XAVIER SCHOOL, GAMHARIA

2ND TERM EXAM (2018-2019) **Time: 2 Hrs**

STD:IX **SUBJECT: COMPUTER APPLICATIONS** **FULL MARKS: 100**

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 [5 x 2 = 10]

(a) What do you mean by precedence of operator?
(b) What are the points to be taken care while naming a class in a java program?
(c) In what ways are Encapsulation and Data Abstraction inter-related?
(d) What are primitive and non primitive data types? Give two examples of each.
(e) What is a Ternary operator? Explain with the help of an example.

Question 2 [5 x 2 = 10]

(a) Differentiate between 'if' and 'switch' statement.
(b) Explain with the help of an example, the purpose of default in a switch statement.
(c) What is meant by an infinite loop? Give an example.
(d) Write a statement to generate random numbers between 1 to 7.
(e) Write the Java expression for the following:

(i) $\frac{(a+b)^n}{\sqrt{2}+b}$ (ii) $ut + \frac{1}{2}at^2$

Question 3 [10 x 2 = 20]

(a) What will be the output of the following code:

```
double x = -9.67 , y = -3.51;
System.out.println(Math.ceil(Math.max(x, y));
System.out.println(Math.rint(Math.min(x, y));
```

(b) Rewrite the following statements using if-else:

```
double net = (salary > 5000) ? salary – (7.25/100)*salary : salary – (5/100)*salary;
```

(c) What will be the result stored in B after evaluating the following expression?

```
A=71
B = A >> 2
```

(d) Name the operators listed below:

(i) >> (ii) + +
(ii) **&&** (iv) **? :**

(e) Write the output for the following looping constructs:

```
int i;
for(i = 1; i< = 5; i++)
System.out.println( i );
System.out.println( );
System.out.println( i );
```

(f) Analyse the following code segment and determine how many times the loop will be executed. What will be the output of the program segment.

```
int i, sum = 0;
for(i =10; i > = 1 ; i = i – 3)
{
  sum = sum + i;
}
System.out.println(sum);
```

(g) What will be the result stored in A after evaluating the following expression?

```
A = 7;
A-  = --A % 10 +  ++A / 10  – A-- ;
```

(h)

(a) Write a java expression for the following:

$ax^5 + bx^3 + c$

(b) What is the value of y if x = 5?

```
y = ++x – x++ + --x;
```

(i) What will be the output of the following code if p is 1:

```
int a = 1, b = 2, c = 3;
switch(p)
{
        case 1: a++;
        case 2: ++b;
        break;
        case 3: c--;
}
System.out.println(a + "," + b + "," + c);
```

(j) Write any four escape sequences with example.

Section B (60 Marks)

Attempt any four questions from this section.

The answer in this Section should consist of the Programs in either Blue J environment or any program environment with Java as the base.

Each program should be written using Variable description/Mnemonic Codes so that the logic Of the program is clearly depicted.

Flow-Charts and Algorithms are not required.

Question 4 **[15]**

Write a program in java to find the sum of the given series:

(i) 1 + 4 + 9 + 16 + ... 10^{th} term [7]

(ii) 2 – 4 + 6 – 8 + ... 10^{th} term [8]

Question 5 **[15]**

Jharkhand electricity board charges their consumers according to the units consumed per month according to the given tariff:

Units Consumed	Charges
Up to 100 units	Rs. 2 per unit
More than 100 units and up to 200 units	Rs. 1.80 per unit
More than 200 units and up to 300 units	Rs. 1.50 per unit
More than 300 units	Rs. 1.00 per unit

In addition to the above, every consumer has to pay Rs. 200 as service charge per month. Write a program to input the name of consumer, amount of units consumed and calculate the total charges payable bill by the consumer. Also print in tabular format.

Name **Units Consumed** **Charge Payable**
..... **.....** **.....**

Question 6 **[15]**

The volume of solids, viz. Cuboids, cylinder and cone can be calculated by the formula:

1. Volume of cuboids (v) = l * b * h
2. Volume of cylinder (v) = π * r^2 * h
3. Volume of cone (v) = $\frac{1}{3}$ * π * r^2 * h

Using a switch case statement, write a program to perform the above task by taking suitable variables and data type.

Question 7 **[15]**

i) Write a program to find the sum of all even numbers and odd numbers between 1 to 100. [8]

ii) S = $\frac{1}{2} + \frac{2}{3} + \frac{3}{4}$ + ----------+ n terms. [7]

Question 8 **[15]**

Using the switch statement, write a menu driven program:

(i) To check and display whether a number input by the user is Buzz number or not
(A **number** is said to be **Buzz Number** if it ends with 7 or is divisible by 7)

(ii) To check and display whether a number input by the user is even number or odd number.

(iii) To check and display whether a number input by the user is single digit number or double digit number or three digit number.

Question 9 **[15]**

'National Electronics' has announced the following seasonal discounts on purchase of certain items.

