PRE BOARD EXAMINATION
2019-2020
SUBJECT- ENGLISH
CLASS X

Max. Marks: 80 **Time 3 Hrs.**

General Instructions:

I. The Question paper is divided into three sections:

Section A:	Reading	20 Marks
Section B:	Grammar and Writing	30 Marks
Section C:	Language and Literature	30 Marks

II. All questions are compulsory.
III. You may attempt any section at a time.
IV. Separate instructions are given with each section and questions, wherever necessary. Read these instructions very carefully and follow them faithfully.
V. Do not exceed the prescribed word limit while answering the questions.

SECTION - A
READING (20 MARKS)

1. Read the passage given below-

1. Necessity is indeed the mother of invention. When areas in and around Leh began to experience water shortages, life didn't grind to a halt. Why? Because Chewang Norphel, a retired civil engineer in the Jammu and Kashmir government came up with the idea of artificial glaciers.
Ladakh, a cold desert at an altitude of 3,000-3,500 metres above sea level, has a low average annual rainfall rate of 50mm. Glaciers have always been the only source of water. Agriculture is completely dependent on glacier melt unlike the rest of river/monsoon-fed India. But over the years with increasing effects of climate change, rainfall and snowfall patterns have been changing, resulting in severe shortage and drought situations. Given the severe winter conditions, the window for farming is usually limited to one harvest season
2. It is located between the natural glacier above and the village below. The one closer to the village and lowest in altitude melts first, providing water during April/May, the crucial sowing season. Further layers of ice above melt with increasing temperature thus ensuring continuous supply to the fields. Thus, farmers have been able to manage two crops instead of one. It costs about Rs.1,50,000 and above to create one.
3. Fondly called the "glacier man", Mr. Norphel has designed over 15 artificial glaciers in and around Leh since 1987. In recognition of his pioneering effort, he was conferred the Padma Shri by President Pranab Mukherjee, in2015.
4. There are few basic steps followed in creating the artificial glacier.

5. River or stream water at higher altitude is diverted to a shaded area of the hill, facing north, where the winter sun is blocked by a ridge or a mountain range. At the start of winter/November, the diverted water is made to flow onto sloping hill face through distribution channels. Stone embankments are built at regular intervals which impede the flow of water, making shallow pools and freeze, forming a cascade of ice along the slope. Ice formation continues for 3-4 months resulting in a large accumulation of ice which is referred to as an "artificial glacier".

1. Attempt **any eight** of the following questions on the basis of the passage you have read.

1. Who was Chewang Norpal?
2. What kind of land form is Ladakh?
3. Why have Glaciers been the only source of water for Ladakh?
4. Why has the pattern of snowfall and rainfall changed?
5. How are Glaciers significant for irrigation?
6. How does farmer manage to grow two crops instead of one?
7. In which year did President Mukherjee confer Padmashri to Mr. Norphel?
8. How many months does the ice formation continue for?
9. Find the word in the Paragraph 6 which means the same as "gathering"?

2. Read the passage given below and answer the questions that follow:

1. Have you ever failed at something so miserably that the thought of attempting to do it again was the last thing you wanted to do?
If your answer is yes, then you are "not a robot." Unlike robots, we human beings have feelings, emotions, and dreams. We are all meant to grow and stretch despite our circumstances and our limitations. Flourishing and trying to make our dreams come true is great when life is going our way. But what happens when it's not? What happens when you fail despite all of your hard work? Do you stay down and accept the defeat or do you get up again and again until you are satisfied? If you have a tendency to persevere and keep going then you have what experts call, grit.

2. Falling down or failing is one of the most agonizing, embarrassing, and scariest human experiences. But it is also one of the most educational, empowering, and essential parts of living a successful and fulfilling life. Did you know that perseverance (grit) is one of the seven qualities that have been described as the keys to personal success and betterment in society? The other six are: curiosity, gratitude, optimism, self-control, social intelligence, and zest. Thomas Edison is a model for grit for trying 1,000 plus times to invent the light bulb. If you are reading this with the lights on in your room, you know well he

succeeded. When asked why he kept going despite his hundreds of failures, he merely stated that what he had been not failures. They were hundreds of ways not to create a light bulb. This statement not only revealed his grit but also his optimism for looking at the bright side.

3. Grit can be learned to help you become more successful. One of the techniques that help is mindfulness. Mindfulness is a practice that helps the individual stay in the moment by bringing awareness of his or her experience without judgment. This practice has been used to quiet the noise of their fears and doubts. Through this simple practice of mindfulness, individuals have the ability to stop the self-sabotaging downward spiral of hopelessness, despair, and frustration.

4. What did you do to overcome the negative and self-sabotaging feelings of failure? Reflect on what you did, and try to use those same powerful resources to help you today.

2.1 On the basis of the reading of the passage answer any four of the following **2×4= 8**

1. According to the passage, what are the attributes of a human?
2. What is perceived as gift?
3. How is "failing" an educational and empowering part of the human life?
4. In what ways can grit be developed?
5. How does mindfulness help?

