

EAST POINT SCHOOL
CLASS X
ONLINE ASSIGNMENT 27

ENGLISH
A Letter to God

Extract Based Questions

1. **“In the north-east huge mountains of clouds could be seen approaching. The air was fresh and sweet. The man went out for no other reason than to have the pleasure of feeling the rain on his body, and when he returned he exclaimed, “These aren’t raindrops falling from the sky, they are new coins. The big drops are ten cent pieces and the little ones are fives.”**

- (a) Why did Lencho go out in the rain?
- (b) Why were the raindrops like ‘new coins’ for Lencho?
- (c) How did these new coins ultimately bring disaster to his cornfield?
- (d) Explain the description: ‘The air was fresh and sweet’.

2. **“God,” he wrote, “if you don’t help me, my family and I will go hungry this year. I need a hundred pesos in order to sow my field again and to live until the crop comes, because of the hailstorm”**

- (a) What help has he asked for?
- (b) Why did he need help?
- (c) Why did Lencho write a letter to God?
- (d) Why was Lencho and his family in distress?

Short Answer Type Questions

- 1. Why does the postmaster send money to Lencho? Why does he sign the letter ‘God’?
- 2. How far would you agree that one’s positivity can bring in a spark of brightness even in adverse circumstances’?
- 3. Was Lencho surprised to find a letter with money in it? Why/Why not?
- 4. What impression do you form the postmaster after reading the story ‘A Letter to God’?
- 5. Why was Lencho angry? What did he do?

Long Answer Type Question

- 1. The postmaster represents such people who still believe in helping others mention those values of the postmaster which you would like to emulate in yourself. Write in 100-120 words.
- 2. “If you don’t help me, my family and I will go hungry this year.” Lencho had faith in God but he didn’t manage to solve the problem by himself. Did he lack the courage to resolve his matter himself? What values did he lack? Explain it in 100-120 words.
- 3. Show Lencho’s faith and confidence in God with examples from the lesson.

GEOGRAPHY

Revision assignment

Lifelines of National economy

Group 1

1. port was developed as a subsidiary port in order to relieve growing pressure on the Kolkata port.
 - (a) Haldia
 - (b) Kochi
 - (c) Kandla
 - (d) Vishakhapatnam
2. Which one of the following groups of cities is connected by the National Highway No. 1?
 - (a) Kolkata-Amritsar
 - (b) Ranchi-Kolkata
 - (c) Delhi-Punjab
 - (d) Varanasi-Kanyakumari
3. Explain the significance of border roads .(3)
4. Today the world has become a “global village”. Justify this statement.(3)
5. Modern means of transport and communication serve as lifelines of our nation.” Justify this statement by giving supportive arguments.(5)

Group 2

1. Roadways still have an edge over railways in India”. Give reasons(3)
2. Differentiate between District Roads and Other Rural Roads?(3)
3. Explain the importance of railways as the principle mode of transportation for freight and passengers in India.(5)
4. Which one of the following is the southernmost international airport in India?
 - (a) Nedimbacherry
 - (b) Chhatrapati Shivaji
 - (c) Raja Sansi
 - (d) Meenam Bakkam
5. Narrow Gauge railway line is found in
 - (a) the Northern Plains
 - (b) the hilly areas of Darjeeling, Shillong and Ooty
 - (c) deserts of Rajasthan
 - (d) the Central Highlands

Group 3

1. Which one of the following is not an advantage of pipeline transportation?
 - (a) Pipelines are used for transporting crude oil and gas from fields to refineries.
 - (b) Solids can be transported in slurry form through pipelines.
 - (c) Pipelines rule out trans-shipment losses or delays.
 - (d) Initial cost of laying a pipeline is high.
2. The largest number of newspapers published in India are in which of the following languages?
 - (a) Hindi
 - (b) English

- (c) Urdu
(d) Marathi
3. How roads are classified on the basis of the type of material used for their construction ?(3)
 4. Give brief description of the Indian Railway's gauge operations.(3)
 5. Analyse the physiographic and economic factors that have influenced the distribution pattern of railway network in our country(5)

ACTIVITY: locate and label the following sea ports On the political map of India

Haldia

Kandla

Mumbai

Chennai

New Mangalore

Marmagao port

Video link :

https://youtu.be/ORXbUaz-O_4

<https://youtu.be/ER1sCcZS6eg>

POLITICAL SCIENCE

Ch-7 OUTCOME OF DEMOCRACY

Q1 How does democracy produces an accountable, responsive and legitimate government?

Or

Why do people prefer democracy? Give four reasons.

Answer:. The most basic outcome of democracy should be that it produces a government that is accountable to the citizens, and responsive to the needs and expectations of the people.

- Accountable/ Transparent government:** In democracy people have the right to choose their rulers and have control over them- representative government. Whenever possible a citizen should be able to participate in decision making process that affects them all. Democracy can produce such a type of government because its decision making is based on norms and procedures and a citizen can examine the process of decision making which shows the democracy is accountable. The citizens have the right to examine the process of decision making.
- Responsive government:** Democratic government takes decisions by following norms and proper procedures. It is based on the idea of deliberation and negotiation. They respond to the needs and interests of people from time to time and can also know if the decision were taken through proper procedures. The basic parameters to evaluate democracy are regular

free and fair elections, open public debate on major policies and legislations and citizens' right to information about the government and its functioning

- c. **Legitimate government:** A democratic government is a legitimate government which may be slow, less efficient. It is not always very responsive or clean but it is people's own government. People wish to be ruled by the representatives elected by them. They also believe that democracy is suitable for them and has an ability to generate its own support, is itself an outcome that cannot be ignored. Various South Asian countries show support for democratic government

Q2 Do democracies lead to a just distribution of goods and opportunities? Justify your answer by suitable arguments.

