

THE FIRST COMPARATIVE EXAMINATION 2019-20

Class X (ICSE)
ENGLISH LANGUAGE
ENGLISH Paper - I
(Two hours)

Maximum 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 the time allowed for writing the answers.

Attempt all five questions.

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

You are advised to spend not more than 30 minutes in answering Question 1
and 20 minutes in answering Question 2.

Question 1

(Do not spend more than 30 minutes on this question.)

[20]

Write a composition (300 – 350 words) on any one of the following:

- (a) 'We ourselves are responsible for our ill health in modern times'. Express your views either for or against this statement.
- (b) Narrate an event of social importance in your city or locality. Write about the background, the event and its impact on the lives of the people.
- (c) You are working hard towards taking up a serious profession. Which profession would you choose and why?
- (d) Write an original story ending with the words, '... I swear to God never again to do what I did today'.
- (e) You are a spectator at a cricket match. Trouble erupts suddenly in the stadium and you witness a riot among the crowd. Give a vivid description of the scene.
- (f) Study the picture given on the next page. Write a story or a description or an account of what the picture suggests to you. Your composition may be about the subject of the picture or you may take suggestions from it; however there must be clear connection between the picture and your composition.



Question 2

(Do not spend more than 20 minutes on this question.)

[10]

Select *any one* of the following:

- A park in your locality is slowly being used as a rubbish dump. Write a letter to the Editor of a newspaper pointing out the nuisance caused to the inhabitants of the locality and suggest remedies for solving the problem.
- You have been excluded from your school swimming team. Write a letter to your mother expressing your disappointment and state the reason for the same.

Question 3

[5+5]

- Your school is organizing an Inter-School Music Competition. Write a notice informing the students of classes IX – X about the event.
- Write an email to the Principal of a neighbouring school requesting him / her to send a team of four students to participate in the event.

Question 4

Read the following passage carefully and answer the questions (a), (b) and (c) that follow:

Aunt died at 6 p.m. on Wednesday the 5th of April and came to life again exactly twenty minutes later. This is how it happened.

Aunt was, as a rule, a fairly tolerant, easygoing person, who waddled about the house without paying much attention to the swarms of small sons, daughters, nephews and nieces who poured in and out of the rooms. But, she had taken a particular aversion to her ten-year-old nephew, Sunil. She was a simple woman and could not understand Sunil. He was a little brighter than her own sons, more sensitive, and inclined to resent a scolding or a cuff across the head. He was better looking than her own children. All this, in addition to the fact that she resented having to cook for the boy while both his parents went out to office jobs, led her to grumble at him a little more than was really necessary.

5

10

Sunil sensed his aunt's jealousy and fanned its flames. He was a mischievous boy and did little things to annoy her, like bursting paper bags behind her while she dozed or commenting on the width of her pyjamas when they were hung out to dry. On the evening of the 5th of April, he had been in particularly high spirits and feeling hungry entered the kitchen with the intention of helping himself to some honey. But the honey was on the top shelf, and Sunil wasn't quite tall enough to grasp the bottle. He got his fingers to it but as he tilted it towards him, it fell to the ground with a crash. 15

Aunt reached the scene of the accident before Sunil could slip away. Removing her slipper, she dealt him three or more furious blows across the head and shoulders. This done, she sat down on the floor and burst into tears. 20

Had the beating come from someone else, Sunil might have cried; but his pride was hurt and instead of weeping, he muttered something under his breath and stormed out of the room.

Climbing the steps to the roof, he went to his secret hiding place, a small hole in the wall, where he kept his marbles, kite-string, tops and a clasp-knife. 25

"I'll kill her!" he whispered fiercely, "I'll kill her! I'll kill her I ..."

"Whom are you going to kill, Sunil?"

It was his cousin Madhu, a dark, slim girl of twelve, who aided and abetted him in most of his exploits. Sunil's aunt was her Maami. It was a very big family. 30

"Aunt" said Sunil. "She hates me, I know. Well, I hate her too. This time I'll kill her." "How are you going to do it?"

"I'll stab with this." He showed her the knife. "Three times in the heart."

"But you'll be caught. The C.I.D. is very clever. Do you want to go to jail?" "Won't they hang me?"

"They don't hang small boys. They send them to boarding schools." 35

"I don't want to go to boarding school."

"Then better not kill your aunt. At least not this way. I'll show you how."

Madhu produced pencil and paper, went down on her hands and knees and made a rough drawing of aunt. Then, with a red crayon, she sketched in a big heart in the region of aunt's stomach. "Now, she said, stab her to death." 40

Sunil's eyes shone with excitement. Here was a great new game. You could always depend on Madhu for something original. He held the drawing against the woodwork, and plunged the knife thrice into aunt's pastel breast.

"You have killed her," said Madhu. "Is that all?"

"Well if you like we can cremate her." "All right."

She took the torn paper, crumpled it up, produced a box of matches from Sunil's hiding place, lit a match, and set fire to the paper. In a few minutes all that remained of aunt was a few ashes. "Poor aunt, said Madhu."

"Perhaps we shouldn't have done it," said Sunil beginning to feel sorry.

"I know, we'll put her ashes in the river." "What river?" "Oh the drain will do."

50

Madhu gathered the ashes together, and leant over the balcony of the roof. She thrust out her arms and the ashes drifted downwards. Some of them settled on the pomegranate tree, a few reached the drain and were carried away by a sudden rush of kitchen water. She turned to find big tears rolling down Sunil's cheeks.

"What are you crying for?" asked Madhu.

"Aunt, I didn't hate her so much."

As they came down the steps from the roof, aunt emerged from the kitchen.

"Oh aunt" shouted Sunil. He rushed to her and tried to get his arms around her ample waist. "I love you so much please don't leave us."

- (a) Give the meaning of each of the following words as used in the passage. One word answers or short phrases will be accepted. [3]

(i) aversion (line 5)

(ii) inclined (line 7)

(iii) plunged (line 43)

- (b) (i) Why had aunt taken an aversion to Sunil? [2]

(ii) How would Sunil annoy her? [2]

(iii) How did the honey bottle break? [2]

(iv) How did Sunil react when his pride was hurt? [1]

(v) Describe Sunil's secret place. [2]

- (c) In not more than 50 words relate how aunt died and came back to life twenty minutes later. [3]

Question 5

- (a) Fill in each of the numbered blanks with the correct form of the word given in brackets. [4]

Do not copy the passage but write in correct serial order the word or phrase appropriate to the blank space.

Example:

Answer: (0) takes.

Man (0) _____ (take) water for granted, for water (1) _____ (be), by and large, a free commodity. The rate at which man (2) _____ (consume) this raw material will sooner or later (3) _____ (exhaust) the entire stock of water in certain parts of the world. It, therefore, (4) _____ (come) as no surprise that the world bank (5) _____ (propose) a water tariff. It would (6) _____ (design) to make the wasters pay for waste and the polluters for pollution. It (7) _____ (has) a tremendous ripple effect upon our entire economic system but will go a long way in the (8) _____ (conserve) of water.

(b) Fill in each blank with an appropriate word:

[4]

- (i) He was let off _____ a fine.
- (ii) The villagers lodged a complaint _____ the corrupt officials.
- (iii) Always be true _____ yourself.
- (iv) Where did you come _____ this word?
- (v) Nothing can stop him _____ pursuing his aim.
- (vi) The driver was forced to hand _____ the keys.
- (vii) The scientist carried _____ a number of experiments.
- (viii) _____ Maria, all of you are invited.

(c) Join the following sentences to make one complete sentence without using and, but or so:

[4]

- (i) He cannot afford a car. He is very poor.
- (ii) He is not an idler. He is not a gambler.
- (iii) Tanya was inexperienced. Tanya did a good job.
- (iv) The police arrived. The crowd disappeared.

(d) Re-write the following sentences according to the instructions given after each. Make other changes that may be necessary, but do not change the meaning of the sentence. [3]

(i) As soon as Serena Williams won the Wimbeldon title, tears rolled down her cheeks.

(Begin: No sooner

(ii) Although she is very dull in studies, her father loves her.

(Begin: However

(iii) Besides making a promise, she kept it.

(Begin: Not only

(iv) He said to us, "Are you going to school?"

(Begin: He

(v) You are a doctor.

(Add a question tag)

(vi) The young people like his songs.

(Begin: His songs

(vii) It is probable that he will come back.

(Begin: In all

(viii) Water is the cheapest fire extinguishing agent.

(Use: cheap)

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X (ICSE)
LITERATURE IN ENGLISH
ENGLISH Paper 2
(Two hours)

Maximum 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 the time allowed for writing the answers.

Attempt five questions in all.

You must attempt one question from each of the Sections A, B and C
and any two other questions.

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

SECTION A - DRAMA

The Merchant of Venice: Shakespeare

Question 1

Read the extract given below and answer the questions that follow:

Antonio

Content, in faith: I'll seal to such a bond,
And say there is much kindness in the Jew.

Bassanio

You shall not seal to such a bond for me:
I'll rather dwell in my necessity.

Antonio

Why, fear not, man; I will not forfeit it.

(i) Where are Antonio and Bassanio at present? Who else is present along with them? What was the purpose of their being together?

[3]

(ii) What are the terms of the bond?

[3]

(iii) What danger, concerning Antonio, does Bassanio see? What does Bassanio mean by saying 'I'll rather dwell in my necessity'?

[3]

(iv) What does 'not forfeit it' mean? What assurance does Antonio give to Bassanio immediately after this?

[3]

(v) What justification does Shylock give for not gaining anything from the forfeiture? What impression do you form of Shylock's character from this scene?

[4]

Question 2

Read the extract given below and answer the questions that follow:

Bassanio

O sweet Portia,

Here are a few of the unpleasant'st words

That ever blotted paper!

Q

R

- (i) Where does this scene take place? Who else was there with Portia and Bassanio? Why was Bassanio present there? [3]
- (ii) What does Bassanio confess to Portia? [3]
- (iii) What news did Bassanio receive about his friend, Antonio? How does Portia conclude that there is some bad news in the letter? What could be the bad news according to Portia? [3]
- (iv) Why were the Duke and magnificoes helpless? What was Shylock demanding from them? What information does Jessica give about Shylock and his demand? [3]
- (v) What does Portia instruct Bassanio to do to help his friend? What else does she ask him to do before leaving? [4]

Question 3

Read the extract given below and answer the questions that follow:

Launcelot

(Shouts) Why, Jessica!

Shylock

Who bids thee call? I do not bid thee call

- (i) Where does the scene take place? Who all are present there? Who makes an entry soon after? [3]
- (ii) According to Shylock, what difference will Launcelot find when he joins Bassanio's service? [3]
- (iii) What does Shylock tell Jessica about the place he is going to? Why is he unwilling to go there? [3]
- (iv) What instructions does he give Jessica regarding the masque being held that night? [3]
- (v) What does Shylock say about Launcelot? Why is he ready to part with him? What benefit does he find in it? [4]

SECTION B - POETRY
A Collection of Poems

Question 4

Read the extract given below and answer the questions that follow:

The athletes had come from so many countries
To run for the gold, for the silver and bronze
Many weeks and months in training
All building up to the games

(*Nine Gold Medals*, David Roth)

- (i) Which event did the athletes come for? Why was it unique? What were the athletes running for? [3]
- (ii) For whom was the call made? Describe the scene in the field. [3]
- (iii) Who proved to be unlucky in the event and why? Describe his reaction. [3]
- (iv) What did the other athletes do? How did they continue the race? [3]
- (v) What was written on the banner? How did the incident justify those words? [4]

Question 5

Read the extract given below and answer the questions that follow:

Their logs held tight in death's still hands
Was proof of human sin.
They did not die from the cold without
They died from the cold within.

(*The Cold Within*, James Patrick Kinney)

- (i) Whom does 'their' refer to? What human sin is referred to here? [3]
- (ii) What was their immediate need at that moment and why? [3]
- (iii) Describe the behaviour and attitude of the third and fourth person. [3]
- (iv) What did the black man see in his piece of wood? What does the poet say about the last man? [3]
- (v) Earlier why had this group been referred to as 'forlorn'? What are the six people in the poem representative of? What message does the poet convey to the readers? [4]

Question 6

Read the extract given below and answer the questions that follow:

Bangle sellers are we who bear
Our shining loads to the temple fair ...
Who will buy these delicate, bright
Rainbow-tinted circles of light?

(*The Bangle Sellers*, Sarojini Naidu)

- (i) Where are the bangle sellers taking the bangles? Why do they select this place for selling their bangles? Who are the prospective buyers of these bangles? [3]
- (ii) What colour of bangles are suitable for a maiden's wrist? What do these colours symbolize? [3]
- (iii) What do you understand by bridal laughter and bridal tear? What have they been compared to in the poem? [3]
- (iv) Describe the stages of a woman's life as expressed in the poem. [3]
- (v) How does the poem glorify the idea of Indian womanhood? [4]

SECTION C – PROSE

A Collection of Short Stories

Question 7

Read the extract given below and answer the questions that follow:

"Well, Mr Easton, if you will make me speak first, I suppose I must.

(*Hearts and Hands*, O. Henry)

- (i) Who is the speaker? How has this person been described? [3]
- (ii) Who were the linked couple? Which train were they travelling by? Where did they board the train? [3]
- (iii) What did Mr Easton and his companion look like? [3]
- (iv) What favour does Mr Easton's companion ask from the speaker? [3]
- (v) How do the handcuffs reveal the true identity of Mr Easton? Draw out one character trait of the marshal from the story. Justify with a suitable example. [4]

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Question 8

Read the extract given below and answer the questions that follow:

Now, nothing could pierce the inch-thick armoured hide. Not even rifle bullets, which would bounce off.

(*The Blue Bead*, Norah Burke)

- (i) Who is being spoken about in the above lines? What dangers did he face in his young age? [3]
- (ii) What did he feed on? [3]
- (iii) Who were the Gujars? Describe the Gujar women. Where had the Gujar males gone? [3]
- (iv) How did Sibia take care of the Gujar woman after rescuing her? [3]
- (v) What did Sibia see when she went back to get her sickle and fork? Why did her heart go up in flames of joy? [4]

Question 9

Read the extract given below and answer the questions that follow:

With reference to the story 'A Face in the Dark' by Ruskin Bond, answer the following questions:

(*A Face in the Dark*, Ruskin Bond)

- (i) Describe the school where Mr Oliver worked. What name had it been given and why? [4]
- (ii) In what condition did Mr Oliver find the boy? Why was he surprised to see him there? [4]
- (iii) The story has a prominent supernatural element. Discuss it in the light of the events that occur in the story. [8]

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X (ICSE)
MATHEMATICS

Time: Two hours and a half

Maximum marks: 80

Instructions:

- * Answers to this paper must be written on the answer script 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.
- * Answer all questions in Section A. Attempt any four questions from Section B.
- * All working, including rough work must clearly be shown and must be done on the same sheet as the rest of the answer. Omission of essential working will result in loss of marks.
- * The intended marks for questions or parts of questions are given in brackets [].
- * Mathematical tables and graph papers shall be provided to you.

SECTION A [40 marks]

Attempt all questions from this section.

Question 1

- (a) If $x = \frac{3}{2}$ is a solution of the quadratic equation $4x^2 + mx - 3 = 0$, find the value of 'm'. [3]
- (b) If $\begin{bmatrix} 4 & -2 \\ 4 & 0 \end{bmatrix} + 3A = \begin{bmatrix} -2 & -2 \\ 1 & -3 \end{bmatrix}$, find the matrix A. [3]
- (c) Solve the following inequation and represent the solution set on the number line:
 $2+4x < 2x-5 \leq 3x$, where $x \in I$ [4]

Question 2

- (a) If $(x-2)$ is a factor of the expression $2x^3 + ax^2 + bx - 14$ and when the expression is divided by $(x-3)$, it leaves a remainder 52, find the values of 'a' and 'b'. [3]
- (b) A man buys 50, ₹ 100 shares paying 12 percent dividend. He buys shares at such a price that he gets 15 percent of his money. At what price did he buy the shares? [3]
- (c) The area of a rectangular hall is 300 m^2 . If the length of the hall is decreased by 5 m and its breadth is increased by 5 m, the area would be unaltered. Find the length of the hall. [4]

Question 3

- (a) Amit deposited ₹ 150 per month in a bank for 8 months under the Recurring Deposit Scheme. What will be the maturity value of his deposits, if the rate of interest is 8% per annum and the interest is calculated at the end of every month? [3]
- (b) The tax invoice of a telecom service in Meerut shows cost of services provided by it as ₹ 750. If the rate of GST is 18%, find the amount of the bill. [3]
- (c) Find the mode and the median of the following frequency distribution: [4]

x	5	6	7	8	9	10
f	3	9	6	4	2	1

Question 4

- (a) Solve the following inequation and graph the solution set on the number line;
 $2y - 3 < y + 1 \leq 4y + 7, y \in \mathbb{R}$ [3]

- (b) Find the mode of the following data, using a histogram. [3]

Class	0-10	10-20	20-30	30-40	40-50
Frequency	5	12	20	9	4

Use a graph paper for this question.

- (c) Find x and y, if:

$$[3x \quad 8] \begin{bmatrix} 1 & 4 \\ 3 & 7 \end{bmatrix} - 3[2 \quad -7] = 5[3 \quad 2y]$$

SECTION B [40 marks]

Attempt any four questions from this section.

Question 5

- (a) Solve the following inequation and graph the solution on the number line: [3]

$$-2\frac{5}{6} < \frac{1}{2} - \frac{2x}{3} \leq 2, x \in \mathbb{W}$$

- (b) Find x and y, if:

$$\begin{bmatrix} 4 & 3x \\ x & -2 \end{bmatrix} \begin{bmatrix} 5 \\ 1 \end{bmatrix} = \begin{bmatrix} y \\ 8 \end{bmatrix}$$

- (c) Ram opened a recurring deposit account with a Nationalised Bank. He deposited ₹ 1,000 per month for a period of 2 years. At the time of maturity, he received ₹ 25,500. Find:

- (i) the interest earned in 2 years
(ii) the rate of interest per annum.

[4]

Question 6

- (a) Solve the equation $3x - \frac{8}{x} = 2$. [3]
- (b) What number should be subtracted from $x^3 + 3x^2 - 8x + 14$ so that when the resulting polynomial is divided by $(x - 2)$, the remainder is 10? [3]
- (c) Given $\begin{bmatrix} 2 & 3 \\ 1 & -2 \end{bmatrix} X = \begin{bmatrix} 11 \\ -12 \end{bmatrix}$.
- Write the order of the matrix X.
 - Find the matrix X. [4]

Question 7

- (a) Without solving the following quadratic equation, find the values of 'm' for which the given equation has real and equal roots: $x^2 + (m - 1)x + (m + 2) = 0$ [3]
- (b) Sudhir invests a sum of money in ₹ 50 shares, paying 15% dividend quoted at 20% premium. If his annual income is ₹ 600, calculate:
 - the number of shares he bought
 - his total investment
 - the rate of return on his investment. [3]
- (c) Using step-deviation method, calculate the mean of the following distribution: [4]

Class interval	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	5	3	4	7	2	6	13

Question 8

- (a) Goods/services are sold from Kota (Rajasthan) to Mumbai (Maharashtra) for ₹ 20,000 and then from Mumbai to Pune (Maharashtra). If the rate of GST is 12% and the profit made at Mumbai is ₹ 5,000; find the net GST paid at Pune, if the dealer at Pune is the end-user. [3]
- (b) Solve for 'x' and give your answer correct to two decimal places: $3x^2 - x - 7 = 0$ [3]
- (c) Using the Factor Theorem, factorise the following expression completely: $2x^3 + x^2 - 13x + 6$ [4]

Question 9

- (a) Mr Khanna has a Recurring Deposit Account of ₹ 300 per month. If the rate of interest is 12% per annum and the maturity value of this account is ₹ 8,100; find the time (in years) of this Recurring Deposit Account. [5]

- (b) The product of the digits of a two digit number is 12. When 36 is added to this number, the digits interchange their places. Find the number.

[5]

Question 10

- (a) The mean of the following distribution is 62.8 and the sum of all the frequencies is 50. Find the missing frequencies f_1 and f_2 .

[5]

Class	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100	100 - 120
Frequency	5	f_1	10	f_2	7	8

- (b) The marked price of an article is ₹ 6,000. A wholesaler sells it to a dealer at 20% discount. The dealer further sells the article to a customer at a discount of 10% on the marked price. If the rate of GST at each stage is 18%, find the amount of tax (under GST) paid by the dealer to the government.

[5]

Question 11

- (a) Rohit invested ₹ 9,600 on ₹ 100 shares at ₹ 20 premium paying 8% dividend. Rohit sold the shares when the price rose to ₹ 160. He invested the proceeds (excluding dividend) in 10% ₹ 50 shares at ₹ 40. Find:
- (i) the original number of shares
 - (ii) the sale proceeds
 - (iii) the new number of shares
 - (iv) the change in the two dividends.

[4]

- (b) The following distribution represents the height of 160 students of a school:

Height (cm)	140-145	145-150	150-155	155-160	160-165	165-170	170-175	175-180
No. of students	12	20	30	38	24	16	12	8

Using a graph paper, draw an ogive for the given distribution, taking 2 cm = 5 cm of height on one axis and 2 cm = 20 students on the other axis. Using the graph, determine:

- (i) the median height
- (ii) the inter-quartile range
- (iii) the number of students whose height is above 172 cm.