Purchase Amount	Discount on Laptop	Discount on Desktop
Up to Rs. 25,000	0.0%	5.0%
Rs. 25,001 to Rs. 50,000	5.0%	7.5%
Rs. 50,001 to Rs. 1,00,000	7.5%	10.0%
More than Rs. 1,00,000	10.0%	15.0%

Write a program to input name, amount of purchase and the type of purchase ('L' for Laptop and 'D' for Desktop) by a customer. Compute and print the net amount to be paid by a customer along with his name.

(Net amount = Amount of purchase – discount)

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2nd Term Exam-2018

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

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

SECTION A [40 MARKS]

ANSWER ALL QUESTIONS FROM THIS SECTION

Q1a. Name the phylum of the following invertebrates: **[5]**

1. Butterfly
2. Tapeworm
3. Jelly fish
4. Bath sponge
5. Sea cucumber

b. Give the scientific names of: **[5]**

1. Silk moth
2. Peepal tree
3. Tiger
4. Domestic cat
5. Maize

c. Mention the class of vertebrates of each of the following: **[5]**

1. Turtle
2. Dolphin
3. Penguin
4. Crow
5. Dog fish

d. Define the following terms: **[5]**

1. Vaccination
2. Vasodilatation
3. Decalcified bone
4. Pylorus
5. Omnivore

e. Name the following: **[5]**

1. An enzyme which digest fats.
2. Excess amino acids are broken down in
3. An enzyme present in saliva.
4. The part of small intestine which receives food from stomach.
5. The last part of large intestine which opens at the anus.

f. The following statements are false. Correct the following statements by changing the word which is underlined: **[5]**

1. Gastric juice is <u>alkaline.</u>
2. There are total <u>seven</u> pairs of floating ribs in human.
3. <u>Humerus</u> of the <u>upper arm</u> is the longest bone.
4. Blue whale has <u>two</u>- chambered heart.
5. Sweat gland is a derivative of <u>nails.</u>

g. State one major function of: **[5]**

1. Meibomian glands
2. Sweat duct
3. Tendons
4. Red marrow of human bone
5. Epiglottis.

h. Write the common names of: **[5]**

1. Agaricus bisporous
2. Naja naja
3. Musca domestica
4. Solanum tuberosum
5. Hibiscus rosa- sinensis.

SECTION B [40 MARKS]

ATTEMPT ANY FOUR QUESTIONS FROM THIS SECTION

Q2a. Given below is an overall chemical reaction of a certain process: [5]

Glucose --------- lactic acid + 2ATP + Heat energy

1. Name the process
2. Is this reaction applicable to animals or to plants or to both animals and plants?
3. Name one tissue in which this reaction may occur.
4. What does ATP stands for?
5. Define the above mentioned process.
6. What are the conditions under which the above reaction is occurring respectively?
7. Give two examples of life activities which need energy.

b. Draw a well-labeled diagram of human respiratory system. [5]

Q3a. How many bones are present in: [5]

1. Wrist
2. Palm
3. Ankle
4. Thumb finger
5. Neck

b. State the type of joint present in: [5]

1. Elbow
2. Skull
3. Joint between sternum and ribs
4. Joint between vertebrae
5. Hip joint

Q4a. Study the following dental formula and then answer the questions that follow: [5]

I =3/4 c=0/0 pm = 0/1 m 1/1

1. State the total number of teeth present in the dentition.
2. Is the dentition that of a carnivore or herbivore? Give a reason to support your answer.
3. Name any two animals having such dentition.
4. Give the dental formula of an adult human being

b. Draw a well-labeled diagram of human mammalian tooth with two roots. [5]

Q5a. Complete the following table by filling in the blanks 1 to 8. [4]

S.no.	Organ	Enzyme	Food acted upon	End product
1	1	Pepsin	2	3
2	Mouth	4	5	Maltose
3	6	7	Emulsified fats	8

b. Give one difference between each of the following: [6]

1. Insecta and arachnids
2. Prokaryotes and eukaryotes
3. Antitoxin and antibiotic
4. Tendon and ligament
5. Voluntary muscle and cardiac muscles.
6. Albinism disease and Leucoderma disease.

Q6a. Give two examples of each of the following: [5]

1. Angiosperms
2. Fungi
3. Bryophyte
4. Antibiotics
5. Derivatives of the skin.

b. State the exact location of: [3]

1. Parotid glands
2. Larynx
3. Patella bone
4. Malphigian layer
5. Ceruminous glands
6. Alveoli

c. State two similarities and two differences between “plant respiration” and “animal respiration”.[2]

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2nd Term Exam-2018

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

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

Section A (40 Marks)
All questions are compulsory

1. Name the following [1x5=5]
   a) The sub-atomic particle discovered by Goldstein.
   b) An atom X has 2, 8, 6 electrons in its shell. It combines with Y having 1 electron in its outermost shell. Write the formula of the compound formed.
   c) Name the product formed when carbon –Monoxide mixes with haemoglobin.
   d) Formula of CFC.
   e) Credit for discovery of hydrogen goes to

2. Elements A, B, C and D have atomic numbers 8, 9, 11 and 12 respectively.
   a) Write the electronic configuration of elements. [2]
   b) Choose the electropositive and electronegative from the above element. [2]
   c) What does 2H symbols convey? [1]

