



DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR

HOLIDAY HOMEWORK (2021-22)

CLASS IX

The Earth Needs You

The Earth needs you
To change your ways,
Month by month
And day by day.



The changes are easy.
Just look and you'll see
The differences that can be made
By you and by me.

Single-use plastic
lasts almost forever.
It might be cheap
But it's not very clever.



It can end up in oceans, rivers and seas.
The wind sometimes carries it
And it tangles in trees.

When people drop it onto the ground,
This is not where it stays,
It travels around.



If people used less,
The better place the world would be.
The future's in our hands;
Cut-down and you'll see.



Dear Students,

Holidays have always been a butterfly phase of a year for all of us but this year it's far from the conventionalities due to the pandemic. So rewiring the concept of summer holidays & yet keeping the brilliant prismatic effects, our facilitators have framed an enriching holiday homework to replenish the fuel for your innovative thoughts & revive the spirits-academia productively utilizing your hourglass & kicking doldrums away.

So don your creativity- cape with the crown of innovation & be optimistic. So get.....set.....fly. We look forward to your co-operation.

Happy Holidays



ENGLISH:

Take the less travelled road & widen the positive horizons of "Insidious Corona".

The terms like 'lockdown', Quarantine, pandemic, crisis, containment , asymptomatic etc have been media influencers for more than a year now. Make a short video of 2 mins ,interviewing your family members on how they perceive the "Corona Glossary" & keep themselves intact. Do share your outlook also about the same telling how covid has impacted your routine & plans.

do a thorough research before making the video.

frame the interview questions in formal language.(Seek help from any media platform)

Use various transition/ sound effects in your video.

Don't forget to introduce yourself briefly in the beginning.

wear your school uniform for the video.

make sure that you discuss about the coping solutions after every Covid-term talk.

The project should be submitted to the respective teacher on her personal wall.

HINDI:

1.“ प्रकृति एक ममतामयी माँ के समान है किंतु उसकी संतानों ने उसका रूप विकृत कर दिया है जिसके दुष्परिणामस्वरूप कोरोना जैसी महामारी हमारे सामने आई है। किस प्रकार प्रकृति को पुनः उसके वास्तविक स्वरूप में लाकर संसार को खुशहाल बनाया जा सकता है।” प्रस्तुत विषय पर लगभग 250 शब्दों में एक सचित्र परियोजना का निर्माण कीजिए।

2. कराए गए पाठ्यक्रम को दोहराइए।

निर्देश: गृहकार्य -1. हिन्दी भाषा के रजिस्टर में किया जाएगा।

MATHS : Solve the following questions in your Maths assignment register

DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR

Class : IX (2021-22)

MATHEMATICS WORKSHEET

CHAPTER: NUMBER SYSTEM

1. Is the number $(3 - \sqrt{7})(3 + \sqrt{7})$ rational or irrational?
2. Find the rationalising factor for the denominator of the expression $\frac{1}{3 + \sqrt{5}}$
3. Find the value of $8\sqrt{15} \div 2\sqrt{3}$
4. Find the value of $2\sqrt{5}$ and $3\sqrt{7}$
5. Evaluate: $(25)^{1/3} \times (5)^{1/3}$.
6. Find the value of $(16)^{3/4} \div (16)^{1/4}$
7. Write the simplified value of $(49)^{-1/4} \div (49)^{1/4}$
8. Is the product of two irrational numbers always irrational? Justify your answer.
9. Is every rational number a whole number? Justify your answer
10. Rationalise: $\frac{1}{7 + 5\sqrt{2}}$
11. Which is greater $\sqrt[3]{3}$ or $\sqrt[4]{4}$
12. Find two rational numbers between -2 and 5
13. Express $0.\bar{6}$ in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$
14. Multiply: $5\sqrt[3]{4}$ by $\sqrt{3}$
15. Find the irrational number between $\frac{1}{2}$ and $\frac{2}{7}$
16. Find six rational numbers between 3 and 4
17. Find six rational numbers between $\frac{5}{7}$ and $\frac{6}{7}$
18. Write $4\frac{1}{8}$ in decimal form and find what kind of decimal expansion it has.
19. Write $\frac{3}{13}$ in decimal form and what kind of decimal expansion it has.
20. Express 0.00323232..... in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$
21. Express $0.\overline{357}$ in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$
22. Locate $\sqrt{3}$ on a number line
23. Visualise the representation of $5.\overline{37}$ on a number line up to 5 decimal places, that is, up to 5.37777
24. Rationalise the denominator of $\frac{2 + \sqrt{3}}{2 - \sqrt{3}}$
25. Rationalise the denominator of $\frac{\sqrt{5 + \sqrt{3}}}{\sqrt{5 - \sqrt{3}}}$.