[6]

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X (ICSE)
GEOGRAPHY - H.C.G. 2

Time: Two hours
Instructions

Maximum marks: 80

- Answers in this paper must be written on the answer script provided separately.
- All subsections of each question must be answered in the correct serial order.
- You will NOT be allowed to write during the first fifteen minutes. This time is to be spent in reading the question paper.
- Please do not write anything on your question paper except your name and roll number.
- The intended marks for questions or parts of questions are given in brackets [].
- Do not copy the questions on your answer script but copy the correct question number.
- The map given at the end of this question paper must be detached and after marking, must be fastened to your answer booklet after the cover page.

Note

It is very much advised to make use of arrows to avoid overcrowding of the map.
~~Study the section of the Survey of India Map Sheet No. 45 D/10, T11 502 and answer the following questions.~~
~~Attempt all questions from Part I.~~
~~Attempt four questions from Part II.~~
To be supplied with this paper: Survey of India Map sheet No. 45 D/10, T11 502; and
A pen or pencil.

PART I [40 marks]

Attempt all questions from this section.

SECTION I [25 marks]

Question 1

Study the section of the Survey of India Map Sheet No. 45 D/10, T11 502 and answer the following questions:

- (a) Give the six figure grid reference for each of the following:
① ~~Suratgarh~~ ~~Parma~~ [1]
② ~~Suratgarh~~ ~~Parma~~ [1]
- (b) Name the village param in:
① 6517 [1]
② 1916 [1]
- (c) Calculate the distance in kilometres along the car track between Revdar and ~~Suratgarh~~ ~~Param~~ [2]
- (d) What is the bearing of:
① 260° to 1117 [1]
② 315° to 0617 [1]
- (e) On which bank of Sipu Nadi is Marol situated? What is the social significance of this village? [2]

- (f) What is the meaning of:
(i) Causeway
(ii) Open Scrub?
- (g) What do you understand by Representative Fraction? State the Representative Fraction of the given map sheet.
- (h) Calculate in Kilometres the area of land enclosed within eastings 03 to 07 and northings 08 to 13. Show the working.
- (i) Which is the most important settlement? Give a reason for your answer.
- (j) Give two reasons to show that the area experiences seasonal rainfall.
- (k) What is the general pattern of settlement in the region shown on the map?
Give a reason for such settlement pattern.
- (l) Draw the conventional symbols for the following:
(i) Unlined perennial well
(ii) Temporary hut
(iii) Metalled road.

SECTION II [15 marks]

Question 2

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

- (a) The Western Ghats
(b) The River Tapi
(c) The Palk Strait
(d) The River Kosi
(e) The Latitude which divides the subcontinent into two zones
(f) Lake Chilika
(g) The Thar Desert
(h) The Malabar Coast
(i) The Vindhyan Mountains
(j) The Garo Hills
(k) Hyderabad
(l) Kolkata
(m) The Nathu-La Pass
(n) An area of Red Soil
(o) The Deccan Plateau.

PART II [40 marks]

Attempt any four questions from this part.

Question 3

- (a) Give two differences between alluvial soils found in the upper course and lower course of the river. [2]
- (b) Define the following: [1]
(i) Soil fertility [1]
(ii) Soil texture [1]
- (c) (i) Define Leaching. [2]
(ii) Mention two climatic conditions which promote it. [1]
- (d) (i) Identify the soil having self ploughing quality. [1]
(ii) Mention two of its chemical properties. [1]
(iii) Name any two cash crops grown in it. [1]

Question 4

- (a) Mention two causes for the decline of forest cover in India. [2]
- (b) Define "natural vegetation". Name the most important factor which influences the distribution of natural vegetation in the Himalayas. [2]
- (c) (i) State two characteristics of tropical thorn forests. [1]
(ii) Name two states where they are found. [1]
- (d) (i) Why do tropical evergreen forests appear green all the year round? [1]
(ii) Give two reasons why they are difficult to exploit. [2]

Question 5

- (a) Differentiate between inundation and perennial canals. [2]
(b) Give any four ways of recharging ground water. [2]
(c) What are the advantages of tube wells over ordinary wells? [3]
(d) (i) Where in India is tank irrigation more popular? [1]
(ii) Give two reasons to support your answer. [2]

Question 6

- (a) Why is road transport favoured in the northern plains of India? [2]
(b) What is the significance of waterways in the growth of civilization and economy? [2]
(c) What is NHDP? Name the metro cities which have been connected by the Golden Quadrilateral. [1+2]
(d) Give a reason for each of the following:
(i) It is essential to develop a cheap and efficient system of transport in India. [1]
(ii) Road transport is becoming more popular than other means of transport. [1]
(iii) Air transport is used only for high value goods and passenger services. [1]

Question 7

- (a) Mention two reasons as to why canal irrigation is more popular in Northern India. [1]
- (b) Mention any two states where well irrigation is widely used. Give one reason as to why well irrigation is common in the states mentioned by you. [1]
- (c) Explain the need for soil conservation in India. State any two methods of soil conservation. [1½]
- (d) How is red soil formed? State two reasons for the low productivity of the red soil. [1½]

Question 8

- (a) What are the two main advantages of forests? [1]
- (b) Mention two characteristics of tropical deciduous forests. [1]
- (c) What are the major problems of Indian Railways? [1]
- (d) Name the following:
(i) The organization that lays and maintains the state highways. [1]
(ii) An Expressway in South India. [1]
(iii) A major port which is not located on the sea coast. [1]

Question 9

- (a) What is the importance of ports for the Indian economy? [1]
- (b) "Rainfall is an important factor which decides the type of vegetation of a particular region". Justify. [1]
- (c) What is water scarcity? Mention any two factors responsible for water scarcity. [1½]
- (d) Explain the following terms:
(i) Transported soil [1]
(ii) Humus [1]
(iii) In-situ. [1]

THE FIRST COMPARATIVE EXAMINATION 2019-20

Class X (ICSE)

History & Civics - H. C. G. - Paper 1

Time: Two hours

Maximum marks: 80

Instructions:

- Answers to this paper must be written on the answer script provided separately.
- All subsections of each question must be answered in the correct order.
- You are NOT 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.
- Please do not write anything on your question paper except your name and roll number.
- The intended marks for questions or parts of questions are given in brackets [].
- Do not copy the questions on your answer script but copy the correct question number.
- Part I is compulsory. Attempt two questions out of three from Section A and three questions out of five from Section B. A total of five questions will be attempted from Part II.

PART I [30 marks]

Attempt all questions from this Part.

Question 1

- (a) Name the two types of authority in a federal set up in India. [1]
(b) Name the main constituents of the Indian Parliament. [1]
(c) What happens if the Lok Sabha and the Rajya Sabha fail to agree on a non-money bill? [1]
(d) What is the maximum strength of the Lok Sabha? How many members are nominated by the President? [1]
(e) What is 'Quorum'? What is the quorum of the Lok Sabha? [1]
(f) What is the maximum gap allowed between the two parliamentary sessions? [1]
(g) Name the law making body of the Union Government. [1]
(h) What do we mean when we say that the Rajya Sabha is a permanent body? [1]
(i) Name the bill that cannot originate in the Rajya Sabha. [1]
(j) Who presides over the joint sitting of both the houses of the Parliament? [1]

Question 2

- (a) What was Nana Saheb's main grievance against the British? [2]
(b) Mention any two changes that the British Government brought about, after the Revolt of 1857, regarding the relations with Princely States. [2]
(c) What is meant by the Doctrine of Lapse? [2]
(d) Mention any two contributions of Jyotiba Phule to the National Movement. [2]

- (e) Name the two precursors of the Indian National Congress. [2]
- (f) Write any two repressive policies of Lord Lytton that promoted the growth of nationalism. [2]
- (g) Mention two basic reasons responsible for the Surat Split of 1907 between the early nationalists and the assertive nationalists. [2]
- (h) Write any two contributions of Raja Ram Mohan Roy. [2]
- (i) Name the signatory countries of the Triple Alliance and the Triple Entente. [2]
- (j) Mention any two differences in the ideologies of Fascism and Nazism. [2]

PART II [50 marks]

SECTION A

Attempt any two questions from this Section.

Question 3

With reference to the Union Parliament, answer the following questions:

- (a) How are the members of the Lok Sabha elected? What are the qualifications required to contest the elections for the Lok Sabha? [3]
- (b) Two houses of the Parliament enjoy co-equal powers in many spheres. Explain it by giving three examples. [3]
- (c) Explain:
 (i) Question Hour
 (ii) No-Confidence Motion. [2]

Question 4

With reference to the Union Parliament, answer the following:

- (a) What is the composition of the Rajya Sabha? [3]
- (b) Mention three administrative functions of the Speaker. [3]
- (c) Write the four disciplinary functions of the Speaker. [4]

Question 5

With reference to the powers and functions of the Union Parliament, answer the following:

- (a) What are the exclusive powers of the Rajya Sabha? [3]
- (b) Mention any three legislative powers of the Rajya Sabha. [3]
- (c) Mention two judicial and two financial powers of the Parliament. [4]

SECTION B

Attempt any three questions from this Section.

Question 6

With reference to the First War of Independence, 1857, answer the following questions:

- (a) Mention any three socio religious reforms that invoked adverse reaction from the Indian masses. [3]
- (b) What was the immediate cause of the Revolt of 1857? [3]
- (c) Explain any two military and economic causes of the Revolt of 1857. [4]

Question 7

With reference to the First and the Second phase of the Indian National Movement, answer the following:

- (a) Who is known as the 'Father of Indian Nationalism'? Write any two of his contributions. [3]
- (b) What was Lord Curzon's argument in favour of the partition of Bengal? How did the nationalists interpret it? [3]
- (c) Highlight two different methods of struggle adopted by the early and the assertive nationalists. [4]

Question 8



- (a) Identify the picture. Mention his role in the formation of the Muslim League. [3]
- (b) Mention the objectives of the Muslim League. [3]
- (c) What was the significance of the Lucknow Pact? [4]

Question 9

With reference to the First World War, answer the following:

- (a) Explain the immediate cause of the First World War. [3]
- (b) What were the territorial rearrangements made after the First World War? [3]
- (c) List the main terms of the Treaty of Versailles. [4]

Question 10

With reference to Fascism and Nazism, answer the following:

- (a) State three similarities between the ideologies of Fascism and Nazism. [1]
- (b) How did the Anti Semitic propaganda become a cause for the rise of Nazism in Germany? [2]
- (c) How did the following become a cause for the rise of Fascism in Italy?
 - (i) Economic crisis
 - (ii) Failure of the League of Nations. [4]

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X
HINDI

Time: Three hours

Maximum marks: 80

Instructions:

- 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.
- This paper comprises two sections; Section A and Section B. Attempt all the questions from Section A. Attempt any four questions from Section B, answering at least one question each from the two books you have studied and any two other questions.
- The intended marks for questions or parts of questions are given in brackets [].

SECTION A [40 marks]

Attempt all questions.

Question 1

Write a short composition in Hindi in not less than 250 words on any one of the following topics:-

[15]

निनालिखित विषयों में से किसी एक पर संक्षिप्त निबंध लिखिए जो 250 शब्दों से कम न होः—

- (i) आजकल चर्चे प्रायः माता-पिता एवं गुरुजनों का उचित सम्मान नहीं करते। आपकी दृष्टि ने क्या यह ठीक है ? इसके कारणों को स्पष्ट करते हुए यह भी बताइये कि जनतान का नाता-पिता तथा शिष्यों का गुरुजनों के प्रति क्या कर्तव्य होना चाहिए।
- (ii) जपने त्वूरि की तरफ से आयोंजित किसी ईश्विक-यात्रा का वर्णन कीजिए।
- (iii) नविव्य ने चाँद पर एक नयी दुनिया बसने जा रही है। क्या आप उस नयी दुनिया में चलना चाहेंगे ? यदि हों, तो आप वहाँ क्या-क्या आवश्यक प्रयत्न करेंगे ताकि उस नयी दुनिया में सुख-शांति का बास हो।
- (iv) 'दो घंटे बदूल का तो आम कहाँ से होय' – इस लोकोक्ति को आधार मानकर कोई नांलिक कहानी लिखिए।
- (v) दिए नये चित्र को ध्यान से देखिए और चित्र को आधार बनाकर फोई लेख, कहानी अथवा घटना लिखिए जिसका सीधा व स्पष्ट संबन्ध चित्र से होना चाहिए।



Question 2

Write a letter in Hindi in approximately 120 words on any one of the topics given below:-

(7)

निम्नलिखित में से किसी एक विषय पर हिन्दी में लगभग १२० शब्दों में पत्र लिखिए:-

- (i) कर्मचारियों की अशुद्ध हिन्दी के विषय में सुधार हेतु दूरदर्शन के महानिदेशक का पत्र लिखिए।
- (ii) अपने पिताजी को पत्र लिखकर अपनी शैक्षिक उपलब्धियों व जीवन के लक्ष्य के बारे में बताइए।

Question 3

Read the passage given below and answer in Hindi the questions that follow, using your own words as far as possible:-

निम्नलिखित गद्यांश को व्यानपूर्वक पढ़िए तथा उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए। उत्तर यथासंभव आपके अपने शब्दों में होने चाहिए:-

एक कुएँ में एक मेंटक रहता था। एक बार एक और मेंटक कुएँ में आ पहुँचा, तो कुएँ के मेंटक ने उसका हाल-चाल, अता-पता पूछा। यह उसे जात हुआ कि वह मेंटक समुद्र में रहता है और समुद्र बहुत बड़ा होता है, तो उसने अपने कुएँ के पानी में एक छोटा-सा चक्कर लगाकर उस समुद्र के मेंटक से पूछा कि क्या समुद्र इतना बड़ा होता है? कुएँ के मेंटक ने तो कभी समुद्र देखा ही नहीं था। समुद्र के मेंटक ने उसे बताया कि इससे भी बड़ा होता है। कुएँ का मेंटक चक्कर बड़ा करता गया और अंत में उसने कुएँ को दीवार के तहारे-तहारे आखिरी चक्कर लगाकर पूछा- "क्या इतना बड़ा है तेरा समुद्र?" इस पर समुद्र के मेंटक ने कहा- "इससे भी बहुत बड़ा!" अब तो कुएँ के मेंटक को क्रोध ही आ गया। कुएँ के अतिरिक्त उसने बाहर की दुनिया तो देखी ही नहीं थी। उसने कह दिया- "जा, तू झूठ बोलता है। कुएँ से बड़ा कुछ होता ही नहीं। समुद्र भी कुछ नहीं होता है।"

कुएँ में मेंटक वाली कथा इस प्रसंग में चरितार्थ होती है कि जितना अध्ययन होगा, उतना अपने अज्ञान का आभास होगा। आज जीवन में पग-पग पर हमें ऐसे कुएँ के मेंटक मिल जाएँगे, जो केवल यही मानकर वैठे हैं-कि जितना वे जानते हैं, उसी का नान ज्ञान है, उसके इधर-उधर और बाहर कुछ भी ज्ञान नहीं है, लेकिन सत्य तो यह है कि ज्ञान की मीति ज्ञान की भी कोई सीमा नहीं है। अपने ज्ञानी होने के अज्ञानगम्य ग्रन्थ को यदि तोड़ना हो तो अधिक-से-अधिक अध्ययन करना आवश्यक है। जितना अधिक अध्ययन किया जाएगा, ग्रन्थ टूटेगा और ऐसा जामास होगा कि अभी तो बहुत कुछ जानना और पढ़ना शेष है।

अधिकाधिक अध्ययन करते रहने से एक मानसिक परितोष, आनंद और शांति अवश्य प्राप्त होती है। उसके आगे और अध्ययन करने की जिज्ञासा भी उत्पन्न होती है। अधिक अध्ययन करने से मनुष्य के हृदय की संकीर्णता समाप्त हो जाती है तथा उसका दृष्टिकोण उदार ढोता जाता है। सतत अध्ययनशीलता और दृष्टि की उदारता शनैः शनैः व्यक्ति को पूर्णता और पवित्रता की ओर ले जाती है।

सतत अध्ययन मनुष्य की जांतरिक रस्तवृत्तियों को विकसित करता है। शारीरिक, मानसिक और आत्मिक उन्नति द्वारा गनुष्य की पाशाधिक प्रवृत्तियों को दूर कर उसे शुद्ध और पवित्र बनाता है; गनुष्य को सच्चे अर्थों में गनुव्यता की प्राप्ति कराता है।

- (i) कुएँ के मेंढक ने समुद्र की विशालता का अनुमान किस प्रकार किया और क्यों? [2]
- (ii) कुएँ के मेंढक को क्रोध क्य और क्यों आया? [2]
- (iii) अपने ज्ञानी होने के भ्रम को कैसे तोड़ा जा सकता है? [2]
- (iv) अधिकाधिक अध्ययन से क्या लाभ होते हैं? [2]
- (v) उपर्युक्त गद्यांश से कौन-सी शिक्षा प्राप्त होती है? [2]

Question 4

Answer the following according to the instructions given:-

निम्नलिखित प्रश्नों के उत्तर निर्देशानुसार दीजिए:-

- (i) निम्नलिखित शब्दों की भाववाचक संज्ञा बनाइये:-
आत्सी, भक्त [1]
- (ii) निम्नलिखित शब्दों में से किन्हीं दो शब्दों के विलोम लिखिए:-
अमावस्या, निरक्षर, आरोह, भूक [1]
- (iii) निम्नलिखित में से किसी एक शब्द के दो पर्यायवाची लिखिए:-
उद्यान, अरण्य [1]
- (iv) निम्नलिखित मुहावरों में से किसी एक की सहायता से वाक्य बनाइए:-
गागर में सागर, कलई खुलना [1]
- (v) निम्नलिखित शब्दों में से किन्हीं दो शब्दों को शुद्ध कीजिए:-
अंतमुखी, अलोचना, इतिहासिक, तपस्यनी [1]
- (vi) कोष्ठक में दिए गए वाक्यों में निर्देशानुसार परियर्तन कीजिए:-
 (a) कुएँ के मेंढक ने समुद्र नहीं देखा था। (नहीं उटावार पावय लिखिए, पर वाक्य का अर्थ न बदलें) [1]

- (b) गुप्ती कमिला पढ़ रही है। (गुप्तमन ने नदतिए) [1]
- (c) विद्यानुलो संसाट के साथ रहते हैं। (जवयं को स्मीतिंग वं नदतिए) [1]

SECTION B [40 marks]

Attempt four questions from this section.

You must answer at least one question from each of the two books you have studied and any two other questions.

साहित्य-सामग्र

गद्य खंड

Question 5

Read the extract given below and answer in Hindi the questions that follow:-

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए तथा उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:-

किशोरी ने आकर ढल्ला मधा दिया, "भानी, अरे नाभी ! देखा नहीं तूने, न ! निहाल नावू रो रहे हैं | अरे, तू चल भी !"