Answer: Democracies do produce good governments but it does not necessarily lead to just distribution of goods and opportunities or reduce economic disparities because:

- a. Although individuals have political equality, we find growing economic inequalities.
- b. A small number of ultra-rich enjoy a highly disproportionate share of wealth and incomes.
- c. The gap between the rich and the poor in terms of income distribution is widening.
- d. The income of those at the bottom of the society is declining so much so that it becomes difficult to meet their basic needs, such as food, clothing, housing etc.
- e. Although the poor constitute a large proportion of voters, yet democratically elected governments do not provide them opportunities on equal footing.
- f. Democratically elected governments do not appear to be as keen to address the question of poverty as you would expect them to.

Q3 "Does democracy ensure faster economic growth and development" Explain. Answer: If democracies are expected to produce good governments, then is it not fair to expect that they would also produce development.

- a. Dictatorships have slightly showed higher rate of economic growth between 1950-2000. Though the difference is negligible.
- b. It is also been noticed that when two poor countries, one being democratic and other being non democratic are compared then the difference in their economic growth is not at all alarming.
- c. In developed countries the poor class which is on the higher side of the population tends to have a reasonable share in the national income. For example Denmark and UK have a higher percentage share for bottom 20% of population. Where as in South Africa and Brazil top 20 % of population take away more 60% of national income.
- d. But we expect democracy not to lag behind dictatorship in this respect. Therefore it is better to prefer democracy as it has several other positive outcomes.
- e. Factors on which economic growth is dependent i. population size ii. Global situation, iii cooperation from other countries, iv, economic priorities adopted by the country etc. **It can concluded that democracy is not a guarantee of economic development**

Q4 "Most destructive feature of democracy is that its examination never gets over." Support the statement with three appropriate arguments.

Answer: Expectations from democracy also function as the criteria for judging any democratic country. As people get some benefits of democracy, they ask for more and want to make democracy even better.

- a. People always come up with more expectations from the democratic set up.
- b. They also have complaints against democracy.
- c. The fact people are complaining is itself a testimony (evidence) that people have developed awareness and ability to expect and judge
- d. This transforms them from a status of 'subject' to that of a 'citizen'.
- e. Most feel that their vote makes a difference to the way government is run and in turn to their own self-interest.
- f. A public expression of dissatisfaction with democracy shows the success of the democratic project.

Q5. How do democracies accommodate social diversity? Explain

Answer: Democracy is best suited to produce this outcome. Non-democratic regimes often turn a blind eye to or suppress internal social differences. Ability to handle social differences, divisions and conflicts is thus a definite plus point of democratic regimes. Democracies accommodate various social diversities in the following ways:

- a. **By developing competitive attitude-** Democracies usually develop a procedure to conduct their competition. This reduces possibility of these tensions becoming explosive or violent.
- b. **By evolving mechanisms to negotiate-** No society can fully and permanently resolve conflicts among different groups. But we can learn these differences and we can also evolve mechanisms to negotiate differences
- c. **By playing dual role-** Ability to handle social differences, divisions and conflicts is thus a definite plus point of democratic regimes. But democracy must fulfil **two conditions** in order to achieve this outcome. **Firstly**, it is necessary to understand that democracy is not simply rule by majority opinion rather they should work with minority. **Secondly**, Rule by majority does not become rule by majority community in terms of religion or race or linguistic. Rule by majority means that in case of every decision or in case of every election, different persons and groups may and can form a majority. Democracy remains democracy only as long as every citizen has a chance of being in majority at some point of time.

Q6 How is democracy considered to be superior to any other form of government?

Answer: Democracy is superior to any other form of government as it:

- a. Promotes equality among citizens
- b. Enhances the dignity of the individual
- c. Improves the quality of decision making
- d. Provides a method to resolve conflicts and
- e. Allows room to correct our mistakes

Q7 Examine with the help of examples how dignity and freedom of citizens are best guaranteed in a democracy.

Answer: Democracy stands much superior to any other form of government in promoting dignity and freedom of the individual.

- a. Every individual wants to receive respect from fellow beings. Often conflicts arise among individuals because they are not treated with due respect

- b. The passion for respect and freedom are the basis of democracy.
- c. For societies which have been built for long on basis of subordination and domination it is not a simple matter to recognise that all individuals are equal.
- d. It seen that worldwide democracies have recognized and adopted this feature at least in principle
- e. **Dignity of women-** after long struggles, equal treatment to women has become a key ingredient in democratic societies
- f. Once the principle is recognized it becomes easier to make morally and legally acceptable
- g. Unlike in non-democracies where moral and legal force is not present, many nondemocratic governments do not accord equal status to women and men.
- h. **Case of caste inequalities-** India has strengthened the claims of the disadvantaged and discriminated castes for equal status and equal opportunity.
- i. Hence with the deepening of the roots of democracy in more and more parts of the world the underprivileged are feeling a sense of relief.

Q8. What role can citizens play in strengthening democracy?

Answer: Citizens can play a decisive and crucial role in strengthening democracy since human resource is the key resource of a nation

- a. They can choose the right and honest leaders to form and run the government
- b. They can actively participate in the governance of the country and decision making process.
- c. They can keep themselves abreast with the issues, affairs and problems facing the country.
- d. They can help the government and authorities in maintaining peace, harmony and law and order
- e. They can exercise their rights and duties judiciously.

