

English-8

Worksheet-1

The Sentence

A.	Subject	Predicate
1.	The sun	was shining brightly.
2.	The dogs	were barking loudly.
3.	The pretty girl	was wearing a blue frock.
4.	My younger brother	serves in the army.
5.	The man and his wife	were working in their garden.
6.	My mother and my aunt	are trained classical dancers.
7.	You	don't have to wait for me.
8.	We	will no longer tolerate this.
9.	The little tree	was covered with needles instead of leaves.
10.	A rich merchant	was passing by the shoemaker's window.
B. 1.	How was your day in school?	Interrogative
2.	Do your assignments in class on time.	Imperative
3.	I'm so excited I passed the test.	Affirmative
4.	Walking up that mountain is dangerous.	Declarative
5.	Who is the most popular singer?	Interrogative
6.	You need to get with the program.	Declarative
7.	He is the leader of the group.	Declarative
8.	Which is your favourite magazine?	Interrogative
9.	Congratulations on your achievement!	Exclamatory
10.	Can you cancel the concert?	Interrogative

Worksheet-2

Structure of a Sentence

- A. 1. Are you ready to order? 2. I can pay by credit card.
3. Can I have my coat, please. 4. Do you have a reservation?
5. She sang beautifully. 6. The children were playing.
7. These questions are very difficult. 8. He has sold his house.
- B. 1. They, 2. The sun, 3. Mera Bharat, 4. Virat Kohli, 5. Farmers
- C. 1. noise much.
2. won the concert.
3. was sent.
4. was a good singer.

Worksheet-3

The Phrase and the Clause

- A. 1. Clause, 2. phrase, 3. phrase, 4. phrase, 5. phrase, 6. clause, 7. clause, 8. clause, 9. phrase, 10. clause
- B. **Principal Clause**
1. Karan spoke
 2. They felt
 3. I could not tolerate
 4. artist drew their pictures on stones.
 5. The few books ages were written by hand.
- Subordinate Clause**
- as he was a born orator.
that the farmer must be put to death.
what he said because it was quite insulting.
When the world was young,
that were produced in the middle
- C. 1. So, 2. as, 3. that, 4. who

Worksheet-4

Simple, Compound and Complex Sentences

- A. 1. compound, 2. complex, 3. complex, 4. complex, 5. complex, 6. simple, 7. simple
- B. 1. The hen chased the dog, but the dog ran away with the toy.
2. It was a warm afternoon, and the sun was shining.
3. The balloon flew up, and the wind carried it further.
4. The kids were happy to see the cook, but there were no cookies.
5. Mr Gerry bought a blue ball, but his son wanted a red ball.
- C. 1. if you return it on time.
2. you cannot achieve success.
3. who deserves the title.

Worksheet-5

Combining Sentences

- A. 1. We were talking to a doctor whom we met earlier.
2. We liked the hill station which we visited last year.
3. She knows that his neighbour is a doctor.
4. Could you suggest the place where I can park my car?
- B. 1. After finishing her work she went to market.
2. I was happy to meet him.
3. He went away whistling.
4. Being tired of waiting he left for home.
- C. 1. She neither speak French nor write.

2. He doesn't smoke, and he doesn't drink.
3. You should tell the truth or you should keep quiet.
4. My brother and my sister bought novels.

Worksheet-6

The Pronoun

- A. 1. He, 2. He, 3. It, 4. I, 5. I, it, 6. She, my, 7. it, 8. she, I, her, 9. My, I, him, 10. you
- B. 1. them, 2. it, him, 3. we, 4. him, 5. he, 6. you, 7. she, 8. it, 9. you, us, 10. I, your, 11. you

Worksheet-7

The Adjective

- A. 1. bright, 2. fast, 3. faster, 4. hotter, 5. harder, 6. more tricky, 7. more silly, 8. prettier
- B. 1. No other woman in the village is as wise as Lata.
Lata is wiser than any other woman in the village.
2. The clay is not as hard as rock.
The rock is the hardest substance.
3. No other animal is as friendly as dogs on earth.
Dogs are friendlier than any other animals on earth.
4. No other house in the neighbourhood is as expensive as her.
Her house is more expensive than any other house in the neighbourhood.
5. The sword is not as mighty as the pen.
Pen is the mightiest weapon.

Worksheet-8

Tenses : Forms and Usage

- A. 1. we entered, was teaching; 2. came, was studying; 3. was sweeping, saw; 4. were playing, started; 5. was running, failed
- B. 1. are playing, 2. reads, 3. am doing, 4. am eating, 5. Do you want, 6. are watching, 7. do not like, 8. is sleeping
- C. 1. because he has hurt his leg.
2. because I have lost the key.
3. because I have seen the film.
4. because I have not put the stamp on it.
5. because he has eaten too much.

Worksheet-9

Non-Finites

- A. 1. to read, 2. to eat, 3. to post, 4. of passing, 5. to disobey, 6. talking
B. 1. using, 2. selling, 3. greeting, 4. applying, 5. waiting
C. 1. laugh, 2. hear us, 3. fall, 4. coming from the bushes, 5. playing, 6. go

Worksheet-10

The Adverb

- A. 1. heavily, 2. quietly, 3. loudly, 4. angrily, 5. happily, 6. slowly.
B. 1. The girl works patiently.
2. He writes carefully.
3. She will join you soon.
4. He fought against his enemies courageously.
C. 1. He went to school at 8 a.m.
2. She was born on 10th May, in 1984 at 5 pm.
3. I drink tea at home every morning.
4. I saw my brother off the bus station at 8 o'clock this morning.

Worksheet-11

Prepositions

- A. 1. (b), 2. (b), 3. (b), 4. (c), 5. (a), 6. (c), 7. (d), 8. (d)
B. 1. beside, 2. on, 3. on, 4. in, 5. between, 6. at, 7. since, 8. on

Worksheet-12

Determiners

- A. 1. a, 2. any, 3. enough, 4. some, 5. much, 6. every, 7. most
B. 1. the, 2. an, 3. a, 4. the, 5. a, 6. an, 7. a, an, 8. a, 9. an
C. (a) any, (b) a, (c) the, (d) the, (e) a, (f) some, (g) any, (h) some

Worksheet-13

Conjunctions

- A. 1. He is neither honest nor truthful.

2. Make haste otherwise you will be late.
 3. Shahid could neither read nor write.
 4. Nandu not only lost his watch but also lost his money.
 5. He is rich yet he leads an unhappy life.
- B.** 1. so, 2. or, 3. so, 4. and, 5. and
- C.** 1. because, 2. As, so, 3. since, 4. when, 5. as, 6. so, that

Worksheet-14

Modal Verbs

- A.** 1. could, 2. can, 3. can, 4. May, 5. should, 6. might, 7. can, 8. must, 9. may, 10. could
- B.** 1. will, 2. shall, 3. should, 4. would, 5. ought, 6. can, 7. can, 8. must, 9. should, 10. May

Worksheet-15

Active and Passive Voice

- A.**
1. The exhibition was opened by the Governor.
 2. The time was fixed at 10 O'clock by them.
 3. A remarkable speech was made by him.
 4. Character is made by manners.
 5. We were kept waiting by him.
 6. Three goals were scored by our team.
 7. By whom was the tiger killed?
 8. The house is being built by the mason.
 9. The work will be finished by him in about a week.
 10. Why was such a rude reply given to you by your brother?
 11. He was struck by a stone on the head.
 12. He was given a reward by the king.
- B.**
1. Even a little mouse may help a lion.
 2. The people welcomed the king.
 3. I left behind my cares.
 4. He was a thief.
 5. Everyone knew him to be a kind man.
 6. Gambling has ruined men.
 7. England declared a war against Germany.
 8. Her mother bought a present for her.
 9. They made him General.
 10. Who wrote this letter?
 11. Everyone will curse him.
 12. The police has caught the robber.

Worksheet-16

Direct and Indirect Speech

- A. 1. Manya said that she liked Turkish pop music.
2. The woman said that it was not her umbrella, hers was red.
3. Rohit said that he had a sports car. It was red.
4. Mr. Khatri said that he didn't drive a car in the rush hour.
- B. 1. He asked how long did it take us to have lunch.
2. He asked me what I was doing the weekend.
3. She enquired Lucky why she was late.
4. My mother asked me where my umbrella was.
5. The secretary politely enquired the man whom did he want to see.
- C. 1. Woman told the helper to carry her suitcases.
2. Policeman asked the man to describe his car.
3. Mother suggested the boy not to hurt himself.
4. The robber threatened the man to give him his money.
5. Teacher ordered the student to give him his book.

Worksheet-17

Subject Verb Agreement

- A. 1. has, 2. is, 3. are, 4. is, 5. need, 6. play, 7. have, 8. is, 9. walks, 10. ride, 11. has, 12. was, 13. have
- B. 1. go, 2. taste, 3. comes, 4. cries, 5. buries, 6. have spoilt, 7. turns off, 8. is, 9. sleep, 10. goes

Worksheet-18

Conditionals

- A. 1. do not work, will not pass, 2. had not been, would pass, 3. had not been, would go, 4. had, would e-mail, 5. does not go, will not go, 6. had been slept, would not, 7. gives, will not be
- B. 1. would understand, 2. would arrive, 3. will take, 4. would have, 5. will have
- C. 1. If Rachit was careless while driving, he would have crashed into a tree.
2. If Aman had forgotten to do his homework, he would have punished.
3. If my mother is fine, she can go out.
4. If Lalit did not know you were in hospital, he would not visit you.

Worksheet-19

Relative Clauses

- A.** 1. steals things, 2. sells meat, 3. plays a musical instrument, 4. is ill in hospital, 5. takes photographs
- B.** 1. which, 2. who, 3. that, 4. who, 5. that, 6. that
- C.** 2. She spoke to the man who was standing next to her.
 3. I read the letters which came in the morning post.
 4. He likes the other people who work in his office.
 5. She's that singer who was on television last night.
 6. Next week there is a festival which happens in the village every summer.
 7. I paid the bills which came yesterday.

Worksheet-20

Phrasal Verbs and Question Tags

- A.** 1. on, 2. up, 3. up, 4. up, 5. down, 6. around, 7. to, 8. with, 9. with, 10. behind, 11. with, 12. away
- B.** 1. can't you?, 2. won't they, 3. are you?, 4. has she?, 5. isn't he?, 6. didn't we?, 7. wasn't he?, 8. weren't they?, 9. had he?, 10. was it?, 11. don't they?, 12. didn't she?, 13. would you?, 14. didn't you?, 15. Won't they?

Worksheet-21

Punctuation and Capital Letters, Synonyms and Antonyms

A.

(a)
1. R E C O V E R

(b)
D
P L E A S A N T

(c)
S E C U R E

(d)
A B A T E

- B.** 1. Mr Sharma's, 2. girl's, 3. wife's, 4. mother-in-law's
- C.** 1. Stop that now!
 2. Help! Help me, I'm drowning.
 3. What are you going to do today, Aanya?
 4. I hate it.

Worksheet-22

Idioms, Words that Often Confuse

- A. 1. go bananas, 2. spilled the beans, 3. piece of cake, 4. cup of tea, 5. in a nutshell,
B. 1. (a), 2. (c), 3. (d), 4. (e), 5. (b)
C. 1. their, 2. hour, 3. tea, 4. whether, 5. higher, 6. quiet, 7. desert, 8. bear, 9. heir

Worksheet-23

Spelling Rules

- A. 1. recommend, 2. choir, 3. cafeteria, 4. definite, 5. niece, 6. schedule, 7. laboratory, 8. truly
B. 1. traffic, 2. descend, 3. restaurant, 4. usually, 5. foreign, 6. necessary, 7. permanent, 8. grammar, 9. advisor, 10. neighbourhood, 11. jewellery, 12. licence, 13. business, 14. immediate, 15. height, 16. technology

Worksheet-24

Comprehension

- A1. 1. forming and bad, 2. bad character
A2. (i) Every time we resist temptation and do what is in the long-run wise and good, we make the next struggle less severe. At last, we form a good habit which would be hard to break even if we want to break it.
(ii) Good habits are formed by calling for effort and determination at first.
A3. (i) Repetition, (ii) inclination
A4. (i) won't you, (ii) to tell
A5. Yes, it is easy to form good habits by effect and determination we built and habited a good character.

Worksheet-25

Paragraph Writing

❖ 1. The Importance of Reading

Undoubtedly, reading is essential for all-round development of the personality. Bacon, the great British writer and philosopher has rightly said, "Reading makes a full man; writing an exact man, and conference a ready man." Reading is an essential basic skill building activity. One's language fluency is determined by the quality of reading. Besides, vocabulary enrichment, ideas collection, familiarization with different types of writing formats, speaking fluency, etc, all depend upon reading. In all cultures and

civilizations, much stress is laid on reading. Schools, colleges, and other academic institutes use reading as a major tool in imparting education to students. However, in the modern times, this activity is being ignored. All great men and women have been great readers. In her novel 'The Story of My Life' Helen Keller tells us the magic of reading books. Helen plays a glowing panegyric to books and the enlightening role they played in her otherwise dark life. In chapter 21 of her novel 'The Story of My Life' she shares with the audience the deep influence she had from the books since her childhood. She calls books her 'friends'. It is true a person who has the reading habit, never feels lonely and bored. The books open up a magical world for him or her and he lives among angels in the pages of the books. Books never let go the readers a stray. They make them wise and pragmatic. We must endeavor to develop this fabulous habit of reading.

2. Environment Pollution

Environmental Pollution refers to the excessive level of dangerous pollutants present in various elements of environment such as air, water, soil, etc. Environment consists of the nature of the world, air and water. For the growth and preservation of life environment plays an important role. There is a keen relation between the natural environment and living things. Atmospheric pollution creates disturbance to this relation. Industrialization in the modern civilization spreads water and air pollution simultaneously. Nowadays, it appears to be a very dangerous condition. Scientists say that if it is not controlled, all the living things of the earth will be destroyed in near future.

The trend of urbanization, in the modern age, turns the remote village to city. The forests and other natural wealth are destroyed to pave way for the establishment of industries. As a result smoke consisting of harmful carbon dioxide gas coming from chimneys and blast furnaces of the factories, from the domestic ovens and from the automobiles. Violent noises and sounds are producing by the cars and giant machines. The nuisance of the city and sewage make the water of the river as well as sea polluted. Environmental pollution is very harmful for human life. It helps spread out various kinds of diseases like bronchial irritation, asthma, pneumonia and cancer.

3. Need for Moral Education in Schools

Any education can't be called Education until it makes the person some lesson or a moral. Education is not about grasping things, it's about understanding them and applying them. The great power possessed by only some students is, they can realise and analyse the subject. Moral education is very much important.

Education targets only to increase the intellectual property of mind. But it must also teach the virtue of morality. Every children, when grown up has to face this society. Hence, Education must make children learn moral values and how far the children can live harmoniously in the society.

Moral education can be done by School, Tuition, etc. The scope for imparting moral teaching to the children is greater in home than in school or college because greater part of time is spent at home. Moral education is simply to make children learn

truthfulness, honesty, charity, hospitality, tolerance, love, kindness and sympathy. Education is not for obtaining supremacy at one degree only, it's about all round development.

Worksheet-26

Notice Writing Message Writing

A.

NOTICE

KLM INTERNATIONAL SCHOOL

14th May 20xx

BUY ORGANIC IDOLS DURING NAVRATRI

This is an humble request to all the students of the school to buy organic idols of gods and goddesses during the Navratri and they are tadoradable and are not need by low amount of chemicals. They are eco-friendly for ABC school captain.

B.

MESSAGE

Date : _____

Time : _____

Dear father,

Mr. Hritik called up and told that he has postponed his plan to join Anil's wedding because his son is in hospital. George can join you. He further asked to give him a ring.

Sammy

Worksheet-27

Dialouge Writing

- A. Shivani : Hi Rajat! How are you?
Rajat : Hi Shivani, I am good. Did you see the pollution level today?
Shivani : Yes, I was going to discuss that only. The situation is worsening by the day.
Rajat : Unbelievable. What is the government doing? Every year, we have to face the same problem.
Shivani : Right. Vehiclular pollution, crop burning, rampant construction activities and incessant bursting of firecrackers has led to this. I can only shudder to think what would happen post Diwali.
Rajat : I agree. There should be some sort of check on this. People are suffering and no concrete steps are being taken.
Shivani : Tell me. I haven't gone to office for the past couple of days. Working from home, grandparents have developed a terrible breathing problem and need to take care of them.
Rajat : What! That sounds serious. Have you got them admitted? I got my younger brother admitted to RML Hospital. His asthma condition has deteriorated over the last week.
Shivani : That is awful. Please take care of him. I wanted to ask-which are the air

purifiers available in the market? And can you also please suggest some good oxygen masks?

Rajat : I guess you can go for a Honeywell. Air purifier has been using it since the past few months. And a Dettol oxygen mask will do the task.

Shivani : Oh thank you! I will need go out after a few days and from the looks of it, seems impossible without a mask.

Rajat : I agree. It is like a gas chamber out there. A report said that it is equivalent to smoking 10 cigarettes daily!

Shivani : Hmm. I guess I will have to shift out of Delhi after I get married. This is no place to raise a family. Every other kid I know has developed some sort of breathing problem.

Rajat : I am planning the same. I will ask for a transfer to Bangaluru. By the way, have you seen the petition doing the rounds on change of environment, asking the CM to take immediate action to alleviate the pollution problem?

Shivani : Yeah, I signed it. Does anything good ever come out of these petitions? I doubt it.

Rajat : One can only hope.

Shivani : Thanks again, Rajat. Take care of your family. I am hoping it rains soon. At least, we will be able to breathe.

Rajat : Fingers crossed. Let's hope the monsoon arrives early. Take care of your family. Bye!

Shivani : Bye! Bye!

B. Rohit : Do you have any plan for the weekend?

Rajat : I haven't given it much thought. What were you thinking of doing?

Rohit : I was planning on taking a trip up the coast to the beach.

Rajat : What a perfect thing to do on a beautiful weekend!

Rohit : Would you like to come along?

Rajat : I think I would enjoy that a lot. When would we leave?

Rohit : Saturday morning around 8 : 00.

Rajat : Good! That would get us there with time to look around. There is a music festival in Santa Barbara on the beach that day.

Rohit : Yes, I was hoping to be able to go to the festival.

Rajat : I am so glad we talked. Thank you for inviting me to the beach with you.

Worksheet-28

Report Writing

New Multi-Storeyed Shopping Mall

A new multi-storeyed shopping mall was inaugurated recently in Laxmi Nagar known as the V35 mall. It covers a huge land area under the Laxmi Nagar Metro Station and has five storeys. All the floors are connected with each other through escalators and lifts. The first floor has all the branded showrooms, the second floor has electrical appliances, the third floor caters to the kids zone and a wonder world like arrangement.

Next comes the movie launch which is the most sorted out section by the youth. On the top floor, there is food court with counters from all leading chain food stores. ATM machines are also available in case people get short of money while shopping with tempting things all around. The ground floor has a food bazaar, where the kitchen goods and eatables are available at a very nominal rate. There is a grand facility for underground parking. The new mall has indeed taken care of providing all facilities under one roof and is a delight for all.

Worksheet-29

Article Writing, Speech Writing

- A. Global warming is the term used to describe a gradual increase in the average temperature of the Earth's atmosphere and its oceans, a change that is believed to be permanently changing the Earth's climate. There is a great debate among many people, and sometimes in the news, on whether global warming is real (some call it a hoax). But climate scientists looking at the data and facts agree the planet is warming. While many views, the effects of global warming to be more substantial and more rapidly occurring than others do, the scientific consensus on climatic changes related to global warming is that the average temperature of the Earth has risen between 0.4 and 0.8 °C over the past 100 years. The increased volumes of carbon dioxide and other greenhouse gases released by the burning of fossil fuels, land clearing, cutting of trees, agriculture, and other human activities, are believed to be the primary sources of the global warming that has occurred over the past 50 years. Scientists from the Intergovernmental Panel on Climate carrying out global warming research have recently predicted that average global temperatures could increase between 14° and 58° C by the year 2100. Changes resulting from global warming may include rising sea levels due to the melting of the polar ice-caps, as well as an increase in occurrence and severity of storms and other severe weather events. There is a great need to take preventive measures to check global warming.
- B. Social media has become a part of everyone's life that it can't be ignored. Social media has both positive and negative impact not only on youth but also on elders and children. Let us see some of the positive impacts of social media :

Positive impacts :

Friends : Making friends has become easier with these social networking sites like Facebook, Google+ and Twitter etc. In olden days it was a bit tough to make friends unless and until one had personal interest of going out and making friends. Later on in the decades of 70's and 80's mobile phones helped in connecting and improving conversation with people. And now the exploration of social networking sites sprang up and it has changed the whole idea of making friends once more and forever. We can make unlimited friends worldwide and chat with them without any time limit and even at free of cost. Now-a-days even we can have a video chat which is also available for free of cost. This can be considered as one of the best advantages of having social networking sites. We can connect with friends whom we missed out in our childhood.

