



CLASS : 8 2nd MID TERM PORTIONS AND PATTERNS

MATHEMATICS	
Life Mathematics	Algebra
I. Choose the correct answer	$10 \times 1 = 10$
II. Match the following	$5 \times 1 = 5$
III. Do as directed	$10 \times 2 = 20$
IV. Do as directed	$3 \times 5 = 15$
	Total 50 marks

SCIENCE		
Heat	Atomic Structure	Body Movements
I. Choose the correct answer		$10 \times 1 = 10$
II. Short Answers: (pick out, spot the error, assertion and reasoning, who am i?)		$7 \times 2 = 14$
III. Match the following		$5 \times 1 = 5$
IV. Answer in brief (diagram, distinguish, problems, Q and A)		$4 \times 4 = 16$
V. Answer the detail		$2 \times 5 = 10$
		Total 50 marks

SCIENCE		
HISTORY	GEOGRAPHY	CIVICS
Educational Development in India	Migration and Urbanisation	Understanding Secularism
I. Choose the correct answer		$5 \times 1 = 5$
II. Fill in the blanks		$5 \times 1 = 5$
III. Match the following		$5 \times 1 = 5$
IV. Answer in a word or two		$4 \times 1 = 4$
V. Distinguish between		$2 \times 3 = 6$
VI. Answer the following briefly		$5 \times 3 = 15$
VII. Answer the detail		$2 \times 5 = 10$
		Total 50 marks

EXPRESSIONS IN ENGLISH		
Virtual cultural tours	Africa, My Africa	Pride goeth before a fall
I. Write the meanings and opposites of the given words.		$6 \times \frac{1}{2} = 3$
II. Write prefixes to make opposites.		$6 \times \frac{1}{2} = 3$
III. Read the lines from the poem and answer the questions.		$2 \times 1 = 2$
IV. Fill in the blanks with prepositions.		$4 \times \frac{1}{2} = 2$
V. Rewrite the following using correlative conjunctions.		$5 \times 1 = 5$
VI. Write a short diary entry for a weekend.		$4 \times 1 = 4$
VII. Fill in the blanks with food idioms.		$4 \times 1 = 4$
VIII. Write four dance movement words.		$4 \times \frac{1}{2} = 2$
IX. Answer the following in two sentences.		$5 \times 1 = 5$
X. Who said this to whom and why was it said.		$5 \times 1 = 5$
XI. Answer the following.		$5 \times 3 = 15$
		Total 50 marks



Class: 8 KEY ANSWERS TERM : II

Chapter - 1 Life Mathematics

Try This! (Page No. 3)

- a) 50% b) 25% c) 12.5% d) 75%
 e) $33\frac{1}{3}\%$ f) $66\frac{2}{3}\%$ g) 20% h) 5%
 i) 4% j) 2%

Page No. 3 and 4

Exercise: 1.1

1. i) (c) ii) (d) iii) (a)
 2. a) false b) true c) true
 3. a) 100% b) 9% c) 70%
 d) 75% e) 230%
 4. a) 20% b) 52% c) 75%
 d) 55% e) 43.75%
 5. a) $\frac{18}{25}$ b) $\frac{2}{25}$ c) $\frac{17}{20}$ d) $\frac{9}{10}$ e) 5
 6. a) 0.03 b) 0.52 c) 0.7 d) 3 e) 2.5
 7.

	30	200	550	705	973
10% of	3%	20%	55%	70.5%	97.3%
20% of	6%	40%	110%	141%	194.6%
25% of	7.5%	50%	137.5%	176.25%	243.25%
60% of	18%	120%	330%	423%	583.8%
1% of	0.3%	2%	5.5%	7.05%	9.73%
$12\frac{1}{2}\%$ of	3.75%	25%	68.75%	88.12%	121.62%

8. $x = 150$
 9. a) 70% b) $33\frac{1}{3}\%$ c) 2%
 d) 25% e) 50%

H.O.T.S: 21. Yes. Both percentages represent fractions and multiplication of fractions is commutative.

Page No. 8 and 9

Exercise: 1.2

1. a) 56 b) 799
 2. $x = 200$
 3. $x = 100$
 4. No change.
 5. $x = 150$; Cricket-45; Volleyball-42;
 Badminton-33
 6. ₹670
 7. Pass% = 87%
 8. $x = 400$
 9. loss % = $33\frac{1}{3}\%$
 10. $r = 4\%$
 11. $x = 110$
 12. 87%
 13. Total marks = 300
 14. $x = 14.52\%$
 15. $\frac{x}{y} = \frac{44}{125}$

Challenging Problem

1. $x = 300$
 2. T3, $93\frac{2}{3}\%$
 3. 476
 4. 100
 5. 6, 0.8%

Exercise: 1.3

1. a) profit b) ₹100
c) ₹360 d) ₹450
2. a) $11\frac{1}{9}\%$ b) P% = 50%
c) 3500, 53.85% d) loss % is 4%
3. CP = ₹960, SP = ₹1152
4. ₹Discount of 8% is better
5. 200, 13.33%
- 6.

Article	CP(₹)	P or L	P% or L%	SP(₹)
a) Crayon Box	300	L = 35	L% = 11.6%	265
b) Wall Hanging	650	P = 130	P% = 16.6%	780
c) Shirt	900	P = 90	P% = 11%	990
d) Tennis racket	2500	L = 125	L% = 5%	2375

7. ₹6820
8. SP = ₹3835, P% = 14.47%
9. 60%
10. $x = ₹60000$
- 11.

	MP(₹)	D	D%	SP(₹)
a) Bicycle	9500	760	8%	8740
b) Sofa Set	84000	21000	25%	63000
c) Necklace	128000	9600	7.5%	118400
d) Umbrella	336	112	$33\frac{1}{3}\%$	224

12. ₹5400
13. 20%
14. ₹2000
15. ₹1134
16. ₹18000
17. ₹4000000

18. ₹1440
19. ₹1600, P% = 5.25%
20. ₹15000
21. ₹920
22. 10%
23. 8%
24. ₹9000, ₹4500
25. $2\frac{2}{9}\%$
26. 40%
27. 15%
28. SP = ₹8280, GST = ₹414, MP = ₹9200,
CP = ₹8000, P = ₹280, Profit% = 3.5%
29. a) ₹840 b) ₹728 c) ₹900 d) ₹2065
e) ₹36480 TOTAL BILL: ₹41013

Page No. 31 and 32

Exercise: 1.4

1. a) ₹3362, ₹162 b) ₹4936.8, ₹936.8
c) ₹26772, ₹2272 d) ₹10875
 2. a) ₹347.28, ₹47.28 b) ₹104000, ₹4000
c) ₹5300, ₹300 d) sum = ₹8000
e) Difference - ₹104
 3. 46.22%
 4. a) ₹1874.99 b) ₹14000 c) ₹60606.89 d) ₹20000
 5. ₹0.50
 6. a) $1\frac{1}{2}$ year b) 2 year
c) 3 year d) 1 year
 7. a) ₹76.80 b) ₹1143
 8. 14%
 9. ₹16000
- Challenging problems:**
1. 700 cm 3. 3 years
 2. ₹22949 4. 30%

Chapter - 2 Alegbra

Try this! (Page No. 35)

$-6n^2 + 8mn + n$	-6, 8, 1	trinomial
$x^2 + 7y^2$	1, 7	binomial
$-3c^5 d^4$	-3	monomial

Try this! (Page No. 36)

- $6(t + \frac{1}{2}s)$
- $3r - 2w$ or $2w - 3r$
- $\frac{5x}{y} - z$

Try this! (Page No. 37)

Linear equation: 1, 4, 8 and 9

Non-linear equation: 2, 3, 5, 6, 7 and 10

Match

a-(iv) b-(v) c-(ii) d-(i) e-(iii)

Page No. 42

Exercise: 2.1

- $x = \frac{-1}{5}$;
 - $x = -5$;
 - $x = 0.5$;
 - $x = \frac{1}{5}$;
 - $x = 5$;
 - $x = -0.5$
- Doing-Undoing
 - 2
 - cubic
 - one
 - transposition
- $x = 4$
 - $z = 3$
 - $x = -11$
 - $x = \frac{13}{2}$
 - $x = 10$
 - $y = \frac{-1}{6}$
 - $x = 11$
 - $x = -1$
 - $p = -1$
 - $x = -8$
 - $x = 11$
 - $m = -4$

Page No. 48 and 49

Exercise: 2.2

- $b = -2$
 - $a = 1$
 - $b = \frac{-2}{3}$
 - $a = \frac{11}{2}$
 - $a = 22$
- $1.5 + x = 3.5$
 - $x + (x + 1) + (x + 2) = 276$

$$c) \frac{1}{4x} + \frac{2}{5x} = \frac{26}{5}$$

$$d) 2x = \frac{1}{6x} + 84$$

$$e) 4x + 5x + 6x = 180$$

$$f) x + (x - 15) = 90$$

Frame The Equation & Solve:

- 21, 3
- $x = 20, y = 24, z = 14$
- 27
- Reji's age = 18 years, Her sister's age = 12 years
- $l = 24, b = 8$
- $\frac{13}{21}$
- $y = 11$ units, $P = 133$ units.
- (80, 10) Notes
- Murali's age is 15 years, Thenmozhi's age is 20 years.
- 63
- a) True; b) False; c) False
- 64.61 km
- $b = 5\text{cm}, l = 8\text{cm}$

Objective Type Questions:

- b
- c
- b
- d
- a

Page No. 53 and 55

Exercise: 2.3

1.	End pt	Q
	A' (-5, 1)	II
	B' (2, -2)	IV
	C' (9, -5)	IV
	D' (-4, 4)	II
	E' (-3, -3)	III

2. $A' = (0, 6)$ $B' = (2, 3)$ $C' = (6, 3)$
 $D' = (4, 0)$ $E' = (6, -4)$ $F' = (2, -4)$
 $G' = (0, 7)$ $H' = (-2, -4)$ $I' = (-6, -4)$
 $J' = (-4, 0)$ $K' = (-6, 3)$ $L' = (-2, 3)$

3. $A(-6, -4)$, $B(4, -4)$, $C(6, -2)$, $D(-4, -2)$,
 $E(-6, 4)$, $F(4, 4)$, $G(6, 6)$, $H(-4, 6)$

4. Student's work

5. a) False b) True c) False
d) True e) False f) False

Try this! (Page no.58)

1. $Y = 0$ 2. $X = 0$ 3. $(-1, 5)$
4. Parallel 5. Perpendicular 6. Square

THINK! (pg-62) Points B, C, D lie on the graph.

Page No. 67 to 70

Exercise: 2.4

1. a) -4 b) $(0, 8)$ c) perpendicular
d) X-axis e) IV
2. i) a ii) c iii) c iv) a v) d
3. $(-8, -3)$, Equations of four sides: $x = -8$, $x = 2$,
 $y = -3$, $y = 7$
4. Students work
5. Students work
6. $(0, 0)$ and $(0, 8)$
7. Students work
8. Students work
9. Students work
10. a) ₹150 is the fixed rate to rent a car.
b) ₹600
c) 11 hours
d) x axis: 1 cm = 1 hour
 y axis: 1 cm = ₹150

11. Students work

12. a) $P = 1000$ ml, $Q = 800$ ml
b) X-axis: 1cm = 10 min
Y-axis: 1 cm = 100 ml
c) 40 min, 400 ml
d) P

13. Students work

14. $y = 100x + 500$, ₹1200, 6 months

15. $y = 2500x + 1000$, ₹13500

Miscellaneous Problems:

1. a) -2 b) $\frac{40}{9}$ c) 5 d) 2
2. 17
3. 6 years, 36 years.
4. 14 cm
5. 44 years
6. 12
7. 7, 8, 9
8. 9
9. $55^\circ, 60^\circ, 65^\circ$
10. $\angle A = 78^\circ, \angle B = 68^\circ, \angle C = 34^\circ$
11. 15
12. Rekha- ₹450, Hema- ₹310
13. 54
14. 4 km
15. Students Work

Chapter - 3 Geometry

Page No. 73

Exercise: 3.1

1. 80°
2. $44^\circ, 56^\circ, 90^\circ$ cannot be the angles of triangle.
3. $x = 72^\circ$ angles: $92^\circ, 32^\circ, 56^\circ$
4. a) $x = 40^\circ, y = 115^\circ, z = 75^\circ$
b) $x = 100^\circ, y = 45^\circ, z = 35^\circ$

5. $x = 20$ cm, $y = 2$ cm
6. $d = 170$ cm
7. $BC = 8$ cm, $AC = 12$ cm, $BD = 6$ cm

Page No. 79

Exercise: 3.2

1. a) True b) False c) False d) False
 e) False f) False g) True h) True
 i) True j) False

Page No. 84 to 88

Exercise: 3.3

1. a) 5 cm
 b) $a = 12$ cm, $b = 35$ cm, $c = 37$ cm
 c) 10.44 d) 17 e) 6 cm
2. i) a ii) b iii) a iv) c
 v) b
3. It is satisfied
4. $d = 30$ inches
5. $d = 35$
6. $d = 35$ m
7. It is right angle triangle hypotenuse - 3.7 cm
8. By Pythagoreus Theorem,

$$\begin{aligned} AP^2 &= AK^2 + KP^2 \\ &= AK^2 + AK^2 \quad (AK = KP) \\ AP^2 &= 2AK^2 \end{aligned}$$

Hence proved

9. $l = 25$ ft
10. Proved
11. a) $x - 21$; $y - 29$
 b) $x - 29.71$; $y - 16$
12. $l = 65$ m
13. 24 inches, No.

14. 7.5 m
15. Yes
16. $AR = 28$ ft
17. $P = 98$ cm
18. 240 sq. units
19. 15 cm

Challenging Sums:

1. 22.5 cm
2. $x = 8$ cm; $y = 10$ m
3. 50 cm, 150 sq. cm
4. $AB = 24$ cm, $BC = 14$ cm
 $CA = 28$ cm
 area = 168 sq. cm
5. $x - 18.38$ ft
 $y - 18$ ft

H.O.T.S:

length - 84 cm, b - 42 cm
 Area - 3528 sq. cm
 Area of IR = 1800 sq. cm, Diagonal of IR = 86.48 cm

Chapter - 3 Practical Geometry

Page No. 95 and 100

Exercise: 3.4 and 3.5

Student's work

Chapter - 4 Information Processing

Page No. 107

Exercise: 4.1

Student's work

Page No. 109

Exercise: 4.2

1. Student's work
2. $PQ = \sqrt{n}$

3. Student's work

4. Area = $4(3 + \sqrt{2} + \sqrt{3})\text{sq.cm}$
Perimeter = $2(5 + \sqrt{5})\text{cm}$

Page No. 112 and 113

Exercise: 4.3

1.

Number of dots on the sides	4	8	12	16	20	...	$4n$
Number of dots inside the square	1	5	13	25	41	...	$n^2 + (n-1)^2$
Total number of dots	5	13	25	41	61	...	$2n^2 + 2n + 1$

Fun Activity 1 (Page No. 114)

Crack the code: Good Morning



"CODING

IS

FUN"



Fun Activity 1 (Page No. 115)

See the star in the night sky.

Fun Activity 2 (Page No. 116)

P V SINDHU IS THE FIRST INDIAN WOMAN TO WIN A GOLD MEDAL AT BWF WORLD CHAMPIONSHIP.

Page No. 119 and 120

Exercise: 4.4

1. Student's work

2. a)

Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Cipher text	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y

b.

Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Cipher text	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V

3. 3211442315321144241343 2443 442315 4145151533 3421 43132415331315

4. Mathematics is key and door to the sciences

5. Monday-b. Tuesday-c Wednesday-e Thursday-a Friday-d

6. 7 and 8 - Student's work

Fun Activity 3 (Page No. 121)

- From Park town station take orange line.
- Get down at St Thomas mount station.
- Travel to Alandur station by green line.
- From Alandur take the red line to go to airport.

Exercise: 4.5

1. a. True b. True c. False
 d. False e. True

2. The cipher text using the key 3: MS AH SFNT I U

M				S							
	A		H				S		F		N
		T				I				U	

The cipher text using the key 4: MI A SN TS UH F

M						I					
	A						S				N
		T		S						U	
			H						F		

They are not same.

3.

P		R		L		E		O		R		M		I				P		C		A				U		D		I		A		E		A		
	A		A		L		L		G		A			S		A		S		E		I		L		Q		A		R		L		T		R		L

PRLEORMI PCA UDIAEA AALLGA SASEILQARLTRL

5. a) COMPUTER

- b) (i) PET (ii) MOP (iii) COPE (iv) MORE (v) TOP



Class: 8 KEY ANSWERS TERM : II

Chapter - 1 HEAT

I. Choose the best answer:

1. c - thermal energy
2. d -All the above
3. d -All the above
4. c - Gas
5. c - freezing
6. a -solid

II. Fill in the blanks:

1. heat transfer between systems
2. Specific heat capacity
3. the temperature of a system at a constant
4. deposition
5. increase
6. reduce

III. State True or False. If false, correct the statement:

1. True
2. False - The dimensions increase if the temperature is increased.
3. False - It is called sublimation.
4. False - Convection is the process by which thermal energy flows in liquids.
5. False - It is the product of mass and specific heat capacity.
6. False - In a thermos flask, the silvered walls reflect radiated heat back to the liquid in the bottle.

IV. Match the following:

- | | | |
|------|------|------|
| 1. e | 3. d | 5. b |
| 2. a | 4. c | |

V. Answer briefly:

1. Applications of conduction in our daily life:

- i. We cook food in vessels made up of metals. When the vessel is heated, heat is transferred

from the metal to the food.

- ii. When we iron dresses heat is transferred from the iron box to the cloth.
- iii. Handles of cooking utensils are made up of plastic or wood because they are poor conductors of heat.
- iv. The temperature inside igloo (snow house) is warm because snow is a poor conductor of heat.

