

GUARDIAN SCHOOL

Std : IX
Date : 20/02/2024

FINAL EXAMINATION 2023-2024
Subject: MATHS

Time : 2 hr 30 mins
Marks : 80

- Answers to this paper must be written on the paper, provided separately.
- You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this paper is time allotted for writing the answers.
- Answer **all** questions in Section I and **any four** questions from Section II
- The intended marks for questions or parts of questions are given in brackets [].
- The paper consists of 4 number of pages.

Section I (Attempt all questions)

[15]

Question 1

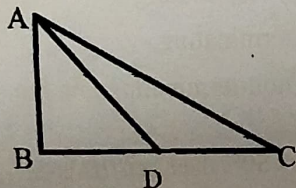
Choose the correct option for the following questions.

- 1) Which one of the following is a correct statement ?
 - a) Decimal expansion of a rational number is terminating
 - b) Decimal expansion of a rational number is non-terminating
 - c) Decimal expansion of an irrational number is terminating.
 - d) Decimal expansion of an irrational number is non-terminating and non-repeating.
- 2) AB and CD are two equal chords with center O. If $\angle AOB = 50^\circ$, then $\angle COD$ is
 - (a) 25°
 - (b) 50°
 - (c) 100°
 - (d) 60°
- 3) The point on X axis which is equidistant from A (2,-5) and B (-2,9) is
 - (a) (2,0)
 - (b) (0,-7)
 - (c) (3,-7)
 - (d) (-7,0)
- 4) The median of the data 25,34,31,23,22,26,35,28,20,32 is
 - (a) 22
 - (b) 26
 - (c) 27
 - (d) 28
- 5) Which line among the following is parallel to X axis?
 - (a) $x+3 = 0$
 - (b) $2y+3x = 0$
 - (c) $x-3 = 0$
 - (d) $y+3 = 0$
- 6) If the area of a square is same as the area of a circle, then the ratio of their perimeters in terms of π is
 - (a) $\pi : \sqrt{3}$
 - (b) $2 : \sqrt{\pi}$
 - (c) $3 : \pi$
 - (d) $\pi : \sqrt{2}$
- 7) If $\tan 2A = \cot(A - 18^\circ)$, then value of A is
 - (a) 36°
 - (b) 72°
 - (c) 78°
 - (d) 45°
- 8) If $x \tan 45^\circ \cos 60^\circ = \sin 60^\circ \cot 60^\circ$, then x is equal to
 - (a) 1
 - (b) $\sqrt{3}$
 - (c) $\frac{1}{2}$
 - (d) $\frac{1}{\sqrt{2}}$
- 9) The mean of 5 numbers is 18. If one number is excluded, their mean is 16. The excluded number is
 - (a) 26
 - (b) 30
 - (c) -20
 - (d) 15
- 10) The value of $[2 - 3(2-3)^3]^3$ is
 - (a) 5
 - (b) 125
 - (c) $\frac{1}{5}$
 - (d) -125
- 11) $x^4 + \frac{1}{x^4} = 623$, then $x + \frac{1}{x} =$
 - (a) 27
 - (b) 25
 - (c) $3\sqrt{3}$
 - (d) $-3\sqrt{3}$

- 12) The factors of $x^3 - 7x + 6$ are
 (a) $x(x-6)(x-1)$ (b) $(x^2-6)(x-1)$ (c) $(x+1)(x+2)(x-3)$ (d) $(x-1)(x+3)(x-2)$
- 13) The value of k for which the system of equations $2x+3y=5$ and $4x+ky=10$ has infinite number of solutions, is
 (a) 1 (b) 3 (c) 6 (d) 0
- 14) Which of the following is not a criterion for congruence of triangles?
 (a) SAS (b) SSA (c) ASA (d) SSS
- 15) If $x + \frac{1}{x} = 5$, then $x^2 + \frac{1}{x^2} =$
 (a) 25 (b) 10 (c) 23 (d) 27

Question 2

- a) Determine the rational numbers a and b $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = a + 7\sqrt{5}b$ [4]
- b) A sum amounts to Rs. 9680 in 2 years and to Rs 10648 in 3 years compounded annually. Find the sum and the rate of interest per annum. [4]
- c) In the given figure, triangle ABC is a right angled triangle with $\angle B = 90^\circ$ and D is the mid-point of side BC. Prove that $AC^2 = AD^2 + 3CD^2$



[4]

Question 3

- a) In a two digit number, the ten's digit is three times the unit's digit. When the number is decreased by 54, the digits are reversed. Find the number. [4]
- b) Using distance formula show that the points $A(-2,1)$, $B(2,-2)$ and $C(5,2)$ are the vertices of an isosceles right angled triangle. [4]
- c) Using scale $1\text{ cm} = 1$ unit on both axes, draw graph of lines $2x-y=1$ and $2x+y=9$. From the graph Find i) point of intersection of two lines. [5]
 ii) Area of the triangle formed by the lines with the x axis.

Section -II

(Attempt any four questions from this sections)

Question 4

- a) Solve for x , $\log(x+5) + \log(x-5) = 4 \log 2 + 2 \log 3$. [3]
- b) Solve simultaneously: $2x + \frac{x-y}{6} = 2$; $x - \frac{(2x+y)}{3} = 1$ [3]
- c) Evaluate
 i) $\frac{\cos 60^\circ}{\cos^2 45^\circ} - 3 \tan 30^\circ + 5 \cos 90^\circ$
 ii) $\frac{\cos 77^\circ}{\sin 13^\circ} + \cos^2 52^\circ + \cos^2 52^\circ + \cos^2 38^\circ - 3 \tan^2 45^\circ$ [4]

Question 5

- a) The difference between the compound interest and the simple interest on a certain sum at 10% per annum for 3 years is Rs. 93. Find the sum [3]

- b) Construct a regular hexagon of side 5 cm. [3]
- c) In a circle of radius 17cm, parallel chords of lengths 30 cm and 16 cm are drawn. Find the perpendicular distance between the chords if both the chords are
- (a) on opposite side of the center. (b) on same side of the center. [4]

Question 6

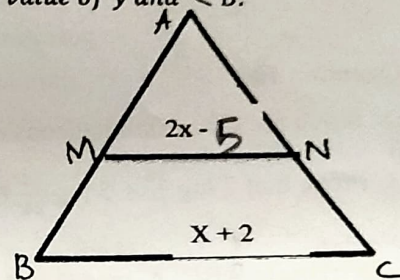
a) Draw a frequency polygon for the data given below [3]

Marks	10-20	20-30	30-40	40-50	50-60
No. of Students	10	25	12	8	5

b) If $5\cos A - 12\sin A = 0$, find value of $\frac{\sin A + \cos A}{2\cos A - \sin A}$ [3]

c) In the given figure, M & N are mid points of sides AB and AC of triangle ABC. [4]

- (i) if $MN = 2x - 5$ and $BC = x + 2$, find the value of x
- (ii) if $\angle AMN = (2y + 25)^\circ$ and $\angle B = (3y - 5)^\circ$, find the value of y and $\angle B$.