Q9. 'Democracy leads to peaceful and harmonious life among citizens'. Support this statement with examples

Answer: After going through the qualities of democracy, political as well as economic outcome of democracy it will be fair expectation that democracy should produce a harmonious social life. Democracy usually develops a procedure to conduct their competition. This reduces the possibility of social tension becoming explosive or violent.

Hence social outcomes of democracy can be evaluated as follows:

- Accommodation of social diversity
- Dignity and freedom of citizens
- Dignity of women
- Strengthening the claims of the disadvantaged and discriminated castes
- A public expression of dissatisfaction with democracy is one of the most important outcome of democracy

Q10 What are the expected outcomes of democracy?

Answer: The expected outcomes of democracy are as follows:

- a. A government that is chosen and accountable to the people is called democratic government.
- b. A government that is responsive to the needs of the people.
- c. Economic growth and development reducing all forms of inequality and end of poverty

- d. Accommodating all social diversities.
- e. Ensuring the dignity and freedom of the individuals.

Q11 On which two grounds the record of democracy is found to be dismal? Is it the reason enough to support non-democratic rule?

Answer: The record of democracies is not impressive on these two counts-

- a. Corruption- The routine tales of corruption are enough to convince us that democracy is not free of this evil.
- b. Frustrating people by ignoring their needs on morality grounds
But at the same time there is nothing to show that non-democracies are less corrupt or more sensitive to the people. All one can say in favour of democratic regimes is that they are much better than any non-democratic regime in these respects. Non democratic regimes may become autocratic and ignore the needs of people which are often reflected in these countries, example- North Korea, Saudi Arabia

HISTORY

CHAPTER-1 (RISE OF NATIONALISM IN EUROPE)

Question 1. What was the major change that occurred in the political and constitutional scenario due to the French Revolution in Europe? (2015 D)

Question 2. What was the main aim of the French revolutionaries? (2015 OD)

Question 3. What is the meaning of concentration camps? (2015 OD)

Question 4. Name the Treaty of 1832 that recognised Greece as an independent nation. (2016D)

Question 5. Name the event that mobilised nationalist feelings among the educated elite across Europe in 1830-1848? (2016 D)

Question 6. What was the main aim of revolutionaries of Europe during the years following 1815? (2016 D)

Question 7. Who remarked “when France sneezes the rest of Europe catches cold”. (2016 OD)

Question 8. Who was proclaimed German Emperor in a ceremony held at Versailles in January 1871? (2016 OD)

Question 9. Who was proclaimed the King of United Italy in 1861? (2016 OD)

Short Answer Questions (SA) 3 Marks

Question 10. Explain any three beliefs of the conservatism that emerged after 1815. (2011 D)

Question 11. Explain the contribution of Otto von Bismarck in German unification. (2011 D)

Question 12. Explain any three ways in which nationalist feelings were kept alive in Poland in the 18th and 19th centuries. (2011 OD)

Question 13. Explain the contribution of Giuseppe Mazzini in spreading revolutionary ideas in Europe. (2011 OD)

Question 15. Explain any three causes of conflict in the 'Balkan area' after 1871. (2011 OD)

Question 16. How did the local people in the areas conquered by Napoleon react to French rule? Explain. (2014 D)

Question 17. Explain the conditions that were viewed as obstacles to the economic exchange and growth by the new commercial classes during the nineteenth century in Europe. (2014 OD)

Question 18. Describe the events of French Revolution which had influenced the people belonging to other parts of Europe. (2015 D)

Question 19. How did nationalism develop through culture in Europe? Explain. (2015 OD, 2013 OD)

Or

Describe the role of culture in shaping the feelings of nationalism in Europe from 1830 to the end of 19th century.

Question 20. How had the female figures become an allegory of the nation during nineteenth century in Europe? Analyse. (2016 D)

Question 21. Describe any three steps taken by the French revolutionaries to create a sense of collective identity amongst the French people. (2017 D)

Question 22. Describe any three economic hardships faced by Europe in the 1830s. 2017OD

Long Answer Questions 5 Marks

Question 23. What did Liberal Nationalism stand for? Explain any four ideas of Liberal Nationalists in the economic sphere. (2011 OD)

Question 24. "Napoleon had, no doubt, destroyed democracy in France, but in the administrative field he had incorporated revolutionary principles in order to make the whole system more rational and efficient." Support the statement. (2016 OD, 2014 OD, 2012 D)

Or

Explain any five social and administrative reforms introduced by Napoleon in regions under his control.

Question 25. How did culture play an important role in creating the idea of the 'nation' in Europe? Explain with examples. (2013 D)

Question 26. Explain any five economic hardships that Europe faced in the 1830s. (2016 OD, 2013 OD, 2011 D)

Or

“The decade of 1830 has brought great economic hardship in Europe”. Support the statement with arguments.

Following are the causes of economic hardships in Europe during 1830s:

Question 27. Describe any five measures which were introduced by the French Revolutionaries to create a sense of collective identity amongst the French people. (2016 D, 2015 OD, 2012 OD)

Question 28. How had revolutionaries spread their ideas in many European States after 1815? Explain with examples. (2014 OD)

Question 29. Describe the process of unification of Germany. (2015 D, 2013 D, 2012 D)

Question 30. Explain the process of unification of Italy. (2015 D, 2013 D, 2012 OD)

Question 31. Describe the process of Unification of Britain.

Or

How has Britain come into existence? Explain.

VIDEO LINK: <https://www.youtube.com/watch?v=j6ygx4CfUEo&authuser=0>

ECONOMICS

Revision Notes: X

Subject: Social Science (Economics)

Chapter 3: Money and Credit

Double Coincidence of Wants

- It refers to a situation wherein what a person wishes to sell is exactly the same as that the other person wishes to buy. This is a concept in the barter system in which goods are exchanged directly without the use of money.

