Question Bank

Class-IX

English

KATHMANDU

Answer the following questions:

1. Which two temples did Vikam Seth visit in Kathmandu?
2. Describe the strict religious code at the Pashupatinath Temple.
3. How was the atmosphere of the Pashupatinath Temple full of 'febrile confusion'?
4. Write a note on the belief at Pashupatinath about the end of Kaliyug.
5. How does the author describe the streets of Kathmandu?
6. Why is Baudhnath Stupa described as a haven of quietness?
7. How does the author contrast the flute seller with the other hawkers?
8. What is compared to the quills of a porcupine? Why?
9. Why does the author call flute music 'the most universal and particular of sounds'?
10. According to the author, in what way does the flute come closest to the human voice?

A HOUSE IS NOT A HOME

Answer the following questions:

1. Why did the narrator's first year of highs school feel awkward?
2. Describe the scene at the narrator's house on the Sunday afternoon after he had started high school.
3. What suddenly caught the narrator's attention one Sunday afternoon? How did he and his mother react?
4. What did the narrator's mother do after the house caught on fire? Why did she do so?
5. In what state did the narrator turn up at school the day after the fire?
6. In what way was the narrator's house destroyed by the fire? What was saved? What was he particularly sad about?
7. How did the narrator reminisce about his cat?
8. What happened when the narrator was getting ready for his gym class?
9. Who walked up to the narrator when he was sitting on the curb? What did she have for him? How did the narrator react to it?
10. Where and why had the narrator's cat disappeared? How did it come back?

A SLUMBER DID MY SPIRIT SEAL

<u>Read the extract below and answer the questions that follow:</u>

A slumber did my spirit seal-

I had no human fears.

She seemed a thing that could not feel

The touch of earthly years.

1. What does the word 'seal' mean here?
2. Why did the speaker have no human fears?
3. To who does 'she' refer?
4. What does 'earthly years' refer to?
5. What could she not feel?
6. Why did she seem to be a 'thing' that could not feel it?

<u>Answer the following questions:</u>

1. What does having no 'human fears' mean? What does this tell you about the poet's state of mind?
2. Why was the poet in a state of slumber?
3. What effect did the slumber have on the poet?
4. Explain 'the touch of earthly years'.
5. How did the poet think of his loved one in the first stanza?
6. How does the poet reveal the death of his loved one? What was his reaction to it?
7. Pick out examples from the poem which convey that the poet's beloved will now remain unaffected by the passing of time.
8. How does the poet think of his loved one after she dies?
9. Does the poet bitterly grieve the death of his loved one? Does he feel calm? Give reasons for your answer.

IF I WERE YOU

<u>Answer the following questions:</u>

1. What was Gerrard doing before he saw the intruder?
2. Give a physical description of the intruder.
3. How did Gerard answer the intruder's questions? What do you think Gerrard was trying to do by talking in that manner?

4. "I've got brains and I use them. That's how I've got where I have." Does this statement of the speaker sound ironic? How?
5. What was the intruder's specialty?
6. According to the intruder, what was Gerrard's big surprise? Why did he want to take that step?
7. What is the 'posh stuff' that the intruder found easy?
8. Why had the intruder been running away from the police? Where did it bring him?
9. How did Gerrard manage to lock the intruder?
10. What did Gerrard's telephonic conversation reveal about him?

ON KILLING A TREE

Answer the following questions:

1. Why does it take much time to kill a tree?
2. What, according to the poet, is not enough to kill a tree?
3. How does the tree grow to its full size? Give examples from the poem that suggests its life and activity.
4. What do you understand by 'bleeding bark'? why does it bleed?
5. How is the root of the tree to be pulled out?
6. Explain the poet's tone and language as he describes the uprooting of a tree.
7. What does the poet mean by 'anchoring earth' and 'earth cave'?
8. How is the strength of the tree exposed?
9. What is the most sensitive part of the tree? How do sun and air affect it?
10. How is the tree finally killed?

PACKING

Answer the following questions:

1. Name the characters in the story 'Packing'. Describe the Relation they share among themselves.
2. How did George and Harris react to Jerome's suggestion? Did Jerome approve of their reaction?
3. What did Jerome intend when he offered to pack?
4. How did Jerome's old roommate irritate him?
5. How did Harris remark after the bag was shut and strapped first by Jerome? Why do you wait he waited until then?
6. Which 'horrible idea' was Jerome struck by a little later?
7. Why did Jerome feel that 'the thing' would soon become exciting? How did it become exciting?
8. What foolish things did George and Harris do while packing?
9. Describe Montmorency.
10. How did Harris react to Montmorency's 'contribution' to the packing?

REACH FOR THE TOP: PART I SANTOSH YADAV

<u>Answer the following questions:</u>

1. what surprised the holy man who gave Santosh's mother his blessings?
2. Describe Santosh's family.
3. Why do you think Santosh's grandmother wish for a girl?
4. Santosh lived life on her own terms from the start. Explain.
5. Where did Santosh go to school? Why?
6. How did Santosh become familiar with the world of mountaineering?
7. What did the encouragement from the Aravali mountaineers result in?
8. Which qualities helped her improve and cement a place in the hearts of her fellow climbers?
9. What shows Santosh's concern for environment?
10. What enabled Santosh Yadav to get into the record books both the times she scaled Mt Everest?

REACH FOR THE TOP PART II: MARIA SHARAPOVA

<u>Answer the following questions:</u>

1. When did Maria Sharapova reach the world number one position?
2. What according to the author, contrasts with her read smile and glamourous attire?
3. How did Maria Sharapova have to make sacrifices as a nine-year-old?
4. How did the other pupils treat Maria Sharapova?
5. What is Sharapova's mantra for success?
6. Why do you think Maria Sharapova has a pronounced American Accent?
7. How does Sharapova express her pride in her Russian nationality?
8. How is Sharapova 'reaping' the riches?
9. What Maria Sharapova have to say about monetary gains from tennis?
10. Why does Sharapova call tennis a 'business and a sport'?

THE ACCIDENTAL TOURIST

<u>Answer the following questions:</u>

1. Give two examples of explain that Bryson was easily confused.
2. At which airport did the author check in when flying to England? What did he remember at the airport?
3. Why did Bryson cry, "My tobacco!" in horror?
4. What happened once Bryson attempted to tie his shoelace?
5. Why do you think Bryson's hair went into panic mode?