- रादेह -

लेखक - जयरामकर प्रसाद

- (i) राग निहाल के छाँयों में क्या था व उसके असमंजस का कारण क्या था ? [2]
- (ii) कारे में विद्यगान प्रतिगाऊं का वर्णन अपने शब्दों में कीजिए। [2]
- (iii) उपर्युक्त कथन किसने, किसरो तथा वयों कहा ? [3]
- (iv) 'संदेह' फहानी का उद्देश्य स्पष्ट कीजिए। [3]

Question 6

Read the extract given below and answer in Hindi the questions that follow:-

निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़िए तथा उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:-

उसने कोई बहाना न बनाया। चाहता तो कह सकता था कि यह साजिश है।

- वात अठनी की -

लेखक - सुदर्शन

- (i) किसे, कौन फँसा रहा था ? [2]
- (ii) रसीला कौन था ? उसका परिचय दीजिए। [2]

- (iii) हमें अपने नौकरों के साथ कैसा व्यवहार करना चाहिए? कहानी के अधार पर उदाहरण देकर सनझाइए। [3]
- (iv) इस कहानी में लेखक ने जमाज की कौन-जी पुराई को प्रकट करने का प्रयास किया है? वहां से अपने प्रयास में सफल हुए हैं? जनझाकर लिखिए। [3]

Question 7

Read the extract given below and answer in Hindi the questions that follow:-
निम्नलिखित गद्यांश को व्यानपूर्वक पढ़िए तथा उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:-

पर “सब दिन होत न एक सामान” अकस्मात् दिन किरे और सेठ को गरीबी का मुँह देखना पड़ा।

— महायज्ञ का पुरस्कार —
लेखक — यशपाल

- (i) अकस्मात् किसका बुरा समय आ गया था तथा बुरा समय आने से पहले उसकी दशा कैसी थी? [2]
- (ii) अपना बुरा समय दूर करने के लिए सेठ ने क्या उपाय लोचा? इस उपाय के लिए उन्हें किसके पास जाना पड़ा? [2]
- (iii) सेठ ने कौन-सा महायज्ञ किया था? क्या वह वास्तव में महायज्ञ था? समझाकर लिखिए। [3]
- (iv) ‘महायज्ञ का पुरस्कार’ कहानी का उद्देश्य लिखिए। [3]

साहित्य—सागर
पद्य खण्ड

Question 8

Read the extract given below and answer in Hindi the questions that follow:-
निम्नलिखित पद्यांश को पढ़िए और उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:-

जाके प्रिय न राम वेदेही।
तजिए ताहि कोटि वैरी सम जदपि परम सनेही॥
तज्यो पिता प्रह्लाद, विभीषण वन्धु, मरत महतारी।
वलि गुरु तज्यो, कंत ग्रज वनितहि, भर-मुद मंगलकारी॥

— विनय के पद —
कवि — तुलसीदास

- (i) कवि द्वारा अनुसार कैसे व्यक्ति का जीवन मंगलकारी है? [2]

- (ii) कौनसे व्यक्तियों को गत्रुओं के सनान सनन्दना चाहिए और कहाँ ? [2]
- (iii) प्रहलाद, विभीषण, भरत आदि के उदाहरण द्वारा कथा स्पष्ट करना चाहते हैं ? [3]
- (iv) तुलसीदास जी का परिचय दीजिए। [3]

Question 9

Read the extract given below and answer in Hindi the questions that follow:-
निम्नलिखित पद्यांश को ध्यानपूर्वक पढ़िए तथा नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए-

मूख से सूख ओढ़ जय जाते, दाता-माय, विधाता से क्या पाते ?
धूंट आँसुओं के पीकर रह जाते। चाट रहे जूठी पत्तले वे कभी सड़क पर खड़े हुए.
और झपट लेने को उनसे कुत्ते भी हैं अड़े हुए। वहरो, अहो मेरे हृदय में है अमृत,
मैं सींच दूँगा। अभिमन्यु-जैसे हो सकोगे तुम, तुम्हारे दुख में अपने हृदय में खींच दूँगा।

- भिषुक -

कवि-सूर्यकांत त्रिपाठी 'निराला'

- (i) भिषुक कव आँसुओं के धूंट पीकर रह जाते हैं ? [2]
- (ii) वे अपनी मूख कैसे मिटाने को चिंगा हैं ? [2]
- (iii) 'ओर झपट लेने को उनसे कुत्ते भी हैं अड़े हुए' - आशय स्पष्ट कीजिए। [3]
- (iv) कवि भिषुक को वया प्रेरणा दे रहे हैं ? [3]

Question 10

Read the extract given below and answer in Hindi the questions that follow:-
निम्नलिखित पद्यांश को ध्यानपूर्वक पढ़िए तथा नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:-

लेकिन विज्ञ अनेक अभी इस पथ पर अड़े हुए हैं
मानवता की राह रोककर पर्वत खड़े हुए हैं।
न्यायोचित सुख सुलभ ही जय तक मानव-मनव को
चैन कहाँ धरती पर तब तक शांति कहाँ इस भव को ?

- स्वर्ग बना सकते हैं -

कवि - रामधारी सिंह 'दिनकर'

- (i) किस मार्ग में अनेक वाधाएँ हैं तथा मानवता की राह रोककर कौन खड़ा है ? [2]
- (ii) संसार में व्यक्ति को कौन-सा सुख प्राप्त नहीं है ? [2]
- (iii) विकास के मार्ग में आने वाली किन समस्याओं का वर्णन कवि ने किया है ? [3]
- (iv) "चैन कहाँ धरती पर तब तक शांति कहाँ इस भव को ?" ऐसा क्यों कहा गया है ? [3]

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X (ICSE)
COMPUTER APPLICATIONS

Time: Two hours

Maximum marks: 100

Instructions:

- * Answers to this paper must be written on the answer script provided separately.
- * All subsections of each question are to be answered in the correct order.
- * All working including rough work should be done on the same sheet as the rest of the answer.
- * 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 the paper is the time allowed for writing the answers.
- * Please do not write anything on the question paper except your name and roll number.
- * The intended marks for questions or parts of questions are given in brackets [].
- * Attempt all questions from Section A and any four questions from Section B.

SECTION A [40 marks]
Attempt all questions from this section.

Question 1

Answer the following questions:

(a) Write the keyword:

- (i) that forces the next iteration in a loop
- (ii) that prevents fall through in a switch case construct.

[2]

(b) Write an expression in Java for:

$$z = \frac{x^y + y^x}{(x + y)} + (x \times y)$$

[2]

(c) Explain "Mixed expression" with the help of an example.

[2]

(d) Arrange the given data types in ascending order of their size:
double, char, int, boolean.

[2]

(e) Rewrite the following code using "for" loop:

```
int X = 5, Y = 10;  
do  
{  
    System.out.print(X%Y + ", ");  
    X = X + 2;  
    Y = Y - 1;  
} while (X <= Y);
```

[2]

Question 2 [2]

(a) What are relational operators? What type of value they return? [2]

(b) Explain why class is known as an "object factory". [2]

(c) Define "Explicit Type conversion" with the help of one suitable example. [2]

(d) Answer the following questions: [2]

(i) Name the keyword that is used to define a variable whose value cannot be changed during the execution of java program. [2]

(ii) How will you find the total number of elements of an array? [2]

(e) Explain default case as used in switch case construct. [2]

(f) In the following code consider M as a character type variable storing choice of the user.

```
switch (M)
{
    case 'A' : System.out.println("APPLE");
    case 'E' :
    case 'I' : System.out.print ("INDIGO");
    default   : System.out.println ("WRONG");
}
```

What will be the output if M is:

(i) 'A' [2]

(ii) 'a' [2]

(iii) 'I' [2]

(iv) 'E' [2]

(g) What is an identifier? Give an example. [2]

What are comments or remarks in a java program? Explain multiline comments in java. [2]

(i) Write a java statement to declare an array to store age of 55 students. [2]

(j) Explain logical error with the help of an example. [2]

Question 3

Analyze the following code and write the output:

(a) `System.out.println(a >= b);` [where a = 5 and b = 9] [2]

(b)

```
int Num = 23;
while(Num > 0)
```

```
{
```

```
    System.out.print(Num % 2 + " ");
    Num = Num / 2;
}
```

- (c) `int X = 5, Y = 10;
System.out.println(++X + --Y);
System.out.print(X + Y);` [2]
- (d) `int m = 2, n = 5;
System.out.println(m-- + --n >= 0 ? ++m : --n);` [2]
- (e) `System.out.println('X' > 'Y');` [2]

SECTION B [60 marks]

Attempt any four questions from this section.

The answers in this Section should consist of the Program in Blue J environment with Java. Each program should be written using Variable descriptions/Mnemonic Codes such that the logic of the program is clearly depicted.

Flow-charts and Algorithms are not required.

Question 4

Write a program in Java to input integers in an array `Arr[]` of size 10. Increase the value of each element by 10. Print original as well as the updated array. [15]

Question 5

Write a program in Java to calculate and print the value of S, where:

$$S = 1 + (1 \times 2) + (1 \times 2 \times 3) + (1 \times 2 \times 3 \times 4) + \dots + (1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9) \quad [15]$$

Question 6

Write a menu driven program in Java using switch - case - default construct for the following options:

- (1) to print absolute value of an inputted number n
- (2) to print a random number
- (3) to find and print the square root of an inputted number
- (4) exit.

[Use functions of Math class wherever required.]

[15]

Question 7

Write a program in Java to accept a number. Check and display whether it is a NIVEN number or not.

(Niven number is that number which is completely divisible by the sum of its digits. For example, if the inputted number is 126

then the sum of its digits $1 + 2 + 6 = 9$ and 126 is divisible by 9.)

[15]

Question 8

Write a program in Java to print the following pattern on computer screen, using nested "for" looping statement.

3
3 3
3 3 3
3 3 3 3
3 3 3 3 3

[15]

Question 9

Write a program in Java to define a class Bill which accepts electricity units consumed by a customer in a month. Calculate and print the electricity bill to be paid by a customer as per the following criteria:

Number of units consumed	Charge per unit
up to 100 units	₹ 1.50
for the next 100 units	₹ 2.00
for the next 50 units	₹ 2.50
beyond 250 units	₹ 4.00

Assume that the customer pays an additional rent for the meter which is charged as ₹ 100 per month.

[15]

101
100
—
1

THE FIRST COMPARATIVE EXAMINATION 2019-20
Class X (ICSE)
BIOLOGY
SCIENCE Paper - 3

Time: Two hours

Maximum marks: 80

Instructions:

- Answers to this paper must be written on the answer script 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.
- The intended marks for questions or parts of questions are given in brackets [].
- Please do not write anything on your question paper except your name and roll number.
- All subsections of each question must be answered in the correct order.
- Do not copy the questions on your answer script. Copy the correct question number.
- This question paper consists of two sections. Section I contains one question with eight parts (a) to (h). All the parts are compulsory. Section II contains six questions numbered 2 to 7. You have to answer any four of these questions.

SECTION I [40 marks]

Attempt all questions from this Section.

Question 1

[5]

(a) Name the following:

- (i) A waxy layer on the epidermis of the leaf
- (ii) A sudden change in one or more genes
- (iii) A membrane that disappears during late prophase
- (iv) The chemical substance used to test the presence of starch in the cell of a leaf
- (v) An instrument used to demonstrate root pressure.

(b) Mention the significant function of:

[5]

- (i) Chlorophyll
- (ii) Root hair
- (iii) Lenticel
- (iv) Centromere
- (v) Guard cells.

(c) Choose the correct answer from the four options given below:

[5]

- (i) Which of the following is NOT the end product of photolysis?
 - (A) NADPH
 - (B) O₂
 - (C) C₆H₁₂O₆
 - (D) ATP.

Z - 1

This paper consists of seven printed pages.

Turn over

- (iii) Endodermis, Root hair, Pericycle, Xylem, Cortex
- (iv) G₁, S, G₂, Cytokinesis, Karyokinesis
- (v) Photons, Water molecule, Oxygen, Grana, Hydrogen and hydroxyl ions.

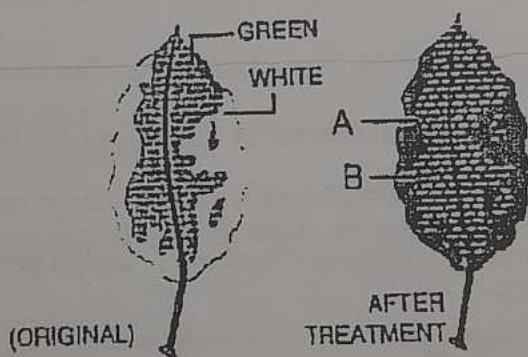
(g) Match the items given in Column A with the most appropriate ones in Column B. Rewrite the correct matching pairs:

[5]

	Column A	Column B
(i)	Centriole	Cut shoot
(ii)	Autosomes in human	Stroma
(iii)	Sunken stomata	Aster
(iv)	Thylakoid	<i>Nerium</i>
(v)	Bleeding	23 pairs
		22 pairs
		Grana

(h) The diagram given below is an experiment conducted to study a factor necessary for photosynthesis. Observe the diagrams and answer the questions that follow:

[5]



- (i) What is the aim of the experiment?
- (ii) What type of leaf was used for the experiment? Give an example.
- (iii) Why was the experimental plant kept in the dark before beginning the experiment?
- (iv) What is the expected result of the starch test on the parts labelled A and B?
- (v) Write a balanced chemical equation to represent the process of photosynthesis.

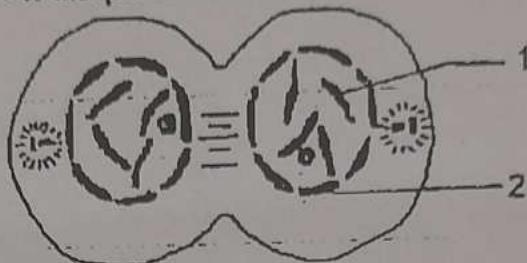
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SECTION II [40 marks]

Attempt any four questions from this Section.

Question 2

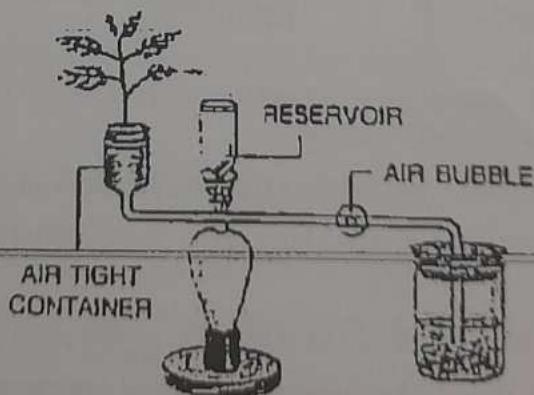
- (a) Study the diagram given below which represents a stage during the mitotic cell division and answer the questions that follow:



- (i) Identify the stage by giving a suitable reason.
(ii) Name the parts numbered 1 and 2.
(iii) Mention the stage that comes before the stage shown in the diagram.
Draw a neat labelled diagram of the stage mentioned.
- (b) Write the full form of:
(i) NADP
(ii) ATP.
- (c) Draw a well labelled diagram of chloroplast with at least five labellings.

Question 3

- (a) Given below is the diagram of an apparatus used to study a particular phenomenon in plants:



- (i) Name the apparatus.
(ii) What is it used for?
(iii) What is the role played by the air-bubble in this experiment?
(iv) What is the use of the reservoir?
(v) Draw a neat labelled diagram of stomatal apparatus.

(b) Differentiate between each of the following pairs on the basis of the given parameters: [5]

- (i) Hypotonic solution and Hypertonic solution (Definition)
- (ii) Osmosis and Active transport (Movement of molecules)
- (iii) Chromosome and Chromatid (Definition)
- (iv) Homozygous and Heterozygous (Definition)
- (v) Cell wall and Cell membrane (Permeability).

Question 4

(a) A homozygous plant having round (R) and yellow (Y) seed is crossed with homozygous plant having wrinkled (r) and green (y) seeds.

(i) Give the scientific name of the plant on which Mendel conducted his hybridization experiments. Give any two reasons for selection of the same. [1+1]

(ii) Give the phenotype of the offspring of the F₂ generation when two plants of the F₁ generation are crossed. [1]

(iii) Name and state the law which explains the dihybrid ratio. [1]

(iv) Give the possible combination of gametes that can be obtained from F₁ hybrid. [1] [2]

(b) Name the type of cell division that occurs during:

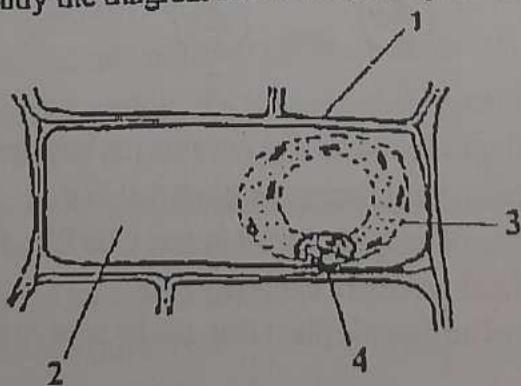
(i) growth of shoot

(ii) formation of pollen grain.

(c) Draw a Punnett square to find out the progeny of a marriage between a colour blind man and a normal woman. Show the genotype and phenotype. [3]

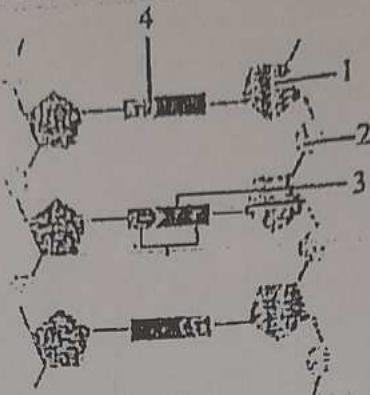
Question 5

(a) The diagram given below represents a plant cell after being placed in a strong sugar solution. Study the diagram and answer the questions that follow:



- (i) Name the state of the cell shown in the diagram. [1]
- (ii) Label the parts numbered 1 to 4 in the diagram. [2]
- (iii) How can the above cell be brought back to its original condition? Mention the scientific term for the recovery of the cell. [2]

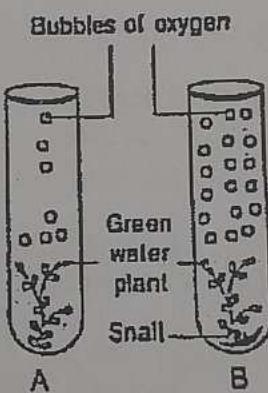
(b) Study the diagram given below and answer the questions that follow:



- (i) Label the parts 1 – 4. [2]
(ii) What are rungs of DNA made up of? [1]
(iii) Name the nitrogenous bases present in DNA. [2]

Question 6

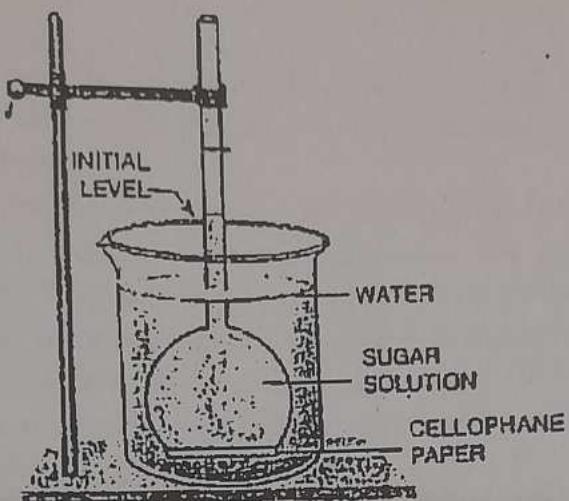
(a) The diagram given below shows test tubes A and B. Test tube A contains an aquatic plant. Test tube B contains both an aquatic plant as well as a snail. Both test tubes are kept in sunlight. Answer the questions that follow:



- (i) Name the physiological process that releases the bubbles of oxygen. [1]
(ii) Explain the physiological process mentioned above. [1]
(iii) What is the purpose of keeping a snail in test tube B? [1]
(iv) Why does test tube B has more bubbles? [1]
(v) Give an example of an aquatic plant that can be used in the above experiment. [1]
- (b) Define the following: [5]
- (i) Active transport
(ii) Guttation
(iii) Root pressure
(iv) Haploid cell
(v) Monohybrid Cross.

Question 7

- (a) Study the diagram given below and answer the questions that follow:



- (i) Define the process shown in the diagram. [1]
- (ii) State your observation after an hour or so. [1]
- (iii) Suggest a control set up for the experimental set up shown above. [1]
- (b) Differentiate between the following terms: [2]
- (i) Turgor pressure and Wall pressure
 - (ii) Gene and allele.
- (c) Give an appropriate biological or technical term for each of the following: [5]
- (i) The exchange of chromatid material between the two members of a homologous pair
 - (ii) Paper used to test transpired water
 - (iii) Fully distended state of a cell
 - (iv) The site of biosynthetic phase of photosynthesis
 - (v) The phenomenon by which the living or dead plant cells absorb water by surface attraction
 - (vi) Relative concentration of the solution that determines the direction and extent of diffusion
 - (vii) A disease caused by a gene mutation
 - (viii) Alternative form of character
 - (ix) Point of attachment of sister chromatids
 - (x) Conversion of ADP to ATP.

THE FIRST COMPARATIVE EXAMINATION 2019-20
CLASS X (ICSE)
PHYSICS
SCIENCE Paper – 1

Time: Two hours

Maximum marks: 80

Instructions:

- * Answers to this paper must be written on the answer script 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.
- * All subsections of each question must be answered in the correct order.
- * Please do not write anything on the question paper except your name and roll number.
- * The intended marks for questions or parts of questions are given in brackets [].
- * Section I is compulsory. Attempt any four questions from Section II.

SECTION I [40 marks]

Attempt all questions from this section.

