SSC PUBLIC EXAMINATIONS: JULY-2020

PHYSICAL SCIENCE PAPER

ANALYSIS

SECTION – I

(OBJECTIVE TYPE QUESTIONS)

- TYPES OF OBJECTIVE QUESTIONS---Matching, Blank, Multiple Choice, Choose the correct/ wrong statement/ Sentence, Information type, One word/ Phasre , Assertion and Reason, Set of pairs etc.
- Number of Questions-6
- 3 Questions coming from Physics part and 3 Questions coming from Chemistry part
- Each Question carries 1 Mark
- Total Marks in this Section is 6 Marks

1. Convert 30^0C into Kelvin Scale

2. Chemical name of Common Salt is…….

3. State Pauli Exclusion Principle

4. Statement 1 : n + *l* value of 3s is 3.
Statement 2 : n + *l* value of 3s is 4.
Write the correct answer of the following in your answer booklet.
A) Both statements are correct **B) Statement 1 is only correct**
C) Statement 2 is only correct **D) Both Statements are wrong**

5. When the length of a conductor is doubled then it's resistance will be_____
A) Increased **B) Decreased** **C) become zero** **D) Unchange**

6. Write any one use of Semiconductor.

Similar Questions and Important Questions

1. Convert 300K into Celsius scale
2. Write the formula to find the specific heat of a substance
3. Write the relation between SI unit of heat and CGS unit of heat
4. Match the following

Group – A	Group – B
1. Latent heat of vaporization [ ]	A) 100 cal/g
2. Latent heat of fusion of ice [ ]	B) 80 cal/g
	C) 540 cal/g

5. X: When ice melts, its temperature remains constant.
Y: During boiling the temperature changes.
A) Both X and Y are true. B) X is true and Y is wrong. C) Both X and Y are Wrong.
6. What happens to absolute temperature of a body, when the average kinetic energy of the molecules of the body is doubled
7. The specific heat(s) of a substance depends on its_____
A) Temperature B) Mass C) Nature D) All the above
8. Match the following

i) Plaster of Paris	( )	a) $CaSO_4\ 2H_2O$
ii) Gypsum	( )	b) $NaHCO_3$
iii) Baking Soda	( )	c) $CaSO_4\ ½\ H_2O$

9. What is the Chemical name of milk of magnesium?
10. If the p^H of a solution is 13. Then what is the nature of the solution?
A) Strongly acidic B) Strongly basic C) Weakly acidic D) Weakly basic
11 .Define p^H
12. Which of the following is a correct statement
A) Tooth decay starts when p^H of mouth is greater than 5.5
B) Tooth decay starts when p^H of mouth is 5.5
C) Tooth decay takes place when p^H of mouth is 5.3

D) Tooth decay is caused by improper brushing

13. What type of reaction takes place in stomach, When an antacid tablet is consumed?
14. Which statement is correct
    Statement I : plaster of paris exposed to moisture it forms hard mass
    Statement II: plaster of Paris used by doctor supporting fractured bones in the right position
15. Which of the following solutions give yellow colour with methyl orange indicator
    A)NaOH B)CH_3COOH C)HCl D)H_2SO_4
16. Optical Fibre Cable (OFC) are Oftenly used in tele-communications. What is the working principle behind OFC
17. Choose the suitable answers of Section B with Section A

Section A	Section B
1. Formula for Snell's Law	P) n2/n1 = Sin r / Sin i
2. At critical angle, the angle of refraction	Q) n1/n2 = Sin r/ Sin i
	R) 90^0
	S) 60^0

18. The refractive index of glass respect to air is 2. Then the critical angle of glass air interface is
    A)0^0 B)45^0 C)30^0 D)60^0
19. Define Refraction
20. Write the formula to find the refractive index of glass slab by using vertical shift
21. Statement 1: When light ray travels from a rarer medium to denser medium the refracted ray bends towards normal
    Statement 2: When light travels from rarer medium to denser medium the angle of refraction is less than the angle of incidence
    Which of the above statement is correct
22. Refractive index of glass relative to water is 9/8. What is the refractive index of water relative to glass?
23. What is lens formula and explain the terms in it ?
24. Find the focal length of plano convex lens, when its radius of curvature of the surface is R and n is the refractive index of the lens?
25. P: Light ray passing along the principal axis is un deviated.
    Q: Light ray passing through the focus is un deviated.
    A)P,Q both are correct B)P is correct, Q is incorrect
    C)P in correct, Q is correct D)P,Q both are incorrect
26. Assertion (A):A person standing on the land appears taller than his actual height to a fish inside a pond
    Reason (R):Light bends away from the normal as it enters air from water
    Which of the following is correct?
    a) Both A and R are true and R is the correct explanation of A
    b) Both A and R are true and R is not the correct explanation of A
    c) A is true but R is false d) A is false but R is true
27. In which situation, the value of focal length of a convex lens is equal to the value of image distance
28. Total internal reflection takes place when the light ray travels from?
    A) rarer to denser medium B) rarer to rarer medium
    C) denser to rarer medium D) denser to denser medium
29. Choose the suitable answers of section B with section A.When the object is placed on the principal axis of convex lens

