

9th Science HALF YEARLY EXAM - 2022Important Two Marks :Physics Part (Units : 1, 2, 3, 4, 5, 6)

1. State whether true or false. If false correct the statement.
 - a) The SI unit of electric current is kilogram.
 - b) Kilometre is one of the SI units of measurement.
2. Differentiate mass and weight.
3. a) What is the full form of SI system?
 b) Define least count of any device.
4. Match the following :

a) Screw gauge	-	Vegetables
b) Vernier caliper	-	Coin
c) Beam balance	-	Gold ornaments
d) Digital balance	-	Cricket ball
5. Fill in the blanks :
 - a) One light year is equal to _____
 - b) One Parsec is equal to _____
 - c) One Astronomical unit (AU) is equal to _____
6. Define velocity.
7. Distinguish distance and displacement.
8. Compare speed and velocity.

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9. What is meant by uniform circular motion? Give two examples of uniform circular motion.

10. An athlete completes one round of a circular track of diameter 200 m in 40 s. What will be the distance covered and the displacement at the end of 2 m and 20 s?

11. Why does a helium balloon float in air?

12. Why it is easy to swim in sea water than in river water?

13. State Pascal's law.

14. What is meant by atmospheric pressure?

15. Match the following:

- | | | |
|--------------------------------|---|-------------|
| a) Density | - | hpg |
| b) 1 gwt | - | Milk |
| c) Pascal's law | - | Mass/volume |
| d) Pressure exerted by a fluid | - | Pressure |
| e) Lactometer | - | 980 dyne |

16. Match the following:

- | | | |
|-------------------------|---|--------------------|
| a) Electric charge | - | Ohm |
| b) Potential difference | - | ampere |
| c) Electric field | - | coulomb |
| d) Resistance | - | newton per coulomb |
| e) Electric current | - | volt |

17. Name any two appliances which work under the principle of heating effect of current.

18. A bird sitting on a high power electric line is still

19. How are the home appliances connected in general, in series or parallel. Give reason.
20. Can electroplating be possible with alternating current ? **Ilahi High school YouTube**
21. a) Define electric field.
b) Define electric current and give its unit.
22. State Fleming's left Hand Rule.
23. Define magnetic flux density.
24. List the main parts of an electric motor.
25. Draw and label the diagram of an AC generator.
26. Differentiate step up and step down transformer.
27. What is meant by magnification ? Write its expression. What is its sign for real image and virtual image ?
28. Write the spherical mirror formula and explain the meaning of each symbol used in it.
29. a) Why does a ray of light bend when it travels from one medium to another ?
b) What is the speed of light in vacum ?

CHEMISTRY

Part (Unit : 10, 11, 12, 13, 14)

1. Define Sublimation.
2. A few drops of 'Dettol' when added to water the mixture turns turbid. Why ?
3. true or false :
a) A compound cannot be broken into simpler substances chemically.

b) Aspirin is composed of 60% Carbon, 4.5% Hydrogen and 35.5% Oxygen by mass. Aspirin is a mixture.

4. Write the differences between elements and compounds and give an example for each.

5. Draw the structure of oxygen and sulphur atoms.

6. What are nucleons? How many nucleons are present in Phosphorous? Draw its structure.

7. Why do $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$ have the same chemical properties? In what respect do these atoms differ?

8. Write the electronic configuration of K and Cl.

9. For an atom 'X', K, L and M shells are completely filled. How many electrons will be present in it?

10. Match the following:

a) Triads — Newlands

b) Alkali metal — Calcium

c) Law of octaves — Henry Moseley

d) Alkaline earth metal — Sodium

e) Modern Periodic Law — Dobereiner

True or False? If false give the correct statement.

11. Metals can gain electrons (${}^1\text{M}^-$)

12. Group 17 elements are named as Halogens (${}^1\text{M}^-$)

13. What are the limitations of Mendeleev's periodic table?

14. Group 17 elements are named as Halogens.

15. How do atoms attain Noble gas electronic configuration?
16. Explain Octet rule with an example.
17. NaCl is insoluble in carbon tetrachloride but soluble in water. Give reason.
18. Identify the following reactions as oxidation or reduction : **Hai High school YouTube**
- a) $\text{Na} \rightarrow \text{Na}^+ + e^-$ b) $\text{Fe}^{3+} + 2e \rightarrow \text{Fe}^+$
19. Why are Noble gases inert in nature?
20. Write any four uses of acids.
21. Write any four uses of bases.
22. What are the various uses of Aquaregia.
23. What are the uses of Plastics of Paris?
24. Define aqua regia.