Question 7

a) If $\log \frac{x-y}{2} = \frac{1}{2} (\log x + \log y)$, prove that $x^2 + y^2 = 6xy$ [3]

b) Two cubes of edge 12 cm are joined end to end to form a cuboid. Find the volume and total surface area of the cuboid. [3]

c) Using class interval 0-10, 10-20,.....construct a frequency table for the given data

20	4	27	36	5	40	20	25	13	9	10	15	20
18	9	8	16	20	26	5	34	2	31	16	11	

From the table find

- (a) Class boundary of second class. (b) Class mark of third class. (c) Class size of first class. [4]

Question 8

a) Prove that $\sin 60^\circ = \frac{2\tan 30^\circ}{1+\tan^2 30^\circ}$ [3]

b) Construct a rhombus ABCD given that $AB = 5\text{cm}$, $AC = 6\text{cm}$. [3]

c) A person invests Rs 10000 for two years at a certain rate of interest compounded annually. At the end of one year this sum amounts to Rs.11200. Calculate

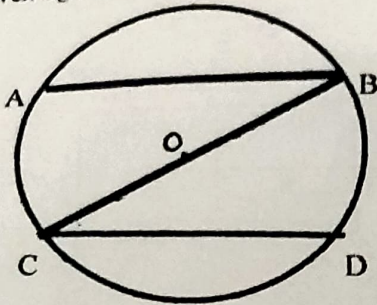
- (i) The rate of interest per annum (ii) the amount at the end of the second year. [4]

Question 9

a) If $x = \frac{1}{2-\sqrt{3}}$, find the value of $x^3 - 2x^2 - 7x + 5$

[3]

b) In the given figure AD is the diameter of a circle with center O. If AB is parallel to CD, Prove that AB = CD [3]



c) From the four corners of a square piece of paper of side 24 cm, quarter circles with centers at the vertices of the square are cut off. If the radius of each of the quarter circle is 7cm. Find

(a) area of paper left.

(b) perimeter of paper left.

[4]

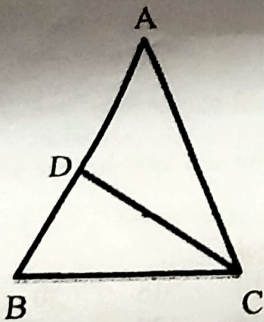
Question 10

a) Solve the given simultaneous equations by elimination method $\frac{4}{x} + \frac{5}{y} = 3$; $\frac{6}{x} - \frac{10}{y} = 1$ [3]

b) Prove that $7 \log \frac{16}{15} + 5 \log \frac{25}{24} + 3 \log \frac{81}{80} = \log 2$ [3]

c) In triangle ABC, AB = AC and D is a point on AB such that AD = DC = BC. Show that $\angle BAC = 36^\circ$

[4]



- Answers to this Paper must be written on the paper provided separately.
- You will not be allowed to write during the first 15 minutes.
- This time is to be spent in reading the question paper.
- The time given at the head of this paper is the time allowed for writing the answers.
- Attempt five questions in all from Section II.
- The intended marks for questions or parts of questions are given in brackets []
- This paper consists of -- 7 number of pages.

Section I

Attempt all questions from this Section.

Question 1

Choose correct alternative:

[15]

- (i) Places near to the sea experiences moderate temperature is known as
(a) Maritime influence (b) Continental influence (c) None of these
- (ii) Assertion (A): Most of the plains are formed by rivers and its tributaries.
Reason (R): Northern plains are located in the north of the Himalayas.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is the not correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
- (iii) Which atmospheric layer reflects the radio waves back to the Earth?
(a) Mesosphere (b) Troposphere (c) Stratosphere (d) Ionosphere
- (iv) Which is the longest day in Northern hemisphere?
(a) 21st March (b) 21st June (c) 23rd September (d) 22nd December
- (v) Which winds prevail between 30° and 60° of latitudes in both the hemisphere?
(a) Westerlies (b) Trade winds (c) Local winds (d) Seasonal winds
- (vi) The distance between two lines of longitude is maximum at which latitude?
(a) Arctic Circle (b) North Pole (c) Tropic of Capricorn (d) Equator

Std: D
Date:

- (vii) Which amongst the following is not a sources of Radioactive pollution?
(a) Pesticides (c) Nuclear weapons
(b) X-rays waste (d) Radioactive fallout from nuclear plants
- (viii) Effect of noise pollution are:
(a) Reduce sleeping hours
(b) Reduce productivity or efficiency of a human being
(c) Affect the peace of mind and invades the privacy of a human being.
(d) All the above
- (ix) International Date Line passes through.....
(a) Bering Strait (b) Florida Strait (c) Gibfaltar Strait (d) Malacca Strait
- (x) Which of the following volcano is known to be a dormant volcano?
(a) Mt. Kilimanjaro (b) Mt. Vesuvius (c) Mt. Kenya (d) Mt. Nilgiri
- (xi) Every country calculates Standard Meridian as the angular distance from the Greenwich Meridian. If it is 12 noon at GMT what is the time on Indian Standard Time?
(a) 5:30 P.M. (b) 5:00 P.M. (c) 5:20 P.M. (d) 5:30 A.M.
- (xii) There are two statements marked as Assertion(A) and Reason(R). Mark your answer as per the codes provided below:
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is the not correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
- Assertion (A): The amount of moisture in the atmosphere is related to latitude.
Reason ®: the capacity to hold moisture in the form water vapour is related to temperature.
- (xiii) Mohorovicic discontinuity separates
(a) Sial and Sima (b) Crust and Core (c) Mantle and Crust (d) Core and Mantle
- (xiv)wave can pass through solid, liquid and gases.
(a) Push wave (b) Shear wave (c) Surface wave (d) All of these
- (xv) Catskill range in USA is an example of mountain.
(a) Residual (b) Fold (c) Block (d) None of the these

Question 2

(i) On the outline of world map mark and label the following:

[10]

- (a) Suez Isthmus
- (b) Baltic Sea
- (c) Indus River
- (d) Great Dividing Range
- (e) Labrador Current
- (f) Falkland Current
- (g) Atacama Desert
- (h) Canadian Shield
- (i) Llanos
- (j) Equatorial natural region in Africa

(ii) Explain the following terms:

[5]

- (a) Condensation
- (b) Normal Lapse Rate
- (c) Doldrum
- (d) Standard Time
- (e) Epicentre

Section II

(Attempt any five questions)

Question 3

(i) Give a single term for each of the following:

[2]

- (a) Photosynthetic plants which can produce their own food themselves.
- (b) The process of transfer of food from one organism to the other in the biosphere.

