

GENERAL SCIENCE
X CLASS
MODEL PAPER
SUMMATIVE - 1

1. **Heat**
2. **Chemical Reaction and Equations**
3. **Reflection of light by different surfaces**
4. **Acids, Bases and Salts**
5. **Refraction of Light at Plane Surfaces**
6. **Refraction of Light at curved Surfaces**

X CLASS
MODEL QUESTION PAPERS - GENERAL SCIENCE PAPER - SA-1
BASED ON C.C.E MODEL

ACADEMIC STANDARD WISE WEIGHTAGE TABLE

Academic Standard	% of Weightage	Marks Alloted
AS-1	40%	16
AS-2	10%	04
AS-3	15%	06
AS-4	15%	06
AS-5	10%	04
AS-6	10%	04
TOTAL	100%	40

QUESTION WISE WEIGHTAGE TABLE

Type of Question	Allotted Marks	No. of Questions
Essay type questions	16	04
Short Answer questions	04	05
Very Short Answer questions	06	04
Multiple Choice Questions	06	20
TOTAL	40	33

BLUE PRINT

Academic	Essay type	Short Answer Questions	Very Short Answer Questions	MCQ	No. of Questions
AS-1 (40%)	1P/P	1(P) 1(C)	2C, 1P	10(5P+5C)	16
AS-2 (10%)	-	1(P) 1(C)	-	-	2
AS-3 (15%)	1C/C	-	-	4(2P, 2C)	5
AS-4 (15%)	1P/C	-	1P	2(1P, 1C)	4
AS-5 (10%)	1P/C	-	-	-	1
AS-6 (10%)	-	- 1P	-	4(2P, 2C)	5
TOTAL	4	5	4	20	33

QUESTION WISE WEIGHTAGE TABLE

Name of the Unit	Essay Questions	Short Answers	Very Short Answers	MCQ
1. Heat	AS-4(4M)	AS-1	AS-1	AS-1, AS-4
2. Chemical Reactions and Equations	AS-3, AS-4(4M)	AS-2	AS-1	AS-1-2, AS-3, AS-6
3. Reflection of light by different surfaces	AS-1(4M)	AS-6	-	AS-1-2, AS-3, AS-6
4. Acids, Bases and Salts	AS-5, AS-3(4M)	AS-1	AS-1	AS-1-2, AS-6
5. Refraction of Light at Plane Surface	AS-4	AS-2	AS-1	AS-1, AS-3, AS-4, AS-6
6. Refraction of Light at curved	AS-1	-	-	AS-1-2, AS-3

SUMMATIVE ASSESSMENT - I
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE
(English Version)

PART - A & B

TIME : 2.45 min

Marks : 40

Instructions :

1. This paper contains **Part-A** and **Part-B**
 2. Part-A contains 3 sections, answer the questions under **Part-A** on separate answer book. Write the answer to the Questions under **Part-B** on the Question Paper itself and attach it to the answer book of **Part-A**.
 3. Answer all the questions Internal choice to the questions under section III
 4. In the duration of 2.45hrs , 15 minturs of time is allotted to read the question paper
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PART - A

TIME : 2 hours

Marks : 30

Instructions :

1. **Part-A** comprises of **three** sections **I, II, III**.
2. All the questions are **compulsory**.
3. There is no overall choice. However, there is an internal choice to the questions under Section-III.

SECTION - I

NOTE :

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

4×1 = 4 marks

1. We get sweat while doing work ? What is the process behind it. (AS-1)
2. $\text{MnO}_2 + 4 \text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$ in the above equation, name the compound which are oxidized and which are reduced?
3. If we kept a clean cloth along with finely chopped onion in plastic bag for few hours. How can we use the cloth to test. (AS-I)
4. Why does a diamond shine more than a glass piece cut to the same shape? (AS-1)

SECTION - II

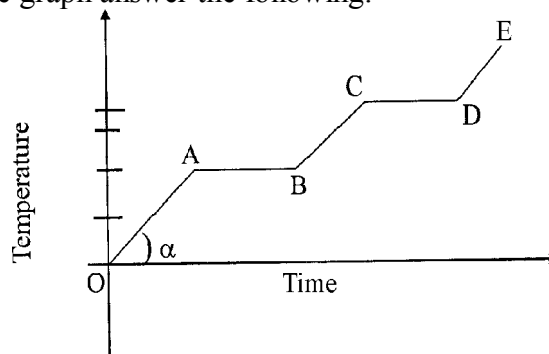
- NOTE :**
1. Answer **all** the questions.
 2. Answer each question in 4 or 5 sentences.
 3. Each question carries **TWO** mark. 2×5 = 10 marks
5. 50 gm of water at 20° C is mixed with 50 gm of water at t° C. In the final temperature is 30° C find to C ? (AS-1)
6. Both the precipitation and the neutralisation reactions are double displacement reaction. Justify your answer with two examples? (AS-2)
7. A convex mirror with a radius of curvature 3m is used as rearview in automobile. If a bus is located at 5 m from the mirror, find the position, nature and size of the image ? (AS-6)
8. Metal carbonate and metal hydrogen carbonates reacts with acids, produces CO₂ and H₂O. Give two examples with balanced equation. (AS-1)
9. Ramana said " Reflection of light and total internal reflection of light are same. Is it Yes / No? HOW can you support your answer? (AS-2)

SECTION - III

- NOTE :**
1. Answer **all** the questions.
 2. Answer each question in 8-10 sentences.
 3. There is internal choice for each question.
Only one option from each question is to be attempted.
 4. Each question carries **FOUR** marks. 4×4 = 16 marks

10. The graph shows variation of temperature (T) of one kilogram of Gold with heat (H) supplied to it. At "O" the substance is in the solid state. From the graph answer the following.

