

**ST FRANCIS XAVIER SCHOOL.**

**BIOLOGY SAMPLE PAPER**

**CLASS –X**

**TIME – 1 hour**

**FULL MARKS -40**

*[ Attempt all questions ]*

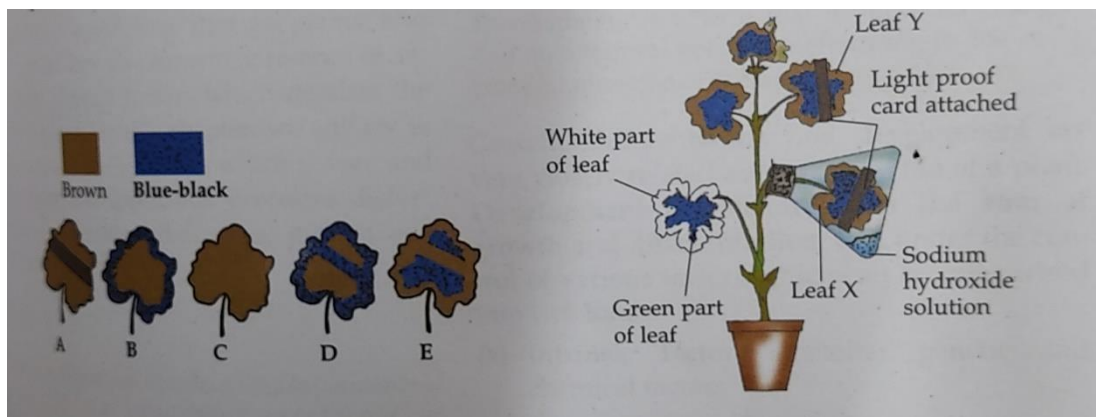
1. Take four leafy shoot. Dip their stems in separate beakers containing coloured water. Keep the beakers in the following conditions separately.
  - i) Dark & Warm room.
  - ii) Dark & warm room with a moving fan.
  - iii) Cold room with strong light.
  - iv) Warm room with strong light condition.

Observe the plants after an hour and answer the following -

- a. Which plant absorbs maximum amount of water?
- b. Which plant absorbs minimum amount of water?
- c. What is the significance of moving fan in condition (ii)?
- d. What are the various conditions of the atmosphere observed in this experiment?
- e. Why was coloured water put in the beaker?

[5]

2. A well-watered plant with variegated leaves was kept in the dark for 24 hrs. It was then set up as shown in the diagram and exposed to light for about 12 hrs. At the end of this period, leaf X & leaf Y were tested for the presence of starch. Study the diagram 2 & answer the questions-



- i) Why was the plant initially kept in the dark? What is this process called?
- ii) What is the function the sodium hydroxide solution kept in flask?
- iii) Select the correct leaf from the five available choices shown in the diagram as A, B, C, D & E and fill in the blanks:
  - a) After the starch test, leaf X will look like \_\_\_\_\_
  - b) After the starch test, leaf Y will look like \_\_\_\_\_

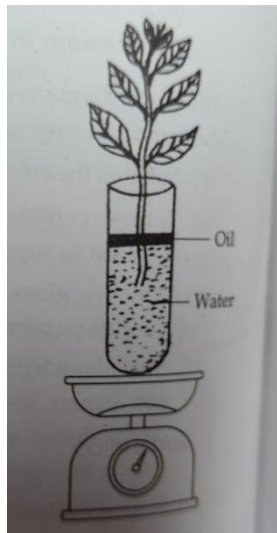
[5]

3. A thin strip of epidermal cells from an onion peel was examined in a drop of water, under the microscope. All the cells looked alike. The strips was then transferred to a drop of sugar solution on a slide and re-examined under the microscope after about 5 months. Based in your understanding & observation answer the following -

- i. Make a labelled diagram of one of the epidermal cells as it would appear after immersion in strong sugar solution.
- ii. Give the scientific term for the change observed in the cells and define it.
- iii. How will you bring this cell back to the original condition?
- iv. What is the scientific term for the recovery of the cell?
- v. Give two example from our daily life, where the above physiological process has an application.

[8]

4. Study the diagram given below and answer the questions.



- i) Name the process being studied in the experiment.
- ii) Explain the process mentioned in (i) above.
- iii) Why is oil placed over water?
- iv) What do we observe with regard to the levels of water when placed in (a) sunlight (b) humid condition (c) windy day.

- v) When placed in bright sunlight for four hours, what do you observe with regard to the initial & final weight of the plant? Give reasons for your observation.

[8]

5. Choose the correct options and rewrite the sentences:

- i. Expenditure of energy is required in \_\_\_\_\_  
(a) Osmosis (b) Active Transport (c) Diffusion (d) Passive Transport
- ii. \_\_\_\_\_ factor does not affect the rate of transpiration.  
(a) Wind (b) Light (c) Humidity (d) Age of plant
- iii. The role of chlorophyll in photosynthesis is \_\_\_\_\_  
(a) Absorption of water (b) Absorption of CO<sub>2</sub> (c) Absorption light & photosynthesis of water (d) Absorption of light
- iv. Why seeds when placed in water swell up due to \_\_\_\_\_  
(a) Imbibition (b) Absorption (c) Diffusion (d) Adsorption
- v. \_\_\_\_\_ process is known as necessary evil.  
(a) Transpiration (b) Guttation (c) Bleeding (d) Evaporation
- vi. ATP formation during photosynthesis is termed as \_\_\_\_\_  
(a) Photophosphorylation (b) Photophosphorylation (c) Oxidative photophosphorylation (d) None of these.
- vii. Fixation and reduction of CO<sub>2</sub> requires \_\_\_\_\_  
(a) ATP, NADPH (b) ATP (c) NADPH, water (d) Sunlight
- viii. Root hair absorbs water from soil through \_\_\_\_\_  
(a) Turgor Pressure (b) Iron exchange (c) Osmosis (d) Diffusion
- ix. A plant cell bursts when \_\_\_\_\_  
(a) Turgor pressure equalises wall pressure  
(b) Turgor pressure exceeds wall pressure  
(c) Wall pressure exceeds turgor pressure  
(d) Cell loses turgidity
- x. Absorption of water by the plant cells by surface contraction is called \_\_\_\_\_  
(a) Diffusion (b) Osmosis (c) Imbibition (d) Endosmosis

[10]

6. Give scientific reasons for the following-

[4]

- i. Some plants have sunken stomata.
- ii. Leaves of certain plants are thin and transparent.
- iii. Transpiration is a necessary evil.
- iv. We gargle with saline water in case of throat infection.