(ii) Why is the Standard Time considered necessary?

[2]

(iii) An amazing natural phenomenon occurs in the Northern Hemisphere mostly during summer solstice. However Southern Hemisphere experiences it during winter solstice on 22 December. The duration of this phenomenon depends on how far an area is from the Arctic circle. The Sun does not set below the horizon in these areas during summer solstice. There is a heavy inflow of tourists in such areas during summer to observe this phenomenon which in turn helps to boost the economy of these areas.

[3]

- (a) What is this phenomenon called?
- (b) Why does not Sun set at night in such areas during summer solstice?
- (iv) Calculate the local time at Singapore ($104^{\circ} E$) when it is 6:00 p.m. at Greenwich.

Question 4

- (i) Students of class 9, Guardian school visited Geological Survey of India. They observe various types of rocks. Some of them were called as "primary rocks" and the other were called as "secondary rocks".
 - (a) As a student of Geography, name the primary and secondary rock.
 - (b) Write the two examples of primary and secondary rocks.
 - © Write the two characteristics of these rocks.
- (ii) Draw a well labelled diagram to show the interior of the Earth. [3]
- (iii) Give one example of each: [2]
 - (a) Structural plain (b) Delta (c) Residual mountain (d) Old fold mountain
- (iv) Distinguish between Gutenberg Discontinuity and Mohorovicic Discontinuity. [2]

Question 5

- (i) The Northern plains of India are aptly called the dust of Himalayas. It is one of the densely populated areas in the world. As one moves Eastwards the plain culminates into the large delta in the world.
 - (a) Name the agent responsible for the formation of this plain.
 - (b) Mention any two factors which are responsible for the dense population.
 - (c) Mention any two factors that do not favour the formation of deltas.
- (ii) Distinguish between the following: [2]
 - (a) Physical weathering and chemical weathering.
 - (b) Primary and secondary wave
- (iii) Define the following term: [2]
 - (a) Dormant volcano (b) Extinct volcano
- (iv) Describe the earthquake zone of the world. [3]

Question 6

- (i) The Pacific Ocean, largest and deepest ocean in the world, is home to dynamic and intricate system of ocean current. These currents play vital role in shaping global weather pattern, influencing marine life and impacting the lives of millions of people living along its shores. It maintains balance of climate and ecosystem. As we continue to study and appreciate the power and significance of these currents, we gain a deeper understanding of the interconnectedness of Earth's oceans and the urgent need to protect them for future generations. [3]

- (a) Name the two most ocean currents formed in the Pacific Ocean.
 (b) Why rich fishing grounds are found in the areas where cold and warm currents meet?
- (ii) Equatorial region extends between 0° - 10° north and south of the Equator. It covers certain areas of Asia, South America and Africa. Based on the information answer the following question. [2]
- (a) Which parts of Asia are included in Equatorial Region.
 (b) Which parts of South America are included in Equatorial Region.
- (iii) State the location and extent of Tropical Grassland. [2]
- (iv) Name the following: [3]
- (a) The Grassland in North of the Equator.
 (b) The Grassland in Brazilian Highland.
 (c) Natural region in India.

Question 7

- (i) Due to the spherical shape of the Earth, the tilt of the Earth on its axis, its rotation and the presence of an atmosphere on the Earth, the insolation distribution on the Earth is not uniform. [2]
- (a) Explain why different places receive different amount of heat?
 (b) What is altitude? How is temperature of atmosphere and altitude interrelated?
- (ii) Give reason for the following: [3]
- (a) Temperature decreases from the Equator to the poles.
 (b) Land is heated and cooled faster than the sea.
 (c) Various weather phenomena are confined to the troposphere.
- (iii) Give a technical term for: [3]
- (a) Heat is radiated by the Earth in the form of long waves.
 (b) Transfer of heat in a liquid or gas.
 (c) The upper limit of Mesosphere.
- (iv) State the layers of atmosphere. Write the two characteristics of Stratosphere. [2]

Question 8

- (i) Dated- 05.06.2023: Indian Meteorological Department (IMD) said that Summer Monsoon onset over India's Southern Kerala coast may be delayed by two to three days due to the reduction of cloud cover caused by the formation of cyclonic circulation in the Arabian Sea. The Monsoon, which delivers nearly 70% of India's required rainwater, is crucial to the country's agriculture industry. [2]
- (a) Why does India receive summer monsoons between June to September month?

(b) India lies between which pressure belts? Name the permanent winds seen between these belts.

(ii) Draw well labelled diagram of atmospheric pressure belt.

[3]

(iii) Name the regions where the following local winds blow:

[3]

(a) Chinook (b) Loo (c) Mistral

(iv) Distinguish between Absolute Humidity & Relative Humidity.

[2]

Question 9

(i) Rashi's father working as an Engineer in leather factory got an accommodation around his factory in Kanpur which saved his time and money spent on travelling from his house to his work place. This happiness was short lived. Rashi started to fall sick quite often due to respiratory disease she had developed recently.

[3]

(a) What could be the reason for Rashi's illness?

(b) What are the different types of air pollutants?

© What harm can this type of pollution lead to humans?

(ii) An oil tanker ship sailing from the coast of Saudi Arabia over turned near the coast of Mumbai. Few days later sea gulls around were found to be dead floating on surface of the sea.

(a) Mention the reason for the death of sea gulls.

(b) What kind of pollution is it?

(c) What all harms does this kind of pollution pose?

(iii) What is radioactive pollution?

(iv) Why are non-biodegradable pollutants harmful?

- Answers to this paper must be written on the paper, provided separately.
- You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this paper is time allotted for writing the answers.
- Answer all questions in Part I
- A total of five questions to be attempted from Part II [two out of three questions from section A and three out of five questions from section B
- The intended marks for questions or parts of questions are given in brackets [].

