

SANSKAR CITY INTERNATIONAL SCHOOL

Class : XII SUMMER VACATION ASSIGNMENT Date :-17.04.2017

Business Studies:

Learn Chapter 1 and 2. Solve the assignment sheet.

Accountancy:

Solve all the examples of 'Issue of share capital' from T.S. Grewal's Book.

Economics:

Unit 1- Introduction and Unit 2- Consumer's Equilibrium and Demand. (NCERT Questions and Answer write in your class work copy)

Physical Education:

1. Draw the fixture of 8, 24, 21, 20, 16 teams by using knockout methods.
2. Draw the fixture of 9, 12, 13 teams by using cyclic method.

English:

Write the answers of Prose 1, 2, 3, and 4 of 'Flamingo' in class work copy and learn.

Chemistry:

p- block elements and coordination chemistry & solution.

Mathematics:

Matrix and determinants. (Assignment sheet)

Informatics Practices :

Assignment sheet.

Physics:

Electric field, Electric Potential, Gauss's Law and uses. All conceptual and objective questions of class 11th.

Biology:

Chapter – 01 -Reproduction in Organism (NCERT Questions and Answer write in your class work copy) (Q.1 to 7)

Practical Completion (Experiment No. – 1 to 19)
Except 14.2 from Comprehensive Lab Manual.

XII SCIENCE CHEMISTRY

1. * Why does PCl_5 fume in moisture, which one PCl_4^+ & PCl_4^- is not likely to exist & why?
2. Why the chemical Reactivity of nitrogen is much less than that of phosphorus.
3. Which is a ^{strong} reducing agent SbH_3 or BiH_3 ?
4. NF_3 is an exothermic compound where as NCI_3 is not.
5. Phosphorus has greater tendency for catenation than nitrogen. why?
- Q6. The N-O bond in NO_2^- is shorter than the N-O in NO_3^- .
7. Tendency to form pentahalides decreases down the group in group 15 of the periodic table why?
8. Mention optimum conditions for the industrial manufacture of Ammonia by Habber process.
9. NH_3 act as good legand. Why?
10. Why does NO_2 dimerise.
11. In the structure of HNO_3 molecule

N-O, No bond (121 pm) is shorter than N-OH bond (140 pm).

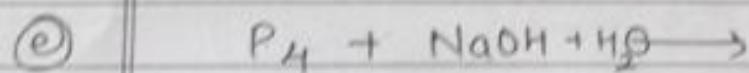
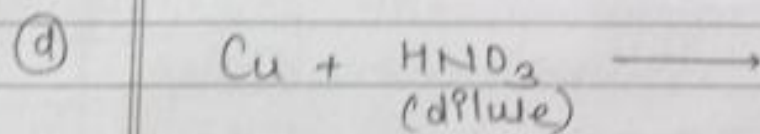
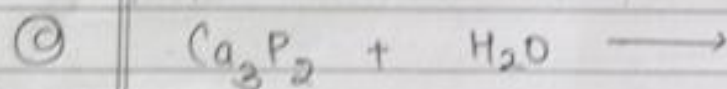
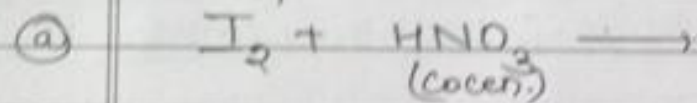
12. Explain the following observation →

(a) The molecule of NH_3 & NF_3 have dipole moment which are opposite direction.

(b) All the bonds in PO_5 molecule are not equivalent.

13. Why is the bond angle of PH_3 is less than NH_3 .

14. Complete the following chemical reaction



15. Oxygen show catenation behaviour less than sulphur.

16. Oxygen is a gas but sulphur is solid.

17Q Draw the structure of $\text{H}_2\text{S}_2\text{O}_7$?