**ST. FRANCIS XAVIER SCHOOL**  
**SPECIMEN PRACTICE PAPER**  
**SUBJECT- CHEMISTRY**  
**CLASS-X**

**TIME: 1hour**

**FULL MARKS-40**

**Question 1.**

**Answer the following questions by choosing the correct options:- [8]**

- i. Electronegativity of oxygen is greater than nitrogen as:-
  - a. Oxygen has more electron affinity than nitrogen.
  - b. Size of oxygen atom is less than that of nitrogen.
  - c. Nuclear pull experienced by nitrogen atom is less than that of oxygen atom.
  - d. Both b and c.
- ii. Cationic size is always less than the atomic size of the element because:
  - a. Greater nuclear charge is experienced by the valence electrons of cation.
  - b. Number of shells for cations decreases compared to that of the atom.
  - c. Both a and b.
  - d. None of these.
- iii. The relative molecular mass of a gaseous hydrocarbon is twice its empirical formula mass. If its empirical formula is  $C_2H_5$ , its molecular formula should be:
  - a.  $C_3H_{15}$
  - b.  $C_4H_{10}$
  - c.  $C_4H_8$
  - d.  $C_2H_6$
- iv. The reason for covalent compounds to exist as soft solids, liquids and gases is:
  - a. Weaker forces of attraction between the combining atoms.
  - b. Polar nature of the covalent bond.
  - c. Absence of ions in the molecule.
  - d. Inability to get dissolved in water.

**Question 2.**

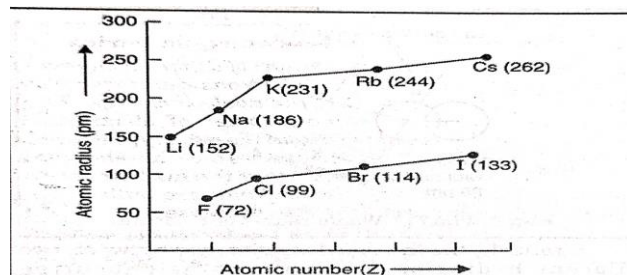
**Read the following and answer the questions that follow: [10]**

**Metallic character**

The ability of an atom to donate electrons and form positive ion is called metallic character. Down the group, metallic character increases due to increase in atomic size and across the period, from left to right, electropositivity decreases due to decrease in atomic size.

**Non metallic character**

The ability of an atom to accept electrons to form anion is called non metallic character. The elements having high non metallic character have higher tendency to gain electrons and become anions. Down the group non metallic character decreases due to increase in atomic size and across the period, electronegativity increases due to decrease in atomic size.



- i. Which of the following correctly represents the decreasing order of metallic character of alkali metals plotted in the graph?

- a. Cs, Rb, Li, Na, K
  - b. K, Rb, Li, Na, Cs
  - c. Cs, Rb, K, Na, Li
  - d. Cs, K, Rb, Na, Li.
- ii. Hydrogen is placed along with the alkali metals in the modern periodic table though it shows non metallic character as
- a. Hydrogen has one electron and readily loses electron to form negative ion
  - b. Hydrogen can easily lose one electron like alkali metals to form positive ion.
  - c. Hydrogen can easily gain one electron like halogens to form negative ion.
  - d. Hydrogen shows properties of non metals.
- iii. Which of the following has the highest electronegativity?
- a. F
  - b. Cl
  - c. Br
  - d. I
- iv. Identify the reason for gradual change in electronegativity of halogens down the group
- Electronegativity increases down the group due to decrease.
- a. Electronegativity increases down the group due to decrease in atomic size.
  - b. Electronegativity decreases down the group due to decrease in tendency to lose electrons.
  - c. Electronegativity decreases down the group due to increase in atomic radius/tendency to gain electron decreases.
  - d. Electronegativity increases down the group due to increase in forces of attraction between nucleus and valence electrons.
- v. Which of the following reason correctly justifies that “Fluorine(72pm) has smaller atomic radius than lithium(152pm)”?
- a. F and Li are in the same group. Atomic size increases down the group.
  - b. F and Li are in the same period. Atomic size increases across the period due to increase in the number of shells.
  - c. F and Li are in the same group. Atomic size decreases down the group.
  - d. F and Li are in the same period. Atomic size decreases across the period.

### Question 3.

a) **An organic compound has following percentage composition:-**

Carbon = 54.55%, Hydrogen = 9.09%, O = 36.36%.