2. Effects of heat:

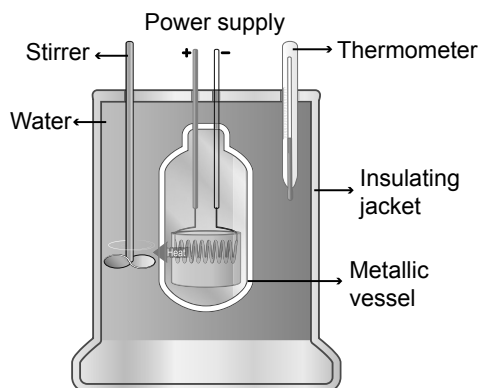
- i. Increase in temperature of an object
 - ii. Expansion of an object
 - iii. Change in state of an object
3. Convection, Conduction and radiation are the three types of heat transfer.
 4. The process of transfer of heat in solids from a region of higher temperature to a region of lower temperature without the actual movement of molecules is called conduction.
 5. Convection is the flow of heat through a fluid from places of higher temperature to places of lower temperature by movement of the fluid itself. Convection takes place in liquids and gases (fluids).
 6. It is the amount of heat energy required to raise the temperature of unit mass of a substance (1 kg) through 1°C or 1 K. It is denoted by c. Its units are joule per kelvin per kilogram or J/(kg K). It is independent of mass of the substance. It is given by the formula: $c = \frac{Q}{m\Delta T}$
 7. One calorie is the amount of heat energy required to raise the temperature of 1 gram of water through 1°C.
 8. We can use a calorimeter to compare the specific heat capacities of two liquids. We can measure the heat capacity of each individually and then compare them.

VI. Consider the statements labelled as Assertion and Reason and choose the correct option:

1. (d) Assertion is false, but reason is true.
Correct Explanation: Radiation is the emission or transmission of energy in the form of waves or particles through space or through a material medium.
2. (a) Both assertion and reason are true and reason is the correct explanation of assertion.

VII. Answer in detail:

1. Calorimetry is a method to measure the heat exchange of process which can be *physical changes* such as melting, evaporation or it can be a *chemical changes* such as acid-base neutralisation. A **calorimeter** is a device designed to measure the amount of heat absorbed or released in a chemical or physical process.



Parts and working of a calorimeter:

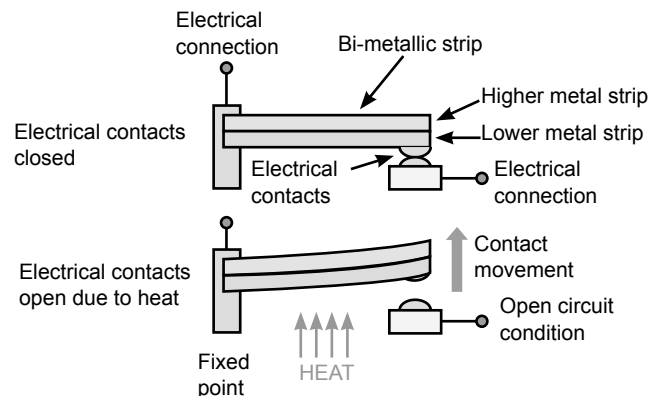
- i. **Metallic vessel:** A vessel made of metals like copper or aluminium which are good conductors of heat and electricity.
- ii. **Insulating Jacket:** The metallic vessel is kept in an insulating jacket to prevent heat loss to the environment. There are two holes in it.
- iii. **Thermometer:** Through one of the holes of an insulating jacket, a thermometer is inserted to measure the temperature of a substance.
- iv. **Stirrer:** It is inserted through another hole of an insulating jacket for stirring the substance taken in the vessel and distributes heat throughout the vessel.

- v. **Power Supply:** The vessel is filled with liquid which is heated by passing current through the heating element. Using this device we can measure the heat capacity of the liquid in the container.
2. Thermostat is a device to detect temperature changes for the purpose of maintaining the temperature of an enclosed area essentially constant. It will automatically cool the room when it is hot and heat it up when it is cold according to a pre-set temperature.

Working of thermostat:

A traditional thermostat uses a bimetallic strip to work. This has two pieces of different metals that are welded together.

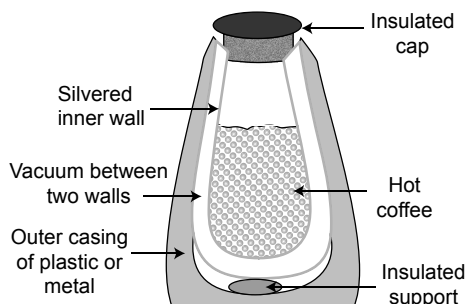
- i. In a thermostat, the strip works as a bridge in an electrical circuit connected to it.
- ii. When the strip is straight and connected, the circuit is complete. Hence, the strip carries electricity through the circuit, and the heating is turned on.



Working of the bimetallic strip in a thermostat

- iii. As the temperature of the surroundings increases, the strip gets hot. This causes one of the metals to expand more than the other. This causes the whole strip to bend. This causes the circuit to break, and the electricity switches off.
- iv. As the room cools, the strip also cools and bends back to its original shape. This makes the electricity flow again, so the heating switches back on.
- v. By adjusting the temperature dial, we can change the temperature at which the circuit switches on and off.

3. A thermos flask can keep a liquid hot or cold for a long period of time. A thermos flask has three components that help it reduce heat loss through conduction, convection and radiation.



- Insulated cap:** This is an insulator. It prevents heat loss by conduction through the opening of the flask. It also stops any gas from moving out of the flask, reducing heat loss by convection.
 - Outer casing of plastic or metal:** Both plastic and glass are poor thermal conductors. This reduces the heat loss by conduction through the walls. This also holds the vacuum in between to further eliminate the heat transfer by convection and conduction.
 - Silver inner wall:** A shiny surface is a poor emitter of radiation. This will avoid the heat transfer through radiation.
4. Radiation is the flow of heat from one place to another by means of electromagnetic waves.

Applications of radiation in daily life:

- Heat energy from the Sun reaches the Earth by radiation.
- While standing near fire we feel the heat which is transferred as radiation.

- Black surfaces absorb heat radiation so that the bottom of the cooking vessels is painted black.
- While colour reflects heat radiation. That's why we are advised to wear white cloth during summer.

5. (a) Melting Vs Freezing

Melting or Fusion	Freezing or Solidification
The process in which a solid is converted to liquid by absorbing heat is called melting or fusion.	The process in which a liquid is converted to solid by releasing heat is called freezing or solidification.
The temperature at which a solid changes its state to liquid is called melting point .	The temperature at which a liquid changes its state to solid is called freezing point .

(b) Boiling Vs condensation

Boiling or Vaporisation	Condensation
The process in which a liquid is converted to vapour by absorbing heat is called boiling or vaporisation.	The process in which a vapour is converted to liquid by releasing heat is called condensation.
The temperature at which a liquid changes its state to gas is called boiling point .	The temperature at which vapour changes its state to liquid is called condensation point .

(c) Sublimation Vs deposition

Sublimation	Deposition
The process in which a solid is directly converted to gaseous state without going through the liquid state is called sublimation.	The process in which a gas directly converts into solid without passing through the liquid state is called deposition.
Heat is absorbed during this process.	Heat is released during this process.
Examples: Dry ice (solid CO_2), naphthalene balls.	Example: Frost formation from water vapour.

VIII. Higher Order Thinking Skills (HOTS):

1. The main reason that lakes doesn't freeze all the way through is:
 - i. That as we go down till the bottom of the lake the pressure increases. The increase in the pressure increases the temperature as pressure is directly proportional to temperature. Increase in temperature down the lake doesn't create the favourable conditions for freezing of the lake.
 - ii. Also as ice is less dense as compared to water that is why ice always floats on water and doesn't settle down at the bottom or that is the reason why the lake doesn't start to freeze from the bottom.

2. b) Steel > Water > Wood

Thermal conductivity is defined as the heat flow per unit time or ability to conduct heat. It is highest in solids, and lower in liquids. However, it is lower in non-metals than in metals. Hence, Option b is correct.

IX. Solve the numerical:

1. Given: amount of heat required (Q) = 1000 J;
rise in temperature (ΔT) = $20^{\circ}\text{C} - 0^{\circ}\text{C} = 20^{\circ}\text{C}$

Heat capacity,

$$(C) = \frac{\text{the amount of heat energy required}}{\text{rise in temperature}} = \frac{Q}{\Delta T}$$
$$= \frac{1000}{20} = 50 \text{ J}/^{\circ}\text{C}$$

2. Heat capacity (C) = $\frac{Q}{\Delta T} = 8000 \text{ J}/^{\circ}\text{C} = 8000 \text{ J/K}$

$$\text{Specific heat capacity, } c = \frac{Q}{m\Delta T} = \frac{1}{m} \left(\frac{Q}{\Delta T} \right)$$
$$= \frac{8000}{100} = 80 \text{ J}/(\text{kg K})$$

Chapter - 2 ELECTRICITY

I. Choose the best answer:

1. a – negative
2. c – electrons
3. b – Energy Source, Wire, Load

4. b – positive
5. d – a protective device for breaking an electric circuit

II. Fill in the blanks:

1. Transfer of electrons
2. positive
3. Lightning arresters or lightning conductors
4. Electric fuse
5. Series circuit

III. State True or False. If false, correct the statement:

1. True
2. True
3. True
4. True
5. False – In parallel circuit, voltage remains the same in all components.

IV. Match the following:

- | | | |
|------|------|------|
| 1. c | 3. a | 5. b |
| 2. d | 4. e | |

V. Give reasons for the following:

1. When you rub a glass rod with the silk cloth, electrons are attracted away from the atoms in the glass and transferred to the silk cloth. This leaves the glass rod with more positive than negative charge, so you get a net positive charge.
2. When we comb our hair, the electrons (negative charge) from the atoms in your hair were transferred to the comb. Due to the addition of electrons, the surface of the comb now carries a negative charge. The paper bits are neutral - they carry both positive and negative charges. The extra electrons (negative charges) from the comb attract the positive charge of the paper bits. The attraction is so strong that the paper bits fly and stick to the comb.
3. The leaves of an electroscope diverge because when a glass rod is touched on the metal disc, the charge travels through the metal rod to the leaves. Since, like charge repel, the charge travels till the leaves and then open up as both the leaves have like charges.

4. The connecting rod and leaves in an electroscope are essential conductors (in which electrons are free to move) that aid in the working of the electroscope. Hence, they are made of metals, which are good conductors.
5. During thunderstorms, lightning occurs in the sky. Lightning can discharge its charges onto any tall conductors that are available on Earth's surface. An open umbrella could be the only tall object in an open field whose rod and its supporting wires are made up of metals. Hence, it is not advisable to use an umbrella while crossing an open field during a thunderstorm.

VI. Consider the statements labelled as Assertion and Reason and choose the correct option:

1. (a) Both assertion and reason are true and reason is the correct explanation of the assertion.
2. (d) Assertion is false, but reason is true.
Correct Explanation: Lightning is attracted to the tallest tip of a conductor. If the tip of a tree is struck by lightning and a person is standing under the tree, then the current from the lightning may travel down the tree and jump towards the human conductor. Therefore, it is not wise to stand under a tree during a thunderstorm.

VII. Answer briefly:

1. Rubbing certain materials with one another can cause the built-up of electric charges on the surfaces. So, charges are produced by friction.
Example: On brushing hair with a comb, the charges are transferred from the hair to comb due to friction.
2. This process by which excessive electric charge is channeled to the earth is called earthing.
3. The path in which the electrons flow from one terminal to another from a source (battery) is known as an electric circuit.
4. **Uses of electroplating:**
 - i. Preventing iron nails from rusting.
 - ii. Preventing automobile parts made of iron from rusting.

iii. To prevent iron bridges from rusting.

5. Differences between static electricity and current electricity:

Static electricity	Current electricity
Static electricity is a stationary electric charge, typically produced by rubbing two different materials (to create friction) which causes sparks or crackling or the attraction of dust or hair.	Current electricity has a continuous movement of electrons through electrical conductors (like copper wires).
Static electricity is an excess of electric charge trapped on the surface of an object.	It can be stopped or started by opening or closing the circuit connection (through switches). Electric current flows when there is voltage present across a conductor.
Examples: Rubbing feet on the carpet, rubbing a balloon on the head, brushing hair with comb vigorously.	Examples: Current electricity runs through wires at our homes, transfer of electric current through transmission lines which bring electricity from power plants to individual houses, offices, industries, hospitals etc.

6. A fuse is a simple device that can be connected in a circuit inside any electrical appliance. It is designed to withstand heat up to a certain temperature. When excessive current flows through the fuse, it melts because of the high temperature. When the fuse melts, it opens (or breaks) the circuit to save the device from damage. Hence, materials that have a low melting point are used in fuses. A fuse is made of an alloy of lead and tin.

VIII. Answer in detail:

1. The transfer of electrons takes place in three ways:

Transfer by friction: This method of charging an uncharged body by rubbing it against another body is called charging by friction.

Example: While combing hair charges are transferred from the hair to comb due to friction.

Transfer by conduction: Charges can be transferred to an object by bringing it in contact with a charged body. This method of transferring charges from one body to other body is called transfer by conduction.

Example: When the ebonite rod is rubbed with woolen cloth, electrons from the woolen cloth are transferred to the ebonite rod. Now ebonite rod will be negatively charged.

- i. When it is brought near the paper cylinder, negative charges in the rod are attracted by the positive charges in the cylinder.
- ii. When the cylinder is touched by the rod, some negative charges are transferred to the paper. Hence, the negative charges in the rod are repelled by the negative charges in the cylinder.

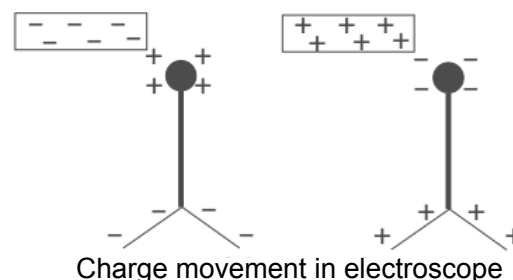
Transfer by induction: The process of charging an uncharged body by bringing a charged body near to it but without touching it is called induction.

Example: We can charge an uncharged object when we touch it by a charged object. But, it is also possible to obtain charges in a body without any contact with other charges like the working of electroscope.

2. Electroscopes are instruments used to detect the presence of electric charges on a body and measure its magnitude. They are helpful in demonstrating the principles of static electricity and charge interactions.

Working of electroscope:

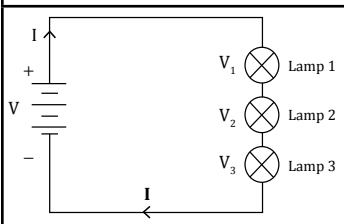
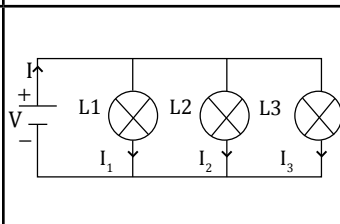
- i. When a positively charged material touches the brass disc, it attracts the negatively charged particles on the disc towards itself. This leaves the positively charged particles on the gold leaf. Now, as both the leaves possess the same (positive) charge, they repel each other, making an inverted 'V' shape.



- ii. When a negatively charged material touches the brass disc, it attracts the positively charged particles towards it, leaving the negatively charged particles on the leaves. Again, the leaves repel each other as they bear like charges.
- iii. After some time, the leaves come back to their original state because they 'discharge' the charge they bear. When the top disc is touched, it causes a discharge through the human body and brings the leaves back to their original shape. This can also be done by placing a metal rod on the brass disc.
- iv. The process by which electrical discharge can be safely collected away from an electrical device is known as **earthing or grounding**. This also helps the gold leaves from tearing as a result of stretching when they come across highly charged materials.

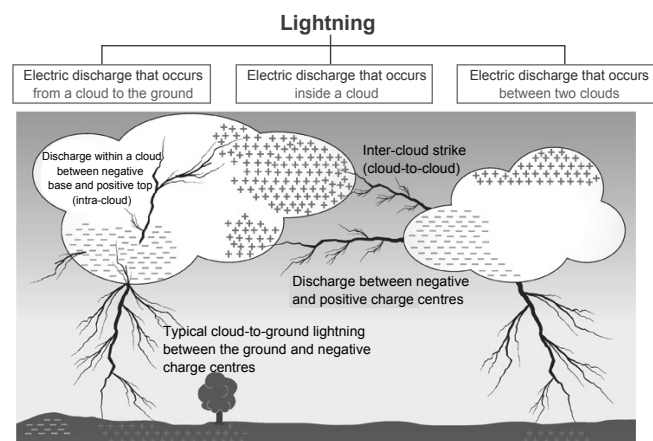
3. Differences between series and parallel circuits:

Series circuits	Parallel circuits
When all the components of a circuit are connected end to end, they are said to be connected in series.	In a parallel circuit, the components are connected parallel to each other.
In this arrangement, the electrons will have only one path to flow.	In this arrangement, the electrons can branch out and flow across the circuit.
In this type of circuit, the current (I) across each of the components remain the same but the voltage (V) differs.	In this type of circuit, the voltage (V) across each of the components remain the same but the current (I) differs.

The voltage across the circuit is divided across all the devices connected through the circuit. If V is the voltage across the circuit and the supply voltage is V, it can be written as $V = V_1 + V_2 + V_3$.	If I is the total of the individual current flowing through the components and I_1, I_2, I_3 is the current across each of the components, then, $I = I_1 + I_2 + I_3$.
	
As the current flows through a series circuit, the voltage reduces as it flows through each of the components. The lamp at the end of the circuit dims because of the low supply of voltage.	When one lamp is defective, it does not affect the whole circuit. The other lamps continue to glow because of the uninterrupted flow of current through the other branches.
Current controlling devices are always connected in series with the device that they protect. Example: Fuses are connected in series with the device they protect.	Parallel circuit connection is very common in use. Example: Various lamps and electrical appliances in our homes are connected in parallel so that each of the lamps and appliances can be operated independently.

4. During a thunderstorm, air moves rapidly and carries small ice crystals upward. At the same time, the heavy water droplets from the clouds move downwards. Hence, the upper part of a storm cloud is positively charged, and the lower part of the cloud is negatively charged.
 - When the positive and negative charges grow large enough, a giant spark -lightning occurs between the two charges within the cloud. This is similar to static electricity sparks, but much bigger in scale.
 - When enough charge is built up in the lower part of the cloud, it meets the accumulated

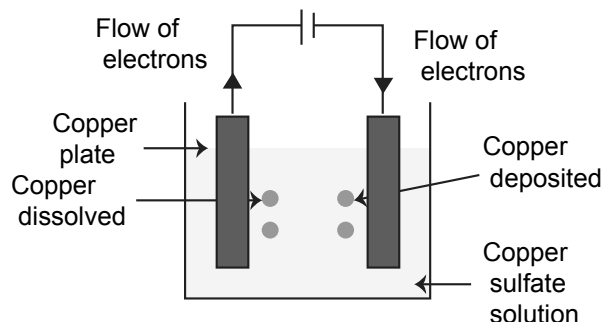
positive charges near mountain tops and trees, causing it to discharge rapidly. This is what we see as flashes of lightning that occur from a cloud to the ground. Thus, lightning can be of three types as shown in the figure below.