18. SF_6 is kinetically an inert substance.

19. H_2S is less acidic than H_2Te .

20. O_3 act as powerful oxidising agent. Give reason.

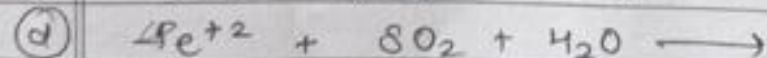
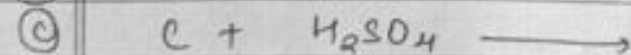
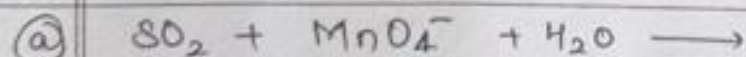
21. All the bonds in SF_6 are not equivalent

22. Why are the S-O in SO_2 molecule of equal strength.

23. Oxygen molecule has the molecular formula of O_2 while sulphur has S_8 .

24. Describe the favourable condition for the manufacture of sulphuric acid by contact process.

25. Complete the following reaction -



26. Name the two poisonous gases which prepared from chlorine.

27. Fluorine does not exhibit positive oxidation state.

28. Give reason for the following :

(a) F_2 is more reactive than ClF_3 , but UF_6 is more reactive than U_2 .

(b) F_2 is more reactive of all the four common halogens.

(c) Why does chlorine does not play the role of central atom in interhalogen compound.

29. How does would you account for the following?

(a) Oxidising power of Oxa-acids of chlorine
 $HClO_4 < HClO_3 < HClO_2 < HClO$.

(b) Decreasing acidic strength of acid —
 $PH_3 < H_2S < HCl$

(c) Arrange the following in order of increasing acidic strength.
 HCl, HBr, HF, HI .

30. How are interhalogen compound formulated & how are they prepared.

31. UF_6 molecule has T-shaped structure & not a trigonal planar one.

32. Iron dissolve in HCl to form $FeCl_2$ but not $FeCl_3$.

33Q Draw the structure of following -
 ClF_3 , $HClO_4$, $HClO_3$.

34. What inspired Anbriahett for carrying out the reaction between Xe & PtF_6 .

35. Helium & has no real chemical compound. Why?

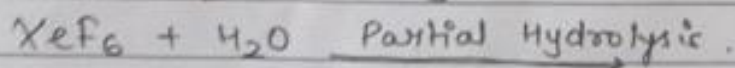
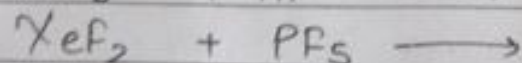
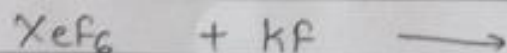
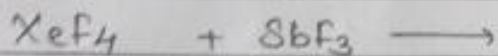
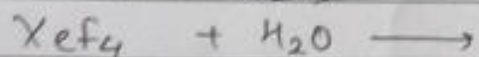
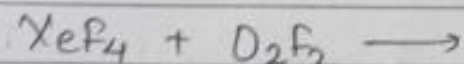
36. Write the formula of & structure of Nobel gas species which are isostructural with ICl_4^- , BO_3^- .

37. Draw the structure

* XeF_4 , XeF_4 , $XeOF_4$, XeO_3 .

38. XeF_2 is linear molecule without a bent.

39. Complete the following chemical reaction -



40. Write the chemical reaction for obtaining XeO_3 & XeOF_4 from XeF_6
41. Explain most of the transition metal; exhibit characteristic colour.
42. Transition metal & their compounds are generally show paramagnetic behaviour.
43. How would you account for the following
 $E^\circ \text{M}^{2+}/\text{M}$ for copper is (+ve) $[0.34 \text{ V}]$
Copper is the only metal in the 1st series of transition metal showing this behaviour.
44. Cu^{+2} is a strong reducing agent where Mn^{3+} with the same d^4 configuration is an oxidising agent.
45. Why the enthalpy of atomization is are quite high.
46. How would you account.
- (a) Transition metal exhibit variable oxidation state.
 - (b) Transition metal & their compound act as catalyst.
 - (c) Zn is not regarded as a transition metal.
 - (d) Many of the transition metal are known to form interstitial compound.
 - (e) Cu^{2+} ion not known in aqueous soln.