1. Melting point of Gold is ?
2. The point of Gold is ?
3. If the latent heat of vaporisation of gold is 1577 KJ/Kg, then find the quantity of heat required in vaporising the gold in KJ ?
4. The state of gold between B and C is ?



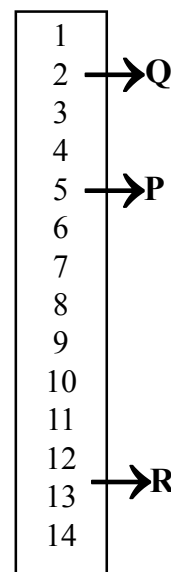
(OR)

With the help of P^H-Scale answer the following questions. (AS-4)

- i) The P^H value of solution P is 5. So it is weak acid. Write the nature of solutions 'Q' and 'R'
- ii) Arrange above solutions based on Hydrogen Ion concentration.
- iii) Arrange the following solutions from concentrated acid to concentrated base.

Orange juice, Milk of Magnesia, Lime juice, Baking soda.

- iv) P^H of a salt is 13, and a solution is 5. If we add these two substances in equal quantities. What is the P^H of solution. And what is its nature?



11. You are provided lime stone, test tube, test tube holder, cork, Retort stand and metal box. By using all these how can you prove the release of CO₂ in thermal decomposition reaction of lime stone.

(OR)

Acids react with metals to produce H₂ gas. Suggest an activity to prove the above statement. How do you test for the H₂ gas. (AS-3)

12. Explain the process that we follow to find the focal length of a concave mirror? (AS-3)

(OR)

Balance the chemical equation by including the physical states of the substance for the following reaction.



- a. Barium chloride and Sodium sulphate aqueous solutions react to give insoluble Barium sulphate and aqueous Sodium Chloride.

- b. Aqueous Calcium hydroxide reacts with aqueous Nitric acid to give water and aqueous calcium nitrate. (AS-1)

13. _____

The above figures show a point light source and its image produced by lens with an optical axis N₁N₂. Find the position of the lens and its foci using a ray diagram.

(OR)

Distilled water is a poor conductor of electricity. When it is acidified, it conducts electricity. Draw a neat diagram which shows the electric conductivity of acidified water. (AS-5)

SUMMATIVE ASSESSMENT - I
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE
(English Version)

PART - B

TIME : 30 minutes

Marks : 10

Instructions :

- (i) Answer all the questions.
 - (ii) Each question carries 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.
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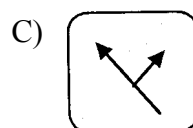
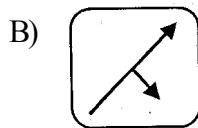
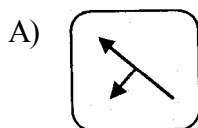
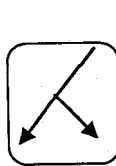
SECTION - IV

- NOTE :**
- 1. Answer **all** the questions.
 - 3. Each question carries 1/2 mark.

20×1/2 = 10 marks

14. The difference in temperature of a body measured as 27° C. Its corresponding difference in kelvin scale is ? ()
- A) 300K B) 0K C) -154K D) 27K
15. P : Rusting of iron is an example of reduction. ()
Q : Rancidity of food is an example of oxidation. ()
- A) P and Q are correct B) P correct, Q wrong
C) P wrong, Q correct D) P and Q are wrong

16. Choose the correct Mirror image ()



17. Assertion : For a erect object having inverted image, linear magnification is negative.
Reason : Linear magnification is the ratio between height of object and height of image. ()
- A) Both assertion and reason are correct
B) Both assertion and reason correct. Reason doesnt support assertion.
C) Assertion is correct, Reason is wrong
D) Assertion is wrong, Reason is correct
18. We are using tooth paste to clean our mouth and to avoid tooth decay.
The nature of the tooth paste is..... ()
- A) Acidic B) Base C) Neutral D) Amphteric
19. Metal oxide + Acid \rightarrow ()
- A) Salt + Metal B) Salt + Water
C) Base + Water D) Non metallic Oxide + Base
20. Which of the following is Snell's law ()
- A) $n_1 \sin i = \frac{\sin r}{n_2}$ B) $\frac{n_1}{n_2} = \frac{\sin r}{\sin i}$ C) $\frac{n_2}{n_1} = \frac{\sin r}{\sin i}$ D) $n_1 \sin i = \text{constant}$
21. Focal length of plano - concave lens is when its radii of curvature of the surface is R and n is the refractive index of the lens ()
- A) $f = \frac{R}{n-1}$ B) $f = \frac{-R}{n-1}$ C) $f = \frac{n-1}{R}$ D) $f = \frac{n-1}{-R}$
22. Consider a convex lens and match the following ()
- | <i>Position of Object</i> | <i>Position of Image</i> |
|---------------------------|--------------------------|
| i) at Focus | P) same side |
| ii) between 2F and F | Q) infinitive |
| iii) between F and P | R) beyond 2F |
- A) i-Q, ii-R, iii-P B) i-P, ii-Q, iii-R C) i-R, ii-P, iii-Q D) i-Q, ii-P, iii-R