5. **Electroplating:** Electroplating is one of the most common applications of chemical effects of electric current. The process of depositing a layer of one metal (usually Zinc) over the surface of another metal by passing electric current is called electroplating.

Explanation:

- i. Take a beaker filled with Copper Sulphate (CuSO_4) solution.



- ii. To the positive end of a battery, connect a copper plate.
- iii. To the negative terminal of the battery, connect an iron object, such as a spoon or a plate.
- iv. Dip both the plate and the iron object in the Copper Sulphate solution. Let the current to flow for some time.
- v. On passing the electric current, electrolysis of the copper sulphate happens. This causes copper ions to be formed.

- vi. The positively charged copper ions are attracted to the negatively charged iron rod. Hence, a thin layer of copper is deposited on the surface of the iron rod.
- vii. The amount of copper deposited on the iron rod is equal to the amount of copper lost from the copper plate.

6. **Effects of electric current:**

- a) **Filament bulb:** The filament in an electric bulb is made of a metal called tungsten. It has very high resistance to conduct electricity. When electricity passes through the filament, it gets heated up. This causes tungsten to glow and emit visible light. Tungsten has a high melting point. This helps it reach higher temperatures without melting.
- b) **Electric cooker:** In electric cookers, the heating coil is placed at the bottom of the cooker. The inner pan is also made of a metal (generally aluminium). The coil is made of high resistant metal. The heat produced in the coil is absorbed through conduction and is used for the process of cooking.
- c) **Electric kettle:** In electric kettles, the heating filament made of highly resistant material is placed at the bottom. The liquid heats up because of the heat produced in the coil.
- d) **Electric irons:** Electric irons also use the principle of heating of a filament due to high resistance. This produces heat energy, which is then conducted to a heavy metal base. The heavy metal base is what presses the clothes. Thus, electrical energy can be transformed into other forms of energy and put to use.

Chapter - 3 AIR

I. Choose the best answer:

- 1. d. Supports burning
- 2. c. Carbon dioxide
- 3. d. sodium carbonate
- 4. a. blue litmus to red
- 5. b. Nitrogen
- 6. b. Nitrogen

- 7. b. Nitrogen

II. Fill in the blanks:

- 1. Metal oxide, basic 4. Refrigerant
- 2. Lighter 5. Rusting
- 3. Nitrogen

III. Match the following:

- 1. Nitrogen - Fertilizer
- 2. Oxygen - Respiration in living animals
- 3. Carbon dioxide - Fire extinguisher
- 4. Dry ice - Refrigerant
- 5. Water vapour - Humidity

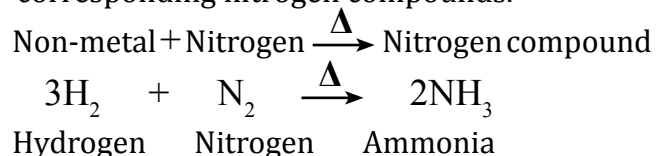
IV. Answer briefly:

- 1. Most of the oxygen is a colorless, odourless has produced by the process photosynthesis in which the chlorophyll present in the leaves of plants uses solar energy to produce glucose and releasing oxygen.
- 2. Some of the physical properties of oxygen are:
 - a. It is a colourless, odourless and tasteless gas
 - b. It is a bad conductor of heat and electricity
 - c. It dissolves freely in cold water
 - d. It can be liquefied at very low temperature and high pressure.
 - e. It is denser than air.
 - f. It supports combustion.
- 3. **Physical properties of carbon dioxide:**
 - a. It is a colorless, odourless gas.
 - b. It is heavier than air.
 - c. It dissolves in water.
- 4. **Uses of nitrogen:**
 - a. Used as a refrigerant in liquid state and for preservation of fresh food.
 - b. Used to provide an inert atmosphere for conducting certain chemical reactions and in reducing fire hazards.
 - c. Used to prepare ammonia (by Haber's process), this is then converted into fertilizers and nitric acid.
 - d. Used for inflating tyres of vehicles.
 - e. Used in manufacturing of stainless steel.

f. Used as a part of the gas in incandescent light bulbs and for filling the space above mercury in high temperature thermometers to reduce evaporation.

g. Many explosives such as TNT (Trinitrotoluene), nitroglycerin, and gun powder contain nitrogen

5. Nitrogen reacts with non-metals like hydrogen, oxygen at high temperature to form their corresponding nitrogen compounds.



6. The green house gases are CO_2 , N_2O , CH_4 , CFC (Chlorofluoro carbon) etc. The increase in the levels of these gases results in the gradual increase of temperature of the earth's surface. This increased green house effect is caused due to increase in the air pollutants and it results in the average increase of temperature of the atmosphere. This is called as Global warming.

7. The carbon dioxide gas in its solid form is called dry ice. It is used as a refrigerant. It is so cold that moisture in the air condenses on it, creating a dense fog which is used in stage shows and movie effects.

8. Nitrogen fixation:

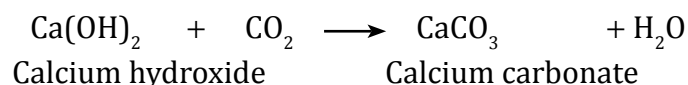
Nitrogen is available in elemental state or in combined form. It is essential for the growth of plants. However, plants cannot use elemental nitrogen from air directly. This is because plants need soluble compounds of nitrogen. Thus, plants depend on certain processes for the supply of nitrates.

Any process that converts nitrogen in the air into a useful nitrogen compound is called nitrogen fixation. This process can occur naturally (in a specific group of plants) or can be done artificially converting nitrogen to ammonia, ammonium nitrate or any other compound useful for plants.

V. Answer in detail:

1. When a limited amount of CO_2 is passed through lime water turns milky due to the formation of insoluble calcium carbonate. When an excess amount of CO_2 is passed through lime water, it

first turns milky and the milkiness disappears due to the formation of soluble calcium hydrogen carbonate, $\text{Ca}(\text{HCO}_3)_2$.

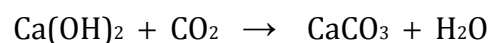


2.

- Carbon dioxide, CO_2 and carbon monoxide, CO
- Sulphur dioxide, SO_2
- Phosphorus reacts with oxygen, usually forming two oxides depending on the amount available oxygen: P_2O_3 when reacted with a limited supply of oxygen, and P_2O_5 when reacted with excess oxygen
- Magnesium oxide, MgO
- Ferric oxide, Fe_3O_4
- Sodium oxide, Na_2O

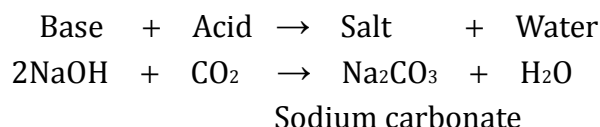
3. a) $4\text{K} + 3\text{CO}_2 \rightarrow 2\text{K}_2\text{CO}_3 + \text{C}$
Potassium Potassium carbonate

- b) When a limited amount of CO_2 is passed through lime water, it turns milky due to the formation of insoluble calcium carbonate.



Calcium carbonate When an excess amount of CO_2 is passed through lime water, it first turns milky and the milkiness disappears due to the formation of soluble calcium hydrogen carbonate, $\text{Ca}(\text{HCO}_3)_2$.

- c) Sodium hydroxide (base) is neutralized by carbon dioxide (acidic) to form sodium carbonate (salt) and water.



4. Acid rain affects us in many ways. Some of the consequences are given below.

- It irritates eyes and skin of human beings.
- It inhibits germination and growth of seedlings.
- It changes the fertility of the soil, destroys plants and aquatic life.
- It causes corrosion of many buildings, bridges, etc.

Acid rain and its effects can be controlled by the following ways.

- a) Minimizing the usage of fossil fuel such as petrol, diesel etc.,
 - b) Using CNG (Compressed Natural Gas).
 - c) Using non-conventional source of energy.
 - d) Proper disposal of the industrial wastes.
5. The cycle of photosynthesis and respiration maintains the balance of carbon dioxide and oxygen on earth. Photosynthesis in plants requires carbon dioxide which is converted to makes glucose and oxygen is released. It is the released oxygen that is used by us and most other organisms for cellular respiration. We breathe in that oxygen, which is carried through our blood to all our cells. In our cells, oxygen allows cellular respiration to proceed.

The glucose is then turned back into carbon dioxide, which is used in photosynthesis. While water is broken down to form oxygen during photosynthesis, in cellular respiration oxygen is combined with hydrogen to form water. While photosynthesis requires carbon dioxide and releases oxygen, cellular respiration requires oxygen and releases carbon dioxide.

VI. Higher Order Thinking Skills (HOTS):

1. The coefficient of expansion of gases is large. Therefore, the gas in the bottle expands. Hence, the pressure inside the bottle increases. Thus, the bottle may burst in hot summer.
2. Animals undergo a process called respiration which is essential for us to live. Similarly plants go through two processes - Respiration and Photosynthesis. These two processes are completely different from each other. In photosynthesis the plants take in carbon dioxide and release oxygen while in respiration there is intake of oxygen and release of carbon dioxide. These two processes are always done by the plants. During the day there is enough sunlight and the plants carry photosynthesis on a large scale but during the night respiration takes place. So at night these plants release carbon dioxide and there is lack of oxygen. That is why it is not advised to sleep under a tree during night.

3. Fishes respire with the help of their gills. Gills are richly supplied with blood capillaries and can readily absorb the oxygen dissolved in water. The water contains some dissolved oxygen in it. When the water enters the fish through its mouth, the dissolved oxygen is taken inside and carbon dioxide is given out through the gills. In this way, the fish breathe in water. When fish are taken out of water, the supply of oxygen to the fish is cut as the fishes cannot absorb and breathe the oxygen present in the atmosphere. Hence, they die after some time.
4. Water, which is made of oxygen and hydrogen atoms bonded together, is also used to maintain oxygen supply on the International Space Station. Using a process called electrolysis, which involves running electricity through water, astronauts and cosmonauts are able to split the oxygen from the hydrogen.
5. The atmosphere contains oxygen as a component of air. It is with the help of this oxygen that meteoroids burn up in the atmosphere.

However, beyond the earth's atmosphere, there is no air. Due to absence of oxygen, meteoroids cannot burn and continue to revolve in space.

VII. Analyse the following:

Sewing needles, knives etc. are made of steel. Iron is one of the metals used to make steel. Iron undergoes rusting when exposed to air.

These items can be coated with a thin layer of oil or wax and wrapped in tissue paper or a towel to prevent exposure to moist air.

Chapter - 4 ATOMIC STRUCTURE

I. Choose the best answer:

1. b. definite proportion
2. c. negatively charged particles
3. a. 1:8
4. c. elements are made up of atoms
5. c. the atomic number is same and the mass number is different

II. Fill in the blanks:

1. Atom
2. Same
3. Protons, neutrons and electrons
4. Anion, cation
5. Electron
6. Negatively

III. Match the following:

1. Law of conservation of mass – d. Lavoisier
2. Law of constant proportion – c. Joseph Proust
3. Cathode rays – a. Sir William Crookes
4. Anode rays – e. Goldstein
5. Neutrons – b. James Chadwick

IV. Answer briefly:

1. The law of conservation of mass states that during any chemical change, the total mass of the products is equal to the total mass of the reactants.
2. The **law of constant proportions** states that chemical compounds are made up of elements that are present in a fixed ratio by mass. This implies that any pure sample of a compound, no matter the source, will always consist of the same elements that are present in the same ratio by mass.
3. Properties of Anode rays:
 - a) Anode rays travel in straight lines from the anode to the cathode.
 - b) Anode rays are made up of material particles.
 - c) Anode rays are deflected by electric and magnetic fields. Since, they are deflected towards the negatively charged plate; they consist of positively charged particles.
 - d) The properties of anode rays depend upon the nature of the gas taken inside in the discharge tube.
 - e) The mass of the particle is the same as the atomic mass of the gas taken inside the discharge tube.

4. Valency of an element can be defined as the number of hydrogen atoms which combine with one atom of that element. For example a molecule of hydrogen chloride consists of an atom of hydrogen combined with a chloride ion. Hence valency of chlorine is 1. In hydrogen chloride molecule, one hydrogen atom combines with one chlorine atom.
5. When an atom gains an electron it has more number of electrons and thus it carries negative charge. At the same time when an atom loses an electron it has more number of protons and thus it carries positive charge. These atoms which carry positive or negative charges are called ions.
6. A chemical equation is a short hand representation of a chemical reaction with the help of chemical symbols and formulae. Every chemical equation has two components: reactants and products. Reactants are the substances that take part in a chemical reaction and the products are the substances that are formed in a chemical reaction.
7.
 - a) Carbon monoxide
 - b) Nitrous oxide
 - c) Nitrogen dioxide
 - d) Phosphorus pentachloride
8.
 - a. cation - calcium ion
anion - sulphate ion
 - b. cation - magnesium ion
anion - chloride ion
 - c. cation - ferrous ion
anion - oxide ion
9. Electrons - are negatively charged particles. Their mass is very very low.
Protons - are positively charged particles. Their mass is nearly that of hydrogen atom.
10.
 - a. Na (11) — 1e
 - b. N (5) — 3e



V. Answer in detail.

1.

Sl. No.	Compound	Name of the cation/anion	Formula for cation/anion	Valency of cation/anion
a.	NaCl	Sodium	Na ⁺	1
b.	CO ₂	Carbon	C ⁴⁺	4
c.	Al(PO ₄)	Aluminium	Al ³⁺	3
d.	Ba(NO ₃) ₂	Barium	Ba ²⁺	2
e.	CaCl ₂	Calcium	Ca ²⁺	2

2.

- a) Al₂SO₄ c) MgO
b) AgNO₃ d) BaCl₂

3.

Sl. No.	Skeletal equation	Balanced equation
a.	C + O ₂ → CO ₂	C + O ₂ → CO ₂
b.	P + Cl ₂ → PCl ₅	2P + 5Cl ₂ → 2PCl ₅
c.	S + O ₂ → SO ₂	S + O ₂ → SO ₂
d.	Mg + HCl → MgCl ₂ + H ₂	Mg + 2HCl → MgCl ₂ + H ₂

4.

- a) 4Na + O₂ → 2Na₂O
b) 3Ca + N₂ → Ca₃N₂
c) N₂ + 3H₂ → 2NH₃
d) CaCO₃ + 2HCl → CaCl₂ + CO₂ + H₂O
e) 2Pb(NO₃)₂ → 2PbO + 4NO₂ + O₂

5. Dalton's atomic theory proposed that

- all matter was composed of minute particles called atoms.
- Atoms are indivisible and indestructible building blocks.

- Dalton's atomic theory also stated that compounds were composed of combinations of these atoms in certain small ratios.

- Dalton also postulated that chemical reactions resulted in the rearrangement of the reacting atoms.

6. Valency may be defined as the number of electrons an element can accept or donate or share to acquire a stable configuration.

The reactivity of an atom is dependent on the number of electrons present in its outermost orbit or the valence shell. If the outermost orbit of an atom has reached its maximum capacity of electrons, then the atom will be chemically inert or stable. Such an element will not react easily with any other elements.

Inert gases have complete outermost orbits with duplet or octet state, making it difficult for these elements to react with any other elements.

7. Atoms of some elements combine with atoms of other elements and form more than one kind of compound. The elements are said to have variable valency.

The suffix-ous is attached at the end of the name of the metal such as cuprous, ferrous etc. to indicate lower valency.

In case of the higher valency the suffix ic is attached at the end of the name of the metal or use is made of the Roman numeral such as I, II, III, IV etc. to indicate valency.

For example, copper combines with oxygen and forms two products namely cuprous oxide (Cu₂O) and cupric oxide (CuO).

Cu⁺ Cupros (or) Copper (I)

Cu²⁺ Cupric (or) Copper (II)

Fe²⁺ Ferrous (or) Iron (II)

Fe³⁺ Ferric (or) Iron (III)

Hg⁺ Mercurous (or) Mercury (I)

Hg²⁺ Mercuric (or) Mercury (II)

8. Main features of Rutherford's Model of an atom

In the year 1911, Ernest Rutherford, a British physicist, proposed an atomic model. The main features of the model are as follows:

- An atom consists of subatomic particles namely, protons, electrons and neutrons.
- Protons and neutrons are found at the centre of an atom, called the nucleus.
- Electrons revolve around the nucleus in a circular path, called orbits or shells.
- An atom has one or more orbits and each orbit has a definite number of electrons.

VI. Higher Order Thinking Skills (HOTS):

1. A light paddle wheel, when placed in the path of the cathode rays, began to rotate because the small particles of the cathode rays (electrons) have mass and energy. This energy is used in rotating the paddle wheel.
2. By observing the deflection of electrons in electrical and magnetic fields.
3. a) He observed all the compounds with two or more elements and noticed that each of such compounds had the same elements in same proportions, irrespective of where the compound came from or who prepared it.
b) Law of constant proportions – It states that in a pure chemical compound the elements are always present in definite proportion by mass.

Chapter - 5 BODY MOVEMENTS

I. Choose the best answer:

1. (a) (i) and (iii)
2. (b) Snail
3. (c) Upper jaw and skull
4. (a) To swim easily in water
5. (b) cartilage
6. (a) leg
7. (a) Cervical – 7

II. Fill in the blanks:

1. locomotion
2. movement
3. skeleton
4. skull, sternum, ribs, vertebral column
5. shoulder (pectoral) girdle, pelvic girdle
6. joint
7. Non striated / Smooth / Involuntary muscle
8. Radial

III. State True or False. If false, correct the statement:

1. True
2. True
3. False. Pelvic girdle is a part of the appendicular skeleton.
4. True
5. False. Cardiac muscle is an involuntary muscle.
6. True.

IV. Answer in one or two sentences:

1. The human body is made up of a frame work of bones which helps in its movement. It is called the skeleton.
2. Eight bones of the skull are fixed together and form the cranium. These bones that form the cranium also called the brain box are connected together by immovable joints.
3. The vertebrae in the backbone are joined by gliding points that allow the body to bend backwards, forwards or sideways; slight movement.
4. The axial skeleton consists of all the bones along the central line or axis of the human body. The skull, facial bones, sternum, ribs, and vertebral column form the axial skeleton. The bones in the appendages as well as the structures that connect the appendages to the axial skeleton form the appendicular skeleton. The bones of the pelvic and pectoral (shoulder) girdle, and the bones of the upper limbs (hand, arm, wrist) and lower limbs (foot, ankle, leg) are a part of it.