2.2 On the basis of the reading of the passage answer any four of the following **1×1=4**

i. While inventing the light bulb, Thomas Edison had failed____

a.1000 times b. 10000 plus times c. 1000 plus times d. 10000 times

ii. Failure is a part of____life.

a. normal b. common c. human d. ordinary

iii. In paragraph 2,_…….means continue.

a. robots b. satisfied c. persevere d. flourishing

iv. In paragraph 3, the synonym of distressing is___.

a. embarrassing b. scariest c. agonizing d. failing

v. …….helps in preventing individuals from going down the lines of despair.

a. success b. fear c. doubt d. mindfulness

SECTIONB

WRITING SKILLS AND GRAMMAR (30 MARKS)

Q3. Recently you brought a new smart phone but the phone developed a fault. **Write the complaint letter** to the company. (8)

OR

India is a highly populated country. People lack in maintaining proper sanitation and hygiene as a result they suffer from various diseases. India has a serious sanitation challenge; around 60 per cent of the world's open defecation takes place in India. Poor sanitation causes health hazards including diarrhea, particularly in children under 5 years of age, malnutrition and deficiencies in physical development and cognitive ability. You are Nitish /Nikita, head boy/girl of Anand Public School, Jaipur. Write a letter to the editor of a national daily, highlighting the problem and suggesting practical ways to ensure public sanitation and the right to dignity and privacy. (100-120 words)

Q4. Develop a **short story** with the help of the given visual/starting line. Give a suitable title of the story. (10)

OR

It was an amazing day, full of fun and frolic. We all stood shocked to see a strange flying object over our heads. We started guessing …(**write story** in 150-200 words)

Q5.Complete the following paragraph with the correct option given below:- (4)

A sparrow is a small bird (a)……(that, who, which) is found throughout the world. There are (b)……(much, many, few) different species of sparrow. Sparrows are only(c)…….. (about, of, over) four to six inches (d)…….(in, on, of) length.

Q6. In the following passage one word has not been edited in each line. Write the incorrect word along with the correct word in the space provided. Do any four. 1×4=4

	incorrect	correct
In Himalayas, the desert is turning green .	e.g. the	a
Climate change in a Indian region of	a)____	
Ladakh has shrunk glaciers or has made	b) ___	
rainfall		
and temperature unpredictable. Water has	c)____	
needed to irrigating the fields .	d) ___	
Farmers may requiring aid from the	e)____	
government.		

Q7.Rearrange any four of the following word or phrases to make meaningful sentences. (4)

i. enters / millions tons / the/ every year / of / ocean/plastic
ii. are / waters/ sightings / junk – filled /of/common
iii. population / middle-class / increasing / is / coastlines /along
iv. trash/ increase/ has led / waste management/lack/of/in /to
v. close/like/ others/helping/my/friends

SECTION-C
LANGUAGE AND LITERATURE (30 MARKS)

Q8.Read the extracts given below and answer the questions that follow: (4)

A. At about the age of twenty five, the Prince, thereof shielded from the sufferings of the world, while hunting out glanced upon a sick man, then an aged man, then a funeral procession, and finally a monk begging for alms. These sights so moved him that he at once became a beggar and went out into the world to seek enlightenment concerning the sorrows he had witnessed.

Questions :

1) Whose age has been referred here?
2) What was the effect of sights on the prince?
3) How did witnessing sorrow change him?
4) What does "glance" imply in the given lines?

OR

"The trees inside are moving into the forest
The forest that was empty all these days
Where no bird could sit
No insect hide
No sun bury its feet in shadow"

Questions :

1) Name the poem and the poet.
2) Which three things can't happen in a treeless forest?
3) Why was the forest empty?
4) Which word here means "hide from view"?

Q9. Answer any four of the following questions in 30-40 words 2×4=8

1) What game did Mij invent in London?
2) How does the necklace change the course of the Loisel's life?
3) What do the elders in Goa still love to remember?
4) What saved the Earth? How?
5) How does the argument about Oxen Meadows starts?
6) Which book did Ebright's mother get for him? How did it change his life?

Q10.Attempt *any one* out of two long answer type questions in100-120 words. 8

Once we decide to achieve something, so many difficulties come in our way. With focused attention we can make that achievement. How did Valli succeed in fulfilling her desire of riding a bus?

OR

School education turned Bholi from a dumb cow into a bold girl. How did she save her father from a huge expense and become his support in his old age?

Q11. Answer any one out of two long answer type questions in 200-250 words. **(10)**

In life, people who easily trust others are sometimes made to look foolish. One should not be too trusting. Describe how Oliver Lutkins made a fool of the young lawyer.

OR

A. How did a book become a turning point in Richard Ebright's life?
B. Mention any two of Ebright's contributions to the world of science.

THE SHIKSHIYAN SCHOOL
PRE BOARD EXAMINATION
2019-2020
MATHEMATICS
CLASS-X

TIME: 3Hour **M. M. 80**

General Instructions:

- All questions are compulsory.
- The question paper consist of 40 questions divided into four sections A, B, C & D.
- All questions in section A contain objective type questions; Fill in the blanks, True false carries 1 mark.
- All questions of section B are short questions, each question carries 2 marks.
- All questions of section C are short answer type question, each question carries 3 marks.
- Section D are long questions, each question carries 4 marks.

Section A

Q1 Find the L.C.M. of 100 and 200

Q2.If tan Θ=$\sqrt{3}$ then Θ is equal to. :

a. 30° b. 60° c. 90° d. none of these

Q3.Distance between the points (2, 1) and (3, 4) is:

a. 9 units° b. $\sqrt{10}$ units c. $\sqrt{11}$ units d. none of these

Q4. Fill in the blank in the following statement:

20^{th} term of the A.P. 50, 48, 46 ……is _____.

Q5. Product of zeroes of the quadratic polynomial $2x^2-5x+2$ is

a. 0 b. 4 c. 1 d. none of these

Q6.Common difference of the A.P.:4, 2, 0,-2……. is:

a. -1 b.-2 c. -3 d. none of these

Q7.Find the mid-point of the line joining the points (8, 0) and (2, 6)

Q8. State True or False

The point (2,-4) lies in second quadrant.