If the molecular mass of the compound is 88u, find the molecular formula of the compound working upto two places of decimals. [ C=12u, O=16u, H=1u ] [4]

- b) Draw Lewis dot structure of the compound which is formed between element ‘M’ belonging to group 14 and element ‘Q’ belonging to group 16. [2]
- c) Define ionization potential (IP). [1]
- d) Between Na and Mg which one has greater IP value and why? [2]

### Question 4.

a) P,Q,R,S are elements having same number of shells. Their IP values are respectively 12.16 ev, 5.13 ev, 9.6 ev, and 13.2 ev. Arrange them in increasing order of their electronegativities. [1]

d) Why do you think Helium has the highest value of IP? [2]

**Question 5.**

a) What is vapour density of a gas? [1]

b) 4 gm of hydrogen gas is enclosed in a cylinder. Under same conditions of temperature and pressure, 128 gm of another gas X is enclosed in the same cylinder. Find the molecular mass of X. [2]

c) The vapour density of a gas (made of elements X and Y) is exactly equal to its empirical formula mass. Find its molecular formula if its empirical formula is  $X_3Y_2$ . [2]

**Question 6.**

The alphabets in the given table do not symbolise the actual elements:- [5]

	GRP 1	GRP 2	GRP 13	GRP 14	GRP 15	GRP 16	GRP 17	GRP 18
PERIOD 1	X							Y
PERIOD 2	Z	L		K		S	P	V
PERIOD 3			T		M		O	W
PERIOD 4	Q		U			N		R

- Identify the element with the largest atomic size in the table given.
- Draw Lewis dot structure of the compound formed between K and O.
- Arrange U, N, R, Q in the decreasing order of non-metallic character.
- How many valence electrons are there in one atom of M?

**THIS QUESTION PAPER CONTAINS THREE PRINTED PAGES**

**ST. FRANCIS XAVIER SCHOOL  
CLASS X**

**SUBJECT- PHYSICS**

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*The intended marks for the questions or parts of the questions are given in brackets [ ].*

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**Attempt all questions**

**Question 1**

- (i) State two factors on which moment of force depends. [2]
- (ii) Draw sketch diagrams and indicate the position of the centre of gravity of : [4]  
(a) rectangular lamina (b) lamina of the shape of a parallelogram (c) triangular lamina  
(d) a thin disc.
- (iii) A man spends 6.4 kJ energy in displacing a body by 64 m in the direction [4]  
in which he applies force, in 2.5 s. Calculate : (i) the force applied and (ii) the power  
spent (in h.p.) by the man.

**Question 2**

- (i) Explain briefly the role of the position of centre of gravity in [4]  
(a) loading a ship (b) sitting/ standing on the upper deck of a bus (c) making toys.
- (ii) A square cardboard is suspended by passing pin through a narrow hole [3]  
at its one corner. Draw a diagram to show its rest position. In the diagram, mark the point  
of suspension letter S and centre of gravity by letter G.
- (iii) A boy weighing 25 kgf climbs up from the first floor at height 3 m above [3]  
the ground to the third floor at height 7 m above the ground. What will be the increase in  
his gravitational potential energy ? (Take  $g = 10 \text{ N kg}^{-1}$ )

**Question 3**

- (i) It is easier to turn the steering wheel of a large diameter than that [1]  
of a small diameter. Give reason.

**(ii) State the effect couple. Give two examples of couple. [2]**

**(iii) State the condition when a body is in (i) static, (ii) dynamic, equilibrium. [4]  
Give one example for each of static and dynamic equilibrium.**

**(iv) Draw a labelled diagram of a block and tackle system having velocity ratio 5. [2]**

**(v) State whether the following statement is true or false:. [1]**

**'The position of centre of gravity of a body remains unchanged even when the body deformed.'**

#### **Question 4**

**(i) A ball is hanging by a thread from the ceiling of the roof. Draw [2]  
a neat labelled diagram showing the forces acting on the ball and the string.**

**(ii) Experimentally verify the laws of refraction and determine [4]  
the refractive index of glass.**

**(iii) A bullet of mass 10 g travelling with a speed of 200 ms<sup>-1</sup> penetrates a [4]  
wooden block of thickness 50 cm which offers a constant resistive force of 200 N to slow  
down the bullet. Find the speed with which the bullet emerges out of the block.**



**ST. FRANCIS XAVIER SCHOOL**  
**MODEL QUESTION PAPER**  
**CLASS – X**  
**COMPUTER**

Q1. Select the correct option for the following:

Each question carries 1 mark. No negative marking.

[ 1X5=5]

i) Find out the value of a if  $a=-4$ .  $a+=a--/2 * (++a -2) +50$

- a) -52
- b) 58
- c) 52
- d) 40

ii) JVM is a/an

- a) Compiler
- b) Assembler
- c) None of these
- d) Interpreter

iii) A constructor without any argument is known as

- a) Default Constructor
- b) None of these.
- c) Copy Constructor
- d) Parameterized Constructor

iv) "x" is a following type of literal

- a) boolean
- b) char
- c) short
- d) String

v) ASCII code of 'a' is

- a) 69
- b) 65
- c) 97
- d) 99

Q2.Fill in the blanks with the correct option :

Each question carries 1 mark. No negative marking.

[1x5=5]

- i) ++ is \_\_\_ operator in JAVA.
- a) Ternary operator
  - b) Binary Operator
  - c) Unary Operator
  - d) Relational Operator
- ii) \_\_\_ keyword is used if the function is not returning any value to the method calling statement.
- a) public
  - b) void
  - c) static
  - d) int
- iii) Static method can access \_\_\_ variable without using an object.
- a) instance
  - b) static
  - c) none of these
  - d) both static and instance
- iv) \_\_\_\_\_ is an instance of a class.
- a) Literal
  - b) Constructor
  - c) Object
  - d) Function
- v) random() function returns \_\_\_ type of value in Java.
- a) float
  - b) int
  - c) char
  - d) double

Q3. State True Or False :

Each question carries 1 mark. No negative marking.

[1x5=5]

i) switch case statement is more versatile than if statement.

- a) False
- b) True

ii) for(int i=1;i<=5; i++); ----- is a delay loop.

- a) True
- b) False

iii) Non-Primitive data types are also known as Reference data type.

- a) False
- b) True

iv) Java Applet used in webpages.

- a) False
- b) True

v) public is an access specifier in Java.

- a) True
- b) False

Q4. Name the following :

Each question carries 1 mark. No negative marking.

