QUESTION PAPER 2019

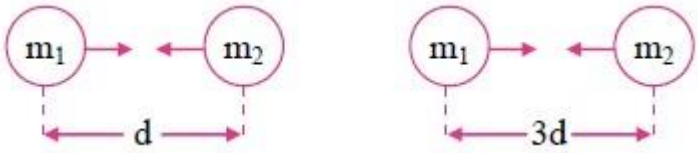
Jogeshwari West – 8655182522 / Goregaon West - 9372880761

Maharashtra Board Class 10 Science and Technology Part I

Solved Previous Year Questions-2019

1) (A) Answer the following Questions: (5)

1. Write the proper answer in the box:



If $F = Gm_1m_2/ d_2$, then F=

Answer: $Gm_1m_2/ 9d^2$

As given in the second figure, distance is 3d. So, replacing the value in the formula:

$F= Gm_1m_2/ (3d)^2 = Gm_1m_2/ 9d^2$.

2. In Dobereiner's triads Li, Na, K, the atomic masses of Lithium and Potassium are 6.9 and 39.1, respectively. What will be the atomic mass of sodium?

Answer: The Law of Dobereiner's Triads states that the atomic mass of Na is the average of the atomic masses of Li and K. Hence, Atomic mass of Sodium (Na) = (6.9 + 39.1)/ 2 = 23.

3. State whether the given statement is true or false:
A concave lens is a converging lens.

Answer: False.

When the refracted rays through the lens are converged at one point, it is called converging lens. However, concave lens spread the light that is refracting through it. Hence, a concave lens is a diverging lens.

4. By considering first correlation, complete the second correlation:
Hubble telescope: 569 km high from earth surface Revolving orbit of Hubble telescope:

Answer: Low Earth Orbit

If the height of the satellite orbit above the earth's surface is in between 180 km and 2000 km, the orbits are called Low Earth Orbits. Hence, the revolving orbit of Hubble telescope is Low Earth Orbit.

5. Find the odd man out:
Tinning, Anodization, Alloying, Froth floatation

Answer: Froth Floatation

Tinning, Anodization and Alloying are the processes of coating a thin layer of metal on the surface of other metals. While, Froth flotation is a process for selectively separating hydrophobic materials from hydrophilic and is used in mineral processing, paper recycling and waste-water treatment industries.

(B) Choose the *correct* alternative: (5)

1. The reaction of iron nail with copper sulphate solution is _____ reaction.

(A) Combination
(B) Decomposition
(C) Displacement
(D) Double displacement

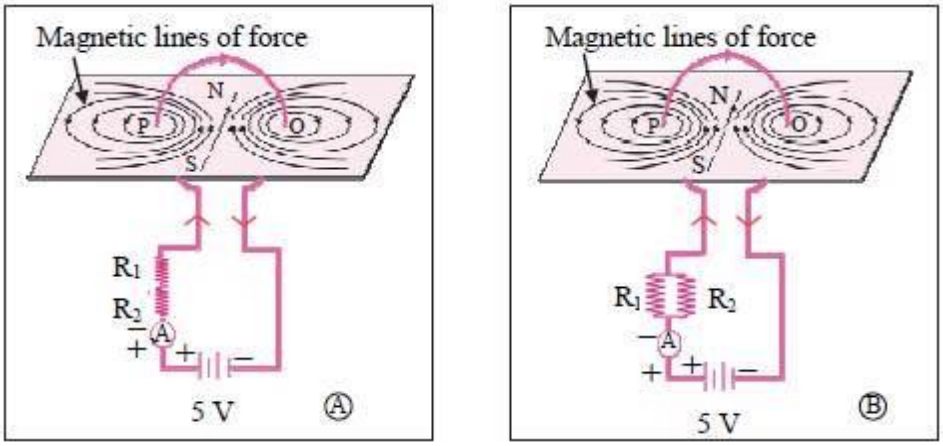
Answer: (C) Displacement

Iron being more reactive than copper can displace copper from its compounds/salts such as copper sulphate solution. Hence, the displacement reaction happens and blue colour of copper sulphate is altered to light green colour of iron sulphate.

Given below is the reaction :->

$Fe + CuSO_4$ (aqueous) --> $FeSO_4 + Cu$

2. Observe the following diagram and choose the correct alternative:



(A) The intensity of magnetic field in A is larger than in B.
(B) The intensity of magnetic field in B is less than in A.
(C) The intensity of magnetic field in A and B is the same.
(D) The intensity of magnetic field in A is less than in B.

Answer: (D) The intensity of a magnetic field in A is less than in B.

3. A ray of light makes an angle of 50° with the surface S_1 of the glass slab. Its angle of incidence will be _____.

(A) 50° **(B) 40°**
(C) 140° **(D) 0°**

Answer: (B) 40°

According to the second law of reflection, Angle of incidence (i) = Angle of Reflection (r).

The angle of a straight line is 180°.

Therefore, 50°+ i + r + 50° = 180°
=> 100°+i+i = 180° (since i=r)
=> 2i = 180°-100°
=> i = 80°÷2 => i
= 40°.

As a result, angle of incidence is 40°.

4. Water expands on reducing its temperature below _____°C.

(A) 0 (B) 4
(C) 8 (D) 12

Answer: (B) 4°C

4°C is the temperature (T) at which liquid water has a minimum volume, at atmospheric pressure. The expansion of water at lower T results from the water molecules arranging themselves to minimize the energy of their interactions.

5. The carbon compound used in daily life is _____.

(A) Edible oil (B) Salt
(C) Carbon dioxide (D) Baking soda

Answer: (A) Edible oil

Edible oil is a carbon compound containing unsaturated hydrocarbons. Even if Baking soda and Carbon dioxide also are carbon compounds, they are not as commonly used as edible oils. Hence, the answer is edible oils.

2. Attempt any *five* of the following questions: [10]

1. Two tungsten bulbs of power 50 W and 60 W work on 220 V potential difference. If they are connected in parallel, how much current will flow in the main conductor?

Answer: 0.5 A

If P_1= 50 W
P_2= 60 W and
V=220 V, then To
Find I=?
Formula P=VI
Solution =Total Power (P) = $P_1 + P_2 = 50+60 = 110W$
So, if P=VI
I= P/V= 110/220= 0.5 A.

2. Give scientific reason:

In the electric equipment producing heat e.g. iron, electric heater, boiler, toaster etc., an alloy such as Nichrome is used, not pure metals.

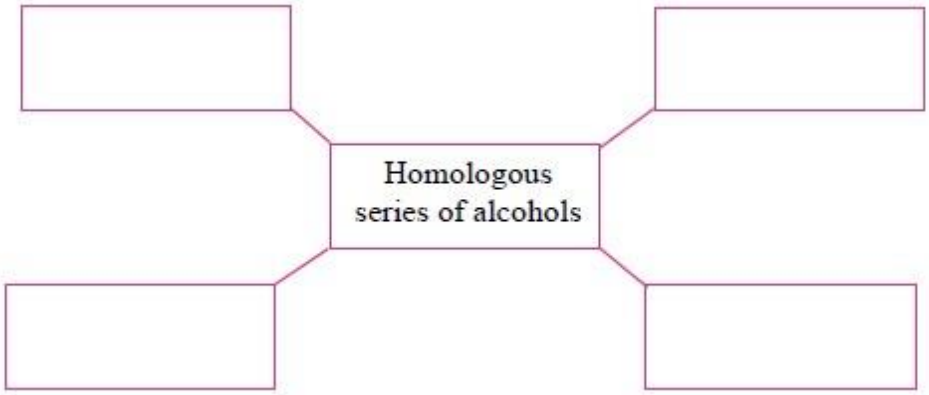
Answer: An Alloy such as Nichrome has a higher level of resistivity, so they will get heated easily on the passage of even a small amount of current. Also, electric equipment like iron, electric heater, boiler, toaster and so on work based on the heating effect of electric current. For this reason, nichrome is used in electric equipment producing heat, such as iron, electric heater, boiler and toaster.

3. A metal ball of mass 5 kg falls from a height of 490 m. How much time will it take to reach the ground? (g = 9.8 m/s2).

Answer: 10 Seconds

u (Initial velocity of the metal ball) = 0
s (displacement travelled by the metal ball) =490m
We know that $s= ut + 1/2at^2$
Replacing the values you get $490= 0 \times t + ½ \times g \times t^2$
(g is acceleration due to gravity)
Hence, $490= 0 \times t + ½ \times 9.8 \times t^2$
$490= 0 + 4.9 \times t^2= 4.9t^2$ $t^2=$
$490/4.9= 100$ So, t=10.

4. Write names of first four homologous series of alcohols:



Answer: Methanol (CH_3OH)
Ethanol (C_2H_5OH)
Propanol (C_3H_7OH)

Butanol (C_4H_9OH)

The general formula for the homologous series of alcohols is $C_nH_{(2n+1)}OH$. To get the answer, replace “n” with values.

n=1

Methanol (CH3OH)

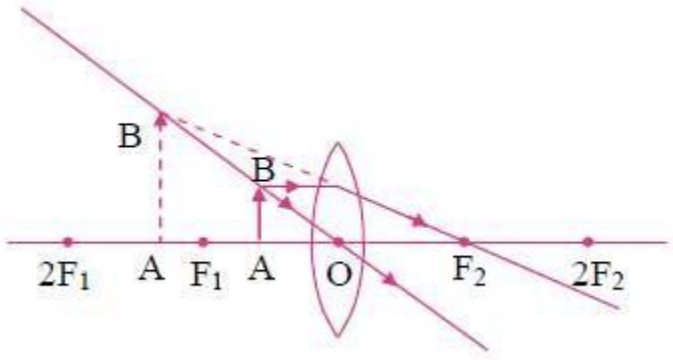
n=2

Ethanol (C2H5OH) n=3

Propanol (C3H7OH) n=4

Butanol (C4H9OH).

5. Observe the following figure and complete the table:



	Points	**Answers**
(i)	Position of the object	
(ii)	Position of the image	
(iii)	Size of the image	
(iv)	Nature of the image	

Answer:

	Points	**Answers**
(i)	Position of the object	Between F1 and O
(ii)	Position of the image	On the same side of the lens as the object
(iii)	Size of the image	Very large
(iv)	Nature of the image	Virtual and erect

6. Out of sodium and sulphur, which is a metal? Explain its reaction with the oxygen.

Answer: Sodium is a metal.

Sulphur is a non-metal that when burned in air reacts with the oxygen in the air to form anacidic oxide called sulphur dioxide. Meanwhile, sodium reacts with oxygen at room temperature to form sodium oxide.

$4Na + O_2 \xrightarrow{\text{----------}} 2Na_20$

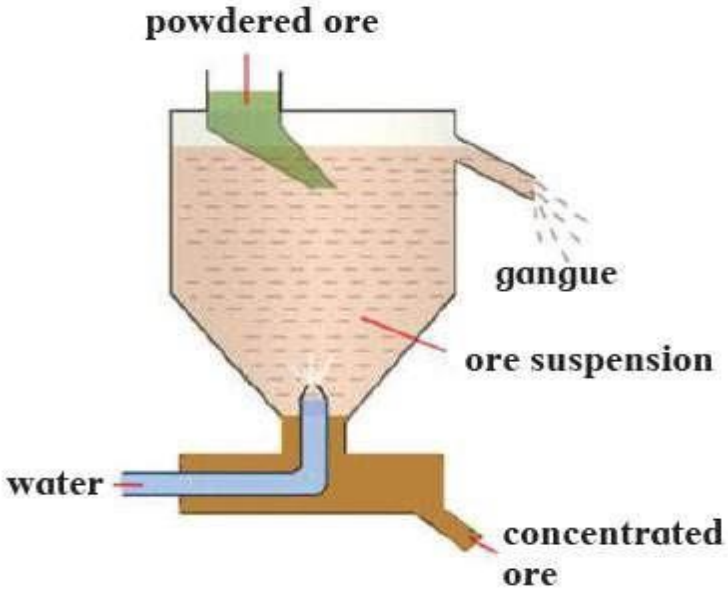
Sodium + Oxygen------Sodium Oxide.

7. A tapping vessel opens in a tank like container that is tapering on the lower side. The tank has an outlet for water on the upper side and a water inlet on the lower side. Finely ground ore is released in the tank. A forceful jet of water is introduced in the tank from lower side and gangue particles and pure ore are separated by this method.

i. The above description is of which gravitation separation method?
ii. Draw labelled diagram of this method.

Answer: (i) Hydraulic Separation Method

(ii)



Hydraulic Separation

3. Attempt any *five* of the following questions: [15]

1. What would be the value of 'g' on the surface of the earth if its mass was twice and its radius half of what it is now?

