SUMMATIVE ASSESSMENT - I - 2016
GENERAL SCIENCE - Paper - I
(Physical Sciences)
(English Medium)

PART - A & B

Class : X | Max. Marks : 40 | Time : 2.45 Mts.

Instructions :

1. **In the time duration 2H 45 Mts; 15 Minutes of time is allotted to read and understand the question paper.**
2. **Answer the question paper under Part - A on separate answer book.**
3. **Write the answers to the questions under part - B on the question paper itself and attach it to the answer book of part - A.**

Marks : 30 **PART - A**

SECTION - I **(4 x 1 = 4)**

Note : 1) **Answer all the questions.**

2) **Each question carries ONE mark.**

3) **Answer each question in 1 or 2 sentences.**

1. Why copper bottomed vessels are used for cooking ?
2. What is the use of keeping food in air tight containers ?
3. What are the precautions to be taken while diluting an acid ?
4. Write the lens makers formula.

SECTION - II **(5 x 2 = 10)**

Note : 1) **Answer all the questions.**

2) **Each question carries Two marks.**

5. Write any two differences between evaporation and boiling.
6. Frame any two questions to explain the concept of rancidity.

[Turn Over...

7. The data given in the table shows the object distance (u) and image distance (v) of a real image of a concave mirror. Basing on the data answer the following questions.

S.No	u (cm)	v (cm)
1	15	30
2	20	20
3	30	15

i) What is the formula to find the focal length of the mirror ?

ii) What is the focal length of the mirror ?

8. Write any four uses of bleaching powder.

9. The absolute refractive index of benzene is 1.5. What is its critical angle ?

SECTION - III (4 x 4 = 16)

Note : **1) Answer all the questions.**
2) Each question carries FOUR Marks.
3) There is an internal Choice for each question.

10. (A) How much energy is absorbed when 10g of ice at 0°C becomes steam at 100°C.

(Or)

(B) The focal length of a converging lens is 20 cm. An object is 60 cm from the lens. Where will be the image formed ? Write the nature of the image.

11. (A) How do you verify that experimentally sin i / sin r is a constant.

(Or)

(B) Write an experiment to perform a decomposition reaction using calcium carbonate. How do you test the gas evolved in the reaction ?

12. (A) $Fe_2O_3 + 2Al \xrightarrow{\Delta} 2Fe + Al_2O_3$

A teacher says that the above reaction involves different types of chemical reaction such as displacement, endothermic, oxidation, reduction and redox. Justify the above statement with proper explanation.

[Contd...3

(Or)

(B) Based on the properties of acids, bases and neutral solutions, fill the following table.

Indicators	Acedic solution	Basic solution	Neutral solution
Red litmus			No change in colour
Blue litmus	Red		
Phenolphthalein	No change in colour		
Methyl orange		Yellow	
Universal			Parrot green

13. (A) Dentists use concave mirror to observe the teeth. Draw a ray diagram which represent the position of teeth and its image. Write the characteristics of the image.

(Or)

(B) Draw a neat diagram, which represent the reaction of zinc granules with dilute hydrochloric acid and mention how do you test for hydrogen gas.

Regd. No. : [ ] **60-A** Marks : [ ]

SUMMATIVE ASSESSMENT - I - 2016

GENERAL SCIENCE - Paper - I

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PART - B

Class : X **Max Marks : 10**

Name of the student : ..... Roll No. : .....

Academic Standards	AS1	AS2	AS3	AS4	AS5	AS6	Total
Question No.s	1, 4, 5 8,10 14 - 25	2,6 26 - 27	3,11 28 - 29	7,12 –	13 –	9 30 - 33	33
Marks Allotted	16	4	6	6	4	4	40
Marks Obtained							
Grade							

PART - B **[Marks : 10]**

Note :

i) **Answer the following questions.**

ii) **Each question carries $\frac{1}{2}$ Mark.**

iii) **Marks will not be awarded in any case of over- writing, rewritten or erased answers.**

iv) **Write the capital letter (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them.**

14. CGS unit of specific heat is ( )

A) $\frac{cal - g}{^oC}$ B) $\frac{g^oC}{cal}$ C) $\frac{cal}{g^oC}$ D) $\frac{cal/^oC}{g}$

[Turn Over...