5. Short bands of tough, flexible connective tissue that connect one bone to another are called ligaments.
6. Muscles are long bundles of contractile tissue that can contract and relax. They are important for movement in the body.
7. Ligaments are short bands of tough, flexible connective tissue that connect one bone to another. Tendons are fibrous elastic chords of tissues that attach muscle to bone

V. Answer briefly.

1. a.

Movement	Locomotion
A change in the shape, direction, place, position, etc., of one or more body parts.	the ability of the body to move from one place to another.
Occurs at the cell, tissue and organisms level.	Occurs only at the organism level.
It can be voluntary or involuntary.	It is only voluntary.

b.

Exoskeleton	Endoskeleton
The skeleton that is found on the exterior layer of the body.	The skeleton that is found inside the body.
It originates from the embryonic ectoderm or mesoderm.	It originates from the mesoderm.
It protects and preserves the inner organs.	Forms the main body structure and framework.
Examples are the scales in fish, feathers on birds and the outer hard layer of the tortoise.	Example - Almost all vertebrates.

- c. The pectoral girdle is formed by the collar bone (clavicle) at the front, and the shoulder blade (scapula) at the back. The collar bone is supported by the breast bone at one end and

the shoulder blade at the other. The shoulder bone encloses a socket like cavity into which fits the ball of the upper arm forming a ball and socket joint.

The pelvic girdle is formed from strong bones as it balances the weight of the entire body. It is formed from five fused vertebrae at the back and it forms a cavity in the centre while it reaches the front. The three bones namely ilium, ischium and pubis are fused together. The femur or the thigh bone fits into the girdle on either side through a ball and socket joint.

d.

Ball and socket joint	Hinge joint
The round ball shaped head of one bone fits into the hollow cup like socket of another bone.	The convex surface of one bone fits into the concave surface of another bone.
It allows rotational movement and the maximum range of movement, in three planes.	It allows movement only in one direction. (bending and straightening only).
Examples - hip and shoulder joint.	Examples - elbow, knee and ankle joints.

e.

Voluntary / Striated / Skeletal	Involuntary / Non striated / Smooth
Attached to the bones Found in arms, legs, neck.	Attached to soft parts of the body like the walls of the internal organs, blood vessels, bronchi, iris, and the skin.
Long, slender, cylindrical, unbranched	Spindle shaped
Multinucleate, Striated dark and light bands.	Single, central nucleus Non striated.
Voluntary	Involuntary
Movement of bones, holding the bones together, shape.	Movement of internal organs.

2. Most muscles work in pairs. They work against each other and are called antagonistic pairs.

Examples are the biceps and triceps in the upper arm. The biceps is bulging (contracted) on the upper arm, when we fold our arm at the elbow, and the triceps is found below the humerus or the bone of the upper arm, when it is relaxed. When the biceps contracts the lower arm is raised and the arm bends. In this position the triceps muscle is relaxed. The opposite happens when we extend or straighten the arm. The triceps contract and the biceps relax.

3. All the features of the bird's body are designed for flight. The streamlined body offers least resistance while moving in the air. The skeleton is made up of pneumatic or hollow bones with air spaces between making them light but strong. This makes their body light and helps them in flight. Their forelimbs are modified into wings and the strong flight muscles attached to the wings; help them to flap their wings. Both the wings and the tail have long feathers to help them fly.
4. The functions of the skeletal system are as follows:
 - The skeleton provides structure, shape and a framework to our body and gives it support.
 - It surrounds and protects delicate internal organs like the heart, lungs and the brain.
 - The bones help us to move our body as the skeletal muscles are attached to them. They act as levers for muscular action. Muscular movement would not be possible without tendons and ligaments.
 - The bone marrow is the seat of production of various blood cells.
 - Bones store various minerals like calcium and phosphorous that are required for regulatory functions in the body.

VI. Answer in detail.

1. Based on their movement, joints can be classified in the following manner.

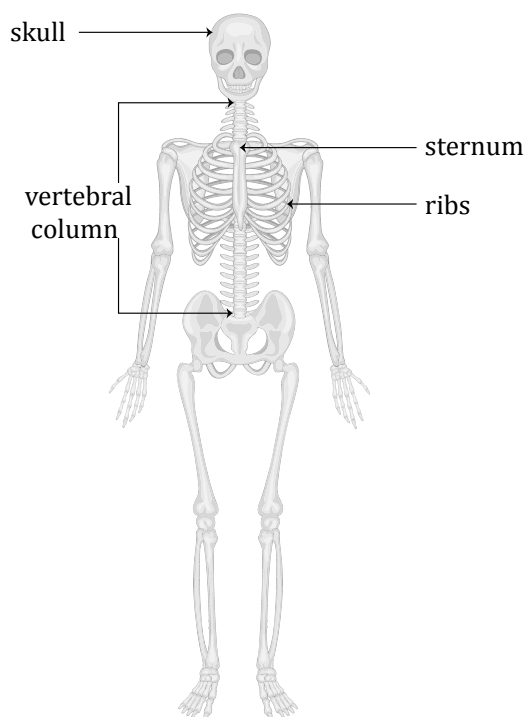
Fixed/ Immovable / Fibrous joints are joints allow no movement between the connected bones. The bones are held together, with the help of fibrous connective tissue. They do not have a synovial cavity. Bones of the skull are connected by these joints.

Cartilaginous / Slightly moveable joints are joints allow little movement between the

connected bones. The bones are held together with the help of a cartilage with no synovial cavity. Bones of the vertebra, and the ribs and the breast bone, are connected by these joints.

Freely movable joints are joints allow varying degrees of movement and easy movement between the connected bones. There are six major types of freely movable joints. Example ball and socket joint in the hip and shoulder.

2. The axial skeleton consists of all the bones along the central line or *axis* of the human body. The skull, facial bones, sternum, ribs, and vertebral column form the axial skeleton. The skull is positioned at the top of the backbone and can be moved upwards, downwards and sideways. It is hard and made up of small bones. There are 22 bones in all. Running down the back of the body in the trunk region is the vertebral column, also called the spine or the backbone. It supports the upper part of the body and is made up of 33 individual bones, called vertebrae. The ribs along with the vertebral column form a conical cage known as the ribcage. The ribcage protects the delicate organs like the heart, lungs, part of the liver and the upper part of the digestive canal. The sternum lies in the middle of the chest. There are 12 pairs of ribs attached to the sternum in front and the vertebral column at the back, forming the ribcage.



3. There are different types of movement seen in organisms, ciliary, flagella, amoeboid and muscular movement.

Ciliary movement: Cilia are tiny hair like processes that extend out from the epithelium. In lower organisms, they help in locomotion. In higher organisms, like man, some of the internal organs are lined with ciliated epithelium. They help in the movement of materials and fluids as is seen in the lymphatic system

Flagellar movement: Unlike cilia that cover the entire body of the organism, a flagellum is a thin, long, whip like structure seen usually at one end of the organism. Euglena and chlamydomonas are examples of organisms that move with flagella.

Amoeboid movement: This movement is seen in amoeba because of the streaming movement of the protoplasm within the organisms to form pseudopodia. It is also seen in some blood cells like leucocytes and macrophages.

Muscular movement: This type of movement is observed in humans and higher vertebrates that help them to move. The muscular and skeletal systems help with this movement.

4. A streamlined body means narrow at the ends and broad at the centre to reduce resistance through a stream of water or air. Fish have streamlined body help the fish to reduce friction and overcome the resistance offered by water while they swim. It helps them to move smoothly with the flowing water. Birds also have a streamlined body that helps them to reduce the friction and resistance offered while flying through the air.
5. Voluntary/ Striated /Skeletal muscles are attached to the bones and found in the arms, legs and neck. They are long, slender, cylindrical, unbranched. They are multinucleate, and striated with dark and light bands. They are voluntary muscles. The functions include movement of bones, holding the bones together and shape.

Involuntary / Non-striated / Smooth muscles are attached to soft parts of the body like the walls of the internal organs, blood vessels, bronchi, iris, and the skin. They are spindle shaped,

non striated with a single, central nucleus and involuntary. Functions include movement of internal organs. Cardiac muscles are found in the walls of the heart. They are branched, striated and involuntary with 1-3 central nuclei. Their function is to help in the beating of the heart.

Chapter - 6 REACHING THE AGE OF ADOLESCENCE

I. Choose the best answer:

- | | |
|---------------------------|---------------|
| 1. c) 11 to 19 | 3. b) girls |
| 2. a) puberty | 4. c) larynx |
| 5. c) sweat and sebaceous | |
| 6. a) Hormones | 8. c) ceased |
| 7. b) LH hormone | 9. d) Calcium |

II. Fill in the blanks:

- | | |
|--------------------|-----------|
| 1. anti pituitary | 4. Iodine |
| 2. menarche | 5. anemia |
| 3. menstrual cycle | |

III. State True or False. If false, correct the statement:

1. True
2. False – The release of the ovum from the ovary is called ovulation.
3. False-During pregnancy, the corpus luteum starts to degenerate and stops producing estrogen and progesterone.
4. False – Making use of disposable napkins or tampons decreases the chances of infections.
5. True

IV. Match the following:

- | | |
|-----------------|----------------------------|
| 1. Puberty | - Sexual maturity |
| 2. Adam's apple | - Change in voice |
| 3. Androgen | - Muscle development |
| 4. ICSH | - Testosterone |
| 5. Menopause | - at 45 to 50 years of age |

V. Answer briefly:

1. Adolescence is a transitional stage of human development, both physical and mental, occurring between puberty and adulthood. It is a transition period between childhood and adulthood.
2. The different changes that occur in puberty are; changes in body size, changes in body shape and proportion, change in voice, development of primary sex organs and development of secondary sex characteristics.
3. There are certain distinct features that appear during puberty and adolescence that cause dissimilarities between boys and girls. These are secondary sexual characteristics, and are due to hormonal changes that occur during puberty.
4. The stage of getting the first menstrual flow at the beginning of the first menstrual cycle is called menarche. It starts around the age of 12 years. At this time due to the onset of puberty, the ova begin to mature. It marks the beginning of adolescence, during which time physical growth is more pronounced and mental and emotional maturation occurs.
5. Cleanliness is very important during the time of the menstrual cycle and girls must take special care of cleanliness and personal hygiene to reduce the spread of germs and chances of catching any infections.

VI. Answer in detail:

1. The physical changes that occur in boys and girls during adolescence are as follows:

Girls:

- Development of hair under the armpits (axillary hair), and in the pubic region
- Development and enlargement of the breasts
- Broadening and rounding of the hips due to the widening of the pelvic region and more fat deposition around the hip
- Increase in muscles, which gives shape to the arms, shoulders, and legs
- The voice becomes shrill
- Beginning of the menstrual cycle

- Like in boys, the skin becomes coarser and the pores enlarge

Boys:

- Development of facial hair such as a beard and a moustache
 - Development of hair under the armpit, on the chest and in the pubic region
 - The body becomes more muscular and broad shouldered because the strength of the muscles increases and it gives shape to the arms, legs and shoulders
 - The voice changes and it becomes deeper and husky as the larynx enlarges. The volume increases and there is a drop in pitch
 - Increase in body weight
 - The skin becomes coarse and the pores in the skin enlarge
2. The ovaries and testes, which are part of the reproductive system, start secreting the sex hormones only at puberty. In males, the hormone testosterone helps in the production of sperm (male gamete). In females, the hormones, oestrogen and progesterone, are responsible for the maturity of the female gametes, i.e. the ova or eggs. Follicle Stimulating Hormone (FSH) in females is responsible for the growth and development of the Graafian follicle and the secretion of estrogen. In males it is required for the development of seminiferous tubules, and spermatogenesis. Luteinizing hormone in females is required for ovulation, and for the secretion of the luteal hormone progesterone. It is also required for the final maturation of the Graafian follicle. It stimulates the interstitial (Leydig) cells of testes in males and the secretion of testosterone and is therefore also known as the Interstitial Cell Stimulating Hormone (ICSH). Sperm is then actively produced. Sperm production in males begins at puberty and continues through life. The main function of prolactin (lactogenic hormone) is the secretion of milk during lactation. Oxytocin is responsible for the expulsion of milk from the mother's breast.

3. The menstrual cycle is as follows: begins with the shedding of the endometrium of the uterus and bleeding.

In females at puberty the sex hormones are released into the blood causing some of the ova in the ovaries to mature. Usually, every 28 days, one mature ovum is released from one of the ovaries. This is known as ovulation. Before ovulation the endometrium starts to thicken and is full of tiny blood vessels as it prepares to receive the fertilised egg. If no fertilisation takes place then the inner lining of uterus is no longer required and is shed. Along with the blood vessels and the unfertilised egg it comes out of the vagina in the form of a bleeding known as menstruation.

4. Nutritional needs are higher during adolescence than any other time in our life. Adolescents need a high calorie diet due to the growth and development spurt and increased physical activity that happens during that period.

Nutrition and physical growth are interrelated. If growing children or adolescent children are not given sufficient quantities of a high calorie, balanced diet with all the nutrients, it may not only result in retarded physical growth, but also reduces the intellectual development and delays sexual maturation. It should be balanced to combat any illness that can set in during that period.

Nutrition is also important to prevent diet related diseases like osteoporosis, cardiovascular problems, hypertension, etc.

A balanced diet contains all the nutrients proteins, carbohydrates, fats, minerals and vitamins in the required quantities. The diet of adolescents should be high in proteins that help in growth, apart from carbohydrates – the energy giving nutrient. They should consume considerable amount of fats and vitamins in the required proportions. They need basic minerals like calcium, iron, phosphorous, etc., in their diet. Apart from these, iodine is also essential.



Class: 8 KEY ANSWERS TERM : II

HISTORY

Chapter – 1

EDUCATIONAL DEVELOPMENT IN INDIA

I. Choose the correct answer:

1. a. Sanskrit
2. a. Gurukula
3. c. Bihar
4. c. 1980
5. d. Portuguese
6. a. Charter Act of 1813
7. b. Radhakrishnan Commission, 1948
8. d. 1968

II. Fill in the blanks:

1. Knowledge
2. Alexander Cunningham
3. Firozshah Tughlaq and Sikandar Lodi
4. 1992
5. SSA
6. Tamil Nadu

III. Match the following:

- | | |
|----------------------|-----------------------------------|
| 1. I-Tsing | - Chinese scholar |
| 2. Francis Xavier | - University at Kochin |
| 3. Wood's Despatch | - Magna Carta of Indian Education |
| 4. Sarafjoi II | - Saraswathi mahal |
| 5. Sir Thomas Munroe | - Western Education in Madras |

IV. Consider the following statements and tick the appropriate answer

1. d. i, ii and iii are correct

V. Find out the correct pair:

- b. Macaulay's English education - Minutes of 1835

VI. Answer the following in one or two sentences:

1. The students were expected to work hard and lead a life of chastity and obedience.

In Gurukula, They spent their time in gaining knowledge and skills.

The guru made up the curriculum as per the need of the individual student.

2. Nalanda university and university in ancient Taxila are the most notable universities that evolved in ancient India.

3. Taxila was first identified by the British army officer and archaeologist Alexander Cunningham in the 19th century. The famous men connected with Taxila are Panini the grammarian, Kautilya, the minister of Chandra-gupta Maurya and Charaka one of the two leading authorities of Indian medical sciences. The city was declared a World Heritage Site by the UNESCO in 1980.

4. Education centres in Chaturvedimangalam and Tirubuvanaai and Temples in Nataraja temple in Chidambaram and the Big temple in Tanjavur flourished in the Chola period.

5. SSA

The SSA (Education for All) was a programme launched in 2000 by the government of India whose objective was universalisation of elementary education. It also focuses on developing lifeskills, girls education and education for children with special needs.

RMSA

The RMSA (National Mission for Secondary Education) is another scheme launched by the



government of India in 2009 (eleventh five year plan). Its intentions are universalisation of access and provision of quality education at the secondary stage – to all children in the 15–16 age group. Through this scheme the government provides science labs, libraries, in-service training for teachers, computer-aided education and co-curricular activities.

6. RTE

Right of Children to Free and Compulsory Education Act (RTE 2009) are sought to be implemented. The RTE provides for free and compulsory education to all children between the ages of six and fourteen.

VII. Answer the following in detail:

1. Panini developed Sanskrit grammar. Books written by Aryabhata (5th century CE – mathematician), Katyayana (grammarian and mathematician), Patanjali (grammar/yoga) and medical texts written by Charaka and Sushruta were used by students are the sources of education in India.
2. Warren Hastings was the first governor general to establish an educational institution in India. He set up a 'Madarsa' (madrasa) at Calcutta in 1781.
 - A Sanskrit college was started at Banaras in 1792 by JonathanDuncan.
 - In 1800, Lord Wellesley established the Fort William College in Calcutta for the training of British civil servants of the Company in the languages and customs of India. This interest in Indian literature, sacred texts, her history and culture led to the revival and encouragement of a learning system that had existed prior to the arrival of the British in India.
 - **Lord Macaulay's Minutes** Written by Thomas Babington Macaulay formed the basis of the English education.
 - **Wood's Despatch on Education** is described as the 'Magna Carta' of English education in India.
 - Lord Ripon appointed an Education Commission under Mr. W.W. Hunter in 1882

to review the progress of education in these areas since Wood's Despatch of 1854. The commission submitted its report in 1883.

3. National Policy on Education (NPE) in 1968. As a result a uniform pattern of education 10+2+3 system was initiated all over the country.

The policy aimed at restructuring Indian education at all levels and at providing equal educational opportunities to its citizens to achieve national integration and greater cultural and economic development.

In 1986 the Indian government introduced another national educational policy called the New Education Policy (NEP), which focussed on greater educational opportunities for weaker sections like Scheduled Castes, Scheduled Tribes and women, promotion of adult education and open universities for rural India. It stressed on child-centric educational approach and launched Operation Blackboard to improve primary level education.

The New Education Policy of 1986 was modified in 1992 and it envisaged the formulation of a new National Curriculum Framework, common entrance tests for professional courses across the country and streamlining of evaluation practices at the secondary education level.

4. Temples became active centres of teaching and learning during the Chola period.

The Chola rulers were enthusiastic patrons of Tamil learning and literature. Consequently, their times witnessed immense literary output in Tamil.