6. How did the woman sitting next to Bryson react to his clumsiness?
7. Why did Bryson never get his frequent flyer miles?
8. Was Bryson upset that he could not fly to Bali? Why or why not?
9. Why did Bryson 'ache to be suave'?
10. What precautions would Bryson take when he was not flying with his family? Why?

THE BEGGAR

Answer the following questions:

1. What did Lushkoff tell Sergei about his plight when he first met him?
2. Why Lushkoff say that he was obliged to beg because of his circumstances? Do you think he had become a beggar by choice or by circumstance? Give reasons.
3. How was Sergei able to recognize the beggar?
4. Sergei knew that the beggar was lying. What lie did the beggar tell Sergei when he me him in Sadovya Street?
5. How did Sergei help Lushkoff find work?
6. How did Lushkoff react when Sergei asked him to go to the wood shed?
7. What made Lushkoff to agree to chop wood for Sergei?
8. Who was Olga? How did she react to her 'companion'?
9. Was Lushkoff able to chop wood? How do you know this?
10. Where did Sergei meet Lushkoff after two years? What difference did he notice in Lushkoff's appearance?

THE BOND OF LOVE

Answer the following questions:

1. What were the narrator and his friends up to when they saw a black sloth bear?
2. How did the narrator capture the baby bear?
3. To whom did the narrator present the baby bear? How did they react?
4. How did Bruno reach the narrator's wife after the accident befell him?
5. What did Bruno do after he gained consciousness?
6. How did Bruno grow within a few months at the narrator's home?
7. How did the Superintendent at Bangalore respond to the narrator's wife's request?
8. What special arrangements were made for Baba's arrival in Bangalore?
9. Describe the island made for Baba?
10. How did the narrator's wife reach the island where Baba was housed?

THE DUCK AND THE KANGAROO

Said the Duck to the Kangaroo,

"Good Gracious! How you hop!

Over the fields and over the water too,

As if you never stop!

My life is a bore in this nasty pond,

And I long to go out in the world beyond!

I wish I could hop like you!"

Said the Duck to the Kangaroo.

1. Why is the Duck taken in by the Kangaroo?
2. What does it say about its own life?
3. What does it want to do?
4. What the does the Duck's longing reveal about it?

Answer the following questions:

1. How did the Duck praise the Kangaroo?
2. How did the Duck complain about its life?
3. What did the Duck wish to do? How did it hope to fulfill its wish?
4. What request did the Duck make?
5. What did the Duck want to travel? Where did it want to go?
6. What did the Kangaroo say about the Duck's request? What concern did it share?
7. How did the Duck take care of the Kangaroo's apprehension?
8. How did the Duck plan to keep out the cold?
9. What instructions did the Kangaroo give the Duck? Did the Duck cooperate?
10. What did the Duck and the Kangaroo do finally? Where did they go?

THE LAST LEAF

<u>Answer the following questions:</u>

1. What was Johnsy and Sue's profession? Where did they live?
2. What did the doctor tell Sue about Johnsy's condition?
3. Why did the doctor think medicines would not help Johnsy?
4. Why was Johnsy not recovering from her illness? How did she feel?
5. What has Johnsy known about her health? Was it true? Why do you think she felt that way?
6. How did Sue look after Johnsy during her illness?
7. Why didn't the last leaf fall even after a fierce storm?
8. Who was Behrman? Why did he risk his life to paint the leaf?
9. How did Behrman did pneumonia?
10. When did Behrman decide to pain the leaf?

THE SNAKE TRYING

<u>Read the extract below and answer the questions:</u>

Along the sand

He lay observed

And chased away, and now

He vanishes in the ripples

Among the green slim reeds.

1. To whom does 'he' refer?
2. Where was he before he was observed?
3. How are the ripples formed?
4. Where does he disappear?

Answer the following questions:

1. How does the poet describe the snake?
2. Is the snake harmful? Support your answer with an example from the poem?
3. What was the snake trying to do?
4. Why did the snake curve his body? What impression did it create on the pot?
5. What request the poet make of the person with the stick?
6. Do you think the poet is in favour of killing the snake? Why?

7. How does the poet describe the snake's beauty?
8. Where was the snake before and after he was pursued?
9. How did the snake hide himself?
10. What impression do you get of the poet from this poem?

WEATHERING THE STORM

Answer the following questions:

1. Describe the scene when the cyclone hit coastal Orissa.
2. What was the condition of Prashant's friend's house during the cyclone?
3. What was Prashant's biggest fear while he was at his friend's house?
4. How did Prashant go back to his village?
5. Where did Prashant find his family?
6. Why did Prashant want to go back home even when the situation was dangerous?
7. Why did the military helicopter not return after dropping some food parcels over the shelter?
8. How did the villagers attract the attention of the military helicopters to get food?
9. What did the government and the non-government organisations do to help the villagers?
10. How did the youth of the village contribute in the rehabilitation work at the shelter?

MATHEMATICS
Area of Parallelogram & Triangles

1. In triangle ABC, AD is a median. If the area of ΔABD is 15 cm sq. then find the ar(ΔABC).

2. ABCD is a parallelogram and BPC is a triangle with P falling on AD. If the area of parallelogram ABCD= 26 cm^2, find the area of triangle BPC.

3. PQRS is a parallelogram and PQT is a triangle with T falling on RS. If area of triangle PQT = 18 cm^2, then find the area of parallelogram PQRS.

4. ABCD is a parallelogram where E is a point on AD. Area of ΔBCE = 21 cm^2. If CD = 6 cm, then find the length of AF.

5. The area of ΔABC = 32 cm^2. AD is a median and E is the mid-point of AD. Find the area of ΔBED.

6. ABCD is a parallelogram and BC is produced to a point Q such that AD= CQ. If AQ intersects DC at P, show that area of ΔBPC= area of ΔDPQ.

7. Area of triangle ABC=24cm^2. F, E and D are the midpoints of sides AB, AC, BC respectively. Find the area of triangle EFD and of parallelogram BDEF.