Q9. Corresponding side's two similar triangles are in the ratio 2:3. Areas of the triangles are in the ratio;

a. 3:2 b. 4 :2 c. 4:9 d. none of these

Q10. A tangent to a circle intersects it in:

a. 1 point b. 2 points c. 3 points d. none of these

Q11. Fill in the blanks in the following statement:

Sign of both x coordinate and y coordinate is positive in _____ quadrant.

Q12. The zeroes of the polynomial x^2-4 are:

a. 2,-2 b. 1,0 c. 3,-3 d. none of these

Q13. How many tangents can a circle have?

Q14.Name the common point of a tangent to a circle and the circle?

Q15. Find discriminant for the quadratic equation $3x^2+2x-2=0$ is

a. 2 b. $\sqrt{7}$ c. $\sqrt[2]{7}$ d. none of these

Q16. System of linear equations x+y=2 and 3x-2y=6 has:

a. Unique solution b. infinitely many solution c. No solution d. none of these

Q17. Find the common difference of an A.P. in which $a_{20}-a_{10}=20$

Q18. State True or False:

Product of zeroes of the polynomial x^2+2x+1 is 1

Q19. Solution of pair of linear equations 2x+3y=3 and 4x+7y=7 is:

a. X=0,y=1 b. x=1,y=0 c. x=2,y=3 d. none of these

Q20. Fill in the blank in the following statement:

In a right angled triangle, the square of the _____ is equal to the sum of the squares.

Section B

Q21 Find the H.C.F of 510 and 92.

Q22. Divide the polynomial x^3-3x^2+5x-3 by x^2-2 and write the quotient and remainder.

Q23. Show that the 3x+2y=5 and 6x+4y=10 are coincident?

Q24Find the area of triangle having vertices (1,5),(0,0) and (1,0)

Q25. A dice is thrown once. Find the probability of getting

(i) An even number (ii) a prime number

Q26. Two dice are thrown together. Find the probability of getting a doublet.

Section C

Q27.Prove that $\sqrt{5}$ is an irrational number?

Q28. Solve for x: $\frac{16}{x} - 1 = \frac{15}{x+1}$:x≠0,-1

or

The sum of two number is 9 and sum of their reciprocals is $\frac{1}{2}$.Find the numbers?

Q29. Find length of each altitude of an equilateral triangle of side 2a

or

If areas of two similar triangles are equal, prove that they are congruent.

Q30. Prove that the parallelogram circumscribing a circle is a rhombus

Or

State and prove the converse of Pythagoras theorem.

Q31. If Θ=30°, verify the following.

(i) $\cos 3\Theta=4\cos^3\Theta-3\cos\Theta$ (ii) $\sin 3\Theta=3\sin\Theta-4\sin^3\Theta$

Or

If Cos (A+B)=0 and sin(A-B)=1/2,then find the value of A and B where A and B are acute angles.

Q32. Find the area of quadrant of a circle, where circumference of circle is 44 cm. $\{\pi = \frac{22}{7}\}$

Q33. Two cubes, each of side 4 cm are joined end to end. Find the surface area of the resulting cuboid.

Q34.Monthly pocket money of students of a class is given in the following frequency distribution:

Pocket money	100-125	125-150	150-175	175-200	200-225
No of students	14	8	12	5	11

Find the mean pocket money using step deviation method?

Section D

Q35. Find the sum of all multiples of 8 lying between 201 and 950.

Or

The sum of first 15 terms of an A.P is 750 and its first term is 15 .Find it 20^{th} term?

Q36. Construct a triangle ABC in which AB=5cm,BC=6cm and AC=7cm.Construct another triangle similar to ΔABC ,such that its sides are 3/5 of the corresponding sides of ΔABC

Q37. Prove that : $\sqrt{\frac{SecA-1}{SecA+1}} + \sqrt{\frac{SecA+1}{SecA-1}} = 2SecA$

Q38. From the top of a 7m high building, the angle of elevation of the top of a tower is 60° and the angle of depression of the foot is 45°. Find the height of the tower?

Or

As observed from the top of a 60 m high light house from the sea level, the angle of depression of two ships are 30° and 45°. If one ship is exactly behind the other on the same side of the light house then the distance between the two ships.

Q39. A conical vessel, with base radius 5 cm and height 24 cm is full of water. This water is emptied in to cylinder vessel of base radius 10 cm.Find the height to which the water will rise in the cylinder vessel.

Q40. The mean of the following frequency distribution is 62.8.find the missing frequency

Class	0-20	20-40	40-60	60-80	80-100	100-120
Frequency	5	8	x	12	7	8

Or

Find the median of the following frequency distribution

Class	60-69	70-79	80-89	90-99	100-109	110-119
Frequency	5	15	20	30	20	8

THE SHIKSHIYAN SCHOOL
PRE-BOARD EXAMINATION
(2019-2020)
SOCIAL SCIENCE
CLASS – X

Time :3 Hours **Maximum Marks :80**

General Instructions:
1. The question paper has 35 questions in all.
2. Marks are indicated against each question.
3. Questions from serial number 1 to 20 are objective type questions. Each question carries one mark. Answer them as instructed.
4. Questions from serial number 21 to 27 are3 marks questions. Answer of these questions should not exceed 80 words each.
5. Questions from serial number 28 to 34 are 5 marks questions. Answer of these questions should not exceed 120 words each.
6. Question number 35 is a map question of 6 marks with two parts - 35 a. from History (2 marks) and 35b. from Geography (3 marks).