Section A Position of the Object		Section B Position of the Image
1) At infinity	( )	P) At infinity
2) Beyond centre of curvature	( )	Q) At centre of curvature
3) At the centre of curvature	( )	R) Between focus and centre of curvature
4) At focus	( )	S) At focus

30. Write lens maker formula
31. Which of the following properties does not change during refraction?
    A) wave length (b) frequency (c) speed (d) none
32. Which lens is concave?

Lens	Focal length (cm)
A	+20
B	-15

33. If focal length of lens is 50cm, then find the power of the lens?

34. Match the following

Section-A	Section-B
1.Myopia	a) Convex lens
2. Hypermetropia	b) Vision defect with age
3.Presbyopia	c) Concave lens

35. Define Accommodation of eye lens
36. What type of image formed by eye lens
37. X: Bi focal lens has concavelens at its upper portion and convex lens at it's lower portion.
Y: Bi focal lens has convex lens at it's upper portion and concavelens at it's lower portion.
Which of the above statement is correct?
38. Which rule is violeted in the electronic configuration $1s^0 2s^2 2\,p^4$?
39. If l=2 for an atom then the number of orbitals in its sub-shell is
a) 2 b) 3 c) 4 d) 5
40. Statement I : S-sub shell has spherical shape
Statement II : P-sub shell has dumbell shape
Write which statement is correct?
41. Copper $[Ar]4s^1 3d^{10}$: : chromium : _____
42. Write the Plank's equation
43. Match the following

1) Principal quantum number	p) orientation of orbitals in space
2) Angular momentum quantum number	q) Size and energy of orbit
3) Magnetic quantum number	r) spin of electron
4) Spin quantum number	s) shape of sub shell`

44. State Aufbau's principle
45. Statement I: Dobereiner triad is based on atomic weight.
Statement II: F, *Cl*, Br form Dobereiner triad.
Which statement is correct ?
46. What is the general electronic configuration of noble gases
47. Which of the following is the least reactive metal ?
a) Lithium b) Sodium c)Potassium d)Rubidium
48. Which one of the following increases in a group from top to bottom
a) atomic size b) metallic nature c) electropositivity d) electronegativity
49. Matching

Group	Valence
1) Valence of group I A	p) 4
2) Valence of group IV A	q) 3
3) Valence of group VI A	r) 1
4) Valence of group III A	s) 2

50. State "Modern periodic law"
51. Match the following

Group A (molecules)	Group B (Bond angle)
1) BeCl2	(p) $109^0\,48^1$
2) BF3	(q) $104^0\,31^1$
3) CH4	(r) 180^0
	(s) 120^0

52. Which of the following is not a covalent compound
a) $BeCl_2$ b) BF_3 c) $CaCl_2$ d) 4 CH_4
53. What is the structure of NaCl lattice
54. Who proposed valance shell electron pair repulsion theory ?
55. Becl2 : Linear : : _____ : Tetrahydral
a) BF_3 b) CH_4 c) H_2O d) NH_3
56. Which of the following molecule doesn't have sp^3 hybridisation
(CH_4, BF_3, NH_3, H_2O)
57. Express 1 KWH in Joules?
58. X: Resistance of a conductor depends on its length

Y: Resistance of a conductor depends on the nature of the conductor
Which statement is correct ?

59. What is the S.I unit of Resistivity
60. Define Ohm;s law
61. What is the resultant resistance when resistances of 2Ω, 4Ω, and 6Ωare connected in series.
62. Match the suitable answers of section-B. With section-A

Section-A	Section-B
A) $\rho.\frac{l}{A}$	p) Resistance
B) $R.\frac{A}{l}$	q) Resistivity
C) Ω	
D) Ω-m	