15. When water is boiling, its temperature ( )

A) Remains constant B) Increases

C) Decreases D) Both B and C

16. Oxidation means ( )

i) Gain of Oxygen ii) Loss of Hydrogen

iii) Loss of Oxygen iv) Gain of Hydrogen

A) i and iv B) iii and iv C) i and ii D) i, ii, iii, iv

17. 1 mole of Hydrogen : 0.602×10^{24} molecules :: 0.5 mole of H_2 : _____ molecules. ( )

A) 0.301×10^{12} B) 6.02×10^{23}

C) 0.602×10^{12} D) 0.301×10^{24}

18. Magnification of a mirror, m = _____ ( )

A) $\frac{-v}{u}$ B) $\frac{u}{v}$ C) $\frac{h_o}{h_i}$ D) $\frac{-h_i}{h_o}$

19. A : When a mirror is immersed in water, its focal length doesn't change.

R : Focal length of a mirror is independent of surrounding medium.

( )

A) A and R are correct and R is correct explanation of A.

B) A and R are correct but R is not correct explanation of A.

C) A is correct and R is incorrect.

D) A is incorrect but R is correct.

20. Match the following. ( )

A	B
P) Plaster of paris	i) $NAHCO_3$
Q) Gypsum	ii) $CaSO_4.2H_2O$
R) Baking soda	iii) Na_2CO_3
S) Washing soda	iv) $CaSO_4 \cdot \frac{1}{2}H_2O$

A) P - iv, Q - ii, R - i, S - iii B) P - iv, Q - ii, R - iii, S - i

C) P - ii, Q - iv, R - i, S - iii D) P - ii, Q - iv, R - iii, S - i

[Contd...3

21. Identify the pair of pH values of strong acid and strong base in the following ( )

A) (6, 14) B) (1, 8) C) (7, 7) D) (2, 14)

22. Which of the following is Snell's law? ( )

A) $\frac{n_1}{n_2} = \frac{\sin i}{\sin r}$ B) $\frac{n_2}{n_1} = \frac{\sin i}{\sin r}$ C) $\frac{n_1}{\sin i} = \frac{n_2}{\sin r}$ D) Both A and C

23. The principle involved in optical fibres are _____ ( )

A) Reflection B) Scattering

C) Total Internal Reflection D) Dispersion

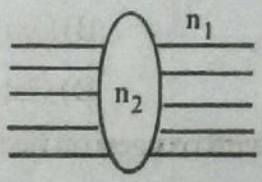
24. A lens with refractive index n_2 is kept in a medium of refractive index n_1 as shown in figure. If $n_1 > n_2$ the nature of the lens is. ( )

A) Convex lens

B) Concave lens

C) Plane lens

D) Concave mirror



25. The lens which can form real and virtual images for real object ( )

A) Converging lens B) Diverging lens

C) Plane lens D) Both A and B

26. A bird flying in air will appear to a fish inside the water as ___ ( )

A) Farther away than its actual distance

B) Closer than its actual distance

C) At the same place D) Bird doesn't appear to the fish

27. The angle of deviation produced by the glass slab is ____ ( )

A) 0° B) 20° C) 90° D) 180°

28. The acid which enters the body by the sting of bee is ( )

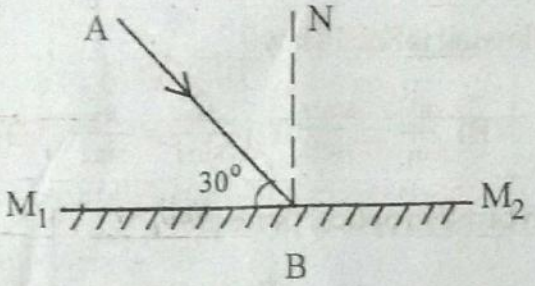
A) Acetic acid B) Methanoic acid

C) Sulphuric acid D) Fatty acid

[Turn Over...

29. In the following figure M_1 M_2 represents a plane mirror, N represents normal and AB represents an incident ray. Then the angle of reflection is ( )

A) 30°
B) 60°
C) 90°
D) 180°



30. The position of a vessel that should be kept in solar cooker ( )
A) At centre of curvature B) At focus
C) At pole D) Any where

31. Which of the following is not suitable for avoiding corrosion ( )
A) Painting B) Oxidation
C) Alloying D) Galvanizing

32. When copper reacts with oxygen on heating its colour changes to ( )
A) Brown B) Green C) Black D) Yellow

33. Dogs pant during hot summer days using the concept of ___ ( )
A) Condensation B) Humidity C) Melting D) Evaporation