BRAIN BUILDER Series

Reduce Bag
Term Book

Teacher's Manual

Class V

Vidyalaya Prakashan
(Publishers of Quality Educational Books)
An ISO 9001 : 2008 Certified Co.
NEW DELHI

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Vidyalaya Prakashan

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Sales Office :

C-24, Jwala Nagar, Transport Nagar, Meerut - 250002

Ph. : 0121 - 2400630, 8899271392

Head Office :

A-102, Chandar Vihar, Delhi - 110092

Website :

www.vidyalayaprakashan.com

Semester – I

English

Lesson –1 : The Noble Horse

Comprehension

1. (a) He had the most beautiful horse in the world.
   (b) Seven kings are marching against the city.
   (c) And thus, he defeated five kings.
   (d) But he had to go back to fight.
   (e) The horse then, very badly wounded fell to the ground.
   (f) But the noble horse and his words were never forgotten.
2. (a) King Brahmadatta ruled over the kingdom of Benaras.
   (b) King Brahmadatta had a noble horse. The horse was as swift as the deer and graceful as a swan.
   (c) The other kings wanted to conquer the kingdom of Benaras.
   (d) When we went to capture the sixth king, the knight's horse was wounded.
   (e) The noble horse said, "Brave knight unless you take me, you cannot win the battle. So put my armour on my back once more and we will win the battle together."
   (f) Yes, because the noble horse has asked him to do so.

Word Knowledge

1. (a) most (b) grandest
   (c) seven (d) second
   (e) able (f) difficult
2. ungreat favour
   under defeated
   slow friend
   love separate
   victorious capture

Grammar Skill

1. (a) was cooking food
   (b) was chewing tree branches
   (c) were yielding milk
   (d) was learning lesson
   (e) was arriving at the platform
2. (a) have departed (b) has gone
   (c) has said (d) has broken
   (e) have made (f) has opened

Composition

To

The Principal

Academy

Dehradun

Respected Sir,

I beg to state that I was issued a book titled "English Grammar" written by Neshfield by the librarian last month. I searched it but could not find anywhere. It is my moral duty to inform you about the missing book. Kindly grant me two days for the arrangement. I shall purchased it from the market and deposit in the library. I shall be highly obliged to you.

With thanks

Dated : Your obediently

Lesson – 2 : Town And Country

Comprehension

1. (a) (iv) (b) (i) (c) (iv)
   (d) (iii) (e) (ii) (f) (ii)
2. (a) The home of the town child is in the busy town.
   (b) The motors rush along the street.
   (c) Wheat fields are around the home of the country child.
   (d) The country's child father works from morning till

evening, tilling the dusty grounds.

(e) Children jump, shout and run in the park.

Word Knowledge

1. around, ground, tree, we
2. plane bail day
   pane write night
3. ie, ie, ie, ie, ei, ie

Grammar Skill

1. (a) typing (b) walking (c) gambling
   (d) walking (e) reading (f) writing
2. (a) I liked potatoes to eat.
   (b) He saw an elephant.
   (c) We were present in the class.
   (d) They have spoken the truth.
   (e) Prashant had fallen ill.
   (f) The dog was under my cot.
3. (a) true (b) false (c) true
   (d) false (e) true

Composition

Last Sunday we went to see the zoo in Delhi. We visited the cage of the lions. There were two lions and one lioness inside the cage. They were sitting on the ground. From there we visited the birds. Various types of birds were sitting on the pipes. They were chirping. At the end of the zoo there was a crocodile in the pond. It was floating on the water. At last we went to the monkeys cage. They were looking at us.

Lesson – 3 : The Message of The Lion

Comprehension

1. (a) Rohit went on a tour with his class-mates and teachers.
   (b) Rohit's teacher ask them not to go into the deep

forest.

(c) They were astonished to see the sight. The lion was moaning in a cage under a big tree. The lion was fainted due to hunger.

(d) Sahil and Vibhor refused Rohit to open the cage of the hungry lion because it might attack on him.

(e) Yes, the lion rushed upon the boys.

(f) How we are wrong to you? The elephant trumpted "Last year some hunters caught my mother - in chains and sold to the owner of a circus."

(g) The forest trees said, "The man makes us victims. We have been serving man since long. We are providing him with timber, fuel, fruits, flowers and purifying the atmosphere by released oxygen and absorbing carbondioxide. Even then he cut us. This boy is one of them and he will also follow ancestors so kill him at once.

(h) The lion thought for a moment and said, "I heard every body but hope you thought that this man made me free from the cage in which I was put by another man. We should be grateful for his kindness and why should we punish him for others guilt." The lion did not kill Rohit and he was allowed to join his class-mates.

2. (a) teacher (b) vibhor (c) teacher
   (d) elephant (e) tree (f) lion

Word Knowledge

1. (a) moment (b) astonished (c) reminded
   (d) gift (e) majesty (f) parrot

2.

A	B
Hissing	sound made by a snake.
Oxygen	gas needed for living.
Carbon dioxide	gas consumed by plants for their food.
Forest	an area full of trees.
Purify	make free from impurities

Grammar Skill

1. (a) No, the children were not in the forest.
   (b) Yes, the teachers were with the boys.
   (c) Yes, the monkey was on the tree.
   (d) No, the elephant and deer were not near the lion.
   (e) Yes, it is wrong to kill the animals for our benefit.
2. (a) Alas (b) Hurrah (c) How
   (d) wow (e) what (f) oh
3. (a) She bought four books.
   (b) I, he and you should take exams seriously.
   (c) This is not my house.
   (d) You know what I say.
   (e) I met a man whose leg is defective.
   (f) A lot of work is yet to be done.