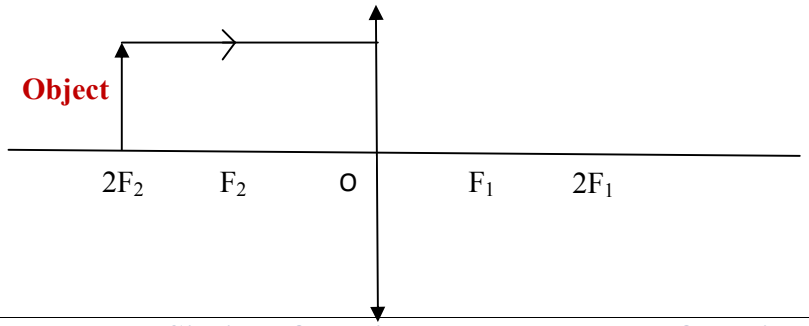
63. Write the mathematical expression of Faraday's law ?
64. Which of the following converts mechanical energy into electrical energy ?
    a) Electric motor b) Battery c) Generator d) Switch
65. Statement-I : If the current flows is vertically upwards, the field lines are in anti clockwise direction
    Statement-II: If the current flows is vertically downward, the field lies are in clockwise direction.
    Which statement is correct?
66. What is the formula of magnetic force on a charge "q" moves with a velocity "V" perpendicular to the magnetic field "B"
67. Faraday's law is consequence of _____
    A) Conservation of charge B) Conservation of Energy
    C) Conservation of mass D) None of these
68. Define Right hand rule
69. Match the following
    i. Zinc blend ( ) (A) PbS
    ii. Lime stone ( ) (B) ZnS
    iii. Galena ( ) (C) CaCO3
70. Which of these act as reducing agent in thermite process
    a) Al b) Fc c) Au d) Si
71. Which of the following furnaces is useful in carrying smelting
    a) Reverbatary b) open hearth c) Retart d) Blast
72. Define " Gauge"
73. What is the name of chemical process in which ore is heated in the absence of air?
74. Which of the following ore is used in froth floatation?
    A) Horn silver B) Galena C) Rock salt D) Cinnabar
75. Identify the functional group of Alcohol?
    A) –CHO B) $-NH_2$ C) –OH D) -COOR
76. Name the acid present in vinegar?
77. What are homologous series?
78. Statement I : In Ethylene carbon is SP^2 hybridized
    Statement II : In acetylene carbon is SP^3 hybridized
    Which statement is correct.
79. The ability to form largest chains with own atoms is _____
80. The polar end of micelle is _____ in nature.
    A) hydrophilic B) Hydrophobic C) isochoric D) isothermal

SECTION – II

(VERY SHORT ANSWER TYPE)

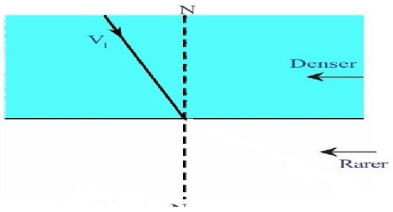
- In this Section-II, Academic standards Questions should be covered
- Number of Questions-4
- 2 Questions coming from Physics part and 2 Questions coming from Chemistry part
- Each Question carries 2 Marks
- Total Marks in this Section is 8 Marks

7. Complete the figure and redraw the correct diagrams in your answer booklet.

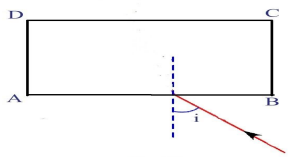


Similar Questions and Important Questions (AS_5)

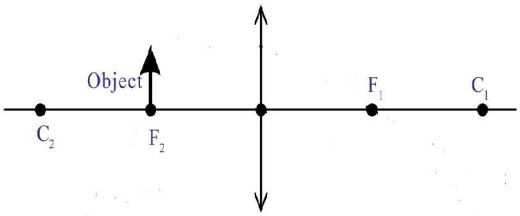
1. Complete the figure and redraw the correct diagram in your answer booklet.



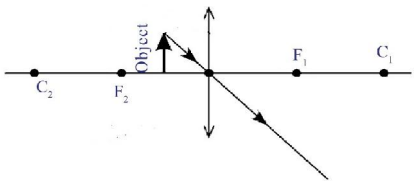
2. Draw a diagram to show the principle of light transmission by an optical fibre.
3. Complete the figure and redraw the correct diagram in your answer booklet.