SECTION -A

I.CHOOSE THE CORRECT OPTION **(1X20=20)**

Q1. Which of the following was Mahatma Gandhi's novel method of fighting against the British?

a) He used violent method of stone pelting.
b) He used arson to bum down government office.
c) He fought with the principle of 'an eye for an eye'.
d) He practiced open defiance of law; peaceful demonstration, satyagraha and non-violence.

Q2. Identify the appropriate reason for the formation of the Swaraj party from the options given below:

a) Wanted members of Congress to return to Council Politics
b) Wanted members of Congress to ask for Poorna Swaraj for Indians
c) Wanted members of Congress to ask Dominion State for India
d) Wanted members of Congress to oppose Simon Commission

Q3. Pick out the correct definition to define the term"Plebiscite"

(a) Plebiscite is a direct vote by which only the female members of a region are asked to accept or reject a proposal.
(b) Plebiscite is a direct vote by the female members of a matriarchal system to accept or reject a proposal
(c) Plebiscite is a direct vote by only a chosen few from the total population of a particular region to accept or reject a proposal.
(d) Plebiscite is a direct vote by which all the citizens of a region are asked to accept or reject a proposal.

Q4. From ancient times travellers travel long distances in search of

a) Food b) Knowledge c) Peace d) Spritual leaders

Q5. The European powers that defeated Napoleon included

(a) Britain and Russia (b) Prussia and Austria
(c) France and Netherlands (d) Both (a) and (b)

Q6. Large occurrences of minerals in cracks, crevices, faults in igneous and metamorphic rocks are called:

(a) Layers (b) Veins (c) Lodes (d) Chamber

Q7. The three major cropping system in India are:

(a) Aus, Aman and Baro (b) Rabi,Kharif and Zaid (c)Baisakh, Paus and Chait (d)None of the above

Q8. A concerted effort has been made for sustainable development.Suggest any one way to popularize its maximum use.

Q9. Which of the following statement defines Sustainable Development?

A. Sustainable use of natural resources without considering the need of the future generation.
B. Present generation fulfils its needs while considering the needs of the future generation as well.
C. It means utilization of natural resources by the past, present and forthcoming future generation.
D. To meets the needs of the future generations even if the needs of the present generation go unmet.

Q10. Which one of the following agencies markets steel for the public sector plants?

(a) HAIL (b) SAIL (c) Tata Steel (d) MNCC

Q11. Correct the following statement and rewrite:

In Srilanka, an Act was passed in 1956 to recognise Tamil as the only official language, disregarding Sinhala.

Q12. Among the following, which countries have high participation of women in public life?

(a) Sweden and India (b) Norway and Sri Lanka (c) Nepal and Finland (d) Sweden and Africa

Q13.Identify the statements which suggest that it is not politics that gets caste-ridden, it is the caste that gets politicised

(a) When governments are formed, political parties take care that representatives of different castes find a place in it
(b) Each caste groups incorporates neighbouring castes which were earlier excluded.
(c) Various caste groups enter into a coalition with other castes.
(d) Political parties and candidates in elections make appeals to caste sentiments.

(A) A, B and D (B) B,C and D (D) B and C (D) A and D

Q14. Which of these sentences is correct?

(a) The Catholics in Northern Ireland were represented by Nationalist parties
(b) They demanded Northern Ireland should be unified with Republic of Ireland
(c) Republic of Ireland should be unified with the Republic of Ireland
(d) All the above.

Q15. Which among the following statements about India's Constitution is wrong? It

(a) prohibits discrimination on grounds of religion.
(b) gives official status to one religion.
(c) provides to all individuals freedom to profess any religion.
(d) ensure equality

Q16. Modern forms of money include

(a) paper notes (b) Gold coins (c) silver coins (d) copper coins

Q17. Deposits in bank accounts withdrawn on demand are called

(a) Fixed deposits (b) Recurring deposit (c) Demand deposit (d) none of these

Q18. Where do MNC's choose to set up production?

(a) cheap good (b) cheap labour (c) economic sustainability (d) none of these

Q19. What is the main criterion used by World Bank and UNDP in classifying different countries?

Q20. Which one of the following is not an important sector of credit?

(a) Traders **(**b) SHG's **(c)** Money lender **(d)** employers

SECTION –B

SHORT ANSWER QUESTION

II. Answer the following questions in brief :

Q21. Read the source given below and answer the questions that follows- (20)

Source A- What did Liberal Nationalism stand for?

Ideas of national unity in early nineteenth century Europe were closely allied to the ideology of liberalism. The term 'liberalism' derives from the Latin root liber, meaning free. For the new middle classes liberalism stood for the freedom for the individual and equality of all before law.

Source B- Rebellion in the countryside

In the Guden Hills of Andhra Pradesh, for instance, a militant guerrilla movement spread in the early 1920's – not a form of struggle that the congress could approve. Here, as in other forest regions, the colonial government had closed large forest areas, preventing people from entering the forest to graze there cattle, or collect fuel wood and fruits. This enraged the hill people. Not only were their livelihoods affected but they felt that their traditional rights were being denied.

Source A- What did Liberal Nationalism stand for?

What was the meaning of liberalism in political and economic sphere in early 19^{th} century in Europe? (1)

OR

Source B- Rebellion in the countryside

who was Alluri Sitaram Raju? Explain his role in Andhra Pradesh during 1920. (1)

Q22. "Indiscriminate use of natural resources has led to numerous problems". Justify the statement. (3)

Q23. Describe any three 'majoritarian measures' taken by the Sri Lankan Government to establish Sinhala supremacy.