Composition

In the picture, we see a drowning sheep into the sea. Three persons are trying to save with the help of air filled tubes. They are floating in the water. Two helicopters are hovering over the sea. One of them is helping the persons rode on the roof of the ship by putting a ladder. Two persons are climbing the ladder to reach the helicopter.

Lesson – 4 : The First Mountaineering Woman of India

Comprehension

1. (a) (i) (b) (iii) (c) (iii) (d) (ii)
2. (a) Sherpa Tenzing is the first man to climb Mt. Everest.
   (b) Bachhendri Pal was born in Nakuri village in Uttarkashi district of Uttarakhand.
   (c) Bachhendri Pal was a college lecturer.
   (d) Bachhendri Pal got training of mountaineering from Nehru Himalayan Mountaineerering Institute, Uttarakhand.
   (e) KM Chandra Prabha Atwal, Miss Harshwati Vist. Km. Rekha Sharma and Santosh Yadav have scaled the Nanda Devi summit of India.

(f) Bachhendri Pal and Santosh Yadav scaled twice Mt. Everest.Word Knowledge

Word Knowledge

1. (a) Nakuri (b) very much (c) face
   (d) decrease (e) Everest (f) lecturer
2. hoisted ambition
   institute training
   colleague summit
   college scaled

Grammar Skill

1. (a) came (b) help (c) gave
   (d) wanted (e) beat
2. climber success
   fulfilment visitor
   completion admission
   attraction training
   decrement learner
3. (a) true (b) true (c) false
   (d) true (e) false

Composition

Here we see two mountain climbers. The climber in red tracking suit is hammering the nail in the rock. Below him another climber is coming down as his rope has been broken. He is crying for help. Climbing mountain is an adventure.

Lesson – 5 : Snowwhite And Seven Dwarfs

Comprehension

1. (a) (ii) (b) (iii) (c) (ii)
   (d) (iii) (e) (i) (f) (ii)
   (g) (ii)
2. (a) Snowwhite was a beautiful daughter of a king.
   (b) The king married again because the mother of Snowwhite died after few years.
   (c) The new queen was a beautiful woman and she was much proud of her beauty.

(d) She had a magic mirror in her bedroom and each day she would stand before it and asked, "Wonderful mirror! Who is the most beautiful lady in the world?"

(e) She called her faithful servant and ordered him to take Snowwhite into the jungle and kill her.

(f) Seven Dwarf's gave shelter to Snowwhite.

(g) The prince took the coffin of Snowwhite.

(h) The queen was quite upset and became mad. She broke the mirror and took poison, fell down to the ground and dead.

Word Knowledge

1. (a) magic (b) piercing (c) servant
   (d) hours (e) patience (f) dwarfs

2.

Words	*Synonyms*
answered	replied
beautiful	nice
dead	innate
young	not too old
kind	pitiful
fainted	unconscious
wicked	cruel
permitted	allowed

3. (a) dwarf (b) wicked (c) servant
   (d) liar (e) dishonest (f) queen

Grammar Skill

1. (a) She cannot run fast on the track.
   (b) We should not tease others.
   (c) They must not be good boys.
   (d) He would not write a letter.
   (e) Mohan may not take my pen.
2. (a) Does he do his work daily?
   (b) Does mother cook dal and chapati?
   (c) Does Mahima tell a lie?
   (d) Did the train never arrive in time?
   (e) Do the birds not make a noise?

3. (a) false (b) false (c) false
   (d) false (e) true
4. (a) There are mice in my shop.
   (b) Teeth of the man is very sharp.
   (c) I saw a geese in the lake.
   (d) That girl has lice in her hair.
   (e) The men are watching the match.

Composition

Do yourself.

Lesson – 6 : Guru Nanak

Comprehension

1. (a) (iii) (b) (ii) (c) (ii)
   (d) (i) (e) (iii)
2. (a) People of first village were rude and inhospitable.
   (b) The people of first village did not allow Guru Nanak and his disciple to stay in their village because they were of the opinion that both the persons might be robbers and would be harmful to them.
   (c) The people of another village welcomed him. They gave them food and provided with a place to live in comfortable for the night.
   (d) Mardana was confused because Guru Nanak prayed for the good things for the rude and inhospitable villagers who did not allow them to stay and misfortunes for the hospitable and good villagers.
   (e) The Guru Nanak explained that the rude and inhospitable people should stay in their village so that they might not spread their bad influence on other places and good people of another village should be scattered all over the country so that they may spread the knowledge and light of their character everywhere and they might be beneficial to others.
   (f) He felt pity over their condition and went to market,

bought a lot of food items and came back to the hermits. He served the food to every hermit and got satisfaction.

3. (a) Guru Nanak (b) Mardana
   (c) Father of Guru Nanak

Word Knowledge

1. (a) The people of the first village were very ***rude***.
   (b) My friend is very ***inhospitable***.
   (c) Guru Nanak liked ***hermits*** very much.
   (d) Mardana was the ***disciple*** of Guru Nanak.
   (e) Mardana was very ***puzzled***.
   (f) The teacher could not ***explain*** the meaning of this couplet.

