XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018-19

Class: IX   **F.M-80**

Sub:- Chemistry   **Time: 2 hrs.**

Section- A (Attempt all questions)

1. Name the following:-   (1×5=5)
   i. The process by which oxygen is released in the atmosphere.
   ii. Solvent for sulphur.
   iii. Metal which reacts reversibly with steam.
   iv. A colourless gas having burning sulphur smell which turn lime water milky.
   v. A liquid non metal.

2. How are the following mixture separated? (Name the technique only)
   i. Carbon tetrachloride and water.
   ii. Ammonium chloride and saw dust.
   iii. Pigments of leaf
   iv. Sulphur and water
   v. Salt and water.

3. Balance the following equations:-   (1×5=5)
   i. $Fe + O_2 \quad\quad Fe_2O_3$
   ii. $C_2H_6 + O_2. \quad\quad CO_2 + H_2O$
   iii. $P + HNO_3. \quad\quad H_3PO_4 + NO_2 + H_2O$
   iv. $NaCl + MnO_2 + H_2SO_4 \quad\quad NaHSO_4 + MnSO_4 + H_2O + Cl_2$
   v. $NH_3 + Cl_2 \quad\quad NCl_3 + HCl$

4. Salt 'A' on heating gives a reddish brown coloured gas 'B', a colourless odourless gas 'C' and a residue D yellow when hot& white when cold.   (3+1+1=5)
   i. identify A,B,C and D
   ii. Give equation for the above reaction.
   iii. Give confirmatory test of gas B & gas C

5. State the type of chemical reaction-   (1×5=5)
   i. $NaOH + HCl \quad\quad NaCl + H_2O$
   ii. $BaCl_2 + H_2SO_4 \quad\quad BaSO_4 + 2HCl$
   iii. $2Fe + 3Cl_2 \quad\quad 2FeCl_3$
   iv. $2PbO_2 \quad\quad 2PbO + O_2$
   v. $PCl_5 \quad\quad PCl_3 + Cl_2$

6. (a)State which is the following are oxidized or reduced.   (1×3=3)
   i. $Cu^{2+} \quad\quad Cu$
   ii. $S^{2-} \quad\quad S$
   iii. $Fe^{+3} \quad\quad Fe^{2+}$

   (b) What is the valency of underlined element in the following.   (1×2=2)
   i. Na_2So_4
   ii. $FeCl_3$

7. Fill in the blanks. (1×5=5)
   i. When zinc carbonate is heated the residue is _____which is _____ when hot.
   ii. Heating of camphor is a_____change.
   iii. When a piece of calcium is dropped in water, it becomes cloudy after sometimes due to the formation of _____.
   iv. When sodium nitrate is heated the _____ gas is evolved.

8. Study the table given below and answer the following questions:- (1×5=5)

Element	Mass no.	Atomic no.
A	1	1
B	14	7
C	40	20
D	32	16
E	20	10

   i. Identify an element having 5 valence electrons.
   ii. Identify an element having no neutron.
   iii. Identify an element exhibiting +2 valency.
   iv. Identify an element having zero valency.
   v. Identify an element exhibiting -2 valency.

Section 'B' 40 marks
Attempt any 4 sets of questions.
All questions carry equal numbers of marks.

1) (a) A gas occupies a volume of 300cm^3 under a pressure of 350 mm of Hg, Find under
   what pressure of the gas, it occupies a volume of 380cm^3 the temperature during the
   reaction remains constant. (3)
   (b)How does barium chloride solution help in distinguishing between sodium sulphite
   and sodium sulphate. (3)
   (c) Define compounds ? Give two characteristics of compounds. (3)
   (d) Name the elements present in group 1 and period 2. (1)

2) (a) What are the major causes of the depletion of ozone layer? Write any three. (3)
   (b) State modern periodic law . Arrange the elements of halogen family in the increasing
   order of the number of shells. (3)
   (c) What is redox reaction? State which of the following are oxidized or reduced.
   Write Oxidising and reducing agent. (4)

   $ZnO+CO \qquad Zn+CO_2$

3) (a) The volume of a Certain gas at constant temperature was found to be 1200 cm^3
   When the pressure is 1000 mm of Hg.
   If the pressure is decreased by 30%, find the new volume. (3)
   (b) Give three equations for the formation of nitric acid in rain water . (3)
   (c) Compare the properties of metal & non-metals on the basis of. (4)
      i. Atomicity
      ii. Physical state
      iii. Electrical conductivity
      iv. Ductility

4) (a) How will you show that thermal decomposition of calcium carbonate is in accordance with the law of conservation of mass ? (3)

(b) Define water of crystallization? Give 2 example of efflorescent salt. (3)

(c) Sodium chloride is neither hygroscopic nor deliquescent but common salt become wet during rainy season. Why? (3)

(d) Convert -273°C into kelvin. (1)

5) (a) What is the atomicity of the following elements? (1×4=4)
   i. Sulphur
   ii. Chlorine
   iii. Phosphorus
   iv. Helium

(b) Choose the odd one from the following. (1×4=4)
   i. He, Ne, Cl, Ar
   ii. Li, Na, K, Ca
   iii. Cl, Br, At, O
   iv. B, Al, Ga, S

(c) A metal 'M' having valency +2. What is the formula of its. (1×2=2)
   i. Bbicarbonate
   ii. Permanganate

6) (a) Define exothermic and endothermic reaction. (2)

(b) What is the chemical formula of the following compounds? (4)
   i. Calcium phosphate
   ii. Magnesium sulphite
   iii. Acetic acid
   iv. Ethyl alcohol

(c) State Charles law of gases. Convert. – 100 k into °C (3)

(d) What is the chemical name of Blue vitriol. (1)

XAVIER SCHOOL, GAMHARIA
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Class: IX   **F.M-100**
Sub:- Computer Application   **Time: 2 hrs.**

General Instructions

- This question paper is divided into two sections.
- Attempt all questions from Section A and any four questions from section B.
- The intended marks for questions or parts of questions are given in brackets [ ].

Section A (40 Marks)
Attempt all questions.

Question 1   **[5x2=10]**

(a) What are comments? Explain these along with their types.
(b) Why a class is called a factory of objects?
(c) What do you understand by the term data abstraction? Explain with an example
(d) Write one difference between **/ and %** operator.
(e) State one similarity and one difference between while and for loop.

Question 2   **[5x2=10]**

(a) What does nested loop mean? In what situation can it be used?
(b) What are identifiers? Write any two **invalid** identifiers.
(c) What is the use of ternary operator and write an expression to find the smallest number between two numbers using ternary operator.
(d) Write ASCII code of 'D' and 'g'.
(e) Write the expression for given java code.

(i) $y = \sqrt{2as + u^2}$ **(ii)** $y = \dfrac{(a+b)^n}{\sqrt{4}+b}$

Question 3

                                                                                  [10x2=20]
(a) **What are the values stored in variables r1 and r2:**

        i) double r1 = Math.abs(Math.min(-2.83,-5.83));
        ii) double r2 = Math.sqrt(Math.floor(16.3));

(b) **Analyze the following program segment and determine how many times the body of loop will be executed (show the working).**

```
x = 5; y = 50;
while(x<=y)
{
   y=y/x;
   System.out.println(y);
}
```

1

(c) Arrange the following primitive data types in an ascending order of their size:

(i) char   (ii) byte (iii) double   (iv) int

(d) Give the output of the following code segment when

(i)   opn = 'b'   (ii) opn = 'x'   (iii) opn = 'a'.

```
switch(opn)
{
        case 'a':
        System.out.println("Platform Independent");
        break;
        case 'b':
        System.out.println("Object Oriented");
        case 'c':
        System.out.println("Robust and Secure");
        break;
        default:
        System.out.println("Wrong Input");
}
```

(e) Give the output of the following program segment and also mention how many times the loop is executed:

```
int i;
for(i = 5; i > 10; i++)
System.out.println(i);
System.out.println(i * 4);
```

(f) Identify the literals listed below:

(i) 0.5   (ii)'A'   (iii) false   (iv) "a"

(g) Evaluate the value of n if the value of p=5, q=19.

```
int n = (q-p) > (p-q) ? (q-p) : (p-q);
```

(h) Convert the following while loop to the corresponding for loop :

```
int m = 5, n = 10;
while (n>=1)
{
        System.out.println(m*n);
        n - -;
}
```

(i) Analyze the given program segment and answer the following questions

```
for(int i=3;i<=4;i++)
{
for(int j=2;j<i;j++)
{
System.out.print(" ");
}
System.out.println("WIN");
}
```

   1) **How many times does the inner loop execute?**
   2) **Write the output of the program segment.**

(j) What is the value of y after evaluating the expression given below?

y - = ++y + y-- + –y;
when int y = 8.