8. Find the area of trapezium whose parallel sides 9cm and 5cm respectively and the distance between these sides is 8cm.

Construction

1. Construct a ΔPQR in which PQ = 5.4 cm, ∠Q = 60° and PR – PQ = 2.3 cm.

2. Construct a ΔXYZ in which ∠Y = 45°, ∠Z = 75° and XY + YZ + ZX = 12 cm.

3. Construct a ΔABC in which ∠B = 60°, ∠C = 45° and the perimeter of the triangle is 10 cm.

4. Construct a ∠ABC with perimeter 11 cm and each of its base angle is 45°.

5. Construct a ∠PQR whose perimeter is 12 cm and the lengths of whose sides are in the ratio 2 : 3 : 4.

6. Construct a right-angled triangle whose be is 3.8 cm and hypotenuse is 5.6 cm.

7. Construct a ∠ABC in which ∠B = 60° ∠C = 30° and the length of the perpendicular from the vertex A is 5.3 cm.

8. Construct an equilateral triangle whose perimeter is 16.2 cm.

9. Construct an equilateral triangle if its altitude is 3.2 cm.

10. The construction of a triangle ABC in which BC = 6 cm, ∠B = 45° is not possible, when difference of AB and AC is equal to
    (i) 6.9 cm
    (ii) 5.2 cm
    (iii) 5.0 cm
    (iv) 4.0 cm

Probability

1. A coin is tossed 150 times and it is found that head comes 1115 times and tail 35 times. If a coin tossed at random, what is the probability of getting
    (i) a head   (ii) a tail

2. A bag-I contains four cards numbered 1, 3, 5 and 7 respectively. Another bag-II contains here cards numbered 2, 4 and 6 respectively. A card is drawn at random from each bag. Find the probability that the sum of two cards drawn is 9.

3. A bag contains 7 white, 3 red and 4 black balls. A ball drawn at random. Find the probability that it is a red or a black ball.

4. In a single throw of two dice, find the probability of getting a total of 8.

5. One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting a face card.

6. Two unbiased coins are tossed once. What is the probability of getting exactly one head?

7. What is the probability of a sure event?

8. How many faces a common die has?

9. When a die is thrown once, what can be the greatest possible score?

10. If two dice are thrown together, then what must be the greatest possible score?

Circles

1. A circle of 30 cm diameter has a 24 cm chord What is the distance of the chord from the centre?

2. A chord AB of a circle with centre O is 10 cm. If the chord is 12 cm away From centre, then what is the radius of the circle?

3. If the diameter AD of a circle is 34 cm and the length of a chord AB is 30 cm. What is the distance of AB from the centre?

4. What is the length of a chard which is at a distance of 4 cm from the centre of a circle of radius 5 cm?

5. If the radius of a circle is 13 cm and the length of its chord is 10 cm then what is the distance of chord from the centre?

6. If the distance of 10 cm long ekond farm the centre of the circle is 12 cm then what is the diameter of the circle?

7. Two circles having radii 5 cm and 3 cm intersect each other at two distinct points. If the distance between their centres is 4 cm, then what is the length of the common chord?

Surface areas & Volume

1. The length, breadth and height of a cuboid are 15 cm, 10 cm and 20 cm respectively. Find its total surface area.

2. Shanta had to make a model of a cylinderical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope, wha would be the area of chart paper required by her, if she wanted to make a kaleidoscope of length 25 cm with a 3.5 cm radius? take $\pi \frac{22}{7}$

3. The height of a cone is 16 cm and its base radius is 12 cm. Find: (i) the curved surface area, (ii) total surface area of the cone. [Use π = 3.14]

4. If the slant height and the base radius of a cone are 10 cm and 8 cm respectively, then find
     (i) curved surface area and
     (ii) total surface area. [Take π = 3.14]

5. The hollow sphere in which the circus motor cyclist performs his stunts, has a diameter of 7 m, Find the area available to the motor cyclist for riding.

6. A hemispherical dome of a building needs to be painted. if the circumference of the base of the dome is 17.6 m, find the cost of painting it, given the cost of painting is Rs. 5 per 100 cm2.

7. A wall of length 10 m was to be built across an open ground. The height of the wall is 4 m and thickness of the wall is 24 cm. If this wall is to be built up with bricks whose dimensions are 24 cm π 12 cm π 8 cm, how many bricks would be required?

8. The pillars of a temple are cylindrical shaped. if each pillar has a circular base of radius 20 cm and height 10 m, how much concrete mixture would be required to build 14 such pillars?

9. The sides of a right triangle are 7 cm, 24 cm and 25 cm. If it is revolved abotu its side 7 cm to form a solid cone find teh volume of the solid so formed.

10. Two cones have their base radii in ratio of 3 : 1 and the ratio of their heights as 1 : 3. Find the ratio of their volumes.

Statistics

1. The mean of 100 observations is 50. If one of the observation which was 50 is replaced by 150 then what will be the resulting mean?

2. There are 50 numbers. Each number is subtracted from 53 and the mean of the numbers so obtained is found to be –3.5. What is the mean of given numbers?

3. What is the mean of first 10 natural numbers?

4. The mean of 10, 15, x, 5, 15 is 15. What is the value of x?

5. In the frequency distribution.

Class intervals	Frequencies
0 –10	5
10 – 20	15
20 – 30	10
30 – 40	2
40 – 50	3

    What is the cumulative frequency corresponding to class 40 – 50?

6. What is the median of the data 10, 16, 7, 9, 8, 4 and 12?

7. What is the mode of the observations 11, 8, 10, 8, 15, 6, 7, 8, 12, 7 and 9?

8. What is mode of the data 14, 20, 19, 14, 15, 16, 15, 14, 15, 18, 19, 14, 15, 18, 15?

9. What is median of the following numbers: 4, 3, 4, 5, 12, 7, 7, 6, 7?

10. What is the median of the data 78, 56, 22, 34, 45, 54, 39, 68, 54, 84?

11. In the class intervals 10–20, 20–30, the number 20 is included in which of the following?
     (a) 10-20   (b) 20-30
     (c) both the intervals   (d) none of these intervals

12. The width of each of five continuous classes in a frequency distribution is 5 and the lower class limit of the lowest class is 10. What is the upper class limit of the highest class?