Chemistry : Do the given worksheet in your Chemistry register.

DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR

SESSION : 2021-22

WORKSHEET NO. : I

Date : _____

Subject : CHEMISTRY

Class : IX

Name : _____

Roll No.: _____

1. Why are light and sound not considered as matter?
2. A rubber band is a solid but it can change its shape. Why?
3. We can get the smell of perfume sitting several metres away. Why?
4. When salt or sugar is poured into different kinds of vessels, why do they take the shape of vessels, as they are solids?
5. Sponge is a solid yet we are able to compress it, why?
6. We can easily move our hand in the air but to do the same through a solid block of wood we need a karate expert, why?
7. What is plasma?
8. Express the boiling point of water in Celsius as well as in Kelvin scale.
9. What is diffusion?
10. What happens to the rate of diffusion if the temperature is increased?
11. Define melting point.
12. What is dry ice?
13. What is humidity?
14. What is the normal atmospheric pressure?
15. Give the temperature at which water exists in two different phases or states.
16. What happens if you put copper sulphate crystals in water?
17. Predict the physical state if the melting point of a substance is below the room temperature.
18. State the effect of pressure on boiling point.
19. Why evaporation is called surface phenomena?
20. What is the effect of surface area on the rate of evaporation?
21. Which is a slower process, evaporation or boiling?
22. Which property of gases is used in supplying oxygen cylinders to hospitals?
23. The boiling point of alcohol is 78°C , what is its temperature on Kelvin scale?
24. The Kelvin scale temperature is 0 Kelvin, what is the corresponding Celsius scale temperature?
25. What do you mean by latent heat of vaporization?
26. Is it not proper to regard the gaseous state of ammonia as vapour. Explain.
27. A mixture of Sulphur and charcoal can be separated by _____ method.
28. During distillation of iodine and methyl alcohol the non volatile substance is _____.
29. Which word describes the following change?
 $\text{I}_{2(s)} \longrightarrow \text{I}_{2(g)}$
30. During separation of CO_2 and H_2 gas by diffusion, the gas that diffuses rapidly is _____.

Choose the correct option:

- In which form do the water molecules have less kinetic energy ?
(a) Ice (b) Water (c) Steam (d) All of them have equal kinetic energy
- Which of the following describes the liquid phase?
(a) It has a definite shape and a definite volume.
(b) It has a definite shape but not definite volume.
(c) It has a definite volume but not a definite shape.
(d) It has neither a definite shape nor a definite volume.
- The process of evaporation causes:
(a) heating (b) cooling (c) increase in temperature (d) none of these
- Ice floats on the surface of water because:
(a) it is heavier than water (b) the density of both water and ice is the same
(c) ice is lighter than water (d) none of these
- The electric bulb on long use forms a black coating on its inner surface. The process associated with this is
(a) melting of tungsten (b) sublimation of tungsten (c) oxidation of tungsten (d) reduction of tungsten
- If a few spoons of salt are dissolved in pure water then
(a) its b.pt. becomes less than 100°C
(b) its b.pt. becomes more than 100°C
(c) its freezing point becomes more than 0°C
(d) none of these
- A gas can be best liquefied
(a) by increasing the temperature
(b) by lowering the pressure
(c) by increasing the pressure and reducing the temperature
(d) none of these
- Evaporation is directly proportional to
1. humidity 2. surface area 3. temperature 4. wind speed
(a) 1 and 4 (b) 2 and 3
(c) 3 and 4 (d) 2, 3 and 4
- Which of the following has highest kinetic energy?
(a) Particles of ice at 0°C
(b) Particles of water at 0°C
(c) Particles of water at 100°C
(d) Particles of steam at 100°C
- 450 K temperature may be written in Celsius scale as
(a) 278°C (b) 450°C (c) 0°C (d) 177°C

PHYSICS : Solve the given sheet in your Physics register

DR. VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR

Class : 9th (2021-22)

PHYSICS WORKSHEET

CHAPTER: MOTION

1. Define the following terms:

- a) Uniform motion
- b) Motion
- c) Speed
- d) Acceleration
- e) Non – uniform motion
- f) velocity
- g) average speed
- h) scalar quantity

2. If a body starts from rest, what can be said about the acceleration of the body?

3. **Assertion:** Even if the acceleration of the of a moving body is positive, it is possible that the body may be slowing down.