Chola inscriptions tell us about the nature of education, method of teaching, the qualifications of teachers, and royal support, in financial terms, to schools attached to temples. Institutional and residential arrangements were made by the Chola rulers for selected students.

Temple schools from the 12th and 13th centuries were present at the Nataraja temple in Chidambaram and the Big temple in Tanjavur. The Chola rulers supported Sanskrit learning as well. Inscriptions of their reign mention the presence of Vedic institutions in such places as Chaturvedimangalam and Tirubuvanai.

VIII. Higher Order Thinking Skills:

1. The SSA (Education for All) was a programme launched in 2000 by the government of India whose objective was universalisation of elementary education.

The universalisation was achieved through RTE. Right of Children to Free and Compulsory Education Act (RTE 2009).

The RTE provides for free and compulsory education to all children between the ages of six and fourteen. The SSA also focuses on developing lifeskills, girls education and education for children with special needs.

Chapter – 2

DEVELOPMENT OF INDUSTRIES IN INDIA

I. Choose the correct answer:

1. d. Smelting of Iron
2. a. Textile
3. c. Kanpur
4. c. To built a strong industrial base
5. c. Industrial policy of India

II. Fill in the blanks:

1. Trade
2. mid of 18th century
3. 1839
4. 1855
5. Suez canal

III. Match the following:

- | | | |
|--------------------|---|------------------|
| 1. Travenier | - | French traveller |
| 2. Dacca | - | Muslin |
| 3. Dadabai Naoroji | - | Drain theory |
| 4. Ballygunj | - | Paper Mill |
| 5. Smiths | - | Artisan |

IV. State True or False:

- | | | |
|---------|----------|----------|
| 1. True | 3. True | 5. False |
| 2. True | 4. False | |

V. Consider the following statements and tick the appropriate answer

1. c) iii and iv are correct
2. a) A is correct and R is correct explanation of A
3. Which one of the following is wrongly matched?
d) Economic Liberalisation – 1980

VI. Answer the following in one or two sentences:

1. Gold and silver jewellery, brass, copper and bell metal wares and marble work are the traditional handicraft industries of India.
2. Dadabhai Naoroji wrote the famous and influential book 'The Drain of Wealth: UnBritish Rule in India'. In it he demonstrates with statistical evidence how India became poor under the British by losing her wealth to Britain.
3. The invention of the spinning jenny, the cotton gin and the flying shuttle made the production of textiles large scale.
4. The CII is a non-government, non-profit industry sponsored and managed trade/business association. It was set up in 1895 in Bengal under the name Engineering and Iron Trades Association by Indians to put pressure on the British government to place government orders for iron and steel and engineering goods with Indian companies based in India. The CII works with the government on policy issues with the aim of contributing to the development of industry in India.
5. India lost her status as a leading manufacturing country and became a consumer of British goods. Reduced internal demand and the absence of outside markets led to deindustrialisation of India in the late 19th century.

VII. Answer the following in detail:

1. Loss of Royal Patronage:

Indian industries and handicraft were patronised by the local rulers, who were also major consumers of the goods produced.

From Producer of Handicraft to Exporter of Raw Materials:

The Indian handicraft industry was collapsed as a consequence of the policies followed by the British rulers of India. During the period of industrial revolution, starting roughly in mid-18th century in England, machines began to replace human labour in the production of goods.

The result of this situation was that the Indian craftspeople were deprived of a market for their goods.

Competition from Machine-made Goods

The invention of the spinning jenny, the cotton gin and the flying shuttle made textile production faster in England leading to mass production of cotton textiles. The machine-made textiles were cheaper than the hand-made ones since they were produced on a large scale. The invention of the steam engine in England made transportation quicker. Indian handmade goods could not compete with these goods.

Trading Policy of the British

The trading policies and practices of the British rulers affected Indian economy and people adversely.

India's Deindustrialisation in the 19th century

India lost her status as a leading manufacturing country and became a consumer of British goods. Reduced internal demand and the absence of outside markets led to deindustrialisation of India in the late 19th century.

2. Increasing demand for Indian tea, coffee and indigo in the 19th century in England led to the plantation industry being the first modern industry to be started and owned by the British and other Europeans. The Assam Tea Company was founded in 1839 to cultivate tea in Assam.

Eastern India (Bengal and Assam) became centres of tea industry/production. South India (Karnataka, Kerala) became centres of coffee and rubber production under the British with the plantation owners being British/European.

3. The year 1991 ushered in a new era of economic liberalisation or free market economy in India.

Some of the elements of the liberalisation policy are: ending the practice/policy of industrial licensing, simplification of the procedures for starting a business, dismantling price control mechanisms, allowing foreign capital into Indian industrial sector. Consequently, there was robust growth in the capital goods and the manufacturing sectors during the 8th, 10th and 11th Five Year Plan periods (1992-2012). The industrial growth touched a high of 10 percent during the year 2009-2010.

VIII. Higher Order Thinking Skills:

1. Indians made the goods they needed, used and enjoyed mostly with their hands with the required tools. Hence they were little costlier than the machine made.

Production through machine is faster.

Machine made goods were uniform in size and of good quality.

GEOGRAPHY

Chapter – 1

MIGRATION AND URBANISATION

I. Choose the correct answer:

1. a. Availability of clean drinking water
2. c. Better job opportunities
3. b. Emigrates
4. d. 10,00,000
5. c. Delhi
6. a. Rural to urban
7. a. Immigrant
8. c. Urban to Rural
9. c. Political
10. a. Production of food grains

II. Fill in the blanks:

1. Villages
2. Delhi
3. voluntarily
4. Industry

5. urban to rural 7. 2007
6. Brain drain

III. State True or False:

1. True 3. False 5. True
2. True 4. True

IV. Match the following:

1. Emigration – Out migration
2. Immigration – In migration
3. Pull factor – Employment opportunity
4. Push factor – Unemployment
5. Marriage – Socio-cultural migration

V. Answer the following in one or two sentences:

1. People change their place of residence from one place to another as individuals, family units or in large groups.
2. Temporary migration, Permanent migration and Seasonal migration/transhumance are the different types of migration.
3. People migrate in search of better studies, jobs, livelihoods and careers or simply for a better life.
4. Villages have become deserts. People move from urban wants leave their retire life calm and quiet.
5. Towns and cities grow in three ways:
 1. A small town can grow larger because of natural increase of its population.
 2. When more people migrate into cities, a city has to expand to make space for them.
 3. Villages could grow in population to be classified as towns and towns could grow in size to be classified as cities.
6. The process of society's transformation from rural to urban areas is known as urbanisation. This happens when more people move into towns and cities.

7. Tokyo, Delhi, Shanghai, Sao Paolo are some of the most populous cities in the world.

VI. Answer the following in detail:

1. Impacts of Urbanisation:

Consequences of urbanisation

The growth of towns and cities, while they have offered many people comfortable lives, have had a great impact in the deterioration of quality of life for a large number of them.

- i. The density of population is so high that a large number of people live in small areas and there is not enough space for comfortable housing.
- ii. Urban areas promote housing for the poor in slums as many workers are needed in cities. They cannot afford proper houses and live in temporary dwellings with poor sanitation and hygiene.
- iii. The environment gets polluted with tons of garbage piling with the authorities not knowing what to do with them; sewage disposal is a large problem and safe potable water supply is inadequate.
- iv. People resorting to traffic violations and accidents are also increasing in number.

2.

Push factor	Pull factor
Unsafe environmental conditions	Safe and secure regions.
poor economic conditions, lack of job opportunities.	Better job oppourtunities.
War, racial or religious discrimination, division of states or countries often lead to people becoming refugees	Favourable political policies that allow people to settle without discrimination; acceptance of refugees.
lack of proper services like health care, education, transport, water and sewage.	Availability of modern facilities like housing, with the required infrastructure for work as well as living.

When people belonging to a specific cultural or religious group have moved out, those left behind also do, not particularly due to discrimination but simply because of the changing circumstances.	The clustering of people of one group while welcoming and supporting others of the same kind.
lack of civil liberties due to societal or political restrictions, like restrictions imposed on style of dressing, freedom of speech and expression.	A free society that does not bind people to strict rules in their personal lives; availability of freedom to express themselves through all forms of expression.

3. Types of Migration

Based on time

We have temporary and permanent migrations. Some people move to other countries or cities on transfers or change their jobs, for short periods of time. This is short term or temporary migration.

Permanent migration or long-term migration is when people leave their place of residence for a long period of time without the intention of coming back..

Seasonal migration is when people move for a part of the year to another place. eg., Agricultural labourers movement shepherds who take their flocks of sheep to high alpine pastures for grazing during summer. This kind of seasonal migration is called **transhumance**.

Based on regions

- **National or internal migration**

It happens within a country. In India, as well as the rest of the world too, we have large numbers of people who have moved from villages to towns and cities.

Rural to urban migration adult workers leave their families in the village and go out to towns and cities for jobs.

People move from one village to another in search of fertile agricultural land. This is called rural to rural migration. Urban to rural migration is becoming rarer.

Workers who moved out because of lack of opportunities in villages sometimes come back when agriculture improves or when village services have become better. Some people like to retire into the village seeking the quiet and calm.

urban to urban migration happens when people move from small towns to large towns or cities or from one city to another.

- **International migration** happens when people leave one country for another.

Based on social needs

Women migrants are more prevalent as they move to their husband's place of residence after marriage. In modern societies, men try to find a job in their wives' place if the wife already has a good job.

Based on willingness to migrate

Sometimes migration takes place due to a person's desire to live in a better place.

So people move voluntarily. This is called voluntarily migration.

If migration happens by force like disasters, a famine etc. then it is termed as forced migration.

4. Human migration is the movement of people from one place to another with intention of settling, permanently or temporarily, at a new location. They move in search of better studies, jobs, livelihoods and careers or simply for a better life. Mankind has been moving and spreading across the world. They tend to live in groups or sometimes scatter far and wide.

Living and moving in groups gave people a sense of security. They could help one another especially in times of danger like natural calamities or attacks from animals. They supported and saved one another. Whether it was the hunters and gatherers or the nomadic herdsmen, they moved in groups. People living close to nature like hunters, herdsmen, foresters and farmers depend upon the environment for their daily living.

5. Problems of Urbanisation:

Lack of space for housing and reduction in the quality of housing in the urban areas due to increase in population.

Population is more in the Urban areas leading to overcrowding.

No proper water supply and sanitation is bad.

Traffic is heavy and increase in vehicles cause air pollution.

Industrial waste pollute the water sources.

Chapter – 2 HAZARDS

I. Choose the correct answer:

1. d. Andaman and Nicobar Island
2. c. Monsoon
3. d. Japanese
4. c. Pollutants
5. a. Chemical leak industries

II. Fill in the blanks:

1. Droughts
2. Natural
3. 2004
4. 1984
5. 78.09%
6. natural, tectonic
7. heavy rainfall, plains
8. Environmental, pollutant
9. Man made, Hiroshima
10. Secondary, cool season

III. Match the following:

- | | | |
|-----------------------|---|---------------------|
| 1. Smog | – | Smoke + fog |
| 2. Chernobyl disaster | – | 1986 |
| 3. Landslide | – | Ooty |
| 4. Hazard | – | A game of dice |
| 5. Cyclone | – | Low pressure centre |

IV. Give a single term for the following:

- | | |
|---------------|----------------|
| 1. Carcinogen | 4. Storm surge |
| 2. ozone | 5. Particulate |
| 3. Tsunami | |

V. Answer the following in one or two sentences:

1. There are eight types of hazards based on the origin.

Atmospheric hazards, Atmospheric hazards, Atmospheric hazard, Volcanic hazard, Biological hazard, Environmental hazard, Technological hazard, Human-induced hazards.

2. **Radioactive substance:**

Tools and unused fuel rods of nuclear power plants.

Biomedical wastes

Hypodermic needles, bandages and outdated drugs; human waste from surgeries.

3. There are three types of drought:

Meteorological drought, Hydrological drought, Agricultural drought

4. **Causes for flood:**

Meteorological cause

Heavy rainfall, cyclones, thunderstorms and cloud bursts.

Physical cause:

Large, flat plains with large catchment area providing copious water and melting snow; insufficient drainage by blocking flow by built-up areas and transport lines.

Man-made causes

Deforestation, faulty agricultural and irrigation practices, breaching of dams, siltation of water bodies and not maintaining them; rapid urbanisation by taking away open lands and filling up lakes.

5. Structural damage to buildings, fires, damage to bridges and highways, initiation of slope failures, death, loss of lives and tsunami. People become homeless.
6. Floods bring lot of problem to people. They are Loss of life and damage to buildings and other structures, including bridges, sewerage systems, roadways, and canals. Problem in power generation and water supply. It also causes lot of diseases.

VI. Distinguish between the following:

1.

Natural disaster	Man-made disaster
These occur completely due to natural forces. For example: Earthquakes, volcanic eruptions, Flood. They are also very difficult to predict.	These are caused solely due to human activities. For example: pollution from solid wastes, water pollution, air pollution, leakages of nuclear power plants etc. They occur due to human negligence and poor management and can often disturb the safety and health of people.

2.

Flood	Drought
A flood occurs when the land gets inundated with heavy rainfall.	Drought refers to a continuous period of dry weather. It results in inadequate water supply for daily life, crops and livestock.

3.

Primary pollutant	Secondary pollutant
These are wastes that get into the atmosphere directly from industrial activity. Burning of coal and oil, which are fossil fuels, releases carbon dioxide and carbon monoxide.	Particulate matter and all these poisonous gases descend during the cool season to mix with condensed vapour or fog to cause smog. Smoke combined with fog is called smog

4.

Earthquake	Landslide
An earthquake is a violent tremor caused due to the movement of tectonic plates. Shock waves may be felt in all directions from the place of origin. They are extremely violent.	A landslide is the rapid movement of soil, rocks, stones, boulders along with trees, houses and other structures down a slope due to gravity

5.

Smog	Fog
Smoke combined with fog is called smog	Fog is a visible aerosol consisting of tiny water droplets or ice crystals suspended in the air at or near the Earth's surface

6.

Hazard	Disaster
A hazard is a thing, person or event that causes harm or damage to human property or the environment.	A disaster is a serious disruption occurring over a relatively short period of time that causes great damage to property or loss of life

7.

Meteorological disaster	Atmospheric pollution
Meteorological disasters are caused by extreme weather, e.g. rain, drought, snow, extreme heat or cold, ice, or wind.	Atmospheric pollution is the release of a harmful chemical or material into the atmosphere.

8.

Sewage	Industrial effluent
Sewage (or domestic wastewater or municipal wastewater) is a type of wastewater that is produced by a community of people.	wastewater from industries treated or untreated - that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters".

VII. Answer the following in detail:

1. Hazardous Wastes caused by modern technology:

The wastes that may or tend to cause adverse health effects on the ecosystem and human beings are called hazardous wastes. They could be the result of a process or activity

using modern technology by manufacture of chemicals and synthetic materials that are not bio-degradable.

The following are the major hazardous wastes:

Radioactive substances

Tools and unused fuel rods of nuclear power plants; used x-ray sheets and irradiated material from x-ray labs.

Chemicals

Synthetic organics, inorganic metals, salts, acids and bases, flammables and explosives.

Biomedical wastes

Hypodermic needles, bandages and outdated drugs; human waste from surgeries.

Flammable wastes

Organic solvents, oils, plasticisers and organic sludge that can catch fire easily.

Explosives

The wastes resulting from ordnance manufacturing and some industrial gases; fireworks factories, godowns and shops during Diwali.

Household hazardous wastes

Pesticides, waste oil, automobile batteries and household batteries.

E-waste

Used electronic gadgets like cell phones, computers other electronic equipment that use different kinds of metals.

2. Causes of water pollution:

Rapid urbanisation increasing the volume of freshwater consumption and at the same time letting out huge volumes of wastewater.

Industrial effluents without proper treatment of chemicals in the wastewater.

Directly letting out large volumes of domestic sewage into freshwater bodies.

- In agricultural fields, chemical fertilisers and pesticides are washed down through irrigation and flow into the rivers and lakes nearby. This is known as agricultural run-off. They also seep into underground water causing water pollution.

- Excessive extraction of underground water in coastal areas allows sea water to intrude or come into underground aquifers. So the water turns salty.
 - Large urban areas generate thousands of tons of garbage. They are all dumped in lakes or nearby. Mountains of garbage leach pollutants into the nearby water bodies and underground water.
3. Identifying the hazard and prescribing the correct preventive measures for it.
 - Studying areas that are most prone to particular hazards. This is known as vulnerability study. For example, people living in low-lying areas are vulnerable to floods.
 - Immediate response with aid is a must, otherwise many lives may be lost and people will bear heavy economic losses.
 - Prevention is better than cure. India is a country that faces multiple kinds of disasters in various geographic regions. Preventing major losses is important for a developing country like India. We have to work hard to make economic progress.
 4. When the proportion of the gases change, it becomes hazardous to human beings and other life forms. Air pollution is the contamination of indoor and outdoor air. Pollutants are substances or energy that causes pollution.

Causes:

Smoke from industries, vehicles, other sources add particulate matter; burning of fossil fuels adds more carbon di oxide causing global warming; other pollutants like lead oxide and sulphur di oxide

Effects:

Smoke mixes with natural fog to cause smog; oxides of lead cause cancer; H_2SO_4 mixes with water vapour to cause acid rain.

Preventive measures:

Use industrial filters and other devices to recover particulate matter; find alternate sources of fuel and energy resources.

5.

Zone V (very high level of risk)

This region comprises of the entire north-eastern states, Northern Bihar, Kutch region of Gujarat and states of Uttarakhand, Himachal Pradesh, parts of Jammu and Kashmir and Andaman & Nicobar Islands.

Zone IV (high level of risk)

This region covers Delhi, northern part of Uttar Pradesh, West Bengal, remaining parts of Bihar and Jammu and Kashmir, small portions of Maharashtra near the west coast and Rajasthan.

Zone III (moderate risk)

The regions of Kerala, Goa, Lakshadweep Islands, Madhya Pradesh, Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamil Nadu and Karnataka.

Zone II (low risk)

This covers remaining parts of our country in parts of Rajasthan, Haryana, Punjab, parts of Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, central and eastern Deccan regions.