SANSKAR CITY INTERNATIONAL SCHOOL

Session (2017-18)

Class :
Subject : Chemistry

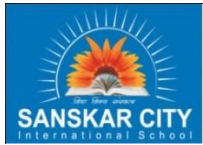
Worksheet No. :- 02
Chapter :

Date :- 21-04-2017

Topic : "Solution"

1. Write two limitations of Raoult's law.
2. Sodium Chloride solution freezes at lower temp. than water but boils at higher temp. than water. Why - ?
3. H_2S a toxic gas with rotten egg like smell is used for qualitative analysis. If solubility of H_2S in water at S.T.P. is 0.195. Calculate Henry's law constant.
(Ans 285.9 bar)
4. Which will have higher boiling point 0.1M NaCl, 0.1M $CaCl_2$
5. Why is molality considered better for expressing concentration of solution than molarity, ?
6. What is molal elevation constt. or ebullioscopic constant ?
7. Boiling point of water at 750 m.m.Hg is $99.63^\circ C$. How much sugar is to be added to 500gm. of water such that it boils at $100^\circ C$
(Ans. 121.7 gm)
8. Concentrated nitric acid used in the laboratory work is 68% nitric acid by mass in aq. solution. What should be molarity of such sample of acid. if the density of solution is 1.504 gm mL^{-1}
(Ans. 16.24 M)

21/4/17



SANSKAR CITY INTERNATIONAL SCHOOL

Class : XII SUMMER VACATION ASSIGNMENT Date :-17.04.2017

Business Studies

- Q.1. In order to achieve target production of 5,000 units per month, a Production Manager has to operate on double shifts. Due to power failure most of the time, the manager is able to achieve 5,000 units, but at a higher production cost .In your point of view, what is lacking in management?**
- Q.2. ‘In an organization employees are happy and satisfied, there is no chaos and the effect of management is noticeable’. Which characteristics of management is highlighted by this statement?**
- Q.3. MC Donald’s ,the fast food giant made major changes in its menu to be able to survive in the Indian market .Which characteristics of management is is referred to ?**
- Q.4. Your grandfather has retired as the director of a manufacturing company. At what level of management was he working?**

OR

Your grandfather has retired as the director of a manufacturing company. At which level of management was he working?

Different types of functions are performed at this level. State any one function.

- Q.5. Your grandfather has retired from an organization in which he is responsible for implementing the plans developed by the top management .At which level of management was he working. State any one function performed at this level.**
- Q.6. At which level of management are the managers responsible for maintaining the quality of output and the safety standards?**
- Q.7. Name the level of management at which the managers are responsible for implementing and controlling the plans and strategies of the organization.**
- Q.8. Why is management called inexact science?**
- Q.9. Karan Enterprise Limited is facing a lot of problems .It manufactures pens. It is suffering losses due to surplus production of pens. The production department produces more of pens than required and sales department is not able to sell those many pens. What quality of management do you think the company is lacking?**

Q.10. Raman is working as “plant superintendent” in Tifco ltd. Name the managerial level at which he is working? State any 4 functions he will perform as “start plant superintendent” in this company.

HOTS

Q.11. In which two functions do manager at the top level spend more time than managers at lower level of the organization?

VALUE BASED

Q.12. Nishita is the marketing manager of a company selling laptops she has 6 subordinated working under her. On the last day of every month she rewarded the efficient employees to motivate them.

Name the values which an organization inculcates among its employees when it promotes efficiency

Q.13. Kushal ltd is a leading automobile company in which the various departments are setting up their own objectives without paying any interest to the organizational objectives name the values which are ignored by the departmental heads and the impact of it on the organization.