[1x5=5]

i) Name the function returns the largest whole number less than or equal to the number by rounding down.

- a) Math.random
- b) Math.ceil
- c) Math.round
- d) Math.floor

ii) Name the type of error in the following statement. `int b=8; double c=Math.cbrt(b); System.out.println("Square Root="+c);`

- a) Runtime error
- b) Logical error
- c) Syntax error
- d) None of these

iii) Name the variable common to all the objects of a class.

- a) Local Variable
- b) Non-static variable
- c) Static Variable
- d) Instance Variable

iv) Name the process of converting one higher primitive datatype to a lower primitive data type with user intervention.

- a) None of these
- b) Coercion
- c) Explicit Conversion
- d) Implicit Conversion

v) Name the construct that has same name as class name.

- a) Instance Method
- b) Static Method
- c) Constructor
- d) Function

Q5. Choose the odd one :

Each question carries 1 mark. No negative marking.

[1x5=5]

i) Select the odd option

- a) for( int i=4; i>=1;i++);
- b) for( int i=4; i<=10;);
- c) for( int i=4; i<=10;i--);
- d) for( int i=4; i<=10;i++);

ii) Select the odd option

- a) short
- b) int
- c) float
- d) long

iii) Select the odd option

- a) sum
- b) name
- c) char
- d) avg

iv) Select the odd option

- a) >
- b) ==
- c) <=
- d) &&

v) Select the odd option

- a) Sample s=new Sample(85,9.5);
- b) Sample s=new Sample(8.9,75.2);
- c) Sample s=new Sample(5,9);
- d) Sample s=new Sample();

### Section B (20 Marks)

Question 7 : The following program is based on the specification given below. Fill in the blanks with appropriate java statements. [1X6=6]

Class name : StockMarket

member variables : long code [ store product code]

int qty [ Store quantity]

double price[Store price], total[Store total amount], dis[Store discount] ,

net [Store net amount after discount]

Member methods :

StockMarket(long n, int q, double p) -- To assign n to code, q to qty, p to price.

void compute ( ) – to calculate total cost, discount as 25% on total cost if the total cost is more than 15,000/- otherwise no discount. Also find net price to be paid after availing the discount.

void display() – to print the product code, quantity, total cost, discount and net price to be paid.

Write a main() method to create an object and call the above methods.

```
import java.util.Scanner;
class _(i)___
{
    long code;
    int qty;
    double price, total, dis, net;

    StockMarket(long n, int q, _(ii)___ p)
    {
        code=_(iii)___;
        qty=q;
        price=p;
        dis=0.0;
    }
    void compute()
    {
        total=price*qty;
        if(_(iv)___)
            dis=total*25.0/100;
        net=_(v)_;
    }
    void display()
    {
        System.out.println("Product Code="+code);
        System.out.println("Quantity="+qty);
        System.out.println("Total Cost="+total);
        System.out.println("Discount="+dis);

        System.out.println("Net Price="+net);
    }
}

public static void main()
{
    StockMarket ob=new StockMarket(1442583,20,1000);
    _(vi)_.compute();
    ob.display();
}
}
```

(i)

- a) StockMarket
- b) stockmarket
- c) Stock Market
- d) Stockmarket

(ii)

- a) long
- b) double
- c) float
- d) int

(iii)

- a) N
- b) dis
- c) p
- d) n

(iv)

- a) total>=15000
- b) total>15000
- c) total<=1500
- d) total<15000

(v)

- a) net-discount
- b) total-discount
- c) total-dis
- d) total-pr

(vi)

- a) n
- b) q
- c) p
- d) ob

Question 8 : The following program is based on the specification given below. Fill in the blanks with appropriate java statements. [1X4=4]

Write a program in Java to print the sum of the following series:

$$(3*2)/1 + (4*3)/2 + (5*4)/3 + (6*5)/4 + \dots + ((n+2)*(n+1)) / n$$

class Series

```

{
    public static void main(int _(i)_ )
    {
        double s=0.0;
        for(int i=_(ii)__;i<=n;i++)
        {
            s=s+_(iii)_;
        }
        System.out.println("Sum of series "+_(iv)_);
    }
}

```

(i)

- a) s
- b) i
- c) i+1
- d) n

(ii)

- a) 3
- b) 0
- c) 1
- d) 2

(iii)

- a)  $((i+2)*(i+1))/i$
- b)  $(i*(i+1))/i$
- c)  $((n+2)*(n+1))/n$
- d)  $(i+2)/(i+1)$

(iv)

- a) s
- b) i

- c) n
- d)  $(i+1)*(i+2)$

Question 9

[6]

Write a program to input a set of **5 integer** numbers. Find the **sum** and the **product** of the numbers. Join the sum and the product to form a single number. Display the **concatenated** number.

**Sample Example:**

Input: 5, 9, 15, 6, 4

Sum= 39

Product = 16200

After Concatenation: 3916200

Q10. Read the paragraph given below and answer the questions given below: [1x4=4]

Case study 1

Java Loops

A loop in a computer program is an instruction that repeats until a specified condition is reached.

Entry Controlled Loop vs Exit Controlled Loop

In an entry controlled loop, the test condition is checked first followed by loop body, whereas in an exit controlled loop, the loop body is executed first followed by the test condition

In an entry controlled loop, if the test condition is false, the loop body will not be executed, whereas in exit controlled loop, if the test condition is false, the loop body will be executed once.

Entry controlled loops are used when checking of test condition is mandatory before executing loop body, whereas exit controlled is used when checking of test condition is mandatory after executing.

For loop and while loops are examples of entry controlled loops, whereas do-while loop is an example of exit controlled loop.

The jumping statements are the control statements which transfer the program execution control to a specific statements.

Java Jumping Statements

Java has three types of jumping statements they are break, continue, and return. These statements transfer execution control to another part of the program.