Answer: The formula is given $g=GM/R^2$
In this g is the acceleration due to gravity
M for mass of the earth
R is radius of the earth
G for universal gravitational constant
Now, according to the question
Mass is twice= 2M
Radius is half= R/2 g1 is considered as the new gravity. When we substitute the formula we get $g1= Gx2M/(R/2)^2$
$g1= 2GM / R^2/4$
$= 8(GM/ R^2)$
$= 8 \times g = 8 (9.8) =78.4 m/s^2$.

2. Write merits of Mendeleev's periodic table

Answer: Mendeleev's periodic table demonstrates the following merits:
1. Mendeleev classified the 63 elements known at the time.
2. Atomic masses of some elements were revised, so as to give them proper place in the periodic table, in accordance with their properties.
3. Mendeleev kept vacant places in the periodic table for elements not discovered till then. Three of these unknown elements were given the names eka-boron, eka-aluminium and eka-silicon from the known neighbours and their atomic masses were indicated as 44, 68 and 72, respectively. Their properties were also predicted.
4. Even though there was no place reserved for noble gases in Mendeleev's original periodic table, when noble gases such as helium, neon and argon were discovered towards the end of 19th century, Mendeleev created the 'zero' group without disturbing the original periodic table in which the noble gases were fitted very well.

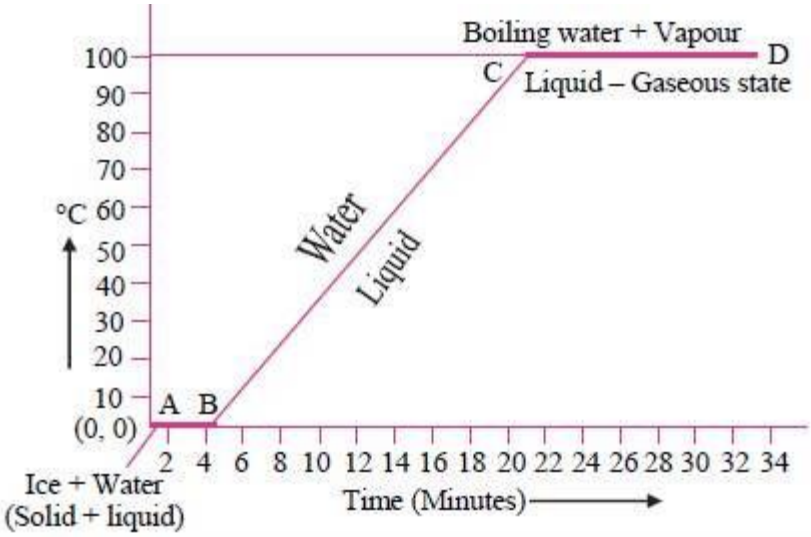
3. Study the following chemical reaction and answer the questions given below:

$$AgNO_{3(aq)} + NaCl_{(aq)} \longrightarrow \underset{\text{(Precipitate)}}{AgCl_{(s)}\downarrow} + NaNO_{3(aq)}$$

i. Identify and write the type of chemical reaction.
ii. Write the definition of the above type of chemical reaction.
iii. Write the names of reactants and products of the above reaction.

Answer: (i) It is a double replacement chemical reaction.
(ii) The reaction normally takes place in aqueous solutions and the ions in the reactants are exchanged to form a precipitate. These types of reactions are called double displacement reactions.
(iii) Silver Nitrate and Sodium Chloride are the reactants or products used in the above reaction.

4. Explain the following temperature vs. time graph:



Answer: See the graph given, which represents the changes occurring when a mixture of ice and water is heated**.** In this graph, the line AB signifies the conversion of ice into the water at a constant temperature. Heated ice melts at 0°C and converts to water even as it maintains the constant temperature at 0°C. This constant temperature is also known as the melting point of ice. Meanwhile, line BC represents the temperature rising from 0°C to 100°C, on further heating. At 100°C water converts to steam, and this is called a boiling point of water. After that, even on heating, the temperature of the water does not rise. Line CD represents this state when there is no change in temperature.

5. Surabhi from Std. X uses spectacles. The power of the lenses in her spectacles is 0.5 D.

Answer the following questions from the given information: i. Identify the type of lenses used in her spectacles.
ii. Identify the defect of vision Surabhi is suffering from. iii. Find the focal length of the lenses used in her spectacles.

Answer: (i) Since the power is positive, the lenses used in Surabhi's spectacle is convex lens
(ii) Surabhi is suffering from hypermetropia. Also, known as long-sightedness, it is a common eye condition, where nearby objects appear blurred. However, your vision is clearer when looking at things further away.
(iii) Power of the lens (P) =1/Focal length (F)
Given that Power = 0.5D
0.5=1/Focal length
Focal length= 1/0.5 =10/5
Hence, Focal length is 2m.

6. Complete the following table:

Sr. No.	Common Name	Structural Formula	IUPAC Name
1.	Ethylene	$CH_2=CH_2$	----------
2.	----------	CH3COOH	Ethanoic Acid
3.	Methyl alcohol	----------	Methanol

Answer:

Sr. No.	Common Name	Structural Formula	IUPAC Name
1.	Ethylene	$CH_2=CH_2$	Ethene
2.	Acetic Acid	CH_3COOH	Ethanoic Acid
3.	Methyl alcohol	CH_30H	Methanol

7. What is meant by space debris? Why is there a need to manage the debris?

Answer: In addition to the artificial satellite, there are some other objects revolving around the earth. These objects include, non-functional satellites, parts of the launcher detached during launching and debris generated due to collision of satellite with other satellites or any other object in the Space. Meanwhile, as per an estimation made in 2016, there are about 2 crore pieces of length more than 1 cm, revolving around the earth. All these are nothing but the debris in space. This debris can be harmful to the artificial satellites. It can collide with these satellites or space crafts and damage them. This debris is increasing day by day. Soon, it will be difficult to launch new space crafts. It is, therefore, very essential to manage the debris.

Q.4. Answer any *one* of the following questions: (5)

1. Taking into consideration the period of the elements given below, answer the following questions:

Elements	Atomic Radius (pm)
O	66
B	88
C	77
N	74
Be	111
Li	152

i. Arrange the above elements in a decreasing order of their atomic radii.
ii. State the period to which the above elements belong. iii. Why is this arrangement of elements similar to the above period of modern periodic table? iv. Which of the above elements have the biggest and the smallest atom?
v. What is the periodic trend observed in the variation of atomic radius while going from left to right, within a period?

Answer: (i) According to the decreasing order of atomic radii:
Li > Be > B > C > N > O.
(ii) The given elements belong to Period 2.
(iii) You will find that the atomic radius goes on decreasing while going from left to right, within a period. The reason behind this is as follows. While going from left to right, within a period, the atomic number increases one by one, meaning the positive charge on the nucleus increases by one unit at a time. However, the additional electron gets added to the same outermost shell. Due to the increased nuclear charge the electrons are pulled towards the nucleus to a greater extent and thereby the size of the atom decreases.
(iv) In these elements, Lithium has the biggest atom and Oxygen has the smallest atom. (v) You will find that the atomic radius goes on decreasing while going from left to right within a period.

2. The observations made by Swarali while doing the experiment are given below. Based on these, write answers to the questions:
Swarali found that the light ray travelling from the denser medium to rarer medium goes away from the normal. If the angle of incidence (i) is raised by Swarali, the angle of

refraction (r) went on increasing. However, after certain value of the angle of incidence the light ray is seen to return into the denser medium.

Questions:

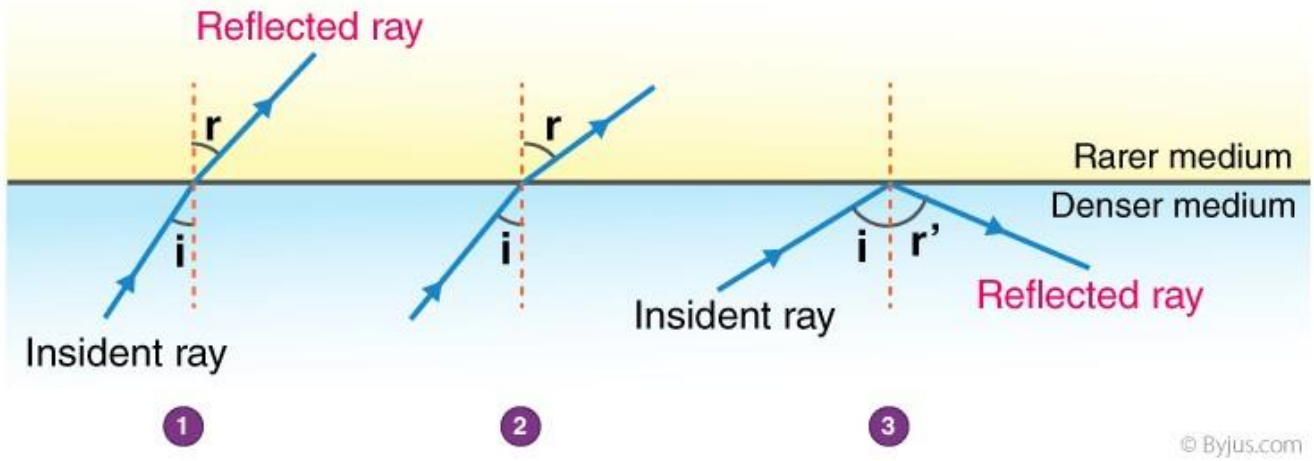
i. What is the specific value of i called?

ii.What is the process of reflection of incident ray into denser medium called? iii. Draw the diagrams of three observations made by Swarali.

Answers: (i) The specific value of ∠i is called critical angle.

(ii) The process of reflection of incident ray into denser medium is known as total internal reflection.

(iii)



MSBSHSE Class 10 English 2019 Question Paper Solutions

Section-I
(Language Study)

Q.I A.I Follow the given instructions: [08 marks]

i. Make a meaningful sentence of your own using the following phrase "to look into"

Answer: **I may need to look into the reason why he failed in the exam.**

ii. Pick out the infinitive from the following sentence I just had to do it

Answer: **"to do" is the infinitive in the sentence.**

iii. Punctuate the following sentence: did you hear him he whispered

Answer: **"Did you hear him?" he whispered.**

iv. Find out two hidden words of minimum of 4 letters from: "Endurance"

Answer: **cure, race and near are some words of minimum of 4 letters from "Endurance"**

v. Spot the error in the following sentence and rewrite it:
The novel was publishing in 1952

Answer: **The novel was published in 1952.**

vi. Complete the following word chain of verbs:
Write e ____, _____,_____,_____

Answer: **Enter, Remember, Report, Think**

vii. Identify the type of sentence: I could manage well enough.

Answer: **"I could manage well enough" is the example of an assertive sentence.**

viii. Write two past participles in which the last two letters are doubled.

Answer: **'slipped' and 'dropped' are two past participles in which two letters are doubled.**

A. 2 Follow the given instructions: [08 marks]

i. Make two sentences by using the given word as a noun and as a verb:
dream

Answer: **Use "dream" as a noun**
Is that your 'dream?'

Use "dream" as a verb
I 'dream' of him

ii. We saw a tree, bare of all leaves.
(Rewrite the sentence beginning with "A tree bare_____)

Answer**: A tree bare of all the leaves was seen by us.**

iii. The Dauphin will give me all I need.
(Rewrite the sentence using the present perfect tense).

Answer: **The Dauphin has given me all I need.**

iv. The Nobel Prize is one of the biggest honours in the world. (Change the given sentence into positive and comparative degree)

Answer: **(a) Nobel Prize is greater than most other honours in the world is a sentence in comparative degree.**
(b) Few honours in the world are as great as the Nobel Prize is a sentence in the positive degree.

B. Follow the instructions and answer the questions: [4 marks]

i. I must tell the truth
(pick out the model auxiliary verb and state its function)

Answer: **In this sentence. "I must tell the truth", the modern auxiliary verb used is "must". It is used to complete the form of a sentence. The 'must', used in this sentence states the need or requirement to tell the "Truth."**

ii. Identify the clauses and name it:

The nerves that controlled his muscles were shutting down.

Answer: **Adjective Clause of manner is used in this sentence.**

Section-II
(Textual Passages)
(Reading skills, Vocabulary and Grammar)

Q.2 A. Read the following passages and answer as instructed: [10 Marks]

A1. Choose the correct alternatives from the given options to re-write the sentences:
(appealing, casually, flattery, well-oiled)

i. I followed _____

Answer: **Casually.**

ii. Anil talked about the _____ wrestlers.