Empathy : By connecting with friends through social networking sites we share all of our

good and bad experiences with friends. This will improve the relationship between friends and thus creating good bonding. Thus by sharing both good and bad experiences with friends, we will be able to empathize with each other. Sharing one's experiences with friends will also give mental relaxation.

Rapid communication : Everybody is becoming so busy with their lives that they don't even have time to communicate with their family members. Our time is getting thinner and thinner with busy work schedule and family commitments. Social networking sites give us a chance to communicate in a speedy and effective manner. Writing in Facebook, Google+ and Twitter will reach as many people as we want just in a span of seconds and with no cost. These sites will allow us to live a life which is unhindered with a small talk.

Be in touch with the world : Not only communicating with friends within the circle but we can also make friends worldwide easily. We can build a network of friends and we can share our ideas, photos and videos through these sites. Through this we can have updated news of friends and family members. We can emphasize our location by using location based services like foursquare and Gowalla.

Building relationship and finding a common ground in an open society : We can make a strong relationship with friends and relatives through these sites. This can help foster friendship and more besides strengthen us. Because friend is the only person with whom we can share everything related to our life. Connecting with groups will help in improving one's own business, thus creating profits, professional sites like LinkedIn will have many groups based on different criteria. Through LinkedIn people get jobs and some promote their business.

Negative impacts :

Social media, now-a-days is leaving a negative impact rather being positive. Most of the youth spend lot of time on the internet to visit and check their single or multiple accounts. This will affect students, youth and productivity of work because of the extreme use of technology. The risks of using social media may also include mental health, cyber bullying, texting and revelation to problematical and unlawful content and privacy violations.

Cyber bullying : Usage of social media may create a chance for emotional distress in getting frightening, irritating and degrading communication from another teenager which is called cyber bullying. It's been proved that cyber bullying will build advanced levels of depression and anxiety for victims and also resulted in youth suicide. Most of the females become victims of this cyber bullying.

Texting : Texting is used to harass people. Using cell phones and social networking sites for instant messaging to threaten, and hassle relationship partners is increasing day by day. One in three teens in relationships has been text messaged up to 30 times an hour by a partner to know where they are, what they are doing or whom they are with.

Privacy : Most of the teenagers are not aware of the website policies when setting their profiles and they may not be even aware of disclosing the information to the third parties like the advertisers. Most of the teenagers like to post their information publicly which will affect them when the hackers or people with cruel intention may use their information for wrong purposes.

Worksheet-30

Letter Writing

B-165 Vijay Vihar
Near Shivam Optical Delhi-110094 16th December 20xx
The Accounts Manager, State Bank of India
Vijay Vihar Branch
Delhi-110094,
Subject : Request for opening a New Saving Account

Dear Sir,

This is to inform you that I, Sunil Kumar, am interested in opening a new Saving Account in your bank. I am a permanent resident of Vijay Vihar. I am enclosing the required documents and photographs as per your verification. I would appreciate if you do the needful to initiate the process as soon as possible.

Thanking you



Your Sincerely

(Sign)

Sunil Kumar

Worksheet-31

Poster Making

**TAKE**
REGULAR EXERCISE
AND

★ *Become Active!*★ *Get Fit For Life!*★ *Enjoy Mental Alertness!*

Remember

A Healthy Body Shelters a Healthy Mind

Exercising can be fun — choose any one :

**Run and
have fun**

Live Longer

- ❖ Swimming
- ❖ Jogging
- ❖ Aerobics
- ❖ Dancing
- ❖ Working out at the Gym

**Sport a
Healthy heart**

**Give your heart
a healthy resort**

Exercise Everyday & Keep The Doctor Away

Issued by : Sports Authority of India

Hindi-8

कार्यपत्रक-1

वर्ण-विचार

- (क) 1. पारिवारिक - प् + आ + र् + इ + व् + आ + र् + इ + क् + अ
2. उज्ज्वल - उ + ज् + ज् + व् + अ + ल् + अ
3. उपर्युक्त - उ + प् + अ + र् + य् + उ + क् + त् + अ
4. आवृत्ति - आ + व् + ऋ + त् + त् + इ
5. उच्चारण - उ + च् + च् + आ + र् + अ + ण् + अ
6. कार्तिक - क् + आ + र् + त् + इ + क् + अ
7. दर्द - द् + अ + र् + द् + अ
8. नर्तकी - न् + अ + र् + त् + अ + क् + ई
- (ख) 1. नाम; 2. कब; 3. आक्रमण; 4. आकांक्षा; 5. ऋणग्रस्त; 6. बाजार; 7. आनंद; 8. शुभ; 9. व्याकरण
- (ग) अनुस्वार : मंगल, चंचल, कंगन
विसर्ग : प्रातः, दुःख, प्रायः
हलन्त : अद्भुत, विद्यार्थी, द्वितीय

कार्यपत्रक-2

संधि

- | | | | |
|-----------------------|-------------------------------------|-----------------|-------------------------------------|
| (क) 1. विद्या + अर्थी | <input checked="" type="checkbox"/> | विद्या + आर्थी | <input type="checkbox"/> |
| 2. कवी + इंद्र | <input type="checkbox"/> | कवि + इंद्र | <input checked="" type="checkbox"/> |
| 3. सू + उक्ति | <input type="checkbox"/> | सु + उक्ति | <input checked="" type="checkbox"/> |
| 4. इति + आदि | <input checked="" type="checkbox"/> | इती + आदि | <input type="checkbox"/> |
| 5. उपरि + उक्त | <input checked="" type="checkbox"/> | उपरी + उक्त | <input type="checkbox"/> |
| 6. सू + अल्प | <input type="checkbox"/> | सु + अल्प | <input checked="" type="checkbox"/> |
| 7. महा + ऋषि | <input checked="" type="checkbox"/> | मह + ऋषि | <input type="checkbox"/> |
| 8. वन + औषधि | <input checked="" type="checkbox"/> | वनौ + औषधि | <input type="checkbox"/> |
| 9. महा + ईश्वर | <input checked="" type="checkbox"/> | महा + ईश्वर | <input type="checkbox"/> |
| 10. वार्षिक + उत्सव | <input checked="" type="checkbox"/> | वार्षिक + उत्सव | <input type="checkbox"/> |
| 11. सदा + एव | <input checked="" type="checkbox"/> | सदा + ऐव | <input type="checkbox"/> |
- (ख) 1. पुरुषार्थ; 2. रमेश; 3. एकैक; 4. स्वागत; 5. सदैव; 6. रवींद्र; 7. अत्याचार; 8. महौषधि; 9. संसार;
10. परिणाम
- (ग) 1. मनः + रंजन; 2. वयाः + वृद्ध; 3. पुनः + जन्म; 4. निः + चय; 5. सम् + मति; 6. सम् + पूर्ण; 7. शरत् + चंद्र; 8. जगत् + नाथ; 9. अति + अधिक; 10. देवी + आगमन; 11. नर + ईश; 12. अनु + एषण;
13. सदा + एव; 14. परम + आत्मा

कार्यपत्रक-3

शब्द-विचार

- (क) 1. अंबा; 2. गृह; 3. अंध; 4. दुग्ध; 5. इष्टिका; 6. नृत्य; 7. कार्य; 8. कोकिल; 9. काष्ठ; 10. घोटक; 11. कपाट; 12. पादप; 13. कूप; 14. मयूर; 15. चर्म; 16. अर्ध; 17. चंद्र; 18. जिह्वा
- (ख) विकारी – अकबर, कमल, मंदिर, मैं, दौड़ना, गाना, हम, बूढ़ा, तुम्हारा, निर्धन, ऊँचा, पैदल, घोड़ा, कमलेश।
अविकारी – थोड़ा, वाह!, यहाँ, परंतु, ऊपर, छिः, अरे, सामने।
- (ग) 1. नृत्य, श्वसुर; 2. गधा; 3. ऑपरेशन, लीची, डस्टर; 4. हिम्मत, तनख्वाह, काजू, बहादुर, सितार, ईमानदार; 5. चमचा, तौलिया, कमीज़, चाय।

कार्यपत्रक-4

वर्तनी तथा वाक्य संबंधी अशुद्धियाँ

- (क) 1. स्मृतियाँ; 2. आशीर्वाद; 3. परामर्श
- (ख) 1. व्यावसायिक; 2. कार्यक्रम; 3. अष्टावक्र; 4. ऋण; 5. अधीन; 6. त्योहार; 7. अत्यधिक; 8. संन्यास; 9. शृंगार; 10. साम्राज्य; 11. जाऊँगा; 12. भैया; 13. पितृभक्ति; 14. व्यवहार; 15. संवाद; 16. पृष्ठ; 17. शताब्दी; 18. उपलक्ष्य।
- (ग) 1. यह गद्यांश 'पराग' से लिया गया है।
2. वह छत पर खेल रहा है।
3. मजदूर दिन-रात काम करते हैं।
4. यह भोजन बीस आदमियों के लिए है।
5. कृपया यहाँ बैठने की कृपा करें।
6. भरी सभा में उसकी नाक कट गई।
7. उसने मुझे मुंबई दिखाई।
8. उसका अंग-अंग महक रहा था।
9. वृक्ष पर कोयल कूक रही है।
10. यह आदमी क्या कर रहा है।
11. उन्होंने गृहकार्य कर लिया।

कार्यपत्रक-5

उपसर्ग

- (क) अभि – अभिमान, अभिशाप
अति – अतिशयोक्ति, अतिरिक्त
आ – आगामी, आनंद
गैर – गैरकानूनी, गैरजिम्मेदार
परा – पराधीन, पराजित
अन – अनपढ़, अनावश्यक
नि – निडर, निबद्ध
अव – अवनति, अवकाश
अंतर – अंतर्यामी, अंतर्राष्ट्रीय
उप – उपनाम, उपकार
अप – अपमान, अपशब्द
ना – नालायक, नापसंद
अनु – अनुशासन, अनुचित
दुर – दुराचार, दुराग्रह
उत् – उत्थान, उत्कृष्ट
भर – भरपेट, भरपूर
- (ख) परिवार – सपरिवार; ऋण – उऋण; मान – सम्मान; ध्वनि – सुध्वनि; हाल – बेहाल; समय – असमय; मोल – अनमोल; सरकारी – गैरसरकारी; गति – दुर्गति; ताज – बेताज

कार्यपत्रक-8

संज्ञा

- (क) व्यक्तिवाचक संज्ञा - कानपुर, मुंबई, लखनऊ, उदयपुर, मेवाड़, गुजरात, चेन्नई।
जातिवाचक संज्ञा - डाकघर, चिड़िया, कुरसी, दाल, शेर, कुत्ता, लड़का, कपड़े।
भाववाचक संज्ञा - मिठास, भय, नम्रता, अहंकार, कठिनाई, निजता, उदारता, लिखाई, हँसी।
- (ख) 1. सुषमा, बहन; 2. भारत, देश; 3. फल, मिठास; 4. तोता, डाल; 5. परिवार; 6. शेर, पिंजरा; 7. जंगल, पशु;
8. भारत, राजधानी, दिल्ली; 9. बाघ, पशु; 10. दीवाली, त्योहार; 11. शहर, विद्यालय; 12. लोग, घर, सफाई
- (ग) मनुष्य - मनुष्यता; बूढ़ा - बुढ़ापा; मानव - मानवता; निकट - निकटता; शाबाश - शाबाशी; चतुर - चतुराई;
महान - महानता; सफेद - सफेदी; बच्चा - बचपन; गरीब - गरीबी; मीठा - मिठास; कठिन - कठिनाई।

कार्यपत्रक-9

लिंग

- (क) ग्वाला - ग्वालिन; पुत्र - पुत्री; कवि - कवयित्री; राजा - रानी; रचयिता - रचयित्री; भवदीय - भवदीया; पुरुष - स्त्री; वीर - वीरांगना; सम्राट - सम्राज्ञी; साधु - साध्वी; फूफा - बुआ; बैल - गाय; ससुर - सास; पति - पत्नी; नर - नारी; भैंस - भैंसा; वर - वधू; भाई - बहन; दाता - दात्री; कर्ता - करत्री; नेता - नेत्री; विधाता - विधात्री; अभिनेता - अभिनेत्री; यशस्वी - यशस्विनी; कुम्हार - कुम्हारिन; हाथी - हथिनी; शिष्या - शिष्य; राग - रागिनी; देवी - देवता; हंस - हंसिनी; तपस्वी - तपस्विनी; संन्यासी - संन्यासिन; प्रिय - प्रिया; सुत - सुता; छात्र - छात्रा; अनुज - अनुजा; अग्रज - अग्रजा; महोदय - महोदया; आचार्य - आचार्या; वृद्ध - वृद्धा।
- (ख) 1. रानी की चार पुत्रियाँ थीं।
2. नेत्री ने भाषण दिया।
3. हथिनी आगे-आगे चली।
4. दूध देने ग्वालिन आई थी।
5. मालिन ने बाग ठीक कर दिया।

कार्यपत्रक-10

वचन

- (क) पुस्तक - पुस्तकें; ताला - ताले; कुर्सी - कुर्सियाँ; खिड़की - खिड़कियाँ; माता - माताएँ; सखी - सखियाँ; कला - कलाएँ; केले - केला; माला - मालाएँ; विद्यार्थी - विद्यार्थीगण
- (ख) 1. कुर्सियाँ, 2. नेताओं, 3. खिलाड़ी, 4. होश, 5. सहायता
- (ग) 1. बंदर डाल पर कूद रहे हैं।
2. काले कोट गिर गए।
3. लड़के नाच रहे हैं।
4. कोयलें कू-कू कर रही हैं।
5. कलियाँ खिल गईं।
6. तारे चमक रहे हैं।
7. कवियों ने कविताएँ सुनाईं।
8. सुहानी ने गीत गाए।
9. लकड़हारों ने पेड़ काटे।
10. मजदूरों ने ईंटें उठाईं।
11. मछुआरों ने मछलियाँ पकड़ीं।
12. मालियों ने पेड़ों को पानी दिया।

कार्यपत्रक-11

कारक

- (क) 1. कर्ता, कर्म; 2. करण; 3. कर्ता; 4. संप्रदान; 5. करण; 6. कर्म; 7. अपादान; 8. अपादान; 9. अपादान; 10. संबोधन; 11. संबंध; 12. कर्म।
- (ख) 1. करण कारक; 2. अपादान कारक; 3. संप्रदान कारक; 4. संबंध कारक; 5. कर्म कारक; 6. अपादान कारक
- (ग) 1. मैं माँ के लिए फूल लाया हूँ। 2. मोहन सोहन से अधिक लंबा है।
3. लक्ष्मण राम के भाई थे। 4. मीना गीत गाती है।

कार्यपत्रक-12

सर्वनाम

- (क) 1. उसे पुरुषवाचक, 2. ये निश्चयवाचक 3. तुम्हारे पुरुषवाचक
4. वह निश्चयवाचक, स्वयं निजवाचक 5. जैसा-वैसा संबंधवाचक
- (ख) 1. वे; 2. वह; 3. कोई; 4. मैं; 5. मेरे; 6. मेरी
- (ग) तुम्हारा - तुम्हारा नाम क्या है? कौन - तुम कौन हो?
किसी - तुम किसी के साथ आए हो। उन्होंने - उन्होंने तुम्हें आज बुलाया है।
उसमें - उसमें क्या रखा है?
कुछ - चाय में कुछ गिर गया।
- (घ) 1. लक्ष्मी जल्दी-जल्दी उठी और उसने घर की सफाई की।
2. अहमद ने ध्यान नहीं दिया और वह फिसलकर गिर गया।
3. राजेश ने नरेश के घर जाकर उसे पुस्तक दी।
4. सतीश मेरा पड़ोसी है। वह बहुत परिश्रमी है।

कार्यपत्रक-13

विशेषण

- (क) विचार - वैचारिक; बुद्धि - बुद्धिमान; परिवार - पारिवारिक; अनुभव - अनुभवी; जीव - जैविक; पत्थर - पथरीला; समाज - सामाजिक; सुर - सुरीला; दिन - दैनिक; रेत - रेतीला; धन - धनवान; वेद - वैदिक; स्वर्ण - स्वर्णिम; उदास - उदासी; मधुर - मधुरता; आलस्य - आलसी; स्वर्ग - स्वर्गीय; अर्थ - आर्थिक; गाँव - गाँवार; शब्द - शाब्दिक; इतिहास - ऐतिहासिक
- (ख) विशेषण भेद विशेषण भेद विशेषण भेद
- | | | | | | |
|---------------------------|------------|---------------------------|--------------------|------------|------------|
| 1. कुछ | संख्यावाचक | 2. पीली | गुणवाचक | 3. ऊँचा | गुणवाचक |
| 4. सारा | परिमाण | 5. मेरे | सार्वनामिक | 6. दीन | गुणवाचक |
| 7. उस | सार्वनामिक | 8. थोड़ा-सा | परिमाणवाचक | 9. एक | संख्यावाचक |
| 10. दस | संख्यावाचक | 11. कुछ/ईमानदार/
दयालु | परिमाण/गुण | 12. बहादुर | गुणवाचक |
| 13. मोटे, खुरदरे,
काले | गुणवाचक | 14. उसकी, | गुणवान सार्वनामिक, | गुणवाचक | |

कार्यपत्रक-14

क्रिया

- (क) 1. सकर्मक; 2. सकर्मक; 3. सकर्मक; 4. सकर्मक; 5. सकर्मक; 6. सकर्मक; 7. सकर्मक; 8. सकर्मक; 9. सकर्मक; 10. सकर्मक; 11. अकर्मक; 12. सकर्मक; 13. सकर्मक; 14. अकर्मक
- (ख) सकर्मक - वाक्य में जो क्रिया, कर्म की अपेक्षा रखती है।
अकर्मक - वाक्य में जो क्रिया, कर्म की अपेक्षा नहीं रखती है।
- (ग) सकर्मक - वाक्य में जो क्रिया, कर्म की आवश्यकता रखती है।
द्विकर्मक - वाक्य में जो क्रिया, दो कर्म की अपेक्षा रखती है।
- (घ) 1. लजाना; 2. थरथराना; 3. लतियाना; 4. गड़गड़ाना; 5. शर्माना; 6. बतियाना

कार्यपत्रक-15

काल

- ❖
- | | |
|--------------------------------------|-------------------------------------|
| 1. मैं फोन करूँगा। | 2. मैं बाहर काम करूँगा। |
| 3. हम सब फिल्म देखने गए थे। | 4. मैं अपना काम पूरा कर रहा हूँ। |
| 5. कक्षा में छात्रों ने पढ़ाई की थी। | 6. गोपाल ने आम खाया था। |
| 7. हर एक को केवल एक ही फाँक मिलेगी। | 8. उसने आँखें बंद कर लीं। |
| 9. अब एक कठिनाई सामने आएगी। | 10. पिताजी उसे दस रुपये दे रहे हैं। |
| 11. नरेश गृहकार्य कर रहा है। | 12. सुमन खाना बनाएगी। |

कार्यपत्रक-16

वाच्य

- (क) 1. कर्तृ; 2. कर्तृ; 3. कर्तृ; 4. कर्तृ; 5. कर्म; 6. भाव; 7. कर्म
- (ख) 1. गायकों द्वारा गीत पेश किया गया। 2. रेल बिजली द्वारा चलती है।
3. हरि द्वारा वॉलीबाल खेला जाता है। 4. मुझसे कलम से लिखा जाता है।
5. रीमा द्वारा साईकिल चलाई जाती है। 6. लड़कों द्वारा पतंग उड़ाई जाती है।
7. लौहार द्वारा औजार बनाया जाता है। 8. माली द्वारा पौधों को पानी दिया जाता है।
- (ग) 1. बच्चों से पहाड़ पर नहीं चढ़ा जाता। 2. हमसे प्रतिदिन नहाया जाता है।
3. बच्चों से शांत बैठा जाता है। 4. क्या उनसे लिखा जाएगा?
5. मुझसे पुस्तक नहीं पढ़ी जा सकती। 6. साहिल के द्वारा सोया जा रहा है।
7. पक्षियों से रात में सोया जाता है। 8. अजय से दवाई लाई जाएगी।

कार्यपत्रक-17

अव्यय (अविकारी)

- (क) 1. अचानक रीतिवाचक क्रियाविशेषण 2. धीरे-धीरे रीतिवाचक क्रियाविशेषण

- | | | | |
|-------------|-----------------------|-----------|-------------------------|
| 3. जल्दी | रीतिवाचक क्रियाविशेषण | 4. ज्यादा | परिमाणवाचक क्रियाविशेषण |
| 5. प्रतिदिन | कालवाचक क्रियाविशेषण | 6. बहुत | परिमाणवाचक क्रियाविशेषण |
| 7. के ऊपर | संबंधबोधक | | |

(ख) 1. के पास; 2. के ऊपर; 3. के कारण; 4. अपितु; 5. और; 6. किंतु

(ग) धीरे-धीरे – वह धीरे-धीरे चलता है। के नीचे – बिल्ली मेज के नीचे बैठी है।
फटाफट – वह फटाफट चला गया। के ऊपर – पेड़ के ऊपर कौआ बैठा है।
और – रीता और गीता सगी बहनें हैं। या – तुम जाओगे या आज रुकोगे?

