

Model Paper
SSC Public Examinations- 2020
PHYSICAL SCIENCE – PAPER-1

(English Medium)

Class: X

Maximum Marks: 50

Time 2.45 hours

Instructions:

1. There are four sections and 33 questions in the paper.
2. Answers should be written in a given answer booklet.
3. There is internal choice in Section- IV
4. Write all the questions visible & legibly.
5. 15 minutes are given for reading the question paper and 2.30 hours given for answering questions

Section-I

Note:- 1. Answer all the questions

2. Each question carries 1/2 mark

12x1/2=6

1. Name the simplest hydrocarbon
2. Which rule is violated in the electronic configuration $1s^0 2s^2 2p^4$
3. How many water molecules are present in gypsum
4. X: The refractive index of medium for red colour is low
Y: Red colour suffers low deviation
A) Both are correct B) X is correct, Y is wrong C) X is wrong, Y is correct D) Both are wrong
5. What is the general electronic configuration of noble gases
6. Match the suitable answers of section- B with section- A

Section-A

X) BeCl_2

Y) NH_3

Z) H_2O

Section-B

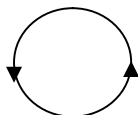
P) 180°

Q) $107^\circ 28'$

R) $104^\circ 31'$

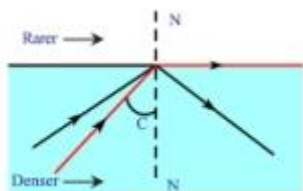
S) 120°

7. SI unit of latent heat is
8. The direction of current flowing in the coil is shown in figure. Find the magnetic pole formed at the face



9. The chemical process in which the ore is heated in the absence of air is
10. Write the focal length of symmetrical convergent lens, when its radius of curvature of the surface is R and n is the refractive index of the lens

11. Which phenomena do you observe below the figure



12. What is the shape of V-I graph of Ohmic conductor

Section-II

Note:- 1. Answer all the questions

2. Each question carries 1 mark

8X1=8

13. The wavelength of a radio wave is 1 m. Find its frequency

14. State the rule which explains the direction of induced emf in a coil

15. Mention some important methods of refining

16. Write a formula for specific heat and explain letters in it

17. What is refraction

18. What are factors which affect the resistance of a material

19. Write the relation between electronegativity, ionization energy and electron affinity

20. Represent Calcium atom using Lewis notation

Section-III

Note:- 1. Answer all the questions

2. Each question carries 2 marks

8X2=16

21. How much energy is transferred when 10 gms. of water at 50°C boiled to vapour at 100°C

22. Fresh milk has a pH of 6. Explain why the pH changes as it turns into curd.

23. Your friend has two lenses. They are bi-convex lens and a bi-concave lens. But she could not distinguish them. She asked you to help her. What are the questions to ask to clear her doubts

24. The differentiated electron in an atom has following set of quantum numbers are given, then answer the given questions

n	l	m_l	m_s
3	0	0	+1/2

i) Which orbital this electron belongs

ii) Write the name of the element

25. An element has atomic number 19. Where would you expect this element in the periodic table and why

26. Why do we use fuses in household circuit

27. Give a few applications of Faraday's law of induction in daily life

28. Describe with chemical equation how ethanoic acid may be obtained from ethanol

Section-IV

Note:- 1. Answer all the questions

2. Each question carries 4 marks

5X4=20

29. Explain the procedure of finding specific heat of solid experimentally

(OR)

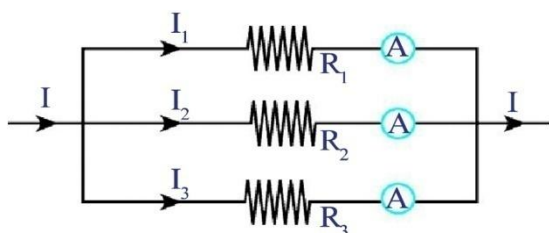
Explain the formation of Mirage

30. Explain the cleaning action of soap

(OR)

What is hybridization? Explain the formation of BF_3 molecule using hybridization

31. Observe the figure and answer the following questions



a) How these resistors are connected?

b) What is the equivalent resistance of the combination of three resistors?

c) In this connection, which physical quantity is constant?

d) If $R = 2\ \Omega$, $R = 3\ \Omega$ and $R = 6\ \Omega$, then find equivalent resistance?

(OR)

Observe the following table and answer the following

Name of the Student	Power of lens used for a single eye
Bhavitha	+1 D
Bhavana	-2D
Bharathi	-1 D and +1 D

- a) Who is suffering from hypermetropia
- b) What type of vision defect has Bharathi
- c) Which type of lens is used by Bhavana
- d) What is the focal length of lens used by Bhavitha

32. What is meant by water of crystallization of substance. Describe an activity to show the water of crystallization

(OR)

Suggest an experiment to prove that the presence of air and water are essential for corrosion. Explain the procedure

33. Draw a ray diagram for virtual image formed by convex lens

(OR)

Draw Moeller's chart showing the increasing order of energy levels of various orbitals

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