Section B (60 Marks)
Attempt any four questions from this section.

Question 4 [15]

Using the switch statement, write a menu driven program to

(i) Generate and display the first 10 terms of the Fibonacci series 0,1,1,2,3,5….The first two Fibonacci numbers are 0 and 1, and each subsequent number is the sum of the previous two.

(ii)Find the sum of the digits of an integer that is input.
Sample Input: 15390
Sample Output: Sum of the digits=18

for an incorrect choice, an appropriate error message should be displayed

Question 5 [15]

Write two programs to generate the following patterns using loop statements.

1.
```
*
*  #
*  #  *
*  #  *  #
*  #  *  #  *
```

2.
```
1   2   3   4   5
6   7   8   9
10  11  12
13  14
15
```

3

Question 6 **[15]**

Write a program to accept a number and check and display whether it is a Niven number of not. (Niven number is that number which is divisible by its sum of digits).

Example:
Consider the number 126.

Sum of its digits is 1 + 2 + 6 = 9 and 126 is divisible by 9

Question 7 **[15]**

Given below is a hypothetical table showing rates of Income Tax for male citizens below the age of 65 years:

Taxable Income (TI) in	Income Tax in
Does not exceed 1,60,000	Nil
Is greater than 1,60,000 and less than or equal to 5,00,000	(TI – 1,60,000) * 10%
Is greater than 5,00,000 and less than or equal to 8,00,000	[(TI - 5,00,000) *20%] + 34,000
Is greater than 8,00,000	[(TI - 8,00,000) *30%] + 94,000

Write a program to input the age, gender (male or female) and Taxable Income of a person. If the age is more than 65 years or the gender is female, display "wrong category".

If the age is less than or equal to 65 years and the gender is male, compute and display the Income Tax payable as per the table given above.

Question 8 **[15]**

Write a program to accept a number and check whether a given number is twisted prime number or not.

A number is called a twisted prime number if it is a prime number and reverse of this number is also a prime number.

Examples: 11, 13, 17, 31, 37, 71, 73, 79

Question 9 **[15]**

Write a Program in Java to find the sum of the series, taking the value of 'a' and 'n' from the user.

$$S = 1 + \frac{a^2}{1!} + \frac{a^3}{2!} + \frac{a^4}{3!} + \text{............................ to n}$$

(Where ! stands for factorial of the number and factorial value of a number is the product of all integers from 1 to that number, example 5! = 1 x 2 x 3 x 4 x 5 = 120).

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Class: IX **F.M-80**

Sub:- English Language **Time: 2 hrs.**

Q.1. Write a composition not exceeding 350 words on any one of the following topics. (20)
    a. Tradition is an obstacle to progress. Give your views for or against the topic.
    b. Imagine you are an acrobat in a famous circus. Describe a typical day in your life.
    c. My greatest fear.
    d. Write a story that clearly brings out the theme-Necessity is the mother of invention.

Q.2.
    a. Your friend from Mumbai has never been to a typical Indian village fair.
      Write a letter to him describing one such annual fair that takes place in your locality. OR
    b. Write a letter to the editor of a newspaper highlighting the problems caused
      by anti-social people in your area. (10)

Q.3.
    a. Write a notice for students of senior classes informing them about the beginning of
      music classes in your school. (5)
    b. Compose an email to a well-known personality of your town inviting him to be the
      chief guest at the inauguration of the new music classes in your school. (5)

Q.4. A. Read the passages given below and answer the questions that follow them:

Adoption means establishing a bond between a couple (the adopters) and a child (the adoptee) which is legal, socially and morally equivalent to that between parents and their biological children. The adoptive couples assume the same rights and responsibilities in relation to the child as in a biological relationship and so does the adopted child towards his adoptive parents.

Adoption has been prevalent in India since ancient times. However, until the recent past, it has been mainly to fulfil the needs of the parents, i.e. to have a male child to perform the last rites or to acquire an heir to inherit the family name and property. Childless couples or those without a male child usually adopted a child from their own extended family or at least belonging to their own caste and community. The child's needs were secondary, although usually, a strong parent-child bond did develop.

Today, when a couple decides to adopt, the above reasons continue to be a major motivating factor. Almost equally potent is the desire to avoid the stigma attached to barrenness. However, more couples are now having reservations about adopting a child whose parents are known to them and are instead seeking children about whose background they may have little or no information. This is to avoid divided loyalties and possible interference in the care and upbringing of the child they adopt.

While India continues to have a high birth rate, there are also thousands of couples who are childless. In their desperation to become parents, they go from pillar to post and frequently spend thousands of rupees in trying out various methods like in vitro fertilisation, which still have a very low success rate. Many approach hospitals and private nursing homes and with the active assistance of medical and other staff, obtain unwanted children born therein, often clandestinely. Unfortunately, not many people seem to be aware of the existence of destitute children in institutions, languishing for want of a loving home, or that there are competent child welfare organisations which can help them to fulfil their desire for a child at the same time ensuring that their interests and those of the child are fully protected from all angles, including the important aspect of confidentiality. Details about such organisation are available with the State Department of Directorate of Social Welfare, and couples seriously considering adoption would do better to approach only such organisations rather than depending on the dubious and unreliable assistance of unauthorized persons in hospitals and nursing homes.

    i.   What is adoption? (2)
    ii.   Till recent times, what was the primary reason for adopting a child in India? (2)
    iii.   Why are most couples reluctant to adopt children of parents known to them? (2)
    iv.   What do many childless couples do when they are desperate to have a child of their own?
        (two points) (2)
    v.   Why is it better to adopt children only from competent and authorized institutions? (2)

B. In 60 words summarise the reasons why couples are keen on adopting a child in India and the measures they take to do so. Give a title to your précis and justify it.   (8+2)

Q.5. A. Fill in the blanks with a suitable word.   (4)
   i.   Sonia is overwhelmed _____ grief.
  ii.   Only graduates are eligible _____ the post.
 iii.   The climate of Kashmir does not agree _____ me.
  iv.   She was offended _____ his rudeness.

B. Join the sentences without using and, but or so.   (4)
   i.   The thief escaped. It was very dark.
  ii.   It rained heavily. The football match was cancelled.
 iii.   Answer the first question. You proceed further.
  iv.   Susan lost her book. Her mother scolded her.