OR

Compare the federations of coming together type and holding together type? (3)

Q24. Mention any three constitutional provisions that make India a secular state. (3)

Q25. Why do we need to expand formal sources of credit in India? (3)

Q26. Distinguish between open unemployment and distinguish unemployment? (3)

Q27. What was the reason for putting barriers on foreign trade and foreign investment by the Indian government? Why did it wish to remove these barriers (3)

SECTION –C

LONG ANSWER QUESTION

III. Answer the following questions in detail : (5x7=35)

Q28. Explain, giving example, the role played by technological inventions in transforming 19th century world.

OR

How did variety of cultural processes play an important role in making nationalism in India? Explain with example. (5)

Q29. The Spanish conquest and colonization of America was decisively underway by the mid-sixteenth century.' Explain with examples. (5)

Q30. Read the source given below and answer the questions that follows-

Energy is a basic requirement for economic development. Every sector of the national economy – agriculture,

industry transport, commercial and domestic- needs inputs of energy. The economic development plans implemented since independence necessarily required increasing amounts of energy to remain operational. As a

result, consumption of energy in all forms has been steadily rising all over the country.

27.1. - Explain the importance of conservation of minerals. (2)

27.2 - Highlight any three measures to conserve them. (3)

Q31. "The economic strength of the country is measured by the development of manufacturing industries". Support the

statement with arguments.

OR

Differentiate between metallic and non-metallic minerals with examples. (5)

Q32. "Serious efforts were made by the legal organisations to reform political parties in India." Support the statement. (5)

Q33. Explain how Belgium was able to solve her ethnic problems.

OR

Serious efforts were made by the legal organisations to reform political parties in India." Support the statement. (5)

Q34. "The impact of globalization has not been uniform." Explain the statement with suitable example? (5)

SECTION – D

MAP SKILL BASED QUESTIONS

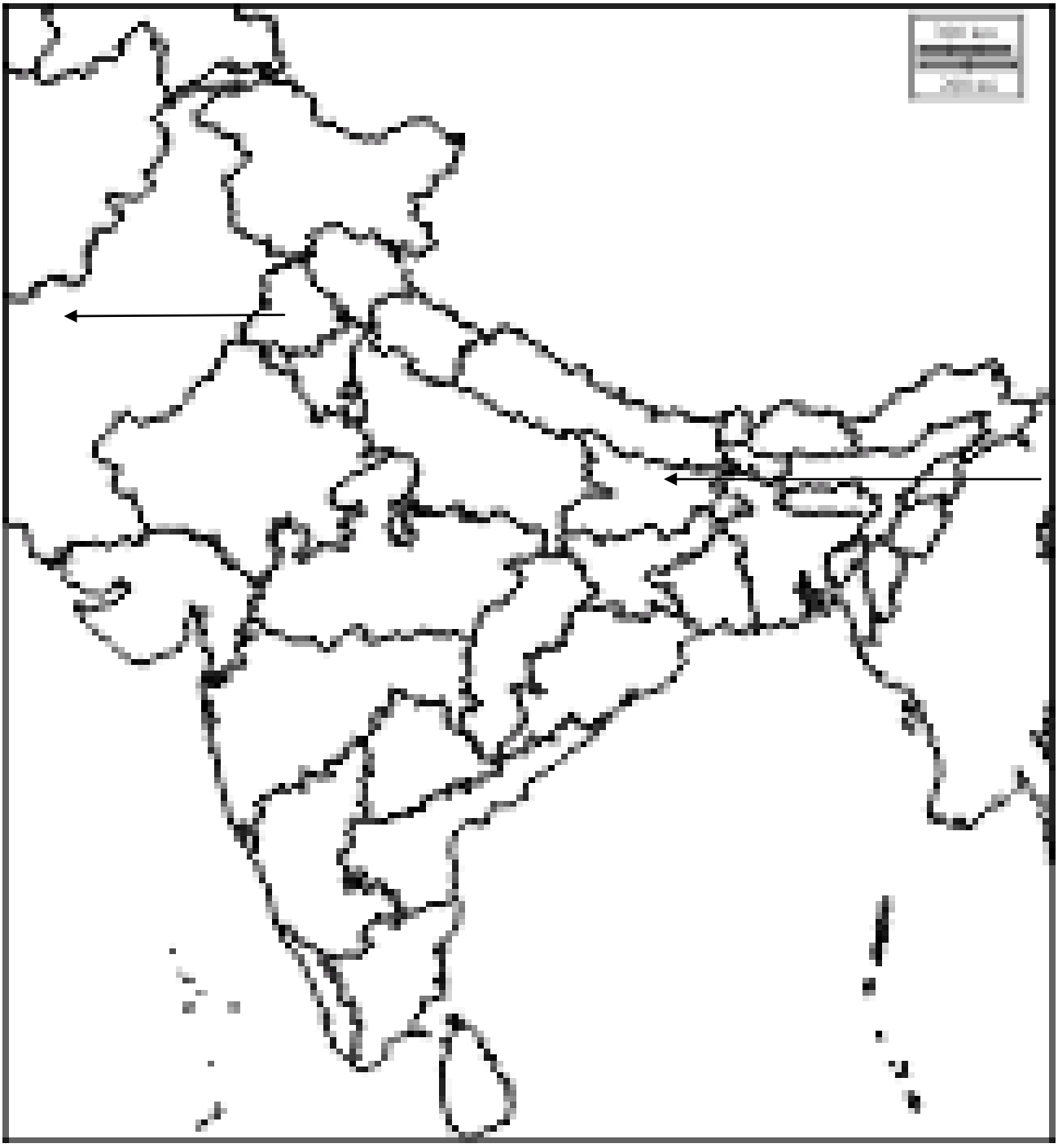
Q35. (A) Two places A and B are marked on the outline political map of India. Identify these places with the help of following information. (1x2=2)

(a) The place where the Jallianwala Bagh incident took place.