कार्यपत्रक-18

वाक्य-विचार

- (क) 1. पंडित जवाहरलाल नेहरू (स्वतंत्र भारत के पहले प्रधानमंत्री थे)।
2. शरारती लड़कों ने (विद्यालय के बगीचे से बहुत से फूल तोड़ लिए)।
3. सब विद्यार्थी (जानते हैं कि) मोहन (चोर है)।
4. आत्मा का ज्ञान (ही सच्चा ज्ञान है)।
5. एक छोटा लड़का (प्रतिदिन पार्क में खेलता है)।
- (ख) 1. निषेधवाचक; 2. आज्ञार्थक; 3. विधानवाचक; 4. आज्ञार्थक; 5. प्रश्नवाचक; 6. विस्मयादिबोधक;
7. इच्छावाचक; 8. इच्छावाचक; 9. संकेतवाचक; 10. संकेतवाचक
- (ग) 1. सरल; 2. संयुक्त; 3. सरल; 4. मिश्रित; 5. मिश्रित; 6. संयुक्त; 7. संयुक्त; 8. सरल; 9. संयुक्त;
10. मिश्रित

कार्यपत्रक-19

पदबंध

❖	पदबंध	भेद
1.	कश्मीर कन्याकुमारी भारत	संज्ञा
2.	गेंद की तरह	विशेषण
3.	भारत राजधानी दिल्ली	संज्ञा
4.	पढ़कर सो गया	क्रिया
5.	न्यूजीलैंड खिलाड़ी होटल	संज्ञा
6.	परिश्रम करने वाले	विशेषण/क्रिया
7.	प्राणों की बाजी लगाने वाले	क्रियाविशेषण
8.	आगरा डॉक्टर	संज्ञा
9.	मीठे-मीठे	विशेषण
10.	सस्ता खरीदा हुआ	विशेषण

कार्यपत्रक-20

विराम-चिह्न

(क)	1. योजक; 2. लाघव; 3. योजक; 4. दोहरा उद्धरण चिह्न			
(ख)	(,)	अल्प विराम	?	प्रश्नसूचक
	[] () {}	कोष्ठक		पूर्णविराम
	!	विस्मयादिबोधक	-	योजक
	:-	आदेश	,	अल्पविराम
	-	रेखांकन	o	लाघव चिह्न
	;	अर्द्धविराम	"....."	दोहरा उद्धरण चिह्न

कार्यपत्रक-21

समरूपी भिन्नार्थक शब्द

- (क) 1. नाप – दर्जी ने सूट का नाप लिया।
माप – न्यायाधीश अपने मापदंड पर खरा नहीं उतरा।
2. नेता – नेता ने भाषण दिया।
नायक – माता-पिता बच्चों के नायक होते हैं।
3. अवधि – अल्पावधि में मेरा भाई अंग्रेजी सीख गया।
समय – बीता हुआ समय कभी वापस नहीं आता।
4. अमूल्य – माँ का प्रेम अमूल्य है।
बहुमूल्य – हीरा एक बहुमूल्य वस्तु है।
5. दीन – हमें दीन-दुखियों की सहायता करनी चाहिए।
दिन – किसान सारे दिन मेहनत करता है।
- (ख) 1. पत्नी; 2. निरर्थक; 3. तूफान; 4. गर्व; 5. पर्याप्त; 6. निद्रा; 7. आनंद
- (ग) 1. अभिमान; 2. उपहार; 3. प्रचार; 4. स्नेह; 5. अप्रसन्नता

कार्यपत्रक-22

अनेक शब्दों के लिए एक शब्द

- (क) 1. ज्ञानार्जन; 2. जड़मती; 3. अतुल्य; 4. अल्पज्ञ; 5. स्थानक; 6. गिरजाघर; 7. बाईबल; 8. आरक्षण;
9. ध्यानमग्न; 10. स्तूप; 11. सुगंध; 12. मोती; 13. अमूल्य; 14. सादर; 15. अगम्य; 16. किसान
- (ख) 1. मोहन एक निर्धन व्यक्ति है।
2. लक्ष्य बड़ा ही सदाचारी लड़का है।
3. अनिल निर्दोष छात्र है।
4. विपिन मेरा सहपाठी है।
5. मेरी मम्मी मितभाषी हैं।

कार्यपत्रक-23

समरूपी भिन्नार्थक शब्द

- (क) 1. धेनु, धनु; 2. नारी, नाड़ी; 3. नग, नाग; 4. निधन, निर्धन; 5. प्रणाम, परिणाम; 6. पानी, पाणि; 7. बदन, वदन; 8. बाग, बाध।
- (ख) 1. क्रम – हर कार्य को करने का क्रम निर्धारित होना चाहिए।
कर्म – हमें सदैव अच्छे कर्म करने चाहिए।
2. सदेह – नचिकेता सदेह यमपुरी गया था।
संदेह – हमें अपनों पर संदेह नहीं करना चाहिए।
3. मांस – शेर बकरी का मांस खा रहा था।
मास – मुझे एक मास में यह कार्य पूर्ण करना है।
4. द्यूत – पांडव द्रौपदी को द्यूत में हार गए थे।
दूत – अंगद भगवान राम के दूत बनकर रावण के दरबार गये।
5. बली – हनुमान जी महाबली थे।
बलि – परिवार के लिए उसने अपनी खुशियों की बलि दे दी।

कार्यपत्रक-24

पर्यायवाची शब्द

- (क) 1. विहग, खग, चिड़िया; 2. बाग, बगीचा, वाटिका; 3. गज, कुंजर, हस्ती; 4. सोम, शशि, चंद्र; 5. मेहमान, अभ्यागत, पाहुन; 6. समुद्र, वारिध, उदधि; 7. दिवाकर, भास्कर, रवि; 8. आँख, चक्षु, नेत्र; 9. निशा, रात्रि, रजनी; 10. पर्वत, अचल, शैल; 11. दिवस, अह, वार ; 12. सर, सरोवर, तड़ाग; 13. तीर, कूल, तट; 14. अँधेरा, तम, तमस
- (ख) 1. किनारा; 2. तालाब; 3. असुर; 4. जहाज; 5. वीरांगना; 6. खग; 7. पहाड़; 8. सागर; 9. अतिथि।

कार्यपत्रक-25

विलोम शब्द

- (क) 1. अपकीर्ति; 2. वरिष्ठ; 3. दूर; 4. दुखांत; 5. अपव्यय; 6. वियोग; 7. तरल; 8. संक्षिप्त; 9. कुमति; 10. दुराग्रह; 11. भाटा; 12. उपेक्षा; 13. दुरात्मा; 14. पराधीन; 15. साक्षर; 16. विपन्न; 17. उपजाऊ; 18. उदार; 19. विरक्त; 20. अवैतनिक; 21. वाचाल; 22. साकार; 23. कृतघ्न; 24. निर्दोष; 25. विपक्ष; 26. क्षणिक; 27. पतन; 28. निर्यात; 29. अवज्ञा; 30. अल्पवृष्टि; 31. प्राचीन; 32. दुर्जन
- (ख) 1. अप्रत्यक्ष; 2. अवरोह; 3. वरदान; 4. गुलाम; 5. दुर्जन; 6. शांति; 7. रंक

कार्यपत्रक-26

मुहावरे

- (क) 1. लज्जित होना रंगे हाथ पकड़े जाने पर रोहन पानी-पानी हो गया।

2. आपसे बाहर होना जब से सलमा कॉलेज गई है उसके तो पर ही निकल आए हैं।
 3. संदेहपूर्ण स्थिति विपिन बार-बार आगरा जाता है, दाल में जरूर काला है।
 4. बढ़ा-चढ़ाकर कहना रमेश ने मोहन से कहा जितनी बात हुई उतनी कहो, तिल का ताड़ मत बनाओ।
 5. भाग जाना पुलिस को देखते ही चोर नौ दो ग्यारह हो गये।
- (ख) 1. काट लेते; 2. से बातें करता; 3. फूली नहीं; 4. में धूल झोंककर; 5. दबाकर भाग गया; 6. निकल आए हैं;;
 7. पानी हो गया; 8. बारह हो गई; 9. भी बाँका नहीं कर सकेगा; 10. बाग हो गया।
- (ग) 1. अपने मुँह मियाँ मिट्टू; 2. मुँह फेर लेना; 3. इधर की उधर करना; 4. दूर के ढोल सुहावने।

कार्यपत्रक-27

लोकोक्तियाँ

- (क) 1. अच्छे का परिणाम अच्छा होता है। 2. परिश्रम में शक्ति होती है।
 3. भाग्य की विचित्रता 4. परिश्रम अधिक, फल कम
- (ख) 1. अपनी कमियाँ न दिखना उसे स्वयं क्रिकेट खेलना नहीं आता और दूसरों को सिखा रहा है। इसे कहते हैं चिराग तले अँधेरा।
 2. परेशानी में परेशानी आना एक तो वह गरीब, ऊपर से बीमार हो गया। इसे कहते हैं कंगाली में आटा गीला।
 3. चीज़ एक, चाहने वाले अनेक नौकरी एक, दावेदार सौ। यह तो वही बात हुई कि एक अनार सौ बीमार।
 4. स्वयं अच्छा व्यवहार रखने पर पिताजी के अच्छे व्यवहार के कारण, सब उनकी इज्जत करते हैं। इसे ही कहते हैं कि आप भले तो जग भला।
 5. आय के अनुसार व्यय पिता ने पुत्र को अधिक व्यय करने पर सलाह दी- तेते पाँव पसारिये, जेती लाम्बी सौर।
 6. झगड़े की जड़ को नष्ट कर देना जिस खिलाँने के लिए बच्चे लड़ रहे थे, वह टूट गया। अब न रहेगा बाँस न बजेगी बाँसुरी।

कार्यपत्रक-28

कहानी-लेखन

एक बार एक राजा था। उसके पास एक बंदर था जो उसका सबसे अच्छा मित्र था। राजा का मित्र होने पर भी वह बंदर बहुत ही मूर्ख था। राजा का प्रिय होने के कारण उसे महल के हर जगह बिना कोई रोक-टोक जाने की अनुमति थी। उसे शाही तरीके से महल में इज्जत दी जाती थी और यहाँ तक कि वह राजा के कमरे में भी आराम से आ-जा सकता था जहाँ राजा के गोपनीय सेवकों को भी जाना मना था।

एक दिन दोपहर का समय था। राजा अपने कमरे में आराम कर रहा था और बंदर भी उसी समय पास के गद्दे पर बैठकर आराम कर रहा था। उसी समय बंदर ने देखा कि एक मक्खी आकर राजा की नाक पर बैठ गई। बंदर ने एक तौलिये से उस मक्खी को भगा दिया। कुछ समय बाद वह मक्खी दोबारा से आ कर राजा की नाक पर आकर बैठ गई। बंदर ने दोबारा भी उसे अपने हाथों से भगा दिया।

थोड़ी देर बाद बंदर ने फिर से देखा कि वही मक्खी फिर से आकर राजा की नाक पर बैठी है। अब की बार बंदर क्रोधित हो गया और उसने मन बना लिया कि इस मक्खी को मार डालना ही इस परेशानी का हल है।

उसने उसी समय राजा के सिर के पास रखी हुई तलवार को उठाया और सीधे उस मक्खी पर मारा। मक्खी तो उड़ गई परंतु राजा की नाक कट गई, जिससे राजा बहुत घायल हो गया।

कहानी से शिक्षा : मूर्ख दोस्तों से सावधान रहें। वे आपके दुश्मन से भी ज्यादा आपका नुकसान कर सकते हैं।

कार्यपत्रक-29

संवाद-लेखन

- (क) अमन - नमन, पर्यावरण किसे कहते हैं?
नमन - हमारे आस-पास जो कुछ भी विद्यमान है, वह सब हमारा पर्यावरण है।
अमन - इससे हमें क्या लाभ हैं?
नमन - यदि हमारे आस-पास सभी वस्तुएँ सुरक्षित एवं स्वच्छ रहेंगी तो हम भी सुरक्षित रहेंगे। यदि इनमें कोई अनावश्यक तत्व मिल जाएँगे तो यह पर्यावरण भी दूषित हो जाएगा। इस तरह हमारा जीवन भी संकट में पड़ जाएगा।
अमन - तो इसका अर्थ है कि हमें अपने आस-पास स्वच्छता रखनी चाहिए।
नमन - हाँ, यह हमारा उत्तरदायित्व भी है।
- (ख) गृहिणी - सर, मुझे अपना खाता खुलवाना है।
बैंककर्मी - कौन-सा? बचत खाता या चालू खाता?
गृहिणी - बचत खाता।
बैंककर्मी - ठीक है, पाँच हजार रुपये से खुलेगा और आधार कार्ड, पैन कार्ड की फोटोस्टेट कॉपी और अपने दो फोटो दीजिए और इस फार्म में अपनी डिटेल्स भर दीजिए।
गृहिणी - लाइए। (गृहिणी फार्म भरकर देती है।)
बैंककर्मी - दो दिन बाद अपनी पासबुक ले जाना।
गृहिणी - जी, धन्यवाद।

कार्यपत्रक-30

पत्र-लेखन

सेवा में

श्रीमान जिलाधिकारी महोदय

पूर्वी दिल्ली

महोदय,

मैं आपका ध्यान पूर्वी दिल्ली के प्रीति विहार क्षेत्र में पेड़ों के काटे जाने की ओर आकर्षित करना चाहता हूँ।

यहाँ पर राष्ट्रमंडलीय खेलों के आयोजन हेतु मुख्य सड़क को चौड़ा किया जा रहा है। इस काम हेतु बीच में आ रहे कुछ पेड़ों को काटा जाना था। इनकी संख्या मुश्किल से 50 थी। लेकिन यहाँ लगभग 200 पेड़ों को काटा गया है। सड़क चौड़ी करने के बहाने आवश्यकता से बहुत अधिक पेड़ काटे गए हैं। यह काम सर्वथा नियम विरुद्ध है। इससे पर्यावरण पर बहुत बुरा प्रभाव पड़ेगा। यहाँ के स्थानीय निवासियों ने इसका विरोध भी किया था, पर कर्मचारी अपनी मनमानी करने पर आमादा थे। किसी उच्च अधिकारी ने मौके पर निरीक्षण करने का कष्ट तक नहीं उठाया। ऐसा प्रतीत होता है कि इसमें कुछ व्यक्तियों का स्वार्थ निहित था। इस पूरे मामले की जाँच की जानी चाहिए, ताकि भविष्य में इस गलती को न दोहराया जा सके।

धन्यवाद सहित,

रमाकांत नय्यर

कक्षा आठ

नई दिल्ली

दिनांक

निबंध-लेखन

अनुशासन का महत्त्व

अनुशासन मानव जीवन का जरूरी अंग होता है। मानव को अपने जीवन के हर क्षेत्र में अनुशासन का पालन करना पड़ता है फिर चाहे वो स्कूल हो, खेल का मैदान हो, घर या फिर घर के बाहर की जगह। इन सभी जगहों पर अनुशासन का पालन जरूर करना पड़ता है। विश्व का कण-कण अनुशासन के सूत्र में बँधा हुआ है। अनुशासन का पालन करके ही प्रगति की जा सकती है।

अनुशासन का सही पालन करने वाला इंसान कामयाबी के रास्ते पर बिना रुकावट आगे बढ़ता है तथा अनुशासन का उल्लंघन करने वाला सदैव विनाश के रास्ते पर चला जाता है। इसीलिए अनुशासन का दूसरा नाम ही जीवन कहलाता है। यह वो पुल होता है जो हमें सफलता के रास्ते पर ले जाता है।

अनुशासन पर चलना थोड़ा मुश्किल जरूर होता है किंतु इस पर चलने के बाद मिलने वाला फल बहुत स्वादिष्ट होता है। यह वह डोर होती है जो हमें आकाश की बुलंदियों को छूने में मदद करती है; जैसे- डोर के बिना पतंग आसमान में उड़ नहीं सकती वैसे ही अनुशासन के बिना हम कभी सफल नहीं हो सकते।

जो लोग अपनी जिंदगी में अनुशासन में रहकर कार्य करते हैं; वे हमेशा सफलता की बुलंदियों को छूते हैं। यह एक ऐसी कड़वी दवा है जिसका सामना करके ही हम कामयाब बन सकते हैं। जहाँ अनुशासन नहीं है वहाँ जीवन नहीं है; जैसे सूर्य समय पर उगता है, मौसम अपने समय पर बदलते रहते हैं। यदि ये सभी अपना अनुशासन तोड़ दें तो हमारी पृथ्वी जीने लायक नहीं रहेगी, इसीलिए यह बात हम सभी प्राणियों पर भी लागू होती है कि किस तरह हम अनुशासन में रहकर अपनी जिंदगी को निरंतर बिना किसी मुश्किल से जी सकें।

अनुशासन में रहकर मन के अंदर धैर्य और समझदारी का विकास होता है। आज हमारे समाज में अनुशासन की सख्त जरूरत है क्योंकि यह जीवन के विकास का जरूरी तत्व है।

Operations of Rational Numbers

A. 1. (i), 2. (ii), 3. (iv), 4. (iv), 5. (i)

B. 1. infinite, 2. either, 3. positive, 4. number, 5. $\frac{-7}{5}$

C. 1. 0, 2. 1, 3. 0

D. 1. $-1\frac{1}{8} = -\left(1\frac{1}{8}\right) = -\left(\frac{9}{8}\right) = \frac{-9}{8}$

2. $3\frac{1}{3} = \frac{9+1}{3} = \frac{10}{3}$

E. $\frac{1}{4}, \frac{13}{16}, \frac{5}{8}$

$$\Rightarrow \frac{1}{4} \times \frac{4}{4}, \frac{13}{16}, \frac{5 \times 2}{8 \times 2}$$

$$= \frac{4}{16}, \frac{13}{16}, \frac{10}{16}$$

$$\Rightarrow \frac{13}{16}, \frac{10}{16}, \frac{4}{16} \text{ or } = \frac{13}{16}, \frac{5}{8}, \frac{1}{4}$$

F. Let x be the multiple of $-\frac{15}{20}$

$$\Rightarrow x \times \frac{-15}{20} = \frac{-5}{7}$$

$$x = \frac{\frac{-5}{7}}{\frac{-15}{20}} = \frac{-5}{7} \times \frac{20}{-15} = \frac{-20}{-21} = \frac{20}{21}$$

G. Let x be the multiple of $\frac{-8}{13}$

$$= x \times \frac{-8}{13} = 24$$

$$x = \frac{24}{\frac{-8}{13}} = 24 \times \frac{13}{-8} = -39$$

H. Let the number to be x

$$x \times (-5) = -7$$

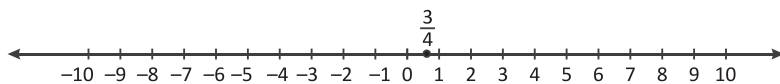
$$x = \frac{-7}{-5}$$

$$x = \frac{7}{5}$$

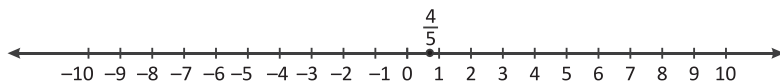
Worksheet-2

Representation of Rational Numbers on Number Line

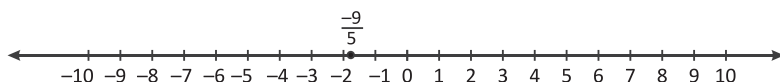
A. 1.