23. Match the following Set-A and Set-B ()

Set-A

- i) Plaster of Paris
- ii) Bleaching Powder
- iii) Baking Soda
- iv) Washing Soda

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

Set-B

- P) NaHCO_3
- Q) CaOCl_2
- R) $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$
- S) Na_2CO_3
- B) i-R, ii-P, iii-Q, iv-S
- D) i-P, ii-R, iii-S, iv-Q

24. A student added dil HCl to a test tube containing Zinc granules and made following observations ()

- i) The zinc surface become dull and black.
- ii) The gas evolved is burnt with a pop sound.
- iii) The solution remain colourless.

The correct observations are

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

25. A vessel is kept at the of a solar cooker ()

- A) Centre of the curvature
- B) Pole
- C) Focal point
- D) Convex surface

26. Shamta curie is doing an experiment with the glass slab. She focussed the light towards the glass slab at an angle 30° . What would be the angle of emergence ? ()

- A) 0°
- B) 30°
- C) 90°
- D) 180°

27. A man photographed a white donkey after fitting black vertically on to the lens of his camera. What photo will he get ? ()

- A) A dull image of white donkey
- B) A bright image of white donkey
- C) An image of Zebra with horizontal strips
- D) An image of Zebra with vertical strips

28. Consider two materials lead and iron with specific heat values $0.031 \text{ cal/gm}^\circ\text{C}$ and $0.115 \text{ cal / gm}^\circ\text{C}$ respectively. If the mass of two materials are same and are supplied same heat, then ()
- A) Temperature of lead will be increased B) Temperature of Iron will be increased
 C) Both are at same temperature D) No change in the temperature
29. Find the refractive index of the glass, if the speed of light in glass is $2 \times 10^8 \text{ m/s}$ and speed of light in vacuum is $3 \times 10^8 \text{ m/s}$ ()
- A) $\frac{2}{3} \text{ m/s}$ B) $\frac{3}{2} \text{ m/s}$ C) $\frac{2}{3}$ D) $\frac{3}{2}$
30. Which of the following is not related to a concave mirror ()
- A) TV dish antenna B) Shaving mirror
 C) Vehicle head light reflector D) Rearview mirror
31. Spoilage of food can be prevented by ()
- i) Adding preservatives like Vitamin C and E
 ii) Adding antioxidants
 iii) Adding water
 iv) Keeping food in Air tight containers
- A) iii only B) i and iii C) i, ii and iv D) i, iii and iv
32. Ramu added water to acid. Sreenu added acid to water. Which of the following is correct.()
- A) Both Ramu and Sreenu are correct
 B) Ramu correct, Sreenu incorrect
 C) Ramu is incorrect and Sreenu is correct
 D) Both Ramu and Sreenu are incorrect
33. Suppose you are inside the water in a swimming pool, your friend is standing on the edge of the swimming pool. Your friend appears to be ()
- A) Shorter B) Taller C) Same size D) Stout

GENERAL SCIENCE

X CLASS

MODEL PAPER

SUMMATIVE - II

- 1. Heat**
- 2. Chemical Reaction and Equations**
- 3. Reflection of light by different surfaces**
- 4. Acids, Bases and Salts**
- 5. Refraction of Light at Plane Surfaces**
- 6. Refraction of Light at curved Surfaces**
- 7. Human Eye and Colourful world**
- 8. Structure of Atom**
- 9. Classification of Elements - The Periodic Table**
- 10. Chemical Bonding**
- 11. Electric Current**

X CLASS
MODEL QUESTION PAPERS - GENERAL SCIENCE PAPER - SA-1I
BASED ON C.C.E MODEL

ACADEMIC STANDARD WISE WEIGHTAGE TABLE

Academic Standard	% of Weightage	Marks Alloted
AS-1	40%	16
AS-2	10%	04
AS-3	15%	06
AS-4	15%	06
AS-5	10%	04
AS-6	10%	04
TOTAL	100%	40

QUESTION WISE WEIGHTAGE TABLE

Type of Question	Allotted Marks	No. of Questions
Essay type questions	16	04
Short Answer questions	04	05
Very Short Answer questions	06	04
Multiple Choice Questions	06	20
TOTAL	40	33

BLUE PRINT

Academic	Essay type	Short Answer Questions	Very Short Answer Questions	MCQ	No. of Questions
AS-1 (40%)	1C/C	1(P) 1(C)	2C, 1P	10(5P+5C)	16
AS-2 (10%)	-	1(P)	-	4(2P, 2C)	5
AS-3 (15%)	1P/P	-	1P	2(1P, 1C)	4
AS-4 (15%)	-	1(P) 1(C)	-	4(2P, 2C)	6
AS-5 (10%)	1P/C	-	-	-	1
AS-6 (10%)	1P/C	-	-	-	1
TOTAL	4	5	4	20	33