Answer: **well-oiled**

iii. I gave him my most _____ smile.

Answer: **appealing**

iv. A little _____ helps in making friends.

Answer: **flattery**

I was still a thief when I met Anil. And although only 15, I was an experienced and a fairly successful hand.

Anil was watching a wrestling match when I approached him. He was about 25- a tall, lean fellow, and he looked easy-going, kind and simple enough for my purpose. I hadn't had much luck lately and thought I might be able to get into the young man's confidence.

"You look a bit like a wrestler yourself", I said. A little flattery helps in making friends.
"So, do you", he replied, which put me off for a moment because at that time I was rather thin.
"Well", I said modestly, "I do wrestle a bit."
"What's your name?"
"Hari Singh", I lied. I took a new name every month. That kept me ahead of the police and my former employers.

After this introduction, Anil talked about the well-oiled wrestlers who were grunting, lifting and throwing each other about. I didn't have much to say. Anil walked away. I followed casually.
"Hello, again", he said.
I gave him my most appealing smile. "I want to work for you," I said.
"But I can't pay you."
I thought that over for a minute. Perhaps I had misjudged my man.
I asked, "Can you feed me?"
"Can you cook?"
"I can cook," I lied again.
"If you can cook, then maybe I can feed you."
He took me to his room over the Jamuna Sweet Shop and told me I could sleep on the balcony. But the meal I cooked that night must have been terrible because Anil gave it to a stray dog and told me to be off. But, I just hung around, smiling in my most appealing way, and he couldn't help laughing.

A 2. Complete the following web-chart:

Answer: **Tall, Easy-going, Kind, Simple are the qualities of Anil**

A 3. Find the similar meaning words from the passage for the following: i. endearing ii. miscalculated iii. humbly iv. awful

Answer: **(i)appealing**
(ii) misjudged
(iv) **kind**
(v) **terrible**

A 4. i. "I want to work for you", I said.
(Change it into indirect speech).

Answer: **I said that I wanted to work with him.**

ii. I can't pay you.
(Rewrite it making it affirmative)

Answer: **I refuse to pay.**

A 5. “We should learn from our own mistakes,” Explain.

Answer: **We have to learn from our mistakes so that we do not repeat them. We should also develop wisdom and have the good sense to reach a proper decision and choice. If we always find it challenging to reach a decision or are inclined to blame others for our bad decisions, we have not learnt anything. We should all forget our mistakes, but we should never forget what it taught us. We should take the message we learnt from it and then try to improve it.**

B. Read the passage and follow the instructions given to answer: [10 marks]

B 1. Answer in one word:

i. At what age was Stephen diagnosed with amyotrophic lateral sclerosis?

Answer: **At the age of 21**

ii. Over the years, how many books has Stephen written or co-written?

Answer: **Stephen Hawkins has written or co-written 15 books.**

iii. When did Stephen catapult to international prominence?

Answer: **In 1988**

iv. In which year, was his life story depicted?

Answer: **The film, The Theory of Everything that came in 2014, depicted his life story.**

Stephen Hawking (born January 8, 1942) is a British Scientist, Professor and Author who has done groundbreaking work in Physics and Cosmology, and whose books have helped make Science accessible to everyone. At the age of 21, while studying Cosmology at the University of Cambridge, he was diagnosed with amyotrophic lateral sclerosis (ALS). Part of his life story was depicted in the 2014 film, The Theory of Everything.
Over the years, Stephen Hawking has written or co-written a total of 15 books. A few of the most noteworthy include:
In 1988 Hawking catapulted to International prominence with the publication of A Brief History of Time. The short, informative book became an account of cosmology for the masses and offered an overview of space and time, the existence of God and the future. The work was an

instant success, spending more than four years atop the “London Sunday Times” best-seller list. Since its publication, it has sold millions of copies worldwide and been translated into more than 40 languages.

A Brief History of Time also wasn't as easy to understand as some had hoped. So, in 2001, Hawking followed up his book with The Universe in a Nutshell, which offered a more illustrated guide to Cosmology’s big theories.

In 2005, Hawking authored the even more accessible A Briefer History of Time, which further simplified the original work’s core concepts and touched upon the newest developments in the field like String theory.

B 2. Complete the following table with the relevant information about Stephen Hawking

Books	Films
(i)_____	(i) _____
(ii)_____	
(iii)_____	

Answer:

Books	Films
(i) A Brief History of Time	(i) The Theory of Everything
(ii) The Universe in a Nutshell	
(iii) A Briefer History of Time	

B 3. Find out the “Antonyms” from the passage for the following:

(i) worst x
(ii) exclude x
(iii) duplicate x
(iv) oldest x

Answer: **(i) The antonym of worst is noteworthy**
(ii) **The antonym of exclude is include**
(iii) **The antonym of duplicate is original**
(iv) **The antonym of oldest is the newest**

B 4. i. It has sold millions of copies worldwide and been translated into more than 40 languages
(Change into a simple sentence)

Answer: **Being translated into more than 40 languages, they sold millions of copies worldwide.**

ii. The short informative book became an account of Cosmology
(Add a question tag)

Answer: **Isn't it?**
The short informative book became an account of Cosmology, Isn't it?

B 5. 'Stephen Hawking was a versatile personality'. Justify.

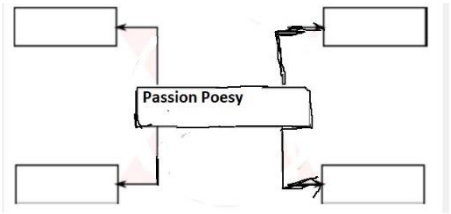
Answer: **Stephen Hawking, the British Scientist, diagnosed with amyotrophic lateral sclerosis (ALS), at the age of 21, was given about five years to live. Despite his disabilities, he proved the doctors and the people wrong. He worked hard and completed his best works, which also came to be known worldwide. A film was also made on his life, and it became popular. Stephen Hawking was a real inspiration to people. He taught us that Intelligence is not our IQ and that there is a way out of the black hole. He taught us that it is crucial to learn from the mistakes in life and never take life for granted. His intellect and zest for life is a chief example of the triumph of the human spirit. Thus, we can justify the statement that Stephen Hawking is a versatile personality.**

Section-III

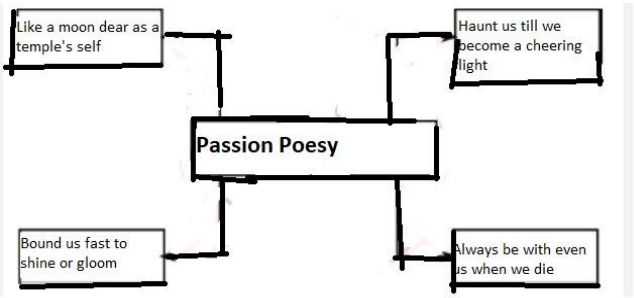
(Poetry)
3 [15 Marks]

3 A. Read the following extract and answer the given questions

A1. Fill on the web with what passion poesy can do to you



Answer:



_____ and clear rills
That for themselves a cooling covert
make 'Gains the hot season; the mid
forest brake' Rich with a sprinkling of
fair musk-rose blooms:
And such too is the grandeur of the dooms
We have imagined for the mighty deed;
All lovely tales that we have heard or
read An endless fountain of immortal
drink Pouring unto us from the
heaven's brink. Nor do we merely feel
these essences
For one short hour; no, even as the trees

That whisper round a temple become soon
Dear as the temple's self, so do the moon,
The passion poesy, glories infinite,
Haunt us till they become a cheering light
Unto our souls, and bound to us so fast,
That, whether there be shine, or gloom o'ercast They always must be with us, or we die.

A2. List the things which express sorrow from the extract.

Answer: **Lines from this extract that express sorrow are:**

- **And such too is the grandeur of the dooms**
- **Nor do we merely feel these essences • For one short hour; no, even as the trees.**

A3. Write down the rhyme scheme of the last five lines.

Answer: **Find here the rhyme scheme of the last five lines:**
aa-bb-c.

3B [10 Marks]

Read the following poem and write an appreciation of it with the help of the given points in a paragraph format:

The Pulley

When God at first made Man,
Having a glass of blessings standing by:
Let us (said He) "pour on him all we can :
Let the world's riches, which dispersed lie,
Contract into a span.
So strength first made a way.
The beauty flow'd, then wisdom, honour, pleasure:
When almost all was out, God made a
stay, Perceiving that alone of his
treasures Rest in the bottom lay.
For if should(said He)
Bestow this jewel also on my creature,
He would adore my gifts instead of me,
And rest in Nature, not the God of Nature.
So both should losers be.

Yet let them keep the rest,
But keep them with repining restlessness :
Let him be rich and weary, that at last,
If goodness lead him not, yet
weariness May toss him to my breast.
--------- George Herbert

- The tile of the poem
- The poet
- Central Idea/ theme
- Rhyme scheme
- Figure of speech
- Special features
- Favourite line/ lines
- Why I like/ don't like the poem

Answer: **Title of the poem is 'The Pulley.' The poet is George Herbert.**
The poem's central idea or theme focus on the reason for the man's continuous restlessness in his life. According to the poet, God has made sure that the man will suffer hard so that their thoughts would ultimately return to his creator, God. There are five lines in every verse of the poem.
The rhyme scheme for the poem is a-b-a-b-a.
Metaphor is the key figure of speech used in the poem. 'Glass of blessings' is a term used to depict the total of all human qualities bestowed on a man, while the quality of "rest" or "contentment" is compared with that of a "jewel."
In the meantime, the poem comes with a message. The message is that however rich or whatever abundance of qualities we may have, we must always believe in our God and thank him for the blessings that he has bestowed upon us.
My favourite line from the poem is "If goodness lead him not, yet weariness May toss him to my breast." Here, it talks of the fickle nature of man. It says that if goodness and luxury do not lead a man to God, then man will be reminded of God in difficulties for sure. A tired and weary man is most likely to believe more in God than someone living in luxury, who has not undergone much trouble.
I like this poem very much as it teaches us not to be self-satisfied and content but to believe in God, thank God, and to always remember him for all the kindness and blessings that he has showered upon us.

Section-IV
(Non-textual passage)
(Reading skills, Vocabulary and Grammar)

4. [15 Marks]

4 A. Read the following passage and do the given activities

A 1. Fill in the blanks, with the virtues of dogs.

1. _____
2. _____
3. _____
4. _____
5. _____

Answer: **(1) Companion**
(2) **Loyal**
(3) **Faithful**
(4) **Devotee**
(5) **Protection**

Humans and Dogs are inseparable for thousands of years, and they are dependent on each other for protection and survival. Relationships between humans and dogs are often characterised by strong emotional bonds which run both ways. Dogs are very popular as pets and companions. The dog is the “Man’s best Friend” and a family member. The dog is one of the most loyal, faithful and devoted animals. In earlier days dogs were kept mainly for hunting and guarding; now they are kept for companionship, protection and showmanship.
There are millions of people all over the world who are dog lovers. Puppies need more attention at an early age. As much as possible, try many methods of socialisation, such as playing with them, taking them for a walk, expose them to crowds, make them obey orders, etc.

A 2. Methods of socialisation of puppies are

1. _____
2. _____
3. _____
4. _____

Answer: **(1) Playing with them**
(2) **Taking them for a walk**
(3) **Expose them to crowds**
(4) **Make them obey orders**

A 3. Cross the odd man out from the following:

(i) inseparable, dependent, protection, popular
(ii) Hunting, guarding, playing, petting
(iii) Earlier, human, relationship, family
(iv) Often, mainly, now, emotional

Answer: **(i) popular**
(ii) **petting**
(iii) **earlier**
(iv) **emotional**

A 4. 1. There are millions of people all over the world
(pick out the determiners and write them)

Answer: **All**

2. Puppies need more attention
(Re-write the sentence without changing its meaning beginning with: Puppies don't____)

Answer: **Puppies don't need less attention.**

Puppies don't need negligence.

A 5. Should we ban keeping pets?

Answer: **I am all for no ban on keeping pets. Pets are faithful and are man's best friends. They bring love and happiness to people who have adopted them. Pet dogs are also used for protection. Pets are good companions, and some pet dogs are also used for guarding and hunting. Pets are loyal and devoted to you. However, I also believe that pets should be kept only by people who can take proper care of them, and give them the required attention. It is a huge responsibility, and the owner should be willing to take care of the pets.**

4 B

Show a summary of the passage given in the following and suggest a suitable title.