2.



3.



B. 1. (i), 2. (iv), 3. (ii), 4. (ii), 5. (iv)

C. 1. $\frac{61}{90}, \frac{62}{90}, \frac{63}{90}, \frac{64}{90}, \frac{65}{90}$

2. $\frac{-8}{6}, \frac{-7}{6}, -1, \frac{-5}{6}, \frac{-2}{3}$

Worksheet-3

Exponents

A. 1. (ii), 2. (iii), 3. (iv)

B. 1. $\frac{1}{64}$, 2. 3410000, 3. $34 = 81$, 4. 1

C. 1. False, 2. True, 3. True, 4. True

D. 1. $100^{-10} = \frac{1}{100^{10}} = \frac{1}{100 \times 100 \times 100 \times 100 \times 100 \times 100 \times 100 \times 100 \times 100 \times 100}$
 $= \frac{1}{10000000000}$

2. $2^{-3} \times 2^{-3} = \frac{1}{2^3} \times \frac{1}{2^3} \Rightarrow \frac{1}{2^6} = \frac{1}{2 \times 2 \times 2} \times \frac{1}{2 \times 2 \times 2} = \frac{1}{64}$

3. $\left(\frac{1}{2}\right)^{-2} \div \left(\frac{1}{2}\right)^{-3} = \left(\frac{1}{2}\right)^{-2-(-3)} = \left(\frac{1}{2}\right)^1 = \frac{1}{2}$

E. $(-2)^3 \times (4)^2$
 $= (-2)^3 \times (2^2)^2$
 $= -2^3 \times (2)^4$
 $= (-2)^{4+3} = (-2)^7$
 $= -128$

F. 1. 1.673×10^{-24}

2. 2.2×10^{-8}

3. 3.34×10^{-21}

4. 10^{12}

Worksheet-4

Squares

A. 1. (iii), 2. (i), 3. (i), 4. (iii)

B. 1. 5, 2. 9, 3. 0.49, 4. 30.25, 5. 4

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

D. 1. $(1111111)^2$

$$(1)^2 = 1, (11)^2 = 121, (111)^2 = 12321$$

$$(1111)^2 = 1234321, (11111)^2 = 123454321$$

$$(111111)^2 = 12345654321$$

$$(1111111)^2 = 1234567654321$$

2. $(1111)^2$

$$(1)^2 = 1, (11)^2 = 121, (111)^2 = 12321, (1111)^2 = 1234321$$

E. 1. $(18)^2 - (17)^2$

$$a^2 - b^2 = (a + b)(a - b)$$

$$(18 + 17)(18 - 17) = 35 \times 1 = 35$$

2. $(45)^2 - (44)^2$

$$= (45 + 44)(45 - 44) = 99 \times 1 = 99$$

3. $(31)^2 - (30)^2$

$$(31 + 30)(31 - 30) = 61 \times 1 = 61$$

F. 1. Total consecutive odd numbers = 5

Thus, $n = 5$

Therefore, $\text{sum} = n^2$
 $= 5^2 = 5 \times 5$
 $= 25$

2. Total consecutive odd numbers = 8

Thus, $n = 8$

Therefore, $\text{sum} = n^2$
 $= 8^2 = 8 \times 8$
 $= 64$

3. Total consecutive odd numbers = 9

Thus, $n = 9$

Therefor, $\text{sum} = n^2$
 $= 9^2 = 9 \times 9$
 $= 81$

Worksheet-5

Square Root

A. 1. (ii), 2. (iv), 3. (iii), 4.

B. 1. $\sqrt{729} = 27$

2. $\sqrt{9216} = 96$

3. $\sqrt{8100} = 90$

4. $\sqrt{7744} = 88$

C. 1. $\sqrt{\frac{4}{81}} = \sqrt{\frac{(2)^2}{(9)^2}} = \frac{2}{9}$

2. $\sqrt{\frac{64}{289}} = \sqrt{\frac{(8)^2}{(17)^2}} = \frac{8}{17}$

3. $\sqrt{5\frac{4}{9}} = \sqrt{\frac{49}{9}} = \sqrt{\frac{(7)^2}{(3)^2}} = \frac{7}{3}$

4. $\sqrt{3\frac{97}{144}} = \sqrt{\frac{529}{144}} = \sqrt{\frac{(23)^2}{(12)^2}} = \frac{23}{12}$

5. $\sqrt{2\frac{7}{9}} = \sqrt{\frac{25}{9}} = \sqrt{\frac{(5)^2}{(3)^2}} = \frac{5}{3}$

6. $\sqrt{5\frac{55}{169}} = \sqrt{\frac{900}{169}} = \sqrt{\frac{(30)^2}{(13)^2}} = \frac{30}{13}$

7. 1. $\frac{155}{169} = \sqrt{\frac{324}{169}} = \sqrt{\frac{(18)^2}{(13)^2}} = \frac{18}{13}$

8. $\sqrt{7\frac{106}{225}} = \sqrt{\frac{1681}{225}} = \sqrt{\frac{(41)^2}{(15)^2}} = \frac{41}{15}$

9. 1. $\frac{39}{361} = \sqrt{\frac{400}{361}} = \sqrt{\frac{(20)^2}{(19)^2}} = \frac{20}{19}$

D. 1. 13, 2. 27, 3. 21, 4. 25, 5. 23, 6. 43, 7. 15, 8. 18, 9. 19

Worksheet-6

Square Root of Decimal Numbers

A. 1. 1.2, 2. 0.05, 3. 0.6, 4. 0.04, 5. 0.5, 6. 0.7

B. 1. 0.1009, 2. 3.768, 3. 18.109, 4. 9.52, 5. 10.029, 6. 0.0009, 7. 12.35, 8. 0.13

C. 1. 3.11, 2. 3.39, 3. 0.181, 4. 5.22

D. 1. 7.20839, 2. 4.6, 3. 6.5, 4. 2.9, 5. 10.89, 6. 10.6

E. 1. $\frac{2.5}{0.26}$

2. $\frac{17.07}{24.98}$

3. $\frac{6.008}{10.11}$

4. $\frac{0.917}{3.668}$

5. $\frac{0.32}{9.834}$

6. $\frac{4.11}{7.74}$

Worksheet-7

Cube and Cube Roots

A. 1. (ii), 2. (ii), 3. (iii), 4. (iii)

B. 1. odd, 2. triplets, 3. , 4. 10,

$$\begin{aligned}
\text{C. } \quad \sqrt[3]{448} &= \sqrt[3]{2^3 \times 2^3 \times 7} \\
&= 4\sqrt[3]{7} \\
\sqrt[3]{392} &= \sqrt[3]{2^3 \times 49} \\
&= 2 \times \sqrt[3]{49} \\
\sqrt[3]{448} \times \sqrt[3]{392} &= 4\sqrt[3]{7} \times 2\sqrt[3]{49} \\
&= 8\sqrt[3]{343} \\
&= 8\sqrt[3]{7^3} \\
&= 8 \times 7 = 56
\end{aligned}$$

$$\text{D. } 1. \frac{-16}{8} = -2 \qquad 2. \frac{-8}{5} \qquad 3. \frac{8}{19}$$

$$\text{E. } 1. 1.4, 2. 2.1, 3. 3.8, 4. 6.4, 5. 1.6, 6. 1.7$$

$$\text{F. } 1. 7, 2. -11, 3. 14, 4. 12, 5. 18, 6. 21$$

Worksheet-8

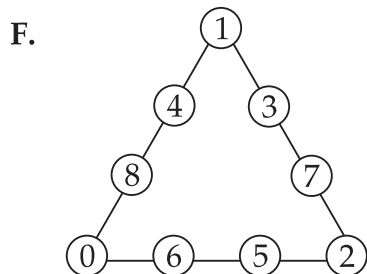
Playing with Numbers

$$\text{A. } 1. \text{ (i), } 2. \text{ (ii), } 3. \text{ (ii)}$$

$$\text{B. } 1. 100 \times 7 + 0, \qquad 2. 100 \times 2 + 0 \times 10 + 6, \qquad 3. 10 \times 9 + 0, \qquad 4. 10 \times 3 + 7$$

$$\begin{array}{r}
\text{C. } 1. \quad 1 \quad 0 \\
\quad \times \quad 3 \\
\hline
\quad \quad 30
\end{array}
\qquad
\begin{array}{r}
2. \quad 3 \quad 0 \\
\quad \times \quad 3 \\
\hline
\quad \quad 90
\end{array}
\qquad
\begin{array}{r}
3. \quad 4 \quad 4 \\
\quad \times \quad 5 \\
\hline
\quad \quad 220
\end{array}$$

$$\text{D. } \begin{array}{|c|c|c|c|} \hline 9 & & 4 & \\ \hline 5 & & & 7 \\ \hline & & & \\ \hline & & 4 & 2 \\ \hline 45 & 32 & 16 & 14 \\ \hline \end{array}$$

$$\text{E. } \begin{array}{|c|c|c|c|} \hline & 14 & 13 & 0 \\ \hline 8 & & & 11 \\ \hline 4 & & & 7 \\ \hline & 2 & & 12 \\ \hline \end{array}$$


$$\text{G. } \begin{array}{|c|c|c|} \hline 5 & 9 & 1 \\ \hline 7 & 2 & 6 \\ \hline 3 & 1 & 8 \\ \hline \end{array}$$

Worksheet-9

Divisibility Test

A. 1. (i), 2. (iii)

B. 1. 5 and 10, 2. 0 or 5

C. 60174

D. $1 + 5 + a = 6 + a$

If we put $a = 3$ then

$$6 + 3 = 9$$

9 is divisible by 9

So, the value of $a = 3$

E. $27y^4 = 2 + 7 + y = \text{multiple of } 3$

F.

Number	Sum of digits	2	3	4	5	6	8	9	10	Number divisible by
1248	$1 + 2 + 4 + 8 = 15$	✓	✓	✓		✓				2, 3, 4, and 6
91	$9 + 1 = 10$									None of them (by 7 only)
93	$9 + 3 = 12$		✓							3
102	$1 + 0 + 2 = 3$	✓	✓			✓				2, 3 and 6
144	$1 + 4 + 4 = 9$	✓	✓	✓		✓	✓	✓		2, 3, 4, 6, 8, 9
150	$1 + 5 + 0 = 6$	✓	✓			✓				2, 3 and 6
168	$1 + 6 + 8 = 15$	✓	✓	✓		✓				2, 3, 4 and 6
195	$1 + 9 + 5 = 15$		✓		✓					3 and 5
225	$2 + 2 + 5 = 9$		✓		✓			✓		3, 5 and 9
256	$2 + 5 + 6 = 13$	✓		✓			✓			2, 4, 8
268	$2 + 6 + 8 = 16$	✓		✓						2, 4
316	$3 + 1 + 6 = 10$	✓		✓						2
450	$4 + 5 + 0 = 9$	✓	✓		✓	✓		✓	✓	2, 3, 5, 6, 9, 10
549	$5 + 4 + 9 = 18$		✓					✓		2, 9
1470	$1 + 4 + 7 + 0 = 12$	✓	✓		✓	✓			✓	2, 3, 5, 6, 10
4518	$4 + 5 + 1 + 8 = 18$	✓	✓			✓		✓		2, 3, 6, 9
7120	$7 + 1 + 2 + 0$	✓			✓				✓	2, 5, 10

Worksheet-10

Percentage

A. 1. (iv), 2. (iii), 3. (ii), 4. (i), 5. (iii)

B. Let the total no. of people be x

After death due to epidemic, remaining people is given by 98% of x

Only 14% were alive,

No. of people alive is 14% of 98% of x which is 2107

$$= \frac{14}{100} \times \frac{98}{100} \times x = 2107$$

$$x = \frac{2107 \times 100 \times 100}{14 \times 98} = 153577$$

C. Students failed in Maths = 27%

Students failed in English = 24%

Students failed in both = 20%

1. Percentage of students failed in any of subject $(27 + 24) = 51\%$

2. % of students failed in both subjects = 20%

Percentage of students failed in maths only $(27 - 20)\% = 7\%$

Percentage of students failed in English only $(24 - 20)\% = 4\%$

Hence, total percentage of students failed = $[7 + 4 + 20]\% = 31\%$

And total percentage of students passed = $(100 - 31)\% = 69\%$

3. No. of students who passed in both of subjects = 414

Let ' x ' be the no. of students

$$69\% \text{ of } x = 414$$

$$= \frac{69}{100} \times x = 414$$

$$x = \frac{414 \times 100}{69}$$

$$x = 600$$

Total no. of students is 600.

D. Current price = ₹ 200

10% increasing price = $200 + 10\% \text{ of } 200$

$$= 200 + 20 = ₹ 220$$

New decreasing price = $220 - 10\% \text{ of } 220$

$$= 220 - 22 = ₹ 198$$

Original price and new prices aren't same.

E. No. of parrots flew away = 20% of x

$$= \frac{20}{100} \times x = \frac{x}{5}$$

No. of parrots died = 5% of x

$$= \frac{5}{100} \times x = \frac{x}{20}$$

No. of parrots remaining = $x - \left(\frac{x}{5} + \frac{x}{20} \right)$

$$= x - \left[\frac{4x + x}{20} \right] = x - \frac{x}{4} = \frac{3x}{4}$$

No. of sold parrots = 45% of $\frac{3x}{4}$

$$= \frac{45}{100} \times \frac{3x}{4} = \frac{27x}{80}$$

No. of parrots which are not sold

$$= \frac{3x}{4} - \frac{27x}{80} = \frac{60x - 27x}{80} = \frac{33x}{80}$$

According to question = $\frac{33x}{80} = 33$

$$= x = \frac{80 \times 33}{33} = 80$$

Therefore Chandani purchased 80 parrots.

Worksheet-11

Profit, Loss and Discount

A. 1. (ii), 2. (ii), 3. (iii), 4. , 5. (ii)

B. 1. selling price, 2. selling price, 3. gain, 4. loss

C. S.P. = ₹990

Discount = 10%

Profit = 10%

$$= \text{C.P.} \times \frac{100 \pm P / L}{100} = \text{S.P.}$$

$$= \text{C.P.} \times \frac{100 - 10}{100} = 990$$

$$= \text{C.P.} = \frac{990 \times 100}{90} = ₹1100$$

Profit = 10%

$$\begin{aligned}\text{Now, } &= \text{C.P.} \times \frac{100 + 10}{100} = ₹1100 \\ &= \text{C.P.} = \frac{1100 \times 100}{110} = ₹1000\end{aligned}$$

D. C.P. = 918, given 20% gain

$$918 \times \frac{20}{100} = \frac{918}{5} = 183.6$$

$$918 + 183.6 = 1101.6$$

Instead of taking S.P. as x take it as 100

$$= \frac{100 - 15x}{100} = 1101.6$$

$$= \frac{85x}{100} = 1101.6$$

$$x = ₹1296$$

E. New salary = $x + 10\%$ of x

$$x + \frac{10x}{100} = \frac{11x}{10}$$

$$15,400 = \frac{11x}{10} = 15400 = 11x$$

$$x = ₹14,000$$

F. S.P. = ₹ 5225

Discount = 15%, let x be marked price

$$\text{Then, } x - \frac{5}{100}x = 5225$$

$$= \frac{19x}{20} = 5225$$

$$x = \frac{5225 \times 20}{19} = 5500$$

So, marked price is ₹ 5500

Worksheet-12

Direct and Inverse Variations

A. 1. (iv), 2. (i), 3. (iv), 4. (i), 5. (ii)

B. 1. inversely, 2. increased, 3. direct and inverse variation, 4. $1/n$

C. 1. Girls in hostel = 50

Food provisions = 40 days

1 girl is provision for = 40×50 days

$$\begin{aligned}50 \times 40 &= 80 \times a \\ &= \frac{200}{80} = a\end{aligned}$$

$$a = 25 \text{ days}$$

2. No of bottles filled in six hours = 540 bottles

$$\text{No. of bottles filled in one hour} = \frac{540}{6} = 90$$

$$\text{No. of bottles filled in 5 hrs} = 90 \times 5 = 450 \text{ bottles}$$

3. No. of persons = 30

$$\text{No. of days} = 17 \text{ days}$$

$$\text{Let 'x' be the same persons then } 30 \times 17 = x \times 10$$

$$= \frac{30 \times 17}{10} = x$$

$$x = 51 \text{ persons}$$

Worksheet-13

Time, Distance and Work

A. 1. (ii), 2. (ii), 3. (iii), 4. (ii)

B. Distance = 40 km

$$\text{Time} = 1 \text{ hr}$$

$$\text{Speed} = \frac{\text{Distance}}{\text{time}}$$

$$= \frac{40}{1} = 40 \text{ km/hr}$$

C. Let full part of tank = x

$\left(\frac{4}{5}\right)$ th of water tank fills

in 1 hour or 60 min

$$\frac{4}{5} \times x = 60 \text{ min}$$

$$4x = 300 \text{ min}$$

$$x = 75 \text{ min}$$

Total part of tank gets filled in 75 minutes.