C. Do as directed.
   i.   I like reading. I like sewing more. (Rewrite using would rather….than)
  ii.   I finished my work. I went home. (Begin: Having…)
 iii.   Frank is successful in life but is not proud. (Begin: Despite….)
  iv.   She carries a pen and paper with her at all times to take notes. (Rewrite using so...that)
   v.   We will not have the party if you cannot join us. (Rewrite using unless)
  vi.   Donna will not donate blood. All other students will. (Begin: Except...)
 vii.   She wore a mask. It prevented others from recognizing her. (Begin: To…)
viii.   We rushed over to our grandparents' home when we heard the news. (Begin: As soon as….)
  ix.   I grew up on this farm. (End……up)
   x.   You can use this room until someone wants to use it. (As long as …..)
  xi.   We had fun walking through the forest even though it was hot. (Begin: Despite…)
 xii.   You will be late. You have to take a taxi. (Join using 'unless')

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Class: IX   **F.M-80**
Sub:- English Literature   **Time: 2 hrs.**

General instructions
* Answer to this paper must be written on the paper provided separately
* You will not be allowed to write during the first 15 minutes
* This time is to be spent in the reading of the question paper
* Attempt five questions in all from only three text books.
* You must attempt at least one question from each of the sections A,B and C and
  not more than two other questions from the same book you have
  already compulsorily chosen.
* The intended marks for the question or parts of the question are given in Brackets ( )

Section 'A' - Drama
The Merchant of Venice : Shakespeare

Q1. Read the extract given below and answer the question that follow:

Salarino : O! ten times faster Venus' pigeon's fly to seal love's bonds new-made, then
they are wont
To keep obliged faith unforfeited!
Gratiano: That ever holds: who riseth from a feast would that keen appetite that he sits down?
where is the horse that doth untread again
His tedious measures with the unbated fire
that he did pace them first? All things that are,
Are with more Spirit chased than enjoy'd.

(1) Where does this scene take place? Who is being waited for? What is the basic
    characteristics of lovers they wish to highlight?   3
(2) Who are Venus' pigeons? How do the Venus' pigeons behave as far as love is concerned?   3
(3) Which fact is discussed by giving the example of a ship?   3
(4) How does Gratiano explain in the extract the state of people in love?   3
(5) How will Jessica participate in the masquerade? What does she have to say regarding this?
    What is your opinion of Jessica?   4

Q2. Read the extract given below and answer the question that follow:

Antonio : Content , i'faith : I'll seal to
such a bond ,
And say there is much kindness in the Jew.
Bassanio : You shall not seal to such a bond for me:
I'll rather dwell in my necessity.
Antonio : Why ,fear not, man; I will not forfeit it:

(1) Where are Antonio and Bassanio? Why are they there?   3
(2) Who is the Jew? What does Antonio mean when he says "And say there is much
    kindness in the Jew"?   3
(3) Why is Antonio so confident that he would not forfeit the bond?   3

(4) How does Bassanio react to Antonio's willingness to seal the bond?   3
(5) What does the word 'bond' mean here? what is demanded in the bond?   4

Q3. Read the extract given below and answer the question that follow:
Shylock: Lock up my doors; and when you hear the drum
and the vile squeaking of the
wry - neck'd Fife,
Clamber not you up to the casements then,
Nor thrust your head into the public street.
To gaze on Christian fools with vamish'd faces;
But stop my house's ears, I mean my casements:
Let not the sound of shallow foppery enter
My Sober house.

(1) To whom are these instructions given? Who are the "Christian fools with varnish'd faces?   3
(2) Where is the speaker going? Why? Who has come to invite him?   3
(3) What does the speaker mean by the sound of shallow foppery? What premonition he
     has earlier?   3
(4)What further instructions does Shylock proceed to give his daughter?   3
(5) Does his daughter follow the advice given to her? If not, why?   4

 Section 'B'- Poetry

Answer one or more questions from this section
A collection of poems
Q4. Read the extract given below and answer the question that follow:

`With fire and sword the country round

Was wasted far and wide,
And many a childing mother then,
And new-born baby died;
But things like that you know must be
At every famous victory.

(1) Where did Kaspar's father live during the war? How did he suffer?   3
(2) What is meant by 'wasted far and wide'?   3
(3) What does the reference 'a childing mother' signify?   3
(4)Was it very uncommon? Quote the line to support your answer.   3
(5)What cost did the people pay for the 'great victory' in the poem, 'After Blenheim'?   4

Q5. Read the extract given below and answer the question that follow:

Bangles sellers are we who bear
Our shining loads to the temple fair.....

Who will buy this delicate, bright
Rainbow - tinted circles of light ?

Lustrous tokens of radiant lives,
For happy daughters and happy wives.

(1) Who is the narrator of the poem? What does the `bangle seller` tell about his lot?   3
(2) Give the words or phrases used to describe the bangles. Who are the prospective buyers?   3
(3) Which coloured bangles do the maidens wear? Describe the comparison.   3
(4) Explain the line Lustrous token off radiant lives'.   3
(5) The colors of the bangles are associated with the life of a girl getting married.
Explain their significance.   4

Q6. Read the extract given below and answer the question that follow:

The last man of his forlorn group
Did naught except for gain.
Giving only to those who gave
Was how he played the game ?
Their logs held tight in death's still hands
Was proof of human sin?
They did not die from the cold without
They died from the cold within.

(1) What game does the poet refer to? Who plays the game? How?   3
(2) Why does the poet refer the group as a 'forlorn group'? Name the poem and the poet.   3
(3) What proof do they provide regarding the human sin?   3
(4) Give the meaning of –
   (a) in store   (b) shiftless   (c) bespoke   3
(5) According to the poet, what is the reason behind their death?   4

 Section 'C' - Prose
Answer one or more questions from only one of the following books that you have studied:
A Collection of short stories
or
Animal Farm
or
Call of the wild

Q7. Read the extract given below and answer the question that follow:
   "What are you doing out here, boy? asked Mr. Oliver."

(1) Who is the boy Mr. Oliver is talking to? What was the boy doing?   3
(2) How was the boy weeping? Why did Mr. Oliver talk to him sharply?   3
(3) Why does the author say "if you could call it a face"?   3
(4) What was the reaction of Mr. Oliver when he saw the boy's face?   3
(5) Describe the uncanny climax of the story.   4

Q8. Read the extract given below and answer the question that follow:
"There were not so many carts now and very few people on foot, but the old man was still there".

(1) Who is the speaker in the about extract? Where is he? what duty is he assigned?   3
(2) Where are the carts and the people going? Why? Where is the old man sitting?   3
(3) Why doesn't the old man move? what is he wearing?   3
(4) What made the old man smile? Why did he leave his town and animals?
   Why was he worried now?   3
(5)Describe the scene at pontoon bridge?   4

Q9. Answer the following questions with reference to R K. Narayan's story
A Horse and the Two Goats' :

(1) Describe The Village 'Kritam'. What is the irony about it? How was Muni related to 'Kritam'?   4
(2) Compare the relationship between Muni and his wife and relationship between
The American and the wife.   4
(3) Examine how cross cultural differences bring out humour in the story
'A Horse and Two Goats'.   8

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Class: IX   **F.M-80**
Sub:- Geography   **Time: 2 hrs**

SECTION: A (30 Marks)
All question from this part is compulsory.

Q1. Answer the following questions: (20)

    a. Why are lines of latitudes are called parallels.   (2)
    b. Why does the earth have optimum temperature condition?   (2)
    c. What are ocean currents?   (2)
    d. What is meant by the term hydrosphere?   (2)
    e. Mention two features of ozone layer.   (2)
    f. Why does only 51percent of the insolation reach the earth's surface? (2)
    g. With the help of a diagram explain orographic rainfall.   (2)
    h. i. Mention two non biodegradable pollutants.   (1)
       ii. Mention two suspended impurities of fresh water pollution.   (1)
    i. What is acid rain?   (2)
    j. What do you understand by marine water pollution.   (2)

Q2. On an outline of the world mark the following;   (10)

    a. Andes mt. range
    b. Ural mountain
    c. Brazilian highland
    d. Deccan plateau
    e. Mongolian plateau
    f. Gulf stream
    g. Okhotok current
    h. Japan sea
    i. Gulf of Maxico.
    j. Oyashio current

SECTION: B (50 Marks)
Attempt any five questions from this part.