Java Break Statement



We can use break statement in the following cases. Inside the switch case to come out of the switch block. Within the loops to break the loop execution based on some condition. Inside labelled blocks to break that block execution based on some condition.

### Java Continue Jumping Statement

This statement is used only within looping statements. When the continue statement is encountered, then it skip the current iteration and the next iteration starts. The remaining statements in the loop are skipped. The execution starts from the top of loop again. We can use continue statement to skip current iteration and continue the next iteration inside loops.

### Java Return Jumping Statement

The return statement is mainly used in methods in order to terminate a method in between and return back to the caller method. It is an optional statement. That is, even if a method doesn't include a return statement, control returns back to the caller method after execution of the method. Return statement may or may not return parameters to the caller method.

- i) In which loop the loop body will be executed once, if the test condition is false?
  - a) Endless Loop
  - b) Entry Controlled Loop
  - c) Delay Loop
  - d) Exit Controlled Loop
  
- ii) \_\_\_ jumping statement is used to terminate a method.
  - a) return
  - b) None of these
  - c) break
  - d) continue
  
- iii) A \_\_\_ in a computer program is an instruction that repeats until a specified condition is reached.
  - a) switch statement
  - b) Loop
  - c) if statement
  - d) none of these
  
- iv) \_\_\_ statement is used to skip current iteration and continue the next iteration inside loops.
  - a) continue statement
  - b) break statement
  - c) return statement
  - d) None of these

**ST. FRANCIS XAVIER SCHOOL**  
**MODEL TEST PAPER**  
**ECONOMIC APPLICATIONS**  
**CLASS - XC & S**

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*Maximum marks-50*

*Time allowed- 1 hour 15 minutes*

*You will not be allowed to write in the first 15 minutes.*

*This time is to be spent in reading the question paper.*

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*The intended marks for questions are given in the brackets[.].*

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**Question 1**

**Multiple choice questions:**

**[10X1=10]**

- a) If due to fall in the price of bread, demand for butter rises, the two goods are:
- i) Substitutes
  - ii) Complements
  - iii) Not related
  - iv) Competitive
- b) Which of the following goods have inelastic demand?
- i) Textbooks
  - ii) Air conditioners
  - iii) Cars
  - iv) Precious clothes
- c) Law of supply does not apply to:
- i) Substitute goods
  - ii) Antique goods
  - iii) Luxury goods
  - iv) Necessary goods

*This question paper consists of **four** printed pages.*

d) Which of the following is not considered labour in economics?

- i) Driving his master's car by a driver
- ii) Playing cricket by Virat Kohli
- iii) Washing of children's clothes by mother
- iv) The work of teacher in a classroom

e) Indian Railways is an example of:

- i) Monopolistic competition
- ii) Perfect competition
- iii) Monopoly
- iv) Oligopoly

f) Who are the worst affected during the period of inflation?

- i) Debtors
- ii) Entrepreneurs
- iii) Producers
- iv) Fixed income groups

g) Indian Oil Corporation is an example of:

- i) Competitive firm
- ii) Monopoly firm
- iii) Monopolistically competitive firm
- iv) Oligopolistic firm

h) Which is not a primary factor of production?

- i) Land
- ii) Labour
- iii) Capital
- iv) Fuel

i) Who are considered skilled labours?

- i) Goldsmiths
- ii) Weavers
- iii) Chartered Accountants
- iv) Railway coolies

j) Luxury car is the example of:

- i) Giffen goods
- ii) Veblen goods
- iii) Inferior goods
- iv) Consumer goods

## **Question 2**

**Short answer questions:**

**[10X2=20]**

- a) The price of milk rises from ₹ 26 to ₹ 30 per litre and its demand falls from four litres per day to two litres per day. Calculate the price elasticity of demand for milk.
- b) Study the statement given below and state whether demand will be elastic or inelastic, citing reasons for your answer.
  - i) Demand for cigarettes by a habitual smoker
  - ii) A consumer postpones the purchase of a refrigerator till the off-season sale.
- c) State whether the following goods are elastic or inelastic, citing the reasons for the same.
  - i) car
  - ii) textbook
  - iii) diamonds
  - iv) milk
- d) The area of cultivable land is more or less fixed in a country. Under such conditions, suggest two ways to increase the productivity of land.
- e) Land is one of the most important factors of production. In this context, mention two ways in which the efficiency of land can be enhanced.
- f) "Entrepreneurs are innovators." Explain briefly.
- g) Identify the market form from the following:
  - i) Firm is a price maker
  - ii) Differentiated products
  - iii) Price discrimination
  - iv) Perfect knowledge
- h) The role of the state is important in developing the economic infrastructure of a developing economy. Give two reasons to support your answer.
- i) Improved technology affects the productivity of land. Explain with example.
- j) An indirect tax can be made progressive by imposing higher tax rates on luxury goods. Give reasons to support your answer.

### Question 3

**Long answer questions:**

**[4X5=20]**

- a) Read the following dialogue between two people:

Sita: I want 1 kg of potatoes.

Rani: What will you give in exchange?

Sita: I can give you 2 litres of milk in return for the potatoes.

Rani: I don't need milk, I want a pair of shoe.

Explain the problem faced by Sita and Rani in their exchange process.

- b) Read the extract and answer the questions:

*Business Telegraph, 23rd July, 2008*

Inflation is already at a 13 year high of 11.9%. Any further hike in prices could trigger more price pressure. The government raised the price of petrol by ₹ 5 per litre, diesel by ₹ 3 per litre and domestic LPG cylinder by ₹ 50.

- i) How does a rise in fuel prices create inflation in a country?
- ii) What is cost push inflation?
- iii) Explain the effects of inflation.

- c) *Case Study*

Farmers in our country are mostly small and marginal. They produce for self-consumption and hardly have any surplus crop to sell in the market.