Remaining part of tank to be filled

$$x - \frac{4x}{5} = \frac{x}{5} = \frac{75}{5}$$

$$= 15 \text{ min}$$

D. Distance = 800 m

Speed = 18 km

$$= 18 \times \frac{5}{18} \text{ m/s} = 5 \text{ m/s}$$

$$\text{Time} = \frac{\text{distance}}{\text{speed}} = \frac{800}{5} = 160 \text{ sec}$$

E. Work done by Mohan in 1 hr = $\frac{1}{9}$

Mohan and Sohan mow it together in = 4 hrs

Work done by them in 1 hr = $\frac{1}{4}$

$$= \frac{1}{4} - \frac{1}{9} = \frac{9-4}{36} = \frac{5}{36}$$

Time taken by Sohan to complete the work

$$= \frac{1}{\frac{5}{36}} = \frac{36}{5} \text{ hr} = 7.2 \text{ hr}$$

F. 1 km/hr = $\frac{18}{5}$ m/s

G. 1. 70/9 m/s, 2. 144 km/h, 3. 50 m/s, 4. 432 m/s

H. Speed = 50 km/h

$$= 50 \times \frac{5}{100} = \frac{250}{100} \text{ m/s}$$

Time = 50 min

$$= 50 \times 60 \text{ sec} = 300 \text{ sec}$$

Distance = speed \times time

$$= \frac{250 \times 300}{18} = \frac{250 \times 50}{3}$$

$$= 4166 \text{ m/sec}$$

I. Distance = 199

Time = 15 sec

$$\text{Speed} = \frac{199}{15} \times \frac{100}{5} = \frac{1144}{25} \text{ km/h}$$

Worksheet-14

Compound Interest

A. 1. (i), 2. (ii), 3. (ii)

B. 1. True, 2. False, 3. True, 4. True

C. 1. $P\left(1 + \frac{r}{100}\right)^T$ 2. Conversion period 3. $P\left(1 + \frac{r}{2 \times 100}\right)^{2t}$

D. Principal = 100000

Rate of interest = 10%

1. Interest for 6 months

$$\begin{aligned} \text{S.I.} &= \frac{P \times R \times T}{100} \\ &= \frac{100000 \times 10 \times 1}{100 \times 2} = 5000 \end{aligned}$$

2. Amount = ?

$$P = 100000$$

$$\text{S.I.} = 5000$$

$$\text{Amount} = P + \text{S.I.}$$

$$= 100000 + 5000 = 105000$$

3. For this, $P = \text{Amount}$

after 6 months = ₹ 105000

$$A = P\left(1 + \frac{R}{100}\right)^1 \quad (\because n = 1 \text{ for 6 months})$$

$$= 105000\left(1 + \frac{10}{200}\right)$$

$$= 105000 \times \frac{21}{20} = ₹ 110250$$

$$\therefore \text{Compound interest} = A - P$$

$$\text{Interest for next 6 months} = 110250 - 105000 = ₹ 5250$$

4. Amount after one year = ₹ 110250 (calculated above)

E. Principal = ₹ 30000

Time = 6%

$$\text{Year} = \frac{1}{2} \text{ years}$$

$$\begin{aligned}
A &= P \left[\frac{1+R}{2 \times 100} \right]^{2t} \\
&= 30000 \left[1 + \frac{6}{2 \times 100} \right]^{2 \times \frac{1}{2}} \\
&= 30000 \left[\frac{103}{100} \right] \\
&= 300 \times 103 = 30900 \\
\text{CI} &= A - P \\
&= 30900 - 30000 = ₹ 900
\end{aligned}$$

Worksheet-15

Multiplication of Algebraic Expressions

A. 1. (ii), 2. (iv) 3. (iii)

B. 1. $5a^2 \times (-5a^4)$

$$(5 \times -5) \times (a^2 \times a^4)$$

$$-25 \times a^{2+4}$$

$$-25a^6$$

4. $2x \times -3xy^2$

$$= (2 \times -3y^2)(x \times x)$$

$$= -6y^2x^2$$

6. $3xy \times 4x^2y^3$

$$= (3 \times 4) \times y^3 \times (x \times x^2)$$

$$= 12y^3x^3$$

C. 1. $\left(\frac{-a}{5} + 2ab \right) \times \frac{-2}{5} a^2b^2$

$$= \frac{-a}{5} \times \frac{-2}{5} a^2b^2 + 2ab \times \frac{-2}{5} a^2b^2$$

$$= \frac{2a^3b^2}{25} + \frac{-4a^3b^3}{5}$$

2. $\frac{3}{2}x^2 \times -\frac{3}{2}x$

$$= \left(\frac{3}{2} \times \frac{3}{2} \right) \times (x^2 \times x)$$

$$= \frac{-9}{4} \times x^3$$

3. $-a \times -2b = 2ab$

5. $-5x^2yz \times \frac{2}{3}xy^3$

$$= \left(-5 \times \frac{2}{3} \times z \right) \times (x^2 \times x) \times (y \times y^3)$$

$$= \frac{-10z}{3} \times x^3y^4 = \frac{-10}{3}zx^3y^4$$

2. $x^3y^2 \times \left[\frac{-3}{2}(x-y) \right]$

$$= x^3y^2 \times \left[\frac{-3x}{2} + \frac{3y}{2} \right]$$

$$= \frac{-3y^2x^3 \times x}{2} + \frac{3}{2}x^3 \times y^2 \times y$$

$$= \frac{-3x^4y^2}{2} + \frac{3x^3y^3}{2}$$

$$\begin{aligned}
 3. \quad & \frac{9}{2}(a+2b) \times a^2b \\
 &= \left[\frac{9}{2}a + \frac{18b}{2} \right] \times a^2b \\
 &= \frac{9a}{2} \times a^2b + 9b \times a^2b \\
 &= \frac{9^3b}{2} + \frac{9a^2b^2}{1}
 \end{aligned}$$

$$\begin{aligned}
 4. \quad & \left(\frac{-3}{5}pq^2 \right) \times \left(\frac{1}{9}p^3q \right) \\
 &= \frac{3 \times p \times p^3 \times q^2 \times q}{5 \times 9} \\
 &= \frac{-p^4q^3}{15}
 \end{aligned}$$

$$\begin{aligned}
 \text{D. 1.} \quad & \left(\frac{1}{4} \times -y \right) \left(\frac{1}{4} \times y \right) \\
 &= \left(\frac{1}{4} \times \frac{1}{4} \right) (-y \times y) \\
 &= \frac{1}{16} (-y^2) = \frac{-y^2}{16}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & (a^2 + b^2)(3a + 2b) \\
 &= 3a(a^2 + b^2) + 2b(a^2 + b^2) \\
 &= 3a^3 + 3b^2 + 2a^2b + 2b^3
 \end{aligned}$$

$$\begin{aligned}
 \text{E. 1.} \quad & (x+1) \times (x-1) \\
 &= x(x-1) + 1(x-1) \\
 &= x^2 - x + x - 1 \\
 &= x^2 - 1 \quad [x=1] \\
 &= (1)^2 - 1 = 1 - 1 = 0
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & (x^2 - 1)(x^2 + 1) \\
 &= x^2(x^2 + 1) - (x^2 + 1) \\
 &= x^4 + x^2 - x^2 - 1 \\
 &= x^4 - 1 \quad [x=1] \\
 &= (1)^4 - 1 = 0
 \end{aligned}$$

F. Let the other equation be y
According to question $y \times (x^2 + x + 1)$

$$= x^5 + x^3 + x$$

$$\therefore y = \frac{x^5 + x^3 + x}{x^2 + x + 1}$$

Hence, on solving the equation, the other expression is $x^3 - x^2 + x$.

Worksheet-16

Division of Algebraic Expressions and Identities

A. 1. (i), 2. (iii), 3. (ii)

$$\begin{aligned}
 \text{B. 1.} \quad & (339)^2 - (161)^2 \\
 &= (339 + 161)(339 - 161) \\
 &= (500) \times (178) \\
 &= 89000
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & \frac{(249)^2 - (149)^2}{249 + 149} \\
 &= \frac{(249 + 149)(249 - 149)}{(249 + 149)} \\
 &= (249 - 149) \\
 &= 100
 \end{aligned}$$

C. $p + q = 12$
 $pq = 22$
 $p^2 + q^2 = (p + q)^2 - 2pq$
 $= (12)^2 - 2 \times 22$
 $= 144 - 44 = 100$

D. $a^2 + b^2 = 74$
 $ab = 35$
 $a + b = ?$

Let x be the $(a + b)$, then
 $= a^2 + b^2 = (a + b)^2 - 2ab$
 $74 = x^2 - 2 \times 35$
 $x^2 = 144$
 $x = 12$

E. $a + b = 25$
 $a^2 + b^2 = 225$
 $ab = ?$

Let x be the ab , then

$$225 = (25)^2 - 2x$$

$$225 = 625 - 2x$$

$$2x = 625 - 225$$

$$2x = 400$$

$$x = 200$$

F. 1. $8p = (35)^2 - (27)^2$
 $8p = (35 + 27)(35 - 27)$
 $8p = 62 \times 8$
 $p = \frac{62 \times 8}{8} = 62$

2. $9p = (76)^2 - (67)^2$
 $9p = (76 + 67)(76 - 67)$
 $9p = (143)(9)$
 $p = \frac{143 \times 9}{9}$
 $p = 143$

G. 1. $pqa = (3p + q)^2 - (3p - q)^2$
 $pqa = (3p + q + 3p - q)(3p + q - 3p + q)$
 $pqa = 6p \times 2q$
 $a = \frac{12pq}{pq} = 12$

2. $pq^2a = (4pq + 3q)^2 - (4pq - 3q)^2$
 $= (4pq + 3q + 4pq - 3q) \times (4pq + 3q - 4pq + 3q)$
 $pq^2a = 8pq \times 6q$
 $pq^2a = 48pq^2$
 $a = \frac{48pq^2}{pq^2} = 48$

H. 1. $\frac{51x^3y^2z}{17xyz} = \frac{51x^2y}{17} = 3x^2y$

$$2. \frac{76x^3yz^3}{19x^2y^2} = \frac{76xz^3}{19y} = \frac{4xz^3}{y} = 4xz^3y^{-1}$$

$$3. \frac{17ab^2c^3}{(-abc)^2} = \frac{17ab^2c^3}{a^2b^2c^2} = \frac{17c}{a} = 17a^{-1}c$$

$$4. \frac{-121p^3q^3r^3}{-11xy^2z^3} = \frac{11p^3q^3r^3}{xy^2z^3}$$

$$I. 1. \frac{3pqr - 6p^2q^2r^2}{3pq} = \frac{3pqr}{3pq} - \frac{6p^2q^2r^2}{3pq} = r - 2pqr^2$$

$$2. \frac{(-qrxy + 3pryz - rxyz)}{-xyz}$$

$$= \frac{-qrxy}{-xyz} + \frac{3pryz}{-xyz} - \frac{rxyz}{-xyz} = \frac{qr}{z} = \frac{3pr}{x} + r$$

Worksheet-17

Factorization of Algebraic Expressions

A. 1. (ii), 2. (i), 3. (ii), 4.(i)

B. 1. $x+1$, 2. $2(x+2y)$, 3. $x(ax+b)$

C. 1. $6ab + 12bc$

$$= 6b(a + 12c)$$

$$= 6b \left[\frac{6ab}{6b} + \frac{12bc}{6b} \right]$$

$$= 6b[a + 2c]$$

2. $ax^3 - bx^2 + cx$

$$= x \left[\frac{ax^3}{x} - \frac{bx^2}{x} + \frac{cx}{x} \right]$$

$$= x[ax^2 - bx + c]$$

D. 1. $x^2 - 36$

$$= x^2 - (6)^2$$

$$= (x + 6)(x - 6)$$

2. $16x^4 - 81$

$$= (4x^2)^2 - (9)^2$$

$$= (4x^2 + 9)(4x^2 - 9)$$

$$= (4x^2 + 9)((2x)^2 - (3)^2)$$

$$= (4x^2 + 9)(2x + 3)(2x - 3)$$

E. 1. $x^2 - \frac{y^2}{100}$

$$= x^2 - \left(\frac{y}{10}\right)^2$$

$$= \left(x + \frac{y}{10}\right)\left(x - \frac{y}{10}\right)$$

2. $\frac{4x^2}{9} - \frac{9y^2}{16}$

$$= \left(\frac{2x}{3}\right)^2 - \left(\frac{3y}{4}\right)^2$$

$$= \left(\frac{2x}{3} + \frac{3y}{4}\right)\left(\frac{2x}{3} - \frac{3y}{4}\right)$$

F. 1. $\frac{6.25 \times 6.25 - 1.75 \times 1.75}{4.5}$

$$= \frac{(6.25)^2 - (1.75)^2}{4.5}$$

$$= \frac{(6.25 + 1.75)(6.25 - 1.75)}{4.5} = \frac{8 \times 4.5}{4.5} = 8$$

2. $\frac{198 \times 198 - 102 \times 102}{96}$

$$= \frac{(198)^2 - (102)^2}{96}$$

$$= \frac{(198 + 102)(198 - 102)}{96}$$

$$= \frac{300 \times 96}{96} = 300$$

G. 1. $x^2 + 3x + 2$

$$= x^2 + 2x + x + 2$$

$$= x(x + 2) + 1(x + 2)$$

$$= (x + 1)(x + 2)$$

2. $x^2 + 19x - 20$

$$= x^2 + 20x - x - 20$$

$$= x(x + 20) - 1(x + 20)$$

$$= (x + 20)(x - 1)$$

3. $x^2 + 9x + 20$

$$= x^2 + 5x + 4x + 20$$

$$= x(x + 5) + 4(x + 5)$$

$$= (x + 5)(x + 4)$$

4. $x^2 - 7x + 10$

$$= x^2 - 5x - 2x + 10$$

$$= x(x - 5) - 2(x - 5)$$

$$= (x - 5)(x - 2)$$

Worksheet-18

Linear Equations

A. 1. (ii), 2. (i), 3. (iii), 4. (i), 5. (ii)

B. 1. roots of equation, 2. expression, 3. linear, 4. variable

C. 1. Let the two parts be x and y

$$x = \frac{2}{9}y$$

$$x + y = 54$$

$$= \frac{2}{9}y + y = 54$$

$$= \frac{2y + 9y}{9} = 54$$

$$11y = 54 \times 9$$

$$y = \frac{54 \times 9}{11} = 44.1$$

$$x + y = 54$$

$$= x + 44 = 54, x = 10$$

$$2. \quad \frac{3x-4}{12} + \left[\frac{11-x}{3} - \frac{1}{4} \right] = \frac{x+2}{6}$$

$$\frac{3x-4}{12} + \left[\frac{44-4x-3}{12} \right] = \frac{x+2}{6}$$

$$\frac{3x-4}{12} + \frac{41-4x}{12} = \frac{x+2}{6}$$

$$\frac{3x-4+41-4x}{12} = \frac{x+2}{6}$$

$$\frac{37-x}{12} = \frac{x+2}{6}$$

$$37-x = 2x+4$$

$$2x+4-37+x = 0$$

$$3x-33 = 0$$

$$x = 11$$

3. Let the numerator be x

i.e., $x = 9$

Thus Fraction will be $\frac{9}{5}$

4. $p = AB + BC + AC$

$$55 = 3x - 4 + x + 3x - 4$$

$$55 = 7x - 8$$

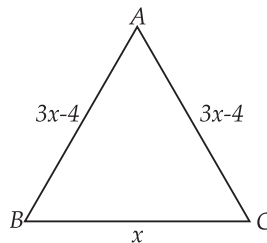
$$7x = 63$$

$$x = 9\text{m}$$

$$BC = 9\text{m}$$

$$AB = 3 \times 9 - 4 = 23\text{m}$$

$$AC = 3 \times 9 - 4 = 23\text{m}$$



Worksheet-19

Introduction to Quadrilaterals

A. 1. (iii), 2. (iii), 3. (iv)

B. Let x be common multiple such that angle become $x, 2x$ and $3x$.

Sum of smallest angle and greatest angle is 180 degree

$$x + 3x = 180^\circ$$

$$4x = 180^\circ$$

$$x = 45^\circ$$

$$2x = 2 \times 45 = 90^\circ$$

$$3x = 3 \times 45 = 135^\circ$$

Sum of all angles of quadrilateral is 360°

$$45 + 90 + 135 + 4\text{th angle} = 360^\circ$$

$$4\text{th angle} = 360^\circ - 270^\circ = 90^\circ$$

So four angles of quadrilateral are

$$45^\circ, 90^\circ, 90^\circ, 135^\circ$$

C. Let angle BAD be $2x$ and

BCD be $3x$

$$BAD : BCD = 2 : 3$$

$$2x + 3x = 360 - [104 - 56]$$

$$5x = 200$$

$$x = 40^\circ$$

$$BAD = 2x = 80^\circ$$

$$BCD = 3x = 120^\circ$$

$$x = 180 - BAD$$

$$= 180^\circ - 80^\circ = 100^\circ$$

$$y = 180 - BCD = 180^\circ - 120^\circ$$

$$y = 60^\circ$$

D. 1. (a), 2. (b), 3. (d), 4. (c)

E. $\angle A = 70^\circ$

$\angle A = \angle C = 70^\circ$ (opposite angles of a parallelogram are equal)

$$\angle A + \angle B = 180^\circ$$

$$\angle B = 180^\circ - 70^\circ$$

$$\angle B = 110^\circ$$

$$\angle B = \angle D = 110^\circ$$

Hence other three angles are

$$\angle B = 110^\circ, \angle C = 70^\circ, \angle D = 110^\circ$$

F. Sum of three angles

$$= 80^\circ + 70^\circ + 50^\circ$$

$$= 200^\circ$$

$$\text{Fourth angle} = 360^\circ - 200^\circ = 160^\circ$$

Worksheet-20

Properties of Quadrilaterals

A. 1. (iii), 2. (iii), 3. (i)

B. 1. hexagon, 2. pentagon, 3. polygon, 4. rhombus

C. 1. False, 2. True, 3. True, 4. False, 5. False, 6. True, 7. True, 8. True

D. Here, $\angle x + \angle 100^\circ = \angle 180^\circ$

$$\angle x = \angle 180^\circ - \angle 100^\circ = \angle 80^\circ$$

Now, $\angle 30^\circ + \angle x + \angle y = \angle 180^\circ$

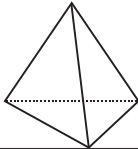
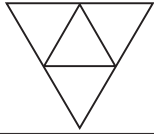
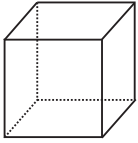
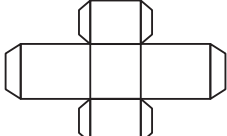
$$\angle 30^\circ + \angle 80^\circ + \angle y = \angle 180^\circ$$

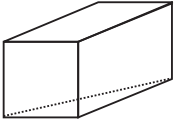
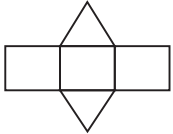
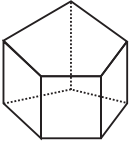
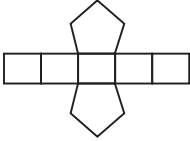
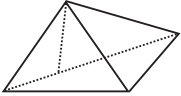
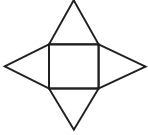
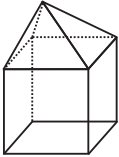
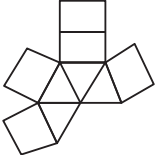
$$\angle y = \angle 180^\circ - \angle 110^\circ = \angle 70^\circ$$

Now, $\angle B = \angle Z = \angle 30^\circ$

Worksheet-21

Identifying and Matching Pictures

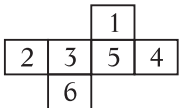
Solid	2D Representation	Net
Tetrahedron		
Cube		

Triangular Prism		
Pentagonal Prism		
Square Pyramid		
Elongated Square Pyramid		

Worksheet-22

Representing 3D in 2D

- A. 4 B. 5 C. 14, 18, 6
D. E. 1. (a), 2. , 3. (c), 4. (b)



Worksheet-23

Area

- A. 1. (ii), 2. (iii), 3. (i), 4. (iii), 5. (iii)
B. 1. False, 2. False, 3. True, 4. True
C. Area of trapezium = 34 cm^2

Length of parallel side = 10 cm

Height = 4 cm

Let the length of other side be "x" cm

$$\text{Area} = \frac{1}{2} [\text{sum of parallel sides}] \times \text{distance between them}]$$

$$= 34 = \frac{1}{2}(10 + x) \times 4$$

$$34 = (10 + x) \times 2$$

$$2x = 34 - 20$$

$$2x = 14$$

$$x = 7 \text{ cm}$$

D. $d_1 = 75 \text{ m}$

$$d_2 = 12 \text{ cm}$$

$$\begin{aligned} \text{Area of rhombus} &= \frac{1}{2} \times d_1 \times d_2 \\ &= \frac{1}{2} \times 75 \times 12 \\ &= 75 \times 6 \\ &= 450 \text{ cm}^2 \end{aligned}$$

E. Side = 6 cm

$$\text{Altitude} = 4 \text{ cm}$$

$$\text{Diagonal } A = 8 \text{ cm}$$

$$\text{Area of rhombus} = 6 \text{ cm} \times 4 \text{ cm} = 24 \text{ cm}^2$$

$$\begin{aligned} \text{Area of rhombus} &= \frac{1}{2} d_1 \times d_2 \\ &= \frac{1}{2} \times 8 \times d_2 = 24 \end{aligned}$$

$$4d_2 = 24$$

$$d_2 = \frac{24}{4} = 6 \text{ cm}^2$$

Worksheet-24

Hero's Formula For Area of a Triangle

A. 1. $S = \frac{a+b+c}{2} = \frac{4+4+3}{2} = \frac{11}{2} = 5.5 \text{ cm}$

$$\begin{aligned} \text{Area} &= \sqrt{S(5-a)(5-b)(5-c)} \\ &= \sqrt{5.5(5.5-4)(5.5-4)(5.5-3)} \\ &= \sqrt{5.5(1.5)(1.5)(2.5)} \\ &= \sqrt{5.5 \times 5.625} \\ &= \sqrt{30.9375} = 5.55 \text{ cm}^2 \end{aligned}$$