QUESTION WISE WEIGHTAGE TABLE

Name of the Unit	Essay Questions	Short Answers	Very Short Answers	MCQ
1. Heat	AS-3(4M)	-	-	AS-1, AS-2
2. Chemical Reactions and Equations	-	AS-1	AS-1	AS-1, AS-2
3. Reflection of light by different surfaces	-	-	AS-1	AS-1
4. Acids, Bases and Salts	AS-1(4M)	-	-	AS-1, AS-3
5. Refraction of Light at Plane Surface	-	AS-2	-	AS-1, AS-3
6. Refraction of Light at curved	-	AS-4	AS-3	-
7. Human Eye and Colourful world	AS-5(4)	AS-1	-	AS-1, AS-4
8. Structure of Atom	AS-1(4)	-	AS-1	AS-1, AS-2
9. Classification of Elements - The Periodic Table	AS-6(4)	-	-	AS-1, AS-4
10. Chemical Bonding	AS-5(4)	AS-4	-	AS-1, AS-4
11. Electric Current	AS-6(4),AS-3(4)	-	-	AS-1, AS-2, AS-4

SUMMATIVE ASSESSMENT - II
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE
(English Version)

PART - A & B

TIME : 2.45 min

Marks : 40

Instructions :

1. This paper contains **Part-A** and **Part-B**
 2. Part-A contains 3 sections, answer the questions under **Part-A** on separate answer book. Write the answer to the Questions under **Part-B** on the Question Paper itself and attach it to the answer book of **Part-A**.
 3. Answer all the questions Internal choice to the questions under section III
 4. In the duration of 2.45hrs , 15 minutes of time is allotted to read the question paper
-

PART - A

TIME : 2 hours

Marks : 30

Instructions :

1. **Part-A** comprises of **three** sections **I, II, III**.
2. All the questions are **compulsory**.
3. There is no overall choice. However, there is an internal choice to the questions under Section-III.

SECTION - I

NOTE :

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

4×1 = 4 marks

1. One substance splits into two or more is chemical decomposition. Write the balanced chemical equation for chemical decomposition of Lead Nitrate ? (AS-1)
2. The refractive index of glass is 1.5. What is the speed of light in glass is 1.5. What is the speed of light in glass (speed of light in vacuum is 3×10^8 m/s ? (AS-1)
3. Sita standing before the mirror at 5m distance, and Geetha stands with 15m distance in the same line from the mirror. When Sita looks into the mirror, how far away from her will Geetha seems to be ? (AS-3)
4. Though there is only one electron present in Hydrogen atom, it can give different spectral line. Give reason? (AS-1)

SECTION - II

- NOTE :**
1. Answer **all** the questions.
 2. Answer each question in 4 or 5 sentences.
 3. Each question carries **TWO** mark. 2×5 = 10 marks

5. What happens an aqueous potassium iodide is added to aqueous Lead nitrate. Explain with balanced chemical equation.
6. "When a light ray passes through a glass slab, the angle of deviation produced by it is zero." To know more about this statement frame any two questions. (AS-2)
7. " X " is an Ionic substance. "Y" is a covalent substance. Write the characters of 'X' and 'Y' in the following table (High or Low) (AS-4)

PROPERTY	X	Y
Solubility		
Boiling Point		
Melting Point		
Chemical reactivity		

8. You have been provided with three test tubes, one of them contains distilled water and the other two contains an acidic and basic solutions respectively
- a) If you are given only red litmus paper how will you identify the contents of each test tube?
 - b) How litmus paper works in the experiment. (AS-1)
9. An object kept at a distance of $2f$, from the refractive device, it forms the image on its other side at the same distance.
- a) identify the refracting device.
 - b) prepare a table at two different situations that indicate the positions of object and corresponding image positions. (AS-4)

SECTION - III

- NOTE :**
1. Answer **all** the questions.

2. Answer each question in 8-10 sentences.
3. There is internal choice for each question.
Only one option from each question is to be attempted.
4. Each question carries **FOUR** marks.

4×4 = 16 marks

10. Explain the experimental process to determine the specific heat of given solid substance by using Calorimeter. (AS-3)

(OR)

Describe an activity with the help of a diagram to establish the relation between current (i) flowing in a conductor and potential difference (V) maintained across its ends. (AS-3)

11. What is your understanding about the concept of Neutralization. Explain with a suitable example.

(OR)

Quantum numbers are very useful in predicting the position of electrons in an atom. Sodium atom has 11 electrons in its configuration.

- a) Write electron configuration of sodium and distribute these 11 electrons in its three shells.
 - b) Write the four quantum numbers for the differentiating electron of sodium atom? (AS-1)
12. How does the position of an element in the periodic table help to predict its chemical properties. Explain with an example?

(OR)

A house has three tube lights, two fans and a television. Each tube light draws 40W. The fan draws 80W, and the television draws 60 W. On the voltage all the tube lights are kept on for 5 hours, two fans are 12 hours and the television for 5 hours every day. Find the cost of electric energy used in 30 days at the rate of Rs.3 per KWH. (AS-6)

13. Draw the Ray diagram showing the position of the image of the object if the object is between the center of curvature and focal point.

