

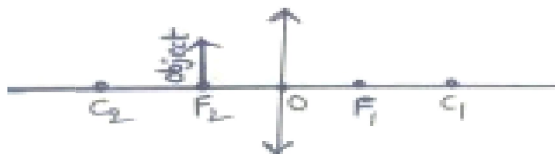
Section-II

Note:- 1. Answer all the questions

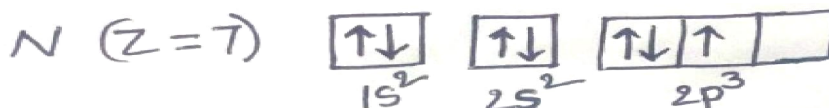
2. Each question carries 1 mark

8X1=8

13. 1 g of ice at 0°C and 1 g of water at 40°C are mixed. What is resultant temperature?
14. What is meant by "water of crystallization" of a substance?
15. On what factors does the refractive index of the medium depend?
16. Complete the ray diagram



17. Following orbital diagram shows the electronic configuration of nitrogen atom. Which rule does not support this



18. If $l=4$ then what is the minimum and maximum values of m_l ?
19. Which metals are exist in free state in earth crust?
20. What is dispersion of light? Give an example

Section-III

Note:- 1. Answer all the questions

2. Each question carries 2 marks

8X2=16

21. Give two important uses of Bleaching powder?
22. When we sit at camp fire, objects beyond the fire are seen swaying. Give the reason for it.
23. Abhi asked to differentiate between far point and near point. What questions could you ask to make him to know the differences between far point and near point
24. What are the limitations of Mendeleeff's periodic table?
25. Represent the molecule H_2O using Lewis notation?
26. Are the head lights of a car connected in series or parallel? Why
27. State the Lenz's law
28. What happens when a small piece of sodium is dropped into ethanol?

Section-IV

Note:- 1. Answer all the questions

2. Each question carries 4 marks

5X4=20

29. Write the differences between heat and specific heat

(OR)

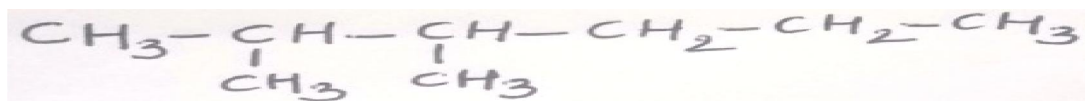
The focal length of a converging lens is 15 cm. An object is 45 cm from the lens. Where will the image be formed and what kind of image is it?

30. Electronic configuration of an atom is $1s^2 2s^2 2p^2 3s^2 3p^5$

- a) What is the name of the element?
- b) Write the atomic number of this element?
- c) How many valency electrons are present in the outermost shell of this element?
- d) To which period and group element belongs?

(OR)

Observe the following structure of carbon compound and answer the questions



a) Mention the IUPAC name for the given compound?

b) Is the compound saturated or unsaturated?

c) How many prefix in this structure?

d) What is the name of this functional group?

31. How to prove that resistance of a conductor is proportional to the length of the conductor for constant cross section area and temperature

(OR)

Suggest an experiment to produce a rainbow in your classroom and explain the procedure

32. Why does tooth decay start when the p^H of the mouth is lower than 5.5?

(OR)

Explain the formation of N_2 molecule using valence bond theory

33. Draw a neat diagram of Reverboratory furnace and label it neatly

(OR)

Draw a neat diagram of electronic motor and label it neatly

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