Question 1

- (a) Can the moment of force be zero even if the force is not zero? If so, when? [2]
- (b) How is refractive index of a medium related to the speed of light in it and in vacuum? If refractive index of water with respect to air is $4/3$, what is refractive index of air with respect to water? [2]
- (c) How is uniform circular motion different from uniform linear motion? [2]
- (d) Calculate the kinetic energy of a body of mass 0.10 kg and momentum 20 kgms^{-1} . [2]
- (e) (i) How is critical angle related to the refractive index of the medium?
(ii) Does the depth of a tank of water appear to change or remain the same when viewed normally from above? It changes; It appears to be shallower than its original depth [2]

Question 2

- (a) (i) Is centrifugal force the force of reaction of the centripetal force?
(ii) Compare the magnitudes of centripetal force and centrifugal force. [2]
- (b) What is meant by the statement 'the critical angle for diamond is 24° '? [2]
- (c) How is the work done by a force measured when the force:
(i) is in the direction of displacement
(ii) is at an angle to the direction of displacement? [2]
- (d) Calculate moment of force needed to loosen a nut by a wrench of length 20 cm by applying a force of 2 N . [2]
- (e) Give two factors on which angle of deviation of light depends when passing through a prism. [2]

Question 3

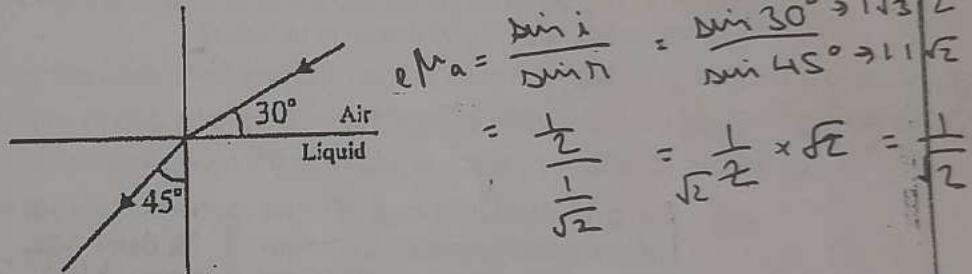
- (a) At which point is the centre of gravity situated in:
 (i) rhombus point of intersection of its diagonals (ii) scalene triangle? point of intersection of its medians [2]
- (b) A man having a box on his head climbs up a slope and another man having an identical box on his head walks the same distance on a horizontal road. Who does more work and why? The 2nd man climbing the slope, does more work since in his case, force is normal to displacement [2]
- (c) Mention one example for each of the following energy conversions:
 (i) light energy to chemical energy photosynthesis by plants [2]
 (ii) electrical energy to sound energy. Loudspeakers [2]
- (d) Why is red colour used as danger signal? [2]
- (e) (i) Name a prism required for obtaining spectrum of ultraviolet light.
 (ii) Name the radiation which can be detected by a thermopile. [2]

Diagram of a prism spectrum

Question 4

$$100000 \text{ W} \rightarrow \text{or } 100000 \text{ Nm/s}$$

- (a) If the power of a motor be 100 kW , at what speed can it raise a load of $50,000 \text{ N}$? [2]
- (b) Find refractive index of liquid with respect to air from the following diagram: [2]



- (c) A lens has focal length of 25 cm . Calculate power of the lens and state its nature. $\frac{1}{f} = \frac{1}{0.25 \text{ m}} + 4.0 \text{ D} \left[\frac{25}{100} = \frac{100}{25} \right] [2]$ [2]
- (d) State the conditions of equilibrium of a body. [2]
- (e) You are provided with a printed piece of paper. Using this, how will you differentiate between convex lens and concave lens? [2]

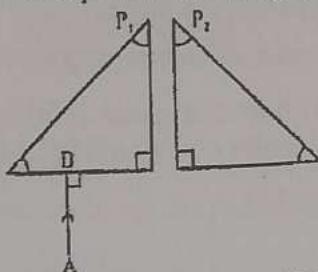
SECTION II [40 marks]

Attempt any four questions from this section.

Question 5

- (a) A uniform metre scale can be balanced at 30 cm mark when a mass of 40 g is hung from 5 cm mark.
 (i) Draw a diagram of the arrangement.
 (ii) Calculate mass of metre scale. [3]

- (b) Two isosceles right prisms are arranged as shown in the figure below. Copy the diagram and complete the path of ray AB along which it passes through the prisms and comes out. Name the phenomenon displayed by the path. [3]



- (c) Draw a diagram to show energy changes in an oscillating simple pendulum and hence show conservation of mechanical energy in it. [4]

Question 6

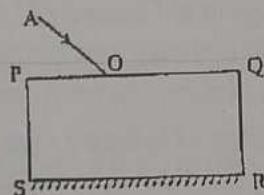
- (a) How fast a man weighing 600 N should run so that his kinetic energy is 150 Nm \leftarrow 750 J? $[g = 10 \text{ ms}^{-2}]$ [3]

(ii) What does electron volt measure?

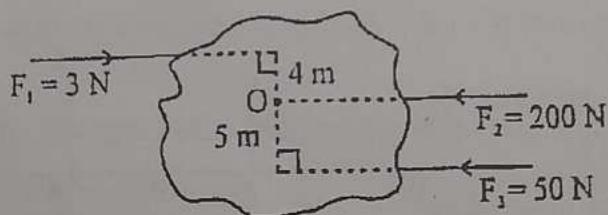
- (b) In the figure given below, a ray of light AO is incident on a rectangular glass block PQRS, which is silvered at the surface RS. The ray is partly reflected and partly refracted.

(i) Draw the paths of the reflected and refracted rays.

(ii) Show at least two rays emerging from the surface PQ after reflection from the surface RS.



- (c) Calculate moment due to F_1 , F_2 , F_3 about O and hence the resultant torque on the body. [4]

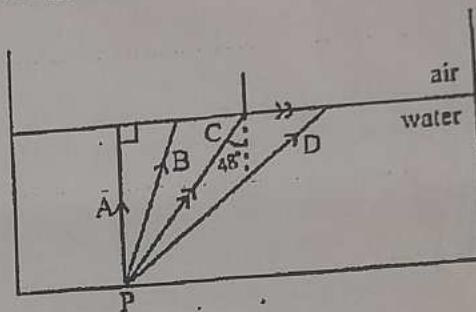


Question 7

- (a) Define nuclear energy. Give one advantage and one disadvantage associated with it when it is used for the production of electricity. [3]
- (b) A postage stamp appears to be raised by 7.0 mm when placed under a rectangular glass block of refractive index 1.5. Find thickness of glass block. [3]
- (c) A boy weighing 40 kg climbs up a stair of 30 steps, each step being 20 cm high, in 4 minutes and a girl weighing 30 kg does the same in 3 minutes. ($g = 10 \text{ ms}^{-2}$). Compare:
- work done by them
 - power developed by them.

Question 8

- (a) (i) Give reason for twinkling of stars at night. [3]
(ii) Give the range of wavelengths of electromagnetic waves visible to us.
- (b) A body of mass 20 kg slows down from a speed of 50 ms^{-1} to that of 40 ms^{-1} in 2 s. Calculate the change in kinetic energy of the body. [3]
- (c) (i) Complete paths for A, B and D on striking water surface. [4]
(ii) What is special name for angle made by C on striking at water surface made in water?

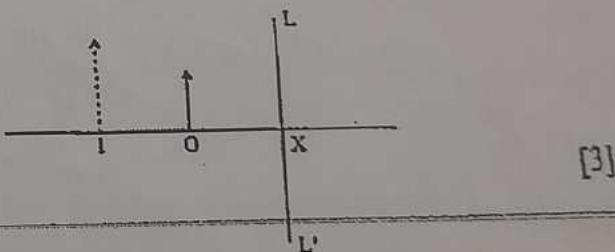


Question 9

- (a) An object is kept at a distance of 15 cm from a convex lens of focal length 10 cm. Calculate image distance and state characteristics of the image formed. [3]
- (b) (i) Give two differences between X rays and γ rays.
(ii) Give one use of Infrared rays based on its property. [3]
- (c) An engine can pump 30,000 L of water to a vertical height of 45 m in 10 minutes. Calculate the work done by the machine and the power.
[g = 9.8 ms^{-2} , density of water = 10^3 kgm^{-3}] [4]

Question 10

- (a) Study the diagram given alongside:
(i) Name the lens LL'.
(ii) Complete the ray diagram.



- (b) A boy uses blue colour and then red colour of light to determine refractive index of glass. Will the refractive index be same or different in the two cases? Give reasons to support your answer. [3]
- (c) A stone is dropped from a height 'h'. Its potential energy at a particular instant is nine times its kinetic energy. When the velocity of the stone becomes double its velocity at that instant, what will be the ratio of its new kinetic energy and new potential energy? [4]

THE FIRST COMPARATIVE EXAMINATION 2019-20

CLASS-X ICSE

SCIENCE Paper-2

CHEMISTRY

Time: Two hours

Maximum marks: 80

- Answers to this paper must be written on the answer script 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.
 - The intended marks for questions or parts of questions are given in brackets [].
 - All subsections of each question or parts of question must be answered in the correct order.
 - Please do not write anything on your question paper except your name and roll number.
 - This paper is divided into two sections. Section I [40 marks] and Section II [40 marks]. Section I is compulsory. Attempt any four questions from Section II.
 - Give balanced equations wherever required.

SECTION I [40 marks]

Attempt all questions from this Section.

Question 1

(a) Choose the most appropriate answer from the options given below:

[5]

- Choose the most appropriate answer:

 - (i) Properties of elements are periodic function of their:
 - (A) Mass number
 - (B) Atomic numbers
 - (C) Molecular mass
 - (D) Relative atomic number.
 - (ii) The compound which has all the three kinds of bonds is:
 - (A) Sodium chloride
 - (B) Ammonia
 - (C) Ammonium chloride
 - (D) Carbon tetrachloride.
 - (iii) Lead sulphate is prepared by:
 - (A) Synthesis reaction
 - (B) Neutralisation reaction
 - (C) Displacement reaction
 - (D) Precipitation reaction.
 - (iv) If an element A belongs to period 2 and group III A then it will have:
 - (A) 2 shells and 3 valence electrons
 - (B) 2 shells and 2 valence electrons
 - (C) 3 shells and 2 valence electrons
 - (D) 3 shells and 3 valence electrons.
 - (v) The gas which will NOT produce an acid when dissolved in water is
 - (A) CO
 - (B) CO₂
 - (C) NO₂
 - (D) SO₃.

(b) Fill in the blanks with the choices given in brackets:

[5]

(1)

- (i) Metals lose electrons during ionization. This process is called _____
(Oxidation / Reduction / Redox).
- (ii) A salt which is soluble in hot water but insoluble in cold water is _____
(Lead nitrate / Lead sulphate / Lead chloride).
- (iii) The most electronegative element in the periodic table is _____
(Fluorine / Chlorine / Cesium).
- (iv) The chemical bond formed between two atoms by transfer of electrons is _____
(Electrovalent / Covalent / Polar covalent) bond.
- (v) The hydroxide of _____ is soluble in Sodium hydroxide solution
(Copper / Lead / Magnesium).

(c) State one relevant observation for each of the following:

[5]

- (i) Copper [II] sulphide is treated with dilute Hydrochloric acid.
- (ii) Excess Ammonium hydroxide is added to Copper sulphate solution.
- (iii) Dilute Hydrochloric acid is reacted with Lead nitrate.
- (iv) Concentrated Hydrochloric acid is added to Manganese dioxide.
- (v) Barium chloride solution is added to Sodium sulphate solution.

(d) Give a suitable chemical term for each of the following:

[5]

- (i) A bond formed by a shared pair of electrons with both electrons coming from the same atom
- (ii) A compound which when dissolved in water yields hydroxyl ions as the only negatively charged ions
- (iii) A salt which is formed by incomplete neutralization of an acid by a base
- (iv) The amount of energy released when an atom in gaseous state accepts an electron to form an anion
- (v) Tendency of an atom to attract electrons towards itself when combined in a compound.

(e) Give a chemical test to distinguish between each of the following pair of compounds:

[3]

- (i) Sodium chloride and Sodium nitrate solution
- (ii) Iron (II) chloride and Iron (III) chloride
- (iii) Copper sulphate and Iron (II) sulphate.

[2]

(f) Draw the electron dot structure of:

- (i) Nitrogen molecule [N = 7]
- (ii) Sodium chloride [Na = 11, Cl = 17]

[5]

(g) Give reasons for each of the following statements:

- (i) Hydrogen chloride is a polar covalent compound.
- (ii) A molecule of ammonia has one lone pair of electrons.
- (iii) The oxidizing power of elements increases from left to right along a period in the periodic table.
- (iv) The temperature should not be above 200°C in the laboratory preparation of Hydrogen chloride gas.
- (v) Hydrogen chloride gas cannot be dried over quicklime.

[5]

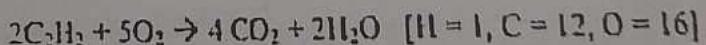
(h) Write a balanced chemical equation for each of the following reactions:

- (i) Calcium bicarbonate reacts with dilute Hydrochloric acid
- (ii) Sodium sulphide reacts with dilute Hydrochloric acid
- (iii) Iron reacts with dilute Hydrochloric acid
- (iv) Sodium carbonate reacts with dilute Hydrochloric acid
- (v) Sodium sulphite reacts with dilute Hydrochloric acid.

[1]

(i) (i) State Gay Lussac's Law.

(ii) Oxygen oxidizes Ethyne to Carbon dioxide and Water as shown by the equation:



[2]

What volume of Ethyne gas at S.T.P. is required to produce 8.4 dm^3 of Carbon dioxide at S.T.P.?

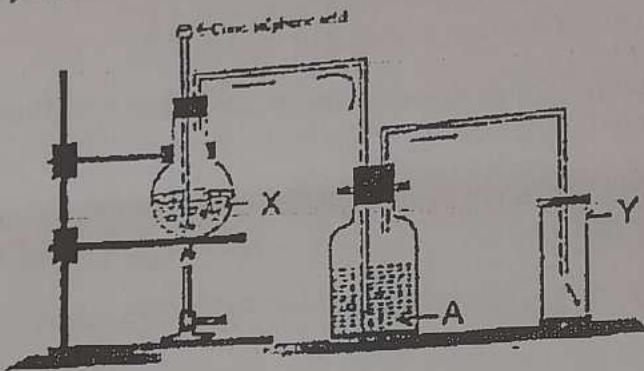
(iii) Calculate the percentage of water of crystallization in Washing soda ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) [$\text{Na} = 23, \text{C} = 12, \text{O} = 16, \text{H} = 1$].

[2]

SECTION II [40 marks]
Attempt any four questions from this Section.

Question 2

- (a) The diagram given below shows the laboratory preparation of Hydrogen chloride gas. Study the same and answer the questions that follow: [4]



- (i) Identify the reagents X and A.
- (ii) Write a balanced chemical equation for the preparation of Hydrogen chloride gas.
- (iii) What happens when a glass rod dipped in NH_4OH solution is brought near the mouth of the gas jar 'Y'?
- (b) Find the empirical formula of a compound containing Na = 29.11%, S = 40.51% and O = 30.38%. [Na = 23, S = 32, O = 16]. [3] Q
- (c) Complete the following chemical equations: [3]
 - (i) $\text{Fe} + \text{H}_2\text{SO}_4 \rightarrow$
 - (ii) $\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow$
 - (iii) $\text{Fe} + \text{Cl}_2 \rightarrow$

Question 3

- (a) Some methods (A – E) commonly used in the laboratory preparation of salts are as follows: [4]

A – Metal + acid

D – Direct combination

B – Metal carbonate + acid

E – Titration

C – Precipitation (Double decomposition)

Copy and complete the table given below by filling in the appropriate method of preparation of salts (i) – (iv):

S.No.	Salt	Method of Preparation
(i)	Ammonium sulphate	
(ii)	Led nitrate	
(iii)	Zinc sulphate	
(iv)	Calcium carbonate	

- (b) Consider the periodic table given below. Some elements (shaded) are given in their own symbols and position in the periodic table while others are shown with a letter. With reference to the table, answer the questions that follow: [3]

Group → numbers	IA	IIA	IIIA	IVA	VA	VIA	VIIA	Zero
2 nd Period	Li			C	N	O		Ne
3 rd Period	X		Al			G	Q	

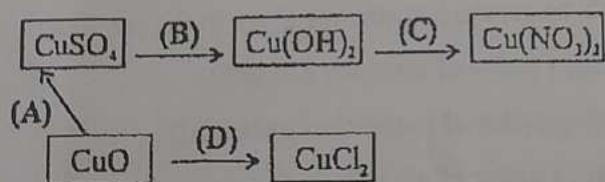
- (i) What type of bond will be formed between the elements 'X' and 'Q'?
- (ii) What is the valency of the element in group V A?
- (iii) A metal 'M' forms a compound with Oxygen and its formula is 'MO'. To which group does metal M belong?

- (c) Name the following: [3]

- (i) The hydride of halogen in period 3
- (ii) The amount of energy required to remove a loosely bound electron from the outermost shell of an isolated gaseous atom
- (iii) A compound which when dissolved in water yields hydronium ions as the only positively charged ions.

Question 4

- (a) Write balanced chemical equations for each of following conversions (A) to (D): [4]



- (b) With reference to the laboratory preparation of Hydrochloric acid, answer the following questions: [3]

- (i) Name the arrangement used for it.
- (ii) Why is such an arrangement necessary? Give two reasons.

- (c) Identify the Cation / Anion in each of the following: [3]

- (i) Salt A on treatment with conc. Sulphuric acid produces a gas which gives dense white fumes with Ammonia. The anion present in Salt A is _____.

- (ii) On adding Sodium hydroxide to Salt solution B, reddish brown precipitate is formed. The cation present in Salt solution B is _____.
- (iii) Salt C on reaction with dil. H_2SO_4 produces a gas which turns lime water milky but has no effect on acidified $K_2Cr_2O_7$. The anion present in Salt C is _____.

Question 5

- (a) Give reasons for each of the following statements: [4]
- (i) Ionic compounds have high melting and boiling points.
 - (ii) Molten NaCl conducts electricity.
 - (iii) HCl gas cannot be collected over water.
 - (iv) Concentrated H_2SO_4 is used in the laboratory preparation of Hydrogen chloride gas.
- (b) A compound gave the following data:
 $C = 57.82\%$, $O = 38.58\%$ and rest hydrogen. If the vapour density of compound is 83, find its molecular formula. [$C = 12$, $O = 16$, $H = 1$] [3]
- (c) Show the formation of Hydronium ion and Hydroxyl ion in water with the help of electron dot diagrams. Also state the type of bonding. [3]

Question 6

- (a) Arrange the following elements as per the instructions given in the brackets: [4]
- (i) Na, S, P, Al (decreasing order of electron affinity)
 - (ii) F, C, N, Li (increasing order of ionization potential)
 - (iii) Mg, Cl, Na, S (decreasing order of atomic size)
 - (iv) Ar, He, Kr, Ne (increasing order of number of electron shells).
- (b) The solutions A, B and C have pH values 5, 7 and 13 respectively: [3]
- (i) Which solution has no effect on litmus solution?
 - (ii) Which solution will liberate CO_2 from Sodium carbonate?
 - (iii) What are universal indicators?
- (c) Define each of the following terms: [3]
- (i) Basic salt
 - (ii) Atomic radii
 - (iii) Lone pair effect.

Question 7

(a) Match the items of Column A with those in Column B.

[4]

	Column A		Column B
(i)	Tribasic acid	(1)	Alkali metal
(ii)	$MgCl_2 + NaOH$	(2)	Phosphoric acid
(iii)	Sodium acetate	(3)	Normal salt
(iv)	Potassium	(4)	Dull white precipitate

(b) Choose the odd one out and give a reason for the same:

[3]

(i) MgO , Al_2O_3 , CuO , Fe_2O_3

(ii) $MgCl_2$, $NaCl$, KCl , HCl

(iii) Be , Mg , Na , Ca

(c) With reference to the properties of Hydrogen chloride gas, attempt the following questions:

[3]

(i) Draw a well labelled diagram to demonstrate the high solubility of HCl gas in water.

(ii) Mention the other property this experiment is showing.

(iii) Name another gas which has the same property and can be demonstrated through this experiment.

THE FIRST COMPARATIVE EXAMINATION 2021-22

Class X (ICSE)
ENGLISH LANGUAGE
ENGLISH Paper - I
(Two hours)

Maximum 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 the time allowed for writing the answers.

Attempt all five questions.

The intended marks for questions or parts of questions are given in brackets [].
You are advised to spend not more than 30 minutes in answering Question 1
and 20 minutes in answering Question 2.

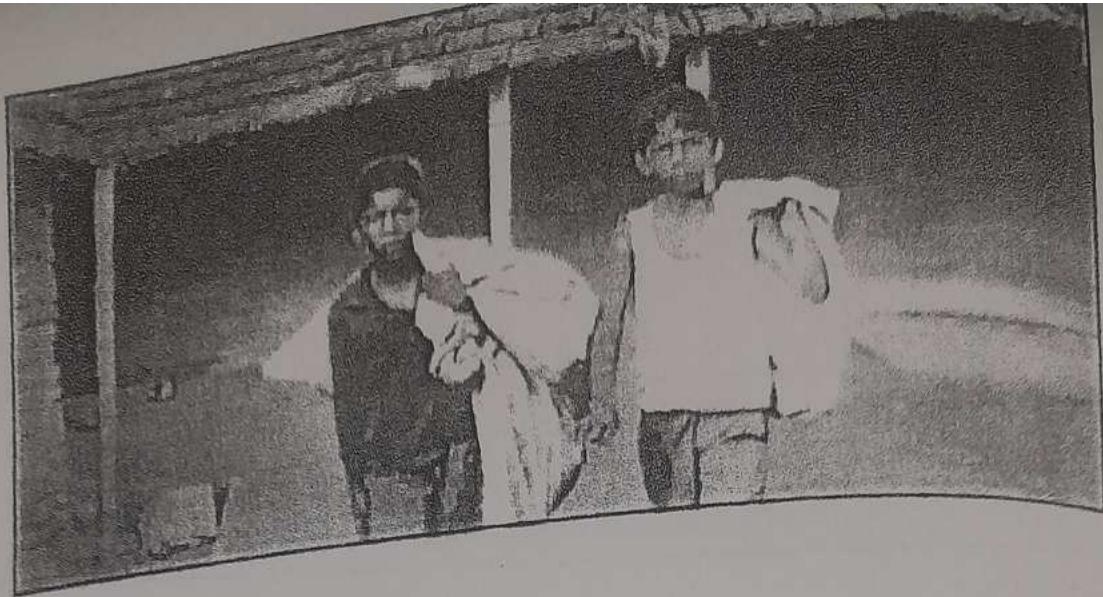
Question 1

(Do not spend more than 30 minutes on this question.)