Money

- It is a medium of exchange.
- It eliminates the double coincidence of wants.

Forms of Money

- Ancient period: Grain and cattle were used as money.
- Medieval period: Metallic coins of gold, silver, copper and lead were used as money.
- Modern period: Paper currency and coins are used as money.

Money in India

- Rupee is the Indian currency.
- Money has value because it has got the sanction of the government.
- Reserve Bank of India (RBI) is authorized to issue currency notes on behalf of the Government of India.

Bank Deposits

- People deposit their money in banks by opening a bank account.
- Banks keep the money safe and also provide interest on the deposited amount of money to the depositors.
- The deposited money can be withdrawn from banks as and when required on demand. Hence, bank deposits are also called demand deposits.
- Bank deposits also facilitate easy transfers of money through cheques, demand drafts or internet banking.
- Cheque: A cheque is a document issued by an account holder to the bank, instructing the bank to pay a specific amount from the issuer's account to the person in whose name the cheque has been issued.

- 1) **What is Barter System? [2015] (1)**
- 2) **Recognize the situation when both the parties in a barter economy have to agree to sell and buy each other's commodities? What is it called? [SQP2016] (1)**
- 3) **Give one example each of modern currency and older currency. [2019,2015] (1)**
- 4) **Give any one example of the methods to make payment without using cash. [2019] (1)**
- 5) **Define Money? (1)**
- 6) **Explain the meaning of 'Currency'. [2019] (1)**
- 7) **How can money be easily exchange itself for goods or services? Give example to explain. [Delhi 2016] (3)**
- 8) **How is money used in everyday life? Explain with examples. [2014] (3)**
- 9) **How do banks mediate between those who have surplus money and those who need money? Explain. [2011] (5)**

Video Links

<https://www.youtube.com/watch?v=Ws5QpLEw1XU&t=307s>

<https://www.youtube.com/watch?v=yn-aDG4hTDE>

<https://www.youtube.com/watch?v=oOr1ydFIA2Q>

<https://www.youtube.com/watch?v=mbYHBkPB05I>

<https://www.youtube.com/watch?v=yn-aDG4hTDE>

<https://www.youtube.com/watch?v=e7fcGnnvEA>

<https://www.youtube.com/watch?v=ium9dcfLamc>

<https://www.youtube.com/watch?v=oOr1ydFIA2Q>

<https://www.youtube.com/watch?v=eYnhFY0bLLU>

<https://www.youtube.com/watch?v=60SeHdW3ld0>

PHYSICS

CHAPTER–13

MAGNETIC EFFECT OF ELECTRIC CURRENT

MULTIPLE CHOICE QUESTIONS

1. What is electromagnetic induction?

(i) the process of charging a body

(ii) the process of rotating a coil of an electric motor

(iii) producing induced current in a coil due to relative motion between a magnet and the coil

(iv) the process of generating a magnetic field due to current passing through a coil

2. What happens to the current in the short circuit?

(i) reduces substantially (ii) does not change (iii) increases heavily (iv) vary continuously

3. An alpha particle is diverted towards the west is deflected towards the north by a field. The field is

magnetic. What will be the direction of the field? (i) towards south

(ii) towards east

(iii) downward (iv) upward

FILL IN THE BLANKS

4. ----- is the strength of the magnetic field at a point near a current-carrying wire related to the current.

5.The frequency of A.C. used in India is ----- --.

6.----- Is the purpose of a soft iron core in making electromagnet?

ONE MARK QUESTIONS

7.Why magnetic field lines are form closed curve?

8.State the direction of the magnetic field inside the bar magnet?

9.What will you do if you see a person coming in contact with a live wire?

ASSERTIONS AND REASONS

For the question numbers 10,11 and 12, two statements are given- one labelled Assertion (A) and the other

labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true.

10.Assertion: The magnetic field interacts with a moving charge and not with a stationary charge.

Reason: A moving charge produces a magnetic field.

11.Assertion: If an electron is not deflected while passing through a certain region of space, then only

the possibility is that there is no magnetic region.

Reason: Force is directly proportional to the magnetic field applied.

12.Assertion: Free electron always keeps on moving in a conductor even then no magnetic force act on

them in the magnetic field unless the current is passed through it.

Reason: The average velocity of a free electron is zero.

THREE MARK QUESTIONS

13.What happens to the force acting on current-carrying conductor placed in a magnetic field when:

(i)The current in conductor increases. (ii)The length of the conductor increase.

(iii)The direction of the current and magnetic field both are reversed.

14.Consider a circular wire lying in a plane of the table and the direction of current in its anticlockwise.

- (i) Draw the magnetic field lines produced around it.
- (ii) Why does the magnetic field at the centre of the current-carrying a circular loop appear straight?

15.If we place a compass needle straight conductor carrying current:

- (a) What happens to the deflection of the compass needle if the direction of the current is reversed?
- (b) What change will you notice in the compass needle if it is moved away from the conductor but the current through the conductor remains the same?

16.State one main difference between A.C. and D.C. Why A.C. is preferred over D.C. for long-range

transmission of electric power? Name one source each of D.C and A.C.

FIVE MARK QUESTIONS

17.(a) What is a solenoid?

(b) Draw the pattern of the magnetic field produced by a current-carrying solenoid.

(c) How is the magnetic field inside a current-carrying solenoid used to make an electromagnet? Explain with the help of a diagram.