CIVICS

Chapter – 1 UNDERSTANDING SECULARISM

I. Choose the correct answer:

1. c) An attitude of tolerance and peaceful coexistence on the part of citizens belonging to any religion
2. c) Both (1) & (2)
3. b) 1976
4. d) Preamble of the Constitution
5. d) Fundamental rights
6. a) Religious instruction
7. c) does not give importance to a particular religion

II. Fill in the blanks:

1. animosity
2. equal rights

3. Atheism

5. discrimination

4. unity, integrity

III. Match the following:

1. Atheism – lack of belief in god
2. Children – future citizen
3. Din-i-Illahi – divine faith
4. Constitution – 1950
5. Holyoake – coined the word secularism
6. Rajaram Mohan Roy – social reformer

IV. State True or False:

1. False
2. False
3. True
4. True
5. True

V. Which of the following statements are true? Tick the appropriate choices:

1. d) i, ii and iv only
2. b) Both A and R are true and R is the correct explanation of A.
3. a) A is correct and R is the correct explanation of A.
4. a) Din-i-Illahi – A book

VI. Answer the following in one or two sentences:

1. Mahatma Gandhi, B.R. Ambedkar, Rabindranath Tagore, Raja Ram Mohan Roy, Sir Syed Ahmad Khan contributed to the spread of secularism.
2. Secularism means an attitude of tolerance towards other religions. It means the peaceful coexistence of citizens belonging to all faiths.
3. The objectives of secularism are as follows:
 - To ensure that one religious community does not dominate another.
 - To ensure that some of the members belonging to a particular religious community do not in any way dominate the others members of the same community.
 - To ensure that the state does not enforce any particular religion on its citizens.

- To ensure that the state does not take away the religious freedom of any of its citizens.
4. It is important to separate religion from the state so that every citizen is free to propagate, practice, and profess their faith, change it or not have one, according to their conscience.
 5. *Any three Constitutional provisions given in the lesson - Refer Text book.*

VII. Answer the following in detail:

1. Education plays an important role in preparing citizens to live a purposeful life within a secular society. Secularism is very essential in education. It means freeing public education of any religious dominance. There should be no religious dominance in learning development. Since children are the future citizens, education imparted to them, should aim at developing their moral behaviour and character and not be biased by religion. Secular education can be identified by the following characteristics:
 - It develops a moral and humanistic outlook, training youth to be better citizens.
 - It helps to develop an attitude of appreciation and understanding towards another's point of view.
 - It helps in the development of a wider vision of life.
 - It helps to develop and strengthen democratic values like equality, liberty, fraternity and co-operative living.
 - It is a synthesis of materialism and spiritualism.
 - It strives towards preventing religious hatred and fanaticism.
 - It helps to remove narrow mindedness and foster liberal attitudes and values.
2. The spirit of secularism is very important in a country like India that is working every day to prevent religious domination of any kind. Secularism strives towards allowing every Indian to enjoy all the blessings of life, liberty and happiness, and to maintain the unity and integrity of the country. This is guaranteed through the Fundamental Rights within the Indian Constitution that are based mainly on secular principles and is one of the main achievements of democracy in our country. For

a multi-religious country like India, secularism is the key, as it encourages us to live civilly, respect each other's religions and grant equal rights to all irrespective of one's religious beliefs.

Chapter – 2 HUMAN RIGHTS AND THE UNO

I. Choose the correct answer:

1. a) UNO
2. a) Beijing
3. b) 1993
4. a) Girl
5. b) 10th December
6. a) UDHR
7. b) Any retired Chief Justice of the Supreme Court.
8. b) 30
9. d) 5 years or upto 70 years of age
10. a) Delhi

II. Fill in the blanks:

1. right
2. fundamental
3. 17th April 1997
4. child labour
5. 24th October 1945

III. Match the following:

1. Eleanor Roosevelt – Human Rights Commission
2. The Cyrus Cylinder – world's first charter of Human Rights
3. Eve Teasing Act – 1997
4. Child help line – 1098
5. Civil right – freedom from slavery
6. Political right – right to vote

IV. State True or False:

1. False
2. False
3. True

4. False
5. The Economic and Social Council (ECOSOC)

V. Answer the following in one or two sentences:

1. In 1948, the UN General Assembly adopted the Universal Declaration of Human Rights (UDHR) a milestone document in the history of Human Rights. This crucial declaration is often referred to as the modern International Magna Carta of Human Rights.
2. Article 45 provides that the state shall endeavour to provide early childhood care and education for all children until they complete the age of six years.
3. **Right to Education Act:**
Article 21-A, Right to Education Act, was inserted into the Constitution of India, through The Constitution (Eighty-sixth Amendment) Act, 2002, to provide free and compulsory education to all children in the age group of six to fourteen years as a Fundamental Right in a way the State may, by law, determine.
4. *Any three legislations from the chapter in the textbook.*
5. *Any of the political rights mentioned from the chapter in the textbook.*
6. The five primary categories of Human Rights are civil rights, political rights, economic rights, social and cultural rights.

VI. Answer the following in detail:

1.

Human Rights	Civil Rights
They are basic rights inherent by birth.	They are rights created by society.
They belong to everyone, everywhere, regardless of age, gender, nationality, race, religion or sexuality.	They are enjoyed by virtue of citizenship in a particular country or state.

They are universal to all human beings and in all countries.	They are related to a nation's Constitution and vary among countries and between different governments.
No country may rightfully deprive an individual of Human Rights.	Different countries can grant or deny their citizens different civil rights and liberties.

2. Some of the basic characteristics of Human Rights are as follows:
 - They are **inherent**. This means that they are not granted by any person or authority.
 - They are **fundamental** rights because without these rights, the life and dignity of a human being is meaningless.
 - Human Rights are **universal**. They apply to all humans irrespective of one's origin or status and are enforceable without national borders.
 - These rights are **indivisible**. This means that they cannot be denied to a person even when other rights have already been enjoyed.
 - **Interdependence** of Human Rights means that the exercising or fulfilment of one human right cannot be had without the realization of the other
 - They are **inalienable**. This means that they cannot be taken away from an individual.
3. Our Indian Constitution has laid down principles to protect the Rights of Children against exploitation.

Right to Education Act:

Article 21-A, Right to Education Act, provides free and compulsory education to all children in the age group of six to fourteen years as a Fundamental Right in a way the State may, by law, determine.

The Juvenile Justice (Care and Protection of Children) Act, 2000 – provides a framework for the protection, treatment and rehabilitation of children.

The Child Labour (Prohibition and Regulation) Act 1986 - prohibits the engagement of children who have not completed 14 and 15 years of age in certain employments and to regulate the conditions of work of children in certain other employments.

Protection of Children from Sexual Offences (POCSO) Act 2012 - deals with sexual offences against persons below 18 years of age, who are deemed as children.

Article 39 which states that children should be given opportunities to develop in a healthy manner and should be protected from exploitation.

Article 24 that prohibits child labour.

Article 45 which provides that the state shall endeavour to provide early childhood care and education for all children until they complete the age of six years.





Class: 8 KEY ANSWERS TERM : II

1. VIRTUAL CULTURE TOURS - Section A

Page No. 1

Warm up

Write the correct name of the dance form from the choices given below. Also write a line about the dance.

1. The hojagiri dancers from Tripura are wearing a traditional costume with heavy jewellery. One of them balances a pot on her head. It is performed by women and young girls.
2. Puliyattam dancers of Tamilnadu have worn tiger masks, painted their bodies and tied bells around their hips. The dancers mimic the movements of the majestic tigers.
3. The Bhavai dancer, in a colourful costume, is balancing three large earthen pots on their heads. This dance is performed by both male and female dancers.

Page No. 6

Reading

A. Match the following.

1. Cham - a ritualistic dance form performed by Buddhist monks
2. Chhau - dance from Eastern India
3. Theyyam - human appears powerful and ominous as God
4. Kathakali - dancers use only face painting
5. Therukoothu - a street dance from Tamilnadu

B. Answer the following questions in a sentence or two.

1. A blog is the short form of weblog, which can be an online diary of a person.
2. The Saraikela Chhau is performed in Jharkhand.

3. The Mayurbhanj Chhau dancers are in sarees and dhotis and do not wear masks or elaborate head gear.
4. Assamese masks are crafted from bamboo and cloth.
5. Some people believe that the Theyyam mask is endowed with magical powers and that it brings them closer to God.
6. Only evil characters wear masks in Krishnattam.

C. Answer the following questions in a few sentences.

1. The Cham performed by Buddhist monks teaches compassion and respect for all living things.
2. Masks hide your face, but reveal what kind of character is performing on stage.
3. The Assamese folk dance Mukra bhaona is similar to the ritualistic Theyyam danced in Kerala. In these dances, the human is transformed into a God with the help of the mask.
4. The masked dancers wear elaborate head gear and carry swords or bows in their hands.
5. The Kali nach is performed in West Bengal, in honour of Goddess Kali. The performer wears a mask and dances with a sword, making prophecies. This shows how our dances are connected to our deepest faith and beliefs.
6. The masks used here may have bulging eyes, protruding noses and tongues jutting out of the mouth. The features are enhanced to portray fear and create a fantasy.

D. Answer the following questions in a paragraph.

1. Cham, a ritualistic dance form. It is performed by Buddhist monks as a part of monastery festivals. People from several towns and villages gather in large numbers outside the monastery and watch the monks appear from inside the

monastery in impressive costumes. Their faces are covered in masks of animals, birds or mythical characters. They sway rhythmically and perform in front of the monastery. The dance teaches compassion and respect for all living things. It is indeed, a religious dance.

2. The dances are performed in different states of India; Saraikela Chhau, in Jharkhand, Mayurbhanj Chhau in Odisha and Purulia Chhau in (West Bengal), the last of which is on UNESCO's heritage list of dances. The Saraikela Chhau dancers wear beautiful masks of good and evil characters, while the Purulia Chhau dancers wear elaborate head gear and carry swords or bows in their hands. The Mayurbhanj Chhau dancers are in sarees and dhotis and do not wear masks. All the dances tell us about how evil is defeated by the divine.
3. Kathakali dance uses only face painting. Green is used for the good characters such as the Pandavas, while green streaked with red is used for the evil characters such as the Kauravas. Demons and ghosts are painted black. In Krishnattam, only the evil characters wear masks. The mask of the theyyam dancer is supposed to have magical powers and people interact with these dancers.

Page No. 7

Vocabulary

A. Fill in the blanks with the right word from the box.

- | | |
|-------------|-------------|
| 1. ominous | 4. accuracy |
| 2. enhanced | 5. renowned |
| 3. escorted | 6. vantage |

B. Add prefixes to form opposites.

- | | |
|---------------|-----------------|
| 1. disbelief | 4. unimpressive |
| 2. disrespect | 5. ineffective |
| 3. dissimilar | 6. inglorious |

C. Circle the words that describe movements made in a dance.

sway, whirl, twirl, gyrate, prance, twist, jive

Page No. 9

Grammar

A. Combine the following sentences using coordinating conjunctions.

1. He is rich but he is very miserly.
2. We can start the meeting or wait for everyone to come.
3. Susheel is upset, so does not wish to speak to anyone.
4. Don't speak loudly or you will wake up the baby.
5. The tribal people protested against the cutting of trees, but the government

B. Circle the subordinating conjunction and identify it.

1. if - used in adverb clause of condition
2. wherever - used in adverb clause of place
3. while - used in adverb clause of time
4. though - used in adverb clause of concession
5. because - used in adverb clause of reason

C. Fill in the blanks with the missing correlative conjunction.

- | | | |
|-------------|-----------|---------|
| 1. nor | 3. either | 5. than |
| 2. not only | 4. both | |

Page No. 10

Listening

1. Joseph Lister, a surgeon from Britain, was among the first to identify that the wounds on his patient's bodies were infected by tiny organisms called bacteria.
2. Respiratory droplets carried bacteria from the doctors to the wounds of their patients.
3. A team of doctors in Poland conducted experiments on infection.
4. The head of this team began to wear face masks in the operating rooms, to cover his nose, mouth and beard, and prevent infection
5. By 1923, most surgeons wore masks during operations.

Writing

Monday, 16th March 2020

Today something unbelievable happened! Mother switched on the television to watch the news and started to sip her hot coffee. I was looking for my English notebook everywhere. All of a sudden, mother called all of us to come and listen to the news. I stared sleepily at the screen, as my sister and father came into the living room.

“Oh this is good news, we have a test today,” said my sister. I was also excited to think that we were having a holiday

“Let me call your school,” said father. After he spoke to someone at school, he confirmed that not only did we not have to go to school that day, but the holiday was for a whole week. On account of the corona virus! My sister and I could not stop smiling. Whatever be the reason, we were delighted. Mother just looked at us seriously and said, “So what if school is closed. Sit down, and study, as per your timetable.”

Tuesday, 14th April, 2020

Schools have not reopened yet! At first my sister and I were thrilled with all the free time we had. But now we miss school. Anyway, school was easier than following my mother’s timetable for study.

But now we have another thing to worry about. Our school is going to conduct online classes. And there is only one smart phone in our house. We discussed about how both of us could attend classes. Both our parents work from home and they talk a lot on the phone. How are we going to concentrate on our classes. The house has become very noisy.

Friday, 15th May 2020

The good news is that both my sister and I got promoted. We did not even write our exams. We even got our new books by post. But it doesn’t feel like holidays at all. We have to be careful and stay at home all the time. We are so bored of watching television. I also don’t like talking to my friends when my sister is always listening in.

I learnt how to make tea and prepare it at five in the evening everyday. My parents are always working at home. My mother was very exhausted and my father prepared dinner for us.

Tuesday, 15th September 2020

We waited and waited for school to reopen. But all schools are still closed. Wonder when they will and when we will start going to school...

1. GOD’S OWN BOATMEN - Section B

Page No. 11

Warm up

This is the annual boat race held in Kerala.

Page No. 12

Reading

A. Speak about the following.

1. Pooradam Thirunal Devanarayana was the king who wanted to install an idol of Lord Krishna in a temple in Ambalapuzha. The idol had to be carried to the temple by boat. The king was very pleased to see how people from the Christian community provided shelter to his men rest during the night and helped to carry the idol safely to the temple. So, he ordered them to celebrate their friendship with a water carnival that would be conducted every year.
2. Mappillaserry Itty Thomman was the Christian subject of the king Pooradam Thirunal Devanarayana. When he saw that the king’s men had to carry the auspicious idol of Lord Krishna on a boat, he let them rest in his place, and escorted them safely till they reached the temple in Ambalapuzha.
3. The race starts in the morning, and people watch in large numbers from the banks of the river. Multiple cameras capture the movement of the boats accurately. This ensures that all disputes about who won the race is settled without any doubt.

B. Narrate what you have read about the boat race to a partner.

The boat race commemorates the installation of the deity of Lord Krishna in the Ambalapuzha temple. In a way it is also a celebration of communal harmony in Kerala because the king who saw how Christians from Champarankulam helped his soldiers to get the idol safely to the

temple, announced the celebration of an annual water carnival in this village.

People gather around the river and find a vantage point to watch the race. High tech cameras are used to finalize who won the race. The boats are very long and can hold up to a hundred rowers. Every village owns one such boat which used to transport soldiers during times of war. People love these races so much that they do not mind if they get wet in the rains during the race.

Page No. 12 – 14

Vocabulary

A. Choose the answer from the options, that mean the same as the highlighted phrases.

1. serene
2. vantage point
3. communal harmony
4. adjoining
5. charged with enthusiasm

B. Find a single word from the text for the phrases given below.

- | | |
|---------------|-------------|
| 1. drizzle | 4. carnival |
| 2. unique | 5. renowned |
| 3. auspicious | |

C. Fill in the blanks with the correct word.

- | | |
|-------------------------|---------------------|
| 1. late, lately | 5. it's, its |
| 2. nearby, near | 6. elicit, illicit |
| 3. some time, sometimes | 7. proceed, precede |
| 4. sound, noise | 8. council, counsel |

Page No. 14

Speaking

Write a dialogue between yourself and this spectator.

- You: Hello! May I ask you a few questions about your experience at the boat race for my video?
- Spectator: Sure! This is a great race to watch.
- You: Is this your first time at the boat race?

Spectator: No, I attend the boat race with my family every year.

You: Wow! At what time did you come here?

Spectator: We got up at five, got ready and reached this spot at six this morning. We are so excited.

You: Which is the best part of the race?

Spectator: When the race starts, it is very thrilling. Then, as each boat passes us, we cheer. And towards the end, it is great to see the teams compete to reach the end.

You: Have you seen disputes arise during the race?

Spectator: Oh, yes. Last year, two of the boats finished so close to each other that it was impossible to say which one had crossed the end line first. There was a lot of argument. The judges checked the cameras carefully and found that one of the boats had beaten the other by just 30 seconds.

2. AFRICA, MY AFRICA

Page No. 15

Warm up

A. The Africa Quiz

1. The dark continent
2. South Africa, Egypt, Kenya
3. The Red Sea
4. Kilimanjaro
5. The Sahara Desert

B. Identify the tribe and share what you know about them.

The people in the picture belong to the Maasai tribe. Most of the tribesmen wear the colour red. It symbolises their culture and they believe that it frightens lions. They are among the tallest people in the world and they depend on cattle for their food. They are also renowned for their music and dance.

Page No. 17 and 18

Reading

A. Read the lines below and explain the words in them.

1. a. He describes it as black blood not because the colour of blood is black. It is because the blood and sweat of black people has been shed to benefit others.
b. The field is irrigated by black persons enslaved by others. This is why the poet accuses those who exploited them.
2. a. The labourer on the field has to bend his back most of the time.
b. The back of the labourer is described as unbent because only his back is bent, and not his spirit. He retains his pride in spite of his misfortune.
3. a. The back has scars that are red in colour because the slave owners whipped the slaves to make them work without stopping.
b. His back trembles with pain as well as some strong emotion such as anger.

B. Match the lines with the emotion it expresses.

- | | |
|------------------|----------------|
| 1. longing | 4. anger |
| 2. pride | 5. frustration |
| 3. determination | |

C. Identify the poetic device used by the poet in the lines given below.

- | | |
|--------------------|-----------------|
| 1. Alliteration | 3. Consonance |
| 2. Personification | 4. Alliteration |

Page No. 18

Writing

Write a paragraph about the physical and mental suffering of the African described in the poem.

The people of Africa were captured and made to work as slaves to colonists. They were beaten cruelly if they did not obey their captors. Their backs were covered in blood from the beating. Their backs were always bent doing hard

labour under the hot sun. They suffer pain as well as anger and humiliation. But, the spirit of the black man was not broken. In the eyes of the poet, his ancestors from Africa are wise and great and he wants them to be determined and get back their original glory.