Write a composition (300 – 350 words) on any one of the following topics:

[20]

- (a) Write an original story beginning with the following line:
“We were just about to board the plane when
- (b) Every year highly skilled people migrate to different countries in search of better jobs. For us it is a national loss. Express your views either for or against the statement.
- (c) India is known for its religious festivals. Choose one of your favourite festivals and describe how it is celebrated in your area.
- (d) You were challenged to spend a weekend without Television, the internet or any electronic gadget. Narrate your experience.
- (e) Study the picture given on next page. Write an account of what it suggests to you. Your composition may be about the subject of the picture or you may take suggestions from it but there must be a clear connection between the picture and the composition.



Question 2

(Do not spend more than 20 minutes on this question.)

Select any one of the following:

- (a) You are in a Summer Camp being held in Rishikesh in Uttarakhand. Write a letter to your cousin telling him/her about the activities being organized in the camp and how you are enjoying every moment of your stay in the camp.
- (b) Write a letter to the Editor of a newspaper regarding frequent electricity failure in your area, which hinders your online classes. Mention the problems faced by you in such a situation.

Question 3

- (a) Your school is organizing a fete to raise funds for victims of the recent floods in your State. Write a notice to be put up on the school notice board giving details of the event.
- (b) Write an email to the Principal of a neighbouring school, inviting him / her to and his / her students to attend the fete.

Question 4

Read the following passage carefully and answer the questions that follow:

Dr. James entered the room, and bowed slightly to a young lady standing by the side of a bed. There lay a man as still as the dead. Dr. James examined him and turned to the lady with questioning eyes.

"I am Mrs. Chandler," she responded. "My husband was taken suddenly ill about ten minutes before you came. He has had attacks of heart trouble before - some of them were very bad." Saying this, the lady fell, white and swooning, into the arms of an old woman. She was carried to her room, and laid on the bed. She passed from the swoon into a profound slumber.

The physician returned to the man on the bed; his eyes were open. His lips seemed
at first words. Dr. James bent his head to listen. "The money! The money! The twenty thousand dollars." And the man closed his eyes again. 10

There arose in Dr. James's brain and heart the *instincts* of his other profession. He decided to learn the whereabouts of this money. Going to the door of the inner room, he softly called the old woman, gave her the prescription, and bade her take it to some drug store and fetch the medicine. 15

"Where should the money be?" mused the physician, looking about the room. Suddenly, he perceived a small iron safe, half-concealed by the trailing end of a window curtain. He stepped there swiftly with his medicine case which actually contained an elegant set of the latest conceived tools used by an ingenious safe burglar. Underneath the tools was a mass of crumpled banknotes amounting to eight hundred and thirty dollars, a sum the physician had obtained after breaking an old-style safe a few hours ago. 20

Dr. James walked back to the bed. There was a mocking, grim smile on the lips of the dying man. He had been watching the physician at work. "Medicine and burglary wedded! I never saw it before," he said, painfully. Suddenly, a deep blush suffused the man's face - the respiration ceased, and, with scarcely a tremor, he expired. Close following upon his last breath came the old woman bringing the medicine. Dr. James told her of the end. 25

"Dear now! It's in the Lord's hands. The Madam paid out the last bit of money for this bottle of medicine, and it never came to any use."

"Do I understand," asked Dr. James, "that Mrs. Chandler has no money?" 30

"Money, sir? Why, the Madam had twenty thousand dollars. Mr. Chandler played it at the races and lost every cent of it. There's nothing to eat in this house but some crumbly crackers in three days."

Some ten minutes later, Mrs. Chandler entered. Dr. James pointed to the safe with its still wide-open door and spoke kindly and briefly, "Your husband, Mrs. Chandler, toward the end, felt that he could not live; and directed me to open that safe, giving me the number upon which the combination is set. In that safe he said he had placed a sum of money - not large. The money is there on the table - as he described it - eight hundred and thirty dollars." 35

- (a) Give the meaning of each of the following words as used in the passage. One word answers or short phrases will be accepted. [3]

- (i) swooning (*line 6*)
- (ii) profound (*line 8*)
- (iii) instincts (*line 12*)

- (b) Answer the following questions briefly, in your own words.
- (i) What made Mrs Chandler swoon? [2]
 - (ii) What was Dr James's other profession? Give evidence to show how he had come prepared for his other profession. [2]
 - (iii) What precaution did he take to ensure that nobody saw what he was going to do? [2]
 - (iv) Give evidence to show that he had done some of his other business recently. [1]
 - (v) What kindness did Dr James show to Mrs Chandler? What explanation did he give for his kindness? [2]
- (c) In not more than 50 words show that Dr James was a medical doctor as well as a cautious burglar. [8]

Question 5

- (a) Fill in each of numbered blanks with the correct form of the word given in the brackets. Do not copy the passage, but write in the correct serial order the word or the phrase appropriate to the blank space. [4]

Example:

Answer: (0) appearing

Articles (0) _____ (appear) in newspapers and magazines, sometimes (1) _____ (offer) tips on learning. According to one write-up, a nose (2) _____ (bury) in a book will not sniff out much knowledge. Hours (3) _____ (spend) on non-stop study are so many hours (4) _____ (waste). Some writers (5) _____ (recommend) that one should take a break and glance at a book of jokes or cautions. Humour (6) _____ (help) in learning. However, the risk involved (7) _____ (be) that you may scare everyone by sudden loud laughter. Perhaps slow music (8) _____ (keep) you company is a safer aid.

- (b) Fill in the blanks with suitable words: [4]

- (i) My mother prefers tea _____ coffee.
- (ii) _____ being a doctor, he is the author of many medical journals.
- (iii) A glow emanated _____ the lamp by the bed.
- (iv) A man is known _____ the company he keeps.
- (v) The planet was seen _____ the telescope.
- (vi) She is smarter _____ the two. *between*
- (vii) The servant made _____ with ten thousand rupees. *off*
- (viii) The scheme fell _____ for lack of funds. *through*

- (c) Join the following sentences to make one complete sentence without using and, but or so. [4]
- (i) Rohan does not like to play cricket. He does not like to play hockey either.
 - (ii) Meeta is wearing a blue saree. She is my sister.
 - (iii) This is an ant hill. A snake lives here.
 - (iv) He is an excellent playwright. He is a great director.
- (d) Re-write the following sentences according to the instructions given after each. Make other changes that may be necessary, but do not change the meaning of the sentence. [8]
- (i) He must save money now, or he will not be able to buy a house.
(Begin: Unless)
 - (ii) I would rather eat fruits than a lot of unhealthy junk food.
(Begin: I prefer)
 - (iii) The librarian orders books for the school library every year.
(Begin: Books)
 - (iv) Had I not helped her, she would not have succeeded.
(Begin: But....)
 - (v) Raju did not complete the exercise on time.
(Rewrite the sentence adding a question tag.)
 - (vi) The old woman was too slow to catch the bus.
(Use: So ... that)
 - (vii) The bee is more industrious than all other creatures.
(Use: most industrious)
 - (viii) As soon as we lit the candle, the power supply was restored.
(Begin: No sooner)

THE FIRST COMPARATIVE EXAMINATION 2021-22

Class X (ICSE)
LITERATURE IN ENGLISH
ENGLISH Paper 2

(Two hours)

Maximum 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 the time allowed for writing the answers.

Attempt five questions in all.

You must attempt one question from each of the Sections A, B and C
and any two other questions.

The intended marks for questions or parts of questions are given in brackets / /

SECTION A – DRAMA

The Merchant of Venice: Shakespeare

Question 1

Read the extract given below and answer the questions that follow:

Shylock: Signior Antonio, many a time and oft
In the Rialto you have rated me
About my moneys and usances:
Still have I borne it with a patient shrug,
For sufferance is the badge of all our tribe.

- (i) Where is the scene set? How has Antonio often treated Shylock? How has Shylock reacted to the treatment? [3]
- (ii) What business brings Antonio to Shylock? What custom is Antonio ready to break while doing his business? Why? [3]
- (iii) Earlier in the scene, Shylock mentions that he hates Antonio. State the reasons for his hatred. [3]
- (iv) What were the terms of the bond that Shylock asks Antonio to sign at the end of the scene? [3]
- (v) Referring to the end of the scene what estimate do you form of the characters of Antonio and Bassanio? Give evidence from the text to support your answer. [4]

Question 2

Read the extract given below and answer the questions that follow.

Arragon: What many men desire! That 'many' may be reward
By the fool multitude, that choose by show,
Not learning more than the fond eye doth teach,
Which prides not to the interior.

- (i) What does 'fool multitude' mean? What does Prince of Arragon say about them? What does he compare them to?
- (ii) Which casket makes the Prince of Arragon to speak the above words? Who is the inscription on that casket? Which casket does Arragon choose in the end?
- (iii) What reasons does Prince of Arragon go on to give for his choice?
- (iv) What does he find when he opens the casket of his choice? What is it 'unlike'?
- (v) State the contents of the scroll that Prince of Arragon finds in the casket.

Question 3

Read the extract given below and answer the questions that follow:

Portia: Away then! I am lock'd in one of them:

If you do love me, you will find me out.

Nerissa, and the rest, stand all aloof,

Let music sound while he doth make his choice.

- (i) Who is going to make the choice here? Explain "Away then! I am lock'd in one of them".
- (ii) What instructions does Portia give to the attendants present there before this person makes the choice? What will be the role of music if he is unsuccessful in his attempt?
- (iii) What will be the role of music if he wins? Explain the comparison that Portia makes between this person and Alcides.
- (iv) Later in the scene what reasons does this person give for rejecting gold and silver casket? Why does he choose the lead casket?
- (v) By closely referring to what the person says about a law suit, religion and the cowards, state how he proves that appearances can be deceptive.

SECTION B - POETRY

A Collection of Poems

Question 4

Read the extract given below and answer the questions that follow:

'Now tell us what 'twas all about,'
Young Peterkin, he cries,
And little Wilhelmine looks up
With wonder-waiting eyes.
'Now tell us all about the war,
And what they fought each other for.'

(After Blenheim, Robert Southey)

- (i) Who are 'Peterkin' and 'Wilhelmine' talking to? What did they want to know?
Who does 'they' in the last line of the extract refer to?
- (ii) Why, 'twas a wicked thing!'" What does this statement tell us about the children?
- (iii) Were Peterkin and Wilhelmine given a satisfactory reply? Why do you think so?
- (iv) What does the person say about the effects of war on his own family?
- (v) From your reading of the poem what estimate do you form of the character of the person the children are talking to? What underlying theme of the poem does his behaviour highlight?

Question 5

Read the extract given below and answer the questions that follow:

Bangle sellers are we who bear
Our shining loads to the temple fair..
Who will buy these delicate, bright
Rainbow-tinted circles of light?
Lustrous tokens of radiant lives.

(Bangle Sellers, Sarojini Naidu)

- (i) Where are the bangle sellers going to sell their bangles? Why do they select this place? Who are the prospective buyers of these bangles? [3]
- (ii) What kind of bangles are suitable for a maiden's wrist? What are they compared to? What does the poet wish to convey by the choice of bangles that a maiden wears? [3]
- (iii) What kind of bangles does a bride wear? What are they compared to? What is its symbolic significance? [3]

- (iv) Later in the poem why does the poet refer simultaneously to 'bridal laughter' and 'bridal tear'? What words does he use in the line before this phrase to make a comparison? [3]
- (v) In the poet's opinion, what does a woman who 'has journeyed through life midway' take pride in? Comment on the theme of the poem. [4]

Question 6

Read the extract given below and answer the questions that follow:

For song and mother-croon of bird
In hushed and happy twilight heard...
The treble of heaven's harmony...
These things he plants who plants a tree.

(The Heart of the Tree, *Henry Cuyler Bunner*)

- (i) Whom does the poet call 'a friend of sun and sky'? Why? [3]
- (ii) Whom does the tree provide shelter to? What is known as 'mother-croon' of birds? When can one hear the croons? [3]
- (iii) Enumerate any three benefits of planting trees as suggested by the poet. [3]
- (iv) What do the trees symbolize when they fade and flush again? What 'far cast' thought prompts the person who plants the trees? [3]
- (v) What philosophical thoughts does the poet express in the concluding stanza of the poem? Mention any one figure of speech used in the poem with a suitable example. [4]

SECTION C – PROSE

A Collection of Short Stories

Question 7

Read the extract given below and answer the questions that follow:

"You'll excuse me for speaking, miss, but, I see you're acquainted with the marshall here."

If you'll ask him to speak a word for me when we get to the pen he'll do it, and it'll make things easier for me there. He's taking me to Leavenworth prison. It's seven years for counterfeiting."

- (i) Who is the speaker? To whom are the words addressed? Where are they? [3]
- (ii) Who is being referred to as 'marshall'? Describe his appearance. [3]
- (iii) Why could the marshall not offer his right hand to greet the girl? How did the girl react to it? [3]

- (iv) A little later in the story, the marshall says, *my butterfly days are over*. Does he say this? What does it really indicate?
- (v) Explain the significance of 'hearts' and 'hands' in the story.

Question 8

Read the extract given below and answer the questions that follow:

Mrs. Thompson saw him approaching from the window, and with ruffling feathers met him a few paces from the door, as he opened the garden gate and came in. He bore a precious burden, and he felt it to be so.

- (i) Who is the 'young woman' mentioned in the extract? Describe her appearance. [3]
- (ii) How has this precious burden been treated earlier? What had happened to her family? [3]
- (iii) What did Mrs. Thompson ask her husband? What was his reaction to it? [3]
- (iv) What was the reaction of Mrs. Thompson when the precious burden was brought in? How did her attitude change later? [3]
- (v) Who is the angel in disguise in the story? Give reasons to justify your answer. [4]

Question 9

Answer the following questions with reference to the short story, 'Chief Seattle's Speech':

- (i) Explain the circumstances under which the famous speech of Chief Seattle was given. [4]
- (ii) How does Chief Seattle compare Christianity and the religion of Great Spirit? [4]
- (iii) What is the message conveyed through the speech? How is the order of nature referred to by the Chief? How does he hint that justice will be done at the end? [8]

THE FIRST COMPARATIVE EXAMINATION 2021-22

**Class X (ICSE)
MATHEMATICS**

Time: Two hours and a half

Maximum marks: 80

Instructions:

- Answers to this paper must be written on the answer script 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.
- Answer all questions in Section A. Attempt any four questions from Section B.
- All working, including rough work must clearly be shown and must be done on the same sheet as the rest of the answer. Omission of essential working will result in loss of marks.
- The intended marks for questions or parts of questions are given in brackets []
- Mathematical tables and graph papers shall be provided to you.

SECTION A [40 marks]

Attempt all questions from this section.

Question 1

(a) Solve the following inequation and represent the solution on the number line:

$$2x - 3 < x + 1 \leq 4x + 7; x \in \mathbb{W}$$

[3]

(b) Mr Anil deposited ₹ 800 per month in a recurring deposit account at $r\%$ p.a. for

$1\frac{1}{2}$ years. If he received ₹ 15084 at the time of maturity, find the value of ' r '.

[3]

(c) Find matrix P such that $P \times \begin{bmatrix} 2 & 6 \\ -1 & -8 \end{bmatrix} = \begin{bmatrix} -4 & 8 \end{bmatrix}$. Also write the order of matrix P.

[4]

Question 2

(a) If $x \begin{bmatrix} 2 \\ 3 \end{bmatrix} + y \begin{bmatrix} -1 \\ 0 \end{bmatrix} = \begin{bmatrix} 10 \\ 6 \end{bmatrix}$, find the values of x and y .

[3]

(b) What number should be subtracted from $3x^3 - 8x^2 + 4x - 3$ so that the resulting expression has $x + 2$ as a factor?

[3]

(c) Using a graph paper, plot the points A (6, 4) and B (0, 4).

(i) Reflect A and B in the origin to get images A' and B'.

(ii) Write down the coordinates of A' and B'.

(iii) State the geometrical name of the figure ABA'B'.

(iv) Find its perimeter.

[4]

Question 3

- (a) Solve $2x^2 + 5x - 9 = 0$ using formula and give your answer correct to 2 decimal places.

Q1

- (b) Given $A = \begin{bmatrix} 2 & 0 \\ -1 & 7 \end{bmatrix}$ and I is a unit matrix of order 2×2 . If $A^2 = 9A + mI$, find 'm'.

1

- (c) Mr Jacob purchases a movie camera for ₹ 25488, which includes 10% rebate on the marked price and 18% tax (under GST) on the remaining price. Find the marked price of the camera.

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Question 4

- (a) Using the Factor Theorem, show that $(x - 3)$ is a factor of the polynomial $x^3 + 3x^2 - 10x - 24$. Hence, factorise the polynomial completely.

(b) Mohan deposited ₹ 800 per month in a recurring deposit account for 1 year at the rate of 10% p.a. Find the amount he will get on maturity.

(c) Twenty identical cards are numbered 1 to 20. The cards are well-shuffled and then a card is drawn at random. Find the probability that the number on the card is:

 - (i) a prime number
 - (ii) a perfect square
 - (iii) a multiple of 4 and 5
 - (iv) a multiple of 4 or 5.

18

12

14

SECTION B [40 marks]

Attempt any four questions from this section.

Question 5

- (a) Without solving the following quadratic equation, find the value(s) of k for which the given equation has equal roots.

$$x^2 - (k+2)x + (k+5) = 0$$

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- (b) The expression $x^3 - ax^2 + bx - 6$ leaves remainder -8 when divided by $(x - 1)$. If $(x - 2)$ is a factor of the given expression, find the values of a and b .

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- (c) A shopkeeper buys a machine from a retailer for ₹ 50,000. He marks the price of the machine 20% above his cost price and sells it to a consumer at 10% discount on the marked price. If the sales are intra-state and the rate of GST is 12%, find:

- (i) the marked price of the machine.
 - (ii) consumer's cost price of the machine inclusive of tax (under GST).
 - (iii) the tax (under GST) paid by the shopkeeper to the Central Government.
 - (iv) the tax (under GST) paid by the shopkeeper to the State Government

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Question 6

- (a) (b) Write down the coordinates of the image of the point $(1, -2)$ when
(i) reflected in x -axis
(ii) reflected in y -axis
(iii) reflected in the origin. [3]

(b) Solve the following inequation and graph the values of x on the real number line:

4)
$$-3 \frac{1}{3} \leq \frac{x}{2} + 1 \frac{1}{3} < \frac{1}{6}; x \in \mathbb{R}$$
 [3]

- (c) The product of the digits of a two digit number is 24. If its unit's digit exceeds twice its ten's digit by 2, find the number. [4]

Question 7

- (a) Using Remainder Theorem, find the value of ' m ' if $mx^3 - 2x^2 - 3$ and $x^3 - mx^2 + 5$ leave the same remainder when divided by $x - 2$. [3]
- (b) A die is thrown once. Find the probability of getting:
(i) a number greater than or equal to 5
(ii) a number less than 8
(iii) an even prime number. [3]
- (c) Mr Gupta had a recurring deposit account. He deposited ₹ 140 per month at 10% per annum. If he received ₹ 1372 as interest at the time of maturity, find the total time for which the account was held. [4]

Question 8

- (a) Rakhi opened a recurring deposit account for 20 months. The rate of interest is 9% p.a. and she receives ₹ 441 as interest at the time of maturity. Find the amount that Rakhi deposited every month. [3]
- (b) Divide 20 into two parts such that three times the square of one part exceeds the other part by 10. [3]
- (c) Use graph paper for this question.
Point A(0, -5) is invariant under reflection in line L_1 .
(i) Name line L_1 .
(ii) Write down the image of B(-3, 2) under reflection in L_1 . Name it as B' and write its coordinates. (Show reflection on graph)
(iii) Reflect B' in origin to B''. Write the coordinates of B''. (Show reflection on graph) [4]

Question 9

- (a) If $(x + a)$ is a common factor of expressions $f(x) = x^2 + px + q$ and $g(x) = x^2 + mx + n$, prove that $a = \frac{n-q}{m-p}$. [3]

(a) Given $A = \begin{bmatrix} 2 & -1 \\ 2 & 0 \end{bmatrix}$, $B = \begin{bmatrix} -3 & 2 \\ 4 & 0 \end{bmatrix}$ and $C = \begin{bmatrix} 1 & 0 \\ 0 & 2 \end{bmatrix}$.

Find matrix X such that $A - X = 2B + C$. [3]

- (b) Mrs. Saroj deposited ₹ 1600 per month in a cumulative deposit account at 9% per annum. If she got ₹ 65592 at the time of maturity, find the total time for which the account was held. [4]

Question 10

- (a) Two different dice are rolled simultaneously. Find the probability that the sum of the numbers appearing on the top of two dice is:

- (i) at least 9
- (ii) at most 4.

[3]

- (b) Given $A = \{x : -6 < 5x - 2 \leq 17, x \in \mathbb{N}\}$ and

$$B = \{x : -2 \leq 7 - 3x < 17, x \in \mathbb{R}\}.$$

Represent A and B on two different number lines. Write down the elements of $A \cap B$. [3]

- (c) A dealer in Uttar Pradesh buys an article for ₹ 16000 from a wholesaler in Uttar Pradesh. He sells the article to a consumer in Rajasthan at a profit of 25%. If the rate of GST is 5%, find:
- (i) the tax (under GST) paid by the wholesaler to Government.
 - (ii) the tax (under GST) paid by the dealer to the Central Government.
 - (iii) the amount which the consumer pays for the article.