2. $S = \frac{3+4+5}{2} = \frac{12}{2} = 6 \text{ cm}$

$$\text{Area} = \sqrt{6(6-3)(6-4)(6-5)}$$

$$= \sqrt{6(3)(2)(1)}$$

$$= \sqrt{6(3)(2)(1)}$$

$$= \sqrt{6 \times 6} = \sqrt{36} = 6 \text{ cm}^2$$

$$3. \quad S = \frac{30 + 46 + 30}{2} = \frac{106}{2} = 53 \text{ cm}$$

$$\text{Area} = \sqrt{53(53 - 30)(53 - 46)(53 - 30)}$$

$$= \sqrt{53(23)(7)(23)}$$

$$= \sqrt{196259}$$

$$= 443.01 \text{ cm}^2$$

$$4. \quad S = \frac{20 + 66 + 55}{2} = \frac{135}{2} = 67.5 \text{ cm}$$

$$\text{Area} = \sqrt{67.5(67.5 - 20)(67.5 - 60)(67.5 - 55)}$$

$$= \sqrt{67.5 \times 47.5 \times 7.5 \times 12.5}$$

$$= \sqrt{300585.938} = 548.25 \text{ cm}^2$$

B. 391.428 cm^2 , 31.31 cm

C. 14.62 cm^2

D. 7.9 cm^2

E. 27.71 cm^2

F. 84.87 cm^2

G. 1. 272.38 m^2 , 2. 1764 cm^2

H. 1. 204 cm^2 , 2. 120 cm^2 , 3. 330 cm^2 , 4. 17.32 cm^2

Worksheet-25

Areas of Irregular Rectilinear Figures

A. 1.

B. 1. 573.20 cm^2 , 2. 117.516 cm , 3. 337.8 cm^2 , 4. 110.448 cm^2

Worksheet-26

Surface Area and Volume

A. 1. (iv), 2. (i), 3. (ii), 4. (iii)

B. **Cuboid** : lbh , $2(lb + bh + hl)$, $2(l + b) \times h$, $l^2 + b^2 + h^2$

Cube : a^3 , $6a^2$, $4a^2$, $\sqrt{3a}$

Cylinder : $\pi r^2 h$, $2\pi rh$, curved, $\sqrt{d^2 + h^2}$

C. 1. rectangle, 2. 1000000, 3. a^2 , 4. 36 m^3

D. 1. 4 times, 2. 8 times

E. **Volume :**

- If $l = 6$ cm, $b = 5$ cm and $h = 4$ cm

then, volume = $l \times b \times h$

$$= (6 \times 5 \times 4) \text{ cm}^3$$

$$= 120 \text{ cm}^3$$

- If $l = 10$ cm, $b = 8$ cm and $h = 3$ cm

then, volume = $(10 \times 8 \times 3) \text{ cm}^3$

$$= 240 \text{ cm}^3$$

- If $l = 8$ cm, $b = 2.5$ cm and $h = 1$ cm

then, volume = $(8 \times 2.5 \times 1) \text{ cm}^3$

$$= 20.0 \text{ cm}^3$$

- If $l = 12$ cm, $b = 8$ cm and $h = 4$ cm

then, volume = $(12 \times 8 \times 4)$

$$= 384 \text{ cm}^3$$

Total Surface Area :

- If $l = 6$ cm, $b = 5$ cm and $h = 4$ cm

then, total surface area = $2(lb + bh + hl)$

$$= 2(6 \times 5 + 5 \times 4 + 4 \times 6)$$

$$= 2(30 + 20 + 24)$$

$$= 2 \times 74 = 148 \text{ cm}^2$$

- If $l = 10$ cm, $b = 8$ cm and $h = 3$ cm

then, total surface area = $2(10 \times 8 + 8 \times 3 + 3 \times 10)$

$$= 2(80 + 24 + 30)$$

$$= 2 \times 134 = 268 \text{ cm}^2$$

- If $l = 8$ cm, $b = 2.5$ cm, $h = 1$ cm

then, total surface area = $2(lb + bh + hl)$

$$= 2(8 \times 2.5 + 2.5 \times 1 + 1 \times 8)$$

$$= 2(20 + 2.5 + 8)$$

$$= 30.5 \text{ cm}^2$$

- If $l = 12$ cm, $b = 8$ cm and $h = 4$ cm

then, total surface area = $2(12 \times 8 + 8 \times 4 + 4 \times 12)$

$$= 2(96 + 32 + 48)$$

$$= 2 \times 176$$

$$= 352 \text{ cm}^2$$

Worksheet-27

Frequency Distributions

- A. 1. Frequency : 7, 2, 12, 4, 5, 10 Total 40
2. Frequency : 12, 5, 10, 2, 9 Total 38
- B. 1. 10, 2. 40, 3. 75, 4. 45

Worksheet-28

Interpretation of Bar Graph

- A. 1. Saturday, 2. 290, 3. Large graph, 4. 190, 5. Increasing
- B. 1. Monday, 2. 10°C, 3. 14°C
- C. 1. August, 2. 1000, 3. spring, 4. winter, 5. entre me cold weather

Worksheet-29

Simple Pie Chart

- A. 1.
- B. 1. 56, 2. 168, 3. 301, 4. No. of children who spend 2 hours or more per day
- C. 1. (i), 2. (iv)

Worksheet-30

Repeated Events

- A. 1. (iii), 2. (iv), 3. (iv), 4. (iv), 5. (ii)
- B. 1. $\frac{1}{2}$, 2. $\frac{1}{2}$, 3. $\frac{5}{6}$, 4. $\frac{1}{3}$
- C. 1. $\frac{1}{4}$, 2. $\frac{1}{4}$, 3. $\frac{3}{4}$
- D. Let the total chances of occurrence of tail and head in the entire event be taken as 100%

Since percentage chances of occurrence of head is 60%

The percentage chances of occurrence of tail = $100 - 60 = 40\%$

Now, the number of times of tossing the coin = 150

$$\therefore 40\% \text{ of } 150 = \frac{40}{100} \times 150$$

$$= 4 \times 15 = 60 \text{ times}$$

E. Total outcomes = 10

No. of heads = 7

No. of tails = 3

So, probability of getting heads = $\frac{\text{No. of heads}}{\text{Total outcomes}} = \frac{7}{10} = 0.70$ or 70%

Probability of getting tails = $\frac{\text{No. of tails}}{\text{Total outcomes}} = \frac{3}{10} = 0.30$ or 30%

Worksheet-31

Cartesian System

- A. 1. x , 2. linear, 3. II, III
- B. 1. 10 sec, 2. 50 m, 3. 5ms^{-1} , 4. 15-20 m
- C. 1. $y = 4$, 2. $y = 2$
- D. 1. (c), 2. (d), 3. (a), 4. (b)

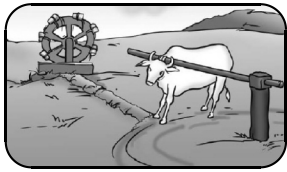
Science-8

Worksheet-1A

Crop Production and Management

A. 1. Cow, Goat, Buffalo; 2. Hen, Goat, Fish; 3. Hen, duck, goose

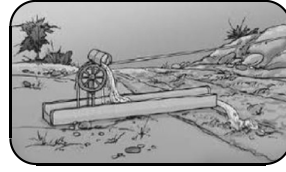
B.



Rahat



Dhekli



Chain pump



Moat

C. 1. Kharif crop; 2. Rabi crop

D. Tubewell, canal irrigation, tanks, drip irrigation

Worksheet-1B

Crop Production and Management

A. 1. The uprooting of a plant and planting it in a new location is called transplantation.

2. A grass such as wheat, oats etc., the starchy grain of which are used as food is called cereal crops.

3. The rearing of fishes is called pisciculture.

B. 1. Milk and cheese.

2. Fungicides protect seeds from soil borne fungi capable of killing seeds before they merge from soil.

3. Kharif crop is grown in rainy season.

C. 1. Weeds, 2. Soil Erosion, 3. Rhizobium, 4. Animal husbandry

D. **Fertiliser** : 1. It is an inorganic salt. 2. It can not be prepared in field.

Manure : 1. It is a natural substance obtained by decomposition of cattle dung, etc.

2. It is prepared in field.

E. 1. (v), 2. (i), 3. (ii), 4. (iii), 5. (iv)

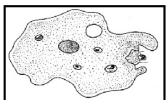
Worksheet-2A

Microorganisms and Viruses : Friend and Foe!

A. 1. Micro-organism, 2. Lactobacillus, 3. Antimicrobial, 4. Bacterial disease,

5. Plasmodium parasite, 6. Pasteurization, 7. rust of wheat, 8. malaria

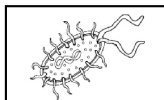
B.



Protozoa



Fungi



Algae



Bacteria

C. 1. (v), 2. (iv), 3. (ii), 4. (iii), 5. (i)

D. 1. Clostridium, 2. Puccinia triticina, 3. Sodium benzoate

Worksheet-2B

Microorganisms and Viruses : Friend and Foe!

- A. 1. (c), 2. (a), 3. (c), 4. (c)
- B. 1. anaerobic, 2. plants, 3. mycoplasma, 4. animal, 5. bread
- C. 1. Bacillus anthracis
2. Housefly and mosquito.
3. Microorganisms breakdown fats in unsalted butter can cause it to become rancid.
4. Viruses are microscopic parasites, that cannot be seen through naked eyes. Common diseases caused by virus are HIV aids, chicken pox.
5. This is because pasteurised milk has a longer shelf life than raw milk.

Worksheet-3A

Synthetic Fibres and Plastics

- A. Reduce, Reuse, Recycle, Recovery
- B. 1. Chemical name of cotton polymer is cellulose.
2. This is because plastic can be easily moulded to any shape and size.
3. This is because plastic and synthetic fabrics produces harmful gases.
- C. 1. Monomer, 2. Artificial, 3. Nylon, 4. Acrylic, 5. Melamine
- D. 1. Bakelite, 2. Polymer, 3. terylene, 4. plastic, 5. teflon
- E. PVC, polythene. F. Nylon, Teflon
- G. Epoxy resin, Melamine
- H. Polyvinyl Chloride

Worksheet-3B

Synthetic Fibres and Plastics

- A. 1. Rayon is widely used in clothing industry.
2. Nylon is used in making parachutes.
3. Polyester is used in making high strength ropes.
4. Acrylic is used for making sweater and carpets.
- B. 1. Natural, 2. Natural, 3. Natural, 4. man-made, 5. man-made, 6. Natural
- C. 1. Thermoplastic, 2. Thermosetting, 3. Thermoplastic, 4. Thermoplastic,
5. Thermoplastic, 6. Thermoplastic, 7. Thermosetting, 8. Thermosetting
- D. 1. (c), 2. (b), 3. (b), 4. (a)

Worksheet-4A

Materials : Metals and Non-metals

- A. 1. (a), 2. (c), 3. (a), 4. (b)

B. Displacement.

C. **Property**

Metal

Non-Metal

1. Appearance

Shiny

Rough

2. Conduction of heat

Good conductor

Bad conductor

3. Malleability

Malleable

Non-malleable

4. Ductility

Ductile

Non-ductile

D. This is because copper reacts with the moisture present in the air and develops a green coating of rust.

Worksheet-4B

Materials : Metals and Non-metals

A. 1. Metalloids, 2. Sonorous, 3. Malleability, 4. Basic, 5. Ductility

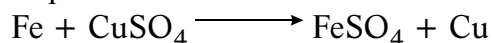
C. oxygen, water, blue, red, non-metal.

1. How sulphurous acid can be obtained?

2. What is the nature of oxides of non-metal?

D. 1. Sodium, 2. Sulphuric acid

E. Dip an iron nail in solution of copper sulphate in a beaker. Keep the beaker undisturbed for some time. After some time, you will notice that iron has displaced copper in the solution. The following reaction takes place.



This shows that iron is more reactive than copper.

Worksheet-5A

Coal and Petroleum

A. 1. (c), 2. (c), 3. (c), 4. (b), 5. (b)

B. 1. Inexhaustible resources, 2. Fossil fuel, 3. Refining, 4. carbonization

C. 1. (i) It is used in industry for steel manufacturing.

(ii) It is used in cement production.

2. Sunlight and air are inexhaustible natural resources because they are present in abundance in nature.

3. Coke is mainly used in iron and steel industry processes such as blast furnace.

4. (i) Turn off the engine while waiting for the signal to turn green.

(ii) Use public transport rather than private one.

Worksheet-5B

Coal and Petroleum

A. 1. Coal, 2. Petroleum, 3. Kerosene, 4. Sunlight, 5. Refinery

B. 3. Natural gas is stored under high pressure as compressed natural gas.

C. LPG : LPG is used as cooking food.

Petrol : Petrol is used as fuel in vehicles.

Kerosene : Kerosene is widely used in powerjet air craft.

Diesel : Diesel is also used as fuel in heavy vehicles.

Lubricating oil : Lubricating oil is used to reduce friction in machines.

Paraffin Wax : Paraffin wax is used for electrical insulation.

Worksheet-6A

Combustion and Flame

A. 1. Ignition temperature, **2.** acid rain, **3.** calorific value

B. 1. (a), **2.** (c), **3.** (d), **4.** (d), **5.** (c)

C. 1. (v), **2.** (i), **3.** (ii), **4.** (iii), **5.** (iv)

Worksheet-6B

Combustion and Flame

A. 1. Fuel is any substance that can be made to react with any other substance so that it release energy.

2. The amount of heat energy produced on complete combustion of 1 kg of a fuel.

3. Process of reacting a substance with oxygen to produce heat and energy.

B. 1. It is due to the reason that when gunpowder is ignited the gas present in it produce large pepping sound.

2. Nitrogen oxide and sulphur dioxide.

3. (i) Enough oxygen. (ii) Temperature should be normal.

C. 1. Outermost zone, **2.** Dark inner zone

D. Human activities near or within forest areas such as smoking near vegetation. Also, natural activities such as volcanic activities, lightening due to thunder are two reason of forest fire.

Worksheet-7A

Conservation of Plants and Animals

A. 1. (b), **2.** (b), **3.** (a), **4.** (c)

B. 1. Rainfall, **2.** water cycle, rainfall, **3.** industrialisation and overpopulation, **4.** deforestation.

C. 1. Satpura National Park.

2. The process of making an area of land into desert is called desertification.

3. The birds that travel from one place to another at regular times are called migratory bird.

4. Group of plants or animals that are all the same and that can breed together are called species.

5. (i) Preserve the environment in which the animal live.

(ii) Poaching should be banned.

Worksheet-7B

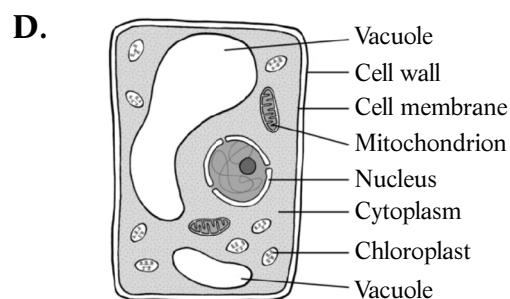
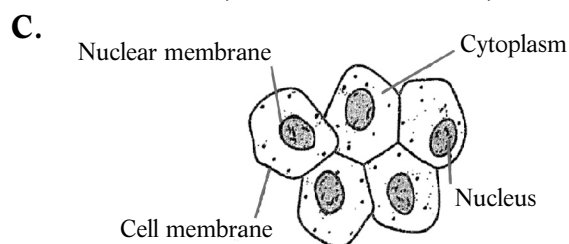
Conservation of Plants and Animals

- A.** 1. The existence of a number of different kinds of animals and plants which together make a good and healthy environment.
 2. Because it gives them a specific place to live and protect their habitat.
 3. Yes, soil erosion removes top soil and humus which affect soil fertility.
- B.** 1. Cutting of trees and clearing of forest and using that land for other purposes is called deforestation.
 2. Process through which we can use objects and materials again.
 3. Species of plants and animals which are found exclusively in a particular area.
- C.** 1. Endangered, 2. Sanctuary, 3. Ecosystem, 4. National Park, 5. Biosphere reserve
- D.** The Project Elephant was started by the Government of Karnataka in 1992. The prime purpose was to protect Asian Elephants in that state and support wildlife management. The project is also meant for saving the elephants and enables those to increase the population while living in natural environment.

Worksheet-8A

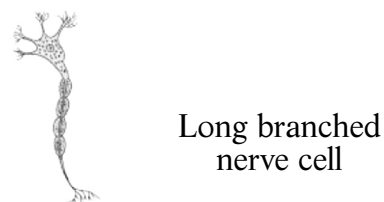
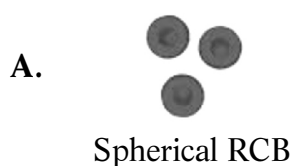
Cell-Structure and Functions

- A.** 1. Cell organelle – Chloroplast, cell pigment - chlorophyll
 2. Robert Hook.
 3. It provide protection to cell membrane of plant.
 4. Microscope.
- B.** 1. Nucleus, 2. Cell membrane, 3. Genes



Worksheet-8B

Cell-Structure and Functions



B. Animal Cell :

1. Contains a large singular vacuole, 2. Cell wall is absent, 3. Centrosomes are present

Plant Cell :

1. Contain many smaller vacuoles, 2. Cell wall is present, 4. Centrosomes are absent

C. 1. Eukaryotic cell, 2. Mitochondria, 3. Nucleus, 4. Chloroplasts, 5. Nuclear membrane

D. 1. It gives protection, and support to plant.

2. They provide green colour to plants.

3. Cytoplasm .

Worksheet-9A

Reproduction in Animals

A. 1. Zygote, 2. Sperm, 3. Egg or Ovum, 4. Internal fertilisation, 5. External fertilisation

B. 1. sperm, ovum; 2. fertilisation takes place; 3. progesterone; 4. fraternal;
5. sexual and asexual

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

D. 1. (a), 2. (b), 3. (d), 4. (b)

Worksheet-9B

Reproduction in Animals

A. **Oviparous animals** : Animals which lay eggs are oviparous animals, for example– fish.

Viviparous animals : Animal which give birth to young ones, for example– dogs.

B. **Sexual Reproduction** : Type of reproduction in which fusion of both male and female gamete takes place, for example– humans.

Asexual Reproduction : Type of reproduction in which only single parent is involved, for example– hydra.

C. **Zygote** : 1. Fertilised egg formed after fusion of sperm and egg. 2. It divides several times to form embryo.

Foetus : 1. Stage of embryo that show all parts of body. 2. It gradually develops into foetus.

Worksheet-10A

Reaching the Age of Adolescence

A. 1. adolescence, 2. larynx, 3. menarche, 4. testosterone, 5. progesterone, 6. Boy child,
7. Endocrine gland, 8. adolescence

B. 1. Womb, 2. thyroid, 3. menopause, 4. faster, 5. politely

C. 1. True, 2. True, 3. False, 4. True, 5. True, 6. False

Worksheet-10B

Reaching the Age of Adolescence

- B.** 1. Pancreas secrete hormones namely insulin which control diabetes.
2. **Boy**– Deepening of voice, broad shoulder, wide chest, grow of facial hair, i.e., moustaches and beard.
Girl– Their hips become more round and they get a more defined waist. The vulva vagina and nipples get bigger and the breasts begin to develop.
3. It is located behind your nose near the underside of brain.
- C.** 1. menopause, 2. thyroxine hormone, 3. pituitary gland

Worksheet-11A

Force and Pressure

- A.** 1. Force, 2. Contact force, 3. Pressure, 4. Atmospheric pressure.
- B.** From the given activity, we can conclude that a liquid exerts pressure on walls of the container.
- C.** 1. (a), 2. (c), 3. (a)
- D.** 1. downward, 2. shape and size, 3. muscular force, 4. Newton, 5. atmospheric pressure

Worksheet-11B

Force and Pressure

- A.** 1. Muscular force, 2. We apply force on ground against frictional force., 3. East. 4. 760 mm of mercury column.
- B.** 1. When we walk on the ground the friction acts against the direction of motion.
2. Air offers friction.
3. Rolling friction is less than sliding friction.
4. Elephants damage the ground less than that of Goats.
5. Pressure depends on area of contact.
- C.** 1. (v), 2. (i), 3. (iv), 4. (ii), 5. (iii)

Worksheet-12A

Friction

- A.** 1. (c), 2. (a), 3. (c), 4. (b)

- B.** 1. (iv), 2. (i), 3. (ii), 4. (iii)

C.