Q3.a. Why is only one side of the moon is visible from the earth?   (2)
  b. How is the local time of a place fixed?   (2)
  c. Give reason: "There is no higher latitude than 90˚S and 90˚N " .   (3)
  d. i. What causes light flattening of the earth at the poles?   (1)
    ii. State two effects of west two east rotation of the earth.   (2)

Q4.a.What do you mean by the crust of the earth?   (2)
  b. What causes orogenic movements?   (2)
  c i. Distinguish between Igneous rocks and Sedimentary rocks.   (1)
    ii. Why are sedimentary rocks also called the secondary rocks?   (2)
  d. i. How is a crater formed?   (1)
    ii. Mention two effects of Earthquakes.   (2)

Q5.a.Mention any four factors that determine the circulation pattern of ocean currents. (2)

b. State any two features of Gulf Stream. (2)

c. Give reasons why are the coast of Newfoundland dangerous for navigation. (3)

d. Mention three effects of ocean currents. (3)

Q6.a.What is the Coriolis effect? (2)

b. Why does the Alaskan coast remain ice free in winter? (2)

c. In Asia, Japan is the largest exporter of fishes. Explain. (3)

d. Why is the water of South Atlantic near 40°S is yellow muddy. (3)

Q7.

a. Mention the importance of ozone layer. (2)

b. State the importance of greenhouse gases. (2)

c. What will be the effect of global warming on the poles? (3)

d. What will be the effect of global warming on coastal regions? (3)

Q8.

a. Explain why temperature varies with latitude. (2)

b. Why are slanting rays less effective in heating the atmosphere than vertical rays? (2)

c. With the help of a diagram explain the slope of a mountain affects the temperature. (3)

d. What is the effect of cloudiness on temperature? (3)

Q9.

a. What do you understand by local winds? (2)

b. Name any two local winds. (2)

c. With the help of a diagram explain the mechanism of monsoon in India. (3)

d. What is convection rainfall? Explain. (3)

Q10

a. What do you understand by pollutants? (2)

b. Mention the natural pollutants. (2)

c. What are the harmful effects of dissolved impurities present in the water? Explain. (3)

d. How can noise pollution seriously harms human and animals life? (3)

Q11.

a. Mention four sources of noise pollution? (2)

b. Name the two manmade sources of radioactive pollution. (2)

c. What are the adverse effects of air pollution on human health? (3)

d. Explain the three preventive measures for environmental pollution. (3)

XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018-19

Class: IX   **F.M-80**
Sub:- Hindi Language   **Time: 3 hrs.**

1. निम्नलिखित में से किसी एक विषय पर लगभग 250-300 शब्दों में निबंध लिखें:   [15]

क) प्रात:कालीन भ्रमण से क्या-क्या लाभ हैं ? क्या आप प्रात:कालीन भ्रमण पर जाते हैं ?
उस समय का दृश्य कैसा होता है वर्णन करें |

ख) नौकरियों में आरक्षण से उत्पन्न होनेवाली समस्या तथा इसके समाधान के उपायों का उल्लेख करते
हुए एक प्रस्ताव लिखिए |

ग) समाचार-पत्र समाज का मापदंड हैं, इस कथन के आलोक में समाचार-पत्रों की उपयोगिता का
वर्णन कीजिये |

घ) 'अभ्यास मनुष्य को परिपक्व बना देता है' इस बात को सिद्ध करते हुए एक कहानी लिखिए |

च) नीचे दिए गया चित्र को ध्यान से देखकर मन में उठनेवाले भावों को किसी घटना या कहानी
के माध्यम से लिखिए –

2. निम्नलिखित में से किसी एक विषय पर पत्र लिखिए जो लगभग 120 शब्दों में हो | [7]

क) आपका मित्र हमेशा बीमार हो जाता है उसे पत्र द्वारा नियमित व्यायाम और योगाभ्यास
करने की सलाह दीजिय |

ख) अपने प्रधानाचार्य को छात्रवृति के लिए आवेदन पत्र लिखिए और उसमें अपने घर की आर्थिक
स्थिति को भी स्पष्ट कीजिए |

3. नीचे दिए गद्यांश को पढकर उसके नीचे लिखे प्रश्नों के उत्तर हिंदी में दीजिए | उत्तर यथासंभव
अपने शब्दों में दीजिए |

प्राचीन काल में विद्यार्थी शहर से अलग गुरुकुल में रहते और समावर्तन संस्कार होने पर ही
घर लौटकर गृहस्थ जीवन में प्रवेश करते | आजकल विद्यार्थी घर पर रहकर भी विद्योपार्जन
कर सकता है और यदि छात्रावास में भी रहता है तो यातायात की सुविधा के कारण घर के
सम्पर्क में अधिक रह सकता है | आधुनिक काल के विद्यार्थी को वह निर्द्वन्द्ता नहीं, जो पहले
के विद्यार्थियों को थी | पहले ज़माने के विद्यार्थियों का शहरी वातावरण से अलग रहने के कारण

प्रकृति से सीधा संपर्क अधिक रहता था।

दूसरा अंतर इस बात का है कि प्राचीन काल का विद्यार्थी सेवा से विद्योपार्जन करता था, आजकल का विद्यार्थी धन से। शिक्षा की झांकी देते हुए गुप्त जी लिखते हैं, "पहले ज़माने में गुरु और शिष्य का आध्यात्मिक और निजी सम्बन्ध होता था।" तभी तो कबीर ने गुरु को गोविन्द से अधिक महत्ता दी है और तुलसी ने गुरु पदपराग को आँखों का अंजन बनाया है। आजकल का विद्यार्थी गुरुओं को अपना क्रीतदास समझते हैं, यहाँ तक कि कवि सम्राट रवीन्द्रनाथ ठाकुर ने अपने आरंभिक शिक्षा काल की गुलाम राज्य से तुलना की है। पहले विद्यार्थी स्वयं को गुरु का दास समझता था। भगवान कृष्ण को भी सुदामा के साथ लकड़ी बीनने जाना पड़ता था। पहले गुरुकुलों में इस सेवावृत्ति के कारण जो साम्यभाव था वह आजकल नहीं है। प्राचीन काल में गुरु सेवा के कारण गुरु के साथ निजी संपर्क का भी प्राचुर्यमय प्रसार था। विद्यार्थी गुरु परिवार का ही एक सदस्य बन जाता था। गुरु कुलपति कहलाते थे। आजकल तो गुरु-शिष्य का सबंध कुछ-कुछ मशीनी हो गया है, विशेषकर ऊँचे दर्जे में, जहाँ पर कि गुरु-विद्यार्थी के दिखाए नोटों पर निर्भर रहता है।

हम यह नहीं कहते कि प्राचीन प्रथा की ही पुनरावृत्ति हो। उसमें थोड़ा दोष भी था कि विद्यार्थियों को संसार का अपेक्षाकृत ज्ञान कम होता था। लेकिन हम अपने विद्यार्थी जीवन में प्राचीन काल की बहुत-सी बातों को अपना सकते हैं; जैसे हम प्रकृति से अधिक मेलजोल बढ़ाएं, गुरु-शिष्य में निजी सबंध स्थापित हो। हमारे विद्यार्थियों में गुरु के प्रति आदर और विनय की भावना बढ़े।

निम्नलिखित प्रश्नों के उत्तर दीजिये। [10]
क) प्राचीन काल और आधुनिक काल के विद्यार्थियों में क्या अंतर है?
ख) पहले ज़माने में शिष्यों और गुरु का कैसा सम्बन्ध था ?
ग) गुरुकुल परम्परा में साम्यभाव क्यों था ? उदाहरण सहित स्पष्ट कीजिये।
घ) आज के विद्यार्थी और गुरु के सम्बन्ध की क्या विशेषता है? उससे क्या हानि होती है?
ङ) लेखक के अनुसार आज के विद्यार्थियों को प्राचीन काल की किन बातों को अपनाना चाहिए और क्यों ?