Reason: Both velocity and acceleration are vector quantities

- a) Both A and R are true, and R is the correct explanation of the assertion
- b) Both A and R are true, and R is not the correct explanation of the assertion
- c) A is true, but R is false
- d) A is false, but R is true

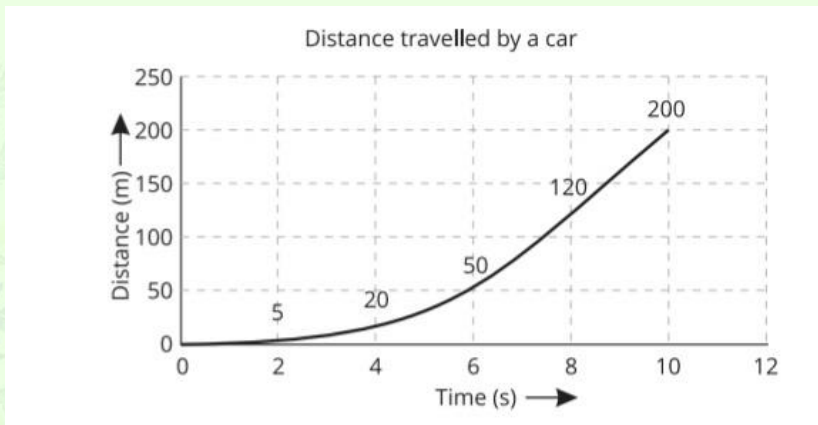
4. What does the slope of position time graph give?

5. **Assertion:** An object cannot undergo displacement unless force acts on it.

Reason: The absence of force only implies that there is no acceleration.

- a) Both A and R are true, and R is the correct explanation of the assertion
- b) Both A and R are true, and R is not the correct explanation of the assertion
- c) A is true, but R is false
- d) A is false, but R is true

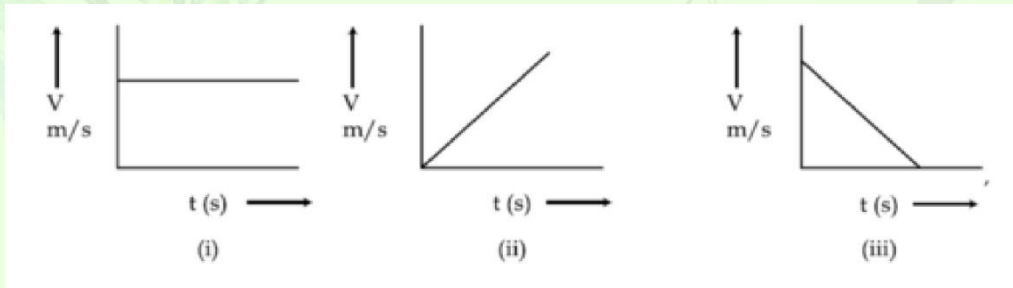
6. The graph given below shows the distance travelled by a car against time



Study the graph and answer the following questions:

- a) Calculate the average speed of the car in the given duration
 - (i) 200 m/s
 - (ii) 20 m/s
 - (iii) 10 m/s
 - (iv) 50 m/s
- b) Which of the following statements is true regarding the motion of the car based on the graph
 - (i) The car is moving with uniform motion
 - (ii) The car is moving along a curved path
 - (iii) The car is accelerating

23. What can you conclude about the motion of a body depicted by the velocity-time graphs (i), (ii) and (iii) given below:



BIOLOGY: Do the given worksheet in your Biology register.