3. Choose the correct option. [1x5=5]

   I. The only inert gas with a complete duplet
      a) Helium
      b) Argon
      c) Krypton
      d) Neon

   II. In the element $^{23}Na_{11}$, 11 represents
      a) Mass number
      b) Atomic number
      c) Number of neutrons
      d) None of these

   III. On adding water to sodium the solution formed is
      a) Neutral
      b) Alkaline
      c) Acidic
      d) Amphoteric

   IV. The promoter used during Haber's process is
      a) Molybdenum
      b) Copper
      c) Zinc
      d) Lead

   V. Which is not a greenhouse gas
      a) CO_2
      b) CO
      c) CH_4
      d) N_2

4. State whether the statement are true or false [1x5=5]
   a) A photochemical smog is beneficial to human beings.
   b) The water gas is a mixture of carbon dioxide and hydrogen.
   c) Isotopes have same chemical properties.
   d) Hydrogen gas burns with a popping sound.
   e) Rain water containing H_2SO_4 and HNO_3 is called heavy rain.

5. Two neutral gases 'A' and 'B' undergo synthesis reaction to form a basic gas 'C'
   i. Identify A, B and C. [1]
   ii. Name the process by which gas 'C' is manufactured. Give balanced chemical equation also. [2]
   iii. What do you observe when gas 'C' comes in contact with [2]
      a) Moist red litmus paper?
      b) Concentrated hydrochloric acid?

6. Metallic hydrides react with water to produce liquid 'A' and gas 'B'. In this context answer the following questions
   a) Identify 'A' and 'B'.[2]
   b) What is the effect of adding neutral litmus solution to 'A'. [1]
   c) What do you observe when burning splinter comes in contact with gas 'B'. [2]

7. Complete and balance the following reactions- [1X5=5]
   a) $Mg + H_2O \rightarrow$ _____ + _____.
   b) $Al + H_2SO_4 \rightarrow$ _____ + _____.
   c) $CO + H_2 \rightarrow$ _____.
   d) $Fe_2O_3 + H_2 \rightarrow$ _____ + _____.
   e) $N_2 + H_2 =$ _____.

8. a) Define atomic mass unit. [1]
   b) Draw orbital diagram of oxide ion. [2]
   c) Compare sodium atom and sodium ion. [2]

Section B (Optional)
Attempt only 4 (All question carry equal marks [10])

1. a) the electronic configuration of fluoride ion is same as that of a neon atom.
   b) What are greenhouse gases. How are they responsible for global warming?
   c) Give reasons why two isotopes of magnesium have different mass numbers.
   d) Describe the major air pollutants. How does carbon mono oxide pollute our environment?
   e) An element M burns in oxygen to form an ionic compound M_2O_3. Write the formula of the compounds formed if this element is made to combine with chlorine and sulphate?

2. a) explain that the formation of sodium chloride is a redox reaction.
   b) What is smog? State its damaging effect.
   c) Why is nitric acid is not used in the preparation of hydrogen.
   d) State how CFC breaks ozone layer.
   e) Why is nitric acid not used in the preparation of hydrogen?

3. a) potassium and sodium are not used in for reaction with dilute hydrochloric acid or dilute sulphuric acid in lab preparation of hydrogen. Give reason.
   b) Write 4 differences between oxidation and reduction.
   c) Describe two ways of saving ozone.
   d) Draw orbit diagram of sodium chloride and calcium oxide.
   e) Oxy hydrogen flame is used for welding and cutting of metals. give reason.

4.a) state giving reason whether the substances underlined have been oxide or reduced.

$PbO + CO \rightarrow Pb + CO_2$

b) Comment on the dual position of hydrogen in the periodic table.

c) bosch process is used for large scale production of hydrogen. give necessary equations and conditions.

d) On the basis of Thomson's model of an atom. explain how an atom as a whole is neutral.

e) What is the harmful effect of oxides of sulphur?

5. a) our atmosphere acts as a greenhouse. Explain.

b) Physical properties of isotopes are different. Give reason

c) Apparatus for lab preparation for hydrogen should be air tight and away from a naked flame. Give reason.

d) Explain octet rule for formation of sodium chloride.

e) Write the equation in the ionic form

$CuSO_4(aq) + Fe \rightarrow FeSO_4 + Cu(s)$

6. a) Draw Lewis dot structure of CCl_4 and $AlCl_3$.

b) Explain that electrovalent compound conduct electricity in molten or aqueous state.

c) Hydrogen is evolved when Dil. HCl reacts with magnesium but nothing happens in the case of mercury and silver. Explain.

d) How does a scrubber help in reducing the formation of acid rain?

e) Use of polythene should be banned. Comment.

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

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

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

Que. 1. Write a composition (350 words) on any one of the following topics: (20)

a. You have lived in your ancestral house since birth. The house is to be sold so that flats might be built. Narrate the circumstances that led to this decision and describe your feelings about the house.
b. Write about two deeds you have done, one of which gave you immense joy and satisfaction while the other was a cause of deep regret.
c. Teenagers today are more worldly wise than their parents. Express your views for or against the statement.
d. Write a story which illustrates the truth of the statement, 'Self-help is the best help.'
e. Study the picture given below. Write a story or a description or an account of what it suggests to you. Your composition may be about the subject of the picture or may take suggestions from it; however there must be a clear connection between the picture and your composition.