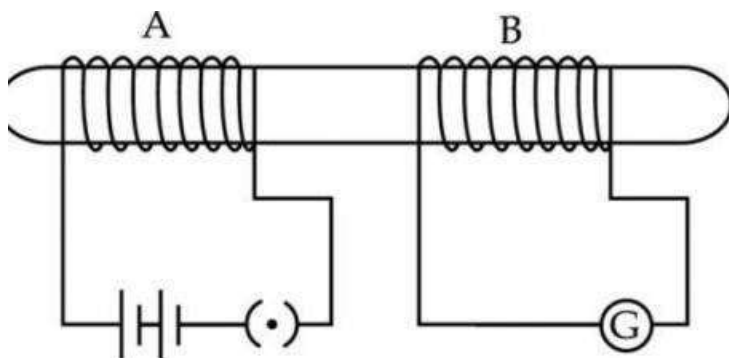
(d) List two factors on which the strength of the magnetic field produced by a current-carrying solenoid depends.

18.(a) Draw a schematic diagram of a common domestic circuit showing provision of:

(i) Earth wire, (ii) Main fuse (iii) Electricity meter and (iv) distribution box

(b) Distinguish between Short Circuiting and Overloading.

19.In the arrangement shown in the figure, there are two coils A and B wound on non-conducting cylindrical



Initially, the key is not inserted.

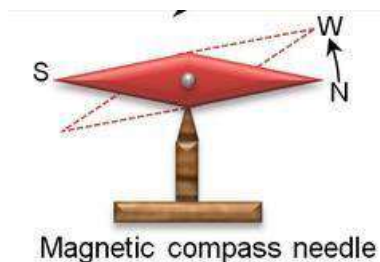
Then the Key is inserted and later removed. (i)State your observation in each case.

(ii)State the conclusion based on your observations.

20.CASE STUDY

Answer question numbers 20 (a) to 20 (d) based on your understanding of the following paragraph and the related studied concepts.

When the current flows through a conductor from South to North then the magnetic needle placed beneath it, gets averted to the west, thereby proving that the flow of electric current produces a magnetic field. This is because the compass needles work as a small bar magnet, so when this magnetic needle is brought near another magnetic property surrounding then the like poles will repel, thereby the needle gets deflected.



- Define the magnetic field.
- Write any two properties of a magnet.
- Write the properties of magnetic field lines.
- How can we get the polarity of magnets?

CHEMISTRY

Chemistry Test

Time: 40 min

- Compare the following elements as per the characteristics given in the brackets
 - Lithium and Nitrogen (Atomic radii)
 - Potassium and Chlorine (Electronegativity)
 - Magnesium and Calcium (Valency)
 Give reason for your answer in each case.
- The position of certain elements in the Modern Periodic Table are shown below:

Group---->	1	2	3to 12	13	14	15	16	17	18
Period ↓									
1	G								H
2	A			I			B		C
3		D			E				F

Using the above table answer the following questions giving reasons in each of the case:

- Which element will form only covalent compounds?
- Which element is a non-metal with valency 2?
- Which element is a non with valency 2?

- d) Out of H, C and F which has largest atomic size?
e) To which family does H, C and F belong?
3. Salt P, commonly used in bakery products, on heating gets converted into salt Q, which itself is used in the removal of hardness of water and a gas R. the gas when passed through freshly prepared lime water turns milky. Identify P, Q and R, giving chemical equation for the justification of your answer.
4. 1 g of solid NaCl is taken in a clean and dry test tube and 2 mL of concentrated H_2SO_4 is added to it. If the gas evolved is tested with dry and then with wet litmus paper, in which case the litmus paper change the colour? Give reason. What inference you draw and also write the chemical equation involved.
5. a) For the preparation of cake, baking powder is used. If at home your mother used baking soda instead of baking powder, how will it affect the taste of cake and why?
b) How is baking soda converted into baking powder?
c) What makes the cake soft and fluffy?
6. What is observed when carbon dioxide gas is passed through lime water.
(i) For a short duration
(ii) For long duration?
Also, write the balanced chemical equations for the reaction involved.
7. When Hydrogen gas is passed over heated copper (II) oxide, copper and steam are formed. Write the balanced chemical equation with physical states for this reaction. State what kind of chemical reaction is this?
8. What are isomers? Draw isomers of C_4H_{10} .
9. Write the next two homologues of C_3H_6 and $\text{C}_2\text{H}_5\text{OH}$
10. Explain in brief catenation and tetravalency.

VIDEO LINK: <https://www.youtube.com/watch?v=WWJQpuv9EIE&authuser=0>

MATHEMATICS

MATHEMATICS (STANDARD)

Time: 3 hrs

Max.Marks:80

General Instructions:

- 1) All questions are compulsory.
- 2) This questions paper contains two parts A and B.
- 3) Both Part A and Part B have internal choices.

Part- A:

- 1) It consists of two sections- I and II.
- 2) Section I has 16 questions of 1 mark each. Internal choice is provided in 5 questions.
- 3) Section II has 4 questions on case study of 4 marks each. Each case study has 4 case-based sub-parts.

Part- B:

- 1) It consists of three sections- III, IV and V.
- 2) Section III has question no. 21 to 26 are Very short answer Type questions of 2 marks each,
- 3) Section IV has question no. 27 to 33 are Short Answer Type Questions of 3 marks each.
- 4) Section V has question no. 34 to 36 are Long Answer Type Questions of 5 marks each.
- 5) Internal choice is provided in 2 questions of 2 marks, 2 questions of 3 marks and 1 question of 5 marks.