[4]

Question 11

- (a) Solve the following inequation and represent the solution set on the number line:

$$4x - 19 < \frac{3x}{5} - 2 \leq -\frac{2}{5} + x, x \in \mathbb{R}$$

[3]

- (b) A fete is being held in a large hall which has 9 doors. By mistake, the caretaker has left 3 doors locked. If someone tries to pull a door at random, find the probability that it will be:

- (i) locked
- (ii) not locked.

[3]

- (c) ₹ 7500 was divided equally among a certain number of children. Had there been 20 less children, each would have received ₹ 100 more. Find the original number of children. [4]

THE FIRST COMPARATIVE EXAMINATION 2021-22

Class V (ICSE)

GEOGRAPHY - I U G. 2

Time: Two hours

Maximum marks: 80

Instructions:

- Answers to this paper must be written on the answer script provided.
- All subsections of each question must be answered in the correct order.
- You will NOT be allowed to write during the first fifteen minutes. This time is to be spent in reading the question paper.
- Please do not write anything on your question paper except your name and roll number.
- The intended marks for questions or parts of questions are given in brackets.
- Do not copy the questions on your answer script but copy the correct question numbers.
- In all map work, make wise use of arrows to avoid overcrowding of the map. The map given at the end of this question paper must be detached and after marking, must be fastened to your answer booklet after the cover page. Answer seven questions in Part I. Part II is compulsory. A total of six questions are to be attempted from Part II.

PART I [20 marks]

Question 1

On the outline map of India, mark, name and label the following:

- (a) The Gangetic Plain
- (b) IST Meridian
- (c) The Palk Strait
- (d) Kochi
- (e) Lake Wular
- (f) The River Betwa
- (g) Kolkata
- (h) The Nathu-La Pass
- (i) A densely populated area in India
- (j) The Chota Nagpur Plateau
- (k) The Eastern Ghats
- (l) The Gulf of Kutch
- (m) The Karakoram Range
- (n) An area of Laterite Soil in India
- (o) The River Tungabhadra
- (p) Mt. Kanchenjunga
- (q) The Andaman Sea
- (r) The Konkan Coast
- (s) The Nilgiris
- (t) New Delhi

PART II [60 Marks]
(Answer any six questions from this part.)

Question 2

- Define the following terms:
 - Humus
 - Leaching
- Distinguish between Gully Erosion and Sheet Erosion.
- Name the soil that is also known as Riverine Soil. State two of its characteristics.
- Explain the need for soil conservation in India. State any two methods of soil conservation.

Question 3

- Define the following terms:
 - Soil Fertility
 - Soil Texture
- Give two points of differences between Khadar and Bhangar Soils.
- With reference to Red Soil, answer the following:
 - How is it formed?
 - Why is it good for Dry Farming?
 - Name any two areas where it is found.
- Give a reason for the following statements:
 - Black Soil has self-ploughing property.
 - Laterite Soil is not suitable for cultivation.
 - Red Soil is red in colour.

Question 4

- Why is there a need for irrigation in India?
- Distinguish between Inundation Canals and Perennial Canals.
- Where are the tanks most widely used in India? Give two reasons to support your answer.
- What is meant by Rain Water Harvesting? Mention any two water harvesting practices followed in India.

Question 5

- (a) Mention any four ways of recharging ground water [2]
- (b) Mention any two disadvantages of tank irrigation [2]
- (c) What are the conditions that favour canal irrigation in Northern India? [3]
- (d) What are the advantages of tube wells over ordinary wells? [3]

Question 6

- (a) Why is road transport favoured in the Northern Plains of India? [2]
- (b) Define the following:
 - (i) National Highways [1]
 - (ii) Golden Quadrilateral [1]
- (c) Name and explain the three Track Systems of Indian Railways [3]
- (d) Give a reason for the following statements:
 - (i) Air Transport is used only for high value goods and passenger services. [1]
 - (ii) People prefer Airways over Waterways. [1]
 - (iii) Inland water transport is not well developed in India. [1]

Question 7

- (a) Name the following:
 - (i) A riverine port [1]
 - (ii) A natural harbour [1]
- (b) What is the significance of transportation for country like India? [2]
- (c) Mention any three problems of the Indian Railways. [3]
- (d) Give three reasons why rivers of South India are not navigable. [3]

Question 8

- (a) Mention two ill effects of acid rain. [2]
- (b) Give two advantages that Sanitary Landfills have over Open Dumping. [2]
- (c) Mention any three ways that an individual can follow to help to reduce environmental pollution. [3]
- (d) Explain the following:
 - (i) Composting [1]
 - (ii) Biomagnification [1]
 - (iii) Segregation [1]

Question 9

- (a) Define Global Warming. Mention any one impact of it on the environment.
- (b) Distinguish between the Indoay Method of composting and Bengaluru Method of composting.
- (c) Mention any three impacts of waste accumulation.
- (d) Explain 3R's of Waste Management with the help of examples.

Question 10

- (a) Distinguish between Transported soil and Residual soil.
- (b) Mention any two causes of Ozone Depletion.
- (c) Give a reason for the following statements:
 - (i) Well irrigation is popular in Northern Plains
 - (ii) Man is responsible for water crisis in India.
 - (iii) Drip irrigation is gaining popularity in recent days.
- (d) Mention two disadvantages and one advantage of Railways.

Question 11

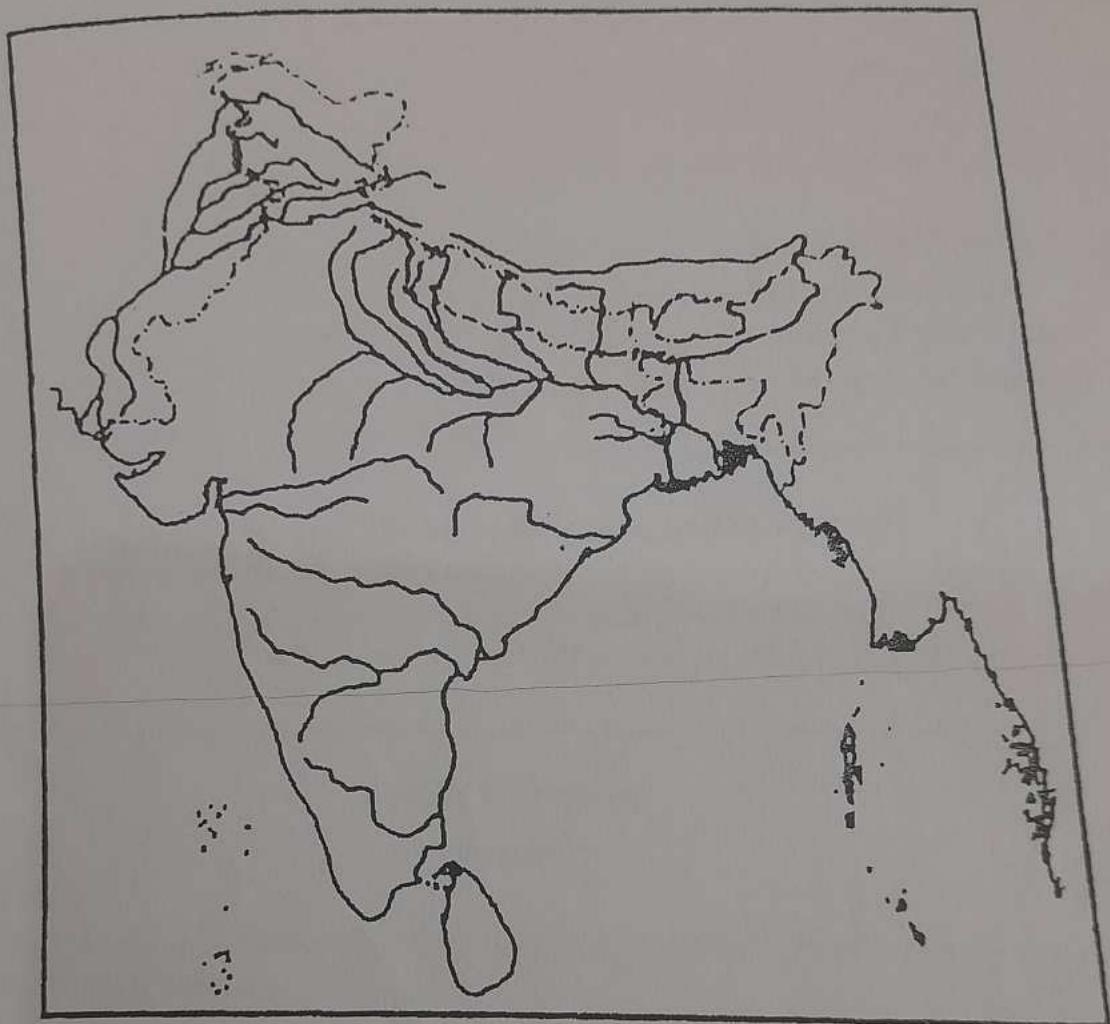
- (a) Define Terrace Farming and Shelter Belts.
- (b) Mention any two impacts of waste accumulation on human life?
- (c) Give a reason for the following statements:
 - (i) Among all means of transport, road transport remains the most popular means of transport
 - (ii) River Ganga is navigable from Allahabad right up to its mouth
 - (iii) A good network of transport is of great help for the development of the economy
- (d) Mention two advantages and one disadvantage of Canal Irrigation.

Name

Index No.....

(This map, if used, must be fastened with all other answers.)

Map of India for Question 2.



ONLY FOR THE EXAMINER

a	b	c	d	e	f	g	h	i	j

THE FIRST COMPARATIVE EXAMINATION 2021-22

Class X (ICSE)

History & Civics - H. C. G. - Paper I

Time: Two hours

Instructions:

- Answers to this paper must be written on the answer script provided separately.
- All subsections of each question must be answered in the correct order.
- You are NOT 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.
- Please do not write anything on your question paper except your name and roll number.
- The intended marks for questions or parts of questions are given in brackets [].
- Do not copy the questions on your answer script but copy the correct question number.
- Part I is compulsory. Attempt two questions out of three from Section A and three questions out of five from Section B. A total of five questions will be attempted from Part II.

Maximum marks: 80

PART I [30 marks]

Attempt all questions from this Part.

Question 1

- (a) Name the two types of authority in a federal set up of India. [1]
- (b) By whom and on whose advice can the Lok Sabha be dissolved? [1]
- (c) Define the term Quorum. What is the quorum of Rajya Sabha? [1]
- (d) How many Rajya Sabha members are nominated by the President? [1]
- (e) What is the maximum gap allowed between two parliamentary sessions? [1]
- (f) Who elects members of the Rajya Sabha? [1]
- (g) Who elects the presiding officer of Lok Sabha? [1]
- (h) What is meant by the term No-Confidence Motion? [1]
- (i) Who decides whether a bill is a money bill or not? [1]
- (j) Which bodies have the right to legislate on subjects in the Concurrent List? [1]

Question 2

- (a) Explain the term Doctrine of Lapse. Name any two states annexed by the British using the Doctrine of Lapse. [2]
- (b) Mention any two social reforms advocated by the British which affected the religious traditions of the people. [2]
- (c) Mention the objectives of the Early Nationalists. [2]
- (d) Who is known as the Father of Indian Renaissance? State one of his contributions. [2]
- (e) When and by whom was the Indian National Congress formed? [2]

- (f) Who presided over the first two sessions of the Indian National Congress? [2]
- (g) Mention two basic reasons responsible for the Surat Split of 1907 between the Early Nationalists and the Assertive Nationalists. [2]
- (h) State any two contributions of Lala Lajpat Rai. [2]
- (i) What is meant by Aggressive Nationalism? [2]
- (j) What were the two hostile groups referred to as once the First World War began? [2]

PART II [50 marks]

SECTION A

Attempt any two questions from this Section.

Question 3

With reference to the Parliament, answer the following:

- (a) State any three qualifications needed to contest for the Lok Sabha seat. [2]
- (b) State three ways in which the Parliament exercises control over the executive. [2]
- (c) Write short note on:
- (i) Rajya Sabha is a permanent house [2]
 - (ii) Two administrative functions of the Speaker. [2]

Question 4

With reference to the functions of the Parliament, answer the following:

- (a) Any three Electoral functions. [2]
- (b) Any three Financial functions. [2]
- (c) Any four Legislative functions. [2]

Question 5

With reference to the two houses of the Parliament, answer the following:

- (a) Mention any three exclusive powers of the Lok Sabha. [2]
- (b) State any three exclusive powers of the Rajya Sabha. [2]
- (c) Important matters where the two houses enjoy co-equal powers. [2]

SECTION B

Attempt any three questions from this Section.

Question 6

With reference to the consequences of the Great Outbreak of 1857 and the Growth of Nationalism, answer the following:

- (a) Changes in the administrative set up of the British territories in India. [3]
- (b) Changes in the Army. [3]
- (c) Role of press. [4]

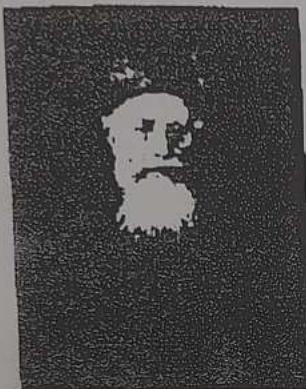
Question 7

With reference to the Indian National Movement, answer the following:

- (a) State three ways in which the socio-religious reform movements led to the rise and growth of Nationalism in India. [3]
- (b) How did the repressive colonial policies lead to the rise of nationalism? [3]
- (c) State the aims of the Indian National Congress. [4]

Question 8

With reference to the pictures given below and the Indian National Congress, answer the following:



(A)



(B)

- (a) Identify the persons (A) and (B) given above. To which section of the Congress did each belong. [3]

- (b) Highlight three different methods of struggle adopted by each section of the Congress. [3]

- (c) State two contributions of each in the freedom struggle. [4]

Question 9

With reference to the causes of First World War, explain the following:

- (a) Imperialism [3]
- (b) Division of Europe into Two Hostile Groups [3]
- (c) Immediate Cause. [4]

Question 10

With reference to the consequences of the First World War, answer the following:

- (a) How did the political scenario of the world change after the First World War? [3]
- (b) Formation of League of Nations. [3]
- (c) Mention any four clauses of the Treaty of Versailles. [4]

THE FIRST COMPARATIVE EXAMINATION 2021-22
Class X (ICSE)
HINDI

Time: Three hours
Instructions:

Maximum marks: 70

- 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.
- This paper comprises of two sections: Section A and Section B.
- Attempt all the questions from section A. Attempt any four questions from section B, answering at least one question each from the sections (prose and poetry) you have studied and any two other questions.
- The intended marks for questions or parts of questions are given in brackets [].

SECTION A [40 marks]

Attempt all questions.

Question 1

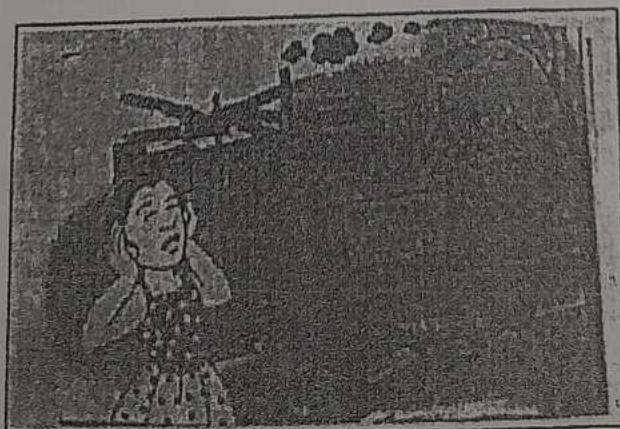
Write a short composition in Hindi of approximately 250 words on any *one* of the following topics:-

[15]

निम्नलिखित विषयों में से किसी एक पर हिन्दी में लगभग 250 शब्दों में संक्षिप्त लेख

लिखिए:-

- (i) आपने अपने जीवन के विषय में क्या सोचा है? आप क्या बनना चाहेंगे? अपने उददेश्य की प्राप्ति के लिए आप कौन-कौन से प्रयास करेंगे?
- (ii) यदि दूरदर्शन न होता तो हमारे घर अधिक सुखद और शान्तिप्रिय होते। इस कथन के पक्ष या विपक्ष में अपने विचार प्रस्तुत कीजिए।
- (iii) कल्पना कीजिए यदि विजली का आविष्कार न हुआ होता तो मानव जीवन कैसा होता होता?
- (iv) शठ सुधरहिं सत्संगति पाई इस उक्ति को आधार बनाकर एक मौलिक कहानी लिखिए।
- (v) नीचे दिए गए चित्र को ध्यान से देखिए और चित्र को आधार बनाकर कोई कहानों अथवा प्रस्ताव लिखिए, जिसका सीधा और स्पष्ट सम्बन्ध चित्र से होना चाहिए।



Question 1
Write a letter in Hindi in approximately 120 words on any one of the topics given below:-

विनालिखित में से किसी एक विषय पर हिन्दी में लगाग 120 शब्दों में पत्र लिखिए:-

विनालिखित में से किसी एक विषय पर हिन्दी में लगाग 120 शब्दों में पत्र लिखिए:-

(i) आपकी छोटी बहन जो रामायान में राक्षस पक्ष रही है, परीक्षा में अनुत्तीर्ण हो गई है,

उसे रामायान में तुम पापा राम के लिए प्रेरित करते हुए एक पत्र लिखिए।

(ii) अपने गार में बड़ी अमीर विद्योग की गारगानी और प्रशारण का ध्यान आकृष्ट करने के लिए किसी रामायान पत्र के रांपादक के नाम पत्र लिखिए।

Question 3

Read the passage given below and answer in Hindi the questions that follow, using your own words as far as possible:-

विनालिखित विषय को ध्यानपूर्यक पढ़िए तथा उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए। उत्तर यथारंगव आपके अपने शब्दों में होने चाहिए:-

गानग के जीयन में नारी का बहुत महत्त्वपूर्ण स्थान है, उसके बिना पुरुष अदूरा है, इसी कारण कहा गया है कि शक्ति के बिना शिव भी शव बन कर रह जाते हैं। इसी कारण शिव को अद्वनारीश्वर कहा जाता है। नारी के दो मुख्य रूप हैं। सामान्य रूप में वह अवला कहलाती है किन्तु आत्म-सम्मान को ठेस पहुँचने की दशा में चण्डी का रूप धारण कर लेती है। सहनशीलता में उसे धरती के समान माना गया है। अपने तप और सहनशीलता की शक्ति से वह देवताओं को भी विवश कर देती है। सावित्री एक ऐसी ही भारतीय नारी थी।

मद देश के अश्वपति नाम के राजा की कन्या सावित्री का जन्म सावित्री देवी की उपासना से हुआ था। वह बहुत सुन्दर, विदुषी और मेधावी कन्या थी। उसके रूप और गुणों के अनुसार पति की खोज में असमर्थ माता-पिता ने सावित्री को अपने योग्य पति बुनने की आज्ञा दी। बूढ़े मंत्री के साथ राजकुमारी यात्रा पर घल दी। यात्रा के मध्य एक सघन बन से निकलते समय सावित्री की दृष्टि आकर्षक व्यक्तित्व वाले एक सुन्दर युवक पर पड़ी। मंत्री की सहायता से उसका परिचय जानकर वे सब वापस राजधानी आ गए। उस युवक का नाम सत्यवान था। वह शाल्व देश के राजा का पुत्र था। जंगल में ही पला-बढ़ा था। संयोगवश नारद जी भी वहाँ उपस्थित थे। उन्होंने यताया कि जो वर सावित्री ने चुना है उसकी आपु का केवल एक वर्ष ही शेष है। तब सावित्री ने अपने पिता जी से कहा कि उसने एक बार जिसका वरण कर लिया है वह उसी से विवाह करेगी। विधि-विधान से शादी सम्पन्न हो गयी।

विवाह के पश्चात् सावित्री की दिनचर्या पति, सास और ससुर की सेवा तक ही सीमित रह गयी। इसके साथ ही पति की दीर्घायु संबंधी प्रार्थना भी चलती रही। जिस दिन सत्यवान की मृत्यु निश्चित थी उसके तीन दिन पूर्व उसने निर्जल व्रत आरम्भ कर दिया किन्तु उसकी

दिनचर्या पथावत रही। अन्तिम दिन सत्यवान के साथ लकड़ी लेने जापत थी गली। प्राचीन सत्यवान की तरीकत बिंगड़ने लगी और नारद जी की भविष्यवाणी के अनुसार सत्यवान ने देह त्याग दी। यमराज सत्यवान के शरीर से प्राण निकाल कर पास में बौद्धकर दृष्टिगति की ओर चल दिए। सावित्री ने यमराज से कहा कि जहाँ उसके पति को ले जाया जाएगा वह भी वहीं जाएगी। यमराज ने सावित्री के पातिघट्य से प्ररान्त होकर उसे भ्रमेक तर दिया। अन्त में यमराज यहाँ तक कि उसे सौ यशस्वी पुत्रों की माँ बनने का आशीर्वाद भी दिया। अन्त में यमराज होकर अपने दिए आशीर्वाद के कारण ही उन्हें सत्यवान को पुन जीवित करना पड़ा। इस प्रकार अपनी दृढ़ता से सावित्री मुत्यु पर भी विजय प्राप्त करने में सफल हुई।

- (i) नारी के सम्बन्ध में लेखक के क्या विचार हैं ? [2]
- (ii) सावित्री कौन थी ? उसके गुणों का वर्णन कीजिए। [2]
- (iii) माता-पिता ने सावित्री को कब और क्या आज्ञा दी ? [2]
- (iv) सावित्री ने किसे और क्यों अपना पति चुना ? [2]
- (v) सावित्री ने किस प्रकार अपने पति के जीवन की रक्षा की ? [2]

Question 4

Answer the following according to the instructions given:-

निम्नलिखित प्रश्नों के उत्तर निर्देशानुसार लिखिए:-

- (i) निम्नलिखित मुहावरों में से किसी एक की सहायता से वाक्य बनाइए:-
आँखों में धूल झोंकना, आटे-दाल का भाव मालूम होना [1]
- (ii) निम्नलिखित शब्दों में से किन्हीं दो शब्दों के विलोम शब्द लिखिए:-
सरस, आज्ञा, अभिशाप, क्रय [1]
- (iii) निम्नलिखित में से किसी एक शब्द के दो पर्यायवाची शब्द लिखिए:-
इच्छा, कपड़ा [1]
- (iv) निम्नलिखित शब्दों में से किन्हीं दो शब्दों को शुद्ध कीजिए:-
कवित्री, अगामी, ऐसी, रूपरया [1]
- (v) निम्नलिखित शब्दों की भाववाचक संज्ञा बनाइए:-
उड़ना, शान्त [1]
- (vi) कोष्ठक में दिए गए निर्देशानुसार वाक्यों में परिवर्तन कीजिए:-
 (a) यालिका कम्प्यूटर सीख रही है। (पूर्ण वर्तमान में बदलिये) [1]
 (b) किसान खेत में हल चला रहा है। (कर्मवाच्य में बदलिए) [1]
 (c) आज हमारे ग्रह में अतिथी आ रहे हैं। (वाक्य शुद्ध कीजिए) [1]

SECTION B [40 Marks]

Attempt four questions from this section

You must answer at least one question from each of the Sections (Prose and Poetry) you have studied and any two other questions.