DR.VIRENDRA SWARUP PUBLIC SCHOOL, KALYANPUR

Session : 2021-22

Date :- _____

Subject :-Biology

Class - IX

Name:- _____

Chapter:-The Fundamental Unit of life

Roll no.:- _____

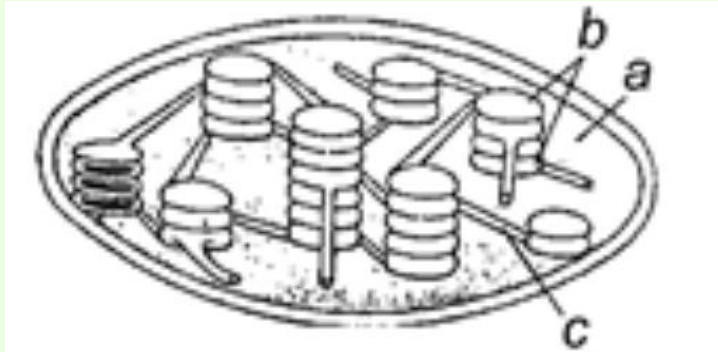
I. Multiple Choice Questions:

1. Chromosomes are concerned with :
a) Respiration b) Assimilation c) Transmission Of hereditary characters d) Nutrition
2. Passage of water from a region of higher water concentration through a semi- permeable membrane to a region of lower water concentration is
a) Diffusion b) Osmosis c) Endocytosis d) Active transport
3. The cell and its structure are studied under a branch of biology called as :
a) Cytology b) Cell Theory c) Cell study d) All of these
4. Which one of the is a unicellular organism ?
a) Amoeba b) Mushroom c) Paramecium d) Both a and c
5. Plasma membrane is made up of :
a) carbohydrate and protein b) Lipid and protein c) Carbohydrate and lipid
d) Cellulose
6. The cell wall of fungi is made up of :
a) Cellulose b) Glycoprotein c) Chitin d) All of these
7. Who is credited for the discovery of nucleus ?
a) Robert Hooke. b) Robert Brown. c) Purkinje d) Darwin
8. Which is a non-living, rigid and a permeable membrane ?
a) Cell wall. b) Cell membrane. c) Plasma Membrane d) Both b and c
9. Which of the following is present only in case of plant cell ?
a) Cell wall b) Plastids c) Mitochondria d) Both a and b
10. 'X' double membrane organelles that oxidise food present in cell to release energy, X is :
a) Nucleus b) Endoplasmic reticulum c) Mitochondria d) Chloroplast
11. Identify the cell organelle being referred to the passage given below:
These are membrane-bound vascular organelles discovered by de Duve. They mostly occur in animal cells but they have also been reported in plant cell.They are concerned with waste disposal system of the cell.
a) Lysosomes b) Golgi Bodies c) Mitochondria d) Vacuole

12. Which of the following statements is correct for a secretory cell

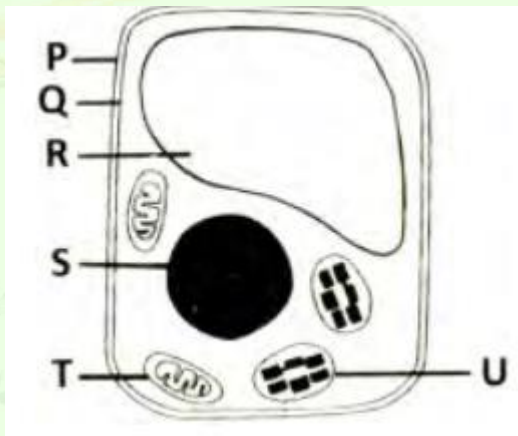
- a) Golgi apparatus is absent.
- b) Rough endoplasmic reticulum is abundantly present in the cell.
- c) Only smooth endoplasmic reticulum is present.
- d) Secretory vacuoles are formed in nucleus.

13. Which of the following is correct for the given figure?



- a) The part labelled 'b' is called intergranal thylakoid.
- b) The part labelled 'c' is called granum.
- c) The part labelled 'a' is called the site of dark reaction.
- d) The parts labelled 'a', 'b' and 'c' possess photosynthetic pigments that is 3chlorophyll.

14. Which labelled organelles helped a student to conclude that it is a plant cell?



- (a) P and R only
- (b) P and S only
- (c) P, R and T only
- (d) P, R and U only

15. Identify the organelle that exists only in plant cell but NOT in an animal cell?

- (a) Centriole
- (b) Chloroplast
- (c) Golgi apparatus
- (d) Ribosome

II. Assertion and reason type questions :

Direction : In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

- (c) Assertion (A) is true but reason (R) is false.
(d) Assertion (A) is false but reason (R) is true.

1. Assertion : A cell swells up when present in a hypotonic solution.
Reason : More water molecules enter the cell than they leave.

2. Assertion : The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum(SER).
Reason : SER is mainly involved in protein synthesis.