PART I

Question 1

(Attempt all the questions from this section)

[16]

Choose the correct answer to the questions from the given options.
(Do not copy the questions write the correct answers only)

1. Which sufi saint believed in drawing close to God through renunciation of the world and service to humanity?
a) Hazrat Ali b) Hazrat Shan c) Hazrat Khan d) Hazrat Nizamuddin
2. Mahabharata: Ved Vyasa :: Ramayana _____
a) Agastya b) Vishwamitra. c) Parashurama. d) Valmiki.
3. Name the oldest European Church in India.
a) St. Francis Church b) St. Vasco Church c) St. Francisco Church d) St. Anglican Church
4. Name the courts which are competent to issue writs.
a) Supreme Court b) High Court c) Both a and b d) None of the above
5. What are the box-like structures erected with the stone slabs, resting on each other without any mortar called?
a) Megaliths b) Tirukkural c) Couplets d) Malaiyar
6. The court issues _____ to protect the fundamental rights of its citizens.
a) policies b) petitions c) orders d) writs
7. The epics reveal:
a) Social, political and cultural organisation. b) Family life and moral principles.
c) Various Aryan kingdoms. d) All of the above.
8. This right stresses on developing the well being of individuals.
a) Right to Education b) Right to Equality
c) Right to privacy d) Right to Information

9. What made the pool at the Great Bath watertight?
 a] Burnt bricks
 b] Mortar lined with bitumen and gypsum
 c] Mud brick platforms
 d] Both (a) and (b)
10. The Tirukkural had three sections, namely _____
 a] Aram, Porul and Inbam
 b] Vanavar, Malaiyar and Udiyan
 c] Tolkappiyam, Tirukkural and Tiruvalluvar
 d] None of the above.
11. The Bhagvad Gita is a part of the _____
 a] Vishnu Purana
 b] Upanishad
 c] Mahabharatha
 d] Ramayana
12. Which of the following is a part of the definition of a Constitution?
 a] A comprehensive document
 b] A set of rules of governance
 c] Position and power of the States
 d] All of the above
13. Dhamma stands for _____.
 a] Moral law
 b] Empty Rituals.
 c] Chastity
 d] Adherence
14. The literary source that refers to the previous births of Buddha is known as _____.
 a] Panchatantra
 b] Jatakas
 c] Aseop
 d] Angas
15. _____ is a country where socialism is predominant.
 a] USA
 b] UK
 c] Canada
 d] China
16. Which of the following is known as 'the first testament of mankind'?
 a] Sama Veda
 b] Rig Veda
 c] Yajur Veda
 d] Atharva Veda

Question 2

[14]

Answer the following questions in one or two sentences.

1. Why did Rajaraja undertake a naval expedition against Ceylon and Maldives?
2. Mr Sheshan is appointed as the Chief Election Commissioner. What according to the Constitution will be his age of retirement from this post? Who appoints the Chief Election Commissioner?
3. Which Sufi Saint's tomb is enshrined in the Ajmer Sharief Dargah? What was his main belief?
4. Mrs Radhika is denied permission to enter the temple premises. Which right has been violated in her case? What step she can take further in this case?
5. Why Mira Bai was so popular?
6. Describe the term Constitution.
7. Mention any two steps taken by Akbar to promote better understanding between the Hindus and the Muslims.

PART II
(A total of five questions to be attempted from Part II [two out of three questions from section A and three out of five questions from section B])

SECTION A:

Question 3

With reference to Constitution of India explain:

1. Name the body that framed our Constitution? What is meant by Constitution? Define Single citizenship. [3]
2. Explain the historical significance of January 26th. [3]
3. Write four Fundamental Duties. [4]

Question 4

With reference to the Elections explain the following:

1. Differentiate between midterm and general election and By election. [3]
2. What is the composition of the Election Commission? [3]
3. Give four reasons to differentiate between direct and indirect elections. [4]

Question 5

With reference to Local self-government answer the following:

1. Explain the meaning of Gram Panchayat, Zilla Parishad and Panchayat Samiti [3]
2. State the Functions of the Zilla Parishad [3]
3. Differentiate between Municipal Corporation and Municipal Committee [4]

SECTION B:

Question 6

With reference to Sangam age and Gupta age answer the following questions:

1. Write short note on Thirukkural. [3]
2. Who was Aryabhata? What were his main achievements? [3]
3. Who was Kalidasa? What was his role in Literature during the Gupta Period? [4]

Question 7

With reference to Reformation and Industrial Revolution answer the following:

1. Contribution of Martin Luther [3]
2. Describe Counter Reformation. [3]
3. Differences between Socialism and Capitalism [4]

Question 8

With reference to Vedic Civilization Explain.

1. Importance of Epics [3]
2. What is the role of Iron implements for the development and growth of people during Vedic period? [3]
3. Any four Allied Vedic Literature. [4]

Question 9

With reference to Jainism and Buddhism and Mughal Empire answer the following:

1. Short notes on Tripitakas.
2. Short notes on Angas.
3. Akbar is one of the greatest Mughal ruler of India, justify the given statement by appropriate examples.

[3]

[3]

[4]

Question 10

With reference to Chola Administration and Delhi Sultanate explain:

1. Features of Brihadeshwara Temple
2. Political history of Qutbuddin Aibak.
3. Political history of Raja Raja I and Rajendra I.

[3]

[3]

[4]

DATE: 14-02-24

SUB: BIOLOGY

- Answers to this Paper must be written on the paper provided separately.
- You will not be allowed to write during first 15 minutes. This time is to be spent in reading the question paper.
- The time given at the head of this Paper is the time allowed for writing the answers.
- Section A is compulsory. Attempt any four questions from Section B.
- The intended marks for questions or parts of questions are given in brackets [].
- This paper consists of 6 number of Pages

SECTION A

(Attempt all questions from this section.)