SECTION- I

Q1) The sum of two numbers is 135 and their H.C.F is 27.If their L.C.M is 162, then find the numbers.

OR

Page | 1

Comment on the prime factorization of the denominators of $62.521521521\dots\dots$

Q2) If one of the zeroes of the cubic polynomial $2ax^3+3x^2+5x+2$ is zero, then find the product of the other two zeroes.

Q3) Find the point of intersection of the lines $x-3 = 0$ and $y-5 = 0$.

Q4) If 3,x,y,z,31 are in A.P, then find the value of z.

OR

Find the 10th term from the end of the A.P 4,9,14,254.

Q5) Find the radius of the base of the largest right circular cone that can be cut out from a cube of edge 4.2cm.

Q6) If the equation $x^2+5kx + 16 = 0$ has real and equal roots, then find the value of k.

Q7) How many common tangents can be drawn ,when two circles do not touch each other?

Q8) If Mean and Mode of a frequency distribution are 28 and 16 respectively, then find the median.

Q9) Find the value of $A(0^\circ < A < 90^\circ)$ if $2\cos^2 A = 1/2$.

OR

If $6\cos A - 5\sin A = 4\sin A + \cos A$, then find the value of $\cot A$.

Q10) The discriminant of the quadratic equation $5x^2+5x+6 = 0$ is -a. Find the value of a.

Q11) A month is selected at random from a year. What is the probability that it is May or July?

OR

Ram and Amit are playing a game in which each player throws two dice and notes down the numbers on the dice. According to the rules of the game, Amit needs to get two numbers such that their product is a perfect square, in order to win the game. Find the probability that Amit will win the game.

Q12) If α, β, γ are the zeroes of the polynomial $2x^3+x^2-13x+6$, then find the value of $\alpha\beta\gamma$.

Q13) Given a triangle with side $AB = 8\text{cm}$. To get a line segment $AB' = \frac{3}{4}$ of AB , in what ratio should AB be divided?

Q14) Find the value of c for which the system of linear equations

$cx + 3y = 3$; $12x + cy = 6$ has no solution.

Q15) Find the coordinates of the centroid of a triangle whose vertices are (0,6), (8,12) and (8,0).

Q16) A solid sphere of radius r is melted and recast into the shape of a solid cone of height r , then what is the radius of the base of the cone.

OR

A solid is hemispherical at the bottom and conical (of same radius) above it. If the surface areas of the two parts are equal, then what is the ratio of the radius and slant height of the conical part.

SECTION- II (CASE STUDY QUESTIONS)

Q 17) Shivam saw his cousin colouring a triangular picture into three parts as shown below. He

found the concept of Thales theorem and similar triangles in it and named its vertices and

framed some questions on it. Check your knowledge on the same by solving the questions

framed by Shivam.



1) In the following figure, which of the following is similar?

- a) $\triangle ABC \sim \triangle EDC$
- b) $\triangle ABC \sim \triangle GFC$
- c) $\triangle CED \sim \triangle CGF$
- d) All of these

2) If $CG:EG = 5:2$ and $GE:EA = 3:1$ then $CF:FD:DB =$

- a) 5:7:1
- b) 15:6:2
- c) 8:5:3
- d) can't be determined

3) Ratio of areas of $\triangle CFG : \triangle CBA =$

- a) 4:225
- b) 1:9
- c) 4:25
- d) none of these

4) If $CD = 42$ cm, then $BC =$ _____

- a) 40 cm
- b) 46 cm
- c) 48 cm
- d) 54 cm

Q18) The following figure is the seating arrangement in a classroom.

The teacher's position is at (0,0) and the student position in top left corner is addressed at (-3,-1).



1) Find the distance of Mona from the origin

- a) $\sqrt{5}$ units
- b) $3\sqrt{5}$ units
- c) $2\sqrt{5}$ units
- d) 6 units

2) If a point (x, y) is equidistant from Mona and Sam, then

- a) $2x + 8y + 7 = 0$
- b) $8x + 2y - 7 = 0$
- c) $8x + 2y + 7 = 0$
- d) $8x - 2y - 7 = 0$

3) If Amit is at the position dividing the line segment joining Mona and Ram in the ratio 1:2, then position of Amit is given by

- a) (1, -3)
- b) (-1, -3)
- c) (-1, 3)
- d) (-4/3, -10/3)

4) Find the midpoint of the line segment joining Sam and the student in the bottom left corner.

- a) $(-1/2, -7/2)$
- b) $(5/2, -7/2)$
- c) $(1/2, 5/2)$
- d) $(-5/2, 7/2)$

Q19) In a toys manufacturing company, wooden parts are assembled and painted to prepare a

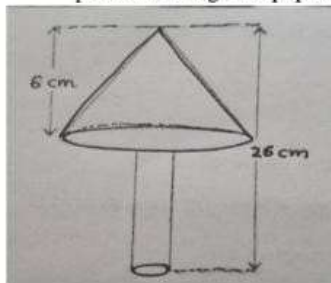
toy. One specific toy is in the shape of a cone mounted on a cylinder. For the wood

processing activity center, the wood is taken out of storage to be sawed, after which it

undergoes rough polishing , then is cut, drilled and has holes punched in it. It is then fine

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polished using sandpaper.



For the retail packaging and delivery activity center, the polished wood sub-parts and assembled together, then decorated using paint.

The total height of the toy is 26 cm and the height of its conical part is 6cm. The diameters of the base of the conical part is 5 cm and that of the cylindrical part is 4cm.