(OR)

Though there is sp^3 hybridization in Ammonia and Water, the bond angle is not $109^\circ.28'$. Give the reason and draw the structures of Ammonia and Water showing their actual bond length.

SUMMATIVE ASSESSMENT - II
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE
(English Version)

PART - B

TIME : 30 minutes

Marks : 10

Instructions :

- (i) Answer all the questions.
- (ii) Each question carries 1/2 mark.
- (iii) Answers are to be written in question paper only.
- (iv) Marks will not be awarded in any case of over-writing, rewritten or erased answers.
- (v) Write the **CAPITAL LETTER (A, B, C, D)** showing the correct answer for the following questions in the brackets provided against them.

SECTION - IV

- NOTE :**
- 1. Answer **all** the questions.
 - 3. Each question carries 1/2 mark.

20×1/2 = 10 marks

14. Match the following : ()
- i) Amount of water vapour present in air () P) fog
 - ii) Condensation of water droplets on grass () Q) humidity
 - iii) Condensation of water droplets on dust particles in air () R) dew
- A) i-P, ii-Q, iii-R B) i-Q, ii-R, iii-P C) i-R, ii-P, iii-Q D) i-R, ii-Q, iii-P
15. A mole of any gas at STP contains ()
- i) 6.023×10^{23} molecules
 - ii) 6.023×10^{-23} molecules
 - iii) 2.24 lt of volume
 - iv) 22.4 lt of volume
- A) ii only B) iv only C) ii and iv D) i and iv

16. The equation of mirror formula is ()

A) $f = \frac{1}{V} + \frac{1}{U}$ B) $\frac{1}{f} = \frac{1}{V} - \frac{1}{U}$ C) $f = \frac{1}{U} - \frac{1}{V}$ D) $\frac{1}{V} = \frac{1}{f} - \frac{1}{U}$

17. Which of the following substances when arranged together will produce table salt ()

- A) Hydrochloric acid and Sodium hydroxide
- B) Sodium Thiosulphate and Sulphur dioxide
- C) Chlorine and Oxygen
- D) Nitric acid and Sodium hydrogen carbonate

18. Which of the following is not correct for diamond ()

- A) critical angle of diamond is high
- B) refractive index of diamond is high
- C) total internal reflection takesplace in diamond
- D) diamonds are used in jewellery

19. The actual shape of rainbow is ()

- A) semi circular
- B) circular
- C) cone
- D) three dimensional sphere

20. Assertion : The energy of red colour is low compared to blue colour ()

Reason : Energy is inversly propoortial to wave length of light.

- A) Both assertion and reason are correct, reason supports assertion.
- B) Both assertion and reason are correct, reason doesn't supports assertion.
- C) Both assertion and reason is incorrect.
- D) Assertion correct but reason is incorrect.

21. Octect formation pair among the following is ()

- A) H, He
- B) He, Ne
- C) O, K
- D) K, Kr

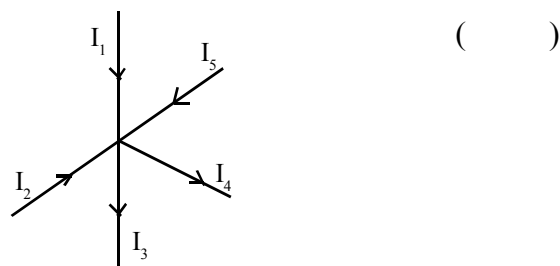
22. Match the following ()

- | <i>Molecules</i> | <i>Hybridisation</i> |
|-----------------------|----------------------|
| i) Be Cl ₂ | P) Sp ³ |
| ii) BF ₃ | Q) Sp |
| iii) H ₂ O | R) Sp ² |
| A) i-Q, ii-P, iii-R | B) i-Q, ii-R, iii-P |
| | C) i-P, ii-Q, iii-R |
| | D) i-R, ii-P, iii-Q |

23. Identify the law

Which is suitable for the adjacent figure ?

- A) Loop law
- B) Lens law
- C) Junction law
- D) Foreday's law



24. Units per Electric current is Ampere. So units per resistance is

()

- A) volt
- B) Ohm
- C) Culumb
- D) KWH

25.

↑	↓
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↑	↓
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↑	↑	
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The above electronic configuration represents

()

- A) Nitrogen
- B) Carbon
- C) Oxygen
- D) Boron

26. A shiny black coloured element 'X' on heating in air becomes black in colour. Predict the element

()

- A) Silver
- B) Copper
- C) Iron
- D) Aluminium

27. Three bodies A, B and C are in thermal equilibrium. The temperature of B is 27o C. Predict the temperature of C

()

- A) 300K
- B) -27° C
- C) 0K
- D) 0° C

28. X : Acid remains colourless in phenolphthalin indicator.

()

Y : Base turns to pink colour in phenolphthalin indicator.