3. PRIDE GOETH BEFORE A FALL

Page No. 19

Warm up

Let's write a poem on something we are afraid of.

A rat is something I fear

If it is there, I would never go near.

What shall I do, if it comes here?

Just scream aloud for all to hear.

Page No. 22 and 23

Reading

A. Choose the best answer from the options given below.

1. Their success made them smug
2. Put his plan of escape into action
3. To tie the hands and feet of the robbers.
4. Ten in the code language used by traders.

B. Pick out the line from the lesson which tells you that the

1. The merchants were rich

They were "returning home with a great deal of money"

2. The merchants had a good sense of rhythm

"A song is always sung by the leader tow hich the rest keep tiem with hands and feet."

3. The robbers did not understand the plan of the leader

The robbers "thought that the leader was merely singing a song as usual."

4. The leader sang the song more than twice.

"Meanwhile, the song was sung a third time."

5. Much later, the merchants found this experience to be funny.

"They often amused their friends and relatives by relaying their adventures."

C. Answer the questions in a few sentences.

1. The merchants were returning home with a great deal of money that they had earned by selling cloth from a faraway place. They had to cross a dense forest to reach their village. Three notorious robbers stopped them with dangerous weapons and robbed them.
2. The merchants used a code language when they traded to prevent the purchaser from knowing what numbers they were saying. It was a simple code by which they said the numbers spelled backwards. They used 'enty' for ten, 'eno' for one and 'erith' for three.
3. They became over confident and did not think that the merchants were ten in number. They relaxed, laid down their weapons and sat down while all the merchants were dancing. This way, they made it easy for the merchants to attack them.
4. The leader conveyed to the other merchants that they were ten men while the robbers were only three in number. If three of them pounced on one robber, nine of them could hold all three down, while the tenth could tie up their hands and feet. This was secret message in the song of the leader.

Page No. 23 – 26

Vocabulary

A. Name the weapons correctly.

Row 1 Left to Right

boomerang, axe, cudgel, dart

Row 2 Left to Right

catapult, rapier, rifle, sickle

B. Match the words with their synonyms.

- | | |
|------------|----------|
| 1. got | 4. grand |
| 2. started | 5. kings |
| 3. just | 6. know |

C. Read what these idioms mean and answer the questions related to them.

(the answers here are examples, they need not be the same)

1. Once I called teacher accidentally by name.
2. Sometimes people bend over backwards to impress their managers at work.
3. When we moved to the city, we had so many expenses and our parents decided to cut corners.
4. My friend is very short tempered. Teasing her is like playing with fire.
5. My family has no plans to hit the road. They are not fond of vacations.

D. Find out what these idioms mean.

1. **couch potato:** someone who sits in front of the television the whole day
2. **cash cow:** a business which gives a steady income during its life time
3. **horse play:** rough style of playing
4. **can of worms:** a complicated, unpleasant thing which most people do not talk about.
5. rotten apple: a corrupt person
6. **door mat:** a person who allows others to ill treat them

E. Food idioms

1. It is not easy for workers to bring home some bread and butter during Covid.
2. My friend butters up teachers.
3. My parents do not think of any of my friends as a bad egg.
4. That political leader is the big cheese in my locality.
5. Sitting at home all day is not my cup of tea.
6. My friend is 'all fun and life', in a nutshell.
7. Typing fast is a piece of cake for me.
8. I can surely keep a secret. I do not usually spill the beans.
9. Cycling near the beach can spice things up in my life.

10. It is wrong to egg someone to fight with his friends.

4. PV SINDHU - THE PLAYER WITH AN UNBEATEN SPIRIT - Section A

Page No. 27

Warm up

Match these players with the games they play.

- | | | |
|----------------------|---|--------------|
| 1. Gopichand | - | Badminton |
| 2. Chetan Sharma | - | Cricket |
| 3. Mary Kom | - | Boxing |
| 4. Major Dhyan Chand | - | Hockey Singh |
| 5. Milkha Singh | - | Athletics |

Class discussion

(The answers can be different. These are just examples.)

Sania Mirza - Tennis

No. 1 rank holder in doubles for ninety one weeks

Mary Kom- Boxing

Five time world amateur boxing champion

Mithali Raj - Cricket

Captain of Indian cricket team and highest scorer in women's cricket

Saina Nehwal - Badminton

First female Indian to be ranked first in the world

Geeta Phogat - Wrestling

Gold medal winner at the Commonwealth games

Sakshi Mallik- Wrestling

First Indian female wrestler to win a medal in the Olympics

Deepika Kumari - Archery

Former number one in the world ranking

Tania Sachdev- chess

Has won several International Master and Woman Grandmaster titles to her name.

Rani Rampal - Hockey

Represented the country at the age of fifteen at the World Cup.

The names of district level players from local schools can also be brought up.

Page No. 29 and 30

Reading

A. Write True or False

- | | |
|----------|----------|
| 1. False | 4. True |
| 2. False | 5. False |
| 3. True | 6. False |

B. Answer the questions in a short paragraph.

1. Sindhu donated a total of ten lakhs to fight Covid 19. She gave five lakh rupees to the Chief Minister's Relief Fund to two states, Telangana and Andhra Pradesh in March, 2020. This shows her generosity and wish to help her countrymen.
2. Although Sindhu struggled to develop her game initially, she worked on her strategy, skill and fitness till she became a strong contender at the international level. She concentrated during difficult situations and placed complete trust in her coach and followed up his suggestions during the game.
3. The Government of India honoured her with the Rajiv Gandhi Khel Ratna Award, the Arjuna award, the Padmashree and the Padmabhushan. The Andhra Pradesh government appointed her as a Deputy collector of the state.
4. Sindhu is admired for her fashion sense. She regularly appears in public wearing designer sarees, lehengas, pantsuits, dresses and fashion jewellery.

C. Write the names of the competitions that Sindhu won against the years given.

- | | | |
|------|---|--|
| 2009 | - | Bronze - Sub-junior Asian Badminton Championship |
| 2010 | - | Silver - Iran Fajr International Badminton Challenge |
| 2011 | - | Maldives, Indonesia, Swiss and Indian Championships |

- 2012 – Under 19 Asia World Championship
- 2014 – Commonwealth Bronze Medal
- 2016 – Olympic silver Medal, South Asian Games
- 2018 – Commonwealth Silver Medal

Page No. 30 – 32

Vocabulary

A. Choose the best option.

1. professionally 4. famous
2. schedule 5. quarantined
3. contender

B. Remove a part of the word to form the clipped word.

1. pop 6. tele
2. exam 7. fan
3. fridge 8. zoo
4. memo 9. stereo
5. cine 10. sub

C. Write the clipped form of the following words.

1. photo 4. dorm
2. flu 5. copter
3. ad 6. vet

D. Write the expanded form of the clipped words.

1. perambulator 4. gymnasium
2. spectacles 5. laboratory
3. submarine

Page No. 33

Grammar

A. Identify the sentence patterns.

1. SVA 4. SVC
2. SVO 5. SVIODO
3. SV 6. SVOC

B. Write sentences of your own in the following sentence patterns.

1. I wrote a letter yesterday.
2. In London, the weather is unpredictable
3. The government gave her a medal.
4. The clock ticked.
5. She polished her shoes clean.

Page No. 33 and 34

Listening

1. Chandro leant to shoot with a rifle at the age of 65.
2. The coach advised Chandro to take up the sport because she was able to hit the bull's eye easily.
3. Chandro and Prakashhi won over a hundred medals in the years they participated
4. Prakashhi's daughter is Seema.
5. A movie titled, "Saand ki aankh" was made on their lives and brought them in the news.

Page No. 34

Speaking

Write the commentary of the last five minutes of a match. Read it aloud with excitement and energy.

Commentator:

It's only five minutes to the end of the match. The two teams that are playing today in the finals are The Southern Champs Vs the The Northern Royals. All the spectators are tensed because it has been a very close match, with both teams playing extremely well and not ready to give up without a fight.

The captain of The Northern Royals has started to bowl very carefully. But the other team is also doing their best. Their star player is still batting on the field. He just has to hit four runs to win the match. But unexpectedly, he swings the bat and the ball flies far above the heads of fielders.

What a surprise! It's a six! The Southern Champs have won the match.

Page No. 34

Writing

Write a letter to your teacher as to why you cannot attend online classes.

Sub: non availability of a computer for online classes

Dear Madam,

Good day to you.

This is Sheela from class eight. I am sending this mail from my father's phone.

We have only this phone to attend classes, madam. We do not have a computer. Even this phone will be required for my elder sister who is in class 10.

None of my class mates live in my neighbourhood. I have asked my relatives for help. But they do not have a device to spare.

I do not know how I can attend classes during this period.

Please give me a suggestion as to how I can attend the online classes.

Regards,

XYZ

Student

Class 8

ABC school

4. THE ORIGIN OF BADMINTON - Section B

Page No. 35

Warm up

Identify the objects used to play badminton.

batminton, shuttlecock

Page No. 36

Reading

Summarize the contents of the passage in five bullet points.

- Originally played as shuttlecock in ancient India, China and Greece, its current form was

invented in Poona under British rule and named Badminton after a place in England.

- The inventors of the game realized that it was best played with one or two players on one side.
- Invented by the military, it is a casual game in many parts of the world.
- It was played seriously in Canada and later Newzealand and some European countries joined it to form the International Badminton Federation
- Although Denmark dominated the game at first, the best players of today are from Asian countries.

Page No. 36 – 38

Vocabulary

A. Match the antonyms of the following words.

- | | |
|--------------|-----------|
| 1. seriously | 4. submit |
| 2. finally | 5. past |
| 3. earlier | |

B. Use the correct phrasal verb from the box.

- | | |
|----------------|------------------|
| 1. put up with | 4. superior to |
| 2. thirst for | 5. going forward |
| 3. step up | |

C. Match the eponym with its origin.

1. A person in Greek mythology who supports the heavens
2. The first Roman emperor, Augustus Ceaser
3. Louis Braille, who invented the system
4. Julius Ceaser was born in this manner
5. Albert Einstein , Nobel prize winning scientist
6. Hooligan, a rowdy Irish family described in a song.
7. The disciple of Jesus who deceived him
8. Marathon, a city from which a soldier ran 150 miles.
9. The Mughal emperors
10. The Greek God, Pan who caused terror.

Grammar

Identify the sentence patterns

- | | |
|---------|---------|
| 1. SVA | 5. SVOA |
| 2. SVO | 6. SVC |
| 3. SVAA | 7. ASVO |
| 4. SVOA | 8. SVOA |

5. CASEY AT THE BAT

Reading

A. Complete the sentences with one of the two options.

1. He was proud and happy to be playing
2. He was ready for the ball
3. He felt that the ball was not stylish enough for him
4. He was sure he would hit the last ball far away
5. He decided to face the last ball seriously.

B. Who said the sentences below? When and why did they say it?

1. Casey said this when he saw the bowler throw a ball which Casey judged to be in poor style. He said that he was overconfident and he was sure he would make the game more interesting by hitting the ball which came later and winning the game at the last moment.
2. Some spectator in the stand said that when the umpire called out Casey's first miss. The spectator was angry with the umpire because he was a supporter of Casey's team.
3. The umpire said this when Casey missed the second ball. This is like a warning to the batsman that he cannot miss the next ball.
4. Thousands of spectators yelled this word at the umpire when he said "Strike two", after Casey missed the ball a second time. They were fans of Casey and blamed the umpire for the mistake made by their favourite player.

C. Answer the questions.

1. Casey carried himself with an easy grace, his posture was proud and he had a confident smile on his face. Upon his entry into the field, the crowd cheered him and he doffed his hat in response to their cheers.
2. Before he faced the ball, Casey rubbed his hands with dirt for a firm grip, wiped them on his shirt, looked at the bowler with a defiant look. He was ready for anything and sneered at the bowler.
3. As he prepared for the last ball, Casey became serious. His face became stern and cold, and his muscles strained, ready to hit the ball. He hits the bat on the ground with his teeth clenched in readiness.
4. It is normal for a star player to be confident and play the game differently from others. But sometimes the risk does not pay. Instead of a thrilling finish Casey was hoping to give his fans, he disappointed everyone by getting struck out in the last ball.

D. Identify the simile, repetition and hyperbole from the lines given below.

- | | |
|--------------|---------------|
| 1. Hyperbole | 3. Repetition |
| 2. Simile | 4. Hyperbole |

Vocabulary

A. Find words from the poem that are synonyms of the words given below.

- | | |
|--------------|--------------|
| 1. bearing | 6. unheeded |
| 2. applauded | 7. sneer |
| 3. writhing | 8. tumult |
| 4. haughty | 9. clutched |
| 5. visage | 10. scornful |

B. Give antonyms for the following words.

- | | |
|-------------|---------------|
| 1. humility | 4. genial |
| 2. fragile | 5. meek |
| 3. unlikely | 6. considered |

C. Fill in the blanks using the sports idioms.

1. at this stage of the game
2. front runner
3. get off the hook
4. give it your best shot
5. race against time
6. skate on thin ice

D. Use the idioms in sentences of your own.

(The answers can be different. These are examples.)

1. I have got you an appointment with the school head master. Get ready with all the points that you have to present before him. The ball is in your court.
2. It was easy to see she called the shots in that organization. Every change had to meet with her approval.
3. Sometimes directors of fight scenes go overboard, and make the heroes hit ten people in one stroke.
4. He has the upper hand in the company because he owns most of the shares.
5. The team from the city had better equipment, an expert coach and bright uniforms. They held all the aces in this competition with the village team.

Page No. 44

Grammar

A. Circle the conjunction and say if they are coordinating or subordinating.

1. as – subordinating
2. and – coordinating
3. that (conjunction is understood) – subordinating
4. if – subordinating
5. but – coordinating

B. Combine the sentences using 'hardly had—when'

1. Hardly had I reached the school gates, when the bell rang.

2. Hardly had he got into the train, when it started to move.
3. Hardly had the doctors treated all four victims of the accident, when three more were admitted.
4. Hardly had the thief entered the room, when the alarm began to ring.
5. Hardly had the ships set sail, when the storm began to rage.

C. Fill in the blanks with 'either...or' and 'neither nor'

1. either...or
2. neither...nor
3. either ...or
4. either...or
5. either...or

Page No. 45

Class discussion

The games mentioned in the poem are cricket, football, rounders (a game similar to baseball), billiards and lawn-tennis. Some games cannot be played when it rains or when it is cold, such as cricket. The poet also says that there is a game played with a spherical ball in every season of the year.

Yes, the poet says he loves to watch games, whatever it may be.

6. AN UNFORTUNATE EXPERIMENT

Page No. 47

Warm up

Sample answer:

Sport using animals is prevalent in cultures across the world. It was a source of great entertainment. Animals have certain skills and strengths; this was utilized. For example, horses are known for their speed, hounds for hunting...In the modern world it is insensitive to use animals for our entertainment since there are many other sources.

I have watched animal sport on TV. While I love to watch a horse run, I hate to see it whipped, or

for that matter, an elephant prodded. Bullfights and cockfights are common in our country. I condemn animal sport. I think they should be banned.

Page No. 47 and 48

Reading

A. Answer the following questions in a sentence.

1. The emperors of Germany and Austria organized the race between the two countries.
2. Four hundred miles was the distance covered during the race.
3. It induced a lot of interest in Europe as well as in America
4. Both the press and the people condemned the race.
5. (answer will be based on the student's experience)

B. Answer in a few sentences.

1. The rules of the race were that the soldiers from Austria had to reach Germany and the German officers had to reach Austria, riding a single horse in the shortest possible time using the route of their choice.
2. One prize for the rider who came first and the second for the rider who brought the horse in the best condition possible, were announced.
3. The animals suffered because many of the animals died of exhaustion and the ones that survived became disabled and unfit to be ridden. The animals had been whipped, poked with spurs and tortured all through the race.
4. People found the treatment of horses during the race barbaric and cruel.
5. I do not think it is right to use animals in sports, as they have to suffer a lot of hardship just so that humans can have fun.

C. Answer in a short paragraph.

The emperors of Austria and Germany organized a race to prove the endurance of man and horse and improve relations between the two countries. The riders had to travel from the capital of one country to that of another

on a single horse and cover 400 miles. Most of the horses died of exhaustion. The public accused the riders of being cruel and using barbaric methods to reach their destination. The experiment was thoughtless and people who watched it with interest were horrified by how it ended.

Page No. 48 and 49

Vocabulary

A. Sight idioms

- | | |
|------------------------|-----------------------|
| 1. catch sight of | 4. stand the sight of |
| 2. sight for sore eyes | 5. hind sight |
| 3. know by sight | 6. set his sights on |

B. Match the words with their opposites.

- | | |
|----------------|--------------|
| 1. kindness | 4. ordinary |
| 2. praise | 5. civilized |
| 3. displeasing | |

C. Look at the dictionary and find the meanings of these phrases.

1. be to my taste or pleasure
2. what is the disadvantage or negative side of doing something?
3. nothing positive resulted
4. the feelings of the general public
5. classify something as bad

Page No. 51

Grammar

A. Change these sentences into reported speech.

1. The little girl exclaimed that it was a lovely kitten.
2. Her training manager told Sonal that she would have a new Manager from that day.
3. The teacher asked Vinay why he needed so many people in his group.
4. I asked my friend if it was her new phone.
5. Kunal told his manager that that salary was not good enough to feed his large family.

6. The teacher advised his students to understand the importance of good hygiene.
7. The leader instructed his team members to have two extra masks in their bags when they entered a polluted area.
8. My uncle asked my brother when his school reopened.

B. Change these sentences into direct speech.

1. "Be responsible," said the father to his daughter.
2. "Why have you come late to school today?" said the teacher to the girl.
3. "How noisy you are!" said the student to his friends.
4. "Will you take me to the park today?" said the little girl to her mother.
5. "Every room will be cleaned this evening." said the janitor to me.
6. "Do not join the sales meeting." Said my manager to me.
7. "How tired I am at the end of a day's work!" said my mother.
8. "Check with me about my availability." you said to me.

Page No. 52

Listening

1. True 3. True 5. True
2. True 4. False

Speaking

(points shared can be different. This is just a guideline.)

1. Animals should not be kept in zoos – Speaking for the topic:

It is a place where people who live in cities get to see all kinds animals from all over the world. Even if we travel within our country, we would not be able to see several animals and a variety of birds. Without zoos, most people would never be able to see animals such as tigers, giraffes and kangaroos. Also some zoos protect

these animals from extinction. Nowadays, zoos keep animals in large enclosures and not cages.