4. निर्देशानुसार उत्तर दें :
क) किन्हीं दो के विलोम शब्द लिखें : [1]
दूषित , सात्विक , जनहित।
ख) किन्हीं दो के पर्यायवाची लिखें : [1]
सोना , हाथ , हाथी।
ग) किन्हीं दो मुहावरों का अर्थ स्पष्ट करते हुए वाक्य बनाएं : [2]
सब्ज बाग दिखाना , हवा से बातें करना , हाथ खींचना।
घ) किन्हीं दो शब्दों को भाववाचक संज्ञा में बदलिए : [1]
अंत , संक्रमित , व्यवस्थित।
ङ) निर्देशानुसार वाक्य परिवर्तन कीजिये। [3]
i. लेकिन हम अपने विद्यार्थी जीवन में प्राचीन काल की बहुत-सी बातों को अपना सकते हैं।
(प्राचीन काल से वाक्य की शुरुआत करें)
ii. ये लोग आपके पुराने मित्र हैं। आपके ज्यादा काम आएँगे।
(एक ही वाक्य में लिखें)
iii. वह रोता-रोता हँसने लगी।
(वाक्य शुद्ध कीजिये।)

XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018-19

Class: IX   **F.M-80**
Sub:-Hindi   **Time: 3 hrs.**

1. निम्नलिखित में से किसी एक विषय पर लगभग 250-300 शब्दों में निबंध लिखें:   [15]

क) प्रातःकालीन भ्रमण से क्या-क्या लाभ हैं ? क्या आप प्रातःकालीन भ्रमण पर जाते हैं ?
   उस समय का दृश्य कैसा होता है वर्णन करें |

ख) नौकरियों में आरक्षण से उत्पन्न होनेवाली समस्या तथा इसके समाधान के उपायों का उल्लेख करते
   हुए एक प्रस्ताव लिखिए |

ग) समाचार-पत्र समाज का मापदंड हैं, इस कथन के आलोक में समाचार-पत्रों की उपयोगिता का
   वर्णन कीजिये |

घ) 'अभ्यास मनुष्य को परिपक्व बना देता है' इस बात को सिद्ध करते हुए एक कहानी लिखिए |

च) नीचे दिए गये चित्र को ध्यान से देखकर मन में उठनेवाले भावों को किसी घटना या कहानी
   के माध्यम से लिखिए –

2. निम्नलिखित में से किसी एक विषय पर पत्र लिखिए जो लगभग 120 शब्दों में हो | [7]

   क) आपका मित्र हमेशा बीमार हो जाता है उसे पत्र द्वारा नियमित व्यायाम और योगाभ्यास
      करने की सलाह दीजिये |

   ख) अपने प्रधानाचार्य को छात्रवृति के लिए आवेदन पत्र लिखिए और उसमें अपने घर की आर्थिक
      स्थिति को भी स्पष्ट कीजिए |

3. नीचे दिए गद्यांश को पढकर उसके नीचे लिखे प्रश्नों के उत्तर हिंदी में दीजिए | उत्तर यथासंभव
   अपने शब्दों में दीजिए |

प्राचीन काल में विद्यार्थी शहर से अलग गुरुकुल में रहते थे और समावर्तन संस्कार होने पर ही
घर लौटकर गृहस्थ जीवन में प्रवेश करते थे | आजकल विद्यार्थी घर पर रहकर भी विद्योपार्जन
कर सकता है और यदि छात्रावास में भी रहता है तो यातायात की सुविधा के कारण घर के
सम्पर्क में अधिक रह सकता है | आधुनिक काल के विद्यार्थी को वह निर्द्वन्द्वता नहीं, जो पहले
के विद्यार्थियों को थी | पहले जमाने के विद्यार्थियों का शहरी वातावरण से अलग रहने के कारण

प्रकृति से सीधा संपर्क अधिक रहता था |

दूसरा अंतर इस बात का है कि प्राचीन काल का विद्यार्थी सेवा से विद्योपार्जन करता था, आजकल का विद्यार्थी धन से। शिक्षा की झांकी देते हुए गुप्त जी लिखते हैं, "पहले जमाने में गुरु और शिष्य का आध्यात्मिक और निजी सम्बन्ध होता था |" तभी तो कबीर ने गुरु को गोविन्द से अधिक महत्ता दी है और तुलसी ने गुरु पदपराग को आँखों का अंजन बनाया है। आजकल का विद्यार्थी गुरुओं को अपना क्रीतदास समझते हैं, यहाँ तक कि कवि सम्राट रवीन्द्रनाथ ठाकुर ने अपने आरंभिक शिक्षा काल की गुलाम राज्य से तुलना की है। पहले विद्यार्थी स्वयं को गुरु का दास समझता था | भगवान कृष्ण को भी सुदामा के साथ लकड़ी बीनने जाना पड़ता था | पहले गुरुकुलों में इस सेवावृत्ति के कारण जो साम्यभाव था वह आजकल नहीं है। प्राचीन काल में गुरु सेवा के कारण गुरु के साथ निजी संपर्क का भी प्राचुर्यमय प्रसार था | विद्यार्थी गुरु परिवार का ही एक सदस्य बन जाता था | गुरु कुलपति कहलाता। आजकल तो गुरु-शिष्य का सबंध कुछ-कुछ मशीनी हो गया है। विशेषकर ऊँचे दर्जे में, जहाँ पर कि गुरु-विद्यार्थी के दिखाए नोटों पर निर्भर रहता है।

हम यह नहीं कहते कि प्राचीन प्रथा की ही पुनरावृत्ति हो | उसमें थोड़ा दोष भी था कि विद्यार्थियों को संसार का व्यावहारिक ज्ञान कम होता था | लेकिन हम अपने विद्यार्थी जीवन में प्राचीन काल की बहुत-सी बातों को अपना सकते हैं; जैसे हम प्रकृति से अधिक मेलजोल बढ़ाएं, गुरु-शिष्य में निजी सबंध स्थापित हो | हमारे विद्यार्थियों में गुरु के प्रति आदर और विनय की भावना बढ़े।

निम्नलिखित प्रश्नों के उत्तर दीजिये।   [10]

क) प्राचीन काल और आधुनिक काल के विद्यार्थियों में क्या अंतर है?

ख) पहले जमाने में शिष्यों और गुरु का कैसा सम्बन्ध था ?

ग) गुरुकुल परम्परा में साम्यभाव क्यों था ? उदाहरण सहित स्पष्ट कीजिये।

घ) आज के विद्यार्थी और गुरु के सम्बन्ध की क्या विशेषता है? उससे क्या हानि होती है?

ङ) लेखक के अनुसार आज के विद्यार्थियों को प्राचीन काल की किन बातों को अपनाना चाहिए और क्यों ?