Humans and Dogs are inseparable for thousands of years, and they are dependent on each other for protection and survival. Relationships between humans and dogs are often characterised by strong emotional bonds which run both ways. Dogs are very popular as pets and companions. The dog is the "Man's best Friend" and a family member. The dog is one of

the most loyal, faithful and devoted animal. In earlier days dogs were kept mainly for hunting and guarding; now they are kept for companionship, protection and showmanship.
There are millions of people all over the world who are dog lovers. Puppies need more attention at an early age. As much as possible try many methods of socialisation, such as playing with them, taking them for a walk, exposing them to crowds, make them obey orders etc.

Answer: **"Man's Best Friend" or "Unconditional Love" are the titles.**

The passage depicts the bond between the dog and human beings, the love existing for so long. Dogs, considered as a loyal animal, is also Man's best friend. They are known for their unconditional love towards humans. Millions of people over the world keep dogs and are known to be dog lovers. Dogs are said to be the best companions and are also used to guard and protect us. Puppies also need more attention and have to be trained well. They will continue to love you if you take care of them.

Section- V
(Writing Skills)

5 [10 Marks]

5 A. Attempt any One:
Letter writing:
Imagine you are Dipesh/ Disha Shastri, residing at J.M.Road, Shivaji Nagar, Pune. Attempt any one letter based on the given advertisement.
Blood Donation Camp
Donate Blood-Save Lives:

- Blood means life
- A noble work
- Higher requirement
- Can bring a smile on many faces

Venue: F.C Road, Pune
Date: 5th March
Time: 10 a.m to 6 p.m
Contact: The Secretary, Lions Club, Pune

FORMAL LETTER	INFORMAL LETTER

Write a letter to 'The Secretary requesting him to enroll your name for the Blood Donation Camp	Write a letter to your friend Manish/ Manisha appealing him or her to donate generously. Tell him or her the importance of Blood Donation.

Answer:

From,
Dipesh/ Disha Shastri,
J.M.Road,
Shivaji Nagar,
Pune.
02 March 2019

To,
The Secretary
Lion's Club
Pune

Subject: **Letter of request to enrol for 'Blood Donation Camp' in ' Gokuldham Society.'**

Sir,

I, Dipesh/ Disha Shastri, a resident of 'Gokuldham Society' with due respect request you to enrol your name in the Blood Donation Camp, which we are conducting for the Blood Bank Group. The Camp will be held on 5 March 2019 at F.C. Road, Pune from 10:00 a.m to 6:00 p.m.

Although you may be engrossed in a busy schedule, all of us do humbly request you to take some time to attend the Camp and be a part of the good cause.

Hope you will consider our request and give an answer in the affirmative.

Thanking you in anticipation,
Yours truly,
Dipesh/ Disha Shastri,
Committee Member
Gokuldham Society

Or

Rose Villa

Bandra West

53, Darshan Apartment.,
Fort.
05 March 2019

Dear Manish/ Manisha,

Hi,
How are you doing? Hope everything's okay at home. Sorry for not writing sooner, but I was busy with the exams.
I am writing this letter to share some information about the Blood Donation Camp, which I have been conducting for 3 years. As you are well aware, there are many accident cases and emergencies where people need blood. Our attempt via these Blood Camps is to come together and help a few of them. Our society is organising a Blood Donation Camp on 5 March 2019 at F.C. Road, Pune from 10:00 am to 6:00 pm. I hope you will be able to participate in the Blood Donation Camp and donate blood. Hope you will be a part of this good cause. Meanwhile, please do remember the date and venue mentioned in this letter.
I will wait for your acknowledgement of this email and your response to my invitation. Please give my regards to Uncle and Aunty.

Love,
Dipesh/ Disha

5 B [5 Marks]

5. B. I Dialogue writing:

Draft an imaginary dialogue between a Scientist and Ritesh/ Ruta about the importance of developing Scientific attitude. You can use the following points:

- Helps to fight against social evils
- Develops rational and logical thinking
- Helps to understand the latest technology
- For the betterment of humanity
- Strengthens economy

Answer: **Activity to be done by the students.**

Or

5. B.2 [5 Marks]

Interview Questions:

Imagine you are the monitor of the class. You are asked to conduct an interview of a famous singer. Frame a set of 8 questions with the help of following points:

- Early life and education
- Interest tot- thin particular field
- Guru or Mentor
- Awards/ Achievements
- Future Plans and Advise to Youngsters

Answer: **Good Morning! Sir. I am excited as I got a chance to interview you and to know you better.**
Here are some questions that will help us to know more about you.

1. **What is your inspiration to become a singer?**
2. **Name your teacher and a role model.**
3. **How did you feel when you received the award last year?**
4. **Describe your family's reaction when you received the award.**
5. **Give your opinion about the modern musical age.**
6. **How do you prepare yourself for any recording or concert?**
7. **How many years have you been into singing? What are the hardships that you faced?**
8. **Please share with us any of your memorable experiences.**
9. **What are the qualities of a good singer? What is your success mantra?**
10. **What is the message to your fans or the upcoming artists?**

6 [10 Marks]

6 A. Attempt any one of the following: Information Transfer

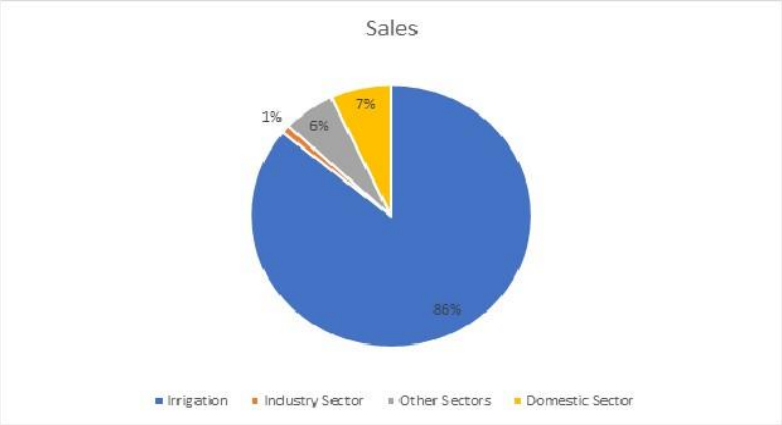
6 A I. Verbal to non-verbal:

Read the given information and prepare a pie diagram for it.
Annual Water Usage in Maharashtra

Water is life. It is a universal solvent and an important resource. The annual usage of water differs in various sectors of Maharashtra. The major occupation of Maharashtra being agriculture, the maximum amount of available water is used for irrigation that is 86%. The distant following pace of 7% is contributed by the domestic sector, including drinking, washing, cooking, etc. There is a close competition of other sectors which is not far away with 6% usage of water. One of the key factors which play an important role in the development of a nation is the industrial sector. The consumption of water in the industrial sector is very negligible, which

is 1%. We know the energy sector plays a vital role in the development of a nation. In this sector, the use of water is almost nil. If we try to observe its place in the chart, we do realise that it holds 0% usage and is yet to open its account.

Answer:



Or

6. A.2 Non-verbal to Verbal: [5]

Observe the following table and transfer the information into a paragraph: State-wise Distribution of Urban and Rural Population in India:

STATES	POPULATION IN MILLIONS	
	Rural	Urban
Maharashtra	560	410
Gujarat	320	190
Madhya Pradesh	440	160
Chhattisgarh	170	40
Andhra Pradesh	550	210
Karnataka	350	180

Answer: **The table given here is the State-wise Distribution of Urban and Rural Population in India. First find the population in Maharashtra to be 560 million for Rural population, while the Urban population is at 410 million. Next, Gujarat follows with 320 million for Rural and 190 million for the Urban population.**
Then comes Madhya Pradesh, where the Rural population is at 440 million and the Urban population at 160 million. After MP, Chhattisgarh has 170 million for Rural population and 40 million for the Urban population. Then is Andhra Pradesh, which has Rural population, right behind Maharashtra with 550 million, while the Urban population of this state is 210 million. The last state is Karnataka, which has a Rural population at 350 million and the Urban population at 180 million. From this, we can see a variance in the distribution of the Rural and Urban population in the various Indian states. It is seen that Maharashtra has the highest in terms of Rural as well as the Urban population, whereas Chhattisgarh has the lowest population.

6. B Attempt any one of the following: [5]

6. B.I. Speech writing:

Prepare a speech to be delivered for the District Level Elocution Competition.
The subject given to you is How to live a happy and joyful life. Use the following points:

- Live in a stress-free environment
- Daily meditation and exercise
- Be in a company of cheerful people
- Take inspiration from great people

Answer: **Activity to be done by students.**

Or

6. B.2 View-Couterview [5]

Write your counterview on ‘Children should work to earn during vacations.’
Use the following points:
View:

- Fruitful use of time
- Development of skills
- Financial support to own education and parents
- Knowledge of transaction
- Awareness of responsibility

Answer: **Activity to be done by the students.**

Section-VI
(Creative Writing)

7 [10 Marks]

7 A. Attempt any one of the following:

7. A.1 Expand the theme:
Nature-The Best Teacher

Answer: **To be answered by the students themselves.**

Or

7. A.2 News Report: Prepare a News Report based on the following headlines:
'14 Child Labourers were rescued from Firework Factory'.

Answer: **Activity to be done by children.**

7. B Attempt any one of the following: [5]

7. B. I Developing a story:

Develop a story in about 80-100 words with the following ending:
Give a suitable Title.
_____ and that's how he got inspired to avoid the use of plastic.

Answer: **How to Avoid Using Plastic?**

Activity to be done by students.

Or

7. B.2 Narrating Experience:
Narrate an experience in about 80-100 words beginning with the given words:
It was Sunday, and I was enjoying the latest movie in the theatre with my parents_____

Answer: **Activity to be done by students.**

Maharashtra Board Class 10 History and Political Science Solved Previous Year Question Paper 2019

1 (A) Choose the correct option from the given options and complete the sentences. [4]

1. 'Primitive Communism to Slavery' represents the _____ historiography.
(A) Colonial (B) Orientalist (C) Nationalistic (D) Marxist

Answer: Option D: Marxist

2. The National Archives of India is in _____.
(A) Delhi (B) Kolkata (C) Mumbai (D) Chennai

Answer: Option A: Delhi

3. The first English newspaper in India was started by _____.
(A) James Augustus Hickey (B) Sir John Marshall (C) Allen Hume (D) Balshastri Jambhekar

3. 1. Keechakvadh Krishnaji Prabhakar

Khadilkar **Answer:** Option A: James Augustus Hickey

2. Ekach Pyala Ram Ganesh Gadkari

4. The ancient event of Olympic competitions used to be held at _____.

(A) Greece (B) Rome (C) India (D) China

Answer: Greece

(B) Identify the wrong pair in the following, correct it and rewrite: [4]

1. 1. Georg Wilhelm Reason in History Friedrich Hegel
2. Leopold von Ranké The Theory and Practice of History
3. Herodotus The Histories
4. Karl Marx Discourse on the Method

Answer: The first three pairs are correct. The wrong pair is no. 4. Karl Marx is discourse of the method written by Rene Descartes.

2. 1. Qutb Minar Mehrauli
2. Gol Gumbaz 3. Bijapur
Chhatrapati Shivaji
Maharaj Railway Terminus Delhi
4. Taj Mahal Agra

Answer: The wrong pair is no. 3. Chhatrapati Shivaji Maharaj Railway Terminus is located in Mumbai.

3. Ithe Oshalala Mrutyu Vasant Kanetkar
4. Natasamrat Vijay Tendulkar

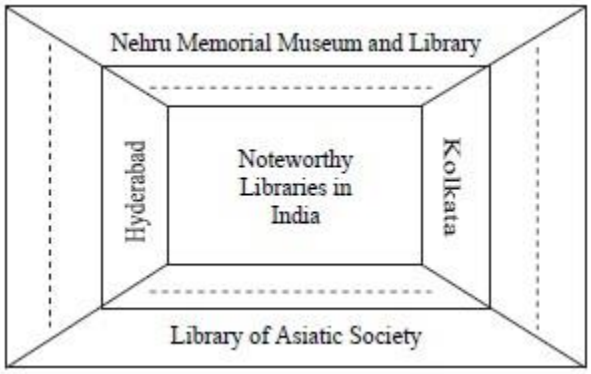
Answer: No. 4 option is the wrong pair. Natasamrat was written by VV Shrivadkar.