BIOLOGY Part • (Units: 17, 18, 19, 20, 21, 22)

1. True or False :

- a) Canal system is seen in coelenterates.
- b) Trachea are the respiratory organ of Annelida.

2. Match the following :

a) Coelenterata	-	Snail
b) Platyhelminthes	-	Starfish
c) Echinodermata	-	Tapeworm
d) Mollusca	-	Hydra

3. List five characteristic feature of fishes.
4. What is nematocyst?
5. List the respiratory organs of amphibians.
6. Types of Meristems based on position.
7. Differences between Xylem and Phloem.
8. Significance of Meiosis?
9. What is complex Tissue? Name the various kinds of complex tissues.
10. True ? or False ?
- The response of a part of plant to the chemical stimulus is called phototropism.
 - When the weather is hot, water evaporates lesser which is due to opening of stomata.
11. What is nastic movement?
12. Differentiate phototropism from photonasty.
13. Define transpiration.
14. Fill in the blanks:
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- $$6\text{CO}_2 + \text{_____} \xrightarrow[\text{Chlorophyll}]{\text{Sunlight}} \text{_____} + 6\text{O}_2 \uparrow$$
15. Differentiate between tropic and nastic movements.
16. Differentiate the following.
- Absorption and Assimilation
 - Incisors and Canines
17. Why do we sweat?
18. Name the types of teeth present in an adult human being. Mention the functions of each.

19. Match the following :

- | | |
|--------------|--------------------|
| a) Calcium | - Muscular fatigue |
| b) Sodium | - Anaemia |
| c) Potassium | - Osteoporosis |
| d) Iron | - Goitre |
| e) Iodine | - Muscular cramps |

20. Give abbreviations for the following.

- a) ISI b) FPO c) AGMARK d) FCI e) FSSAI

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21. Differentiate
 a) Kwashiorkar from Marasmus
 b) Macronutrients from Micronutrients

22. What is an adulterant ?

23. Name any two naturally occurring toxic substances in food.

24. Write any one function of the following minerals

- a) Calcium b) Sodium c) Iron d) Iodine

25. Explain any two methods of food preservation.

26. What are the effects of consuming adulterated food ?

27. Expand the following :

- a) ORS b) HIV c) DPT d) WHO e) BCG

28. Define the following.

- a) Pathogen b) Prions

29. Distinguish between Virion and Viroid.

30. What is triple antigen ? Mention the disease

which can be prevented by using the antigen.

31. Match the following.

- | | |
|------------------|--------------------------------|
| a) Swine flu | - Human Papilloma virus |
| b) Genital warts | - Human Immunodeficiency Virus |
| c) AIDS | - Mycobacterium |
| d) Tuber culosis | - Influeenza virus H1N1 |

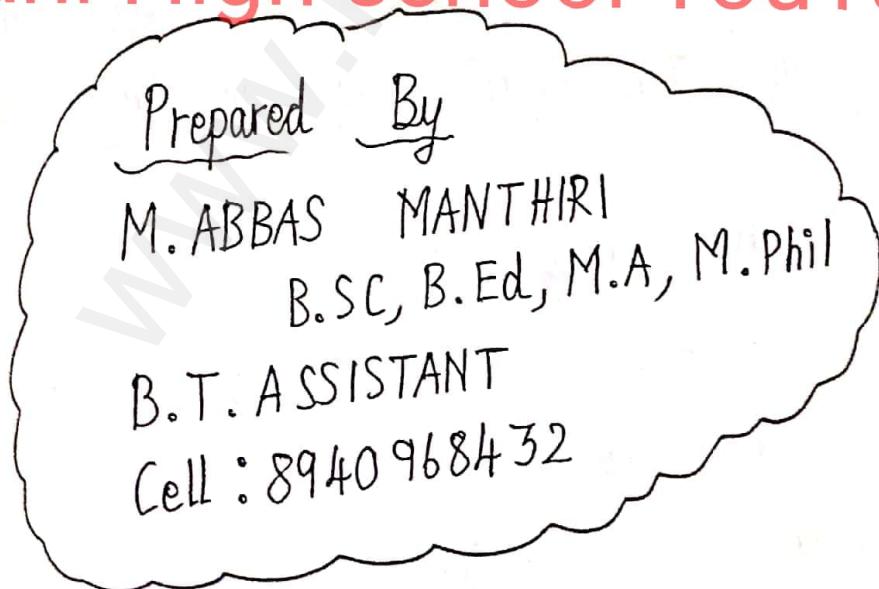
32. Name the organism causing diarrhoeal disease and give one precaution against it.