[15]

Question 1

- i. Which of the following controls all biological activities of a cell?
 a) Protoplasm b) Cell wall c) Nucleus d) Golgi apparatus
- ii. Which muscles act involuntarily?
 P) Straited muscles
 Q) Smooth muscles
 R) Cardiac muscles
 S) Skeletal muscles
 a) P and Q only b) Q and R only c) Q and S only d) P and S only
- iii. Floral stalk is technically termed as:
 a) Petiole b) Peduncle c) Pedicel d) Funicle
- iv. Generative nucleus divides forming
 a) 2 male nuclei b) 3 male nuclei c) 2 female nuclei d) 3 female nuclei
- v. The majority of the water from the indigestible food is absorbed in the _____?
 a) Stomach b) Food pipe c) Pancreas d) Large intestine

- vi. Assertion: Communicable diseases are called infectious diseases.
Reason: Cancer is a communicable disease.
- Both assertion and reason are true and reason is the correct explanation of assertion.
 - Both assertion and reason are true but reason is not the correct explanation of assertion.
 - Assertion is true but reason is false.
 - Assertion is false but reason is true
- vii. The total number of cervical, thoracic and lumber vertebrae comes to
- 24
 - 33
 - 37
 - 27
- viii. An example of disaccharide is :
- Fructose
 - glucose
 - galactose
 - maltose
- ix. Respiration differs from the process of combustion in the fact that
- All the energy stored in glucose is released at once due to combustion
 - All energy stored in glucose is gradually released due to combustion
 - Comparatively large quantity of energy is produced due to combustion
 - The carbohydrates act as the combustion substance.
- x. The breakdown of pyruvate to give carbon di oxide, water and energy takes place in
- Cytoplasm
 - Mitochondria
 - Chloroplast
 - Nucleus
- xi. Which of the following immunity is present from our birth?
- Innate immunity
 - Active immunity
 - Passive immunity
 - Acquired immunity
- xii. Use of disposable syringes for injecting medicines, etc, is specially advised to prevent
- Poliomyelitis
 - Mumps
 - Rabies
 - AIDS
- xiii. The layer of the skin that provides protection against bacteria, as well as chemical and mechanical injuries is the
- Dermis
 - Epidermis
 - Sebum layer
 - Subcutaneous layer
- xiv. Except one all other are fat soluble vitamins
- A
 - D
 - E
 - C
- xv. From among the situations given below choose the one that prevents both autogamy and geitonogamy
- Monoecious plant bearing unisexual flowers
 - Dioecious plant bearing only male or female flowers
 - Monoecious plant with bisexual flowers
 - Dioecious plant with bisexual flowers.

i. Name the following

- a) The biocatalyst which alters the rate of a chemical reaction
- b) The part of protoplasm enclosed by the nuclear membrane.
- c) The blood vessel that carries oxygenated blood from lungs to the heart.
- d) A step of cellular respiration that occurs in the cytoplasm of the cell.
- e) The practice of artificially introducing the germs or germ substance into the body for developing resistance.

[5]

ii. Complete the paragraph by filling the blanks:

[5]

The forelimb consists of a long bone (a) _____ in the arms, two long bones, the inner (b) _____ and the outer (c) _____ in the lower arm (d) _____ carpal bones in wrist, five long (e) _____ in palm and fourteen phalanges in finger.

iii. Given below are sets of terms. Rewrite them in logical sequence beginning with the term that is underlined.

[5]

- a) Sacrum, coccyx, cervical, lumbar, thoracic
- b) Class, Phylum, order, Genus, Family
- c) Large intestine, Stomach, Mouth, Small intestine, Oesophagus
- d) Bronchi, Nose, Larynx, trachea, pharynx
- e) Inhalation, Cellular respiration, Tissue respiration, Gaseous transport, Exhalation,

iv. Identify the ODD term in each set and name the CATEGORY to which the remaining other belongs:

[5]

- a) Chloroplast, Tonoplast, Chromoplast, leucoplast
- b) Malaria, Amoebiasis, Taeniasis, Hepatitis
- c) Parenchyma, Collenchyma, Xylem, Sclerenchyma
- d) Thallophyte, Annelida, Mollusca, Arthropoda
- e) Injection needles, polythene covers, Dried leaves, Mobile batteries.

[5]

v. Match the following:

A

- a) Protective covering of the ovule
- b) Vacuole
- c) Sclerenchyma
- d) Potassium hydroxide
- e) Lysosome

B

- 1) Absorbs carbon di oxide
- 2) Integuments
- 3) Ribosomes
- 4) Cell sap
- 5) Dead cells
- 6) Centrosome
- 7) Muscle cells

SECTION B

(Attempt any four from this section)

Question 3

- i. Define term Germination. [1]
- ii. State location and function of gene. [2]
- iii. Name two cell organelles which contain their own DNA? [2]
- iv. Distinguish between bone and cartilage (porosity). [2]
- v. Draw a neat labelled diagram of plant cell and label the following: [3]
 - a) The cell organelle composed of cellulose
 - b) The cell organelle which semipermeable
 - c) The cell organelle give turgidity to the plant cells.

Question 4

- i. Define Dichogamy. [1]
- ii. State the location and function of Collenchyma [2]
- iii. Differentiate between Inspiration and expiration (position of diaphragm). [2]
- iv. Mention two activities of red cross. [2]
- v. Draw a neat labelled diagram of longitudinal section of maize grain and label the following [3]
 - a) Aleurone layer
 - b) Coleoptile
 - c) Coleorhiza

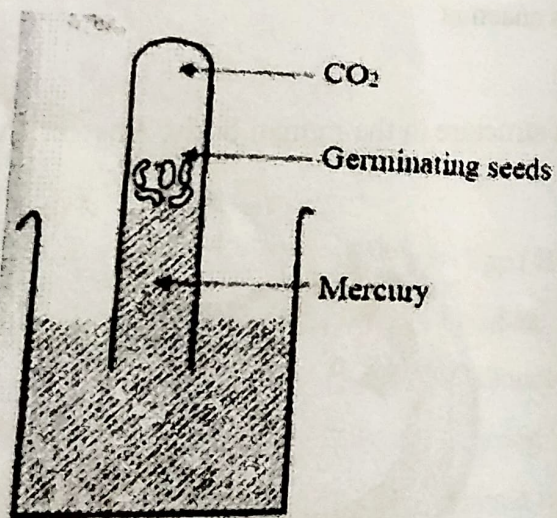
Question 5

- i. Define Incubation period. [1]
- ii. State the location and function of Pleural fluid. [2]
- iii. Write any two characteristic of phylum Nematoda. [2]
- iv. Give reason for Landfills are coming up fast near large cities. [2]
- v. Complete the following table by filling up the blanks numbered 1 to 3 [3]

Secretion	Enzyme secreted	Substrate	Product of digestion
Gastric juice and hydrochloric acid	1	Proteins	2
Pancreatic juice	Steapsin/lipase	3	Fatty acid and glycerol

Question 6

- What is Incomplete flower? [1]
- Give reason -Maize fruit is considered as a maize grain. [2]
- Distinguish between Antiseptic and disinfectant. [2]
- Taking the examples of whole grain atta, fruit and green leafy vegetables, describe how roughage is our diet is useful. [2]
- The given diagram shows an experiment performed on germinating seeds. Study the same and answer the questions that follow: [3]

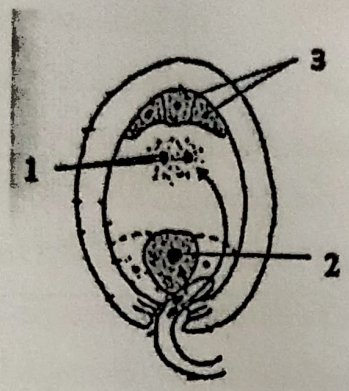


- What does the experimental set up demonstrate?
- Write the chemical reaction for this process.
- How you confirm the presence of carbon dioxide in above process.