3. Assertion : Mitochondria and chloroplasts are semiautonomous organelles.
Reason : They are formed by division of pre-existing organelles and contain DNA but lack protein synthesizing machinery.

4. Assertion : Plasma membrane is selectively permeable.
Reason : Plasma membrane allows some molecules to pass through it more easily. than others.

5. Assertion : Leucoplasts perform photosynthesis.
Reason : Chloroplasts store fats, starch and proteins.

6. Assertion: Plant cells have very large vacuoles.
Reason : In plant cells, vacuoles are full of cell sap.

7. Assertion : Mitochondria and chloroplasts are semiautonomous organelles.
Reason : They are formed by division of pre-existing organelles and contain DNA but lack protein synthesizing machinery.

8. Assertion : A cell membrane shows fluid behaviour.
Reason : A membrane is a mosaic of lipids and proteins.

9. Assertion : A plant cell bursts if placed in water.
Reason : High turgor pressure causes bursting of plant cells.

10. Assertion : Mitochondria are called 'powerhouses' of the cell.
Reason : Mitochondria produce cellular energy in the form of ATP.

III. Fill in the blanks:

1. Ribosomes are rich in _____ and _____.
2. Genes are sub units of _____. The number and type of which vary from species to species.
3. _____ are hereditary units of specific biological function located in a fixed position on a chromosome.
4. _____ are living, protoplasmic structures capable of growth and sometimes multiplication also.
5. ATP stands for _____.

6. _____ are protein factories.
7. First living cell was discovered by _____.
8. _____ cell are primitive and incomplete and have less developed nucleus without nuclear membrane and nucleolus.
9. Colourless plastids are called _____.

IV. Match the following :

(i) Column I

Column II

- | | |
|-----------------|---|
| (A) ER | (p) Sorting, packaging, labelling of cell products |
| (B) Chloroplast | (q) Production and segregation of proteins to be secreted |
| (C) Golgi body | (r) Digestion of nutrients and worn-out cell parts |
| (D) Lysosomes | (s) Organelle of photosynthesis |

(ii) Column I

Column II

- | | |
|-------------------|---|
| (A) Cell wall | (p) Workbench for protein synthesis |
| (B) Cell membrane | (q) External support and protection, made up of cellulose |
| (C) Nucleus. | (r) Selectively permeable |
| (D) Ribosome's | (s) Location of chromatin |

(iii) Column I

Column II

- | | |
|--|---------------------------|
| (A) Structures with one unit membrane | (p) Lysosome |
| (B) Structures with two membranes | (q) Ribosome |
| (C) Structures without membrane | (r) Plastids |
| (D) Structures with membrane bound tubules | (s) Endoplasmic reticulum |

SOCIAL STUDIES :

TOPIC OF THE PROJECT - UTTARAKHAND FLOOD 2013

1. Use A4 size sheets
2. It should be a hand written project (blue or black pen should be used)
3. You can use newspaper clippings, maps, diagrams and material from the web
4. Each illustration should be supported with a write up/relevance to the topic
5. The cover page should be written in bold letters with the topic, name and roll number.

Follow the sequence of pages as given below:

- a. Acknowledgement
 - b. Index
 - c. Define disaster and its types (describe in 2 pages with illustrations)*
 - d. Causes of Floods (illustrations)*
 - e. Extent of damage to agriculture (illustrations)*
 - f. Who is responsible (illustrations)*
 - g. Steps taken by the Govt. to combat Flood (illustrations)*
 - h. Organisations working to help the farmers (illustrations)*
 - i. Dos and don'ts for next time to avoid such disasters
 - j. Bibliography *Maps, pictures, graphs, etc.
6. Use a hard bound cover pocket file or get *your project spiral bound*.

COMPUTER :

The computer science department of your school is organizing Cyber Safety Week. You are supposed to design presentation on the topic which talks about possible risks and threats on the internet, and the steps to ensure our safety in the cyber world.

Make a PowerPoint presentation/video containing fifteen slides at least. The first slide must contain in Student's name, Class, Subject and Topic of the presentation. You can collect the matter from Internet. You can include different Malware (Virus, Worms, Trojan horse key loggers etc.) and some useful safety measures. You are also suggested to use default properties of MS PowerPoint (like Paragraph setting, Animation, Transition etc.) to make it impressive. You also need to lend your voice to this video/presentation and explain its concepts.

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