2. stay collect
   to shop call
   tally serve
   feel

Grammar Skill

1. (a) kind (b) sour (c) biggest

Composition

It is a village fair. I went to the fair with my parents and my younger brother. There were different types of shops in the fair. My mother bought bangles, my father bought sweets and I and my brother bought toys. We also took ride in a big wheel. We also bought balloons. I liked fair much. We returned our home as 5 pm.

Lesson – 7 : The Extinct Animals

Comprehension

1. (a) (iv) (b) (iv) (c) (iv)
   (d) (iv) (e) (iv)
2. (a) Cows, buffaloes, goat, sheep, camels, horses, yaks, etc are domesticated by man.

(b) Vultures are said to be the best scavengers of nature.

(c) The scarcityof meat, the food of vultures and hawks are the main reasons which make the vulture an extinct animal.

(d) On the day of dusehra it is considered auspicious to have a look of magpie.

(e) The tiger project is a programme launched by the government of India to protect and increase the number of tigers. It was launched in 1972.

(f) Dolphins are very beautiful water animals. It is found in oceans and rivers but the number of this species is small due to their regular killing for getting oil, meat and bones. Same is the case with blue whales.

Word Knowledge

1.

Vulture	eagle	animals
hound	tiger	benefit
called	nimble	project
carnivorous	hunter	environment

2. (a) lion, tiger (b) cow, buffalo
   (c) bear, seal (d) cow, deer
   (e) camel, wolf

Grammar Skill

1. (a) engulves (b) assumes (c) catches
   (d) swallows (e) eats (f) jumps
2. (a) true (b) false (c) false
   (d) true (e) true (f) true
3. (a) The kangaroo has a pouch to keep its immature baby.
   (b) The duck can walk on the land surface and swim in water.
   (c) The pigeon is a peace-loving bird.
   (d) The snake swallows the whole frog or rat.
   (e) The monkey is a naughty animal.
   (f) The frog is an amphibian.

(g) The hawk can prey birds in the sky.

(h) The elephant is the biggest land animal.

Composition

Do yourself

Lesson – 8 : Trees – Our True Friends

Comprehension

1. (a) (iv) (b) (iii) (c) (i)
   (d) (iii) (e) (i)
2. (a) Wheat, maize, millets, grams, oils, fruits all are produced by plants.
   (b) The milk which we get from cow, buffalo, goat, etc is indirect product of plants. These milk yielding animals eat green-grass or fodder and in turn they produce milk.
   (c) Most of the green plants have green leaves and these leaves make food for themselves in presence of sunlight and absorb water from atmosphere and land through their roots. This process is called photosynthesis.
   (d) Oxygen gas.
   (e) Forests supply shelter to wild animals.
   (f) People make wooden houses in hills to keep them safe from havoc of earthquakes.
   (g) Our government has saturated the Vanmohotsav programme through which a lot of plants are sown every year.

Word Knowledge

1.

A	B
furniture	timber
wild animals	forest shelter
photosynthesis	oxygen
lentils	proteins
goat	meat

2. domestic disadvantage big
harmful undirect unimportant
incomplete

Grammar Skill

1. (a) Do not help the beggar, please.
(b) Do not open the door, please.
(c) Do not give me food to eat, please.
(d) Do not call your brother, please.
(e) Do not write your roll number, please.
2. (a) to enter (b) to drive (c) to take
(d) to give (e) to cook (f) to watch
3. (a) false (b) true (c) false
(d) false (e) true (f) true
4. (a) city (b) yielding (c) product
(d) leaves (e) balance (f) beauty

Composition

The Taj Mahal is a grand historical building. It stands on the right bank of river the Yamuna at Agra. It was built by Mughal emperor Shah Jahan in the memory of his beloved queen Mumtaj Mahal. It is really a very beautiful building made of white marble. It has four tall minarets on it four corners. It has a very big dome over it. Thousands of visitors came to visit to daily. I like it much.

EVS

Lesson – 1 : Plant's World

1. (a) (iv) spores (b) (ii) stem (c) (i) roots
(d) (iii) wind (e) (i) water
2. (a) True (b) True (c) True
(d) False (e) False
3. (a) vegetative propagation (b) bryophyllum
(c) their stems (d) stem
(e) layering

4.

	A	*B*
(a)	Palms	5. water
(b)	Tobacco	4. wind
(c)	Wheat	1. seeds
(d)	Jasmine	2. layering
(e)	Sweet potato	3. adventitious roots

5. (a) Reproduction of plants without seeds is called as vegetative propagation. In this process, some plants grow out of parts of the parent's plant.
   (b) Patato, onion and ginger.
   (c) Sweet potato and tulip.
   (d) Bryophyllum leaves have kinds at the edges from where new plants grown.
   (e) Layering is another method of vegetative propagation.
   (f) Seeds are dispersed by wind, water, animals, birds and insects.

Lesson – 2 : Life in a Forest

1. (a) (i) oxygen (b) (i) forest areas
   (c) (iii) medicines (d) (iii) deforestation
   (e) (i) trees
2. (a) True (b) True (c) True
   (d) True (e) False
3.