4. 1. Gharapuri (Elephanta) Cave
2. Pandharpur Pilgrim centre
3. Sagareshwar Dam
4. Panchagani Hill station

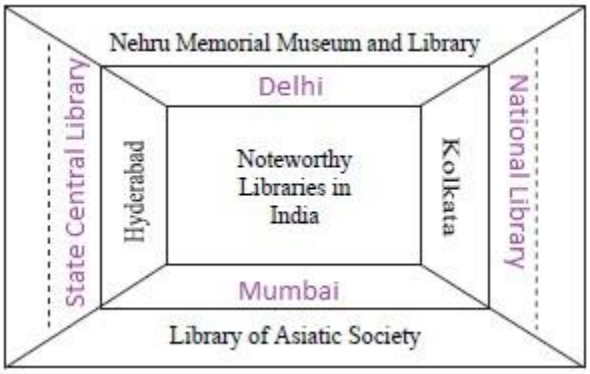
Answer: The wrong pair is no. 3. Sagareshwar wildlife sanctuary is located in Sangli.

2. (A) [4]

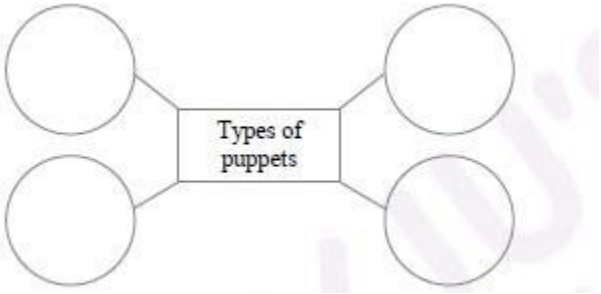
1. Complete the following concept chart (any two):



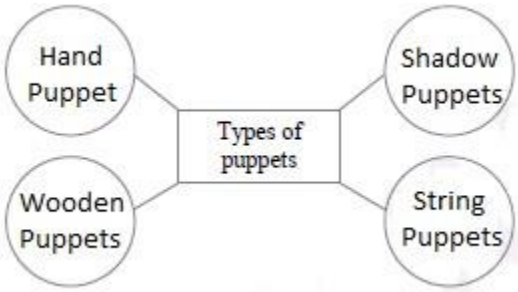
Answer:



2. **Complete the following concept map:**



Answer:



3. **Complete the following concept map:**

Answer:

(B) Write short notes on (any two): **[4]**

1. Bharatiya Samskruti Kosh
2. Need of Mass Media
3. Toys and Festival

Answer 1: Bharatiya Samskruti Kosh is an encyclopedia of Indian culture. They are taken as an outstanding achievement of the society where they served the purpose of inspiration to gain and spread knowledge that motivates either individuals or a group of people. It is just a manifestation of the collective, intellect and creativity of society. It was edited by Mahadevshastri Joshi. It presented dialects, religions, move, music and customs of this very land.

Answer 2: Mass Media is used to facilitate free flow of information to all parts of the society. The most common platforms for mass media are newspapers, magazines, radio, television and the Internet. Some of the essential parts of newspapers are editorials, various columns and supplements. It helps in making the democracy stronger. Television is an audio-visual medium. This medium can cross the boundaries that are set for newspapers and the radio. Through this medium people can see the actual visuals of an event.

Answer 3: Toys throw light on history and technological development. With the help of toys we can get a glimpse of religious and cultural traditions. In Maharashtra, as a Diwali tradition model forts are made. On these model forts clay images of Chhatrapati Shivaji Maharaj and his soldiers and also people and animals are placed. It helps in keeping the memory alive of the important roles of forts in the history of Maharashtra.

4. **(A) Explain the following statements with reasons (any two): [6]**

1. Television is the most popular medium.
2. Writing of the regional history received a momentum.
3. The list of World Heritage Sites is announced by UNESCO.
4. The number of people travelling back and forth from India has increased considerably.
5. Bharuds composed by Saint Eknath are popular in Maharashtra.

Answer 1: Television is the most popular medium of communication because of the following reasons:

a. It is an audio-visual medium of communication.
b. The news and programmes telecasted in a television channel cause a huge impact on the minds of the people.
c. It attracts viewers of all age groups.
d. This medium of communication can also be used for educative and information purpose.
e. It is a good source for entertainment and relaxation purpose.
f. People can view discussions on social problems, education, economic conditions and political events.

Answer 2: Nationalist historiography is termed as one of the schools which includes all historical writings related to India's war of Independence and the related events. It began in

19th century which gave motivation to Indian freedom struggle. These writings are done by Indian historians who wrote about the nationalistic movement held in different parts of India. Nationalistic historiography provided a momentum to the writing of regional histories, which drew the attention of historians to the geographic conditions and history of South Indian regions. For eg: 'The Indian War of Independence, 1857', written by Vinayak Damodar Savarkar is of great importance.

Answer 3: The United Educational, Scientific and Cultural Organisation (UNESCO) announced a list of world heritage sites according to the implementation of their directives. UNESCO is a global organization which has specified some directives for the educational, cultural and scientific promotion of the world heritage sites. These world heritage sites are termed as natural heritages. The
heritage sites of India are given as follow: Ajanta Caves in Maharashtra, Taj Mahal in UP, Kaziranga National Park in Assam, Red Fort in Delhi, etc.

Answer 4: Travelling has become easier because of various serious. Some of the reasons are mentioned below:

a. Because of the easy availability of a number of options such as railways, marine and air transport.
b. The coastal regions are linked via marine transport, Trans European is a railway route and aviation has bought the entire world closer.
c. One of the main reason is the economic liberation of the Indian Government due to which the number of people traveling back and forth from India has increased considerably.
d. People travel to India for studies, relaxation, sight-seeing, professional assignments, job opportunities, shooting of films, etc.

Answer 5: Bharuds are metaphorical songs composed by Saint Eknath that have spiritual and ethical lessons. His purpose was to educate people on various aspects of life through these baruds. Among the people of Maharashtra, the baruds become popular because of its wide range of subjects, dramatic quality, easy rhythm and humour. Saint Eknath wrote about 300 Bharud that are very popular among a large section of population.

(B) Answer the following in short (any two): [6]

1. Why is Voltaire said to be the founder of modern Historiography?
2. Write about folk traditions of sculptural art.
3. Which features of cricket commentary by Bal J. Pandit can be mentioned?

Answer 1: According to his work Voltaire is considered as one of the pioneers of modern historiography. He worked on collecting and recording the historical events during the reigns of famous rulers such as Louis XIV and XV, along with Charles XII and Peter. He was considered as one of the first people to make an attempt to record historical events in modern history

accurately. Even his observations related to roam Empire were also of historical significance. Because of all the above mentioned reasons he was justified to be tagged as the pioneer of modern historiography.

Answer 2: Traditional folk art flourished in the second half of the 19th century. Sculpting is considered as a form of art carved on clay, rock or metal to form three dimensional figures and the figured formed are called as sculptures. Rock sculptures are made by carving, clay sculptures are by hands or moulds and metals are made by using moulds. Sculptural art can be classified into two forms Classical and Folk sculptural art. The art made out of carving stones is called as Folk sculptural art. This form of art is prevalent since the Harappan times. The folk sculptures are region specific. Some of the examples of this art form are decorated utensils, idols made for festivals, etc. The products of this art form can be witnessed in states like Bengal, Bihar, Gujarat, etc.

Answer 3: Bal J Pandit was a pioneer of the Indian cricket commentary and was commissioned by All India Radio for many decades. People used to listen to his commentary very eagerly. His wellstudied commentary were full of information related to the history of playground, career history of the players, anecdotes of the game and established records of the game. His commentary used to be very engaging and entertaining because of these historical details.

4. **Read the following passage and answer the questions based on it: [4]**

'Bharat Ek Khoj'

'Bharat Ek Khoj', a serial telecasted by Doordarshan has a special place in the history of Indian television serials. It was based on 'Discovery of India', a book written by Pandit Jawaharlal Nehru. It was directed by Shyam Benegal. This serial presented the history of India from the ancient to the modern period, throwing light on social, cultural and political history of respective periods. It effectively portrayed many aspects of Indian history like Harappan Civilisation, Vedic history, interpretation of Ramayana and Mahabharata, Mauryan period, Turk-Afghan invasions, Mughal period and the contributions of Mughal emperors, Bhakti Movement, Role of Chhatrapati Shivaji Maharaj, movements of social reform and Indian struggle for independence, etc. Roshan Seth, the actor who played Pandit Nehru's role in this serial also appeared as a narrator, introducing and explaining various parts of the story by dramatising them, using folklore and informative speeches. The serial was admired in all parts of India because of the comprehensive historical perspective of Pandit Nehru and its equally comprehensive visual presentation.

1. On which book is a serial 'Bharat Ek Khoj' based on?
2. Who directed the serial 'Bharat Ek Khoj'?
3. Which factors/aspects, according to you, made the serial 'Bharat Ek Khoj' popular?

Answer 1: The serial 'Bharat Ek Khoj' was based on 'Discovery of India' a book written by Pandit Jawaharlal Nehru.

Answer 2: The serial 'Bharat Ek Khoj' was directed by Shyam Benegal.

Answer 3: The serial presented the history of India from the ancient to the modern period, throwing light on social, cultural and political history of respective periods. It effectively portrayed many aspects of Indian history like Harappan Civilisation, Vedic history, interpretation of Ramayana and Mahabharata, Mauryan period, Turk-Afghan invasions, Mughal period and the contributions of Mughal emperors, Bhakti Movement, Role of Chhatrapati Shivaji Maharaj, movements of social reform and Indian struggle for independence, etc.

5. Write elaborate answer (any two): [8]

1. What objectives can be fulfilled through the heritage projects?
2. Why is library management important?
3. Tourism can generate career and employment opportunities. Give your opinion.
4. Explain Karl Marx's 'Class Theory'.

Answer 1: In September 2017, the Ministry of Tourism with the ASI, started a plan to preserve "the rich cultural and natural heritage" and promote tourism in the length and breadth of our country. The following objectives can be fulfilled through the Heritage of India as follows:

1. Protection of ethnic identities and values
2. Protection and recognition of heritage 3. Preservation of heritage sites
4. History of inheritance.
5. Knowledge on heritage changes.
6. Engage youth in conservation of heritage.
7. Get rid of ethnic and social apathy.

Answer 2: Libraries are considered as the most important treasure of the nation. The various tasks performed by libraries are collecting books, arranging them in a systematic order, preservation of books. The most important aspect of library management is making books available for readers. In libraries most of the works are done on computers due to which Information Technology has become an inevitable part of the management of libraries. Libraries helps in flowing the information from one generation to another. For any nation, it is important to develop and have a knowledge of its past achievements.

Answer 3: Travel and tourism industry, is evolving at a rapid rate creating more job opportunities. Tourism is an industry with potential to create maximum employment opportunities. If managed professionally, it is a very stable industry. A good number of employment opportunities are available in the tourism industry. India is a tourist destination

country. The country receives revenue even before they arrive. The contribution of the tourist helps in the growth of the economy. Along with the development of a tourist centre, the markets in the vicinity grow. Hence, the local handicrafts and cottage industries also begin to develop. The demand for locally processed food items and ethnic handicrafts increases. It results in better income for local artisans, business people and wage earners.

Answer 4: According to Karl Marx, history was not about abstract ideas; it was about living people. Human relationships are shaped by the fundamental needs of people and the ownership as well as nature of prevalent means of production to meet those needs. The accessibility of these means to different strata of the society may not be equal. This inequality causes a division of the society into classes, leading to class struggle. According to Marx, human history is the history of class struggle, as the class that owns the means of production economically exploits the rest of the classes.

6. Choose the correct option from the given options and complete the sentences: [4]

1. The essence of democracy is _____.

(A) Universal adult franchise
(B) Decentralisation of power
(C) Policy of reservation of seats(D) Judicial decisions

Answer: The essence of democracy is **decentralization of power**

2._____ is the main demand of farmers movement.

(A) Right to cultivate on the forest land
(B) To get the right price for agricultural products
(C) Protection of consumers
(D) Building of dams

Answer: To get the right price for agricultural products is the main demand for farmers movement.

3.Justice Party – a non-Brahmin movement was transformed into _____ political Party.

(A) Assam Gan Parishad
(B) Shiv-Sena
(C) Dravida Munnetra Kazhagam
(D) Jammu and Kashmir National Conference
Answer: Justice Party – a non-Brahmin movement was transformed into Dravida Munnetra Kazhagam political Party.

4.The major challenge faced by all democratic nations in the world is _____.

(A) Religious conflicts
(B) Naxal activities
(C) Deepening the roots of democracy(D) Importance to muscle power

Answer: The major challenge faced by all democratic nations in the world is **deepening the roots of democracy**.