Que. 2. Select any one of the following. (10)

a. Your mother has won the National Award for Meritorious Teachers. Write a letter to a friend giving details of the award, the award ceremony and the celebrations that followed.
b. Your school had contributed a large sum of money to the Prime Minister's Relief Fund to help the victims of a flood. You visited the place and were shocked to see the poor living conditions of the victims. Write a letter to the Officer –in-Charge of the Prime Minister's Relief Fund, drawing his attention to the plight of the people in the affected area.

Que. 3. Read the following passage carefully and answer the questions that follow:

From the edge of the steep ridge, I peered down into the Redstone Valley. Like many summer days in North West Alaska, the morning had begun bright and wind swept, but now a dark cloud was drifting in from the east. I decided to move on. Camp was still three kilometres down the hill.

It had been eighteen years since I had first come to this vast untamed wilderness. Still there was the lure of the place- the chance to live, move and breathe. Settled in Ambler, a small village in the Kobuk Valley, I'd found life among the Inuit Eskimos as rich and textured as the Arctic landscape around us. However even a bright summer day could mean trouble.

As I sung my pack onto my shoulders, a big Arctic mosquito thudded against my cheek. There had been a few of them through the day, but it was early in the season-the ice had melted just two weeks before and I'd scarcely noticed the mosquitoes. But now as I wound down the ridge, the last breeze faded, and they were on me. Rising in clouds from the soggy Tundra, they pelted against my face. I looked for the repellent in my pack but in vain.

I was flailing away, nailing five or six at a whack, but there were thousands mobbing me now. They were diving in nose first, piercing me right through my clothes, dozens clothes, dozens at a time. Four hands wouldn't have been enough. Years of Alaskan experience had taught me what to do in a situation like this. I turned up my collar, cinched my pack straps and sprinted.

When I saw my tent, I was still going strong. So were the mosquitoes. They trailed me in a whining veil. Each time I slowed down, the attack resumed. Pausing just long enough to unzip the screen door, I dived through to safety. It took me fifteen minutes to hunt the hundred or so that entered the tent with me.

After I'd cornered the last one, I took stock and tried to relax. My hands and neck were smeared with blood, and every centimetre of the exposed skin was punctured. Outside, the insistent wail was nearly deafening. Mosquitoes settled over the tent, making a strange pattern on the nylon mesh. Not until later that night, when a cold rain swept in and scattered the mob, did I stick my own itching nose outside again. Local legend has it that an animal or human being for that matter, caught in one of those mosquito attacks, can be sucked dry.

Blood thirsty though they are, the big Arctic mosquitoes are frail creatures. These infamous 'Alaska State Birds' averaging a little over half a centimetre in length, can't even withstand a substantial breeze. They'd wither under bright sunlight. Too hot or too cold, too much or too little rain, they run for the right feeding conditions. A still humid, cloudy evening is perfect.

The upper Kobuk Eskimos know how to handle mosquitoes. As soon as the river is clear of ice, many Ambler people load up their boats and head for the chilly, wind swept coast to spend the summer. Of course, they also fish and hunt seals, but it's no coincidence that this annual migration sidesteps the worst of the mosquito season.

A. Give the meaning of each word as used in the passage.

i. Peered ii. Lure iii. Soggy iv. Smeared v. Legend (5)

B. Answer the questions in your own words. (2x5=10)

i. Why did the author feel that he should move on?
ii. Where did the author come from? Why did he come to this particular place?
iii. Why did the author consider the Arctic mosquitoes frail creatures?
iv. Why was a still, humid, cloudy evening perfect and for whom?
v. Why did Ambler people head for the chilly wind swept coast?

C. In your own words, summarise the efforts of the author to save himself from the mosquitoes. (60 words). (8)

D. Give a title to the summary and justify your reason for naming it so. (2)

Que. 4.

A. Rewrite the following sentences according to the directions given. (10)

i. The thieves stole everything from the merchant and left him for dead. (Begin: Having….)
ii. The driver lost his job because of rash driving. (Begin: If the driver…..)
iii. Very few doctors in the hospital are as dedicated as he is. (Begin: He is….)
iv. The principal dealt with the miscreants firmly. (Begin: The principal was……)
v. Prerna consulted her parents before accepting the job offer. (Begin: Prerna did not….)
vi. What a pleasure to see you here! (Begin: How….)
vii. The last time I saw him was in 2017. (Begin: I haven't…..)
viii. If you had not supported me I would have fallen. (Begin: But for your……..)
ix. 'Hurrah! We have won the match!' said the boys. (Begin: The boys……..)
x. 'Whose pen are you using, Nikhil?' asked the teacher. (Begin: The teacher asked……)

B. Fill in the blanks with suitable words: (5)

i. He may turn…..when we least expect him.
ii. The jewel was sold …..thrice its cost price.
iii. They took ……. The company with all its liabilities.
iv. The new manager gets ….. well with his colleagues.
v. Please contact me …… 9a.m. and 10 a.m.
vi. Priya was knocked ….. by a speeding car.
vii. Pursued by his enemies, he swam …. The river to safety.
viii. They drove him ……. The city in their new car.
ix. …….. other things they found an old sword near the ruins of the old fort.
x. He flew ….. a rage when he was challenged.