Q.14. A cloth manufacture distributes its defective product at free of cost after getting them repaired from nari niketan at lower cost to an orphanage which values are being attested in this solution.

1. If $A = \begin{bmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$, find A^3 .

2. If $A = \begin{bmatrix} 3 & 0 & -1 \\ 2 & 3 & 0 \\ 0 & 4 & 1 \end{bmatrix}$, then find $|\text{Adj}(\text{Adj} A)|$.

3. If $A = \begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$ verify that $A^{-1} = A^3$

~~$A^3 - A^2 + 3A$~~

4. If $A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & 1 & 2 \end{bmatrix}$ verify that

$A^3 - 6A^2 + 9A - 4I = 0$ and hence find A^{-1}

5. Solve the equation by matrix method

$x + 2y + z = 7$; $x + 3z = 11$, $2x - 3y = 1$.

6. If $A = \begin{bmatrix} 0 & 2x & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A^T = A^{-1}$

find x, y, z

7. Let $A = \begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$ and $f(x) = x^2 - 4x + 7$, show that

$f(A) = 0$ use this result to find A^{-1}

8. find A^{-1} by ERO

$A = \begin{bmatrix} 1 & 3 & -2 \\ -3 & 0 & 1 \\ 2 & 1 & 0 \end{bmatrix}$

①. $x \neq y \neq z$ and $\begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix} = 0$ then prove

that $xyz = -1$.

② Using properties of determinants, show that

$$\begin{vmatrix} 1 & a & a^2 - bc \\ 1 & b & b^2 - ca \\ 1 & c & c^2 - ab \end{vmatrix} = 0$$

3. show that

$$\begin{vmatrix} (b+c)^2 & ba & ca \\ ab & (c+a)^2 & cb \\ ac & bc & (a+b)^2 \end{vmatrix} = 2abc(a+b+c)^3$$

4. Solve the equation

$$\begin{vmatrix} a+x & a-x & a-x \\ a-x & a+x & a-x \\ a-x & a-x & a+x \end{vmatrix} = 0$$

5. $\begin{vmatrix} a^2+1 & ab & ac \\ ab & b^2+1 & bc \\ ca & cb & c^2+1 \end{vmatrix} = 1+a^2+b^2+c^2$

6. $\begin{vmatrix} x+a & b & c \\ a & x+b & c \\ a & b & x+c \end{vmatrix} = 0$

Sanskar City International School, Rajnandgaon

Date-17-04-17

Summer Assignment Class-12th

Subject-IP

1. (a) Write code in Java that takes principal, rate, and time as input from textfields and displays simple interest.

2. (a) How many times the following while loop get executed?

```
int p=5;
int q=36;
While (p<=q)
{
    p+=6;
}
```

3. (a) What will be the values of variables 'm' and 'n' after execution of the following code?

```
int m, n=0;
For (m=1; m<=4; m++)
{
    N+=m;
    N--;
}
```

4. (a) What will be the values of variables agg and agg1 after the execution of the following loops?

Loop 1

```
int a=9, agg=9;
while (a>10)
{
    agg+=a;
    a-=2;
}
```

Loop 2

```
int b=9, agg1=0;
do
{
    agg1+=b;
    b-=2;
} while (b>10);
```

5. (a) What will be displayed in `TextArea1` after the execution of the following code :

```
int G=1;
do
{
    JTextArea1.setText(Integer.toString(G++));
    G=G+1;
}while(G<=5);
```

6. (a) Give the output of the following Java code :

```
String name="Chennai Express";
int TM=name.length(), TN;
TN=80-TM;
JTextField2.setText(Integer.toString(TM));
JTextField3.setText(Integer.toString(TN));
```

7. (a) Write the value of `z` after execution of following code :

```
int j;
int z;
j=4;
z = (4*++j)%3;
```