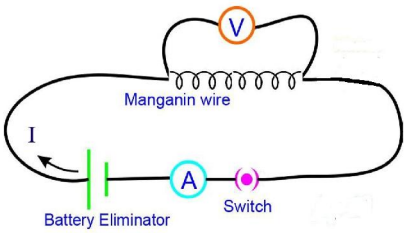
4. Complete the ray diagram of Converging lens in your answer booklet



5. Complete the ra answer booklet



6. If person suffering from Hypermetropia, then show this defect by ray diagram
7. Identify the mistake in the diagram and redraw the correct diagram in your answer booklet



8. Draw the setup of Oersted experiment?
9. Draw the direction of magnetic lines of force, assuming that current is flowing out of the page?
10. Draw an electromagnetic wave/Electromagnetic spectrum
11. Draw the shapes of s and p-orbitals
12. Draw the diagram shows the increasing values of (n + *l*) (OR) Draw the Moeller Chart
13. Represent the molecule H_2O using Lewis notation.
14. Draw the structure of NH_3 molecule
15. Draw the soap molecule

8. Write any two questions to understand differences between Myopia and Hypermetropia.

Similar Questions and Important Questions (AS_2)

1. Write any two questions to understand difference between evaporation and boiling
2. Harsha tells Siddhu that the double convex lens behaves like a convergent lens. But Siddhu knows that Harsha's assertion is wrong and corrected Harsha by asking some questions. What are the questions asked by Siddhu?
3. Frame any two questions to understand the formation of mirage?
4. Frame any two questions to understand the working of Optical fibres?
5. Write any two questions to understand difference between Dispersion and Scattering
6. Are the head lights of a car connected in series or parallel? Why?
7. Rajkumar said to you that the magnetic field lines are open and they start at north pole of bar magnet and end at south pole. What questions do you ask Rajkumar to correct him by saying"field lines are closed"?
8. Write any two questions to understand difference between AC generator and DC generator
9. Why pure acetic acid does not conduct electricity
10. Name two elements that you would expect to have chemical properties similar to Mg. What is the basis for your choice?
11. Predict the reasons for low melting point for covalent compounds when compared with ionic compound.
12. Which method do you suggest for extraction of high reactivity metals? Why?
13. What happens when a small piece of sodium is dropped into ethanol?

9. Assume and write the name of the element whose 4 quantum number are

$n = 1, \quad l = 0, \quad m_l = 0, \quad m_s = +1/2$

Similar Questions and Important Questions (AS_2)

1. Why does not distilled water conduct electricity?
2. Plaster of Paris should be stored in moisture – proof container. Explain why?
3. An electron in an atom has the following set of four quantum numbers to which orbital it belong to

n	*l*	m_l	m_s
2	0	0	+ 1/2

i) Which orbital it belong to ii) Write the four quantum numbers for 1s1 electron.

4. An element has atomic number 19. Where would you expect this element in the periodic table and why?
5. An element X belongs to 3rd period and group 2 of the periodic table. State
   (a) The no. of valence electrons (b) The valency (c) Whether it is metal or a nonmetal.
6. Two carbon compounds A and B have molecular formula C3H8 and C3H6 respectively. Which one of the two is most likely to show addition? Justify your answer.
7. Take a bright metal ball and make it black with soot in a candle flame. Immerse it in water. How does it appear and why?
8. Why do we consider tungsten as a suitable material for making the filament of a bulb?
9. Why should we connect electric appliances in parallel in a household circuit? What happens if they are connected in series?

10. Write the material required to do an activity to prove water and air are essential for corrosion of Iron

Similar Questions and Important Questions (AS_3)

1. Write the materials required to reaction of acids and bases with metals
2. Write the materials required to reaction of acids with carbonates and metal hydrogen carbonates
3. What are the materials required to prove that acid solution in water conducts electricity

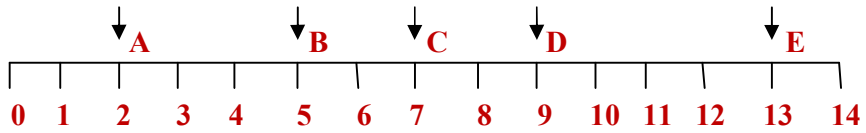
4. What are the materials required to prove that base solution in water conducts electricity
5. Write the materials required to do activity to prove water of crystallization ?
6. Write the materials are required to conduct esterification reaction in laboratory.

SECTION – III

(SHORT ANSWER TYPE)

- In this Section-II, Academic standards AS_4,AS_1 and AS_6 Questions should be covered
- Number of Questions-4
- 2 Questions coming from Physics part and 2 Questions coming from Chemistry part
- Each Question carries 4 Marks
- Total Marks in this Section is 16 Marks

11.