33. Name the chronic diseases associated with respiratory system.

COMPUTER PART (Unit : 25)

1. What is Libre Office Impress?
2. What is a Presentation?
3. What is a Slide?

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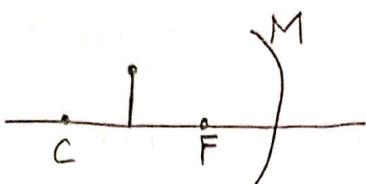
IMPORTANT4 Marks & 7 MarksQuestions

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Physics Part (Unit : 1, 2, 3, 4, 5, 6)

1. Write the rules and conventions for writing SI units and their symbols?
2. Explain a method to find the thickness of a hollow tea cup.
3. How will you find the thickness of a one rupee coin?
4. Derive the equations of motion by graphical method.
5. Explain different types of motion.
6. Describe the construction and working of mercury barometer.
7. Explain the construction and working of a hydrometer with diagram.
8. State the laws of flotation.
9. Explain the principle, construction and working of a dc motor.
10. Explain two types of transformer.
11. Draw a neat diagram of an AC generator and explain its working.
12. Write the cartesian sign convention for measurement of distances?
13. Write the laws of refraction of light?
14. What is meant by magnification? Write its expression. What is the sign for real image and virtual image?

15. a) Complete the diagram to show how a concave mirror forms the image of the object.
 b) What is the nature of the image?



16. Explain with diagrams how refraction of incident light takes place from
 a) rarer to denser medium b) denser to rarer medium
 c) normal to the surface separating the two media.
17. A concave mirror produces three times magnified real image of an object placed at 7 cm in front of it. Where is the image located?
18. Light enters from air into a glass plate having refractive index 1.5. What is the speed of light in glass?
19. a) Draw ray diagrams to show how the image is formed using a concave mirror, when the position of object is: i) at C ii) between C and F iii) between F and P of the mirror.
 b) Mention the position and nature of image in each case.

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Chemistry Part (Unit : 10, 11, 12, 13, 14)

1. Write the differences between elements and compounds and give an example for each.
2. Explain Tyndall effect and Brownian movement with suitable diagram.

5. How is a mixture of common salt, oil and water separated? You can use a combination of different methods.
4. Write the Rutherford's atomic model?
5. Draw the structure of first five elements?
6. Explain the postulates of Bohr's atomic model.
7. State the Gay Lussac's law of combining volumes. Explain with an illustration.
8. What conclusions were made from the observations of Gold foil experiment?
9. What are the limitations of Mendeleev's periodic table?
10. State any five features of modern periodic table.
11. List down the differences between Ionic and Covalent compounds.
12. Discuss in brief about the properties of coordinate covalent compounds.
13. Find the oxidation number of the elements in the following compounds.
a) Cr in $K_2Cr_2O_7$
b) Mn in $MnSO_4$ c) N in HNO_3
14. Give the tests to identify Acids and Bases.
15. Sulphuric acid is called king of chemicals. Why is it called so?
16. Write any five uses of salts.
17. Differentiate hydrate and anhydrous salts with examples.

1. Describe the characteristic features of different Prochordates.
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2. Give an account on phylum Arthropoda.
3. a) Outline the flow charts of Phylum Chordata.
b) Comment on the aquatic and terrestrial habits of amphibians.
4. List out the differences between mitosis and meiosis.
5. Give an account on phylum Annelida.
6. What are permanent tissues? Describe the different types of simple permanent Tissues.
7. How will you differentiate the different types of Transpiration?
8. Explain the structure nephrum.
9. Describe the alimentary canal of man.
10. Explain the structure of kidney and the steps involved in the formation of urine.
11. How are vitamins useful to us? Tabulate the sources, deficiency diseases and symptoms of fat soluble vitamins.
12. Explain the role of food control agencies in India.
13. Describe the role of microbes in agriculture and industries.
14. Explain the various types of viruses with examples.

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