- A) Both X and Y are correct
- B) Both X and Y are incorrect
- C) X correct, Y incorrect
- D) X incorrect, Y correct

29. In an experiment prove Snell's law which of the following ratio is constant

()

- A) $\frac{i}{r}$
- B) $\frac{\sin i}{\sin r}$
- C) $\frac{r}{i} = 1$
- D) $\sin^2 i + \cos^2 r = \text{Constant}$

30. An eye doctor prescribes to a patient +1D powered lens. What is the focal length of the lens ()

- A) 1 cm B) $\frac{1}{10}$ m C) 100 m D) 100 cm

31. The electronic configuration of the elements P, Q, R and S are given below. Which element belongs to second period ()

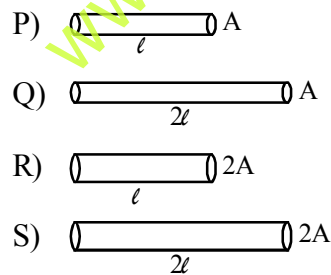
Element	Electron configuration
P	2
Q	2, 6
R	2, 8, 2
S	2, 8, 8, 1.

- A) P B) Q C) R D) S

32. $:N: + :N: \rightarrow :N::N:$ Observe the law's rotation of nitrogen molecules identify the bond present ()

- A) ionic B) single bond C) double bond D) triple bond

33. Consider four copper wires P, Q, R and S. Their lengths and area of cross sections are as shown in figure which pair have equal resistances.



- A) P, Q B) Q, R C) P, S D) R, S

**GENERAL SCIENCE
PHYSICAL SCIENCE PAPER - 1
SUMMATIVE - III
X CLASS
SYLLABUS DIVISION**

SUMMATIVE - III

- 1. Heat**
- 2. Chemical Reaction and Equations**
- 3. Reflection of light by different surfaces**
- 4. Acids, Bases and Salts**
- 5. Refraction of Light at Plane Surfaces**
- 6. Refraction of Light at curved Surfaces**
- 7. Human Eye and Colourful world**
- 8. Structure of Atom**
- 9. Classification of Elements - The Periodic Table**
- 10. Chemical Bonding**
- 11. Electric Current**
- 12. Electromagnetism**
- 13. Principles of Metallurgy**
- 14. Carbon and its compounds**

X CLASS
MODEL QUESTION PAPERS - GENERAL SCIENCE PAPER-1
BASED ON C.C.E MODEL

ACADEMIC STANDARD WISE WEIGHTAGE TABLE

Academic Standard	% of Weightage	Marks Alloted
AS-1	40%	16
AS-2	10%	04
AS-3	15%	06
AS-4	15%	06
AS-5	10%	04
AS-6	10%	04
TOTAL	100%	40

ACADEMIC STANDARDS QUESTION WISE WEIGHTAGE TABLE

Academic	Marks	Essay type Questions	Short Answer Questions	Very Short Answer Questions	MCQ	No. of Questions
AS-1 (40%)	16	2(P+C)	1(P)	1(C)	10(5P+5C)	14
AS-2 (10%)	04	-	1(C)	1(P)	2(1P+1C)	4
AS-3 (15%)	06	-	2(P+C)	1(C)	2(1P+1C)	5
AS-4 (15%)	06	1(P and C)	-	-	4(2P+2C)	5
AS-5 (10%)	04	1(P and C)	-	-	-	1
AS-6 (10%)	04	-	1(P or C)	1(P)	2(1P+1C)	4
TOTAL	40	4	5	4	20	33

QUESTION WISE WEIGHTAGE TABLE

Type of Question	Allotted Marks	No. of Questions
Essay type questions	16	04
Short Answer questions	04	05
Very Short Answer questions	06	04
Multiple Choice Questions	06	20
TOTAL	40	33

WEIGHTAGE TABLE OF ACADEMIC STANDARDS LESSON WISE

Name of the Unit	Essay Questions	Short Answers	Very Short Answers	MCQ
1. Heat	AS-3(4M)	-	-	AS-1(1/2)
2. Chemical Reactions and Equations	AS-5(4M)	-	-	AS-1(1/2)
3. Reflection of light by different surfaces	AS-1(4M)	-	-	AS-1(1/2)
4. Acids, Bases and Salts	AS-1(4M)	-	-	AS-3(1/2)
5. Refraction of Light at Plane Surface	-	AS-4(2M)	AS-1(1)	AS-1(1/2)
6. Refraction of Light at curved	-	AS-6(2M)	-	AS-1(1/2), AS-3(1/2)
7. Human Eye and Colourful world	AS-5(4)	-	-	AS-6(1/2)
8. Structure of Atom	-	-	AS-2(1)	AS-1(1/2), AS-2(1/2), AS-4(1/2)
9. Classification of Elements - The Periodic Table	-	AS-4(2M)	-	AS-1(1/2)
10. Chemical Bonding	AS-1(4)	-	-	AS-1(1/2)
11. Electric Current	AS-1(4)	-	-	AS-1(1/2), AS-4(1/2)
12. Electromagnetism	-	AS-2(2M)	AS-1(1)	AS-1(1/2), AS-3(1/2)
13. Principles of Metallurgy	AS-3(4M)	-	-	-
14. Carbon and its compounds	-	AS-1(2M)	AS-6(1M)	AS-1(1/2), AS-3(1/2), AS-6(1/2)

SUMMATIVE ASSESSMENT - III
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE, Paper - I
(English Version)

PART - A & B

TIME : 2.45 min

Marks : 40

Instructions :

1. This paper contains **Part-A** and **Part-B**
2. Part-A contains 3 sections, answer the questions under **Part-A** on separate answer book. Write the answer to the Questions under **Part-B** on the Question Paper itself and attach it to the answer book of **Part-A**.
3. Answer all the questions Internal choice to the questions under section III
4. In the duration of 2.45hrs , 15 minturs of time is allotted to read the question paper

PART - A

TIME : 2 hours

Marks : 30

Instructions :

1. **Part-A** comprises of **three** sections **I, II, III**.
2. All the questions are **compulsory**.
3. There is no overall choice. However, there is an internal choice to the questions under Section-III.