Question 7

- What is meant by residual air? [1]

- ii. State the location and function of cardiac sphincter. [2]
- iii. Differentiate between Leucoderma and Albinism (Type of disorder). [2]
- iv. State how the nitrates in the soil get converted to nitrogen of the atmosphere. [2]
- v. Given below is a diagrammatic representation of the process that occurs in flowers. Study the diagram and then answer the questions that follow: [3]

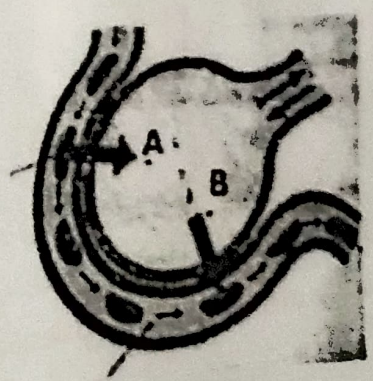


- a) Name and define the process
- b) Define triple fusion

Question 8

- i. What is Antibiotics? [1]
- ii. State the location and function of Parotid gland. [2]
- iii. Name the nutrients whose deficiencies cause the following diseases in humans: [2]
 - a) Kwashiorkor
 - b) Pernicious anaemia
- iv. How is outer surface of skin made water proof? [2]
- v. Study the diagram representing gaseous exchange in a structure in the human body. Answer the following questions: [3]

- a) What is the biological term for this structure?
- b) Where is this structure present in the human body?
- c) Name the gases A and B that are exchanged.



- Answers to this Paper must be written on the paper provided separately.
- You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this paper is the time allotted for writing the answers.
- Section A is compulsory. Attempt any five questions from Section B.
- The intended marks for questions or parts of questions are given in brackets [].

SECTION A

(ATTEMPT ALL QUESTIONS)

QUESTION 1

Choose the correct alternative:

(10)

1. Global Warming is a result of an imbalance of _____ on earth.
a. Carbon b. Nitrogen c. Helium d. Argon
2. The diameter of the earth decreases towards _____.
a. Poles b. Equator c. Higher Latitudes d. Longitudes
3. This layer lies above the Thermosphere.
a. Troposphere b. Stratosphere c. Ionosphere d. Exosphere
4. Electrically charged particles called create a sheet of display like Aurora Borealis.
a. Ozone b. Ions c. CFC d. Jet stream
5. Most volcanic eruptions take place near:
a. Coastal areas b. Deserts c. Plate margins d. Mountain
6. The process in which the loose grains of sediments are converted into rock
a. Cementation b. Intrusion c. Lithification d. Oxidation
7. Taj Mahal is the turning yellow due to:
a. Global Warming b. Acid rain c. Eutrophication d. Bio-magnification
8. Which of the following is not true about noise pollution?
a. causes high blood pressure b. Insomnia c. Hearing loss d. Cancer
9. Which type of rainfall occurs on the windward side?
a. Monsoonal b. Convectional c. Orographic d. Cyclonic
10. The other name of crust is _____
a. Biosphere b. Atmosphere c. Lithosphere d. Hydrogen

QUESTION 2

Define the following:

(10)

1. Oxidation
2. Ozone layer
3. Relative Humidity
4. Ocean Currents
5. Global Warming

QUESTION 3

On the outline of world map, mark and label the following:

(10)

1. Arctic Ocean
2. Drakensberg
3. Scandinavian highlands
4. Canadian Shield
5. Caspian Sea
6. Gulf of Lawrence
7. Brazilian Highlands
8. Central Japanese Alps
9. Great Dividing Range
10. Indian Ocean

SECTION B

(ATTEMPT ANY FIVE QUESTIONS)

QUESTION 4

- 2 a. Give one point each how atmosphere and temperature make earth a habitable planet. (2)
- b. Draw a neat labelled diagram to show Bedford Level experiment. (2)
- c. Give three points of difference between latitudes and longitudes. (3)
- x d. Calculate the time at Singapore (104° E) when it is 6.00 pm at Greenwich. (3)

QUESTION 5

- 1 a. State any two characteristics of Revolution. (2)
- b. Write two points of difference between core and Mantle. (2)
- c. There are two transitional zones between the two consecutive layers of the interior of the earth. Name them and state their chief characteristics. (3)
- d. Give geographical reasons: (3)
 - i. The period of twilight and dawn increases pole wards.
 - ii. The asthenosphere is in semi - melted state.

QUESTION 6

- a. Give any two points of difference between Young Fold Mountains and Old Fold Mountains. (2)
- b. State any two characteristics of Metamorphic Rocks. (2)
- x c. Explain briefly any three landforms created by volcanoes. (3)
- d. Give geographical reasons: (3)
 - i. igneous rocks are also called primary rocks.
 - ii. Alluvial plains are regarded as granaries of the world.

QUESTION 7

- a. What is known as exfoliation? Name the process involved in it. (2)
- b. What is biological weathering? (2)
- c. Give three points of difference between Mechanical and Chemical weathering. (3)

- d. Give geographical reasons :
i. Chemical weathering occurs in moist and cold climate.
ii. Vegetation prevents disintegration of rocks.

(3)

QUESTION 8

- a. Define:
~~X~~ Hydrosphere ~~in~~ Ebb (2)
~~X~~ Explain the two categories of ocean currents which can be divided on their depth. (2)
~~X~~ State any three characteristics of Labrador current. (3)
~~X~~ State one characteristic feature of each Oyashio Current and Gulf stream. (3)

QUESTION 9

- a. In which layer of atmosphere do all the weather conditions occur? Name important greenhouse gases. (2)
b. Give two points of difference between land breeze and sea breeze. (2)
c. Draw a neat labelled diagram showing vertical rays are hotter than slanting. (3)
d. Give geographical reasons:
i. We find it difficult to breathe when we climb mountains. (3)
ii. A desert region has a high range of temperature than a forest region.

