

DISTRICT COMMON EXAMINATION BOARD - ADILABAD
SUMMATIVE ASSESSMENT - I 2016-2017
GENERAL SCIENCE PAPER - I
 (PHYSICAL SCIENCE) (English Version)

Part - A

Class : X

(Time : 2Hr. 45min)

Max Marks : 40

INSTRUCTIONS :

- 1) There are 4 sections in this question paper i.e. (I, II, III and IV).
- 2) All the questions are compulsory.
- 3) There is internal choice to answer the questions under section III.
- 4) In the time duration of 2hrs 45 minutes, 15 minutes of time is allotted to read and understand the question paper.

SECTION - I (7X1=7)

INSTRUCTIONS :

- 1) Answer all the questions.
- 2) Each answer carries **ONE** mark
- 3) Answer the question in 1 or 2 sentences.

1. Write the equation for chemical reaction taking place between NaOH and H₂SO₄.
2. Write the applications of plaster of paris in daily life.
3. Why we take the value of 'u' as negative in mirror formula?
4. Find the focal power of a biconcave lens, whose focal length is 25cm.
5. Balance the following chemical equations given below.
 i) $N_2 + H_2 \longrightarrow NH_3$ ii) $H_2 + O_2 \longrightarrow H_2O$
6. Write the nature of image formed when the object is placed between pole and focus of a concave mirror.
7. Write the Planck's equation and explain the terms used in it?

SECTION - II (6X2=12)

INSTRUCTIONS :

- 1) Answer all the questions.
- 2) Each question carries **TWO** marks.
- 3) Answer the questions in 4 to 5 sentences.

8. Write any 2 important uses of sodium carbonate in daily life.
9. Imagine and write how the acids and bases are tested if chemical indicators are not available.
10. Imagine and write what will happen when the angle between incoming and outgoing rays of light in the water droplet of rain is more than 42°.
11. Write any 4 factors affecting the ionization energy of an element.

12. Substance	Milk of Magnesia	Blood	Milk	Beer	Vinegar	Lemon juice
P ^H Value	10.6	7.4	6.6	4.3	3	2.2

Observe the table given above and answer the following questions.

- i) What is the nature of milk
- ii) Out of all substances which substance has least P^H value.
13. What changes do you observe when some copper sulphate crystals are heated in a dry test tube?

SECTION - III (4 X 4 = 16)

INSTRUCTIONS :

- 1) Answer all the questions.
- 2) Each answer carries **FOUR** marks.
- 3) There is internal choice for each question only one option from each question is to be attempted.
- 4) Answer each question in 8 to 10 sentences.

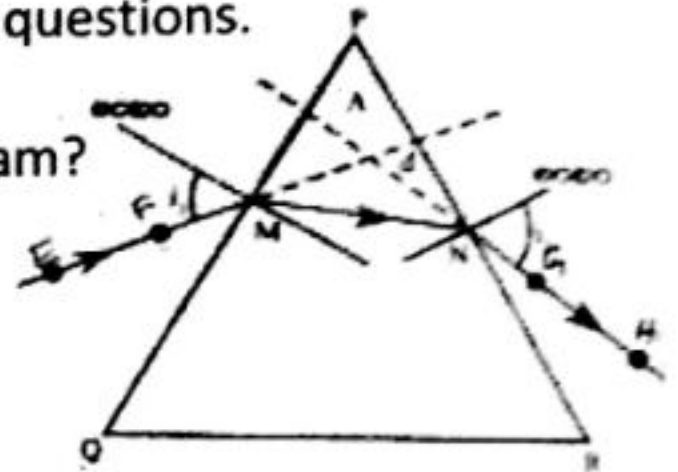
14. A) Draw a ray diagram for the following position of an object by using a convex lens and also explain the nature of the image and position of the image formed.
- i) If the object is placed at centre of curvature.
 - ii) If the object is placed between focus and optic centre.

(or)

- B) Draw a ray diagram for the following positions of an object kept in front of concave mirror of focal length 20cm and also explain the nature of the image formed.
- i) If the object is placed 10cm away from a concave mirror.
 - ii) If the object is placed 45 cm away from a concave mirror.

15. A) Observe the above diagram and answer the following questions.

- i) The ray of light represents _____
- ii) Which is the emergent ray of light in the above diagram?
- iii) If the prism is equilateral prism then what is the angle of the prism?



- iv) What can we find about the prism by the ratio of $\frac{\sin\left(\frac{A+D}{2}\right)}{\sin\left(\frac{A}{2}\right)}$

(or)

B)



In the above diagram

- i) What does the letters H and L represents?
 - ii) Which lens is used to see the objects clearly?
 - iii) What does the dots represents?
 - iv) Which eye defect is corrected by using this lens?
16. A) Explain the formation of Anion and cation with two examples?
(or)
- B) Explain the filling of electrons in carbon atom by using Hund's rule.
17. A) Write the materials required and explain the experimental procedure to prove that the dilute hydrochloric acid exhibits the electric conductivity.
(or)
- B) What kind of change you observe when the water is mixed with calcium oxide and how to test the nature of products formed with litmus paper.

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Marks : 5

Name _____ Roll No. _____

SECTION - IV

INSTRUCTIONS :

- 1) Answer all the questions.
- 2) Each question carries $\frac{1}{2}$ mark and each question has four choices. choose the correct answer and write the relevant alphabet (A, B, C, D) against box provided in question paper.
- 3) Attach this sheet with main answer sheet. [10 X $\frac{1}{2}$ = 5]

- 1) The mirror used by dentist is []
 A) convex B) concave
 C) plane D) Non of these
- 2) The formula of precipitate formed when silver nitrate is reacted with sodium chloride. []
 A) AgCl B) NaCl
 C) NaNO_3 D) AgNO_3
- 3) What is the colour of methyl orange indicator in hydrochloric acid []
 A) Yellow B) Red
 C) Pink D) White
- 4) The chemical we use in the preparation of cake is []
 A) Washing soda B) Bleaching powder
 C) Baking soda D) Plaster of Paris
- 5) In the lens maker's formula $\frac{1}{f} = (n-1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right)$ "n" represents []
 A) Radius of curvature B) Focal length
 C) Frequency D) Refractive Index
- 6) The approximate distance between eye lens and retina is []
 A) 2 cm B) 2.25 cm
 C) 2.5 cm D) 2.75 cm

[Contd...2]