Static friction



Rolling friction

Rolling friction

- D.** Frictional force.

Worksheet-12B

Friction

- A. 1. Writing with pen needs friction.
2. Walking is not possible without friction.
3. Vehicle moves and stop because of friction.
- B. 1. (iii), 2. (iv), 3. (i), 4. (v), 5. (ii)
- C. 1. Friction, 2. Gauges, 3. Lubricant, 4. Rolling friction, 5. drag
- D. 1. (b), 2. (b), 3. (a), 4. (d)

Worksheet-13A

Sound

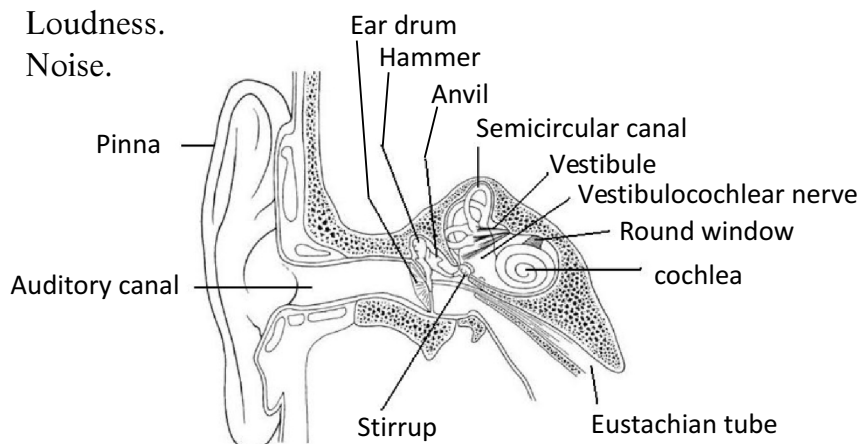
- A. 1. larynx, 2. vacuum, 3. frequency, 4. 20Hz-20 KHz
- B. 2.
- C. 1. (c), 2. (a), 3. (a), 4. (a), 5. (c)
- D. 1. It is a form of energy that travel in form of vibration through a material medium.
2. The to and fro motion of an object is called vibration.
3. Greatest distance that a wave moves up and down is called amplitude.

Worksheet-13B

Sound

- A. 1. Time period, 2. Frequency, 3. 10dB, 4. 20Hz-20KHz, 5. 100 db
6. solid, liquid and gas.
- B. 1. Bouncing of ball.
2. To and fro of motion of an object about its mean position
3. Loudness.
4. Noise.

C.



- D. Sounds of vehicle, loudspeakers, machines, etc.
- E. 1. Silencing devices must be installed in engines of vehicles.
2. Use of automobile worn should be minimised.

Worksheet-14

Chemical Effects of Electric Current

- A. 1. Conductor, 2. Electrolysis, 3. Electrolysis, 4. Anode
- B. 1. anode, 2. electroplating, 3. good conductor, 4. galvanometer, 5. chromium, 6. acid, bases and salt, 7. conductor
- C. 1. This is because coating of zine protect iron and prevents it to corrode.
2. No.
3. Heating effect of current.
- D. 1. It is an electrical test equipment used to determine the presence of current in a circuit.
2. Process of depositing a layer of any desired metal on another material by means of electricity.
3. It is rate of flow of electric charge through a cross-section of area per unit time.

Worksheet-15

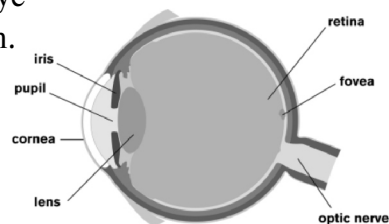
Some Natural Phenomena

- A. 1. (a), 2. (a), 3. (a), 4. (a)
- B. 1. seismograph, 2. crust, 3. resin, 4. negative and positive charge, 5. earthquake
- C. 1. On 26 Dec 2004, in western coast of Northern Sumatra.
2. An earthquake is sudden shaking or trembling of earth. It is caused by deep disturb once inside earth's crust.
3. Boundaries where earthquake tend to occur of earth's plates. Kashmir, Rann of Kutch, Rajasthan are some fault zones in India.
- D. **Do's during a thunderstorm :** 1. find safe, enclosed shelter, 2. stay away from window and door, 3. stay power lines away of damaged.
Don'ts during a thunderstorm : 1. Do not stay in open spaces, 2. Do not use electronic equipment, 3. Never stand near tall structure.

Worksheet-16

Light

- A. 1. multiple reflection, 2. incident, 3. infinite, 4. normal ray, 5. rods, 6. virtual
- B. 1. (iv), 2. (i), 3. (v), 4. (ii), 5. (iii)
- C. The main part of eye are– cornea, iris, pupil, ciliary muscles, eye lens, retina and optical nerves which are labelled in the diagram.
Image formation : The light rays coming from object enter through of eye, pass through the pupil of the eye and fall on the eye lens. The eye lens is a convex lense, so it produces real and inverted image of object. The optical nerve conveys the image formed on retina to brain and we get sensation of vision.



Worksheet-17

Stars and the Solar System

A. 1. satellite, 2. Jupiter, 3. Moon, 4. Artificial satellite, 5. Aryabhata

B. Do yourself.

C. Stars :

1. Stars are dot shaped.

2. Have their own light.

3. Stars twinkle.

4. Stars are of large size.

5. Position of stars are fixed.

Planets :

1. Planets are of spherical shape.

2. Do not have their own light.

3. They do not twinkle.

4. They are smaller than stars.

5. Planets revolve around sun.

D. 1. False, 2. True, 3. False, 4. True, 5. False, 6. False

Worksheet-18

Pollution of Air and Water

A. 1. (b), 2. (d), 3. (c), 4. (d)

B. 1. Carbon dioxide, methane

2. Sulphur dioxide, nitrogen oxides

3. Burning of fossil fuel, volcanic eruption

4. Sewage, harmful factory discharges.

C. 1. Compressed Natural Gas

2. Chloro Fluoro Carbon

3. Liquefied Petroleum Gas

4. Reduce Recycle Reuse

Worksheet-1

When, Where and How

- A. 1. The British felt the need to preserve all the important official documents and letters.
2. The British also established specialised institutions such as archives and museums to preserve important records.
3. An archive is a collection of historical records as well as the place they are located while museum is a building or institution that cares for the collection of artifacts and other objects of scientific, artistic or historical importance and makes them available for public viewing through exhibits.
- B. 1. (iii); 2. (iv); 3. (i); 4. (ii)
- C. 1. (d); 2. (b); 3. (c)

Worksheet-2

The Rise and Growth of the Company Power

- A. 1. **Musket** : An early type of long gun that was used by soldiers in the past.
2. **Charter** : A written statement of the rights, beliefs and purposes of an organisation or a particular group of people.
3. **Mufti** : A muslim legal expert who is empowered to give rulings on religious matters.
- B. 1. (ii); 2. (iv); 3. (iii); 4. (i); 5. (v); 6. (vi)
- C. 1. Tipu Sultan; 2. The Battle of Plassey; 3. Portuguese explorer; 4. East India Company set up trading establishments on the east and west coasts of India and in Bengal.
- D. 1. True; 2. False; 3. True; 4. True; 5. False

Worksheet-3

Agrarian Structure under the British

- A. 1. (ii); 2. (iv); 3. (i); 4. (iii)
- B. Because the price they got for the indigo they produced was very low. The planters insisted that indigo be cultivated on the best soils in which peasants preferred to cultivate rice.
- C. 1. (c); 2. (b); 3. (b); 4. (b)
- D. **Mahalwari Settlement**
1. Started by Holt Mackenzie.
 2. The land revenue was not fixed.
 3. The village headman collected the revenue.
- Permanent Settlement**
- Started by Lord Carnwallis.
The land revenue was fixed.
Zamindars collected revenue.

Worksheet-4

Colonialism and Tribal Societies

- A. 1. (c); 2. (d); 3. (d); 4. (a)
B. 1. forests; 2. baigas; 3. settle, down; 4. state; 5. Mundas, Chottanagpur
C. 1. False; 2. False; 3. True; 4. False; 5. True
D. 1. (ii); 2. (i); 3. (v); 4. (iv); 5. (iii)

Worksheet-5

Crafts, Industries and Colonialism

- A. 1. (b); 2. (c); 3. (c)
B. 1. Indian; 2. Patola sari; 3. 1799; 4. John Kaye; 5. Ahmedabad; 6. Air pump
C. 1. True; 2. False; 3. True; 4. False; 5. False; 6. True
D. 1. (iv); 2. (i); 3. (ii); 4. (iii)

Worksheet-6

The Revolt of 1857

- A. 1. (a); 2. (d); 3. (b); 4. (b)
B. 1. Bahadur Shah Zafar; 2. British Garrison; 3. Tantia Tope; 4. high taxes, revenue; 5. Sati, remarriage
C. 1. True; 2. False; 3. True; 4. True; 5. False
D. 1. (iv); 2. (i); 3. (ii); 4. (iii)

Worksheet-7

Urban Changes under Colonialism

- A. 1. (b); 2. (a); 3. (c); 4. (c); 5. (a)
B. 1. True; 2. False; 3. True; 4. False; 5. True
C. 1. (iii); 2. (i); 3. (iv); 4. (v); 5. (ii)

Worksheet-8

Religious Developments in the Medieval Period

- A. 1. Dr. Sarvepalli Radhakrishnan, author, scholar, Bharat Ratna recipient and the first Vice President and second President of independent India, was born on September 5, 1888.

Teacher's Day is celebrated on his birthday to commemorate his work. He was passed away on 17 April, 1975.

2. Sir Jagadish Chandra Bose was a biologist, physicist, botanist and an early writer of science fiction. He was born on November 30, 1858 in Bangladesh. He pioneered the investigation of radio and microwave optics, made significant contributions to plant science and laid the foundations of experimental science in the Indian subcontinent. He was passed away on 23 November, 1937.
 3. Raja Ram Mohan Roy was born on 22 May 1772. He was one of the founders of the Brahmo Sabha, a social-religious reform movement in the Indian Subcontinent. He was known for his efforts to abolish the practices of sati and child marriage. He is considered to be the "Father of the Bengal Renaissance" by many historians. He was passed away on 27 September, 1833.
 4. Pandit Madan Mohan Malaviya was born on 25 December, 1861. He was also addressed as Mahamana. He was the founder of Banaras Hindu University and Akhil Bharatiya Hindu Mahasabha. He was an Indian scholar, educational reformer and politician notable for his role in the Indian independence movement, as the three times president of Indian National Congress.
- B.**
- Punjab University — 1882 — (Chandigarh)
 - University of Allahabad — 1887 — (Allahabad)
 - Banaras Hindu University — 1919 — (Varanasi)

Worksheet-9

Women and Reform

- A. 1. Sati :** A former practice in India whereby a widow threw herself on to her husband's funeral pyre.
- 2. Untouchables :** A member of the lowest-caste Hindu group or a person outside the caste system, contact with whom is traditionally held to defile members of higher castes.
- B. 1. Dr. B. R. Ambedkar** was a very well-known politician, eminent jurist, buddhist-activist, philosopher, anthropologist, historian, writer, editor, economist too. He fought to eradicate the social evils like untouchability and for the rights of the dalits and other socially backward classes throughout his life.
- 2.** On two main principles equality and absence of casteism.
- C. 1.** Dublas of Gujarat carrying mangoes to the market.
- 2.** Dublas laboured for upper cast landowners, cultivating their fields, and working at a variety of odd jobs at the landlord's house.
- D. 1.** (v); **2.** (iv); **3.** (vi); **4.** (i); **5.** (iii); **6.** (ii)

Worksheet-10

Lower Caste Reform Movements

- A. 1.** It was a Sikh movement that began in Punjab in the 1870s in reaction to the proselytising activities of Christians, Hindu reform movements.

2. It was started by those non-brahman castes that had acquired access to education, wealth and influence.
 3. Madigas are artisan community from Southern India. They mainly live in the states of Andhra Pradesh, Telangana and Karnataka.
 4. Sakyashodhak Samaj was a social reform society founded by Jyotirao Phule in Pune, Maharashtra. It espoused a mission of education and increased social rights and political access for underprivileged groups.
- B.** Jyotirao Phule was an Indian social activist, thinker, anti-caste social reformer and writer from Maharashtra. His work extended to many fields, including eradication of untouchability and the caste system.
- C.** 1. The people of lower caste began to organise movements against caste discrimination.
2. They demanded social equality and justice.
- D.** 1. B.R. Ambedkar; 2. Jyotirao Phule

Worksheet-11

The Changing World of Arts : Painting, Literature and Architecture

- A.** 1. (a); 2. (c); 3. (a)
- B.** 1. Maharajas, Travancore; 2. nephew; 3. 7 years; 4. Tipu Sultan
- C.** 1. False; 2. True; 3. True; 4. True
- D.** 1. (vii); 2. (iv); 3. (v); 4. (vi); 5. (ii); 6. (i); 7. (iii)
- E.** 1. Bibhutibhusan Bandyopadhyay; 2. Thomas Deniel

Worksheet-12

The Rise of Nationalism in India (19th Century-1992)

- A.** This picture is associated with salt march. Salt march, also known as Dandi March, was an act of non-violent civil disobedience in colonial India led by Mahatma Gandhi. The 24-day march lasted from 12 March 1930 to 5 April 1930 as a direct action campaign of tax resistance and non-violent protest against the British salt monopoly.
- B.** Satyagraha literally means an appeal for truth. Gandhiji used the method of non-violent struggle against the colonialist powers and termed it as satyagraha.
- C.** Champaran Satyagrah, Rowlett Satyagrah, Dandi March.
- D.** 1. The main aim of the Congress is to provide opportunity to all educational personalities.
2. Partition of Bengal carried out by the British viceroy in India, Lord Curzon, despite strong Indian National Congress form a middle-class pressure group into a nationwide mass movement.
- E.** 1. Fighting for political or social change without using force, for example by not obeying laws.
2. The Rowlatt Act was an act which allowed the British government the authority and the power to arrest people and keep them in prison for up to two years, without any trial if they were suspected with the charge of terrorism.

Worksheet-13

The National Movement (1923-1947)

- A. The Elbert Bill was introduced in 1883. It was introduced during the viceroyship of Lord Ripon. It concerned the jurisdiction of magistrates to be able to conduct trials for charges against Europeans subjects even if they were not themselves European.
- B. 1. Rashtriya Swayamsevak Sangh; 2. Hindustan Socialist Republican Association
- C. The Indian Arms Act, 1878 was an act regulating the manufacture, sale, possession and carrying of firearms. The act included the mandatory licensing to carry a weapon, but contained exclusions for some groups and persons.
- D. Its strong advocacy for the establishment of a separate muslim-majority, nation-state, Pakistan, successfully led to the partition of India in 1947 by the British Empire.
- E. 1. fundamental, police; 2. Non-cooperation; 3. Jawaharlal Nehru; 4. 8, 1942
- F. 1. False; 2. False; 3. True; 4. True; 5. False
- G. 1. (ii); 2. (iii); 3. (iv); 4. (v); 5. (i)

Worksheet-14

India after Independence

- A. An interim government is also known as the provisional government. It is formed to look after internal and external affairs of the country until a new government is elected.
- B. The first flag hoisting ceremony was took place at the Red Fort.
- C. In this meeting Jawaharlal Nehru, the newly elected PM of India delivered his famous speech "Tryst with Destiny."
- D 1. (b); 2. (d); 3. (d)
- E. 1. foreign; 2. USSR; 3. Punjab, Haryana; 4. 336

Worksheet-15

Our Constitution

- A. 1. A system in which the government of a country is elected by the people.
2. Fundamental rights are a group of rights that have been recognized by the Supreme Court as requiring a high day of protection from government encroachment.
- B. 1. (c); 2. (b); 3. (a); 4. (b)
- C. 1. Indian Constitution; 2. Tyranny; 3. Ideal; 4. religion
- D. 1. (vi); 2. (vii); 3. (v); 4. (i); 5. (iv); 6. (ii); 7. (ii)

Worksheet-16

Secularism

- A. 1. A system of doctrines and practices that disregards or rejects any form of religious faith and worship.

2. Coercion is the practice of forcing another party to act in an involuntary manner by use of threats or force.

B. 1. (d); 2. (c); 3. (a)

C. 1. March; 2. 14; 3. National; 4. Muslim

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

E. 1. (iv); 2. (v); 3. (i); 4. (ii); 5. (iii)

Worksheet-17

Our Parliament–Union Legislature

- A. 1. It is a form of government in which political parties co-operate to form a government.
2. The group of people who are elected to make and change the laws of a country.
3. Universal Adult Franchise means that all citizens of a country have the right to vote, irrespective of caste, creed, religion or sex.
4. A person who has an important position as a manager of a business or organization.
5. The district and the residents of a district who elect a legislator or an official.
6. Opposition is something that goes against or disagrees with something or someone else. Just about any political view has opposition.

B. 1. (ii); 2. (iii); 3. (iv); 4. (i)

C. 1. The Prime Minister of India is the leader of the ruling party in the Lok Sabha.

2. Member of Parliament.

D. Lok Sabha

1. It is known as the lower house of the parliament.
2. The members of the Lok Sabha are directly elected by the people.
3. The tenure of Lok Sabha is 5 years.

Rajya Sabha

1. It is known as the upper house of the parliament.
2. The members of the Rajya Sabha are indirectly elected by the members of the Legislative Assemblies.
3. The tenure of Rajya Sabha is 6 years.

Worksheet-18

The Making of Laws

- A. 1. The use of words or actions that are intended to encourage people to be or act against a government.
2. A repressive government is one that restricts people's freedom and controls them by using force.
3. It means that no man is above law and also that every person is subject to the jurisdiction of ordinary courts of law irrespective of their position and rank.
4. Domestic violence is violence committed by someone in the victim's domestic circle. This includes partners and ex-partners, immediate family members, other relatives and family friends.

- B.** Rowlatt Act passed in March 1919 by the imperial legislative council. Impact of the Rowlatt Act on the political situation in India : (i) People organised hartals in cities and railways went on strike. (ii) Shops were closed down. (iii) Leaders were arrested.
- C.** In an independent and democratic India, all citizens from a rickshaw puller to the prime minister are to be judged equally before the law if they violate it by committing a crime.
- D.1.** (iv); **2.** (i); **3.** (ii); **4.** (iii)

Worksheet-19

The Union Executive

- A. 1.** Dr. Rajendra Prasad; **2.** Prime Minister; **3.** President; **4.** President; **5.** President
- B. 1.** (b); **2.** (a); **3.** (d)
- C. 1.** Prime Minister; **2.** Rajya; **3.** governor/chief minister; **4.** 5; **5.** prime minister
- D.1.** F; **2.** T; **3.** F; **4.** T; **5.** T

Worksheet-20

Judiciary

A. Civil Law

- Civil law is a general law which solves disputes between two organisations or individuals.
- Civil law deals with property, money, housing divorce, custody of a child in the event of divorce etc.

B. A small round piece of medicine that you swallow.

C. 1. High Court; **2.** Article 141; **3.** judicial review; **4.** three; **5.** constitution.

D.1. True; **2.** False; **3.** True; **4.** True; **5.** False

E. 1. (i); **2.** (iii); **3.** (iv); **4.** (ii); **5.** (v)

Criminal Law

- Criminal law deals with offences that are committed against the society.
- Criminal law will deal with serious crimes such as murder, rapes, arson, robbery, assault etc.

Worksheet-21

The Police and the Courts

- A. 1.** It is a written formal order to carry out a function/command. In India, the Supreme Court and High Court has the authority to file the petition.
- 2.** The lawyer representing the defendant.
- 3.** It is unrelated facts that when considered together, can be used to infer a conclusion about something unknown.