Statistics

1. Find the mean of x + 77, x + 7, x + 5, x + 3 and x – 2?
   (a) x + 8
   (b) x + 18
   (c) x – 8
   (d) x – 18

2. If the mean of n observations x_1, x_2, x_3, ... xn is
   (a) 0
   (b) 1
   (c) 2
   (d) 3

3. If each observation of the data is increased by 5, then what happens to its mean?
   (a) is increased by 4
   (b) is increased by 5
   (c) is decreased by 4
   (d) is decreased by 5

4. In the class intervals 40 – 50, 50 – 60, the number 50 is included in which of the following?
   (a) 40 – 50
   (b) 30 – 40
   (c) 50 – 60
   (d) 60 – 70

5. If x be the mid-point and 1 be the upper class limit of a class in a containous frequency distribution. What is the lower limit of the class?
   (a) x – 1
   (b) 3x + 8
   (c) 2x + 2
   (d) 2x – 1

6. The mean of five numbers is 30. If one number is excluded, their mean becomes 28. What is the excluded number?
   (a) 38
   (b) 35
   (c) 33
   (d) 36

7. What is the median of the data 78, 56, 22, 34, 45, 54, 39, 68, 54, 84?
    (a) 54
    (b) 53
    (c) 55
    (d) 51

Constructions

1. Which of the following angle can be constructed with the help of a ruler and a pair of compasses?
    (i) 35°
    (ii) 40°
    (iii) 37.5°
    (iv) 47.5°
2. Which of the following can be the length of BC required to construct the triangle ABC such that AC = 7.4 cm and AB = 5 cm?
    (i) 3.5 cm
    (ii) 2.1 cm
    (iii) 4.7 cm
3. The construction of a triangle $\triangle ABC$ in which BC = 6 cm, $\angle A$ = 50° is not possible, when difference of BC and AC is equal to
    (i) 4.6 cm
    (ii) 6.4 cm
    (iii) 5.1 cm
4. The construction of the triangle ABC is possible if it is given that BC = 4 cm, $\angle C$ = 60° and the difference of AB and AC is
    (i) 3.5 cm
    (ii) 4.5 cm
    (iii) 3 cm
    (iv) 2.5 cm
5. Which of the following set of lengths can be the sides of a triangle?
    (i) 2 cm, 4 cm, 1.9 cm
    (ii) 5.5 cm, 6.5 cm, 8.9 cm
    (iii) 1.6 cm, 3.7 cm. 5.3 cm
6. Which of the following sets of angles can be the angles of a triangle?
    (i) 30°, 60°, 80°
    (ii) 40°, 60°, 70°
    (iii) 50°, 30°, 100°
7. If the construction of a triangle ABC in which AB = 6 cm, $\angle A$ = 70° and $\angle B$ = 40° is possible then find the measure of $\angle C$.
    (i) 40°
    (ii) 70°
    (iii) 80°

8. With the help of a ruler and compasses, which of the following is not possible to construct?
   - (i) 70°
   - (ii) 60°
   - (iii) 135°
9. With the help of a ruler and compasses which of the following is not possible to construct?
   - (i) 120°
   - (ii) 135°
   - (iii) 140°
10. If a, b and c are the lengths of the three sides of a triangle, then which of the following is true?
   - (i) a + b < c
   - (ii) a − b < c
   - (iii) a + b = c

Surface Areas & Volumes

1. If the radius of cylinder is halved and height is doubled, then what will be the curved surface area?
   - (a) increase by 1
   - (b) the same
   - (c) double
   - (d) triple

2. If a right circular cone hs radius 4 cm and slant height 5 cm then what is its volume?
   - (a) 16 π cm³
   - (b) 14 π cm³
   - (c) 12 π cm³
   - (d) 18 π cm³

3. A well with 10 m inside diameter is dug 14m deep. Earth taken out of it is spread all around it to make an embankment of height $4\frac{2}{3}$ m. Find the width of the embankment.
   - (a) 5 m
   - (b) 4 m
   - (c) 4.3 m
   - (d) 6 m

4. In the cylindrical container, the base radius is 8 cm. If the height of the water level is 20 cm, find the volume of the water in the container.
   (a) 5.6721 l
   (b) 4.0218 l
   (c) 3.8925 l
   (d) 4.97 l

5. What is the total surface area of a hemisphere of radius r?
   (a) $4\pi r^2$
   (b) πr^2
   (c) $2\pi r^2$
   (d) $3\pi r^2$

6. If the radius of a sphere is doubled, then what is the ratio of their surface area?
   (a) 1 : 2
   (b) 2 : 1
   (c) 1 : 4
   (d) 4 : 1

7. Two right circular cones of equal curved surface areas have slant heights in the ratio of 3 : 5. Find the ratio of their radii.
   (a) 4 : 1
   (b) 3 : 5
   (c) 5 : 3
   (d) 4 : 5

Science

Chapter 11 Work and energy

Question 1. What do you understand by transformation of energy? Explain with the help of suitable example?

Question 2. List two essential conditions for work to be done?

Question 3. Define energy?

Question 4. Define work? Write an expression of work in terms of force and displacement. State SI unit of work done?

Question 5. Compare the kinetic energies of two objects of masses 10kg anf 50kg respectively but having same momentum?

Question 6. What is a work done on a body moving in a circular path?

Question 7. Identify the state the type of energy transformation in the following cases:
a.Riding a bicycle
b.Burning of cracker

Question 8. Define potential energy? Write an expression for potential energy. Write the SI unit of potential energy?

Question 9. What is work done by the force of gravity on a satellite moving round the earth? Justify the answer?

Question 10. Define kinetic energy? Write an expression for kinetic energy? Write the SI unit of kinetic energy?

Question 11. Define 1 Watt of power? A lamp consumes 1000J of electrical energy in 10s. Calculate its power?

Question 12. Name the two types of mechanical energy? Give two examples when an object possesses both types of energies?

Question 13. Calculate the amount of work required to stop a car of 1000kg moving with a speed of 72km/h?

Question 14. Does the gravitational potential energy of a body depend on the path along which the body is moved, while going from one point to another? Illustrate your answer with the help of suitable example?

Question 15. An object thrown at a certain angle to the ground moves in a curved path and falls back to the ground. The initial and the final points of the path of the object lie on the same horizontal line? What is the work done by the force of gravity on the object?