7. State whether the following statements are true or false. Give reasons for your answer (any two): [4]

1. The nature of Constitution is seen as a living document.
2. The state government decides as to when and in how many stages the elections would be held in a particular state.
3. People may lose confidence in the democratic process due to corruption during elections.

Answer 1: The state "the nature of Constitution is seen as a living document" is true. It is true because the Parliament has the right to change the Constitution according to the changes in the circumstances. The basic framework of the Constitution cannot be altered amending the Constitution.

Answer 2: The statement mentioned above is true. In India the process of election is administered by an independent Election Commission. The Election commission of India and the State level State Election Commissions conduct all important elections in our country.

Answer 3: People may lose confidence in the democratic process due to corruption during elections statement is true. It is the duty of the Government to take care of election expenses. It will ensure that parties will not make misuse of money and mismanagement of money during elections can be stopped.

8. (A) Write short notes on (any two): [4]

1. Regionalism
2. Water Revolution 3. Right to Information.

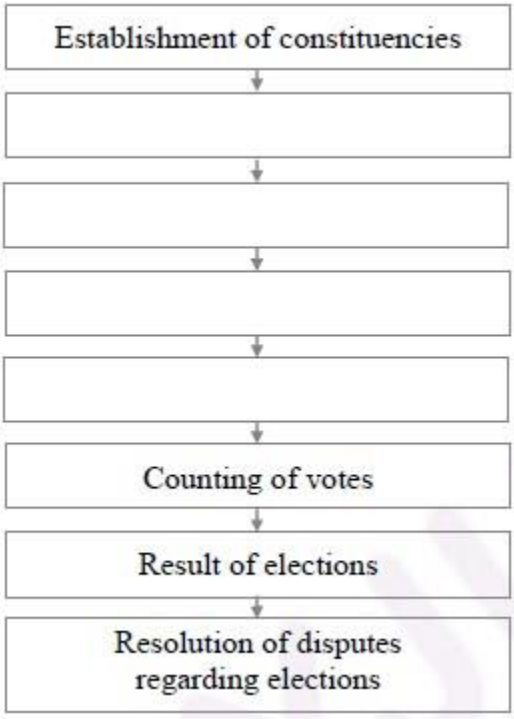
Answer 1: The feeling of affinity developed about our language and region gradually turns into the identity consciousness and finally give rise to regionalism. Regional identity develops from the consciousness about the development of region and the feeling that people belonging to the region should have claim over resources and employment opportunities.

Answer 2: Dr Rajendrasinh Rana started the Water Revolution in Rajasthan. He is also known as Waterman of India. He build thousands of 'Johad' and revived rivers in the desert of Rajasthan. He formed an organization 'Tarun Bharat Singh' which build eleven thousand Johads in hundreds of villages. He started a campaign for water conservation, revival of rivers, forest conservation, and wildlife conservation across India. From last 31 years, his social movement is still active. He won the Stockholm Water Prize, an award known as the "Nobel Prize for Water".

Answer 3: Right to Information is an act of the Parliament of India which sets out the rules and procedures regarding citizens' right to information. The Government of India gave the Right to Information to the Indian citizens to ensure transparency and accountability which are the hallmarks of good governance. Right to Information has made the government more transparent and has reduced the element of secrecy in the working of government. After the year 2000, the whole approach towards democratic reforms has changed. Democratic reforms are considered as 'rights' of citizens. Accordingly, citizens in India have got Right to Information, education and food security. These rights have strengthened democracy in India.

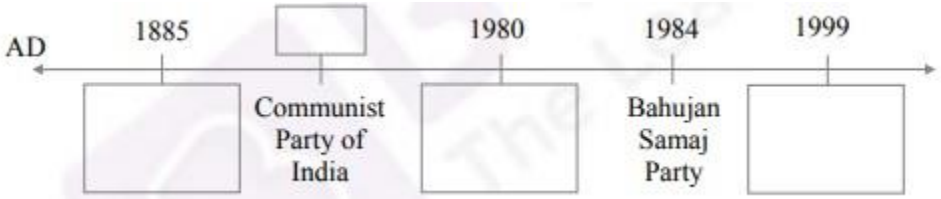
(B) Complete the following picture (any two): [4]

1. Process of elections:



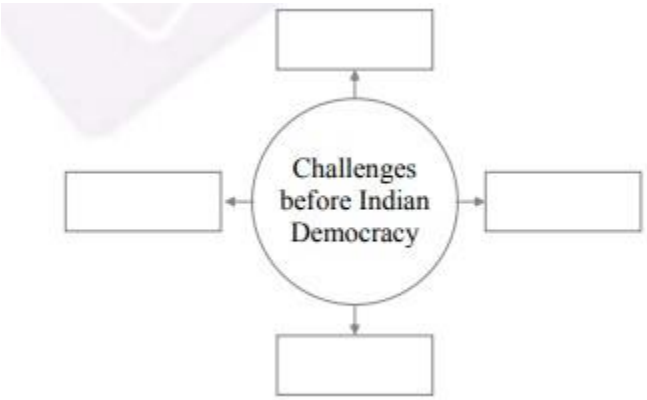
Answer:

2. **Complete the following timeline showing the political parties and their year of establishment:**



Answer:

3. **Complete the concept map:**



Answer:

9. Answer the following questions in brief (any two): [4]

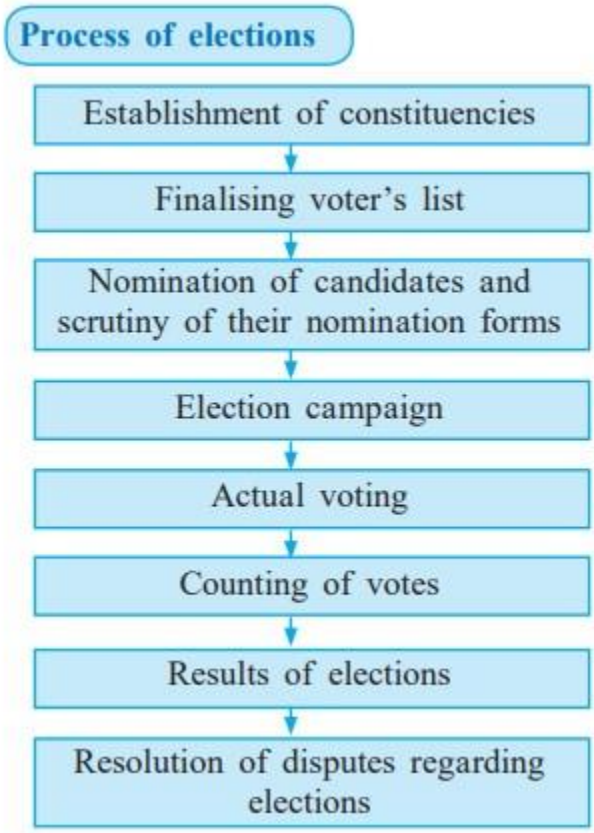
1. For which reforms were the women's movement in the pre-independence period fighting?
2. What efforts are undertaken to bring transparency in political process?
3. Explain the features of procedure of voting during the first Lok Sabha election?
4. Which particular Laws/Acts created a favourable environment for protection of freedom of women and secure their development?

Answer 1: In the pre-independence era women started their movement to eliminate injustice and exploitation against women, to help them lead a respectful life socially. Some of the reforms demanded by women are widow remarriage, women education and right to vote. After Independence, the Constitution granted equal rights to women in all fields. But still social struggle for women continued.

Answer 2: The efforts undertaken to bring transparency in political process are:

(a) Parliament proceedings are easily accessible: Citizens can see live Parliament proceedings broadcasted in their television. Moreover, citizens can also access public records of the debate through archieves on request.
(b) Introduction of Right to Information: The Right to Information Act was introduced in 2005. The introduction of this Act is a huge step towards increasing public accountability in the legislative and administrative ends of the government.
(c) Decriminalization of politics: In order to prevent criminals from corrupting political life of the society, the judiciary has adopted measures like strict punishment and prohibition of criminals from participating in political process.

Answer 3: In India, the Election Commission is central to the process of elections. The President appoints the Election Commissioners. Government officers, teachers and other employees help the Election Commission to execute the process of elections. The features of procedure of voting during the first Lok Sabha election is provided below:



Answer 4: The women's movement aimed at eliminating injustice against women and ending their exploitation, help them to lead a respectful life and participate actively in social life. Reforms such as widow remarriage, women education and right to vote to women were possible due to the work of the reformists. After independence, the Constitution gave equal rights to women in all fields. In spite of this women were not treated equally in several fields. During this period women's movement aimed at freedom of women. The movement demanded that the women should be treated as human beings. In the latter period, women participated

against corruption, caste discrimination and religious extremism. However women's movements at various levels are taking up the issues like women's health, social security, financial independence, and empowerment. Today women's movement face the challenge of equal education for women and giving women a status and prestige as human beings.

Maharashtra Question Paper: March 2019 Maths

(Part - I)

Q1. (A) Solve the following questions (Any four): [4] i.

Find the median of: 66, 98, 54, 92, 87, 63, 72.

Solution: Arrange the series in ascending order:
54<63<66<72<87<92<98
Now, using the median formula,
Median = (n+1)/2 term, where n is the number of values in a set of data
= (7+1)/2
=8/2
=4th term

As we can see in the series 54<63<66<72<87<92<98, the fourth term is 72.
Therefore, the median of the given data is 72.

ii. Multiply and write the answer in the simplest form: 5√7 □ 2√7 Solution: √7 (5□ 2)

= 10√7

iii. If 3x + 5y = 9 and 5x + 3y = 7, then find the value of x + y.

Solution: Solving the equations by using elimination method.
3x + 5y = 9……..(i)
3x = 9 - 5y x

= (9 - 5y)/3

Putting the value of x in equation 5x + 3y = 7 ……(ii)
5 (9 - 5y)/3 + 3y = 7
(45 – 25y)/3 + 3y = 7
(45/3) + (-25y)/3 + 3y = 7
15 + (-25y + 9y)/3 = 7
15 + (-16y)/3 = 7
15 – 7 = (16y)/3
8 = (16y)/3

y = 24/16

y = 3/2

Putting the value of y in equation (i)

3x + 5y = 9
3x = 9 – (5×3)/2
3x = 9 –

15/2 3x =

3/2 x = 1/2

Now, finding the value of x

+ y

1/2 + 3/2 = 4/2 = 2
Therefore, the answer is 2.

Simplest method of solving the problem

Add both equations, 3x + 5y = 9 and 5x + 3y = 7
3x + 5y + 5x + 3y = 9 + 7
8x + 8y = 16

8 (x + y) = 16

x + y = 2

iv. Write the ratio of second quantity to first quantity in the reduced form: 5 dozen pens, 120 pens.

Solution: 1 dozen = 12 quantity
So, 5 dozen pen = 5 × 12 = 60
The ratio of second quantity to first quantity is given as;
120:60
2:1

v. Write the following polynomial in coefficient form: $2x^3 + x^2 – 3x + 4$. Solution:

Coefficient form of the polynomial is (2, 1, -3, 4)

vi. For computation of income tax which is the assessment year of financial year 01–04–2016 to 31–03–2017?

Solution: For computation of income tax of financial year 01-04-2016 to 31-3-2017, the assessment year is 2017-18.

(B) Solve the following questions (Any two): **[4]**

i. Find the value of the polynomial $2x^3 + 2x$, when x = –1.

Solution: Putting x = -1 in the polynomial
$2x^3 + 2x$
$= 2 (-1)^3 + 2 (-1)$
$= (-2) + (-2)$
$= -4$
Thus, the answer is -4.

ii. If A = {11, 21, 31, 41}, B = {12, 22, 31, 32}, then find: a. A □□ B

b. A □□ B

Solution: A □□ B = {11, 12, 21, 22, 31, 32, 41}
A □□ B = {31}

iii. Sangeeta's monthly income is Rs. 25,000. She spent 90% of her income and donated 3% for socially useful causes. How much money did she save? Solution:

90% of Sangeeta's income = (90 × 25,000)/100 = Rs. 22,500

Money denoted for social cause = 3% of 25,000 = (3 × 25,000)/100 = Rs. 750
Money saved by Sangeeta = Income –Money spend by her – Money spend for social cause
Money saved by Sangeeta =25,000 - 22,500 – 750
Money saved by Sangeeta =25,000 - 23,250 = Rs. 1750

2. (A) Choose the correct alternative: **[4]**

i. In the A.P. 2, –2, –6, –10,..... common difference (d) is: (A) –4

(B) 2

(C) –2

(D) 4

Solution: Common difference (d) = $a_2 – a_1$

d = (-2) – (2) d = -4

Hence, option (A) i.e -4 is the answer.

ii. For the quadratic equation $x^2 + 10x – 7 = 0$, the values of a, b, c are:

(A) a = –1, b = 10, c = 7

(B) a = 1, b = –10, c = –7

(C) a = 1, b = 10, c = –7

(D) a = 1, b = 10, c = 7

Solution: Coefficient form of the polynomial is (1, 10, -7).
Therefore, option (C) i.e a = 1, b = 10, c = –7 is the correct answer.

iii. The tax levied by Central Government for trading within a state is: (A) IGST

(B) CGST

(C) SGST

(D) UTGST

Solution: The correct answer is option (B).

iv. If a die is rolled, what is the probability that number appearing on upper face is less than 2?