- 1) If its cylindrical part is to be painted yellow, the surface area need to be painted is
 - a) 80π sq cm
 - b) 82π sq cm
 - c) 84π sq cm
 - d) 88π sq cm

- 2) If its conical part is to be painted green, the surface area need to be painted is
 - a) 26.5π sq cm
 - b) 22.5π sq cm
 - c) 20.5π sq cm
 - d) 18.5π sq cm

- 3) The volume of the wood used in making this toy, is
 - a) 92.5π cu cm
 - b) 89.5π cu cm
 - c) 85.5π cu cm
 - d) 72.5π cu cm

- 4) The cost of painting the toy is 3 paise per sq cm. The paint company gives a discount of 5% if the number of toys to be painted is 100 or above. The cost of painting 200 toys will be (approx.)
 - a) 1900
 - b) 1869
 - c) 1836
 - d) 1805

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- Q20. Upasana bought a wall clock to gift her friend Pratibha on her birthday. The clock contains a small pendulum of length 15cm. The minute hand and the hour hand of the clock are 10cm and 7cm long respectively.



- Find the area swept by the minute hand in 35 minutes
 a) 183.33cm^2 b) 180.43cm^2
 c) 190.46cm^2 d) 185cm^2
- If the pendulum covers distance of 44cm in one complete round, then the angle described by the pendulum at the centre is
 a) 85° b) 84° c) 82° d) 80°
- Find the angle described by hour hand in 30 minutes
 a) 25° b) 20° c) 15° d) 30°
- Find the area swept by the hour hand between 9a.m and 5p.m
 a) 102.64cm^2 b) 100cm^2 c) 98cm^2 d) 110.88cm^2

PART B

SECTION- III

- Q21) $P=2(4)(6) \dots\dots (20)$ and $Q=1(3)(5) \dots\dots (19)$. What is the HCF of P and Q?
- Q22) Draw a circle of radius 6cm. From a point 10cm away from its center, construct the pair of tangents to the circle.
- Q23) If α and β are the zeroes of the quadratic polynomial $f(t)=t^2-6t+5$, then find the value of $\alpha^4\beta^3 + \alpha^3\beta^4$.
- OR
- If α and β are the zeroes of the quadratic polynomial $f(x)=x^2-p(x+1)-c$, then find the value of $(\alpha + 1)(\beta + 1)$.
- Q24) Find the value of x, if $\cos 2x = \sin 60^\circ \cdot \cos 30^\circ - \cos 60^\circ \cdot \sin 30^\circ$.

- Q25) If $6x = \sec\theta$ and $\frac{6}{x} = \tan\theta$, then find the value of $9(x^2 - \frac{1}{x^2})$.

OR

If $\tan^2\theta = 1 + 2\tan^2\phi$, then prove that $2\sin^2\theta = 1 + \sin^2\phi$

- Q26) The radii of two concentric circles are 13cm and 8cm. AB is a diameter of the bigger circle and BD is a tangent to the smaller circle touching it at D and intersecting the larger circle at P on producing. Find the length of AP.

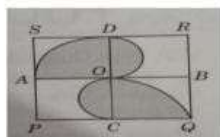
SECTION- IV

- Q27) Given that $\sqrt{5}$ is irrational, prove that $2\sqrt{5} - 3$ is an irrational number.
- Q28) The 17th term of an A.P. is 5 more than twice its 8th term. If the 11th term of the A.P. is 43, then find its nth term.

OR

The sum of 2nd and 7th terms of an A.P. is 30. If its 15th term is 1 less than twice its 8th term, then find the A.P.

- Q29) In the given figure PQRS is a square and $OA=OB=OC=OD=7\text{cm}$. If the shaded region include two semi circles and two quarter circles, then find the area of unshaded region.



Q30) If the numerator of a fraction is multiplied by 2 and its denominator is increased by 1, it becomes 1. However if the numerator is increased by 4 and denominator is multiplied by 2, then the ratio of the numerator and denominator is 1:2. Find the fraction.

OR

The age of the father is twice the sum of ages of his two children. After 18 years, his age will be equal to the sum of ages of his children. Find the age of father.

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Q31) Find the median of the following frequency distribution:

Marks obtained	0-20	20-40	40-60	60-80	80-100
Number of students	5	9	12	8	6

Q32) In a rectangle, the angle between a diagonal and a side is 30° and the length of this diagonal is 8cm. Find the area of the rectangle.

Q33) Find the mean age (in years) (**using assumed mean method**) from the frequency distribution given below:

AGE(in years)	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Frequency	4	14	22	16	6	5	3

SECTION – V

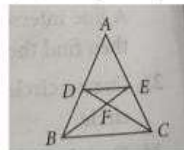
Q34) A man on the deck of a ship, 12m above water level, observes that the angle of elevation of the top of a cliff is 60° and the angle of depression of the base of the cliff is 30° . Find the distance of the cliff from the ship and the height of the cliff. (Use $\sqrt{3} = 1.732$)

OR

The angles of depression of the top and bottom of a building 50m high as observed from the top of a tower are 30° and 60° , respectively. Find the height of the tower and also the horizontal distance between the building and the tower.

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Q35) In the given figure, DE is parallel to BC and AD:DB = 5:4. Find $\frac{ar(\triangle DEF)}{ar(\triangle CFB)}$



Q36) A metallic cylinder has radius 3cm and height 5cm. To reduce its weight, a conical hole is drilled in the cylinder. The conical hole has a radius of $\frac{3}{2}$ cm and its depth is $\frac{8}{9}$ cm. Calculate the ratio of the volume of metal left in the cylinder to the volume of the metal taken out in conical shape.