C. Fill in the blanks with the correct form of the words given in brackets. Do not copy the passage but write in correct serial order. (10)

I went into the Administrative block and 1…….. (be) then 2…….. into the office of the Superintendent. He was 3…….. (sit) there, reading the newspaper. The large desk in front of him was 4……..…… (pile) high with a great assortment of papers, most of which looked official and scientific, a heap of them partially 5…….. ……. (cover) the telephone. As the Superintendent 6……..…….(stand) up, I 7……..……..(see) that he was an immensely tall man. He 8……..……(come) towards me and 9…… …….(stare) at me 10 …..…….(breathe) heavily through his nose.

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

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

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

Answer any 5 Questions

Read the following extract and answer:- (16x5)

1. MOROCCO

Mislike me not for my complexion,
The shadowed livery of the burnished sun,
To whom I am a neighbor and near bred.
Bring me the fairest creature northward born,
Where Phoebus' fire scarce thaws the icicles,
And let us make incision for your love
To prove whose blood is reddest, his or mine.
I tell thee, lady, this aspect of mine
Hath feared the valiant. By my love I swear
The best-regarded virgins of our clime
Have loved it too. I would not change this hue
Except to steal your thoughts, my gentle queen.

PORTIA

In terms of choice I am not solely led
By nice direction of a maiden's eyes.
Besides, the lottery of my destiny
Bars me the right of voluntary choosing.

i. Where is this scene set? Account for Morocco's presence in this place. (3)
ii. What can you assess of Morocco's appearance and character based on the given extract? (3)
iii. Mention any three actions that Morocco says he would be happy to perform in order to win Portia. (3)
iv. What does Morocco have to swear before he makes his 'hazard'? (3)
v. What does Portia mean when she says 'the lottery of my destiny'? what are Portia's feelings regarding this matter? (4)

1. 'All right!' you'll cry. 'All right!' you'll say,
'But if we take the set away,
What shall we do to entertain
Our darling children? Please explain!' (Poetry)

i. What lesson does the poet say he has learnt at the beginning of the poem? (3)
ii. List the ways in which television affects the mind of a 'beloved tot'? (3)
iii. Describe some of the scenes the poet had seen in houses which have televisions. (3)
iv. What activity does the poet recommend to entertain children? How would this activity benefit them. (3)
v. State the central idea of the poem. (4)

1. “The signal was given, the pistol exploded
And so did the runners on hearing the sound
But the youngest among them stumbled and staggered
And he fell on his knees to the ground. (story)

i. Why was the signal given? Describe the event. (3)
ii. What happened to the youngest athlete? (3)
iii. What was his first reaction? Describe. (3)
iv. What happened to the other athletes at that moment? (3)
v. Throw light on the message of the poem. (4)

2. “The snowflakes fell on her long golden hairs which curled so prettily about her neck, but she did not think of her appearance now. Lights were shining in every window, and there was a glorious smell of roast goose in the street, fir this was New Year’s Eve, and she could not think of anything else.” (story)

i. Who is mentioned in the extract? What kind of life did she lead? (3)
ii. Describe the scene. (3)
iii. Give two character traits of the little girl and justify them. (3)
iv. In what did she find hope? Explain (3)
v. How is the ‘Match’ symbolic in the story? (4)

4. **ARRAGON**

What’s here? The portrait of a blinking idiot
Presenting me a schedule! I will read it.
How much unlike art thou to Portia!
How much unlike my hopes and my deservings!
“Who chooseth me shall have as much as he deserves”!

i. What does the portrait of a blinking idiot signify? (3)
ii. Who is the speaker? Which casket is chosen by him? Why? (3)
iii. What is the inscription on the lead casket? Why does he not choose it? (3)
iv. What does his decision to reject the lead casket reveal about his character? (3)
v. Does Portia like him? Give an example to prove this. (4)

3. ‘What does he plant ……..
……. Stirs in his heart who plants a tree.” (poetry)
i. How does planting a tree contribute to the growth of a nation? (3)
ii. Mention two benefits of planting trees. (3)
iii. Explain – ‘In love of home and loyalty’. (3)
iv. What does planting a tree symbolize? (3)
v. State the message of the poem. (4)

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2nd Term Exam-2018

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

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

SECTION: A (30 MARKS)

Q1. Study the extract of the survey of India Map Sheet no. 45 D/ 7 (Nothing 73 to 83) and (Easting 91to 01) and answer the following questions:

a. Give six figure reference of : (2)
   i. Surveyed tree in grid 9775.
   ii. temple near Ikhapura in grid 9376.
b. Identify the drainage pattern : (2)
   i. In grid 9877.
   ii. In grid 9782.
c. Identify the compass direction : (2)
   i. Sangla to Moti Bhatamal.
   ii. Kotda to Bantawada.
d. Calculate the distance in kilometers from Antroli to Sangla. (2)
e. Identift the settlement pattern : (2)
   i. Kotada
   ii. Antroli.
f. i. Identify the highest point on the map. (1)
   ii. What do the red dot ted line indicate in grid 9777. (1)
g. On which bank of the main river Karja and Rampura situated? (2)
h. Name the two seasonal water features in the region of the extract. (2)
i. Identify the main occupation in the extract . Give reason to support your answer. (2)
j. Give the meaning for each of the following conventional signs: (2)
   i.BM 224.6 in grid sq. 0073
   ii.” Dep “ in grid sq. 9178.