(A) 1/3 (B)

1/2

(C) 1

(D) 1/6

Solution: Probability = Number of favourable outcomes/Total Number of outcomes
Total Number of outcomes = 1, 2, 3, 4, 5, 6
Number of favourable outcomes = 1
P(E) = 1/6
Therefore, the answer is option (D) i.e 1/6.

(B) Solve the following questions (Any two): [4]

i. First term and common difference of an A.P. are 12 and 4 respectively. If $t_n = 96$, find n.

Solution: $t_1 = 12$, $d = 4$, $t_n = 96$ t_n

$= t_1 + (n - 1) d$

$96 = 12 + (n - 1) 4$
$96 – 12 = (n - 1) 4$
$84 = (n - 1) 4$

21 = (n –

1) 21 + 1 =

n n = 22

ii. If $\begin{vmatrix} 4 & 5 \\ m & 3 \end{vmatrix} = 22$, then find the value of m.

Solution: By solving the above matrix.

5m – 12 = 22

5m = 22 +

12 5m = 34

m = 34/5

iii. Solve the following quadratic equation:

***x*² + 8*x* + 15 = 0**

Solution: $x^2 + 8x + 15 = 0$

$x^2 + 5x + 3x + 15 = 0$ *x* (*x*

+ 5) + 3 (*x* + 5) = 0 (*x* + 3)

(*x* + 5) = 0 *x* = -3, *x* = -5

3. (A) Complete the following activities (Any two): [4]

i. Smita has invested Rs. 12,000 to purchase shares of FV rs 10 at a premium of Rs. 2. Find the number of shares she purchased. Complete the given activity to get the answer.

Activity: FV = Rs. 10, Premium = Rs. 2

$\therefore \quad MV = FV + \square = \square + 2 = 12$

$\therefore \quad \text{Number of shares} = \dfrac{\text{Total investment}}{MV}$

$= \dfrac{\square}{12} = \square$ shares

Solution:

$\therefore \quad MV = FV + \boxed{\text{Premium}} = \boxed{10} + 2 = 12$

$\therefore \quad \text{Number of shares} = \dfrac{\text{Total investment}}{MV}$

$= \dfrac{\boxed{12000}}{12} = \boxed{1000}$ shares

Therefore, the answer is 1000 shares.

ii. The following table shows the daily supply of electricity to different places in a town. To show the information by a pie diagram, measures of central angles of sectors are to be decided. Complete the following activity to find the measures:

Places	Supply of electricity (Thousand units)	Measure of central angle
Roads	4	$\frac{4}{30} \times 360 = 48°$
Factories	12	$\frac{\square}{\square} \times 360 = 144°$
Shops	6	$\frac{6}{30} \times 360 = \square$
Houses	8	$\frac{\square}{\square} \times 360 = \square$
Total	30	

Solution:

Places	Supply of electricity (Thousand units)	Measure of central angle
Roads	4	$\frac{4}{30} \times 360 = 48°$
Factories	12	$\frac{12}{30} \times 360 = 144°$
Shops	6	$\frac{6}{30} \times 360 =$ 72
Houses	8	$\frac{8}{30} \times 360 =$ 96
Total	30	

iii. Two coins are tossed simultaneously. Complete the following activity of writing the sample space (S) and expected outcomes of the events: a. Event A: to get at least one head.

b. Event B: to get no head.

Activity: If two coins are tossed simultaneously

∴ S = { , HT, TH, }

a. Event A : at least getting one head.

∴ A = {HH, , TH}.

b. Event B : to get no head.

B = { }.

Solution:

Activity: If two coins are tossed simultaneously

∴ S = { HH , HT, TH, TT }

a. Event A : at least getting one head.

∴ A = {HH, HT , TH}.

b. Event B : to get no head.

B = { TT }.

(B) Solve the following questions (Any two): [4] i.

Find the 19th term of the A.P. 7, 13, 19, 25, ……..

Solution: $t_n = a + (n - 1)\, d$ In the given A.P, $a = 7$, $n = 19$ $d = t_2 - t_1$

$d = 13 - 7 = 6$ $t_{19} = 7 + (19 - 1)\, 6$ $t_{19} = 7 + 108$ $t_{19} = 115$ **ii. Obtain a quadratic equation whose roots are –3 and –7. Solution:** Let $\alpha = -3$, $\beta = -7$ $\alpha + \beta = (-3) + (-7) = -10$ $\alpha \times \beta = (-3) \times (-7) = 21$

Quadratic Equation is given by; $x^2 - (\alpha + \beta)\, x + \alpha\beta = 0$ $x^2 - (-10)\, x + 21 = 0$ $x^2 + 10x + 21 = 0$

iii. Two numbers differ by 3. The sum of the greater number and twice the smaller number is 15. Find the smaller number.

Solution: Let the greater number be “a” and the smaller number be “b”. It is given that;

$a - b = 3$

……..(i) $a = 3+b$

$a + 2b = 15$ ……..(ii)

Putting the value of “a” in equation (ii)

$3+b + 2b = 15$

$3+3b = 15$

$3(1+b)=1$

5 $1+b = 5$

$b = 4$

Now, finding the value of a

$a = 3+b$ $a = 3+4 = 7$

Therefore, the smaller number is $b = 4$.

4. Solve the following questions (Any three): [9]

i. Amit saves certain amount every month in a specific way. In the first month he saves Rs. 200, in the second month Rs. 250, in the third month Rs. 300 and so on. How much will be his total savings in 17 months?

Solution: It forms an A.P

200, 250,

300,…… a =

200 d = 250 – 200 = 50 n

= 17 t_n = ?

t_n = [2a + (n-1) d] t_n = [(2 ×

200) + (17 - 1) 50] t_n = [400

+ (16 × 50)] t_n = [400 +

800] t_n = 1200

Therefore, Amit's total saving in 17 months will be Rs. 1200.

ii. A two digit number is to be formed using the digits 0, 1, 2, 3. Repetition of the digits is allowed. Find the probability that a number so formed is a prime number.

Solution: Total two digit number that can be formed using the digit 0, 1, 2, 3 are 10, 20, 30, 12, 21, 13, 31, 23, 32, 11, 22, 33

Total prime number formed are 13, 31, 23, 11
Required Probability = Number of favourable outcome / Total number of outcomes
P = 4/12
P = 1/3

iii. Smt. Malhotra purchased solar panels for the taxable value of Rs. 85,000. She sold them for Rs. 90,000. The rate of GST is 5%. Find the ITC of Smt. Malhotra.

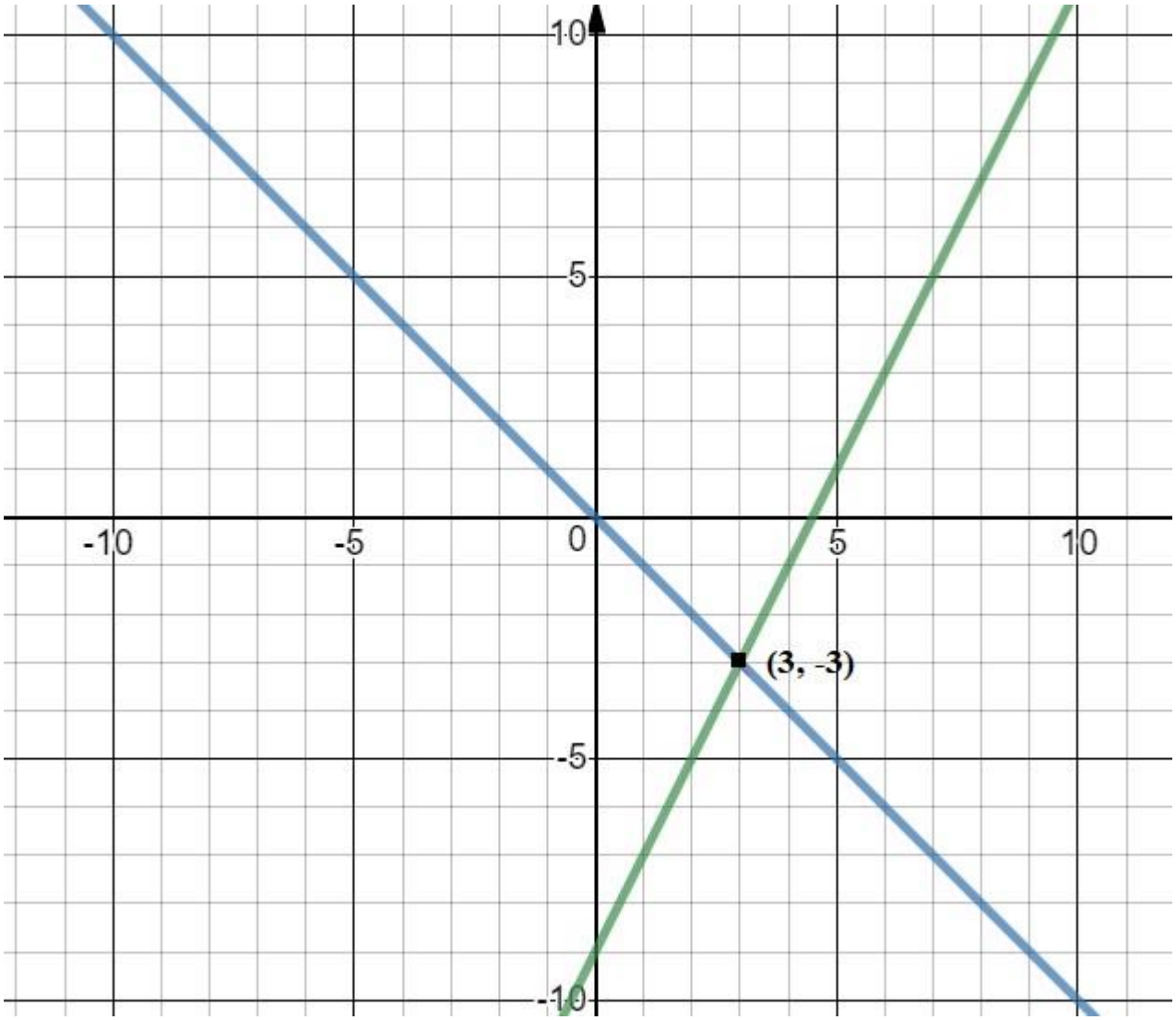
What is the amount of GST payable by her?

Solution: Taxable purchase value of solar panel = Rs. 85000
Rate of GST = 5%
Input Tax Credit (ITC) = 5% of 85000 = Rs. 4250
Selling price of the solar panel = Rs. 90000
Output Tax = 5% of 90000 = Rs. 4500
GST payable by Malhotra = Output Tax – Input Tax Credit (ITC)
GST payable by Malhotra = 4500 – 4250 = Rs. 250

So, the tax paid by Malhotra is Rs. 250.

iv. Solve the following simultaneous equations graphically:

$x + y = 0$; $2x - y = 9$ **Solution:**



5. Solve the following questions (Any one): **[4]**

i. The following frequency distribution table shows marks obtained by 180 students in Mathematics examination:

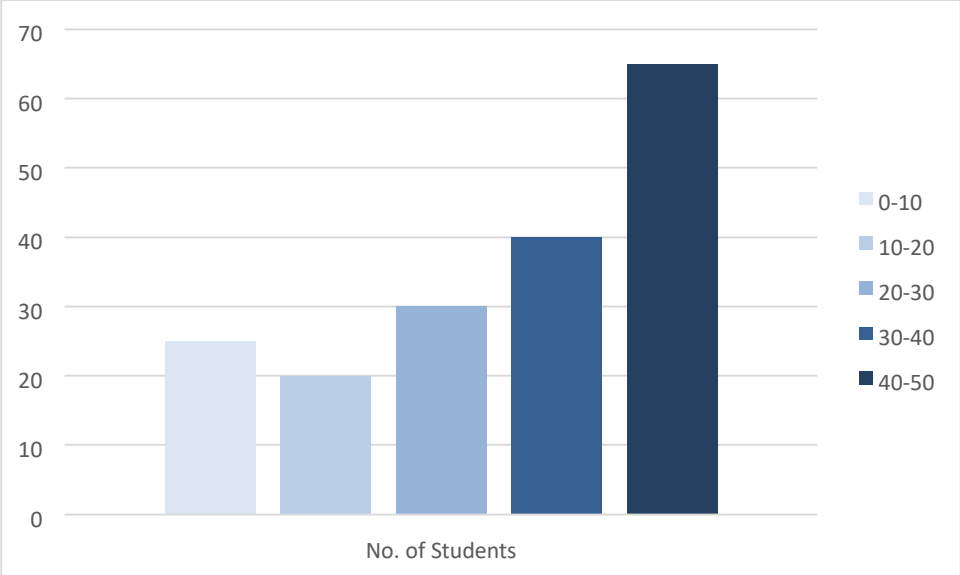
Marks	Number of Students
0 – 10	25
10 – 20	x
20 – 30	30
30 – 40	$2x$
40 – 50	65

Find the value of *x*.
Also draw a histogram representing the above information.