SECTION - I

NOTE :

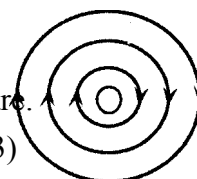
1. Answer **all** the questions.
2. Answer each question in 1 or 2 sentences.
3. Each question carries **ONE** mark.

4×1 = 4 marks

1. Find the absolute refractive index of the water, if its criticle angle is 48.5° ($\sin 48.5^\circ=0.75$) (AS-1)
2. An electron in an atom has the following set of four quantum numbers. Imagine the Orbital of the electron belongs to. (AS-2)

n	1	m_l	m_s
2	0	0	$+\frac{1}{2}$

3. The magnetic line are observed in an experment is mentioned in the adjacent figure. Then show the direction of the current flowing through the wire. (AS-3)



4. Water is added to Ethanoic acid is available. For what purpose you may utilize this solution.

(AS-6)

SECTION - II

- NOTE :**
1. Answer **all** the questions.
 2. Answer each question in 4 or 5 sentences.
 3. Each question carries **TWO** mark.

2×5 = 10 marks

5. Refractive indices of material media are given below

(AS-1)

Material medium	Refractice index	Mass density (gm/cc)
Water	1.33	1
Kerosene	1.44	0.8
Crown glass	1.52	2.59
Canada Balsem	1.53	0.99

Asnwer the following questions basing on the above table.

- a) " The velocity of the light is lesser in Kerosene than water. Do you support the statement? Why?
 - b) Why should we use canadabalsem to glued lenses ?
6. Prepare two questions to know more about the concepts of esterifacation and safonification reactions of organic compounds? (AS-2)
7. A student kept the double convex lens kept in air with two spherical surfaces of radii $R_1 = 30$ cm and $R_2 = 60$ cm. Take refractive index of lens is $n = 1.5$? What is the focal length of the double convex lengths. (AS-3)
8. Based on the modern period table, state the group number and period number of each element given in the table below. (AS-2)

Element	Group Number	Period Number
Sulpher		
Magnesium		

9. Mention any two daily life situations for the electro magnetic induction which is formed by the movement of Bar magnet in the solenoid. (AS-6)

SECTION - III

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

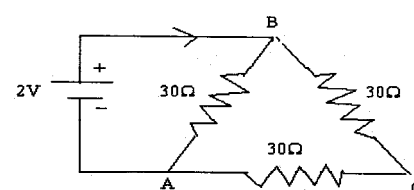
4×4 = 16 marks

10. The conversation between two friends as follows : (AS-1)

RANGA : Concave mirror is used as a rear-view mirror.

RAMESH : Convex mirror is used as a rear-view mirror.

Whom do you support ? Why ?



(OR)

Find the equivalent resistance between any two terminals and find the total current flowing through the circuit. (AS-1)

11. A yellow substance "X" gives a pungent smell when left in open. It is a good oxidising agent and is used for bleaching cotton linen in textile industries. Identify "X" and give its method of preparation. What is its commercial name ? (AS-1)

(OR)

Atoms become stable by sharing of electrons. Explain such kind of chemical bond with a suitable example. (AS-1)

12. Suggest an experiment to prove that the rate of evaporation of liquid depends on its surface area. Explain the process of evaporation based on collision of the liquid atoms. (AS-3)

(OR)

How can you say a chemical reaction is whether oxidation or reduction. Explain the experimental process of the concepts of oxidation or reduction by using copper powder. (AS-3)

13. A student has a difficulty in reading the black board while sitting in the last row. What could be the defect the child is suffering from ? Draw a neat diagram which shows the correction of the above defect ? (AS-5)

(OR)

Mention different types of chemical decomposition reactions ? Which method is suitable for the decomposition of water ? Draw a neat diagram of it ? (AS-5)

SUMMATIVE ASSESSMENT - III
MODEL QUESTION PAPER
X CLASS - GENERAL SCIENCE - Paper - I
(English Version)

PART - B

TIME : 30 minutes

Marks : 10

Instructions :

- (i) Answer all the questions.
- (ii) Each question carries 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.

SECTION - IV

NOTE : 1. Answer **all** the questions.