Q2. On the outline map of India mark the following. (10)
   a. Aravalli hills
   b. Winds that bring rain to North Western India in winter.
   c. Mumbai High
   d. One region of black soil.
   e. River Mahanadi
   f. Chennai
   g. Palk Strait
   h. Tropic of cancer.
   i. Densely populated state located in south India.
   j. Western Ghats.

SECTION: B (50 MARKS)

Attempt any five questions from this part

Q3. a. What is insolation? (1)
b. Why does only a small proportion of the total insolation reach the surface of the earth? (2)
c. Why do the vertical rays of the sun provide more heat than the slanting rays? (2)
d. i. Name the factors influencing weather and climate. (2)
ii. With a diagram explain the heat zones of the earth. (3)

Q4. a. How is atmosphere heated? (1)
b. Explain why temperature varies with latitude. (2)
c. Distinguish between Continental Climate and Oceanic Climate. (2)
d i. Indicate how wind modify the temperature of a place. (2)
ii. Why are parts of Scandinavia ice free while those of North East Canada are frozen for many month? (3)

Q5.a. What are Horse latitudes? (1)
b. How does air pressure vary with height? (2)
c. Why is the equatorial low pressure belt called the doldrums? (2)
d. i. How is the sub tropical high pressure belt formed? (2)
ii. With the help of a diagram explain the mechanism of tropical cyclone in the Northern Hemisphere. (3)

Q6.a. What are variable winds? Give two examples. (2)
b. State two main features of trade winds. (2)
c. Explain the mechanism of monsoon in India. (2)
d. i. What do you understand by deflection of wind. (1)
ii. With a diagram explain " Land Breeze". (3)

Q7.a. What is absolute humidity? (1)
b. When does the air get saturated? (2)
c. Fogs at sea are experienced off the coast of New Foundland. State the reasons for these fogs. (2)
d. i. How is convectional rainfall caused? (2)
ii. Explain the orographic rainfall. (3)

Q8.a. Define Fog. (1)
b. Distinguish between Condensation and Precipitation. (2)
c. What is windward side? Name one part of the Indian sub-continent that experiences the windward side. (2)
d. i. Give reason .Dew occurs commonly during the winter season. (2)
ii. Convection rainfall occurs almost daily in the Equatorial region. Why? (3)

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

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

Sub:- History & Civics **Time: 2 hrs.**

INSTRUCTIONS -Attempt all questions from Part -1
A total of FIVE questions should be attempted from PART -2
Mark the Key Words.

PART -1(CIVICS)

Q1. (1x10=10)

a) Define elections.
b) Who can become a Voter?
c) Name the current Chief Election Commissioner of India.
d) Mention any two discretionary functions of Municipal Corporation.
e) Name the three wings of Municipal Committee.
f) What do you mean by gram panchayat?
g) Name two bodies whose members are elected by Indirect election.
h) Mention one significance of elections in democracy.
i) What do you mean by local Self Government?
j) Name the apex body under the Panchayati Raj.

Q2 (2x10=20)

a) Name the two historical works written by Abul Fazal.
b) Name the architect who designed the Taj Mahal. Mention its two features.
c) Who was called "Zinda Pir"?
d) Mention any two ways inscriptions can be used in reconstructing the history of Delhi Sultanate.
e) Mention any two measures taken by Alauddin to control the market.
f) Explain the local administration of Delhi Sultanate.
g) Name the two great Epics of Kalidasa.
h) Who was Fahein? What is the title of the book that he wrote about India?
i) What was the result of Babur's encounter with a huge confederacy of Rajputs at Khanua?
j) Where is Qutab Minar located? Name the rulers who started and completed the construction of the structure.

PART – II

SECTION - A (CIVICS)

Answer any two from this section:-

Q3. With reference to the composition of the Election Commission, explain the following:-
a) Appointment of Election commissioner and other commissioners. (4)
b) Terms of Office. (3)
c) Independence of the Election Commission. (3)

Q4. Describe the functions of a Municipal Corporation regarding:-
a) Public health and sanitation (3)
b) Education and Sports (3)
c) Public Works (4)

Q5. With regard to the Panchayat Samiti answer the following:-

a) Define Panchayat Samiti (3)

b) Supervisory Functions (3)

c) Any four developmental functions (4)

SECTION – B (HISTORY)

Answer any Three from this section.