	A	B
(a)	Plantation of trees	5. prevents soil erosion
(b)	Wood, gum, lac and resin	4. commercial gains
(c)	Rosewood	1. handicraft goods
(d)	Sandal wood powder	2. soaps
(e)	Deforestation	3. disturbs the water cycle

4. (a) inhabit (b) resin
   (c) tribals (d) Oxygen
5. (a) A forest is a large tract of land covered by large

number of trees.

(b) Tribals gain shelter, food, fruits, vegetables, honey, wood and resin from trees. They also have gained knowledge about herbal medicine and herbal pesticides. They sell these to make money.

(c) The knowledge of medicinal herbs is used for making herbal medicines.

(d) Tribals are leaving forest regions because of deforestation.

(e) The effects of deforestation are following :

(i) The animals have lost their habitats.

(ii) Tribals are leaving forest areas in search of food and hunting.

(iii) The natural water cycle has been disturbed due to lack of trees.

(iv) There is less rain.

(v) It is also causing soil erosion.

Lesson – 3 : Protecting the Greens

1. (a) (iii) group of fruit trees (b) (iii) national parks
   (c) (iv) Bihar (d) (iii) 7000 feet
   (e) (iv) tea
2. (a) True (b) False
   (c) True (d) True
3.

A	*B*
(a) Sarpakavn	5. Kerala
(b) Devaris	4. Maharashtra
(c) Chillies	1. South America
(d) Acacia	2. Australia
(e) Law Kyantangs	3. Meghalaya

4. (a) areas as natural parks and wildlife sanctuaries
   (b) sacred groves
   (c) in India for thousands of years

(d) pruned to be 2 to 4 feet high

(e) introduced in India from other countries.

5. (a) Coconut, rubber, banana, lucalyptus and sandalwood.

(b) Group of fruit trees are said to be orchards.

(c) A sacred grove is a woodland or forest area where the original vegetation is let to survive without any interference because of local deities are worshipped here.

(d) National parks and wildlife sanctuaries are important because no one can cut down trees, destroy plants or harm animals in such places.

(e) Sarna and Sarpa kavu are sacred groves.

(f) Chilliies originated from South America and onion originated from Iran.

(g) The conditions required for growth of tea are following :

(i) Leamy soil

(ii) This plant can be cultivated from at sea level to places over 7000 feet.

Lesson – 4 : Animal's Sense

1. (a) (iii) signals (b) (i) dances

(c) (ii) bat (d) (i) detecting criminals

2. (a) True (b) False (c) True

(d) False (e) False

3. (a) communication (b) Bats

(c) owl (d) bleeding

4.

A		B
(a) Bees	2.	hive
(b) Bats	4.	poor eye sights
(c) Dogs	5.	detectors
(d) Sharks	3.	sharp sense of smell
(e) Owl	1.	large eyes

5. (a) Animals communicate through signals.
   (b) A bee dances to tell others about food location.
   (c) A bat can move in pitch darkness with a kind of echo sounding system.
   (d) The sense of smell of dogs is very keen. Its sense of smell is greater than that of human beings.
   (e) Sharp sense of smell of shark helps it to detect food.
   (f) The eyes of owl are very large. The size of retina is further increased by an appendage called the precten, situated in the middle of the eyeballs. Thus equipped the eyes are able to register the faintest light rays, so an owl can see in the dark.

Lesson – 5 : Preserving Food

1. (a) (iii) the milk had gone sour
   (b) (i) not fit to eat
   (c) (i) Louis Pasteur
   (d) (i) bacterias are killed
   (e) (iii) drying

2.

	A	B
(a)	Milk	5. Pasteurization
(b)	Pickling	4. mango, lemon
(c)	Dates	1. drying
(d)	Vaccum packing	2. jams and jellies
(e)	Canning	3. cold drinks

3. (a) True (b) False (c) True
   (d) False (e) True
4. (a) spoilt (b) spoilage (c) pasteurization
   (d) pickling (e) Papad
5. (a) The reasons for food spoilage are germs. When germs act on food, it gets spoilt. Germs mostly multiply in warm places.
   (b) The heating kills most of the bacteria. Thus, it preserves food.
   (c) Pasteaurization is a method to prevent milk from spoilage.

(d) Food is pickled because it remains unspoiled for many months.

(e) Food is preserved by the method of drying. In this method, the food is dried in the sun and its water is removed.

Lesson – 6 : Famine and Diseases

1. (a) (iii) famine (b) (ii) 1943
   (c) (i) Marasmus (d) (ii) D
   (e) (iii) anaemica
2. (a) True (b) True (c) False
   (d) True (e) True
3.

A	B
(a) Night Blindness	6. Vitamin A
(b) Rickets	5. Vitamin D
(c) Scurvy	1. Vitamin C
(d) Beri-Beri	2. Vitamin D
(e) Anaemia	3. lack of iron
(f) Goitre	4. lack of iodine

4. (a) A famine is a severe shortage of food due to natural conditions.

   (b) The Bengal Famine of 1943 was caused by human rather than natural conditions. In this famine, many rich rice merchants had hoarded all the rice in their godowens. Many rumours had led people to hard rice and thus the price of rice had gone up. So lack of food grain caused the famine.

   (c) Deficiency diseases occur when a person does not receive all nutrients required for a healthy body.