Solution: The marks obtained by all students is given = 180
25 + *x* + 30 + 2*x* + 65 = 180
3*x* + 120 =

180 3*x* = 60 *x*

= 20



ii.

Two taps together can fill a tank completely in $3\frac{1}{13}$ minutes. The smaller tap takes 3 minutes more than the bigger tap to fill the tank. How much time does each tap take to fill the tank completely?

Solutions: Two tap can fill the tank completely in 40/13 minutes.
Let us consider that 1 tap can fill the tank in = x min
So, the smaller tap fill the tank in (x +3) min
Work done by both tap in 1 min;
(1/x) + 1/(x+3) = 13/40
(2x + 3)/x (x +3) = 13/40
$(2x + 3)/(x^2 + 3x) = 13/40$
$80x + 120 = 13x^2 + 39x$
$13x^2 – 41x - 120 = 0$
$13x^2 – 65x + 24x - 120 = 0$

13x (x-5) + 24 (x-5) =

0 (13x+24) (x-5) = 0 x

= -24/13, x = 5

Ignoring the negative value.
Therefore, one tap will take 5 minutes and other tap will be 8 min to fill the tank.

6. Solve the following questions (Any one): [3]

i. The co-ordinates of the point of intersection of lines a*x* + b*y* = 9 and b*x* + a*y* = 5 is (3, –1). Find the values of a and b.

Solution: Given equations are: a*x*

+ b*y* = 9 ……..(i)

b*x* + a*y* = 5

……(ii)

(3, -1) is given as the point of intersection. So, it will satisfy equation (i) and (ii).
3a - b = 9 ……(iii)
3b - a = 5 ……(iv)
Now solving equation (iii) and (iv) we get b = 3 and a = 4.

ii. The following frequency distribution table shows the distances travelled by some rickshaws in a day. Observe the table and answer the following questions:

Class (Daily distance travelled in km)	Continous Classes	Frequency (Number of rickshaws)	Cumulative Frequency less than type
60 – 64	59.5 – 64.5	10	10
65 – 69	64.5 – 69.5	34	10 + 34 = 44
70 – 74	69.5 – 74.5	58	44 + 58 = 102
75 – 79	74.5 – 79.5	82	102 + 82 = 184
80 – 84	79.5 – 84.5	10	184 + 10 = 194
85 – 89	84.5 – 89.5	6	194 + 6 = 200

a. Which is the modal class? Why?

Solution: The class where the frequency is maximum is known as the modal class.
In the given table, the highest frequency is 82. So, the modal class is 74.5 – 79.5.

b. Which is the median class and why?

Solution: Median frequency = (10 + 34 + 58 + 82 + 10 + 6)/2
Median frequency = 200/2 = 100
Median class is defined as the class where the median frequency falls in the cumulative frequency.

As we can see in the table, 100 falls under 69.5 – 74.5
Therefore, the median class is 69.5 – 74.5

c. **Write the cumulative frequency (C.F.) of the class preceding the median class.**

   Solution: Median class preceding the median is 64.5 – 69.5 and the cumulative frequency of it is 44.

d. **What is the class interval (*h*) to calculate median? Solution:** Class interval = range of the class element set h = 64.5 - 59.5 h = 5

Std. X: Maths (Part - II)

BOARD QUESTION PAPER: MARCH 2019
MATHS (PART - II)

Time: 2 Hours **Max. Marks: 40**

Note:

i. *All* questions are compulsory.

ii. Use of calculator is not allowed.

iii. Figures to the right of questions indicate full marks.

iv. Draw proper figures for answers wherever necessary.

v. The marks of construction should be clear and distinct. Do not erase them.

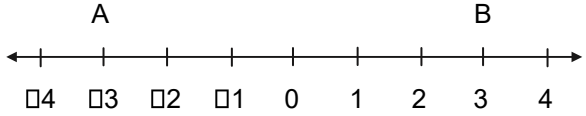
vi. While writing any proof, drawing relevant figure is necessary. Also the proof should be consistent with the figure.

1. (A) Solve the following questions (Any four): **[4]**

i. If □ABC ~ □PQR and □A = 60□, then □P = ?

ii. In right-angled □ABC, if □B = 90□, AB = 6, BC = 8, then find AC. iii. Write the length of largest chord of a circle with radius 3.2 cm.

iv. From the given number line, find d(A, B):



v. Find the value of sin 30□ + cos 60□. vi. Find the area of a circle of radius 7 cm.

(B) Solve the following questions (Any two): **[4]** i. Draw seg AB of length 5.7 cm and bisect it.

ii. In right-angled triangle PQR, if □P = 60□, □R = 30□ and PR = 12, then find the values of PQ and QR. iii. In a right circular cone, if perpendicular height is 12 cm and radius is 5 cm, then find its slant

height.

2. (A) Choose the correct alternative: **[4]**

i. □ABC and □DEF are equilateral triangles. If A(□ABC) : A(□DEF) = 1 : 2 and AB = 4, then what is the length of DE?

(A) $2\sqrt{2}$ (B) 4 (C) 8 (D) $4\sqrt{2}$

ii. Out of the following which is a Pythagorean triplet?

(A) (5, 12, 14) (B) (3, 4, 2) (C) (8, 15, 17) (D) (5, 5, 2)

iii. □ACB is inscribed in arc ACB of a circle with centre O. If □ACB = 65□, find m(arc ACB) :

(A) 130□ (B) 295□ (C) 230□ (D) 65□

iv. $1 + \tan^2 \square = ?$

(A) $\sin^2 \square$ (B) $\sec^2 \square$ (C) $\operatorname{cosec}^2 \square$ (D) $\cot^2 \square$

(B)Solve the following questions (Any two): **[4]**

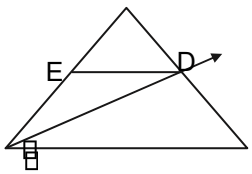
i. Construct tangent to a circle with centre A and radius 3.4 cm at any point P on it.

ii. Find slope of a line passing through the points A(3, 1) and B(5, 3). iii. Find the surface area of a sphere of radius 3.5 cm.

Board Question Paper : March 2019

3. (A) Complete the following activites (Any two): **[4]**

i.



In □ABC, ray BD bisects □ABC.

If A□D□C, A□E□B and seg ED || side BC, then prove that: $\frac{AB}{AE} =$.

BC EB

Proof:

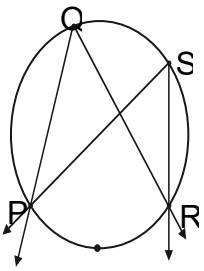
In □ABC, ray BD is bisector of □ABC.

□ $\frac{AB}{B} = \frac{\square}{\square}$ …(i)(By angle bisector theorem)

In□ABC, seg DE || side $\frac{AE}{E} = \frac{AD}{D}$

□ $\frac{AB}{\square} = \frac{\square}{E}$ …(ii) ☐

□ …[From (i) and (ii)]

ii. 

X

Prove that, angles inscribed in the same arc are congruent.

Given: □PQR and □PSR are inscribed in the same arc.
Arc PXR is intercepted by the angles.

To prove: □PQR □ □PSR

Proof:

m□PQR = $\frac{1}{2}$ m(arc PXR) …(i) ☐

m□ ☐ = $\frac{1}{2}$ m(arc PXR) …(ii) ☐

□ ☐ m□ = m□PSR …[From (i) and (ii)]

□ □PQR □ □PSR …(Angles equal in measure are congruent)

iii. How many solid cylinders of radius 6 cm and height 12 cm can be made by melting a solid sphere of radius 18 cm?

Activity: Radius of the sphere, r = 18 cm

For cylinder, radius R = 6 cm, height H = 12 cm

□ Number of cylinders can be made = Volume of the sphere

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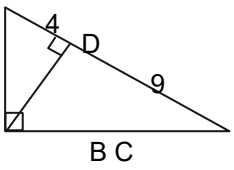
(B) Solve the following questions (Any two): **[4]** i. A

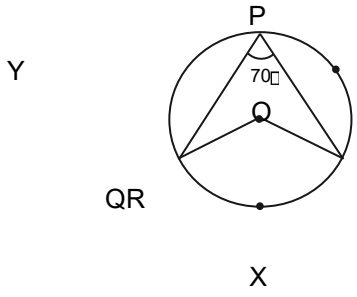


In right-angled ABC, BD AC.
If AD = 4, DC = 9, then find BD. ii.
Verify whether the following points are collinear or not:
A (1, –3), B (2, –5), C (–4, 7).

iii. If sec = $\frac{25}{7}$, then find the value of tan .

4. Solve the following questions (Any three): **[9]**

i. In PQR, seg PM is a median, PM = 9 and $PQ^2 + PR^2 = 290$. Find the length of QR. ii.



In the given figure, O is centre of circle. QPR = 70 and m(arc PYR) = 160, then find the value of each of the following:

(a) m(arc QXR)

(b) QOR

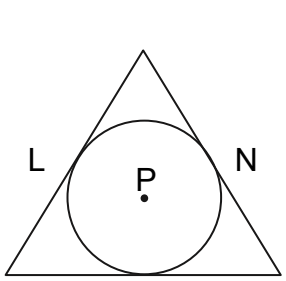
(c) PQR

iii. Draw a circle with radius 4.2 cm. Construct tangents to the circle from a point at a distance of 7 cm from the centre.

iv. When an observer at a distance of 12 m from a tree looks at the top of the tree, the angle of elevation is 60□. What is the height of the tree? ($\sqrt{3}$ = 1.73)

5. Solve the following questions (Any one): **[4]**

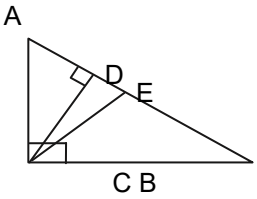
i.



A circle with centre P is inscribed in the □ABC. Side AB, side BC and side AC touch the circle at points L, M and N respectively. Radius of the circle is r.

Prove that: A(□ABC) = $\frac{1}{2}$ (AB + BC + AC) □ r.

ii.



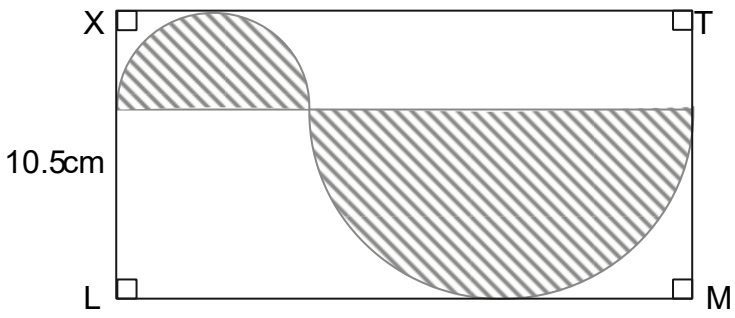
In □ABC, □ACB = 90□. seg CD □ side AB and seg CE is angle bisector of □ACB.

Prove that: $\frac{AD}{BE^2} = \frac{AE^2}{BD}$.

Board Question Paper : March 2019

6. Solve the following questions (Any one): [3]

i. Show that the points (2, 0), (–2, 0) and (0, 2) are the vertices of a triangle. Also state with reason the type of the triangle. ii.



In the above figure, □XLMT is a rectangle. LM = 21 cm, XL = 10.5 cm. Diameter of the smaller semicircle is half the diameter of the larger semicircle. Find the area of non-shaded region.