4. निर्देशानुसार उत्तर दें :

क) किन्हीं दो के विलोम शब्द लिखें :   [1]
        दूषित , सात्विक , जनहित |

ख) किन्हीं दो के पर्यायवाची लिखें :   [1]
        सोना , हाथ , हाथी |

ग) किन्ही दो मुहावरों का अर्थ स्पष्ट करते हुए वाक्य बनाएं :   [2]
        सब्ज बाग दिखाना , हवा से बातें करना , हाथ खींचना |

घ) किन्हीं दो शब्दों को भाववाचक संज्ञा में बदलिए :   [1]
        अंत , संक्रमित , व्यवस्थित |

ङ) निर्देशानुसार वाक्य परिवर्तन कीजिये।   [3]

i. लेकिन हम अपने विद्यार्थी जीवन में प्राचीन काल की बहुत-सी बातों को अपना सकते हैं |
        (प्राचीन काल से वाक्य की शुरुआत करें)

ii. ये लोग आपके पुराने मित्र हैं | आपके ज्यादा काम आएँगे।
        (एक ही वाक्य में लिखें)

iii. वह रोता-रोता हँसने लगी |
        (वाक्य शुद्ध कीजिये)

(गद्य-संकलन)
किन्ही चार प्रश्नों का उत्तर दें।

निम्न गद्यांश को ध्यानपूर्वक पढ़ें तथा उसके नीचे लिखे सभी प्रश्नों का उत्तर लिखें :-

Q1). रसीला ने रमजान का हठ देखा तो आँखें भर आईं ।बोला, "घर से खत आया है बच्चा बीमार हैं, और रुपया नहीं है।

क) रसीला कौन है? वह किससे बात कर रहा है?   [2]
ख) रमज़ान कौन है? उसका परिचय संक्षेप में लिखें।   [2]
ग) रसीला की आँखें क्यों भर आईं? कारण लिखते हुए बताएं कि वह किस परेशानी में है?
घ) रसीला की परेशानी में उसके मित्र ने किस प्रकार उसकी मदद की? सच्चे मित्र की पहचान के सम्बन्ध में अपने विचार व्यक्त करें।   [3]

Q2). फिर एक बार ऐसा हुआ कि मूर्ति के चेहरे पर कोई भी, कैसा भी चशमा नहीं था।उस दिन पान की दुकान भी बंद थी। चौराहे की अधिकांश दुकानें बंद थीं।

क) मूर्ति के चेहरे पर चशमा क्यों नहीं था? चशमा न देखकर हालदार साहब को कैसा लगा?   [2]
ख) चौराहे पर किसी नेता की मूर्ति लगाने का उद्देश्य लिखिए ।   [2]
ग) आप अपने इलाके में किस व्यक्ति की मूर्ति स्थापित करना चाहेंगे और क्यों?   [3]
घ) चौराहे की अधिकांश दुकानें बंद क्यों थीं? कहानी में कैप्टन की क्या भूमिका है?   [3]

Q3) "जाओ और उसकी सहायता करके लौट आओ। तुम्हारा सामान यहीं रहेगा। तुमको अभी यहीं रहना होगा,समझे अभी तुमको मेरी संरक्षता की आवश्यकता है।उठो नहा-धो लो। जो ट्रेन मिले उससे पटना जाकर ब्रजकिशोर की चालाकियों से मनोरमा की रक्षा करो"

क) वक्ता श्रोता से किसकी रक्षा करने के लिए कह रही है और क्यों? स्पष्ट करें।   [2]
ख) 'संरक्षता की आवश्यकता' से वक्ता का क्या तात्पर्य है? दो पंक्तियों में स्पष्ट करें। [2]
ग) वक्ता का मनोरमा के बारे में क्या विचार था? वह रामनिहाल के विचारों से क्यों सहमत नहीं थीं? समझाकर लिखें ।   [3]
घ) ब्रजकिशोर कौन हैं ? उनका चरित्र – चित्रित करें ।   [3]

(पद्य- संकलन)

Q4). जसोदा हरि पालने झुलावै।
हलरावै दुलराइ मल्हावै जोइ-सोइ कछु गावै।
मेरे लाल को आउ निंदरिया, काहे न आनि सुवावै।
तू काहे नहिं बेगहिं आवै तोको कान्ह बुलावै।
कबहुँ पालक हरि मूंद लेत हैं, कबहुँ अधर फरकावै।
सोवत जानि मौन ह्वै कै रहि, करि-करि सैन बतावै।
इहिं अंतर अकुलाई उठे हरि, जसुमति मधुरै गावै।
जो सुख सूर अमर मुनि दुर्लभ, सो नन्द भामिनी पावै।

क) नन्द भामिनी देवता तथा मुनियों से अधिक भाग्यशाली कैसे है? स्पष्ट करें।   [2]
ख) हरि कौन-कौन सी चेष्टाएँ करते हैं और क्यों? समझाकर लिखें।   [2]
ग) यशोदा किसको पालने में झुला रही हैं और क्यों? उनका परिचय दें।   [3]
घ) वह कृष्ण को सुलाने के लिए क्या-क्या उपाय करती हैं? समझाकर लिखें।   [3]

Q9). राजा के दरबार में , जहँ समया पाय।
     साईं तहाँ न बैठिये जहँ कोउ दयौ उठाय।।
     जँह कोउ दयो- उठाय, बोलै नबोलै रहिए।
     हँसिये नहीं हहाय बात पूछत कहिये॥
     कह गिरिधर कविराय समय सो कीजे काजा।
     ति आतुर नहीं होय, बहुरि नखहैं राजा।।

   क) राजा के दरबार में कहाँ नहीं बैठना चाहिए और क्यौं?   [2]
   ख) कवि ने दरबार में कब बोलना और कब न बोलना की सलाह दी है॥   [2]
   ग) कवि के नुसार राजा के दरबार में और किन-किन नियमों का पालन करना चाहिए और क्यौं? [3]
   घ) इस कुंडली से आपने क्या शिक्षा ग्रहण की? स्पष्ट करें।।   [3]

Q10).झरने नाक झरत जिसकी पहाड़ियों में,
    चिड़ियाँ चहक रही हैं, हो मस्त झाड़ियों में,
    मराइयाँ घनी हैं, कोयल पुकारती है॥
    बहती मलय पवन है तन -मन सँवारती हैं।
    वह धर्मभूमि मेरी, वह कर्मभूमि मेरी।
    वह जन्मभूमि मेरी, वह मातृभूमि मेरी।
       क) यहाँ झरने पहाड़ियों और चिड़ियों से कवि का क्या तात्पर्य है॥   [2]
       ख) 'मराइयाँ' से कवि का क्या तात्पर्य है॥ कोयल कब पुकारती है॥ स्पष्ट करें। [2]
       ग) मलय पवन का थ स्पष्ट करते हुए बताइये कि वह तन- मन को कैसे सँवारती है॥   [3]
       घ) धर्मभूमि और कर्मभूमि से कवि का क्या तात्पर्य है॥ समझाएं ।   [3]

XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018-19

Class: IX   **F.M-80**
Sub:- History & Civics   **Time: 2 hrs.**

**NOTE- Attempt all questions from Part I and two questions from Section A
and three questions from Section B.**

PART I (CIVICS)

All questions carry ONE mark :-   10

 a) What do we mean when we say that Fundamental Rights are justiciable?
 b) Mention one Directive Principle which suggests that India is a Welfare State.
 c) Mention two examples of indirect elections.
 d) What is meant by "Gram Panchayat"?
 e) What do you mean by Fundamental Rights ?
 f) How can the Chief Election Commissioner be removed from his office?
 g) What is the important function of Municipal Corporation in the field of Public
    Health and Sanitation?
 h) Mention any one need for Elections.
 i) What do you mean by 'Welfare State'?
 j) What is meant by Universal Adult Franchise?

HISTORY

Q2. Each question carries TWO marks :-   20
 a) Mention the evidences which suggest that Harappan people had trade relations with other
 countries.
 b) What does the Shiv Pashupati seal depict?
 c) What does the Rigveda contain?
 d) What is meant by Sale of Indulgences ?
 e) Who wrote Tirukkural? What are the three main topics the author deals with?
 f) Who was Mirabai? What was her message to the people?
 g) Mention any one historic merit of the St. Francis Assisi Church at Kochi.
 h) What is meant by ' Industrial Revolution'?
 i) Mention any two measures taken by Ala-ud-din Khilji for the control of market.
 j) Give one evidence to suggest that the Brihadeswara Temple is a responsibility of every
    branch of art.

PART II

Attempt TWO questions from SECTION A .