   (d) Deficiency diseases can be prevented by :

      (i) including jaggery, banana, groundnut, soyabeans and spinach in the daily diet.

      (ii) avoiding eating overcooked or improperly cooked food as they cause loss of nutrients.

(iii) avoiding repeated washing of pulses and vegetables because it causes loss of nutrients.

(iv) eating unpolished rice and pulses.

(e) The diseases caused by vitamin deficiency are night blindness, rickets, scurvy and beri-beri.

Lesson – 7 : Food for Plants and Animals

1. (a) (iii) food (b) (i) green colouring matter
   (c) (i) oxygen (d) (i) nitrogen
   (e) (iii) insectivorous plant
2. (a) False (b) True (c) True
   (d) True (e) False
3. (a) chlorophyll (b) Bladder wort
   (c) pitcher plant (d) flesh-eating
   (e) parasites
4.

A	B
(a) Sundew	6. tiny, reddish bog plant
(b) Bladder wort	5. underwater plant
(c) Pitcher plant	1. tropical species
(d) Lion	2. cornivore
(e) Cow	3. herbivore
(f) Lice	4. parasite

5. (a) Photosynthesis is the process by which all green plants produce food for themselves. It is the process by which cells in green plants produce sugar by using energy derived from the sun.

   (b) Carbon dioxide, water, sunlight and cholorphyll are used by plants in the process of photosynthesis.

   (c) Many plants derive their food from insects. They are called insectivorous plants.

   (d) The classification of animals according to their food habits is carnivores, herbivores and omnivores.

   (e) Food chains are formed with green plants, plant-eaters and flesh-eaters. While food webs are formed

when a number of food chains get linked together.

Lesson – 8 : Water Around Us

1. (a) (iii) precious resource
   (b) (iii) turn off the tap
   (c) (i) arid regions and deserts
   (d) (i) Khari baoli
   (e) (i) water reservoir
2. (a) True (b) False
   (c) True (d) True
3. (a) best (b) desert
   (c) water (d) baolis
4.

A	B
(a) Water	4. precious resource
(b) Baoli	1. step well
(c) Khari baoli	2. Delhi
(d) Piaao	3. free of cost

5. (a) We should turn off the tap when not required because it is very precious resource. So it is very important for us to save water.
   (b) Grandpa told that many years ago there was neither water supply nor well, tank or river in his village.
   (c) Baoli is a water reservoir. It is a step well with saline water.
   (d) Baolis were used for collecting water. People gathered there to seat in the cool environment and to meet for social functions.
   (e) Piaaos are important because they quench the thirst of thirsty and tired travellers on roadways. The water provided at piaaos is free.

Lesson – 9 : Irrigating the Lands

1. (a) (i) crops
   (b) (iii) deep holes
   (c) (i) less than 50 cm rainfall

(d) (i) underground water

(e) (iii) desert areas

2. (a) False (b) True (c) True

(d) True (e) True

3. (a) monsoon (b) wells (c) electric pumps

(d) harmfull (e) overshot

4.

	A	B
(a)	Canals	5. carry water from river
(b)	Wells	1. deep holes
(c)	Tubewell	2. underground water
(d)	Sprinkler irrigation	3. desert areas
(e)	Trickle irrigation	4. narrow plastic tube

5. (a) Irrigation is the artificial watering of crops.

(b) The sources of irrigation are canals, wells, tubewells and tanks.

(c) Drip or trickle irrigation is used at steeper or unevenly sloping lands..

(d) Sprinkler irrigation is a method of irrigation. It is used for large fields where each sprinkler sprays droplets of water in circular motion.

(e) Differentiate between the undershot and overshot water wheels :

The Undershot water wheels : These wheels are moved due to the water flow that pushes against the flat paddles sticking out from the wheel.

The overshot water wheels : These wheels use bucket shape paddles to catch falling water. The weight of the water runs the wheels faster.

Lesson – 10 : Aquatic Plants and Animals

1. (a) (i) hydrophytes (b) (iv) ponds

(c) (iv) hornwort (d) (i) harmful plants

(e) (i) aquatic weed

2. (a) False (b) True (c) True

(d) False (e) True

3.

	A	B

(a) Water lily — 5. roots attached to the bottom of a pond
(b) Hernwort — 4. rootless aquatic plant
(c) Water hyacinth — 1. aquatic weed
(d) Shark — 2. swims even in its sleep
(e) Amphibian — 3. frog

4. (a) water lily (b) crowfoot
(c) rootless and completely submerged
(d) spread (e) swimmer

5. (a) Animals which live on land are called terrestrial animals.
(b) Animals which live in water are called aquatic animals.
(c) Some aquatic plants are water lily, crowfoot, hornwort, duck weed and water hyacinth.
(d) Weeds are unwanted and harmful plants which grow in gardens and on farms where they compete with cultivated plants for air, space and soil, water and minerals.
(e) Some aquatic animals are snails, crabs, fish, whales, sharks, salmon and some snakes.
(f) Amphibians are the creatures that can live both in water and on land.

Lesson – 11 : Substances Around You

1. (a) sweet-salt taste (b) (ii) oil is lighter than water
(c) (ii) indefinite (d) (iii) 1000 mililitres
(e) (iii) dissolved oxygen in water

2.