Question 16. State the kind of energy transformation that takes place in the following devices:
a. Solar battery
b.Electric motor
c.Microphone
d.Thermal power plant
e.Hydroelectric power plant

Question 17. Can a body have energy without momentum? Explain?

Question 18. Can a body have momentum without having energy? Explain?

Question 19. Define potential energy? Give SI unit? State two factors on which the magnitude of potential energy depends. Give one example each for the change in potential energy due to:
a.position
b.configuration of the body?

Question 20. Calculate the kinetic energy of a car of mass 750kg moving with a velocity of 54km/. Find the new kinetic energy of a car if passenger of mass 50kg sit in the car?

Question 21. Establish a relationship between momentum and kinetic energy of a body?

Question 22. Calculate the kinetic energy of a car of mass 500kg moving with a velocity of 18Km/h. Find the new kinetic energy if two passengers of mass 50 kg each sit in the car?

Question 23. Derive an expression for the kinetic energy of an object?

Question 24.A man whose mass is 50 kg climbs up 30 steps of a stair in 30 s. If each step is 20 cm high, calculate the power used in climbing the stairs. (Given g = 10 m/s)

Chapter 12 Sound

Question 1.A person hears an echo from the top of a tower, 2.2 sec after the sound is produced. How far away is the tower from the person? Speed of the sound in air is 332m/s?
Question 2. How can multiple echoes of a single sound be produced? Explain?
Question 3. Define echo. Give its two application?
Question 4. When a sound is reflected from a distant object, an echo is produced and heard on a winter night. Will you hear the echo of the same sound on a summer day if the distance between reflecting surface and the source of sound remains the same? Justify your answer?
Question 5. Why are the walls and roof of an auditorium covered with sound absorbent materials?
Question 6. Define reverberation. What arrangements should be made in an auditorium to control excessive reverberation?
Question 7. Determine the minimum distance between the listener and reflector for an echo to be heard dintinctively of a sound propagating with a speed v m/s?
Question 8. Name the sound of the following frequencies:
a) 5Hz

b) 50Hz
c) 50000Hz
d) 50kHz

Question 9. Write full form of acronym SONAR. How the method of echo-ranging is used to detetmine the depth of the sea?

Question 10. Explain, how defects in a metal block can be detected using ultrasound?

Question 11. How bats can detect their prey?

Question 12. What is the frequency of a wave whose time period is 0.05s?

Question 13.A ship is stationary is at a distance of 2800m from the sea-bed. The ship sends an ultrasound signal to the sea-bed and its echo is heard after 4s. Find the speed of sound in water?

Question 14.A body is vibrating 6000times in one minute. If the velocity of sound in air is 360m/s, Find:
a) Frequency of the vibration in Hz
b) Wavelength of sound produced

Question 15. Explain with the help of a diagram the working of SONAR?

Question 16.A hospital uses an ultrasonic scanner to locate tumors in a tissue. What is the wavelength of ultrasound in a tissue in which the speed of ultrasound is $1.5km/sec^2$? The operating frequency of the scanner is 4.0 MHz?

Question 17. State any two characteristics of a wave motion?

Question 18.A ship sends out ultrasound that returns from the sea-bed and is detected after 3.22sec. If the speed of ultrasound in sea water is 1530m/s, calculate the distance of the sea-bed from the ship?

Question 19. How do the frequency and amplitudes affect musical sound?

Question 20. Explain how the human ear works?

Chapter 13 why do we fall ill

1. State two principles of treatment of a disease?
2. Name the causative agent for (i) Typhoid and (ii) Malaria?
3. Write three precautions you can take in your school to reduce the incidence of infectious diseases?
4. Differentiate between congenital disease and acquired disease?
5. "When we think about health, we think about community but when we think about disease, we think about individual sufferer". Do you agree? Comment with two example?
6. Why social harmony and good economic conditions are necessary for good health?
7. Give the ways by which microbial agents can commonly move from an infected person to someone else for the following disease:
a) Cholera
b) Pneumonia
c) Common cold
d) Malaria
e) Fungal infection
8. An active immune system forms many cells to the affected tissue to kill off the disease causing microbes. Identify the process and mention its local and general effects?
9. Name the system which is responsible for fighting on incoming pathogen?
10. What are the different means by which infectious diseases are spread

11. Which disease cause more effects on general health- acute or chronic?
12. Common cold spread faster and is difficult to control. Give reason?
13. What is AIDS? What are the common methods of transmission of AIDS? AIDS patient should not be demeaned in the society. State reason?

14. You have suffered from chicken pox, when you were in class three. Why will you not suffer from it again?

15. Many vaccines form the public health programme of childhood immunization for preventing infectious disease. Name any two such diseases?

16. "Educating parents would help a lot in reducing the incidences of disease in children". Justify the statements with reasons?

17. What is immunization?

18. Why villagers suffer with cholera more than urban people?

19. Write the causative agents of following:

a. Kala-azar

b. Acne

c. Sleeping sickness

d. Rabies

e. SARS

20. What causes Japanese encephalitis? How it can be prevented?

21. Tabulate three differences between acute and chronic diseases?

22. What are the various ways to prevent the disease?

23. "Antibiotics are not effective for viral diseases". Justify this statement?

24. Name any two diseases which are caused due to unprotected sexual intercourse?

25. What type of disease can be prevented through vaccination?

26.Fill in the blanks

(a) _____ disease continues for many days and causes _____on body.

(b) _____disease continues for a few days and causes no longer term effect on body.

(c) _____is defined as physical, mental and social well-being and comfort.

(d) Common cold is _____disease.

(e) Many skin diseases are caused by _____.