SECTION – A

Q3. A Constituent assembly had been set up to enact the constitution of Free India. In this context,
   answer the following :-

 a) What is meant by constitution?   3
 b) What is the significance of January 26 in India's struggle for freedom?   3
 c) Explain the feature of Single Citizenship granted in the Constitution.   4

Q4. With the reference to Elections and Election Commission explain –

  a) Define Elections. 3

  b) Composition of Election Commission 3

  c) Essential differences between Direct and Indirect elections. 4

Q5. At the top level in the Panchayati Raj System there stands the Zila Parishad. In this context, answer the following questions :-

  a) What do you mean by 'Zila Parishad'? 2

  b) What are the Civic Facilities and Welfare Functions? 4

  c) What are the Coordination and Supervisory Functions of Zila Parishad. 4

SECTION B

Attempt any THREE questions from this section.

Q6. With the reference to the Reformation and the consequences of the Industrial Revolution answer the following questions-

  a) How did the spread of New Learning and Spirit of Inquiry become a factor leading to the religious movement called Reformation ? 4

  b) Explain the differences between Capitalism and Socialism under the following headings-

     i) Private Ownership versus State Ownership. 3

     ii) Welfare activities versus No Safety – Net. 3

Q7. Harrapan Civilisation was a highly developed urban civilisation. In this context, explain :-

  a) The Town planning 4

  b) The drainage system 4

  c) Two causes for the decline of the Harappan Civilisation. 2

Q8. With regard to the Vedic Civilisation, answer the following :-

  a) Role of Iron in Later Vedic Economy 4

  b) A comparative study of the Early (Rig Vedic) and Later Vedic Ages in the following context.

     i) Society 3

     ii) Economic Life 3

Q9. Two great religious movements arose around 6th century B.C. With this reference answer the following questions :-

  a) Explain ' Jatakas'. 2

  b) Causes for the Rise of Jainism and Buddhism. 4

  c) The Four Noble Truths advocated by Gautama Buddha. 4

XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018

Class: IX   **F.M-80**

Sub:- Mathematics   **Time: 2 hrs.**

<u>**Attempt all Questions from Section A and any Four Questions from Section B.**</u>
<u>**All working including rough work must be clearly shown and done on the same sheet as the rest**</u>
<u>**of the answer omission of essential working will result in less of marks.**</u>
<u>**The intended marks for questions or part of questions are given in brackets.**</u>
<u>**Section: A (40 Marks)**</u>
<u>**Attempt All Questions from this Section.**</u>

Question: 1.   (3+3+4)

(a) Find a and b. if :

$$\frac{3-\sqrt{5}}{3+2\sqrt{5}} = -\frac{19}{11} + a\sqrt{5}$$

(b) If $a = 2 + \sqrt{3}$, then find the value of $a - \dfrac{1}{a}$.

(c) A sum of money invested at compound interest doubles itself in 4 years, interest being payable annually. In how much time will it be eight- times.

Question: 2.   (2 + 4 + 4)

(a) If $a+b+2c = 0$ then prove that $a^3+b^3+8c^3=6abc$.

(b) Factorize the following-
 (i) $a^2b - ab^2 + 3a - 3b$
 (ii) $3 - 12(c-b)^2$

(c) Solve for x and y.
 $2x = 5y + 4$
 $3x - 2y + 16 = 0$

Question: 3.   (3 + 3 + 4)

(a) Solve $(3x + 1)(2x + 3) = 3$

(b) In the If $a^x = b^y = c^z$ and $b^2 = ac$, then prove that $y = \dfrac{2xz}{z+x}$

(c) Four year ago marina was three times old as her daughter; Six years from now the Mother will be twice as old as her daughter. Find their present age.

Question: 4. (3+4+3)

(a) Solve for x.

$$\text{Log}_x\, 25 - \log_x 5 + \log_x \frac{1}{125} = 2$$

(b) A boy scored following marks in various class tests during a term. Each test being marked out of 20.

$$15,17,16,7,10,12,14,16,19,12,16$$

(i) What is the mean of his marks?
(ii) What is the median?

(c) Prove that: $\left(\dfrac{1}{1+a^{y-x}}\right) + \left(\dfrac{1}{1+a^{x-y}}\right) = 1$

Section: B (40 Marks)
Attempt any Four Questions.

Question: 5. (4+3+3)

(a) Prove that the line segment joining the midpoints of any two sides of a triangle is parallel to the third side and equal to half of it.

(b) Find the area and perimeter of a square whose diagonal is 10 cm long.

(c) Evaluate :-

(i) $\dfrac{\text{Sin}72°}{\text{Cos}18°} + \dfrac{\text{Sec}32°}{\text{Cosec}58°}$

(ii) $\dfrac{\text{Sin}30° - \text{Sin}90° + 2\text{Cos}0°}{\tan30° \times \tan60°}$

Question: 6. (4+3+3)

(a) In the adjoining figure AB ll DC, E and F are medians of AD and BD respectively, Prove that
(i) G is the mid-point of BC.
(ii) $EG = \dfrac{1}{2}(AB + DC)$

(b) The mean of 5 observations is 15.if the mean of first three observations is 14 and that of last three is 17, find the third observation.

(c) Draw histogram for the following:

Marks Obtained	0 – 10	10- 20	20-30	30-40	40-50	50-60
No of Students		4	10	6	8	5	9

Question: 7 (3+4+3)

(a) If P and Q are point of trisection of the diagonal BD of a parallelogram ABCD, prove that CQ ll AP.

(b) Name the type of quadrilateral formed by the following points and give reasons for your answer.
    (-1,-2),(1,0),(-1,2),(-3,0)

(c) In an equilateral triangle prove that the centroid and circumcentre of the triangle coincide.

Question: 8. (3+3+4)

(a) If the points A (4, 3) and B (x, 5) are on a circle with Centre C (2, 3), find the value of x.

(b) Given: 3(log 5 - log 3) – (log 5 - 2log 6) = 2 - log n, find n.

(c) The sum of a two digit number and the number obtained by interchanging the digit is 132.if the two digits differ by 2. Find the numbers.

Question: 9. (3+3+4)

(a) If 5 SinΘ = 3 ,find the value of

$$\frac{Sec\theta - tan\theta}{Sec\theta + tan\theta}$$

(b) Find the circumference of the circle whose area is equal to the sum of the areas of three circles with radius 2Cm, 3Cm and 6 Cm.

(c) Using ruler and compass only, construct a rectangle each of whose diagonals measures 6 Cm and diagonals intersect at an angle 45°

Question: 10. (3+3+4)

(a) Solve:- $\frac{x+3}{x-1} = \frac{2x+1}{3x-5}$

(b) The population of a city is 320000.if the annual birth rate is 9.2% and the death rate is 1.7%.calculate population of the town after 3 years.

(c) Construct a regular hexagon of side 2.5 Cm.

Question: 11.   (3+3+4)

(a) The wheel of a cart is making 5 revolutions per second. If the diameter of the wheel is 84 Cm, find its speed in Km/h. give your answer correct to the nearest Km.

(b) ABCD is a parallelogram and P is any point of BC. Prove that area of Δ ABP + area of Δ DPC = area of Δ APD.
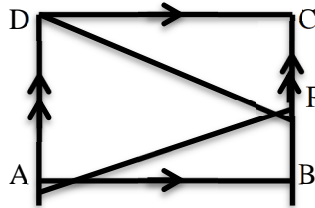
(c) 3 Men and 4 boys can do a piece of work in 14 days, while 4 men and 6 boys can do it in 10 days. How long would it take 1 boy to finish the work?