Based on the above pH scale values, answer the following questions

1) **Which is strongest acid among the A, B, C, D, E ?**
2) **Which is strongest base among the A, B, C, D, E ?**
3) **Which is weakest base among the A, B, C, D, E ?**
4) **Which is neutral in natural among the A, B, C, D, E ?**

Similar Questions and Important Questions (AS_4)

1. Observe the table and answer the following questions

Liquid/Solution	pH
P	7
Q	6
R	11
S	2
T	8

a) Which solution(s) turn into pink by adding phenolphthalein ?
b) Which solution(s) turn into red by adding methyl orange?
c) Which is strong acid?
d) Which one indicates pure water?
e) If P^H=7,then find the $[H]^+$
f) Which solutions are acidic solutions?
g) Which colour given by solution Q with universal indicator?
h) Which colour gives by blue litmus paper when it is dipped in solution S?

2. Electronic configuration of element is $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^5$ (OR) An element has atomic number is 15
Answer the following questions
a)What is the name of element?
b) How many electrons are present in L-shell ?
c) What is the (n+*l*) value of 3p orbital ?
d) In which orbital the next electron enters ?
e) Which period and which group the element belongs?
f) What are the number of valence electrons in the element?
g) Which block it belongs?
h) Is it metal or non metal?
i) What is the valancy of the element?
j) What is the name of the group which the element exists?
k) It is electropositive or electronegative ?

3. Observe the table and answer the questions

Element	Electronic configuration
A	$1s^2 2s^2$
B	$1s^2 2s^2 2p^6 3s^2$

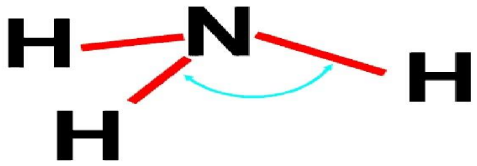
C	$1s^2 2s^2 2p^2 3s^2 3p^3$
D	$1s^2 2s^2 2p^6$

a) Which are the elements coming within the same period?
b) Which are the elements coming within the same group?
c) Which are the noble gas elemnt?
d) To which group and period does the element 'C' belong?
e) Name the element 'D'

4. Observe the figure and answer the questions

a) How many valance electrons are present in **Y**
b) How many valance electrons are present in **X**
c) How many covalent bonds are formed by **X** ?
d) How many covalent bonds are formed by **Y** ?
e) What is the valancy of **X** and **Y**
f) Suggest the names for elements **X** and **Y**
g) Which method used in the molecular representation

5. Observe the figure and answer the questions



a) How many lone pairs present on Nitrogen atom in Ammonia ?
b) What is the shape of the molecule?
c) What is the bond angle present in the molecule?
d) What is the valancy of Nitrogen and Hydrogen in Ammonia?
e) What is the hybridisation present in Ammonia?
f) How many hybrid and atomic orbitals participated in the bonding ?

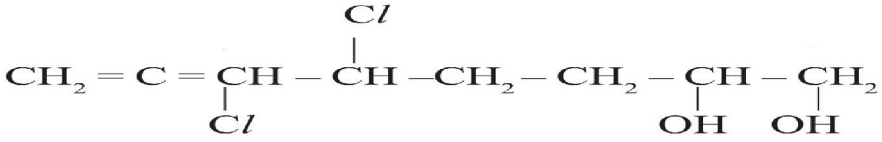
6. Observe the table and answer the questions

ORE	Formula	metal	ORE	Formula	metal
Bauxite	$(Al_2O_3 2H_2O)$	Al	Zincite	(ZnO)	Zn
Copper Iron Pyrites	$(CuFeS_2)$	Cu	Rock salt	(NaCl)	Na
Zinc Blende	(ZnS)	Zn	Cinnabar	(HgS)	Hg
Magnesite	$(MgCO_3)$	Mg	Magnetite	(Fe_3O_4)	Fe
Epsom salt	$(MgSO_4 7H_2O)$	Mg	Galena	(PbS)	Pb
Horn Silver	(AgCl)	Ag	Gypsum	$(CaSO_4 2H_2O)$	Ca
Pyrolusite	(MnO_2)	Mn	Lime stone	$(CaCO_3)$	Ca
Haematite	(Fe_2O_3)	Fe	Carnallite	$(KCl\ MgCl_2 6H_2O)$	Mg

a) Give two examples for sulphide ores?
b) Which method is used for concentration of Galena?
c) What is method used to convert Zinc blend to an oxide ore?
d) What is the method used to convert Magnesite into an oxide ore?
e) What is the metal present in Rock salt ?

f) Which furnace is useful in extraction of Iron from Haematite?
g) What is the ore of Aluminium?
h) Which metal can be extracted from Cinnabar?
i) What are metals present in Carnalite?

7. Observe the structure and answer the questions



a) What is the root word in the compound?
b) What is the functional group in the compound?
c) What is the name of the compound?
d) Which number is assigned for –OH group in the compound?
e) In which direction the numbering should be given?
f) Is it an unsaturated compound. If Yes,why?