Multiple choice questions

27.You are aware of Polio Eradication Programme in your city. Children are vaccinated because

(a) vaccination kills the polio causing micro-organisms

(b) prevents the entry of polio causing organism

(c) it creates immunity in the body

(d) all the above

28. Viruses, which cause hepatitis, are transmitted through

(a) air

(b) water

(c) food

(d) personal contact

29. Vectors can be defined as

(a) animals carry the infecting agents from sick person to another healthy person

(b) micro-organisms which cause many diseases

(c) infected person

(d) diseased plants

30. Which disease is not transmitted by mosquitoes?

(a) Dengue

(b) Malaria
(c) Brain fever or encephalitis
(d) pneumonia

Chapter 4 Structure of the atom

1. Helium atom has two electrons in its valence shell but its valency is not two. Explain?
2. Draw a diagram of the Thomson's model of an atom. Why was it discarded?
3. What are the differences between isotopes and isobars?
4. Compare all proposed models of an atom?
5. An ion M^{+3} has 10 electrons and 14 neutrons. Find its atomic number and mass number of M?
6. Magnesium has 12 protons and 12 neutrons. Fid the valency of magnesium?
7. Write the conclusions drawn by Rutherford for the following observing during his alpha scattering experiment:
a) Most of the alpha- particle passed straight through the gold foil.
b) Some alpha- particles getting deflected from their path.
c) Very small fraction of alpha- particles getting deflected by 180C.
8. An element is represented as $_8X^{16}$ Find:
a) The number of electrons in element X.
b) Mass number of an element X.
c) The number of neutrons in element X.
9. With the help of labeled diagram describe in brief the Rutherford's experiment. Write any three important conclusions drawn from the experiment?
10. The average atomic mass of a sample of element X is 16.2u. What are the percentage of isotopes $_8X^{16}$ and $_8X^{18}$ respectively?
11. State the major drawback in Rutherford's model which helped compensate this drawback?

12. List three differences between electron, proton and neutron?
13. Compare the K and K+ ion on the following parameters:
a) Number of electrons
b) Electronic configuration
c) Atomic structure (energy shells)
14. Give reasons of following:
a) An atom is electrically neutral.
b) Ions are more stable than atoms.
c) Noble gases show low reactivity.
15. Name two elements which have isotopes. Write the symbol of their isotopes and provide an account of the sub-atomic particles present in each of these isotopes.
16. Calculate the number of electrons, protons and neutrons in an atom of an element with atomic number 20 and mass number 40. Write electronic configuration and draw the structure of the atom?
17. An atom has complete K and L shells. Is this an atom of a metal, non-metal or noble gas? Justify?
18. Define the term valency? How is it different from valence electrons? Find the valency of oxygen and fluorine?
19. Write electronic configuration of the following elements and predict their valencies:
a) Fluorine: 9
b) Aluminium: 13
c) Argon: 18
20. What will be the composition of nucleus of the atom of an element with atomic number 19 and mass

number 39? Also write its electronic configuration?

21. Which of the two elements given below would be chemically more reactive:

22. 'X' of atomic number 18 or element Z of atomic number 16? And why?

23. An element has electronic configuration of 2,8,7:

a) What is the atomic number of the element?

b) What is the name of the elements?

c) Which of the following elements have same number of valence electron? N(7), F(9), P(15) and Ar(18).

24. State reasons for the following statements:

a) Some elements possess fractional atomic mass.

b) Isotopes of an element have similar chemical properties.

c) Noble gases are inert.

GEOGRAPHY
CHAPTER-4 Drainage

1. Where do south-east trade winds originate from?
2. Why do south-east trade winds bring abundant moisture to the Indian subcontinent?
3. Why are the temperatures in peninsular India low during summer?
4. Explain loo-a striking feature of the hot weather season.
5. Explain the term 'mango showers'.
6. When does monsoon withdraw itself from the northern plains?
7. Explain the 'October heat'.
8. The northern India has higher temperatures when compared to other areas on the same latitudes. Why?
9. How do dust storms bring temporary relief in the month of May in northern India?
10. Why is cold weather season a dry season?

CHAPTER-5
DRAINAGE

- 1) How many plant and animal species are approximately found in India?

- 2)   What does 'Natural Vegetation' mean?

- 3)   What is 'Virgin Vegetation'?
- 4)   What do 'Flora' and 'Fauna' refer to?
- 5) What kind of land is suitable for natural vegetation?
- 6)   What kinds of soils are needed for natural vegetation?
- 7)   Why are the western slopes of the western Ghats concerned with thick forests and not the eastern slopes?
- 8)   Which factors are responsible for changes in India's natural vegetation?
- 9)   How is an ecosystem formed?
- 10)   What are biomes?
- 11) What are the major types of vegetation found in India?
- 12) Which animals are found in Tropical Rain Forests?
- 13)   Name the commercially important trees of Tropical Rain Forests.

- 14) Give one important characteristic of Tropical deciduous forests.
- 15) In which regions are moist deciduous forests found?
- 16) What are the important species of moist deciduous forests?
- 17) In which regions are dry deciduous forests found?
- 18) Name the important dry deciduous species.
- 19) Name the important coniferous trees of temperate forests.
- 20) Name the common animals found in Montane forests.

CHAPTER- 6
POPULATION

1- Why are human being termed as a resource?

2- What is census?

3- What is India's share of world's area and population?

4- According to 2001 census data what is India's population and population density?

5- Which factors are responsible for uneven distribution of population in India?

6- Despite the decline in growth rate, number of people being added every decade is steadily increasing. Why?

7- Explain:-

 i) Birth rate

 ii) Death rate

 iii) Migration

 iv Age composition

 v) Sex ratio

 vi)Literacy

8- What are the reasons for the high rate of population growth in India?

9- What are the reasons for gradual decline in the rate of population growth in India since 1981?

10-How does migration change the population size and composition of a place?

11- What are the push and pull factors resulting in migration of people in India?

12- What are the causes of unfavourable sex ratio in India?

13- How does the occupational structure affect economic development of a country?

14- What are the indicators of improved health status of the Indian population? Which factors are responsible for this improvement?

15- Describe main features of the NPP 2000.

POLITICAL SCIENCE
CH-5 WORKING OF INSTITUTIONS

- 1) What is SEBC?