(b) The place which is known for Satyagraha movement of Indigo planters. .

(B) Locate and label <u>any three</u> of the following on the outline political map of India: (1x3=3)

(a) Noida -software Technology Park.
(b) Mayurbhanj – Iron ore mine
(c) Bailadila – Iron ore mine
(d) Mumbai – Cotton textile industry
(e) Sardar Sarovar Dam
(f) Kandla major sea port



THE SHIKSHIYAN SCHOOL
FIRST-PRE BOARD EXAMINATION
(2019-2020)
SUBJECT – SCIENCE

. **SET-A** **CLASS -X**

Time 3: Hours **Maximum Marks 80**

General Instructions:

1.The question paper comprises three sections-A,B and C. Attempt all the sections.
2.All questions are compulsory.
3.Internal choice is given in each section.
4.All questions in Section A are one-mark questions comprising MCQ, VSA type and assertion-reason type questions. They are to be answered in one word or in one sentence.
5. All questions in Section B are three-marks each.
6.All questions in Section C are five marks each.
7. This question paper consists of a total of 36 questions.

SECTION A

1. It was found that water from a river was contaminated with coliform bacteria. Which one of the following pollutant might have got mixed with the water? **1**

(a) Fertiliser run off. (b)Industrial waste (c) Pesticides (d) Human faecal matter

2 How many male gametes are produced by pollen grains? **1**

3 In the following food chain, plant--------insects----------chicken----------man. 20,000 J of energy was available to the plants. How much energy would be available to man in this chain? **1**

4.The hormone that is used to keep flowers fresh is **1**

(a) cytokinin (b) gibberellins (c) auxin (d) abscisic acid

OR

The part of the digestive system where no digestion takes place is

(a) ileum (b) stomach (c) mouth (d) oesophagus

5. What is a bisexual flower? Give one example. **1**

6. If the potential difference between the ends of a fixed resistor is Halved, the electric power will become-

(a) double (b) half (c) four times (d)one- fourth **1**

7 How much energy does a 100 W electric bulb transfer in 1 minute?

(a) 100 J (b) 600 J (c) 3600 J (d) 6000 J **1**

8 An electric fuse works on the:

(a) chemical effect of current (b) magnetic effect of current

(c) lighting effect of current (d) heating effect of current **1**

9 The elements of electrical heating devices are usually made of:

(a) tungsten (b) bronze (c) nichrome (d) argon **1**

10 The force exerted on a current- carrying wire placed in a magnetic field is zero when the angle between the wire and the direction of the magnetic field is -

(a) 45° (b) 60° (c) 90° (d) 180° **1**

11The frequency of alternating current (a.c) supply in India is –

(a) 0 Hz (b)50 Hz (c) 60 Hz (d) 100 Hz **1**

12 Which of the following is ultimately not derived from the sun's energy (or solar energy)?

(a) wind energy (b) nuclear energy (c) biomass energy (d) ocean thermal energy **1**

13 During smelting, an additional substance is added which combines with impurities to form a fusible product is known as

(a) Slag (b) mud (c) gangue (d). flux **1**

14 What is a redox reaction? **1**

15 Chemically rust is **1**

(a) Hydrated ferrous oxide (b) Only ferric oxide (c) Hydrated ferric oxide (d) None of these **1**

16 What is the common name of ethanoic acid

(a) Acetic acid (b) Formic acid (c) Propanoic acid (d) Butanoic acid

17 What is flux **1**

18. Hematite is an ore of ……. **1**

19 The chemical formula of lead sulphate is

(a) Pb_2SO_4 (b) $Pb(SO_4)$ (c). $PbSO_4$ (d) $Pb_2(SO_4)_3$ **1**

20 What is formed when ethanol reacts with ethanoic acid on warming in the presence of a few drops of conc. Sulphuric acid? **1**

(a) Ester (b) Ethane (c) Butane (d) Ethanol

SECTION B

21 Why are coal & petroleum categorized as natural resources? How do they harm the Environment? Give reason as to why are to be used judiciously? **3**

OR

What is watershed management? List four advantages of properly managed watershed management.

22 (a) List 3 techniques that have been developed to prevent pregnancy? Which one of these techniques not meant for males?

(b) How does the use of these techniques have a direct impact on the health and prosperity of a family? **3**

23 (a) (i) In a cross between a white flowered and a pink flowered plant, the F_1 generation was found to be pink. On the basis of this information, which are the dominant & recessive traits?

(ii) What is the ratio of white & pink flowered plants in F2 generation?

(b) Give the name of the plant on which Mendel experimented? **3**

OR

What are fossils? State two methods of determining the age of fossils?

24. Name the hormones secreted by the following endocrine glands & specify one function of each.

(a) Thyroid (b) Pituitary (c) Pancreas **3**

25. Why is there a need to harness non-conventional sources of energy? Give two main reasons. **3**

OR

What will happen of slow moving neutrons are made to strike the atom of a heavy element $^{235}_{92}U$?
What is the name of the process? And also write the nuclear equation to represent this process.