8. Observe the following table and answer the questions

Organic Compound	Methane	Ethane	Propane	Butane	Pentane
Formula	CH_4	C_2H_6	C_3H_8	C_4H_{10}	C_5H_{12}

a) What type of homologous series is this ?
b) Write the general formula of this homologous series?
c) What is meant by homologous series?
d) Write the next organic compound formula
e) What is meant by 'Homologous series'
f) What is called this homologous series?.

12. Read the following table and answer the following questions.

Material Medium	**A**	**B**	**C**	**D**
Refractive Index	**1.3**	**1.003**	**1.65**	**2.42**

1) In which medium light travels fast in the above given medium ?
2) In which medium light travels slower in the above given medium ?
3) Which medium is more optically denser among all these media ?
4) Write the units of refractive index.

Similar Questions and Important Questions (AS_4)

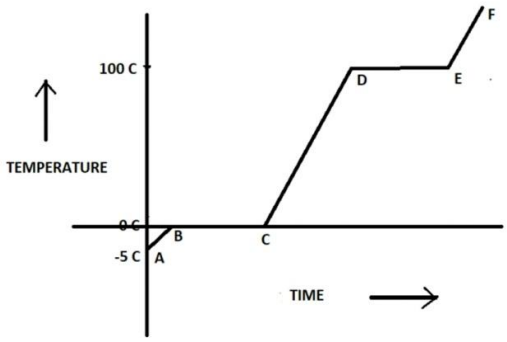
1. Observe the table and answer the following questions

Substance	Specific heat	
	In cal/g-°C	In J/kg-K
Lead	0.031	130
Mercury	0.033	139
Brass	0.092	380
Zinc	0.093	391
Copper	0.095	399
Iron	0.115	483
Glass(flint)	0.12	504
Aluminum	0.21	882
Kerosene oil	0.50	2100
Ice	0.50	2100
Water	1	4180
Sea water	0.95	3900

a) What is the SI unit of Specific heat ?
b) Which metal is best for cooking utensils? Why?
c) Which metal is slowly heated up among all given substance?
d) How much heat energy is required to rise 1^0 C of water of 1 gram?

e) Which metal is used to soldering the wires? Why?
f) Why different substances have different specific heats?
g) Write the formula of specific heat of the substance?
h) Convert 1 cal/g- ^{0}C into J/Kg-J
i) Which liquid used as coolant? Why?

2. Heat energy is continuously supplied to 1 kg of ice at -5^{0}C till it boils. By noting Temperature ,Time and Temperature-Time graph is drawn as follows. Answer the following questions



a) What is melting point of ice and boiling point of water?
b) What is the state and temperature at position C?
c) What is the state and temperature at position E?
d) What are the states of substance at AB and CD?
e) What are the states of substance at BC and DE?
f) Why there is no change in temperature at BC and DE even we gave heat energy continuously to the substance?
g) How much heat energy is required to convert 1 g of ice at 0^{0}C to water at 0^{0}C ?
h) How much heat energy is required to convert 1 g of water at 100^{0}C to vapour at 100^{0}C ?

3. Fill the table following, which is related to convex lens

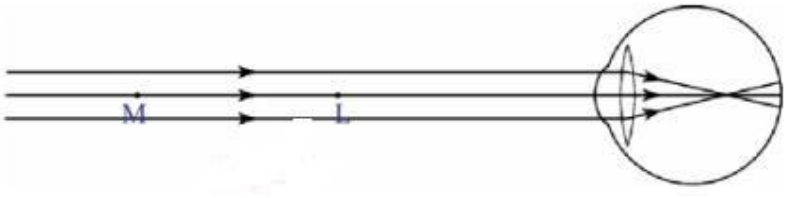
Position of the Object	**Position of the Image**	**Real/Virtual image**	**Inverted/Erected image**	**Enlarged/Diminished image**
Beyond 2F2			Inverted	Diminished
	At 2F1	Real		Enlarged
Between 2F2 and F2	Beyond 2F1	Real		
	Same side of the Object		Erected	Enlarged

4. Student 'Ammalu' conducted an experiment and find the focal length of symmetric convex lens.

Object distance(u)	**Image distance(v)**
60 cm	20 cm
30 cm	30 cm
25 cm	37.5 cm
20 cm	60 cm

a) What is the focal length of the convex lens?
b) What is the radius of curvature of the lens?
c) To get virtual image, at what distance should keep the object from the lens?
d) When object distance is 10 cm, where will image formed?
e) Find the magnification of the lens when object is kept at 20cm?
f) Which formula do you use to obtain focal length of the convex lens?
g) What are the characteristics of the image when object is placed at 30cm

5. Observe the figure and answer the questions



a) What type of eye defect indicates this figure?
b) In the figure, M stands for?
c) Define far point?
d) Which lens is used to correct this eye defect?
e) Draw the symbol of used lens?
f) What is the another name of this eye defect?
g) If the person suffering from this eye defect , what is the focal length of the eye lens?
h) Are the focal lens of the used lens is positive or negative?