A	B
(a) Lemonade	5. sugar + water + salt + lemon
(b) Air filled tube	4. floats on water
(c) Water	1. liquid
(d) Campa	2. contains gas
(e) Fizz	3. carbon dioxide

3. (a) True (b) False (c) True

(d) True (e) False

4. (a) Salt and sugar.
   (b) Air filled balls and balloons.
   (c) Keys and nails.
   (d) Carbon dioxide is found in cold drinks.
   (e) Oxygen gas dissolved in water helps fish to breathe in water.

Lesson – 12 : Mosquitoes : Causes Malaria

1. (a) (iii) fly
   (b) (iii) female mosquito (anopheles)
   (c) (iv) all of these
   (d) (ii) protozoan
2. (a) True (b) False (c) True
   (d) True (e) True
3. (a) female (b) controlled (c) parasite
   (d) drugs (e) surroundings
4.

A	B
(a) Malaria	3. a dangerous fever
(b) DDT	1. stops breeding of mosquitoes
(c) Anopheles	2. mosquito
(d) Quinine	5. cinchona
(e) Protozoan	4. parasite

5. (a) Mosquito is a member of the fly family. It is a dangerous insect as it spreads diseases.
   (b) A mosquito spreads malaria, dengue and yellow fever.
   (c) Female mosquitoes carry parasites called protozoan to cause malaria.
   (d) Malaria is a disease that is caused by a parisite called a protozoan. This disease is carried from person to person by the female anopheles mosquito.
   (e) Mosquitoes can be stopped from breeding :
      (i) by spraying kerosene on the water surface in which they breed to prevent the larvae breathing.

(ii) by putting special fish into the water to eat the larvae.

(iii) by spraying the insectidies.

(f) Malaria can be prevented by the following :

(i) Do not let water collect in cooler, pits and puddles.

(ii) Sprinkle kerosene or DDT in pools of water to stop breeding of mosquitoes.

(iii) Keep your surroundings clean.

(iv) Dispose the house waste in covered bins.

(v) Empty water from storage cans, tins every week.

(g) Symptoms of a malaria patient are following :

(i) A malaria patient becomes extremely weak.

(ii) He/she has high fever.

(iii) Bouts of sweating, chills and shivering.

Lesson – 13 : Houses Around Us

1. (a) (iii) houseboat (b) (iv) Meghalaya
   (c) (iii) stilts (d) (ii) Uttarakhand
   (e) (i) snow
2. (a) True (b) True (c) False
   (d) False (e) True
3.

	A	*B*
(a)	Delhi	5. metropolitan city
(b)	Skyscrapers	4. multi-storey building
(c)	Shikhara	2. small boat
(d)	Inuits	1. Alaska
(e)	Igloo	3. people living in Greenland

4. (a) Dal (b) Tony (c) stilt
   (d) fisherman (e) village
5. (a) Environment (climate, vegetation, etc) building material available and daily requirements of the

people are the factors that effect the types of houses around us.

(b) In Meghalaya, houses have sloping and curved roofs.

(c) Light wood is used to build houses in earthquake prone areas.

(d) Temporary houses are built in coastal areas because many a times, huge and high waves damage the houses in these areas after storm.

(e) Houses in the Arctic region are made of ice and snow.

Lesson – 14 : Bees and Ants

1. (a) (iii) group (b) (iii) honey and beeswax
   (c) (i) lay eggs (d) (iii) drones
   (e) (iv) soldiers
2. (a) False (b) True (c) True
   (d) True (e) False
3.

A	B
(a) Honey	5. bees
(b) Queen bee	4. lay eggs
(c) Drones	1. mate with the queens
(d) worker ants	2. repair damage nests
(e) soldier	3. sprays an acid

4. (a) social (b) workers (c) worker bees
   (d) stings (e) wings
5. (a) Ants and honey bees.

   (b) A queen bee heads the colony and its only function is to lay the eggs in the cells of the honeycomb.

   (c) The only function of drone is to mate with the young queens.

   (d) After mating, a queen ant loses its wings.

   (e) Soldier ants use their powerful jaws to defend the nest from attack by other ants attempting to occupy the nest or by birds in search of food. They can also sting an enemy by spraying an acid.

Lesson – 15 : Disasters

1. (a) (iv) all of these (b) (i) famine
   (c) (ii) natural disaster (d) (iv) all of these
   (e) (iv) all of these
2.

	A	*B*
(a)	Landslide	5. mountains
(b)	Floods	4. rivers
(c)	Famine	1. lack of rains
(d)	Army	2. helps in rescue missions
(e)	Media	3. electronic and print

3. (a) False (b) True
   (c) True (d) False
4. (a) cause
   (b) General public volunteers
   (c) police, firemen and doctors
   (d) helicopters
   (e) agencies
5. (a) A disaster is a term used for major accidents causing great loss of life and property.
   (b) Examples of natural disasters are landslide, earthquake, flood, cyclone and drought.
   (c) Example of man-made disasters are famine, forest fire, war, chemical leakage.
   (d) During disasters, Air Force uses helicopters to drop food packets, clothes and medicines in disaster hit areas.
   (e) After disasters, communities arrange required food, shelter, clothes and medical care for disaster hit people.