HINDI

सूचना लेखन

1. खेल विभाग अध्यक्ष की ओर से विद्यालय की क्रिकेट टीम के चयन हेतु में आयोजित होने वाले शिविर से संबंधित एक सूचना 40 से 50 शब्दों में लिखिए।
2. पुस्तक प्रदर्शन विद्यार्थियों को आने के लिए प्रधानाचार्य की ओर से 40 से 50 शब्दों में एक सूचना लिखिए।

विज्ञापन लेखन

1. अर्पिता गारमेंट्स की नई दुकान का आकर्षक विज्ञापन 25 से 50 शब्दों में बनाइए।
2. हर्बल टूथपेस्ट की विशेषताएं बताते हुए 25 से 50 शब्दों में विज्ञापन बनाइए।

निम्नलिखित शीर्षक

के आधार पर लघु कथा और उससे मिलने वाली शिक्षा को लिखिए

क . एकता में बल

ख. लालच बुरी बला है

SANSKRIT

5. निम्नवाक्यानि घटनाक्रमानुसारं पुनर्लिखत-

1. (i) तस्मै ज्ञानदातुम् इन्द्रः वेशं परिवर्त्य तस्य समीपम् अगच्छत्।
(ii) इदं श्रुत्वा तपोदत्तः विद्यां प्राप्तुं गुरुकुलम् अगच्छत्।
(iii) तदा तपोदत्तः इदं दृष्ट्वा तस्य उपहासं करोति।
(iv) एकः तपोदत्तः तपस्यारतः बालकः आसीत्।
(v) सः कथयति-भोः! कथमेतत् व्यर्थमेव सिक्ताभिः सेतुनिर्माणं करोषि।
(vi) सः पुरुषः गंगायाः सिक्ताभिः सेतुनिर्माणम् आरभत।
(vii) सः विद्याप्राप्त्यै अध्ययनं न कृत्वा केवलं तपः एव अकरोत्।
(viii) इन्द्रः अवदत् यदि तपसा एव त्वं विद्यां प्राप्स्यसि तर्हि अहमपि सिक्ताभिः सेतुनिर्माणं करिष्यामि।

उत्तराणि-(i) एकः तपोदत्तः तपस्यारतः बालकः आसीत्।

- (ii) सः विद्याप्राप्त्यै अध्ययनं न कृत्वा केवलं तपः एव अकरोत्।
(iii) तस्मै ज्ञानदातुम् इन्द्रः वेशं परिवर्त्य तपः समीपम् अगच्छत्।
(iv) सः पुरुषः गंगायाः सिक्ताभिः सेतुनिर्माणम् आरभत।
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(viii) इदं श्रुत्वा तपोदत्तः विद्यां प्राप्तुं गुरुकुलम् अगच्छत्।

2. (i) इदं दृष्ट्वा तस्मै ज्ञानं दातुम् देवराजः इन्द्रः वेशं परिवर्त्य तत्रागच्छत्।
(ii) इदं श्रुत्वा इन्द्रः अवदत् यथा त्वं पठनं, लेखनं लिपि अभ्यासं च विना विद्यां प्राप्तुम् इच्छसि।
(iii) सः गंगायाः सिक्ताभिः तस्य समक्षे सेतुं निर्मातुम् आरभत।
(iv) परं वारं-वारं जले सेतु सिक्ता प्रवहत्।
(v) एकः कश्चित् तपोदत्तः नामकः बालकः विद्यां प्राप्तुं तपः करोति स्म।
(vi) 'तथैव अहमपि सिक्ताभिः सेतुनिर्माणं करिष्यामि'। इदं श्रुत्वा सः पठनाय गुरुकुलम् अगच्छत्।
(vii) इदं दृष्ट्वा तपोदत्तः अहसत् अवदत् च-सिक्ताभिः सेतु निर्माणं कथं भविष्यति?
(viii) परं तस्मै कापि सफलता न अभिलत्।

उत्तराणि-(i) एकः कश्चित् तपोदत्तः नामकः बालकः विद्यां प्राप्तुं तपः करोति स्म।

- (ii) परं तस्मै कापि सफलता न अभिलत्।
(iii) इदं दृष्ट्वा तस्मै ज्ञानं दातुम् देवराजः इन्द्रः वेशं परिवर्त्य तत्रागच्छत्।
(iv) सः गंगायाः सिक्ताभिः तस्य समक्षे सेतुं निर्मातुम् आरभत।
(v) परं वारं-वारं जले सेतु सिक्ता प्रवहत्।
(vi) इदं दृष्ट्वा तपोदत्तः अहसत् अवदत् च-सिक्ताभिः सेतु निर्माणं कथं भविष्यति?

VIDEO LINK: <https://www.youtube.com/watch?v=LWZVKOpikMk&authuser=0>

EAST POINT SCHOOL
CLASS -X
ASSIGNMENT(IT)
TOPIC:DATABASE

Q1 Fill in the blanks:

1. A _____ is a set of data elements that is organized using a model of vertical columns and horizontal rows.
2. A _____ is a set of data values of a particular simple type, one for each row of the table.
3. A _____ represents a single, data item in a table.
4. _____ are used to identify which type of data we are going to store in the database.
5. A _____ is a unique value that identifies a row in a table.
6. Types of languages used for creating and manipulating the data in the Database are _____ & _____
7. A _____ is a standard for commands that define the different structures in a database.
8. A _____ is a language that enables users to access and manipulate data in a database.
9. A _____ is a part of DML involving information retrieval only. 5. A popular data manipulation language is _____.

Q2 Short Answer

- Q 1. What is the file extension for databases created using OpenOffice.Org Base?
Q2. List any three file formats that can be managed using OpenOffice.Org Base?