6. 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

7. Amrutha conducted an experiment and her record the values of V and I are given below

Potential difference(v) volt	**Current(I) amp**
3	1
4.5	1.5
6	2
7.5	2.5
9	3

a) V/I= ?
b) What is resistance of the resistor used?
c) Does the used resistor is Ohmic or non Ohmic conductor?
d) If the potential difference is 15 volt, then what will be the current in the resistor?
e) What is shape of V-I graph of Ohmic conductor
f) Write the relation between V and I

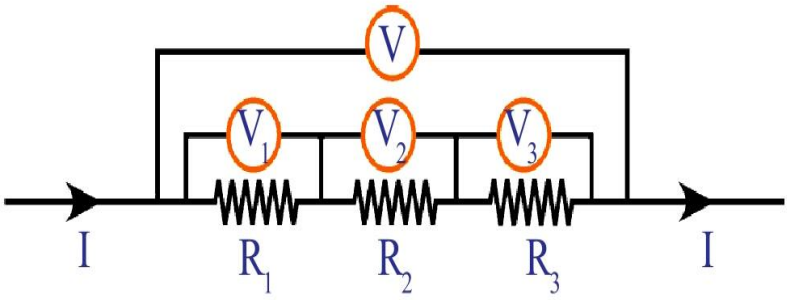
8. Observe the table and answer the questions

Material	**$\rho_{(\Omega\text{-m})}$ at 20 °C**
Silver	1.59×10^{-8}
Copper	1.68×10^{-8}
Gold	2.44×10^{-8}
Aluminium	2.82×10^{-8}
Calcium	3.36×10^{-8}
Tungsten	5.60×10^{-8}
Zinc	5.90×10^{-8}
Nickel	6.99×10^{-8}
Iron	1.00×10^{-7}
Lead	2.20×10^{-7}
Nichrome	1.10×10^{-6}
Carbon (Graphite)	2.50×10^{-6}
Germanium	4.60×10^{-1}
Drinking water	2.00×10^{-1}
Silicon	6.40×10^{2}
Wet wood	1.00×10^{3}
Glass	10.0×10^{10}
Rubber	1.00×10^{13}
Air	1.30×10^{16}

a) On what factors does the resistivity of material depends?
b) Write the SI unit of resistivity
c) Name the material which act as best conductor?
d) Name the material which is used to make of filament in the electric lamp?
e) Name the material which is used to make the heating elements of irons, toasters ?

f) Name the materials which are used to make diodes, transistors and integrated circuits?
g) Name the two factors on which the resistivity of a substance does not depend?
h) Write the equation to show the relation between resistance and resistivity of the material?
i) Which of the material do not oxidise easily either Nickel or Nichrome
j) Name the metals present in Nichrome?

9. Observe the figure and answer the questions



a) Are all the resistors connected in series or parallel
b) What is the equivalent resistance of the combination of three resistors
c) In this system, which physical quantity is constant
d) If R_1= 2 Ω, R_2= 3 Ω and R_3=6 Ω, then find equivalent resistance

13.Define the following.
1) Faraday's Law 2) Lenz Law

Similar Questions and Important Questions (AS_1)

1. Explain why dogs pant during hot summer days using the concept of evaporation?
2. Write the differences between evaporation and boiling?
3. Why is it difficult to shoot a fish swimming in water
4. Define the following
   a) Refractive index b) Critical angle
5. Write the lens maker's formula and explain the terms in it.
6. The focal length of a converging lens is 20cm. An object is 60cm from the lens. Where will the image be formed and what kind of image is it?
7. Define the following
   a) Dispersion of light b) Scattering of light
8. How do you correct the eye defect Myopia?
9. Write the difference between potential difference and emf
10. What do you mean by electric shock? Explain how it takes place
11. Define the following
    a) Magnetic flux density b) Right hand rule
12. What is neutralization reaction? Give two examples
13. What is nl^x method? How it is useful?
14. What are the limitations of Mendeleeff's periodic table?
15. Define the following
    a) Ionic bond b) Covalent bond
16. Define the following
    a) Roasting b) Calcination
17. What are the general molecular formulae of alkanes, alkenes and alkynes?