Q6. Muhammad Tughlaq was also called as 'mixture of opposites'. With this reference, explain:-

a) Failure of the Scheme of taxation in Doab. (4)

b) Introduction of Token Currency (3)

c) Transfer of Capital (3)

Q7. Describe the Mughal administration with reference to-

a) Position of the Monarch (4)

b) The Army and the Navy (3)

c) Law and Justice (3)

Q8. With reference to the Brihadeswara Temple, answer the following:-

a) Where, when and by whom was the temple built? (3)

b) To which deity was the temple dedicated? (2)

c) Explain its features. (5)

Q9. Study the picture below and answer the following questions:-

a) Name the building. (1)

b) Name the ruler who built it? (2)

c) Mention two important buildings within its enclosure. (2)

d) Mention on e occasion when the Fort is used by the government of India. (2)

e) Mention three important features of the Fort . (3)

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

Class: Moral Science **F.M-80**

Sub:- IX **Time: 1½ hrs.**

I. Answer the following questions in 200 words each. **(3x20=60)**

1. 'Honesty is the best policy'. Explain this proverb in reference to the lesson 'I have to win'.
2. What according to you is an ideal family? Describe the roles and responsibilities of your father, mother, grand-father and grand-mother.
3. "A woman's work never ends". Explain this with reference to the lesson 'The Opposite Sex'.

II. Answer the following questions in 150 word each. **(2x10=20)**

1. In the story 'The House on Fire' there are six characters caught up in a burning house, namely, the Tasildar, Lady Lecturer, Retired Army Officer, Pop Singer, Young Student and a Very Senior Priest. You are a superman/superwoman and can rescue only one person. Whom would you rescue? Give justification to your answer. Describe also why you would not rescue others.

2. Rahul is a young medical student. As the first year exams approach, Rajesh, his friend offers him a copy of the question paper a day before the exam. Rahul refuses to take it. The exam is tough and Rahul feels disappointed. When the result is announced Rahul's name is not in the list of those who passed. Rajesh passed the exams and is very happy. Describe the two characters in your own words and explain their morality.

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

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

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

Attempt all Questions from Section A and any Four Questions from Section B .

The intended marks for questions or part of questions are given in brackets.

Section: A

Attempt All Questions from this Section.

Question: 1.

(a) Solve: $2x - \frac{3y}{4} = 3$, $5x - 2y - 7 = 0$

(b) If $3\cos\Theta - 12\sin\Theta = 0$, find the value of $\frac{\sin\theta+\cos\theta}{2\cos\theta-\sin\theta}$

(c) Rationalize : $\frac{\sqrt{2}+\sqrt{3}}{\sqrt{2}-\sqrt{3}}$

Question: 2.

(a) Solve $\frac{1}{x+2} + \frac{1}{x} = \frac{3}{4}$

(b) If $2^x = 3^y = 12^z$, then prove that $x = \frac{2yz}{y-z}$

(c) Solve $\log_2(x^2 - 4) = 5$

Question: 3.

(a) In the adjoining figure AD is median of ΔABC and $AN \perp BC$, prove that

(i) $AC^2 = AD^2 + BC \cdot DM + \frac{1}{4} BC^2$

(ii) $AB^2 = AD^2 - BC \cdot DM + \frac{1}{4} BC^2$

(b) If $A = 60°$ and $B = 30°$ Verify

(i) $\sin(A + B) = \sin A \cdot \cos B + \cos A \cdot \sin B$

(ii) $\tan(A - B) = \frac{\tan A - \tan B}{1 + \tan A \tan B}$

(iii) If A,B and C are the interior angles of ΔABC, Show that $\tan\frac{C+A}{2} = \cot\frac{B}{2}$

Question: 4.

(a) Find the amount and the compound interest on Rs 10,000 compounded quarterly for 9 months at the rate of 4% p.a.

(b) In the adjoining figure, find the length of AD in terms of b and c.

(c) If $2a - b + c = 0$ prove that $4a^2 - b^2 + c^2 + 4ac = 0$

Section: B (40 Marks)

Attempt any Four Questions.

Question:5.

(a) In the adjoining figure ABCD is a square of side 7 Cm. If AE=FC=CG=HA = 3CmFind the length of HF.

(b) Arrange the following numbers in ascending order : $\sqrt{3}, \sqrt[3]{5}, \sqrt[4]{8}$

(c) Solve $\sqrt{\left(\frac{3}{5}\right)^{1-2x}} = 4\frac{17}{27}$

Question: 6.

(a) Find the fraction which becomes $\frac{1}{2}$ when the denominator is increases by 4 and is equal to $\frac{1}{6}$ when the numerator is diminished by 5.

(b) In the Δ ABC, <A = 90°, CA = CB and D is a point on AB produced prove that $DC^2 - BD^2 = 2AB \times AD$

(C) Given $\text{Log}_{10} a = m$ and $\text{Log}_{10} b = n$ express $\frac{a^3}{b^3}$ in terms of m and n.

Question: 7

(a) From the adjoining figure, find

(i) Sinx

(ii) Cosy

(b) If tanx + cotx = 2, find the value of $\tan^2 x + \cot^2 x$.