साहित्य रागर - संक्षिप्त कहानियाँ

Question 5

Read the extract given below and answer in Hindi the questions that follow
निम्नलिखित गद्यांश को पढ़िए और उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए-

“चारों सियार भेड़ों की जय बोलते हुए भेड़ों के झुंड के पारा आए।”

- भेड़ और भेड़िए-

लेखक - हरिशंकर परसाई

(i) चारों सियारों का संक्षिप्त परिचय देते हुए बताइए कि ये उस समय कहाँ आए हैं ?

(ii) बूढ़े सियार ने भेड़िए का रूप किस प्रकार बदला और क्यों ?

(iii) भेड़ों ने भेड़िए को देखकर क्या कहा ? बूढ़े सियार ने भेड़ों को किस प्रकार समझाया ?

(iv) इस कहानी द्वारा किस पर व्यंग्य किया गया है तथा कहानी में भेड़, भेड़िए और सियार किसके प्रतीक बताये गये हैं ?

Question 6

Read the extract given below and answer in Hindi the questions that follow:-

निम्नलिखित गद्यांश को पढ़िए और उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए-

एक दिन उसने ऊपर आसमान में पतंग उड़ती देखी। न जाने क्या सोचकर उसका हृदय एकदम खिल उठा। विश्वेश्वर के पास जाकर बोला, “काका ! मुझे एक पतंग मैंगा दो।”

- काकी -

लेखक - सियारामशरण गुप्त

(i) बालक कौन था ? वह उदास क्यों रहता था ?

(ii) उड़ती हुई पतंग को देखकर उसका हृदय क्यों खिल उठा ?

(iii) विश्वेश्वर कौन थे ? श्यामू ने उनसे क्या कहा और क्यों ?

(iv) पतंग प्राप्त करने के लिए श्यामू ने क्या किया ? उसका क्या परिणाम निकला ?

THE FIRST COMPARATIVE EXAMINATION 2021-22
Class X (ICSE)
COMPUTER APPLICATIONS

Time: Two hours

Maximum marks: 100

Instructions:

- * Answers to this paper must be written on the answer script provided separately.
- * All subsections of each question are to be answered in the correct order.
- * All working including rough work should be done on the same sheet as the rest of the answer.
- * 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 the paper is the time allowed for writing the answers.
- * Please do not write anything on the question paper except your name and roll number.
- * The intended marks for questions or parts of questions are given in brackets [].
- * Attempt all questions from Section A and any four questions from Section B.

SECTION A [40 marks]

Attempt all questions from this section.

Question 1

Answer the following questions:

- (a) Explain the significance of Byte Code in Java. [2]
- (b) Which package is imported automatically at the time of compilation? Write the names of any two other packages used in Java. [2]
- (c) What is an infinite loop? Give an example of infinite loop. [2]
- (d) Explain how an entry controlled loop is different from an exit controlled loop. Give example for each. [2]
- (e) Object is an instance of its class. Explain. [2]

Question 2

- (a) Write any two uses of break statement. [2]
- (b) What are escape sequences? Give two examples showing their uses. [2]
- (c) State the type of initialization for the following (static or dynamic):
 - (i) int x = y + z; [2]
 - (ii) double ans = Math.sqrt(9); [2]
- (d) What is a constant? How can a variable be changed into a constant? [2]
- (e) Arrange the following operators in the order from higher precedence to lower precedence:
(i) && (ii) % (iii) >= (iv) ++ [2]

Question 3

- (a) If $a = 10$ then write the output of the following code:
System.out.print(++a == n++ ? false : true);
- (b) What will be printed after executing the following code snippets?
- int x = 3 % 5; System.out.println(x);
 - int a = 5; double b = 5.0; System.out.println(a == b);
- (c) Write the value stored in the variable time after evaluating the following statements:
 $time = 4; time = ++time - time * --time;$
- (d) Write the output of the following program segment and also mention the number of times the loop is executed.

```
int a, b;  
for(a = 6, b = 4; a <= 24; a = a + 6)  
{  
    if(a % b == 0)  
        break;  
}  
System.out.println(a);
```

- (e) What are the default values of the variables declared of type int and of type float?
(f) Write the Java expressions for the following equation:

$$x = \frac{-a + \sqrt{b - 3ab}}{4a + b} + M$$

- (g) Rewrite the following code using for loop construct:

```
int x = 2;  
while(x <= 12)  
{  
    x = x + 3;  
    System.out.println(x);  
    x = x * 2;  
}  
System.out.println(x + 1);
```

- (h) Give the output of the following program snippet [2]
- ```
int a=3, b=6, c=5;
int res=a>b? (a>c?c:a):(b>c?b:c);
System.out.println(res);
```
- (i) What is the following code calculating and printing? [2]
- ```
int res=0;
for(char alpha='B';alpha<='D';alpha++)
{
    res+=alpha+32;
    System.out.println(res);
}
```
- (j) What will be the output of the following statements? [2]
- System.out.println("four "+2+2);
 - System.out.println("4 "+(2+2));

SECTION B [60 marks]

Attempt any four questions from this section.

The answers in this Section should consist of the Program in Blue J environment with Java. Each program should be written using Variable descriptions/Mnemonic Codes such that the logic of the program is clearly depicted. Flow-charts and Algorithms are not required.

Question 4

Yearly Income Tax is calculated as per the following table:

Income Tax Slabs (as per Annual Income)	Tax Rate	Health and Education Cess
up to ₹2,50,000	Nil	Nil
above ₹2,50,000	5% of annual income exceeding ₹2,50,000	4% of Annual Income Tax
up to ₹5,00,000		
above ₹5,00,000	₹12,500 + 20% of annual income exceeding ₹5,00,000	4% of Annual Income Tax
up to ₹10,00,000		
above ₹10,00,000	₹1,12,500 + 30% of annual income exceeding ₹10,00,000	4% of Annual Income Tax

Write a program in Java to input monthly income to calculate and print Net Tax as per the following formula:

$$\text{Net tax} = \text{Annual Income Tax} + \text{Health and Education Cess.}$$

[15]

Question 5

Write a program in Java to input a number to check and print whether it is a Niven number or not. A number is said to be a Niven number if it is divisible by the sum of its digits.

For example: If the input is 126

Sum of its digits = $1 + 2 + 6 = 9$ and

126 is divisible by 9 hence it (126) is a Niven number.

Question 6

Write a program in Java to input a number and print the frequency of its digits.

For example:

Enter a number: 8119332403

Digit	Frequency
0	1
1	2
2	1
3	3
4	1
8	1
9	1

Question 7

Write a menu driven program in Java to perform the following operations as per the user's choice:

- (a) to display the following pattern using for loop:

5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

- (b) to calculate and print the sum of the following series:

sum = $1 + 3 + 5 + 7 + \dots$ up to 10 terms.

Question 8

Write a program in Java to input a series of numbers one by one to print the count and average of those numbers which have 3 as their last digit. The process of inputting numbers should stop if the number inputted by the user is a negative number.

[15]

Question 9

Sigma Car Company has announced the following festive discounts on the purchase of certain Diesel and Petrol cars:

Cost of Car (in ₹)	Discount on Diesel Car	Discount on Petrol Car
up to 600000	0.0% on purchase amount	5.0% on purchase amount
above 600000 up to 1000000	5.0% on purchase amount	7.6% on purchase amount
above 1000000 up to 1500000	7.5% on purchase amount	10.0% on purchase amount
above 1500000	10.0% on purchase amount	15.0% on purchase amount

Write a program in Java to input the cost of car and the type of car purchased (D for Diesel Car and P for Petrol Car) from a customer. Using the above criteria compute and print the net amount to be paid by a customer.

$$\text{discount} = (\text{discount rate}/100) \times \text{amount of purchase}$$

$$\text{Net amount} = \text{amount of purchase} - \text{discount}.$$

[15]

THE FIRST COMPARATIVE EXAMINATION 2021-22
Class X (ICSE)
BIOLOGY
SCIENCE Paper - 3

Time: Two hours

Maximum marks: 80

Instructions:

- Answers to this paper must be written on the answer script 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.
- The intended marks for questions or parts of questions are given in brackets [].
- Please do not write anything on your question paper except your name and roll number.
- All subsections of each question must be answered in the correct order.
- Do not copy the questions on your answer script. Copy the correct question number.
- This question paper consists of two sections. Section I contains one question with eight parts (a) to (h). All the parts are compulsory. Section II contains six questions numbered 2 to 7. You have to answer any four of these questions.

SECTION I [40 marks]

Attempt all questions from this Section.

Question 1

(a) Name the following:

[5]

- (i) A kind of cell division seen at the tip of the shoot
- (ii) The process of conversion of ADP into ATP during photosynthesis
- (iii) The phase of cell cycle in which DNA is synthesized
- (iv) The repeated unit present on DNA strand
- (v) The mineral element present in chlorophyll.

(b) State location of each of the following:

[5]

- (i) Cell wall
- (ii) Thylakoid
- (iii) Centrosome
- (iv) Chloroplast
- (v) Genes.

(c) Copy and Complete the following paragraph by filling in the blanks (1) to (5) with appropriate term/words:

[5]

To test a leaf for starch, the leaf is boiled in water to _____ (1) _____. It is then boiled in methylated spirit to _____ (2) _____. The leaf is dipped in warm water to soften it. It is placed in petridish and _____ (3) _____ solution is added. The region of the leaf which contains starch turns _____ (4) _____ and the region which does not contain starch turns _____ (5) _____.

- (d) Given below are sets of five terms each. Rewrite them in correct logical sequence:
- (i) photons, water molecules, oxygen, grana, Hydrogen and hydroxyl ions
 - (ii) metaphase, telophase, prophase, anaphase, interphase
 - (iii) histone, DNA strand, chromosome, nucleosome, chromatin fibres
 - (iv) soil water, root hair, xylem, cortex, endodermis
 - (v) G2 phase, G1 phase, synthesis phase, karyokinesis, cytokinesis.
- (e) Choose the correct answer from each of the four options given below:
- (i) The number of daughter cells formed at the end of meiosis from a cell:
 - (A) 2 Haploid cells
 - (B) 2 Diploid cells
 - (C) 4 Haploid cells
 - (D) 4 Diploid cells.
 - (ii) Plasmolysis identifies the process of:
 - (A) Imbibition
 - (B) Diffusion
 - (C) Active transport
 - (D) Osmosis.
 - (iii) Nuclear membrane reappears during:
 - (A) Metaphase
 - (B) Telophase
 - (C) Anaphase
 - (D) Prophase.
 - (iv) A destarched plant is the one whose:
 - (A) Leaves are free from chlorophyll
 - (B) Aerial parts are free from starch
 - (C) Leaves are free from starch
 - (D) Plant is free from starch.
 - (v) A plant cell may burst when:
 - (A) Turgor pressure exceeds wall pressure
 - (B) Wall pressure exceeds turgor pressure
 - (C) Turgor pressure equalizes wall pressure
 - (D) None of these.

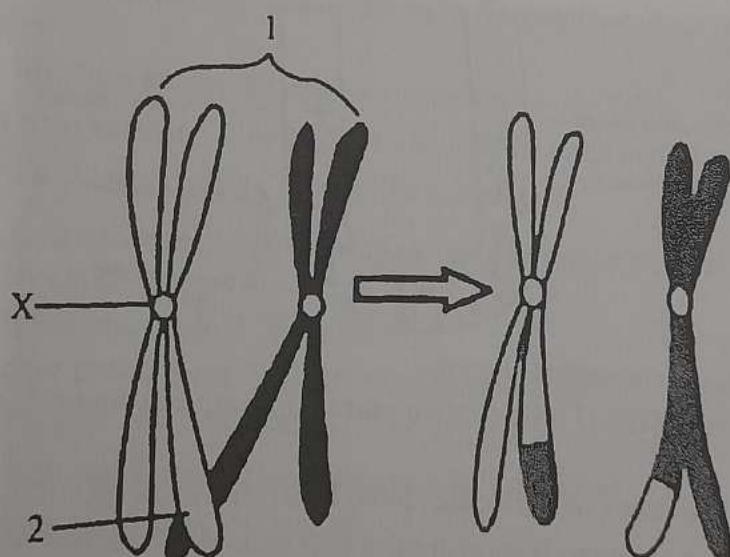
(f) State whether the following statements are true or false. Rewrite the correct statement by changing the first or last words of the statements.

- (i) The solvent used to dissolve chlorophyll pigments while testing a leaf for starch is soda lime.
- (ii) The nitrogen bond joins the complementary nitrogenous bases.
- (iii) Movement of molecules from their lower concentration to their higher concentration with the expense of energy is called active transport.
- (iv) The cell wall is semi permeable.
- (v) Karyokinesis is division of cytoplasm.

(g) Define each of the following terms:

- (i) Tonicity
- (ii) Root pressure
- (iii) Imbibition
- (iv) Nucleosome
- (v) Photosynthesis.

(h) Study the diagram given below and answer the questions that follow:

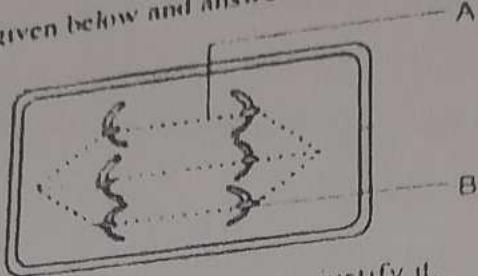


- (i) Name and define the phenomenon shown in the diagram. [1½]
- (ii) Give the significance of the phenomenon named in part (i) above. [1]
- (iii) Name the parts labelled 1 and 2. [1]
- (iv) Name the part labelled X and state its function. [1]
- (v) In which type of cell division does this phenomenon occurs? [½]

SECTION II [40 marks]
Attempt any four questions from this Section.

Question 2

(a) Study the diagram given below and answer the questions that follow:



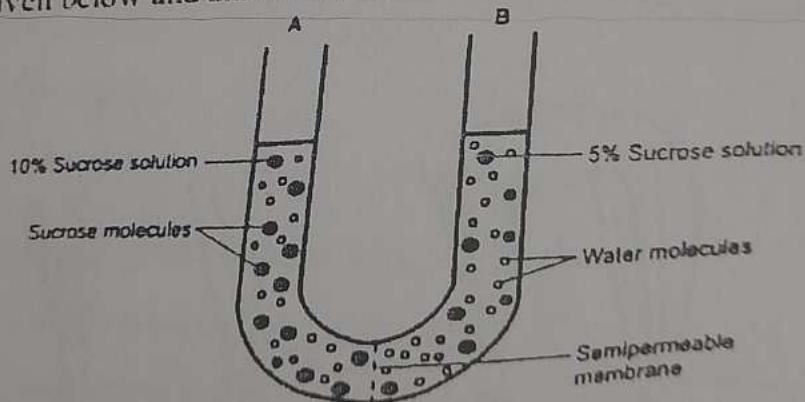
(b)

- Identify the cell and state one reason to justify it. [1]
 - Name the stage phase depicted in the diagram. What unique feature is observed in this stage? [1]
 - Name and draw the stage that comes before the stage shown in the diagram. [1]
- (b) State the significant function of each of the following:
- | | |
|-------------------|------------------|
| (i) Root hair | (ii) Chromosomes |
| (iii) Chlorophyll | (iv) Stomata |
| (v) Phloem. | |

Que
(a)

Question 3

(a) Given below is the diagram of an experiment just at the start. Study the diagram given below and answers the questions that follow:

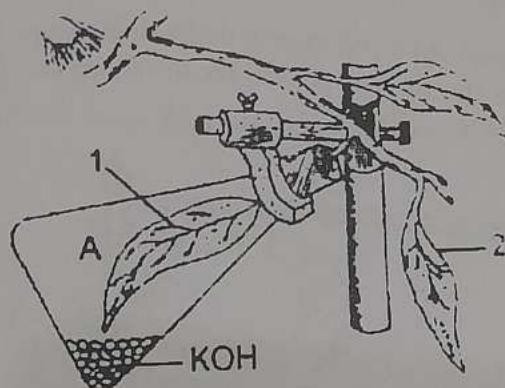


- Define the phenomenon shown. [1]
- Which limb of the U tube contain more concentrated sucrose solution A or B? [1]
- Why the two kinds of molecules have been shown in different sizes? [1]
- Why is the membrane separating the two solutions labelled as semi-permeable membrane? [1]
- Which limb of the U tube A or B is functionally comparable to the root hair of a plant? [1]
- What will be your observation after few hours? [1]

- (b) Give suitable reason for each of the following statements: [5]
- (i) Cell division is a must for all living organisms.
 - (ii) Meiosis is said to be reduction division.
 - (iii) Plants begin to die when excess of fertilizer is added to the soil.
 - (iv) A tiger owes its existence to chlorophyll.
 - (v) Plants with thin and broad green leaves perform more photosynthesis

Question 4

- (a) Study the following experimental setup demonstrating a particular aspect of a biological process and answer the questions that follow:

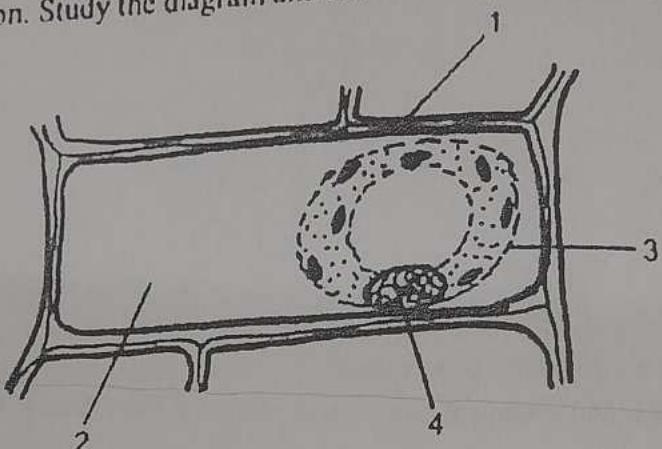


- (i) What is the aim of the experiment? [1]
 - (ii) Give a balanced chemical equation to represent the process shown in the setup. [1]
 - (iii) What chemical can be used as an alternative of KOH? [½]
 - (iv) In what manner do the leaves 1 and 2 differ at the end of starch test? [1]
 - (v) Draw a neat labelled diagram of a chloroplast. [1½]
- (b) Differentiate between each of the following pairs on the basis of the parameters given in the brackets: [5]
- (i) Haploid and Diploid (Definition)
 - (ii) Turgor pressure and Wall pressure (Explanation)
 - (iii) Exosmosis and Endosmosis (State of cell)
 - (iv) Mitosis and Meiosis (Number of nuclear division)
 - (v) Stroma and Grana (Function).

Question 5

- (a) Give the appropriate term for each of the following: [5]
- (i) Phase of cell cycle in which RNA and proteins are synthesized.
 - (ii) The protein constituent of the chromatin material.
 - (iii) An instrument used to measure the root pressure.