4. When a lawyer cross-examines someone during a trial or hearing, he or she questions them about the evidence that they have already given.
 5. The acknowledgment of sinfulness in public or private regarded as necessary to obtain divine.
 6. The act or fact of detaining or holding back.
 7. Bail is cash, a bond or property that an arrested persons gives to a court to ensure that he or she will appear in court when ordered to do so.
 8. To relieve from a charge of fault or crime; declare not guilty.
- B.** A public prosecutor represents the state in any criminal case. It has to act impartially while examining facts and witnesses. He/she then has to present his/her arguments based on the evidences before the court.
- C.** 1. (iv); 2. (v); 3. (ii); 4. (iii); 5. (i)
- D.** 1. True; 2. True; 3. False; 4. False

Worksheet-22

Social Justice and the Marginalised

- A.** A stereotype is a mistaken idea or belief many people have about a thing or group that is based upon how they look on the outside, which may be untrue or only partly true.
- B.** 1. They are losing their lands and access to the forests. Due to these things they lose their main sources of livelihood and food.
2. Having gradually lost access to their traditional homelands, many adivasis have migrated to cities in search of work where they are employed for very low wages in local industries or at building or construction sites.
- C.** 1. (iv); 2. (i); 3. (ii); 4. (iii)
- D.** 1. (a); 2. (c); 3. (b)
- E.** 1. True; 2. True; 3. False; 4. False; 5. True

Worksheet-23

Untouchability– A Social Evil

- A.** 1. A member of the lowest-caste Hindu group or a person outside the caste system, contact with whom is traditionally held to defile members of higher castes.
2. It is the practice of ostracising a minority group by segregating them from the mainstream by social custom or legal mandate.
- B.** 1. True; 2. True; 3. False; 4. False
- C.** The people of India are divided based on their caste or jobs they do is called the caste system in India. From ancient times, there are four classes of people in Indian society,

namely, Brahmans, Kshatriyas, Vaishya and Shudra. Many believe that the groups originated from Brahma, the Hindu god of creation.

D. 1. (c); **2.** (d); **3.** (b)

Worksheet-24

The Government and Economic Development

- A. 1.** The equipment and systems that keep places clean, especially by removing human waste.
2. Sulabh is a non-government organisation which has been working for three decades to address the problems of sanitation facing low-caste, low income people in India.
- B. 1.** (a); **2.** (d); **3.** (c); **4.** (b)
- C. 1.** cattle; **2.** life, 21; **3.** public facilities; **4.** public; **5.** failure
- D. 1.** False; **2.** True; **3.** True; **4.** False
- E. 1.** (iii); **2.** (i); **3.** (iv); **4.** (ii)

Worksheet-25

Resources

- A. 1.** (c); **2.** (a); **3.** (d); **4.** (d)
- B. 1.** Potential resources are those which exist in a region and which can be used in the future, while, actual resources are those which have been surveyed, their quantity and quality determined and are being used in present times.
2. Natural resources that are found everywhere are called ubiquitous resources like air, while natural resources that found in a particular place are called localized resource like copper or iron.
- C.** Migration is the movement of either people or animals from one area to another.
- D. 1.** Utility; **2.** Time, technology; **3.** biotic, abiotic; **4.** electric

Worksheet-26

Abiotic Resources : Land, Soil and Water

- A. 1.** Temperature and rainfall.
2. (i) Agricultural depletion of soil nutrients through poor farming practices.
(ii) Livestock including overgrazing and overdrafting.
3. (i) We should encourage rainwater harvesting.
(ii) We should treat waste from factories before releasing it into water.
(iii) We should use a sprinkler for irrigation.
- B. 1.** True; **2.** True; **3.** True; **4.** False
- C. 1.** (b); **2.** (a); **3.** (b)

D. 1. (iii); 2. (i); 3. (v); 4. (ii); 5. (iv); 6. (vi)

Worksheet-27

Biotic Resources : Natural Vegetation and Wildlife

A. 1. (c); 2. (b); 3. (c); 4. (c)

B. 1. (iii); 2. (i); 3. (ii); 4. (iv)

- C. 1. CITIES full form is Conventional Trade in Endangered Species. It is international or multilateral treaty that is used to protect Endangered Species from extinction.
2. Vegetation provides shelter to animals and provides us with timber and many other forest produce. Wildlife such as animals, birds, insects as well as the aquatic life forms comprise the wildlife. We get meat and leather from animals. Honey bees provide us with honey.
 3. The breaking down or dissolving of rocks and minerals on the surface of the earth. Water, ice, acids, salts, plants, animals and changes in temperature are all agents of weathering.

Worksheet-28

Mineral Resources

A. 1. (iv); 2. (i); 3. (ii); 4. (iii); 5. (v)

- B. 1. A natural substance such as coal, salt, oil, etc., especially one that is found in the ground. Some minerals are also present in food and drink and are very important for good health.
2. Properties that help geologists identify a mineral in a rock are : colour, hardness, luster, crystal forms, density and cleavage.
 3. Smelting is a form of extractive metallurgy to produce a metal from its ore.

C. 1. True; 2. True; 3. False; 4. True

- D. 1. Odisha, Jharkhand, Chhattisgarh, Karnataka
2. Maharashtra, Madhya Pradesh, Odisha, Andhra Pradesh
 3. Odisha, Gujarat, Jharkhand, Maharashtra

Worksheet-29

Power Resources

- A. 1. Because it is found buried under the earth and is as important a source of energy as sunshine.
2. Power resources means the sources of energy available to us needed for driving machineries in industries, fuel in the transport sector, provide light and heat for domestic and industrial use.

3. (i) Water can be used to generate power and electricity.
(ii) Hydro-electricity which uses renewable water resources for generating electricity.
4. (i) Turn off the fan when we leave a room.
(ii) Close our drapes or drop our window shades during the day.
(iii) Wash our clothes in cold water.
(iv) Wrap or cover foods and drinks in the refrigerator.
(v) Always use the cold water faucet, unless we really want hot water.

B. 1. Natural Gas

- (i) It is a non-renewable source of energy.
- (ii) It is formed from fossil fuel.
- (iii) It is formed from the organic matter via geological processes.

2. Conventional Sources of Energy

- (i) It is non-renewable.
- (ii) They cause pollution.
- (iii) Coal, petroleum and natural gas are their example.

Biogas

- (i) It is renewable source of energy.
- (ii) It is formed from the break-down of organic matter in the presence of anaerobic bacteria.
- (iii) It is formed from the breakdown of organic matter via biological process.

Non-Conventional Sources of Energy

- (i) It is renewable.
- (ii) They do not cause pollution.
- (iii) Solar and wind energy are their example.

Worksheet-30

Agriculture

A. 1. (c); **2.** (b); **3.** (b); **4.** (a)

B. 1. tertiary; **2.** Assam, West Bengal; **3.** millets; **4.** Swidden agriculture

C. 1. In the north eastern states of India, shifting cultivation or slash-and-burn agriculture is known as jhumming. In this type of farming farmers usually choose a forest area, then cut it down and burn it. The farmers then cultivate the land.

2. Arable land is the land that can be used for agriculture. The term is derived from the latin work 'arere' meaning, to plough.

3. The action or practice of moving livestock from one grazing ground to another in a seasonal cycle, typically to lowlands in winter and highlands in summer.

4. The production of raw silk by means of raising caterpillars.

5. Viticulture is the scientific study of grapes, most often with a focus on growth and production.

Major Industries

A. 1. Agro-based Industry

- (i) It is a source of employment for people in rural areas.
- (ii) Agro-based industries use plant and animal based products as their raw materials.
- (iii) Food processing, vegetable, oil, cotton, textile, dairy products and leather industries are examples of agro-based industries.

2. Public sector

Public sector is completely owned and controlled by the government.

Mineral-based industry

- (i) It is a source of employment for both rural and urban populations.
- (ii) Mineral-based industries are primary industries that use mineral ores as their raw materials.
- (iii) Steel and iron industries and heavy machinery industries are examples of minerals based industries.

Joint sector industry

Joint sector enterprise, implies shares the ownership between government and private entrepreneurs.

B. 1. (iii); **2.** (iv); **3.** (i); **4.** (ii)

C. The IT industry is a broad, sweeping term that covers many information technology oriented organization. These organization provide IT services to their customers.

D. It has helped in modernising agriculture by manufacturing tractors, tools and machines used in cultivation. Manufacturing industries have helped in eradication unemployment and poverty. It has helped in the growth and boom in economy.

Computer-8

Worksheet-1A

Network and Data Communication

- A. 1. (i); 2. (iv)
B. 1. (vi); 2. (iv); 3. (v); 4. (iii); 5. (i); 6. (ii)
C. 1. Star; 2. Office; 3. Network; 4. Wi-fi, Bandwidth; 5. wireless, wired
D. Modem stands for Modulator-demodulator. A modem converts digital signals generated by the computer into analog signals which can be transmitted over a telephone or cable line and transform incoming analog signals into their digital equivalents.

Worksheet-1B

Network and Data Communication

- A. Ring Topology, Star Topology, Tree Topology, Mesh Topology
B. 1. False; 2. True; 3. True
C. 1. Network Interface Controller
2. Wide Area Network
3. Transfer Control Protocol
4. Hypertext Transfer Protocol
5. Domain Name System
6. Simple Mail Transfer Protocol
7. Local Area Network

Worksheet-2A

Computer Programming Concepts

- A. 1. (iv); 2. (iii); 3. (i)
B. 1. (i); 2. (vi); 3. (v); 4. (iii); 5. (iv); 6. (ii)
C. 1. Structured Query Language
2. Modular programming is the process of subdividing of a computer program into separate sub-program.
3. Java is the language that has both compiler and interpreter.
4. Object oriented programming is a computer programming model that organizes software design around data or objects, rather than function and logic.

Worksheet-2B

Computer Programming Concepts

- A. 1. Mnemonic codes; 2. binary language; 3. source code; 4. rules

B. 1. True; 2. False; 3. False; 4. False

C. Compiler

1. It generates intermediate object code.
2. It reads entire program for compilation.
3. Memory management is high.
4. Execution time is less.
5. Example : C, C++

Interpreter

It won't generate intermediate code.
It reads the single instruction as it is.
Memory management is less.
Execution time is fast.
Example : Python, Ruby

D. 1. Common Business Oriented Language

2. Beginner's All-purpose Symbolic Instruction Code.
3. Formula Translation
4. Master of Social Work Logo
5. Hypertext Markup Language

Worksheet-3A

Java Statements

A. 1. (ii); 2. (iii); 3. (iv); 4. (i)

B. 1. (i); 2. (iv); 3. (iii); 4. (v); 5. (ii)

C. 1. While loop

2. Java Command line Argument
3. Conditional Statements

Worksheet-3B

Java Statements

A. 1. Block; 2. Command; 3. Conditional; 4. next

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

C. public class rectangle {

```
public static void main (String args [ ])
{
int width = 5;
int height = 10;
int area = width * height ;
system.out.println ("Area of rectangle = "+area);
}
}
```

output : Area of rectangle = 50

D. Continue

Continue statement resumes the control of the program to the next iteration of that loop enclosing 'continue' and made executional flow inside the loop again.

Break

Break statement resumes the control of the end of the loop and made executional flow outside that loop.

Worksheet-4A

Looping Statements in Java

A. In Java we have three types of loops :

(a) for loop

(b) while loop

(c) do-while loop

B. While Loop

While (condition)

```
{
statements (Body of the loop);
increment / decrement;
}
```

For Loop

```
For (initialization ; condition ;
increment / decrement)
{
statements ; (Body of the loop)
}
```

C. 1. Loop; 2. For Loop; 3. Jump statement; 4. Break

D. 1. (iii); 2. (i); 3. (iv); 4. (v); 5. (ii)

Worksheet-4B

Looping Statements in Java

A. 1. (ii); 2. (iii); 3. (iii); 4. (i)

B. 1. Program; 2. do-while, for, if-else; 3. comments; 4. reserved; 5. true

C. 1. For-loop is the most common type of iterative statement in Java. It is used to repeat a set of statements depending upon a condition test. It is an entry controlled loop, i.e., the condition is checked before entering the body of loop.

2. Continue statement is mostly used inside loops whenever it is encountered inside a loop the control directly jumps to the starting point of the loop to start the next iteration skipping the execution of statements inside the loop's body for the current iteration.

Worksheet-5A

HTML Forms

A. 1. `<input type = "image">`; 2. select list; 3. (iii) Method attribute

B. 1. (ii); 2. (iv); 3. (i); 4. (iii)

C. 1. Hypertext markup language; 2. SGML; 3. ``; 4. HTMLS; 5. HEADtag

D. 1. (iii); 2. (iv); 3. (i); 4. (v); 5. (ii)

Worksheet-5B

Creating Tables and Hyperlinks in HTML

A. 1. (i); 2. (iv); 3. (i); 4. (ii)

B. 1. table; 2. table <tr>; 3. table <th>; 4. hyperlink; 5. HREF, SRC

C. **bordercolor**

Border color means the color given to the border.

<table border = “border color=”>

bgcolor

BG color means background color it is given to the page.

<bg colour = “color”>

D. **rowspan**

The rowspan attribute in HTML specifies the number of rows a cell should span.

colspan

The colspan attribute defines the number of columns a cell should span.

E. An anchor tag <A> is an HTML tag. It is used to define the beginning and end of a hypertext link. Search engines use the tag to determine the subject matter of the destination URL. Users click on the anchor text to reach the link target.

Worksheet-6A

Adobe Flash Professional CS3

A. 1. (iv); 2. (ii); 3. (iii); 4. (i); 5. (i)

B. 1. zero; 2. line tool; 3. selection tools; 4. flash file option; 5. pixel

C. The six major elements of flash interface are :

Timeline, stage, work area, information bar, toolbox and the panels.

Worksheet-6B

Adobe Flash Professional CS3

A. 1. (vi); 2. (i); 3. (v); 4. (ii); 5. (iv); 6. (iii)

B. **Selection tools** : The selection tools are what you will use to select portion of an image to edit. While each of these tools are for selection they differ in how they go about selecting.

Drawing and Painting tools : Drawing tools allows the user to draw either using a spray pencil, airbrush or paint tool.

Painting tool used to change the area of the canvas and image by adding paint strokes or filling the areas with color.

Color and IK Bones : Inverse kinematics (IK) is a way of animating objects using bones chained relationship.

Color is used for color the objects and steps.

Zooming and Panning : Zooming is using the less to get closer or wider for the subject.

Panning is horizontal or vertical tilt of the camera.

Stroke and Fill : Stroke is line drawing. Fill is “coloring in” (for want a letter).

So in the case of shape (like a circle) the stroke is the border (circumference) and the fill is the body (interior).

Tool Options : Tools within tool groups are now available in the tool options panel. We find all tools options now nearly arranged.

Worksheet-7A

Graphics and Symbols in Flash

A. 1. (i); 2. (i); 3. (iii); 4. (ii); 5. (vi); 6. (iv)

B. 1. The Oval tool; 2. Text tool; 3. Drawing tool; 4. **Graphic Symbol** ; 5. Ink; 6. Hand tool; 7. The Paint Bucket Tool

Worksheet-7B

Graphics and Symbols in Flash

A. **Step 1** : Click the line tool in the toolbar.

The pointer becomes a crosshair that we can drag on the stage.

Step 2 : Click and drag on the stage and then release the mouse when the line is the length you need.

Step 3 : To change line properties, click to select the stroke and then specify the options, you want in the Property Inspector.

B. This tool allows us to easily create complex vector shapes. We can use this tool to create polygons and stars with up to 32 sides.

C. **Straighten** : This is the default option. This mode automatically straighten the line drawn by the Pencil tool. Drawing with the straighten option processes our drawings while taking into account both line and shape recognition. This means that nearly straight lines are straightened and wobbly curves are smoothed.

Smooth : Drawing with smooth option reduces the zeal with which flash automatically processes our drawings. With the smooth option, line straightening and shape recognition.

Ink : The pencil tool has three processing options. Two are straighten and smooth, the third for those who prefer the characteristics of hand writing is ink mode.

D. **Ink Bottle tool**

It is used to switch the color and style of a figure.

Paint Bucket tool

It is used to fill enclosed areas with color, gradients or bitmap fills.

E. The Lasso tool is useful for drawing freeform segments of a selection border. Select the Lasso tool, and set feathering and anti aliasing in the option bar. They are the Lasso polygonal Lasso and Magnetic Lasso. They are mainly used for outlining objects.

F. **Hand tool**

Hand tool is used to move the stage.

Zoom tool

Zoom tool is used to magnify the picture.

G. To reshape a line or shape outline, drag any point on a line using the selection tool. The pointer changes to indicate what type of reshaping it can perform on the line or fill. Animate adjusts the curve of the line segment to accommodate the new position of the moved point.

H. We can specify how aggressively flash should close gaps by using the gap size modifier, which appears in the Options tray of the tools panel when the paint bucket tool is active. Settings include Don't Close Gaps, Close Small Gaps, Close Medium Gaps and Close Large Gaps.

Worksheet-8A

Introduction to Microsoft Access

- A. 1. (v); 2. (iv); 3. (ii); 4. (iii); 5. (i)
B. 1. True; 2. False; 3. True; 4. False; 5. True
C. 1. Text formatting; 2. Columns; 3. Default Field Value; 4. Microsoft Access

Worksheet-8B

Introduction to Microsoft Access

- A. 1. Excel worksheet; 2. Application Paths; 3. structure; 4. relate; 5. quick start
B. 1. (iv); 2. (iv); 3. (ii); 4. (iii); 5. (iv)
C. 1. Click more.. under the open options.
2. If necessary, open the look in drop-down list box to select another drive or directory.
3. Click to select the filename of the database you want to open.
4. Click open. Access opens the database.

Worksheet-9A

Queries, Forms and Reports

- A. 1. A precise request for information retrieval with database and information systems is called query.
2. A form is a window or screen that contains numerous fields or spaces to enter data. Each field holds a field label so that any user who views the form gets an idea of its contents.
3. A report is a concise summary distilled from a larger set of data, intended for a specific audience.
B. 1. (v); 2. (iii); 3. (i); 4. (ii); 5. (iv)
C. 1. False; 2. False; 3. True; 4. True; 5. True
D. 1. Open the Navigation pane,
2. Click the table or query on which we want to base our form.
3. Activate the create tab.
4. Click split form in the forms group. Access creates a split form.

Worksheet-9B

Queries, Forms and Reports

- A. 1. (ii); 2. (i); 3. (iv); 4. (v); 5. (iii)
B. 1. True; 2. False; 3. False; 4. True; 5. False
C. 1. Database Query; 2. SORT; 3. MS Access; 4. Create tab
D. 1. (iii); 2. (iii); 3. (ii)

List box : Draws a list box.

Timer : Places a timer on a form.

Image box : Used for displaying images on the form.

Drive list box : Draws a drive list box that displays all the disk drives available.

Data control : Draws a control to link program to database file.

OLE : Draw a box to insert an OLE object.

Directory list box : Draws a directory list box that displays a directory on a particular disk driver.

Shape : Draws a geometric shape such as a circle or a square.

Line : Draws a line.

Worksheet-12

Operators and Functions in Visual Basic

- A.** An operator is a special symbol which indicates a certain process is carried out. Operators in programming languages are taken from mathematics. Programmers work with data. The operators are used to process data. An operator may have one or two operands.
- B.** 1. (i); 2. (ii); 3. (i)
- C.** 1. Dynamic; 2. & operator, + operator; 3. 255; 4. Debugging
- D.** 1. (vi); 2. (v); 3. (i); 4. (iii); 5. (ii); 6. (iv)

Worksheet-13

Statements and Loops in VB

- A.** Loop structures allows us to run one or more lines of code repetitively. We can repeat the statements in a loop structure untill a condition is True, until a condition is False, a specified number of times, or once for each element in a collection.
- B.** 1. Toolbar; 2. Object browser; 3. Frame; 4. Maxlength
- C.** 1. Multiple Document Interface; 2. Timer; 3. local; 4. Public Constants; 5. Sub procedure
- D.** 1. False; 2. True; 3. False; 4. False; 5. True