3. Each question carries 1/2 mark.

20×1/2 = 10 marks

Academic Standard - 1

14. Specific heat of a substance depends ()
1) Nature of the substance 2) mass of the substance 3) heat given to the substance
A) Only '1' is correct B) Both 1 and 2 are correct
C) 1, 2, 3 are correct D) 1, 2, 3 are wrong
15. $\text{Fe}_2\text{O}_3 + x \text{Al} \rightarrow y \text{Fe} + \text{Al}_2\text{O}_3$ in this equation x, y values are ()
A) x = 3, y = 2 B) x = 2, y = 2 C) x = 2, y = 3 D) x = 4, y = 2
16. When a ray incident perpendicular to the plane surface, the angle of reflection is ()
A) 180° B) 90° C) 45° D) 0°
17. X : The light ray must travel from denser medium to rarer medium to form Total Internal Reflection.
Y : The angle of incidence in denser medium should be greater than the critical angle for the pair of media in contact ()
A) X and Y are True B) X is True and Y is False
C) X is False and Y is True D) Both X and Y are False
18. How will the image formed by a convex lens be affected if the upper half of the lens is wrapped with a black paper ()

- A) The size of the image is reduced to one - half
 B) The upper half of the image will be absent
 C) The brightness of the image is reduced
 D) There will be no effect



19. Find the odd on out ()

- 1) $E = h g$ 2) $h = \frac{E}{g}$ 3) $g = \frac{E}{h}$ 4) $h = E g$

- A) 2 B) 1 C) 4 D) 3

20. Match the following : ()

- 1) Alkalimetal () P) Calcium
 2) Chalcogen () Q) Potassium
 3) Alkaline earthe metal () R) Sulphur

- A) 1-Q, 2-R, 3-P B) 1-Q, 2-P, 3-R C) 1-P, 2-Q, 3-R D) 1-P, 2-R, 3-Q

21. Arrange the following in a systematic order ()

- i) Formation of Anion ii) Electrostatic Force of attraction
 iii) Formation of ionicbond iv) Formation of cation

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

22. A 10W LED bulb is used 10 hour's per day. Find the electric energy consumed in 10 days. ()

- i) 1 KWH ii) 36×10^5 Joule iii) 3.6×10^5 Joule iv) 1000 KWH

- A) iB) i and ii C) iv and iii D) ii and iv

23. The value of magnetic field induction which is uniform is '2T'. What is the flux passing through a surface of area 1.5m^2 perpendicular to the field is ()

- A) 3 Wb B) $\frac{2}{1.5}$ Wb C) $\frac{1.5}{2}$ Wb D) 0

24. Which of the following compound is not a hydrocarban ()

- A) R-CH_3 B) $\text{RCH} = \text{CH}_3$ C) RCH_2OH D) $\text{CH}_3\text{CH} = \text{CH}_2$

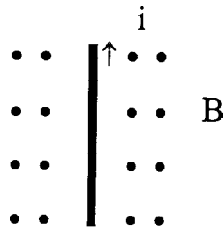
Academic Standard - 2

25. Aufbau principle is for lowest energy orbital , Hund's principle is for ()
- | | |
|------------------------|-----------------------|
| A) Exclusion principle | B) Degenerate orbital |
| C) Quantum number | D) Elliptical |

Academic Standard - 3

26. Test tube 'P' contain NaHCO_3 solution. Test tube 'Q' contain lemonjuice. On introducing pH paper strips on both of them it is observed that the pH paper turns ()
- | | |
|---------------------------|---------------------------|
| A) Blue in P and red in Q | B) Red in P and pink in Q |
| C) Red in P and Blue in Q | D) Blue in both |

27. The air bubble in the water behaves like ()
- | | |
|----------------------|--------------------------|
| A) Converging lens | B) Diverging lense |
| C) Transparent glass | D) Non transparent glass |

28. Symbol \uparrow indicates the direction of magnetic field out of the page. A straight long wire carrying current along its length is kept perpendicular to the magnetic field. The direction of the field experienced by the wire is ()
- | | | | |
|---------|----------|----------------------|-------------------|
| A) left | B) right | C) outside the paper | D) into the paper |
|---------|----------|----------------------|-------------------|
- 

29. A few drops of ethanoic acid were added to solid sodium carbonate. The possible result of the reactions are ()
- | | |
|---------------------------------|-----------------------------------|
| A) A hissing sound was evolved | B) Brown fumes evolved |
| C) Brick effervescence occurred | D) A pungent smelling gas evolved |

Academic Standard - 4

30. Principal quantum number is related to ()
- | | |
|-----------------------------|------------------------------------|
| A) Size of the orbit | B) Spin angular momentum |
| C) Orbital angular momentum | D) Orientation of orbital in space |

31.

Material Resistivity Value (Ohm - m)	
P	1.59×10^{-10}
Q	6.4×10^2
R	1×10^{13}
S	4.6×10^{-1}

 ()

Based on the resistivity values identify an insulator

- A) P B) Q C) R D) S

Academic Standard - 6

32. 1) Refraction () P) Rainbow ()
 2) Scattering () Q) Blue colour of the sky
 3) Dispersion () R) Twinkling of stars
 A) 1-Q, 2-R, 3-P B) 1-R, 2-P, 3-Q C) 1-P, 2-R, 3-Q D) 1-R, 2-Q, 3-P
33. In integrated circuit are used instead copper to connect the compounds together ()
 A) Graphic B) C₆₀ C) Nanotube D) PVC

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