- 2) What is the role of the President in India?
- 3) What are the Prime Minister's powers in India?
- 4) What do you know about Mandal Commission?
- 5) Who agreed to the recommendations of Mandal Commission?
- 6) Who all were against Mandal Commission Recommendations?
- 7) What is the role of government in a citizen's life?
- 8) Why do democratic governments insist on Institutions?
- 9) What is an assembly of elected representatives called in India?
- 10) What is the role of Parliament in law making?
- 11) Which two houses form the parliament of one country?
- 12) What is the length of the term of a government in India?
- 13) Can the houses be dissolved or is it permanent?
- 14) How does Lok Sabha exercise money powers?
- 15) How does Lok Sabha exercise control over the Council of Ministers?
- 16) What is an executive?
- 17) Why are they called as the Executive?
- 18) What do you understand by the term 'Political Executive'?
- 19) Who is called 'Permanent Executive'?
- 20) Why does the political executive have more power than the non-political executive?
- 21) Why should the minister have final say on important matters?
- 22) How is the Prime Minister appointed?
- 23) How are Ministers chosen by the Prime Minister?
- 24) What is a Council of Ministers?
- 25) Who are the Cabinet Ministers?
- 26) Who are Ministers of State with independent charge?
- 27) Why is parliamentary democracy in most countries often known as the cabinet form of government?
- 28) How does the President act as Executive Head?
- 29) How does President give his assent to a bill?

- 30) What is called as 'The Judiciary'.

CHAPTER-6
DEMOCRATIC RIGHTS

- 1) What is Amnesty International?

- 2) How are rulers of Saudi Arabia elected?
- 3) How do citizens exercise their rights in Saudi Arabia?
- 4) What are rights?
- 5) How can we claim our right?
- 6) What are the three qualities of rights?
- 7) Why are rights necessary for the very sustenance of a democracy?
- 8) In what situation should a government protect the citizen's rights?
- 9) What are Fundamental Rights?
- 10) Name the six Fundamental Rights provided by the Indian Constitution to Indian citizens.
- 11) ' What does 'Rule of law' mean?
- 12) How is Rule of Law considered the foundation of any democracy?
- 13) Is it true that every citizen from the Prime Minister to a small farmer, is subjected to the same laws?
- 14) How is right to equality exercised?
- 15) What does 'untouchability' mean?
- 16) What does 'Freedom' mean?
- 17) What is meant by 'freedom of speech and expression'?
- 18) How do citizens of India exercise freedom to travel to any part of the country?
- 19) What is meant by 'traffic in human beings'?
- 20) What is 'Begar'?
- 21) In what way is child labour prohibited by the Indian constitution?
- 22) What is 'Secularism'?
- 23) What is a 'Secular State'?
- 24) Why do we need Cultural and Educational rights?
- 25) What does Right to Constitutional Remedies imply?
- 26) What are writs?
- 27) What does 'Right to freedom of Religion' mean?
- 28) What is PIL?
- 29) What does 'Right to Education* mean?
- 30) What is RTI?

HISTORY
CH-3 NAZISM & THE RISE OF HITLER

- 1) Name the original name of the Nazi party.

- 2) Explain the purpose of the Enabling Act passed on 3rd March, 1933.

- 3) What was the work entrusted to the International War Tribunal set up in Nuremberg after the war?
- 4) Who were considered as the 'desirables' under Nazi rule?
- 5) Who were mockingly called 'November criminals'?
- 6) On whose thinking were Hitler's ideas of racialism based?
- 7) What was the name given to separately marked areas where the Jews lived?
- 8) Which sport did Hitler promote?
- 9) What was the name given to the German Parliament?
- 10) Which treaty was signed by Germany after its defeat in the First World War?
- 11) Which of the following was the most feared security force of the Nazi state?
- 12) When did Germany attack the Soviet Union?
- 13) Which incident persuaded the USA to join the war?
- 14) What was Hitler's ideology of 'Lebensraum' or living space?
- 15) What was Nazi ideology with regard to school children?
- 16) Who was the propaganda Minister of Hitler?
- 17) Which move of Hitler is said to be a historical blunder?
- 18) What terms were used for 'killing' by the Nazis?
- 19) Which event was termed the 'Holocaust'?
- 20) What was the name of Hitler's autobiography, written before he assumed the Chancellorship of Germany?
- 21) What did the term 'Evacuation' mean in Hitler's Germany?
- 22) What was the slogan coined by Hitler when he followed his aggressive foreign policy?
- 23) The US army dropped the atomic bomb in 1945 on which cities?
- 24) What was the name of the Nazi Youth organisation which consisted of all German boys of 14 to 18 years of age?
- 24) Who was Hitler? How did. Hitler re-constructs Germany?
- 25) Examine any three inherent defects in Weimar Republic.

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CHAPTER- 4
FOREST, SOCIETY & COLONIALISM

- 1) What is meant by 'deforestation'?

- 2) Which commercial crops were grown by British after deforestation?
- 3) Why were forests considered unproductive by the British?
- 4) How could English ships be built without a regular supply of strong and durable timber?
- 5) How spread of railways created a new demand for timber?
- 6) Who was the first Inspector General of Forests in India?
- 7) Name the forest Institute of Dehradun set up in 1906 by Brandis.
- 8) What does 'Scientific Forestry' mean?
- 9) Name the three categories of forests as mentioned in the Act of 1878.

- 10) Which species of trees were promoted for the building of ships or railways?
- 11) From which fruit was oil extracted for cooking and lighting lamps?
- 12) What was the use of a dried scooped out gourd?
- 13) What was the effect of Forest Act on the people living nearby?
- 14) What do you mean by Swidden Agriculture?
- 15) What kind of mixture of crops were grown in these plots of forests?
- 16) How did new forest laws affect the hunter forest dwellers?
- 17) How many tigers were killed by British administrator George Yule?
- 18) Give one example of a community which had left their traditional occupations and started trading in forest products.
- 19) What kind of products did nomadic communities of India like Banjaras trade in?
- 20) What were 'Criminal tribes' forced to do by the British?
- 21) Which tribes of India were recruited to work on tea plantations?
- 22) Name the river which flows across Bastar from east to west.
- 23) Name the communities living in Bastar.
- 24) Where is Bastar located?
- 25) If people from a village of Bastar want to take wood from the forest of another village, what would they do?
- 26) Who were 'forest villager'?
- 27) Name the leader who rebelled against the British.
- 28) Where is Java located?
- 29) Which colonial power ruled over Indonesia?
- 30) Which community of Java were skilled forest cutters and shifting cultivators?
- 31) What restrictions were imposed by the Dutch in Java forest laws?
- 32) Who was Surontiko Samin?
- 33) What was 'A Scorched Earth Policy'?
- 34) What are the various uses of forests in our day-to-day lives?
- 35) What were the main causes of deforestation in India during the British rule?