These farmers produce with the help of their family members. Also due to limited landholding at times, there are more laborers working compared with what is actually required, this leads to disguised unemployment.

The use of primitive tools and techniques further reduces the ability of these families to increase production.

- i) What is disguised unemployment?
- ii) In the case of land, what is the law of returns to factor?
- iii) In the above case, why was productivity low?

- d) Classify the following into fixed and working capital stating the reason:

- i) A television set in a hotel room
- ii) Iron-ore in a steel plant
- iii) A car owned by a taxi-driver
- iv) Cotton used by a doctor

**ST. FRANCIS XAVIER SCHOOL**  
**MODEL TEST PAPER**  
**COMMERCIAL STUDIES**  
**CLASS - XC**

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*Maximum marks-50*

*Time allowed- 1 hour 15 minutes*

*You will not be allowed to write in the first 15 minutes.*

*This time is to be spent in reading the question paper.*

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*The intended marks for questions are given in the brackets[ ].*

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**Question 1**

**Multiple choice questions:**

**[10x1=10]**

- a) "They assume greater risk of loss of capital" ,this is degree of risk estimated by:
- i) Creditors
  - ii) Stakeholders
  - iii) Suppliers
  - iv) Debtors
- b) All of the following are benefits of E-commerce except:
- i) No reach limitations
  - ii) Cost reduction
  - iii) Site crash
  - iv) Faster buying process
- c) Blog marketing is a type of:
- i) Sales
  - ii) Publicity
  - iii) Marketing
  - iv) Advertisement
- d) Preliminary expenses are:

*This question paper consists of **four** printed pages.*

- i) Capital expenditure
  - ii) Revenue expenditure
  - iii) Deferred revenue expenditure
  - iv) Capital receipts
- e) Wages paid for erection of machinery are debited to:
- i) Wages account
  - ii) Trading account
  - iii) Machinery account
  - iv) Profit and loss account
- f) Who are not considered stakeholders in a firm?
- i) Shareholders
  - ii) Customers
  - iii) Creditors
  - iv) Government
- g) "One spoon free in the bournvita jar" is which technique of sales promotion?
- i) Price off premium
  - ii) Money refund premium
  - iii) With pack premium
  - iv) Extra quantity premium
- h) Which type of insurance is not a contract of indemnity?
- i) Fire insurance
  - ii) Marine insurance
  - iii) Life insurance
  - iv) Health insurance
- i) RBI is :
- i) Commercial bank
  - ii) Specialised bank
  - iii) Central bank
  - iv) Rural bank

j) Google Pay is an example of:

- i) Debit card
- ii) Credit card
- iii) E-wallet
- iv) NEFT

## **Question 2**

**Short answer questions:**

**[10X2=20]**

- a) "Budgets are useful to management." Justify.
- b) " The Central Bank is a banker's bank." Explain.
- c) " Marketing is customer -oriented whereas selling is producer oriented." Explain
- d) "Marketing is called a system." Why?
- e) " Recruitment is a positive process and Selection is a negative process." Explain.
- f) Advertising encourages artificial living. Do you agree with this statement? Why?
- g) " Warehousing is essential in modern business." Discuss.
- h) "Closing stock is valued at cost price or market price whichever is lesser." Identify and explain the accounting principle underlying the statement.
- i) " Internal recruitment cannot be a complete method in itself." Why?
- j) " Master budget is also known as a Summary budget." Justify.

## **Question 3**

**Long answer questions:**

**[4X5=20]**

- a) Mr. Robert Shaw is the Marketing Manager of a company which is introducing a machine which can change the wheels of bikes, cars and heavy vehicles without any help from people. The Directors have asked Mr. Shaw to give a brand name and the most suitable media to advertise the brand.
  - i) Explain any four factors that Mr. Shaw should consider in selecting a suitable media to advertise.
  - ii) What is a brand?
  - iii) Give two factors to be kept in mind while selecting a good 'Brand' name.
- b) "Marketing is essential for the success of a business organisation." Give four reasons to support your answer.




- c) " A well-trained employee is an asset to the enterprise." Mention any five advantages of training.
- d) " Advertisement is a social waste." In this context, explain the demerits of advertisement.
- e) Suppose in a large modern organisation, you have been recruited as a staff training officer. Name and explain briefly different types of training programmes you would like to organise. Also indicate what will be your pre-training and post-training activities.