26 (a) The refractive index of diamond is 2.42. What is the meaning if this statement?
(b) What is Laws of refraction? Explain with diagrams. **3**

27 A copper wire has a diameter of 0.5 mm and resistivity of 1.6×10^{-8} ohm m. (a) What will be the length of this wire to make its resistance 10 ohm? (b) How much does the resistance change if the diameter is double ? **3**

OR

(i) What is the function of earth wire in electrical instruments? **(ii)** Explain what is short circuiting in an electric supply. **(iii)** State the law of combination of resistances in parallel.

28. How can the valency of an element be determined if its electronic configuration is known? What will be the valency of an element of atomic number 9?

OR

What are the indicators, discuss their types?

29. Identify the type of reaction in the following:

(a) $Fe + CuSO_4\,(aq) = FeSO_4\,(aq) + Cu(s)$
(b) $2H_2 + O_2 = 2H_2O$
(c) $3Fe(s) + 4H_2O\,(g) = Fe_3O_4 + 4H_2\,(g)$ **3**

OR

Give the methods of preparation and properties of baking soda **3**

29 Discuss the chemical properties of acids and bases in detail?

OR

Discuss water of crystallization **3**

30 Define pH and pH- scale in detail?

OR

Discuss dressing of ore, magnetic separation and Froth Flotation process in metallurgy.

SECTION C

(a) Define excretion.

(b) Name the basic filtration unit present in the kidney.

(c) Draw excretory system in human beings and label the following organs of excretory system which perform the following functions.

(i) Form urine

(ii) Is a long tube which collects urine from kidney?

(iii) Store urine until it is passed out. **5**

OR

(a) Write the function of following parts in human female reproductive system.

(i) Ovary (ii) Oviduct (iii) Uterus

(b) Describe in brief the structure and function of placenta.

33 Name the phenomenon that governs the following;-

(a) Green beetles living in green bushes are not eaten by the crows.

(b) Number of blue beetles in green bushes increase only because red beetles living there were trampled by herd of elephants.

(c) No medium height plants be obtained in F1 generation upon crossing pure tall & dwarf pea plants

(d) Tails of mice are surgically removed for several generations still mice had tails in the following generations.

(e) A migrant beetle reproduce with local population as a result gene of migrant beetle enter the new population. **5**

34 (a) With the help of a labelled circuit diagram describe an activity to illustrate the pattern of the magnetic field lines around a straight current carrying long conducting wire.

(b) Draw the pattern of magnetic field lines through and around a current- carrying solenoid.

What does the magnetic field pattern inside the solenoid indicate? **5**

OR

35 (a) Explain the underlying principle and working of an electric generator by drawing a labelled diagram

(b) State two ways by which strength of this electromagnet can be increased. what is the function of brushes? **5**

36 An object of height 1.2 cm is placed before a concave mirror of focal length 20 cm so that a real image is formed at a distance of 60 cm from it. Find the position of an object. What will be the height of the image formed?

5

OR

Nupur needs a lens of power -4.5D for correction of her vision.

(i) What kind of defect in vision is she suffering from?

(ii) What is the focal length and nature of the corrective lenses?

(iii) Draw ray diagrams showing the (a) defected eye and (b) correction for this defect.

(iv) What are the causes of this defect.? **5**

37 What is corrosion? Explain its advantage and disadvantage.

OR

Define allotropy. What are various allotropic forms of carbon, discuss each of them. **5**

THE SHIKSHIYAN SCHOOL
PRE BOARD EXAMINATION
(2019-2020)
SCIENCE
CLASS -X

Time 3: Hours **Maximum Marks 80**

General Instructions:
1.The question paper comprises three sections-A,B and C. Attempt all the sections.
2.All questions are compulsory.
3.Internal choice is given in each section.
4.All questions in Section A are one-mark questions comprising MCQ, VSA type and assertion-reason type questions. They are to be answered in one word or in one sentence.
5. All questions in Section B are three-marks each.
6.All questions in Section C are five marks each.
7. This question paper consists of a total of 36 questions.

SECTION A

1 Mention the raw materials required for photosynthesis. 1

Direction (2 to 4):In the following questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternatives from the following;

(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
(c) Assertion is true but the Reason is false.
(d) The statement of the assertion is false but the Reason is true.

2. Assertion: When air is passed through lime water, lime water turns milky. **1**

Reason: Air contains 78/ nitrogen and 21/ oxygen.

3. Assertion: Reflex Arc works faster than thinking process of brain. **1**

Reason: Reflex Arc works in case of those animals who do not have thinking process.

4. Assertion: Amoeba reproduced by fission **1**
Reason: All unicellular organisms reproduced by asexual method.

5. Trophic level in an ecosystem represents

(a) oxygen level (b) water (c) energy level (d) salt level **1**

OR

A food chain comprising birds, green plants, fish and man. The concentration of harmful

Chemicals entering the food will be maximum in

(a) Green plants (b) man (c) birds (d) fish

6 Unit of electric potential is- **1**

(a) ampere (b) coulomb (c) volt (d) ohm

7 The strength of magnetic field inside a long current -carrying straight solenoid is : **1**

(a) a more at the ends and than at the centre (b) minimum in the middle

(c) same at all points (d) found to increase from one end to the other

8 Ocean thermal energy is due to : **1**

(a) energy stored by waves in the ocean

(b) temperature difference at different levels in the ocean

(c) pressure difference at different levels in the ocean

(d) tides arising out in the ocean

9 Under which of the following conditions a concave mirror can form a real image larger than the actual object? **1**

(a) When the object is kept at a distance equal to its radius of curvature

(b) When object is kept at a distance less than its focal length

(c) When object is placed between the focus and centre of curvature

(d) When object is kept at a distance greater than its radius of curvature

10 The magnification produced by a concave lens is - **1**

(a) equal to 1 (b) greater than 1 (c) less than 1 (d) equal to zero

11 The bluish colour of water in deep sea is due to : **1**

(a) the presence of algae and other plants found in water (b) reflection of sky in water