QUESTION 10

- ~~X~~ What is cyclonic rainfall? (2)
~~X~~ Name four chief forms of condensation. (2)
c. Give geographical reasons:
~~X~~ Convective rainfall occurs every day in equatorial region. (3)
~~X~~ The total volume of water in the oceans and seas remain constant.
~~X~~ Define precipitation. Explain briefly the three forms of precipitation. (3)

QUESTION 11

- a. Explain what is radioactive pollution. (2)
b. What is known as smog? What harm is done by smog especially in winters. (2)
c. State any two effects each of soil pollution on human beings and environment. (3)
d. State any three measures to save energy. (3)

इथला : नववी (९ वी)
दिनांक : ०६/०२/२०२४

गार्डियन स्कूल
वार्षिक परीक्षा २०२३ -२४
विषय : मराठी

वेळ : ३ तास
गुण : ८०

- > Answers to this paper must be written on the paper, provided separately.
- > You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this paper is time allotted for writing the answers.
- > The intended marks for questions or parts of questions are given in brackets [].
- > This Paper consists of 4 printed number of pages.

प्रश्न १ अ] खालील प्रश्नांची एका वाक्यात उत्तरे लिहा. (५)

- १) आंब्याच्या मोहरानुन कोणाची सुरेल तान येत आहे ?
- २) वंडुनानांना कशाचा शोक होता ?
- ३) वंडुनाना आपल्या कुटुंबासोबत काय पाहायला गेले ?
- ४) हिमालयातील कोणते पक्षी गिर्यारोहकांच्या मागे गेल्याचे दिसले ?
- ५) पुन्हा एकदा काय चमकावी असे कवीला वाटते ?

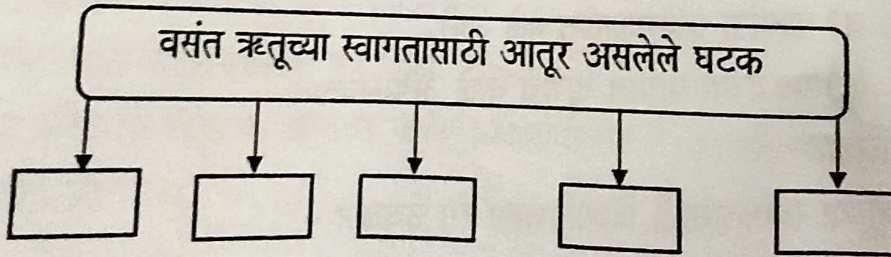
ब] रिकाम्या जागी योग्य पर्याय लिहून वाक्य पूर्ण करा. (४)

(कालिदासाच्या, युवक, धान्याच्या, अन्नाचे, पैशाच्या)

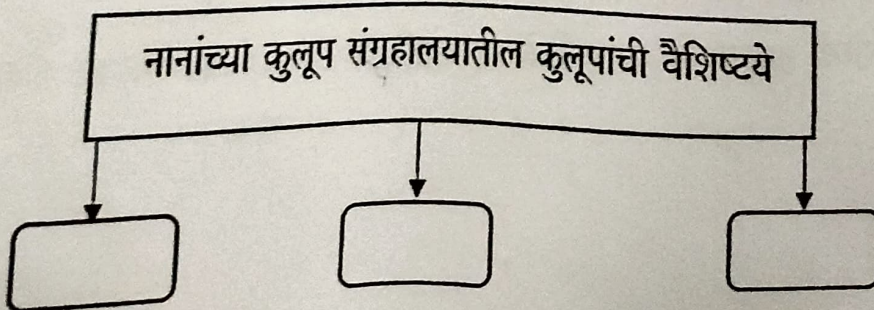
- १) एकदा त्यांच्या _____ कोठीची कुलुपाची किल्ली त्यांच्या कुटुंबाने हरवली.
- २) वलांकांच्या स्थलांतराविषयी _____ वाडःमयात उल्लेख आढळतात.
- ३) मुळात _____ चे दुर्भिक्ष हीच स्थलांतरामागची मूळ प्रेरणा आहे.
- ४) पुन्हा एकदा घुमावा वारा, _____ इथला भारला जावा.

प्रश्न २ अ] आकृती पूर्ण करा.

१) वसंत ऋतूच्या स्वागतासाठी आतूर असलेले घटक (५)



३) नानांच्या कुलूप संग्रहालयातील कुलूपांची वैशिष्ट्ये (३)



- ब] खालील प्रश्नांची तीन-चार वाक्यात उत्तरे लिहा.
- १) वसंत ऋतूच्या आगमनाने सृष्टित होणारे बदल कवितेच्या आधारे तुमच्या शब्दांत लिहा. (१)
 - २) मानवी जीवन व पक्षी जीवन यांच्यातील सारखेपणा यावर तुमच्या शब्दांत माहिती लिहा.
 - ३) आपल्या देशात शांती निर्माण व्हावी यासाठी पुन्हा एकदा काय करावे? असे तुम्हाला वाटते.
 - ४) बंडूनांनांच्या तोंडाला आपोआप कुलूप बसण्याची वेळ का आली ? या घटनेचे वर्णन करा.

प्रश्न ३ अ] चुक की बरोबर ते लिहा.

- १) बंडूनांनांच्या तोंडाला आपोआप कुलूप बसले. (४)
- २) पक्ष्यांच्या स्थलांतराचा अभ्यास करणे ही सौपी गोष्ट आहे.
- ३) पक्ष्यांना थंडीवाऱ्याची फारशी काळजी नसते.
- ४) वाळे अडकवलेले पक्षी मोकळे सोडले जात नाही.

ब] योग्य पर्याय निवडून वाक्ये पूर्ण करा.

- १) मोरपिसासरखी मुलायम पाने आहेत (३)

अ) लिंबोणीची

ब) पिंपळाची

क) वडाची

- २) नानांनी तिजोरीस घंटेचे कुलूप लावले व ती

अ) निजायच्या खोलीत नेऊन ठेवली.

ब) बगिचेत नेऊन ठेवली.

क) स्वंपाकघरात नेऊन ठेवली.

- ३) पक्ष्यांच्या स्थलांतराचा अभ्यास करण्यासाठी

अ) पक्ष्यांसोबत प्रवास केला जातो.