(c) Evaluate :

$$\frac{\text{Sec}29°}{\text{Cosec}61°} + 2\cot 8° \cdot \cot 17° \cdot \text{Cot}45° \cdot \cot 73° \cdot \text{Cot}82° - 3(\text{Sin}^2 38° + \text{Sin}^2 52°)$$

Question:8.

(a) In the adjoining figure AB = AD, < BAP = < QAD and < PAC = < CAQ ,prove that AP = AQ.

(b) If log (m + n) = log m + log n , show that n = $\frac{m^3}{m-1}$

(c) Simplify $\left(\frac{x^a}{x^{-b}}\right)^{a^2-ab+b^2} \cdot \left(\frac{x^b}{x^{-c}}\right)^{b^2-bc+c^2} \cdot \left(\frac{x^c}{x^{-a}}\right)^{c^2-ca+a^2}$

Question: 9.

(a) On selling a tea set at 5% loss and a lemon set at 15% gain, a shopkeeper gains Rs 70.if he sells the tea set at 5% gain, lemon set at 10% gain, he gains Rs 130.find the cost price of the lemon set. (4)

(b) In the given figure, <D = 90°,AB = 16 cm ,BC = 12 cm and CA = 6 cm Find CD.

(c) If $2^x = 3^y = 12^z$, then prove that $x = \frac{2yz}{y-z}$.

XAVIER SCHOOL, GAMHARIA

2nd Term Exam-2018

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) Define the term thrust. State its S.I unit.
(b) Differentiate between thrust and pressure.
(c) What is fluid? What do you mean by the term fluid pressure?
(d) State Pascal's law of transmission of pressure. Name two application of Pascal's law.
(e) Why do sea divers need special protective suit?

Question: 2. **(10)**

(a) What is the cause of upthrust?
(b) A piece of wood is left under water, comes to the surface. Explain the reason.
(c) How does the density of material of a body determine whether it will float or sink in water?
(d) A body of volume V, Density ℓ is kept completely immersed in a liquid of density ℓ_L if g is the acceleration due to gravity. Write expression for the following-

(i) The weight of the body.
(ii) The upthrust on the body.
(iii) The apparent weight of the body.
(iv) The loss in weight of the body.

Question: 3. Give reasons

(a) Explain the following-
  (i) Water pipes in colder countries often burst in winter. (2)
  (ii) A dam has border walls at the bottom. (2)
  (iii) Sleeper are laid below the rails (2)
(b) Name two substances which expand on heating. (2)
(c) At what temperature the density of water is maximum? State its value. (2)

Question: 4.

(a) What do you mean by greenhouse gas? Name three green house gases. (3)
(b) What results in the increases of Co2 contents of earth's atmosphere? (3)
(c) What is carbon tax? Who will pay it? (2)
(d) State the important of green plant in an ecosystem. (2)

Section: B (40 Marks)

Attempt any Four Question from Section II

Question: 5.

a. (4)

(i) What does the slope of a displacement-time graph represent?
(ii) Car displacement-time sketch be parallel to the displacement axis? Give reason to your answer.

b. From the given velocity-time graph, Answer the following- (3)

(i) State the nature of the motion.
(ii) Find the displacement at t = 6 sec.
(iii) Find the acceleration from 0 to 4 S.

(a) A bullet initially moving with a velocity 20 ms^{-1} strikes a target and comes to rest after penetrating a distance 10 cm in the target. Calculate the retardation caused by the target. (3)

Question: 6.

(a) Deduce an expression for the pressure at a depth inside a liquid. (4)
(b) How is the upthrust related to the volume of the body submerged in a liquid (3)
(c) A body moves from rest with a uniform acceleration and travels 270 m in 3 Find the velocity of the body at 10 S after the start. (3)

Question: 7

(a) A given mass of water is cooled from 10°c to 0°c.state the volume changes observed. (3)
(b) State 3 ways to minimize the impact of global warming. (3)
(c) A train first travels for 30 min with a velocity 30 Kmh^{-1} and then 40 min with a velocity 40 Kmh^{-1} in the same direction. Calculate- (4)
(i) The total distance travelled.
(ii) The average velocity of the train.

Question: 8

(a) Explain the principle and working of hydraulic breaks. (4)
(b) A solid of density 5000 Kgm^{-3} weight 0.5 Kgf in air.it is completely immersed in water of density 1000 Kgm^{-3}. Calculate the apparent weight of the solid in water. (3)
(c) A force of 50 Kgf is applied to the smaller piston of a hydraulic machine. Neglecting friction, find the force exerted on the large piston, if the diameters of the pistons are 5 cm and 25 cm respectively. (3)

Question: 9

(a) 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 (4)
(i) Some salt is added to water.
(ii) Water is heated? Give reason.

(b) A body weight 450 gf in air are 310 gf when completely immersed in water. Find (3)
(i) The volume of the body.
(ii) The loss in weight of the body.
(iii) The upthrust on the body.

(c) Calculate the height of a water column which wills exists on its base the same pressure as the 70 cm column of mercury. Density of mercury is 13.6 g cm^{-3}. (3)