Mathematics

Lesson –1 : Large Numbers

Exercise

1. (a) 76532321 Seven crore sixty five lakh thirty two thousand three hundred twenty-one.
   (b) 98700544 Nine crore eighty seven lakh five hundred forty-four
   (c) 800000100 Eighty crore one hundred
   (d) 223344555 Twenty two crore thirty three lakh forty four thousand five hundred fifty-five
   (e) 500406003 Fifty crore four lakh six thousand three
2. (a) Eight crore sixty lakh seventeen thousand and forty – 86017040
   (b) Tweleve crore sixty two lakh eighteen thousand and fourteen – 126218014
   (c) Six crore sixty three lakh ninety five thousand six hundred and four – 66395604
   (d) Eighty four crore twenty seven lakh ninety six thousand eight hundred and eighteen – 842795818
   (e) Ninety nine crore nine lakh ninety thousand nine hundred and ninety-nine – 990990999
3. (a) 876532109 — 800000000
   (b) 678523106 — 8000000
   (c) 100830200 — 800000
   (d) 968965643 — 8000000
4. (a) 45,16,10,417 = 400000000 + 50000000 + 1000000 + 600000 + 10000 + 400 + 10 + 7
   (b) 87,62,40,216 = 800000000 + 70000000 + 6000000 + 200000 + 40000 + 200 + 10 + 6
   (c) 60,25,39,782 = 600000000 + 2000000 + 500000 + 30000 + 9000 + 700 + 80 + 2
5. (a) 50,00,00,000 + 8,00,00,000 + 60,000 + 3,000 + 400 + 1 = 58,00,63,401
   (b) 30,00,00,000 + 1,00,00,000 + 6,00,000 + 70,000 + 300 + 1 = 31,06,70,301
   (c) 4,00,00,000 + 30,00,000 + 90,000 + 8,000 + 600 + 40 + 2 = 430908642
6. (a) 135789357 = One hundred thirty five million seven hundred eighty nine thousand and three

hundred fifty-seven

(b) 63140432 = Sixty three million one hundred forty thousand four hundred thirty-two

(c) 133456789 = One hundred thirty three million four hundred fifty six thousand seven hundred eighty-nine

(d) 5160300460 = Five billion one hundred sixty million three hundred thousand four hundred sixty.

(e) 201301401 = Two hundred one million three hundred one thousand four hundred one

7. (a) Five million, thirty-eighty thousand, eighty four = 5,038,084

(b) One hundred twenty seven million five hundred thousand sixty four = 127,500,064

(c) Two hundred ninety million, three hundred thousand two hundred one = 290,300,201

(d) Five hundred seventy million two hundred eighty, thousand seven hundred thirty = 570,280,730

(e) Seventy nine million, four hundred sixty four thousand nine hundred forty-six = 79,464,946

8. (a) 789000213; 700,000,000

(b) 987123456; 7,000,000

(c) 600704000; 700,000

(d) 978654312; 70,000,000

9. (a) 1 crore = 100 lakh

(b) 1 million = 10 lakh

(c) 1 crore = 10 million

(d) 1 billion = 1000 million

(e) The successor of 90,909,808,999 + 1= 90,909,809,000

(f) The predecessor of 80,808,700,000 – 1 = 80,808,699,999

Exercise

1. (a) 3,76,44,385 > 3,61,99,888

(b) 4,02,40,872 > 4,01,04,316

(c) 4,28,60523 < 45600503

(d) 50550505 > 50505505

(e) 88,30,01,000 < 88,39,99,999

(f) 76,33,555 < 1,70,56,190

2. (a) 399789, 3697898, 30407107, 50009327

(b) 645321, 798543, 1839876, 7893218

(c) 88888, 88889, 777789, 6666789

(d) 555555, 666666, 14867520, 90507200

(e) 3896897, 20007326, 20607206, 24865710

3. (a) 87654321, 3345678, 1432876, 1345678

(b) 33224457, 11188776, 2000000, 1088888

(c) 98765432, 90807060, 87654321, 76543210

(d) 8400084, 8100008, 810008, 83000

(e) 50207306, 41856710, 30007216, 2768976

4. (a) 3, 4, 6, 0, 8

Smallest — 30468; Greatest — 86430

(b) 3, 4, 0, 5, 6, 8, 7

Smallest — 3045678 Greatest — 8765430

(c) 8, 0, 2, 3, 6, 8, 7, 4

Smallest — 2 0 3 4 6 7 8 8 Greatest — 88764320

(d) 1, 3, 2, 5, 0, 4, 9, 7

Smallest — 10234579 Greatest —97543210

5. 0, 3, 5, 6, 7, 8, 2

Greatest — 87653210 Smallest — 10235678

6. 345612083; 380216543

First number is smaller

7. 0, 1, 2, 3 and 4

44443210 10000234

Greatest smallest

8. 6 3 4 5 8 9 0 3; 3 0 9 8 5 4 3 6

First number is greater

Lesson – 2 : Operations Involving Large Numbers
Exercise

1. (a)
```
   1 1 1
   7 5 4 7 5 4
 + 8 0 7 6 5 3
 -------------
   1 5 6 2 4 0 7
```

(b)
```
   1 1 1   1
   7 6 7 8 9 0 8
 + 2 3 4 6 7 5
 -------------
   7 9 1 3 5 8 3
```