**ST. FRANCIS XAVIER SCHOOL**  
**MODEL QUESTION PAPER**  
**SUBJECT – MATHEMATICS**  
**CLASS – X**

**SECTION A (14 Marks)**

**[14 × 1 = 14]**

1. A person deposits ₹ 200 per month for 36 months in a RD account at rate 11 % p.a. The amount got on maturity is  
 (a) ₹ 8241                      (b) ₹ 8124                      (c) ₹ 8421                      (d) ₹ 8412
2. The solution set for  $2 \leq 2x - 3 \leq 5, x \in R$  is  
 (a)  $\{x : x \in R, 2 \leq x < 4\}$                       (b)  $\{x : x \in R, 2.5 \leq x \leq 4\}$   
 (c)  $\{x : x \in R, 2.5 < x \leq 4\}$                       (d)  $\{x : x \in R, 2.25 \leq x \leq 4\}$
3. The roots of the quadratic equation  $3x^2 + 5x - 9 = 0$   
 (a) Imaginary                      (b) Distinct                      (c) Real & Equal                      (d) Real & Distinct
4. If  $\begin{bmatrix} 3 & -8 \\ 9 & 4 \end{bmatrix} X = \begin{bmatrix} -2 \\ 8 \end{bmatrix}$  then the order of the matrix X is  
 (a)  $2 \times 2$                       (b)  $2 \times 1$                       (c)  $1 \times 2$                       (d)  $1 \times 1$
5. The numbers to be subtracted from each of the numbers 23, 30, 57 and 78 so that the remainders, are in proportion is  
 (a) 3                      (b) 6                      (c) 5                      (d) 4
6. If a polynomial  $x^2 - 8x + 4$  is divided by  $2x + 1$  then the remainder is  
 (a)  $\frac{8}{9}$                       (b)  $\frac{32}{5}$                       (c)  $\frac{33}{4}$                       (d)  $8\frac{1}{5}$
7. If  $\Delta YXZ \sim \Delta LMN$  then the corresponding proportional sides are :  
 (a)  $\frac{XY}{ML} = \frac{XZ}{LN}$                       (b)  $\frac{YZ}{LN} = \frac{XY}{MN}$                       (c)  $\frac{XY}{LM} = \frac{XZ}{MN}$                       (d)  $\frac{XY}{LN} = \frac{XZ}{ML}$
8. The sum of first ten terms of the AP : 8, 4, 0, ..... is  
 (a) -100                      (b) 88                      (c) 100                      (d) 260
9. Which of the following is true  
 (a) product of two matrices is commutative  
 (b) product of two matrices is not associative  
 (c) multiplication is distributive over addition  
 (d) multiplication is not distributive over subtraction
10. The solution set representing the following number line is  
  
 (a)  $\{x : x \in R, x \leq 2\}$                       (b)  $\{x : x \in R, x < 2\}$   
 (c)  $\{x : x \in R, x \geq 2\}$                       (d)  $\{x : x \in R, x > 2\}$
11. If  $(x - 2)$  is a factor of  $x^2 - 7x + 2a$  then the value of 'a' is  
 (a) 5                      (b) 9                      (c) -5                      (d) -9
12. The fourth proportion of 3, 6 and 4.5 is  
 (a) 3                      (b) 12                      (c) 6                      (d) 9
13. The value of k for which  $x = 2$  is a solution of the equation  $kx^2 - 2x - 3 = 0$  is  
 (a)  $\frac{1}{4}$                       (b) 2                      (c)  $-\frac{1}{4}$                       (d) -2
14. The  $n^{\text{th}}$  term of an A.P.: 9, 5, 1, -3, ..... is  
 (a)  $4n - 13$                       (b)  $13 - 4n$                       (c)  $13 + 4n$                       (d)  $4n + 13$

**SECTION B (12 Marks)**

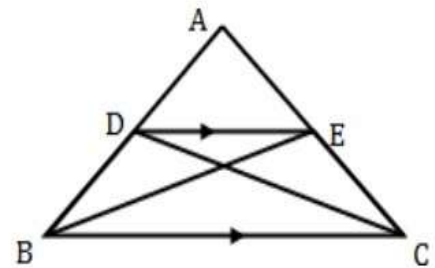
[6 × 2 = 12]

15. The following bill shows the GST rates and the marked price of 2 articles :

MRP	300	2400
GST %	12%	18%

The amount to be paid for the above bill is :

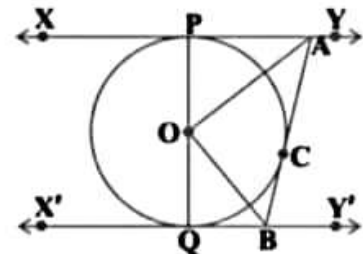
- (a) 3186                      (b) 3145                      (c) 3168                      (d) 3165
16. If  $X = \begin{bmatrix} 1 & -2 \\ 5 & 3 \end{bmatrix}$  and  $Y = \begin{bmatrix} 3 & 1 \\ 2 & 1 \end{bmatrix}$  then  $YX$  is
- (a)  $\begin{bmatrix} 8 & -3 \\ 7 & -1 \end{bmatrix}$                       (b)  $\begin{bmatrix} 8 & 3 \\ 7 & -1 \end{bmatrix}$                       (c)  $\begin{bmatrix} 8 & 3 \\ -7 & -1 \end{bmatrix}$                       (d)  $\begin{bmatrix} 8 & -3 \\ 7 & 1 \end{bmatrix}$
17. A man has a recurring account for 2 years at 6% p.a. simple interest. If he gets ₹ 1200 as interest, his monthly instalment is :
- (a) ₹ 800                      (b) ₹ 810                      (c) ₹ 825                      (d) ₹ 820
18. If  $2x^2 - x - 1 = 0$  is a factor of  $x^3 + 3x^2 - 3x - 2 = 0$ , then its factors are
- (a)  $(x - 1)(x + 2)(2x - 1)$                       (b)  $(x + 1)(x - 2)(2x + 1)$   
(c)  $(x - 1)(x + 2)(2x + 1)$                       (d)  $(x - 1)(x - 2)(2x + 1)$
19. If  $\frac{x^3 + 3x}{3x^2 + 1} = \frac{341}{91}$ , then by Componendo and Dividendo, the value of  $x$  is
- (a) 10                      (b) 11                      (c) 9                      (d) 12
20. In the figure if  $\frac{AD}{DB} = \frac{3}{2}$  then  $\frac{DE}{BC}$  is in proportion is
- (a)  $\frac{2}{3}$                       (b)  $\frac{5}{3}$   
(c)  $\frac{3}{5}$                       (d)  $\frac{3}{2}$



**SECTION C (6 Marks)**

[3 × 2 = 6]

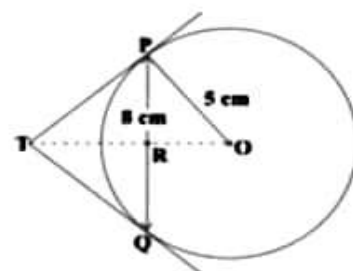
21. A solid iron cuboidal block of dimensions 4.4m × 2.6m × 1m is cast into a hollow cylindrical pipe of internal radius 30 cm and thickness 5cm. Find the length of the pipe.  
(Use  $\pi = \frac{22}{7}$ )



22. XY and X'Y' are two parallel tangents to a circle with centre O and another tangent AB with point of contact C intersecting XY at A and X'Y' at B. Prove that  $\angle AOB = 90^\circ$ .