ब) पक्ष्यांना प्रयोगशाळेत नेले जाते.

क) पक्ष्यांच्या पायात खुणेचे वाळे अडकवितात.

क] कोण ते लिहा. (३)

१) ऋतूच्या स्वागतासाठी दिशादिशांना रंग उधळले =

२) अन्नाच्या शोधात स्थलांतर करणारे =

३) 'उजाड उघडे माळरानही' या कवितेच्या कवयित्री =

प्रश्न ४ अ] योग्य जोडया जुळवा.

‘अ’ गट

- १) मातीत माती एक व्हावी
- २) वीज रक्तात भिनावी
- ३) नवनिर्माणाची चाहूल
- ४) पुसून टाकीत भेदभाव

ब] समानार्थी शब्द लिहा.

१) सुरेल =

२) दुर्घट =

३) पांढरा =

क] अशुद्ध शब्द शुद्ध करून वाक्ये पुन्हा लिहा.

- १) हे पक्षि महिन्यापूर्वी इथे नव्हते.
- २) प्रथम त्यांनी अक्षरि कुलूप लावले.
- ३) सूर्य दक्षिणेकडे झुकू लागला.

प्रश्न ५ अ] खालील वाक्प्रचारांचा वाक्यात उपयोग करा.

- १) घुस्सा होणे
- २) दंग होणे
- ३) नजरेस पडणे

ब] विरुद्धार्थी शब्द लिहा.

- १) अविश्वास X २) खाली X ३) सापडणे X

क] खालील वाक्याचे मराठीमध्ये भाषांतर करून वाक्ये पुन्हा लिहा.

- १) Books are my best friend.
- २) Unity is Power.
- ३) Experience is best Teacher.

प्रश्न ६ कोणत्याही एका प्रश्नावर पत्र लिहा.

अ) तुमच्या परिसरात होणाऱ्या अस्वच्छ पाणीपुरवठ्याची तक्रार करणारे पाणीपुरवठा अधिकाऱ्याला पत्र लिहा.

किंवा

ब) तुमच्या आज्जी-आजोबांना तब्येतीची विचारपुस करणारे पत्र लिहा.

(४)

‘ब’ गट

- अ) भेदभाव नष्ट करणे
- ब) नवनवीन गोष्टींची निर्मिती
- क) मातीने भेदभाव विसरावा
- ड) माणसांत उत्साह निर्माण व्हावा

(३)

(३)

(३)

(३)

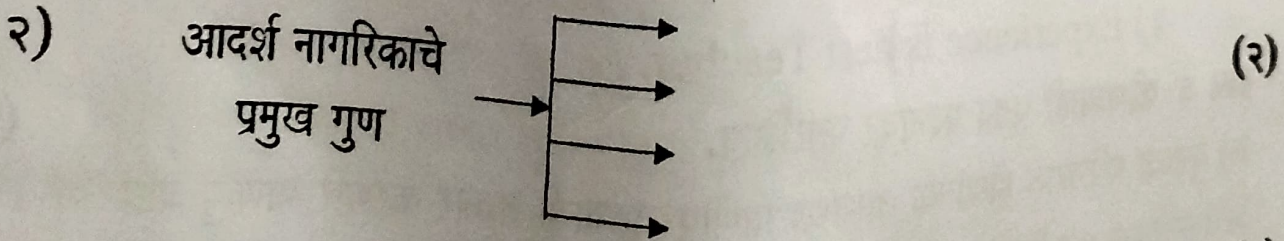
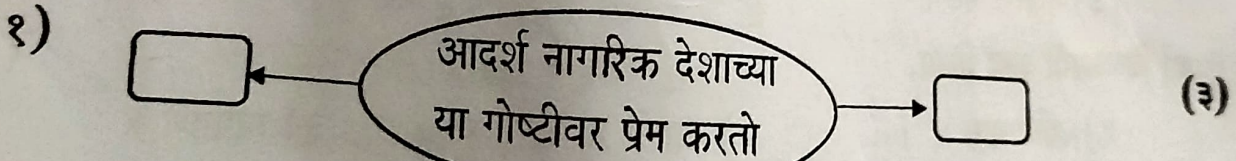
(३)

(७)

प्रश्न ७ खालील उतारा वाचुन त्यावर आधारित आकृत्या सोडवा व पाच प्रश्ने तयार करा.
 कोणत्याही देशाचे नागरिक हेच त्या देशाची संपत्ती असतात. जर देशाचे नागरिक आदर्श, मेहनती आणि सज्जन असतील तरच देश प्रगती करतो. एक आदर्श नागरिक ईमानदार, कर्तव्यनिष्ठ आणि सत्य मार्गावर चालणारा असतो. तो आपल्या देशाची संस्कृती, इतिहास आणि भूमिशी प्रेम करतो. आदर्श नागरिकाच्या मनात देशप्रेम भरलेले असते. एक चांगला नागरिक स्वच्छेने नियमांचे पालन करतो. तो राष्ट्राच्या उन्नतीसाठी सकारात्मक योगदान देतो. आदर्श नागरिक राष्ट्र उत्थानाच्या कार्यक्रमात उभा राहणे सामील होतो. तो समाजाच्या आदर्श मूल्यांना सन्मान देतो आणि समाजात असलेल्या कुरिती समाप्त करण्यासाठी लोकांमध्ये जागरुकता निर्माण करतो. एक आदर्श नागरिक हाच देशाची शान असतो. तो सर्वांशी प्रेम करतो आणि समाजात असलेले वाईट लोकांचे सत्य सर्वासमोर आणतो. म्हणून आपण सर्वांचे कर्तव्य आहे की आपण देशाचे आदर्श नागरिक बनायला हवे आणि देशाविषयी आपली जबाबदारी समजून देश सेवेचे कार्य करायला हवे. आपली संस्कृती आणि इतिहास कायम ठेवण्यासाठी एकमेकांशी प्रेम आणि बंधुकीने राहायला हवे. स्वच्छता, अहिंसा, प्रेम, भाऊ बंधुकी, राष्ट्रप्रेम आणि दयाळू हृदय हे एका आदर्श नागरिकाचे प्रमुख गुण आहेत.

अ) पाच प्रश्ने तयार करा.

ब) आकृत्या पूर्ण करा.



प्रश्न ८ कोणत्याही एका विषयावर सविस्तर निबंध लिहा.

१) माझी परीक्षेची तयारी

२) जेव्हा मला सुट्टी असते.....

३) निसर्ग आणि पक्षीजीवन

(८)