XAVIER SCHOOL, GAMHARIA
3rd Term Exam-2018-19

Class: IX   **F.M-80**
Sub:-Moral Science   **Time: 1 ½ hrs.**

I. Answer each of the following questions using approximately hundred words.   (10x5=50)
1. What according to you is happiness and what factors influence happiness?
2. What are the positive qualities a student should have? Enumerate them explaining any two.
3. Explain the kinds of fears you experienced so far and how you overcame them.
4. What are the positive feelings we must cultivate? Explain any two of them.
5. Success and Failures are part of life. Explain.
6. Name some of the family values that touched you and explain them.
7. Should you obey your teachers and parents? Explain why.
8. Explain with examples why listening is important.
9. What are the advantages of prayer? Write the dismissal prayer of your school.
10. How important is forgiving others when they do wrong against us? Explain with examples.

II. Write your personal reflection on any two of the following questions in about 200 words each.   (2x15=30)
   a) Imagine you have been made a world leader for a year. Write five problems you would focus on to make the world a happier place.
   b) How important is forgiveness? Write some of your personal experience of forgiveness.
   c) Write a summary of the lessons you have learnt in Moral Science class this year.

XAVIER SCHOOL, GAMHARIA
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Class: IX   **F.M-80**
Sub:- Physics   **Time: 2 hrs.**

Section: I is compulsory. Attempt any Four Question from Section II.
The intended marks for questions or part of questions are given in brackets.
Section: A (40 Marks)
Attempt All Questions from this Section.

Question: 1.   **(2x5 =10)**

   (a) Name two units of mass bigger than Kg.How are they related to Kg.

   (b) How are following derived unit related to the fundamental units?
      (i)   Newton (ii) Watt (iii) Pascal (iv) Joule.

   (c) When is a vernier calipers said to be free from Zero error?

   (d) Name two sources of carbon dioxide gas in the atmosphere.

   (e) State first law of thermodynamics?

Question: 2.   **(2x5=10)**

   (a) Give an example of motion in which speed remains same but velocity changes.

   (b) Name the S.I unit of heat. How is it related to Calorie?

   (c) Name two substances which contract on heating.

   (d) What type of mirror is preferred in automobiles to observe traffic at the back and why?

   (e) What transformation of energy take place when current is drawn from a cell?

Question: 3. Give reasons   **(2x5=10)**

   (a) How is the resistance of a wire affected if its
      (i)   Length is doubled.
      (ii)   Radius is doubled.

   (b) A bulb draws current 1.5 A at 6 V.find the resistance of filament of bulb while glowing.

   (c) Describe two ways for the efficient use of energy?

   (d) Mention essential conditions for sound waves to travel in a medium.

(e) Draw the ray diagram to show the formation of image of an object OA.
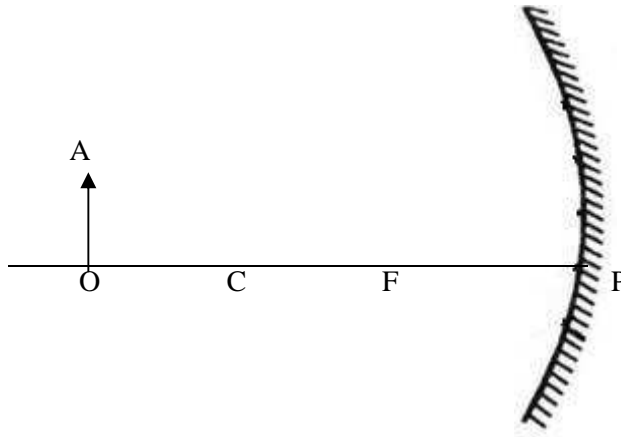
Question: 4. (2x5=10)

(a) What is meant by lateral inversion of an image in a plane mirror?

(b) Deep pond of water has its top layer frozen during winter. State the expected temperature of water layer.
(i)   Just in contact with ice.
(ii)   At the bottom of the pond.

(c) A ship submerges more as it sails from sea water to river water, explain.

(d) A piece of wax floats on brine. What fraction of its volume is immersed?
Density of wax = 0.95 g Cm^{-3}, Density of brine = 1.1 g Cm^{-3}

(e) How is the upthrust related to the volumes of the body submerged in a liquid?

<u>**Section: B (40 Marks)**</u>
<u>**Attempt any Four Question from Section II**</u>

Question: 5. (3+3+4)

(a) A pendulum clock runs faster in winter and slower in summer. Give reason.

(b) What Conclusion do you draw about the motion of an object if the displacement time graph for it is:
(i)   A straight line parallel to the time axis_____.
(ii)   A straight line inclined to time axis with a positive slope_____.
(iii)   A straight line inclined to time axis with a negative slope_____.

(c) State the newton's universal law of gravitation. State the importance of the Newton's law of gravitation.

Question: 6. (3+4+3)

(a) State newton's Second law of motion and prove that it takes the mathematical form F = ma.

(b) A body of mass 100 gm is projected vertically upwards with an initial velocity of 49 ms-1,find
   (i)   Force of gravity on the body.
   (ii)   Vertical height attained in the body.

(c) A body weight 450 gf in air are 310 gf in water. Find
   (i)   The volume of the body.
   (ii)   Weight of the body in a liquid of relative density 1.2.

Question: 7 (3+3+4)

(a) State Pascal's law of transmission of pressure. Name two application of Pascal's law.

(b) Why do sea divers need special protective suit?

(c) What is meant by the term buoyant? A block of wood is floating on water with its dimensions 50 Cm x 50 Cm x 50 Cm inside water. Calculate the buoyant force acting on the block, Take $g = 98 \text{ N Kg}^{-1}$

Question: 8 (3+3+4)

(a) Give three advantage of using biogas as a fuel.

(b) What do you understand by the term electric current? State and define S.I unit of electric current.

(c)
   (i)   State the relation between electric current, no of electrons and time in S.I units.
   (ii)   A bulb draws current 1.5 A at 6.0 Find the resistance of filament of bulb while glowing.

Question: 9 (3+3+4)

(a) Complete the ray diagram
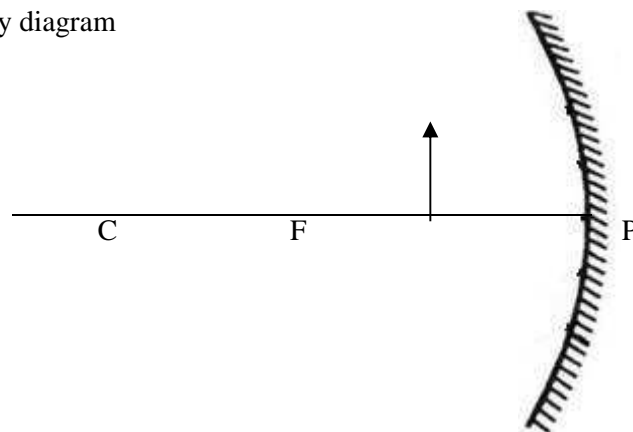
(b) Derive the relationship for wave Velocity V, frequency f and wavelength ʎ.

(c) A boy fires a gun and another boy is at a distance hears the sound of fire 2.5 s after seeing the flash. If the speed of sound in air is 340 ms^{-1}, find the distance between the boys.

Question: 10   **(3+4+3)**

(a) The image formed by a convex mirror is of size 1/3 the size of object. How are U and V are related?

(b) What is meant by efficient use of energy? State three ways for the efficient use of energy.

(c) An object of length 4 Cm is placed in front of a concave mirror at a distance of 30 Cm.The focal length of mirror is 15 Cm.where will the image form? What will be the size of the image?

Question: 11   **(3+4+3)**

(a) Derive the relation between focal length and radius of curvature of a concave mirror.

(b) A block of wood is so loaded that it just floats in water at room temperature .what changes will occur in the state of floatation, if
(i) Some salt is added to water.
(ii) Water is heated?

(c) Explain the motion of a rocket with the help of newton's third law.
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