ECONOMICS
CH-3 POVERTY AS A CHALLENGE
- 1) What kind of people in India are considered poor?
- 2) Has India the largest single concentration of the poor in the world?
- 3) What are the dimensions of poverty?
- 4) What is one of the biggest challenges of independent India?
- 5) What are the social indicators of poverty as seen by social scientists?
- 6) What is the concept of social reclusion?
- 7) How is social exclusion practiced in India?
- 8) What is the vulnerability of poverty?
- 9) How vulnerability to poverty is determined?
- 10) What is 'poverty line'?
- 11) When is a person considered poor?

- 12) How does a country measure its poverty?
- 13) How is poverty line determined in India?
- 14) How is the food requirement estimated in poverty line?
- 15) What is the accepted average calorie requirement in India?
- 16) Why is the calorie requirement of rural areas more than that in urban areas?
- 17) How much amount is needed to fulfill minimum calorie requirement in rural and urban areas?
- 18) How is poverty line estimated periodically?
- 19) Which social groups are most vulnerable to poverty?
- 20) Among the economic groups which are most vulnerable to poverty?
- 21) How are women, children and old people the poorest of the poor?
- 22) Which states of India are the poorest?
- 23) Which states of India have seen a significant decline in poverty?
- 24) How have Kerala and West Bengal reduced their poverty?
- 25) How has poverty reduced in Andhra Pradesh and Tamil Nadu?
- 26) How are China and South Eastern Asian Countries able to control poverty?
- 27) What is the historical cause of poverty in India?
- 28) How did unemployment lead to poverty?
- 29) What are the causes of huge income inequalities in rural areas?
- 30) What are the socio-cultural and economic factors responsible for poverty?

CH-4 FOOD SECURITY

- 1) What does 'Food Security' mean?

- 2) On what factors does food security depend on?
- 3) Explain the three dimensions of food security.
- 4) How is food security ensured in a country?
- 5) What kind of people faces food insecurity?
- 6) How is food security affected during a calamity?
- 8) How do famines lead to widespread deaths?
- 9) Which was the most devastating famine that occurred in India?
- 10) In which areas of India even today famine has caused starvation deaths?
- 11) What kind of people in rural areas are food insecure?
- 12) What type of people in urban areas are food insecure?
- 13) Which other parts of society are prone to food insecurity?
- 14) How people affected by natural disasters are food insecure?
- 15) Is it true that a high incidence of malnutrition prevails among women?
- 16) In which regions are food insecure people disproportionately large in our country?
- 17) Which states of India account for the largest number of food insecure people?
- 18) Does hunger cause food insecurity?
- 19) How does 'chronic hunger' occur?

- 20) What do you understand by 'seasonal hunger'?
- 21) What policies were adopted by Indian government to remove food insecurity?
- 22) How was the success of 'Green Revolution' felicitated by Indira Gandhi?
- 23) Which states achieved the highest rate of growth in food grain production during Green Revolution?
- 24) Which states continued to lag behind in food production despite Green Revolution?
- 25) How did India become self-sufficient in the production of the food grains?
- 26) What is buffer stock?
- 27) What is Minimum Support Price?
- 28) How does FCI purchase grains from the farmers?
- 29) Why is buffer stock created by the government?
- 30) What is Public Distribution System?

Information Technology

Spreadsheet

Q.1. What is a Cell. What does it contain.

Q.2. What are Sheet tabs.

Q.3. What are the four different options present in the Insert dialog box. Explain briefly.

Q.4. What do you understand by the terms :- Row Header and Column Header.

Q.5. What is the Ignore All Option.

Q.6. What is the Change All option.

Q.7. What key combination is used to bring up the Delete dialog box.

Q.8. How can you remove border in a worksheet.

Q.9. What is the use of the Outside borders option.

Q.10. Multiple Choice Questions :-

1) Name the element which is identified by a unique row number and column number.

    a) Cell   b) Column

    c) Row   d) None of these

2) Which symbol separates the address of the starting cell address from the ending cell address in a range.

    a) Semicolon   b) Colon

c) Full Stop   d) None of these

3) Which of the following components lies at the top of the document window in MS Excel.

    a) Task Bar   b) Status Bar

    c) Formula Bar   d) Title Bar

4) What is the default name of a workbook in MS Excel.

    a) Book1   b) Sheet1

    c) Untitled1   d) All of these

5) Which pair of brackets are used to denote a negative value in MS Excel.

    a) Parenthesis   b) Curly Brackets

    c) Square Brackets   d) All of these

6) Which symbol separates time elements in Excel.

    a) Colons   b) Hyphen

    c) Slash   d) Equal to

7) Which feature in Excel is used to rotate text through a specified angle.

    a) Text Orientation   b) Text Alignment

    c) Text Indent   d) Text Formatting

8) The shortcut key for spellcheck is _____.

    a) F6   b) F7

    c) F8   d) F9

9) Theme colors is the caption of the Fill color_____.

    a) Palette   b) Design

    c) Choice   d) Ease!

10) For which type of data currency is not used.

    a) Price   b) Tax amount

    c) MRP   d) Weight

Digital Presentation

Q.1. Write the different ways of creating a new presentation in PowerPoint.

Q.2. Explain the three different options of alert message which you receive while closing a presentation that has not been saved.

Q.3.   When a presentation window opens, what name is displayed on the Title bar.

Q.4.   Name the component of the PowerPoint window which displays the name of the current presentation.

Q.5.   What type of Application software creates multimedia presentations in the form of slide shows.

Q.6.   Write the key combination which is used to save a presentation.

Q.7.   Which view displays a miniature view of all the slides in a presentation.

Q.8.   What is the function of Format Painter Button. Where can you find it.

Q.9.   What is the difference between File Tab and Ribbon.

Q.10. Rohan has downloaded a presentation from the Internet, but he is not satisfied with the slides. He wants to and delete a few slides from the existing presentation. What steps should he follow to a accomplish this task.

Q.11. Rahul is a fan of Virat Kohli, he wants to create a presentation about Virat's cricketing exploits. How can he insert a suitable picture of Virat from the Internet.

Q.12. Which view is used to work with a group of slides.

Q.13. Which shortcut key is used to delete a slide.

Q.14. In which dialog box is the Clip Art Button found.

Q.15. What is the name of the box where you specify the number of copies you want to print.