14. What is Octet rule ? How do you appreciate role of the Octet rule in explaining the chemical properties of elements ?

Similar Questions and Important Questions (AS_6)

1. What is baking powder? How does it make the cake soft and spongy?
2. Give two important uses of washing soda and baking soda.
3. Comment on the position of hydrogen in periodic table.
4. How do you appreciate the role of electronic configuration of the atoms of elements in periodic classification?
5. How Lewis dot structure helps in understanding bond formation between atoms?
6. What is activity series? How it helps in extraction of metals? (AS6)

7. What is thermite process? Mention its applications in daily life?
8. Where do we use handpicking and washing methods in our daily life? Give examples. How do you correlate these examples with enrichment of ore?
9. How do you appreciate the role of esters in everyday life.
10. How do you appreciate the role of the higher specific heat of water in stabilising atmospheric temperature during winter and summer seasons?
11. What is the reason behind the shining of diamonds and how do you appreciate it?
12. Suppose you are inside the water in a swimming pool near an edge. A friend is standing on the edge. Do you find your friend taller or shorter than his usual height? Why?
13. How do you appreciate the working of ciliary muscles in the eye?
14. Why does the sky sometimes appear white?
15. How can you appreciate the role of a small fuse in house wiring circuit in preventing damage to various electrical appliances connected in the circuit?
16. How do you appreciate Faraday's law, which is the consequence of conservation of energy?
17. Give a few applications of Faraday's law of induction in daily life

SECTION – IV

(ESSAY ANSWER TYPE)

- In this Section-II, Academic standards AS1 and AS_3 Questions should be covered
- Number of Questions-2
- Q.No: 15 coming from Chemistry part (AS_1) and Q.No: 16 coming from Physics part (AS_3)
- Each Question carries 8 Marks
- Total Marks in this Section is 16 Marks

15. How do you following properties change in a group and period ? Explain

A) Atomic radius **B) Ionization energy**

C) Electron affinity **D) Electronegativity**

(OR)

Write about cleaning action of Soap

Similar Questions and Important Questions (AS_1)

1. a) Why does tooth decay start when the pH of mouth is lower than 5.5?
   b) What is neutralization reaction? Give two examples
2. Rainbow is an example for continuous spectrum – Explain
3. Explain the significance of three Quantum numbers in predicting the positions of an electron in an atom
4. State and explain with one example of Aufbau Principle
5. State and explain with one example of Hund's rule
6. State and explain with one example of Pauli's Exclusion Principle
7. Define the modern periodic Law. Discuss the construction of the long form of the periodic table
8. Explain how the elements are classified into s, p, d, f-block elements in the periodic table and give the advantage of this kind of classification
9. Explain the formation of the following molecules using valence bond theory
   a) N_2 b) O_2
10. What is hybridization? Explain the formation of the following molecules using hybridization
    a) $BeCl_2$ b) BF_3
11. Explain the formation of sodium chloride and calcium oxide on the basis of the concept of electron transfer from one atom to another atom
12. Write short notes on froth floatation process?
13. Write short notes on each of the following.
    a) Roasting b) Calcination c) Smelting
14. Distnguish between esterification and saponification reactions of organic compounds.

16. Explain the experimental procedure of finding the specific heat of solid.

(OR)

State Ohms's Laws and explain the activity of prove it.

Similar Questions and Important Questions (AS_3)

1. Suggest an experiment to prove that the rate of evaporation of a liquid depends on its surface area and vapour already present in surrounding air.
2. How do you verify experimentally that sin i/ sin r is constant ? (OR) How do you verify experimentally that the angle of incidence is more than angle of refraction when light rays travel from rarer to denser medium
3. Explain the phenomenon of total internal reflection with two activities.
4. How do you verify experimentally that the angle of refraction is more than angle of incidence when light rays travel from denser to rarer medium
5.
6. How do you find experimentally the focal length of bi-convex lens using UV method
7. How do you verify experimentally that the focal length of a convex lens is increased when it is kept in water ?
8. How do you find experimentally the refractive index of material of a prism.
9. Suggest an experiment to produce a rainbow in your classroom and explain the procedure.
10. How do you verify that resistance of a conductor is proportional to the length of the conductor for constant cross section area and temperature
11. How do you verify that resistance of a conductor is inversely proportional to the cross section area of the conductor for constant length and temperature
12. How can you verify that a current carrying wire produces a magnetic field with the help of an experiment ? (OR) Write the experimental procedure of Oersterd experiment?
13. How do you verify experimentally that the current carrying conductor experiences a force when it is kept in magnetic field ?
14. Explain Faraday;s law of induction with the help of activity

All the best……..

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