(c) scattering of light (d) absorption of light by the sea

12 The main constituent of biogas is - **1**

(a) methane (b) carbon dioxide (c) hydrogen (d) hydrogen sulphide

13 Which information is not conveyed by a balanced chemical equation? **1**

(a) Physical states of reactants and products

(b) Symbols and formulae of all the substances involved in a particular reaction

(c) Number of atoms/molecules of the reactants and products formed

(d) Whether a particular reaction is actually feasible or not

14 Define Homologous series **1**

15 What is the common name of the compound $CaOCl_2$? **1**

(a) Washing soda (b) Bleaching powder (c) Caustic soda (d) All of these

16 What are Alloys? **1**

17 Write the name of the following compounds **1**

(a) CH_3CH_2COOH (b) CH_3CH_2Br

18 Explain the meaning of malleable and ductile **1**

19 Define the terms.

(a) Ore (b) Mineral **1**

20 Rancidity can be prevented by

(a) Adding antioxidants (b) Storing food away from light

(c) Keeping food in refrigerator (d) All of these **1**

SECTION B

21 (i) Draw a well labeled diagram of human heart. Identify any two parts which carry oxygenated and deoxygenated blood?

(ii) Explain the process of double circulation with the help of a flow chart. **3**

OR

What are the different methods of contraceptives to prevent pregnancy? Describe any three in detail.

22 Explain phototropism in plants with diagram? Give reason for bending of shoot tip towards light coming from one side of the plant. **3**

23 What are acquired traits? Why are these traits generally not inherited over generations? Explain. **3**

24 What is meant by biodiversity? List two advantages of conserving forests and wildlife. **3**.

25. Give reason

(a) Why don't two magnetic field lines of force Intersect each other?

(b) Nichrome is used to make the element of electric heater why? **3**

26 What are the advantages and disadvantages of nuclear energy? **3**

OR

(a) It is advantageous to convert bio-mass into a bio-gas rather than burning bio-mass directly. Why?

(b) On which day, a solar heater cannot be used to get hot water?

27 Two circular coils A and B are placed close to each other. If the current in the coil A is changed, will some current be induced in coil B? Give reason. **3**

OR

A coil of insulated copper wire is connected to a galvanometer. What will happen if a bar magnet is

(a) pushed into the coil (b) withdrawn from inside the coil (c) held stationary inside the coil

28 (a) The atomic numbers of three elements, X, Y and Z are 9, 11 and 17 respectively. Which two of these elements will show similar properties and why?

(b) How does the Valency of elements vary?

(i) In going down a group, and

(ii) In going from left to right in a period of the periodic table?

OR **3**

Discuss Catenation and what are saturated and unsaturated hydrocarbons are.

29 Give important methods of preparation and uses of washing soda and baking soda.

OR **3**

What is the difference between displacement and double displacement reaction? Write equations for these reactions.

30 What are neutralization reactions? Give two examples

OR

Balance the following chemical reactions **3**

a. $HNO_3 + Ca(OH)_2$ ----------→ $Ca(NO_3)_2 + H_2O$

b. $NaOH + H_2SO_4$ ----------→ $Na_2SO_4 + H_2O$

c. $BaCl + H_2SO_4$ ----------→ $BaSO_4 + HCl$

31 What is thermite reaction? Write the reaction involved in thermite reaction and also uses.

SECTION-C

32 Name and explain the five R's to save the environment. **5**.

33 (a) How does pollination occur in plants?

(b) How does pollination lead to fertilization? Explain.

(c) Draw a diagram to showing germination of pollen on stigma of a flower. **5**.

OR

(a) Can the wings of a butterfly and the wing of a bat be regarded as homologous? Why?

(b) What is speciation? State any two factors which could lead to speciation.

(c) Name the vegetables made from wild cabbage by artificial selection when farmers:

(i) Opted for swollen stems

(ii) Opted for sterile flowers

(iii) Opted for arrested flowers

(iv) Opted for large leaves

34 (a) How many 176 ohm resistors in parallel are required to carry 5 A on a 220 volt line? **5**

(b) How can a galvanometer be converted into a voltmeter?

(c) A wire of resistivity p is pulled to double its length. What will be its new resistivity?

OR

(a) When is the force experienced by a current carrying conductor placed in a magnetic field largest?

(b) State the principle of an electric generator.

(c) What is the frequency of supply of alternating current in India?

35 (a) Why does it take some time to see objects in a cinema hall when we just enter the hall from bright sunlight? Explain in brief. **5**

(b) What is the range of vision of a normal eye?

(c) Make a diagram to show how Hypermetropia is corrected?

OR

(a) How can you distinguish between plane mirror, convex mirror and concave mirror by merely looking at the image formed in each case?

(b) In the refraction of light through a rectangular glass slab the emergent ray is parallel to the direction of the incident ray. Why?

(c) A lens has power of +2 D. What is the nature and focal length of the lens?

36. What are chemical reactions, discuss various types of chemical reaction.

OR

Discuss Modern form of periodic table and its characteristics **5**

37. Give the methods of preparation and properties of plaster of Paris (P.O.P)

OR **5**

What are soaps and detergents? Discuss them in detail.