OR

23. PQ is a chord of length 8cm of a circle of radius 5cm. The tangents at P and Q intersect at a point T. Find the length TP.



24. Reema being a plant lover decides to open a nursery and she bought few plants with pots. She wants to place pots in such a way that number of pots in first row is 3, in second row is 5, and in third row is 7 and so on.
- (a) If Reema wants to place 120 pots in total, then find the total number of rows formed in this arrangement.
  - (b) Find the number of pots placed in last row.
25. Two poles of equal heights are standing opposite each other on either side of the road which is 80m wide. From a point between them on the road, the angles of elevation of the top of the poles are  $60^\circ$  and  $30^\circ$  respectively. (Use  $\sqrt{3} = 1.732$ )
- (a) Find the height of the poles.
  - (b) Find the distance of the point from the poles.

**ST FRANCIS XAVIER SCHOOL**  
**GEOGRAPHY SAMPLE PAPER**  
**CLASS X**

**TIME : 1HR**

**FULL MARKS: 40**

**ATTEMPT ALL THE QUESTIONS**

**1ai.** It was 20th May 2020. At night you were without electricity. You had no internet connection. You were unable to attend your online classes on the next day. Name this natural phenomena experienced by you.

ii. Where did it originate ?

iii .State the cause of its origin ?

b. You bought a ticket to watch the cricket match at Chidambaram stadium in Chennai on 25th November19. Unfortunately the match was cancelled. Find the suitable reason for the situation.

c. Where would you experience overhead sun on 21st June - Asansol in West Bengal or Amritsar in Punjab? Give reason justifying your answer.

d. You have planned to visit Kochi , Kerala in the month of December. Do you need to carry warm clothes and an umbrella. Justify your answer.

e. How can you justify Mangalore has four months of rainfall yet receives 200cm, while Vishakhapatnam has eight months of rainfall yet receives only 100cm. [2+2+2+2+2]

**2ai.** Lower Gangetic plain is flooded during monsoons .It has fertile soil good for cultivation of rice and jute . Is the soil found here ex situ or in situ ?

ii. How is this soil formed?

b. The soil is red in colour on the summit of Western Ghats. As I travelled towards Deccan plateau , the colour changed to black. Identify the two types of soil and describe their formation .

ci There is re plantation of mangrove trees in Sunderbans . Justify.

d. Mention the soil conservation methods to be practised in hilly and desert areas.[3+3+2+2]

**3a.** The forest is most widely found in India and is of economic importance.

Is the forest commercially exploited ? Give reasons to support your answer.

bi. Identify the forest.

ii. Name one typical tree in northern India and one more in southern India from the above mentioned forest and state their uses.

c. It is the western slope of Western Ghats , the forest is multi layered .The trees are tall with epiphytes and lianas.

i. Name the forest. State two characteristics of the forest mentioned by you.

ii. Under what climatic condition is the forest found?

d. Deforestation should be checked, forests are to be conserved in India. Justify. [3+3+2+2]

**4a.** Explain, will Solar power gradually gain popularity over thermal power in India ?

b. There are perennial swift flowing rivers with waterfalls in North eastern India. But there are few hydel power plants compared to southern India. Give reasons to support your answer.

ci. Tertiary coal is also known as brown coal. State its characteristics.

ii. Is it suitable for industrial use ? Justify .

d. Name the following :

i. Best quality of iron ore

ii. Metal which gives strength and toughness to steel

iii. Liquid gold.

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Analytical question paper. CBSE Format

St. Francis Xavier School

History and Civics

Class X

Marks 40

Time. : One Hour

Part I Answer all questions

Civics

1a.what conditions have to be fulfilled by a party in order that it's leader is recognised as Leader of Opposition ? 1

b.Mr. k Rajan was disqualified from election to theLok Sabha .Mention the reasons.

2

C.what reasons are given for adopting the method of Indirect Election for Presidential Elections ?

2

History

2a.Name the book which has been called the 'Bible of modern Bengalee Patriotism.

2

b.what did the Satya Shodhak Samaj endeavour to do? 2

C.why the Early Congressmen were called liberals? 1

Part II

Section A Answer any one question.

Civics

1.a.A Federal set up involves a dual Government .Analyse the statement. 4

b.The Parliament is competent to make laws on different subjects mentioned in the constitution.Explain

3

C.The ministers continue in office so long as they enjoy the confidence of themajority of members in the Lok Sabha.Assess the statement with reference to how Parliament excercises control over the Executive.

3

2a. Ordinary ccitizens play no part in the election of the President. Analyse the statement.

3

b. The Constitution says that the 'executive power of the union shall be vested in the President.' Analyse the statement with examples. 4

C. An Emergency is 'a sudden or unforeseen situation demanding immediate action. It is a situation in which the head of the state assumes all powers. Assess the statement with relevant points in favour of the statement . 3

### Sectio B (History)

Answer all questions

3a. It was but natural that the expansion of British dominions would cause resentment among the rulers of the native states and unrest in the country at large. Analyse the statement with reference to the causes of the Revolt of 1857. 4

b. A natural consequence of the British rule was the economic exploitation of the country. Explain with example 4

C. For several reasons the army also posed a threat to the British rulers.

Give two examples in favour of the statement. 2

4.a. The Brahmo Samaj was not merely a religious movement, it also included in its programme matters of social and political reforms. Analyse the statement. 4

b. Lord Lytton's repressive policies and deeds intensified discontentment in the country. Give reasons in favour of the statement. 3

C. All the demands of Early Congressmen were of a moderate character. Analyse the statement with reference to the demands of the moderates. .3