	○	○	○	8	○	○	○	○	13	○	○	○	○	18	○	○	○	○
4	○	○	○	○	9	○	○	○	○	14	○	○	○	○	19	○	○	○	○
5	○	○	○	○	10	○	○	○	○	15	○	○	○	○	20	○	○	○	○

Mobile No.

Candidate's Signature

Invigilator's Signature

GRADE 10

MOCK TEST-10

1. Read the given statements and mark the correct option. Statement 1: Corrosion of iron is commonly known is rusting. Statement 2: Corrosion of iron occurs in presence of water and air?

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
C. Statement I is true and statement 2 is false.
D. Both statements 1 and 2 are false.

2. Plaster of Paris hardens by_____?

A. Giving off CO2
B. Changing into CaCO3
C. Combining with water
D. Giving out water

3. Given
$Cu + 2AgNO_3 \rightarrow Cu(NO_3)_2 + 2Ag$
$Pb + Cu(NO_3)_2 \rightarrow Pb(NO_3)_2 + Cu$
$Zn + Pb(NO_3)_2 \rightarrow Zn(NO_3)_2 + Pb$
The most reactive metal is_____?

A. Ag B. Cu C. Pb D. Zn

4. Ethene is produced when_____?

A. Ethanol reacts with ethanoic acid in presence of a few drops of conc. H_2SO_4
B .Ethanol is oxidised with acidified potassium dichromate
C. Ethanol is heated with excess of conc. H_2SO_4 at 443 K
D. Ethanol reacts with Na metal

5. Identify A, B, C, E and F

Groups→	1	2	3 to 12	13	14	15	16	17	18
Periods ↓									
2									
3		A	D			E			F

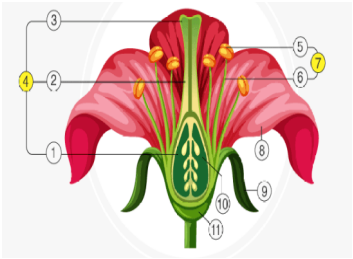
Option	Column-A	Column-B	Column-C	Column-D	Column-E
A	Mg	O	Ne	P	Ar
B	O	Mg	Ar	P	Ne
C	Mg	O	Ar	P	Ne
D	O	Mg	Ne	P	Ar

6. Transpiration has been described as a 'necessary evil' because it is inevitable, but potentially harmful. Which of the following are the after-effects of transpiration?

(i) Absorption of mineral salts.
(ii) Regulation of plant temperature.
(iii) Wilting and injury in plants.
(iv) Ascent of sap

A. (i) & (iv) B. (i), (ii) & (iii) C. (i), (ii) & (iv) D. All of these.

7. The figure given below represents the longitudinal section of a flower. Which of the labelled parts are called as accessory whorls of flower?



A. P (3)&Q(1)
B. Q (1)&R(5)
C. R (5)&S(8)
D. S (8)&T(9)

8. Which of the following given facts is correctly related to Charles Darwin?

A. He gave theory of natural selection in his book 'The Origin of Species'
B. Darwin studied the role of earthworms in soil fertility
C. Darwin's natural selection theory is based on survival of the fittest
D. All of the above

9. A plane mirror is placed vertically facing due north. An arrow pointing north-east is kept in front of the mirror. In which direction will the arrow point in this image?

A. North-East B. South-East C. South-West D. North-West

10. Twinkling of stars is on account of?

A. Large distance of stars and storms in air.
B. Small size of stars.
C. Large size of stars.
D. Large distance of stars and fluctuations in the density of air.

11. Read the given statements and mark the correct option.
Statement 1: In a simple electric circuit, positive terminal of the battery is a point of lowest potential.
Statement 2: The electric current flow in circuit is from a point of high potential to a point of low potential.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
B. Both, statements 1 and 2 are true and statement 2 is not the correct explanation of statement 1.
C. Statements1 is true but statement 2 is false.
D. Both statements 1 and 2 are false.

12. Match column I with column II and select the correct option from the codes given below?

Column I	Column II
(a) Slurry	(i) Ocean-thermal energy conversion plant
(b) Magma	(ii) Wind energy farm
(c) Ammonia	(iii) Biogas plant
(d) Clusters	(iv) Geothermal power plant

Option	Column-A	Column-B	Column-C	Column-D
A	(ii)	(iv)	(i)	(iii)
B	(iii)	(iv)	(i)	(ii)
C	(iv)	(i)	(ii)	(iii)
D	(iii)	(i)	(ii)	(iv)

13. The three R'S that will help us to conserve natural resources for long term use are_____?

A. Reduce, recycle, reuse
B. Reduces, regenerate, reuse
C. Reduce, reuse, redistribute
D. Recycle, regenerate, reuse

14. Ganga has been a symbol of purity but today it is grossly polluted. Which among the following should be included in a programme to prevent pollution of this river basin?

A. Renovation of sewage pumps and treatment plants
B. Extension of sewerage in unanswered areas and bring waste from those areas to treatment plants
C. Installation of new treatment plants
D. All of these

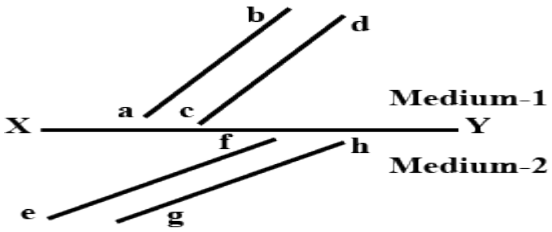
15. The smallest artificial ecosystems, first created by Professor Claire Folsom of University of Hawaii, contained materials from Honolulu bay. These were called_____?

A. Folsom bottles
B. Folsom pool
C. Honolulu flask
D. Hawaii Park

16. The same gas is evolved when Al reacts with H_2SO_4 and NaOH. The gas is_____?

A. N_2 B. O_2 C. H_2 D. None of these

17. Read the passage carefully and answer
The figure shows a surface XY separating two transparent media, medium-1 and medium-2 The lines ab and cd represent wavefronts of a light wave travelling in medium-1 on incident on XY. The lines ef and gh represent wavefronts of the light wave in med wave in medium-2 after reaction. We conclude that

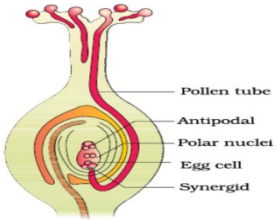


Speed of light is____?
A. The same in medium -1 and medium – 2
B. Larger in medium-1 than in medium – 2
C. Larger in medium-2 than in medium -1
D. Different at b and d

18. Two pink colored flowers on crossing results in 1red, 2pink and 1white flower progeny. The nature of the cross is___?

A. Cross fertilization B. Self pollination
C. Double fertilization D. No fertilization

19. What does this diagram show?



A. Transfer of pollen grains to stigma
B. Germination of pollen grains
C. Fertilization of gametes
D. Development of zygote

20. Which is an incorrect statement for covalent compounds?

A. They exist in all three states of matter
B. The are generally insoluble in water
C. They are good conductors of electricity
D. All of these

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Invigilator's Signature

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