Speaking against the topic

It is cruel to shut animals and birds in cages. Many zoos cannot afford large enclosures. We can see animals and birds on television. We can create 3 D movies and watch them on our devices without capturing them and keeping them as prisoners. If we let our forests undisturbed, animals will survive on their own. Most animals do not have babies when they are kept in enclosures. It is wrong to keep animals in zoos, where people tease them, make them uncomfortable or feed them unnecessarily.

2. Horse riding – Speaking for the subject

Man has used animals for transportation for thousands of years. It is a relationship between man and beast. Humans provide food, shelter and protection for the animal and it carries him. Horse riding is an important skill and the understanding between the rider and the horse is unique bond which cannot be understood by those who use cars and buses. It is environment friendly and ensures that horses survive in large numbers.

Speaking against the subject

Why do we need to torture and train an animal to carry us when we have a variety of transport from skate boards, cycles to cars, trains and planes? It was alright before the invention of these vehicles. We cannot go back to riding animals. It would be better to keep them in the wild where they live in herds and survive on the fresh grass found in forests. If we need a clean environment, we must improve our vehicles and make them environment friendly, not go back to an outdated practice that is barbaric and cruel.

3. Is eating meat cruelty? – Speaking for meat eating

Eating meat is natural to man. Early man hunted and all humans survived on the nutrition provided by meat. If you think it is cruelty, how will we get nutrition such as animal protein that is important for our health? Only 20 to 30 percent of Indians are vegetarians. At the world level, 86 percent of the world's population eats

meat and it would be very hard to tell them to change their habits which they have had ever since humans have roamed the earth. It is not practical or wise to do that. Meat eating is part of human cultures and thousands of dishes are prepared from meat and they are part of festivals celebrated all over the countries in cities, villages and even among tribal people of our country.

Speaking against meat eating

Man is no longer hunting for the needs of his family. He is keeping animals and birds in extremely cruel conditions and killing thousands of them to feed the millions of people who populate the earth. Feeding these animals in captivity requires a large amount of grass, grains and other plant products. We use a lot of our natural resources such as water and soil to supply to the meat industry. Also, we have several options to choose from today. 14 percent of the people all over the world have felt guilty about exploiting animals and started to eat plant products. Each one of us should try to eat food that is produced without harming another living being.

Writing

Write a letter to your mother about the race you participated in.

Date: 10.10.2015

Place: XYZ city

Dear mom,

How are you? Hope you and dad are keeping good health. I am writing directly after participating in the cross country race held in our school. What can I say? You won't believe this, but I completed the entire three kilometres today.

I remember that I told you when we started training that I would never be able to run so far because I have never participated in such a sport. In fact, I don't think that I have even walked that distance. It is all thanks to our coach Meena, who taught us how to improve our stamina by practising regularly at slow speed. Yes, slow running is the best, I discovered for making us strong and keeping our muscles from damage.

But I practised every single day last month. Today, I was able to pick up speed and actually came fourth in the race. I am so tired, but I had to share this news with you. Will write to you later.

Lots of love,

Your daughter abc

7. JESSICA AND JILLUMOL - Section A

Page No. 53

Warm up

1. The first picture is that of a ramp. This helps people who use a wheel chair or have visual impairment climb without difficulty.
2. Braille is a form of writing which can be read by people who cannot see.
3. A guide dog is trained to help a visually disabled person to walk in the street. It guides him to cross roads and walk among other people in the street.

Page No. 55 and 56

Reading

A. Choose the best answer from the options given below.

1. She wanted to touch the things she worked with.'
2. She could fly a plane with her feet.
3. She enjoyed the attention of her friends and her teachers.
4. She paints with just her feet and mouth.
5. In modifying a car for her to drive with her legs.

B. Answer in a few sentences.

1. When she was born, doctors told her parents that she would always be dependent on them because she was born without hands. But by the age of three, Jessica started to eat and do her daily chores with her feet.
2. Jessica became the first female to fly with her feet and the first armless black belt in Taekwando. She can drive a car, play a piano, change her clothes and even wear her contact lens with her feet.

3. Jessica married Patrick Chamberlain whom she met at her martial arts class as an instructor.
4. The nuns who taught Jilumol identified her interest in drawing. Holding colour pencils with her feet, she enjoyed moving them across paper forming curves and lines at the back of her notebook.
5. Jilumol wants to drive a car and move around independently like all the working women around her. She aspires to be a role model for people with disabilities.

C. Answer in a paragraph.

1. Although she was born without two hands, Jessica started do her daily chores with her feet. As she grew up into a young woman, she learnt to play the piano, type on the computer, and drive a car. She also got her pilot's license and became the first woman to fly a plane with her feet. She also became a black belt in Taekwando.
2. Jilumol was born with the same disability as Jessica as well as the spirit to manage with her feet. Learning to draw at school, she continued training under Benny Varghese. She became a Foot and Mouth Painting artist and a graphic designer in a private company. However, when she wanted to drive around as an independent woman, the law did not permit her. She fought and won the case at the high court, and learnt to drive in the modified car donated to her by Lions Club. Still the officials would not issue a license to her.

In this way, her struggles are different from those of Jessica.

Page No. 56 – 59

Vocabulary

A. Answer in a sentence using the news words you have learnt in this lesson.

(answers can vary)

1. I have seen the actor Sudha Chandran who uses a prosthetic limb.
2. My friend Ramesh possesses a pet dog called Rocky.

3. Completion of a project is an evidence of a student's hard work.
4. I am skeptical about going out when it rains.
5. I rarely help my mother with her daily chores.
6. I aspire to own a beautiful new bicycle when I grow up.

B. Add the suffix 'less' and find out what it means.

heartless – unkind

clueless – someone suspects nothing

powerless – a person who has no power over others

motionless – not moving

flavourless – food with no flavour, not tasty

C. Fill in the blanks with a suitable idiom.

1. nest egg
2. dropped like flies
3. raining cats and dogs
4. rat race
5. wild goose chase
6. cat nap
7. pig out
8. take the bull by the horns
9. chickened out
10. smelt a rat

D. Fill in the blanks using the suitable idioms.

1. pulls someone's leg
2. an old hand
3. cold feet
4. think on your feet
5. Achilles' heel
6. break a leg
7. cost an arm and a leg
8. all ears

Page No. 59 and 60

Grammar

A. Identify if the sentence below is Type 1, Type 2 or Type 3

- | | | |
|-----------|-----------|-----------|
| 1. Type 1 | 3. Type 1 | 5. Type 2 |
| 2. Type 3 | 4. Type 1 | 6. Type 1 |

B. Choose the best answer from the options given below.

- | | |
|-------------------|----------------|
| 1. would | 4. had started |
| 2. will | 5. will |
| 3. would not have | |

C. Complete the sentences based on the first half.

(answers can vary, but the grammar should be checked)

1. If the children make a lot of noise, our neighbours will be disturbed.
2. If we had games period every day, I would never take leave.
3. If my mother had studied computers, she would have become a web designer.
4. If I have a computer of my own, I will be able to attend online classes.
5. If I had been born in China, my name would be Jia.

7. THE WHEEL CHAIR BODY BUILDER - Section B

Page No. 62 and 63

Vocabulary

A. Write the correct blended word.

- | | |
|----------------|---------------|
| 1. camcorder | 6. sitcom |
| 2. netizen | 7. frenemy |
| 3. smog | 8. paratroops |
| 4. mobike | 9. malware |
| 5. edutainment | 10. forex |

B. Combine these words to form blended words.

- | | |
|------------|-------------|
| 1. webinar | 5. emoticon |
| 2. hi-tech | 6. motel |
| 3. chillax | 7. brunch |
| 4. email | 8. Brexit |

C. Give antonyms for the following using prefixes.

- | | |
|-----------------|-------------------------|
| 1. dissimilar | 4. unmodified |
| 2. independent | 5. inability/disability |
| 3. dispossessed | |

Page No. 64

Listening

1. The sport that Anand's father played was football.
2. His mother played volleyball at the district level.
3. His brother helped him to get permission to join the gym.
4. He wants to earn money to travel to foreign countries and participate in competitions.
5. He has acted in the movie titled, "Supreme Khiladi."

Speaking

(The answers can vary)

Can children with disabilities study in normal schools?

Children with mild and moderate disabilities of any kind may be integrated in normal schools if the teachers are trained and made aware of the right training methods. Especially, if they have learning disabilities. This will maximize their achievement. Students will also learn social skills and appropriate behaviour from other students.

To do some rules should be established. Wrong ideas about disability should be removed. Children should be made aware of high

achieving persons who managed disability, and children should understand about disability and look at it positively.

Teachers should also be trained on how to modify their lessons to suit children with disabilities and how to deal with the challenges that come up in class due to the integration of children with disability.

Page No. 65

Writing

Notice Board

A. Trekking Club

Those who wish to join the trekking club must give their names to Ms. Meena, the games teacher before the fifth of November. The club will meet every Friday, at 3.30 p.m. The first trek will be on Nandi hills on the second Saturday of November. Attend the Friday meetings to learn more about trekking.

What you should bring for treks

1. Backpack
2. Water bottle
3. Some fruits
4. Caps
5. Trekking shoes

B. Family Day Celebrations

Bring members of your family to school with you. It will be a fun day to celebrate with family and friends.

Date: 14.11.202

Time: 10.30 a.m.

Venue: School grounds

Agenda

1. Fun and Games
2. Lunch at the food stalls
3. Variety entertainment by teachers

8. DON'T QUIT

Page No. 66

Warm up

Look at the picture and write five adjectives to describe it.

- | | |
|----------------|-----------|
| 1. free | 4. silent |
| 2. cold | 5. snowy |
| 3. spectacular | |

Page No. 67 and 68

Reading

A. Say Yes or No to the sentences below.

- | | |
|--------|--------|
| 1. Yes | 4. Yes |
| 2. Yes | 5. Yes |
| 3. No | |

B. Answer in a few sentences.

1. There are times when road seems uphill all the time, and the traveller has to trudge forward, and there are other times when funds are low but many debts have to be paid. These are the examples of hardships given in the poem.
2. We should stick it out even if worries press down on us because we might win, once we cross a rough patch.
3. Not realizing how close one is to success is the mistake done by those who struggle a lot and then lose.

C. Answer in a short paragraph.

(answers can vary)

1. When I failed a test, my mother tried to cheer me up by saying that I would do better next time. I tried to smile but could not because I was very disappointed.
2. The dance group Unbeatables from Mumbai faced a lot of hardship. Their parents could not support them to learn dance or have the time to encourage them. They practised dangerous stunts without mats or nets and finally won the finals in the popular show, America's got Talent

D. Read these metaphors and circle the two things that are compared.

The two things that are compared are

- | | |
|-------------------|----------------------|
| 1. He, mouthpiece | 4. Companies, sharks |
| 2. They, owls | 5. Life, performance |
| 3. Sun, gold | |

Page No. 68 – 70

Vocabulary

A. Make two sentences with each homonym.

1. The leaf uses sunlight to prepare food for the plant

I turned a leaf of the book and came upon the secret map.

2. The neighbours are also close friends.

Close the door and lock it securely.

3. Boys from the village played along the banks of the river

He works as a cashier in a bank.

4. My mother grinds rice into a batter every week.

Do not batter me with so many questions

5. The lawyer filed a case against the man who littered all over the park

We purchased a book case to keep all our books in one place.

B. Use these words in sentences to show the difference in their meanings.

1. My mother sent me a bottle of scent when I was in the hostel.
2. The shop sells books on blood cells.
3. The gentle sound made by flow of water in a creek is pleasant, but not so the creak made by a door.
4. He blew air into the blue balloons
5. Dew forms due to vapour changing into liquid.
6. The fare charged by the auto driver was fair and I paid without protest.

C. Read the colour idiom and rewrite the sentence using it.

1. The sportsman blacked out due to exhaustion.

2. When the retired soldier started to garden, he realized that he had a green thumb.
3. You are looking at the film star with rose coloured glasses.
4. The children were tickled pink when they saw the kitten in the balcony.
5. When he reads mean comments on Facebook, he sees red.
6. When my uncle suffered a heart attack, it was a bolt from the blue for his family

Page No. 70

Writing

Describe the picture.

The picture is of a park that is green and showered with golden sunlight. The sun light reflects on the grass. There is a large, shady tree under which there is a bench for people to sit in. It seems like a warm day. The place must smell of grass and drying leaves. It also seems like an unpolluted place. People can come here and take long walks, or sit under the tree with their family for a picnic. It is also a perfect spot to sit with a book. As it seems to be a large park, it would be a good place for children to run and play with their friends and pets.

Page No. 71

Class discussion

The students can discuss about positive thoughts about how they go about their work, how they interact with others and how to make their society and community better.

9. KING ALFRED AND THE CAKES

Page No. 81

Reading

A. Choose the best answer from the options given below.

1. He wanted to hide and plan his battle moves
2. She feels he must work for his food
3. His mind was occupied with battle strategy
4. He speaks ill of the king
5. She unknowingly saved his life

B. Who says this to whom, and why?

1. The king says this to his soldiers because he does not want them to be hunted and killed by the Danes.
2. The soldiers advise the king to stay with the good wife and beg for some food because then the Danes would not suspect his true identity.
3. The good wife says this to the King when he begs her for food. What she means is that she cannot serve him. If he wants food, he has to work for it.
4. The good wife says this to the Danes when they come to rob her at her door. She is a poor woman without anything to give the Danes.
5. The Chief of the Danes says this to the good wife when she proclaims that she will die for King Alfred. He warns her that she must not speak to him of her loyalty to the English King for he was going to be the King of England.
6. The good wife exclaims in this manner when she comes to know that the person she was about to beat was King Alfred disguised as a beggar. She is upset that she had unknowingly been about to beat him.

C. Answer in a few sentences.

1. King Alfred ruled from 871 to 899 and after many trials defeated the Vikings at the Battle of Eddington in 878.
2. The soldiers and subjects of King Alfred feared the Danes who came to rob them, burn their homes and make slaves out of them. But the King wanted to turn their fear to anger so that they would fight the Danes and chase them out of England.
3. The good wife trembled and wept in front of the Danes because they threatened to burn her home. They were angry with her for she had no silver to offer to them.
4. At first, the Danes suspected that the beggar could be the king in disguise. However, when they saw that the good wife had threatened to beat him, they felt that no king would allow a poor woman to treat him that way. So, they changed their mind about arresting him.

5. The good wife loves Alfred not just because he is the king, but because he is brave and fights battles to save his subjects.
6. The good wife makes a beggar work for his food. This shows that she is a good manager. She speaks her mind in front of the Chief of Danes. She supports her king and threatens to punish the beggar for speaking ill of the king. This shows her bravery and patriotism

D. Imagine you are the good wife. Write an account of the day you unknowingly saved the life of King Alfred.

This is truly the most unforgettable day of my life. I was going about my work as usual, when I heard a knock on the door. I opened it to find another beggar at my door. That man was in rags and begged for food. I was sorry for him and told him to mend the fire and fry the cakes himself.

I had been away from the fire for only a few minutes, but the beggar had burnt the cakes. Not one cake was fit to eat. I wanted to beat the beggar. I asked him to mix more dough. To make matters worse, the Danes entered my gate. I had no silver with me and they threatened to burn my house. I wept so hard at the thought of losing my home. The Chief of the Danes then asked me for information about King Alfred. I was shocked to know that the king was in flight, but told the Dane that I would die for my king. Meanwhile the soldiers searched my home and brought the beggar out. Shocked to hear them call him my husband I told them that he was a beggar. I was glad to hear them say they would take him prisoner. I told them that the deserved to be taken because he had burnt my cakes and I had been about to beat him. They changed their minds about arresting them. When they left, the beggar insulted the king. I wanted to punish him, but before I could, English soldiers came to my home and told me that the man in beggar's clothes was King Alfred himself. Alas! I had been about to beat the king himself. But the king told me that my disrespect to him had saved his life. It was difficult for me to understand at first. But our king is a brave man and he would definitely chase the Danes off our land.

Page No. 82 and 83

Vocabulary

A. Form Anagrams from the words given below.

- | | |
|----------|-----------|
| 1. shoes | 4. miles |
| 2. shrub | 5. wings |
| 3. nails | 6. listen |

B. Match the words with their antigrams.

- | | | |
|--------------|---|-----------|
| 1. silent | × | listen |
| 2. united | × | untied |
| 3. sainted | × | stained |
| 4. nominated | × | not named |
| 5. sheared | × | adheres |

C. Fill in the blanks with the correct phrasal verbs.

- | | |
|---------------|--------------|
| 1. turn in | 4. turn down |
| 2. turn away | 5. take out |
| 3. take after | 6. take down |

Page No. 83 and 84

Grammar

A. Circle the subordinating conjunctions and say if they are conjunctions of time, place, condition, concession or reason.

- | | |
|-------------|---|
| 1. till | subordinating conjunction of time |
| 2. although | subordinating conjunction of concession |
| 3. if | subordinating conjunction of condition |
| 4. because | subordinating conjunction of reason |
| 5. wherever | subordinating conjunction of place |
| 6. before | subordinating conjunction of time |
| 7. as | subordinating conjunction of reason |
| 8. though | subordinating conjunction of concession |

- | | |
|-------|--|
| 9. if | subordinating conjunction of condition |
|-------|--|

- | | |
|-----------|------------------------------------|
| 10. where | subordinating conjunction of place |
|-----------|------------------------------------|

B. Write two sentences for each pattern.

- | | |
|-----------|---|
| 1. SV | The long day ended
A large crowd of people had gathered. |
| 2. SVO | I purchased a laptop
The wild elephants attacked the green fields. |
| 3. SVC | The young woman became an airline pilot.
We are worried. |
| 4. SVIODO | The teacher gave his students a warning.
My grandmother offered me some sweets. |
| 5. SVDOIO | The teacher distributed the report cards to the students
The government gave free food to poor people. |
| 6. SVOC | She found the food tasty.
The dog licked the plate clean. |

Page No. 85

Listening

Listen to your teacher read the poem and answer the

1. The tree gets nutrition from the earth.
2. The branches of the tree look like a hand outstretched towards heaven in prayer.
3. Birds such as robins appear in the branches of the tree in summer.
4. During the other seasons, rain falls on the tree or snow covers it.
5. Only God can make something as wonderful as a tree.