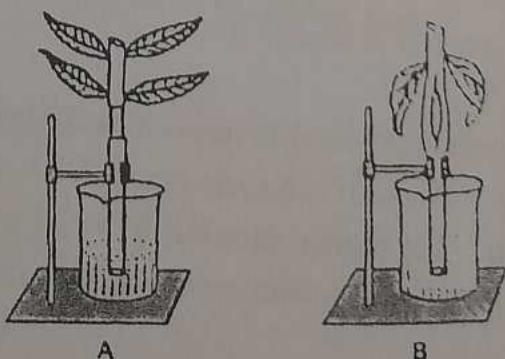
- (iv) The process of conversion of glucose to starch in photosynthesis.
 - (v) Loss of water in the form of droplets from the margin of leaves.
 - (vi) Fully distended state of the cell.
 - (vii) Specific sequence of nucleotide on a chromosome.
 - (viii) Radiating rays coming from centrioles in animal cell.
 - (ix) Type of solution in which cell shape and size remains unchanged.
 - (x) The process by which molecule distribute themselves evenly within the space they occupy.
- (b) Given below is the diagram of a cell as seen under microscope after been placed in a solution. Study the diagram and answer the questions that follow.



- (i) What is the technical term used for state/condition of the cell given?
- (ii) Give the technical term of the solution in which cell was placed.
- (iii) Name the parts numbered 1 to 4.
- (iv) Is the cell plant cell or animal cell? Give two reasons in support of your answer as evident from the diagram.
- (v) What would you do to bring the cell back to its original condition?

Question 6

- (a) Study the experiment setup given below and answer the questions given alongside.
- (i) What is the aim of the experiment?
 - (ii) Name the conducting tissue in shoot A and shoot B that has been removed.
 - (iii) Give reasons for your observations in the diagrams A and B given.
 - (iv) Draw a neat labelled diagram of stomatal apparatus.

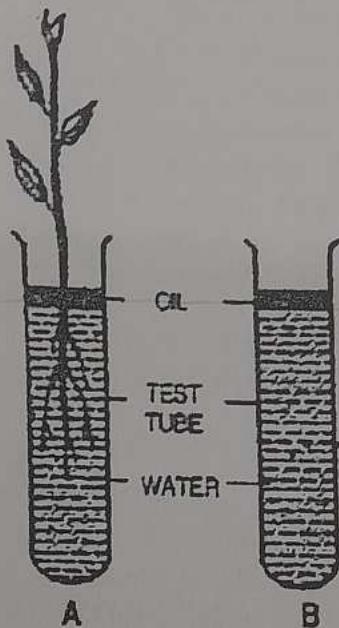


Expand the following abbreviations

- (i) NADP [1]
 - (ii) ATP [1]
 - (iii) DNA [1]
-) Give an example of: [1]
- (i) Plant with variegated leaf [1]
 - (ii) Aquatic plant used in the experimental setup of photosynthesis. [1]

Question 7

- a) Study the experimental setup given below and answer the questions that follow:



- (i) What is the aim of the setup? [1]
 - (ii) What will be observed in the two test tubes after 2 - 3 days? [1]
 - (iii) Why is the surface of water covered with oil? [1]
 - (iv) State the purpose of setting up test tube B. [1]
- (b) Give the diagrammatic representation of carbon cycle. [3]
- (c) Choose the odd one out and mention the category of the remaining terms. [3]
- (i) Stoma, Stroma, Grana, Thylakoid
 - (ii) Nitrogenous base, Pentose sugar, Sulphate, Phosphate
 - (iii) Cell wall, Centrosome, Cell membrane, Chloroplast

THE FIRST COMPARATIVE EXAMINATION 2021-22
CLASS X (ICSE)
PHYSICS
SCIENCE Paper - I

Time: Two hours

Instructions:

Maximum marks: 80

- Answers to this paper must be written on the answer script 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.
 - All subsections of each question must be answered in the correct order.
 - Please do not write anything on the question paper except your name and roll number.
 - The intended marks for questions or parts of questions are given in brackets [].
 - Section I is compulsory. Attempt any four questions from Section II.

SECTION I [40 marks]

Attempt all questions from this section.

Question 1

Question 2

- (a) A tennis ball and a table tennis ball have the same momentum. Which of the two has more K.E. and why? [2]

(b) State two conditions for a body, acted upon by several forces, to be in equilibrium. [2]

(c) A spanner (or wrench) has a long handle. Why? [2]

(d) State a factor on which the position of the centre of gravity of a body depends. Explain your answer with an example. [2]

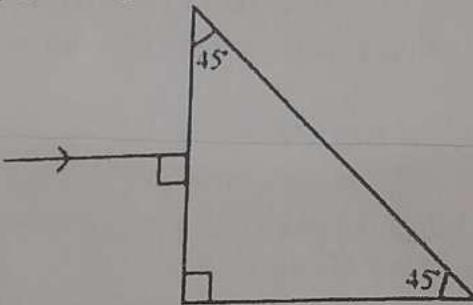
(e) Is it possible to have an accelerated motion with a constant speed? Name such type of motion. [2]

Question 3

- (a) (i) For which colour of white light, the refractive index of a transparent medium is least?
(ii) Which colour of light travels fastest in any medium except air?
(b) State two necessary conditions for the total internal reflection to occur.
(c) Speed of light in diamond is 125000 kms^{-1} . What is its refractive index?
Speed of light in air = $3 \times 10^8 \text{ ms}^{-1}$.
(d) Define critical angle. How is the critical angle related to the refractive index of a medium?
(e) Draw a ray diagram to show the appearance of a stick partially immersed in water.

Question 4

- (a) State the condition for each of the following:
(i) a lens has both its focal lengths equal
(ii) a ray passes undeviated through the lens.
(b) Copy and complete the following ray diagram. (Given that $i_c = 42^\circ$ for glass-air)



- (c) A monochromatic light ray passes through a glass prism surrounded by air suffers minimum deviation. Draw a well labelled ray diagram representing the same.
(d) A water pond appears to be 2.7 m deep. If the refractive index of water is $\frac{4}{3}$, find the actual depth of pond.
(e) State one application each of a convex and a concave lens.

SECTION II [40 marks]

Attempt any four questions from this section.

Question 5

- (a) With reference to the motion of electrons around the nucleus in an atom, answer the following:
(i) What type of motion is executed by the electrons?
(ii) Name the force required for the motion of electrons.
(iii) How do the electrons get the required force?

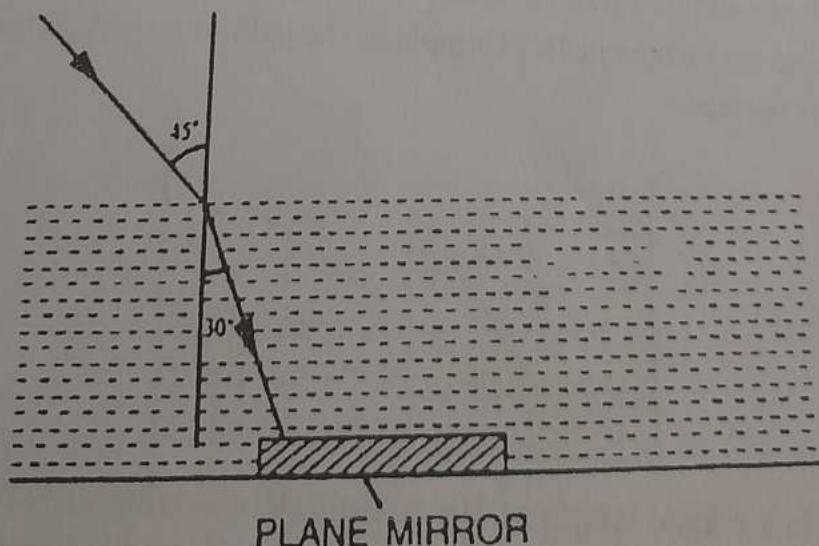
- (b) A boy weighing 350N runs up a flight of 30 steps each 20 cm high in 1 minute
 Calculate:
 (i) the work done
 (ii) the power spent. [3]
- (c) A uniform meter rule is balanced at the 70 cm mark when a mass of 0.05 kg is hung from the 94 cm mark.
 (i) Draw diagram of the arrangement.
 (ii) Find the mass of the rule. [4]

Question 6

- (a) How fast should a man weighing 600 N run so that his kinetic energy is 750 J? ($g = 10 \text{ ms}^{-2}$). [3]
- (b) A coolie A carrying a load on his head climbs up a slope and another coolie B carrying the identical load on his head moves the same distance on a frictionless horizontal platform. Who does more work? Explain the reason. [3]
- (c) A ball of mass 10g falls from a height of 5m. It rebounds from the ground to a height of 4m. Find:
 (i) Initial potential energy of the ball.
 (ii) The kinetic energy of the ball just before striking the ground.
 (iii) The kinetic energy of the ball after striking the ground. [4]

Question 7

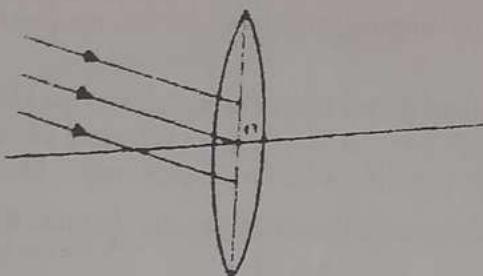
- (a) (i) State the laws of refraction of light.
 (ii) A ray of light falls normally on a glass slab. What is the angle of refraction? [3]
- (b) A ray of green light enters a liquid from air as shown in the diagram. [3]
 (i) Show in the diagram the path of rays of light after it strikes the mirror and re-enters in air.
 (ii) Mark in your diagram the angles whenever necessary.



- (c) When an object is placed in front of a lens at its focus, a virtual and diminished image is formed.
- Name the type of lens used.
 - Draw a ray diagram to show the formation of image with the above stated characteristics.
- [4]

Question 8

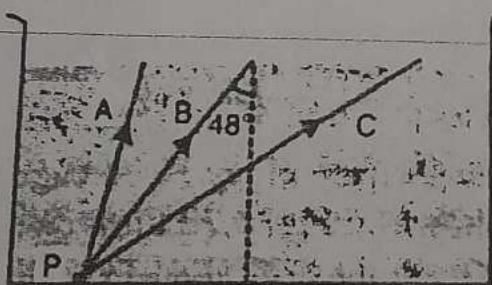
- (a) Copy and complete the following ray diagram



- (b) (i) Show with the help of a ray diagram how a total reflecting prism (45° , 45° , 90°) can be used to turn a ray of light through 180° .
- (ii) Write the application of this action of prism.
- [3]
- (c) An object is kept between focus and optical centre of a lens produces virtual and magnified image. Draw the ray diagram to show the formation of image with the above stated characteristics. Write one application of the lens in the given condition.
- [4]

Question 9

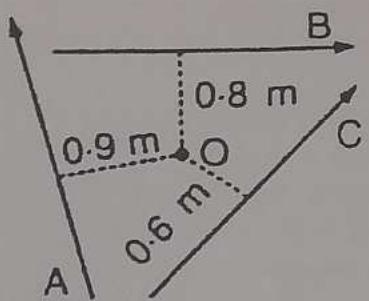
- (a) State three factors on which the angle of deviation depends.
- [3]
- (b) Following figure shows a point source P inside a water container. The critical angle for water-air surface is 48° . Complete the path of rays A, B and C after striking water surface.
- [5]



- (c) A convex lens has a focal length of 20cm. Calculate at what distance from the lens should an object be placed so that it forms an image at a distance of 40 cm on the other side of the lens. State the nature of image formed.
- [4]

Question 10

- (a) A spring is kept compressed by a toy cart of mass 150 g. On releasing the cart, it moves with a speed of 0.2 ms^{-1} . Calculate the potential energy (elastic) of the spring. [3]
- (b) A, B and C are three forces each of magnitude 10N acting in the plane of papers as shown in diagram. The point O lies in the same plane. Calculate the resultant moment of forces about O. [3]



- (c) State the principle of conservation of mechanical energy and prove it for a freely falling body under gravity. [4]

THE FIRST COMPARATIVE EXAMINATION 2021-22

Class X (ICSE)

SCIENCE Paper-2

CHEMISTRY

Time: Two hours

Maximum marks: 80

- Answers to this paper must be written on the answer script 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.
- The intended marks for questions or parts of questions are given in brackets [].
- All subsections of each question or parts of question must be answered in the correct order.
- Please do not write anything on your question paper except your name and roll number.
- This paper is divided into two sections: Section I [40 marks] and Section II [40 marks]. Section I is compulsory. Attempt any four questions from Section II.
- Give balanced equations wherever required.

SECTION I [40 marks]

Attempt all questions from this Section.

Question 1

- (a) Fill in the blanks by choosing the appropriate word from those given in the brackets. [5]

- When Sodium chloride is heated with concentrated Sulphuric acid below 200°C , one of the products formed is _____ (Sodium hydrogen sulphate / Sodium sulphate / Chlorine)
- In Period 3, the most metallic element is _____ (Sodium / Magnesium / Aluminium)
- Ammonia reacts with excess Chlorine to form _____ (Nitrogen / Nitrogen trichloride / Ammonium chloride)
- The compound that does not have lone pair of electrons is _____ (Water / Ammonia / Carbon tetrachloride)
- Potassium sulphite on reacting with dilute Hydrochloric acid releases _____ (Cl_2 , SO_2 , H_2S) gas.

- (b) State one relevant observation for each of the following reactions:

[5]

- Action of dilute Hydrochloric acid on Iron (II) sulphide
- Action of Sodium hydroxide solution on Ferrous sulphate solution
- Dilute Hydrochloric acid reacts with Lead nitrate
- A glass rod dipped in Ammonia solution brought near vapours of Hydrochloric acid
- Concentrated Hydrochloric acid is added to Manganese dioxide.

- Ques. 1. Give short notes on the terms defined below:
- The tendency of an atom to attract electrons to itself when combined in a compound.
 - The amount of energy released when an atom in the gaseous state loses one electron to form an ion.
 - The chemical bond formed due to mutual sharing of electrons between two atoms of non-metallic elements.
- (b) (i) What do you understand by lone pair of electrons?
- (ii) Draw an electron dot structure for Methane [Atomic number C = 6, H = 1]. What type of bonding is present in it?
- (c) Write a balanced chemical equation for each of the following reactions:
- Laboratory preparation of Ammonia
 - Reaction of Ammonia with dilute Nitric acid
 - Ammonia gas is passed over heated Copper (II) oxide
- (d) An organic compound has vapour density 94. It contains C = 12.6%, H = 2.13% and Br = 85.11%. Find the empirical and molecular formula of the compound. [C = 12, H = 1, Br = 80].
- (e) Give a chemical test to distinguish between each of the following pair of compounds:
- Iron (II) chloride and Iron (III) chloride.
 - Lead nitrate and Zinc nitrate.
- (f) Give a reason for each of the following statements:
- A molecule of Ammonia has one lone pair of electrons.
 - Hydrogen chloride gas cannot be dried over quicklime.
 - Ammonia gas is not collected over water.
 - Ammonium nitrate is not used in the laboratory preparation of Ammonia.
 - The oxidizing power of elements increases from left to right in a period.
- (g) Some word/words are missing in the statements given below. You are required to rewrite the statement in the correct form using the appropriate word/words:
- Sodium chloride reacts with concentrated H_2SO_4 , to give sodium bisulphate and Hydrogen chloride.
 - Hydrogen chloride gas is collected by displacement of air.
 - Ammonia gas turns red litmus to blue.

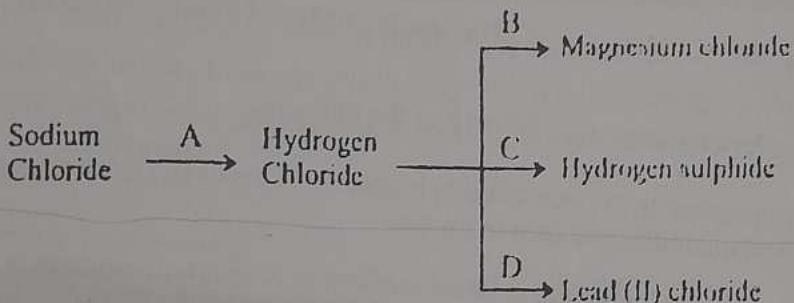
- (iv) Ammonia gas is soluble in water
 (v) Sodium carbonate reacts with Hydrochloric acid to form Carbon dioxide gas.
- (g) (i) Write the empirical formula of the following compounds
 (1) CH_3COOH (ii) $\text{C}_6\text{H}_5\text{Cl}$ (iii) $\text{C}_2\text{H}_5\text{Cl}$ [3]
- (ii) Draw an electron dot diagram to show the formation of Ammonium ion. $[\text{N} = 7, \text{H} = 1]$ [2]

SECTION II [40 marks]

Attempt any four questions from this section

Question 2

- (a) Refer to the flowchart given below and write balanced equations with conditions, if any, for the following conversions A to D: [4]



- (b) Draw an electron dot diagram to show the structure of Hydronium ion. State the type of bonding present in it. [3]
- (c) Draw labelled diagram to show high solubility of Ammonia gas in water. Which other property of Ammonia is demonstrated by this experiment? [3]

Question 3

- (a) Copy and complete the following table by filling in the blanks A, B, C and D related to important industrial process: [4]

Name of the process	Temperature	Catalyst	Pressure	Equation for the catalyzed reaction
Haber's Process	(A)	(B)	(C)	(D)

-] (b) Name the following: [3]
- (i) The hydride of halogen in Period 3
 (ii) A bond formed by a shared pair of electrons with both electrons coming from the same atom
 (iii) An element with zero electron affinity.

- (c) The atomic number of an element is 16.

 - To which period does it belong?
 - State the number of valence electrons.
 - Is it a metal or a non-metal?

Question 4

- Question 4** (a) Arrange the following elements as per the instruction given in the brackets;

- (b) State a relevant observation for each of the following:

- (i) Ammonium hydroxide solution is added to Copper (II) nitrate solution in small quantities and then in excess.
 - (ii) Ammonium hydroxide solution is added to Zinc nitrate solution in minimum quantities and then in excess.
 - (iii) Sodium hydroxide solution is added to Iron (II) sulphate.

- (c) Compare the compounds Carbon tetrachloride and Sodium chloride with regard to state, solubility in water and electrical conductivity.

Question 5

- (a) The electronic configuration of elements X and Y is 2, 8, 8, 2 and 2, 6 respectively. Using this information, answer the following:

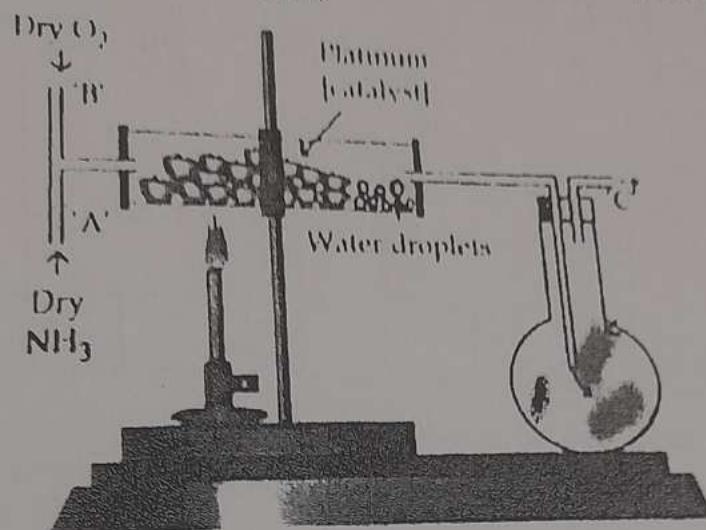
- (i) _____ is a metallic element and _____ is a non-metallic element.

(ii) X will form ions by _____ of electrons and Y will form ion by _____ of electrons.

(iii) Identify X and Y.

[3]

- (b) Study the diagram given below which shows the catalytic oxidation of Ammonia and answer the questions that follow.



[3]

[3]

- Give a balanced chemical equation for the reaction.
- Name the process for which this reaction is the starting reaction.
- Why does the catalyst continues to glow even after the heating is discontinued?

- (c) Name the following:

[3]

- A compound that has all three bonds present in it
- Noble gas in period 2
- Amphoteric oxide of an element in period 3.

3]

Question 6

4)

- In formation of electrovalent compound $MgCl_2$, name the substance that is oxidised and is reduced.
 - Name the charged particles which attract one another to form electrovalent compound.
 - The electronic configuration of Nitrogen is 2, 5. How many electrons in outermost shell are not involved in formation of Nitrogen molecule?
- Hydrochloric acid is prepared by dissolving HCl gas in water using a special arrangement.
 - Name the arrangement used.
 - Why is the above mentioned arrangement used? State two reasons.
- The percentage composition of Sodium phosphate is 42.1% Sodium, 18.9% Phosphorus and 39% Oxygen. If its molecular weight is 164 calculate its molecular formula. [Na = 23, P = 31, O = 16]

[2]

[1]

[1]

[3]

[3]

[3]

Question 7

(a) Use the letters only given in the Periodic Table to answer the questions given below:

	1	2	13	14	15	16	17	18
Periods			Groups					L
1			E	G	J	Z	M	
2	Q							
3	R							
4	T							

- (i) State the number of valence electrons in atom J.
- (ii) Which element shown forms ions with a single negative charge?
- (iii) Which metallic element is more reactive than R?
- (iv) Which element has its electrons arranged in four shells?
- (b) Give balanced chemical equations for each of the following reactions:
- (i) Laboratory preparation of Ammonia from metal nitrides
- (ii) Burning of Ammonia in Oxygen
- (iii) Reaction of Ammonia with Sulphuric acid.
- (c) An element L consist of molecules:
- (i) What type of bonding is present in the particles that make up L?
- (ii) When L is heated with iron metal, it forms a compound FeL.
What chemical term would you use to describe the change undergone by L?