(c)
```
   1 1   1 1
   7 9 7 9 4 9 4
 + 3 3 2 2 0 1 5
 +   3 2 4 4 6 6
 -------------
 1 1 6 2 5 9 7 5
```

(d)
```
   1 2 1 1 2 1
   9 0 8 8 7 7 6 6
 + 7 5 5 7 4 5 9 4
 +   3 0 7 3 4 7 6
 -----------------
 1 6 9 5 3 5 8 3 6
```

2. (a)
```
   2 1 2 1 2
   7 6 9 2 5 0 5
 +   1 3 4 6 8 9
 +     7 3 8 4 6
 ---------------
   7 9 0 1 0 4 0
```

(b)
```
       2 2 2 1
   6 7 0 4 6 9 8 3
 + 4 7 9 0 8 4 6 5
 + 3 2 1 0 9 8 7 6
 -----------------
 1 4 7 0 6 5 3 2 4
```

3. (a)
```
     1 1 1 1 1
   7 7 8 8 5 6 5
 + 2 2 2 3 4 3 4
 +   5 7 6 6 5 7
 ---------------
 1 0 5 8 8 6 5 6
```

(b)
```
   1 1 1 1 1 1
   9 8 8 9 9 8 8
 +   1 0 0 0 0 3 4
 +   7 7 7 7 7 7 7
 -----------------
   1 8 6 6 7 7 9 9
```

(c)
```
   1 1 1 1 1 1
   2 3 3 2 2 3 2
 +   4 4 5 5 0 5
 +   7 7 7 9 9 9
 ---------------
   3 5 5 5 7 3 6
```

4. (a)

		1	**1**	**1**	
	4	4	5	**2**	3
+	2	**1**	3	2	4
+	4	3	**5**	5	6
	1	0	9	4	0 **3**

(b)

		1	**1**	**1**	**1**	
	5	2	3	8	7	
+	2	3	4	3	2	
+	3	5	3	3	8	
	1	**1**	1	1	5 **7**	

5. (a)

	7	**17**		**4**	**9**	**14**
	8	7	0	5	0	4
–	3	9	0	2	4	7
	4	8	0	2	5	7

(b)

2	**11**	**10**	**9**	**14**	**13**	**16**	
3	2	1	0	5	4	6	
– 1	4	3	2	8	7	9	
1	7	7	7	6	6	7	

(c)

6	**14**	**16**	**15**	**6**	**14**	**17**	
7	5	7	5	7	5	7	
– 2	6	8	9	6	5	9	
4	8	8	6	0	9	8	

(d)

9	**9**	**15**	**9**	**17**			
1	0	0	6	0	7	0	8
– 1	2	7	8	9	0	8	
8	7	8	1	8	0	0	

6. (a)

5	**10**	**7**	**11**	**9**	**12**	**10**	
6	**0**	8	2	**0**	3	0	
–	5	**2**	**2**	2	3	4	
5	5	5	9	7	**9**	**6**	

(b)

	4	**11**			**5**	**11**	
8	5	**1**	4	5	6	**1**	
– 6	**1**	5	**1**	3	**1**	7	
2	3	6	3	**2**	4	4	

7. (a)

	5	4	5	5	5	5
+	3	2	1	0	3	0
	8	6	6	5	8	5

	8	6	6	5	8	5
–	6	5	4	3	2	1
	2	1	2	2	6	4

(b)

			7	**16**	**15**	**15**	
	6	7	8	8	7	6	5
–	4	7	8	7	8	8	8
	2	0	0	0	8	7	7

	2	0	0	0	8	7	7
+	2	1	0	2	1	0	2
	4	1	0	2	9	7	9

(c)

					3	**17**	**15**
8	6	4	8	5	4	8	5
–4	5	3	2	1	0	9	6
4	1	1	6	4	3	8	9

		1	**1**	**1**	**1**	**1**	
4	1	1	6	4	3	8	9
+2	1	2	3	9	9	7	6
6	2	4	0	4	3	6	5

Exercise

1.
$$\begin{array}{rcccccc} & \mathbf{2} & \mathbf{9} & \mathbf{9} & \mathbf{9} & \mathbf{9} & \mathbf{10} \\ & 3 & 0 & 0 & 0 & 0 & 0 \\ - & & 8 & 6 & 9 & 5 & 0 & 5 \\ \hline & 2 & 1 & 3 & 0 & 4 & 9 & 5 \end{array}$$

2130495 should be added to 869505 to get 30,00,000

2.
$$\begin{array}{rcccccc} & & & \mathbf{1} & \mathbf{1} & \mathbf{1} & \\ & & 8 & 2 & 0 & 6 & 5 & 7 \\ + & & 2 & 3 & 6 & 5 & 4 & 3 \\ \hline & 1 & 0 & 5 & 7 & 2 & 0 & 0 \end{array}$$

The larger number is 1057200

3.
$$\begin{array}{rcccccccc} & \mathbf{1} & \mathbf{1} & \mathbf{1} & \mathbf{2} & \mathbf{1} & \mathbf{2} & \mathbf{1} & \mathbf{1} \\ & 5 & 4 & 5 & 6 & 7 & 8 & 9 & 6 \\ & 8 & 4 & 5 & 6 & 7 & 8 & 7 & 3 \\ 2 & 4 & 7 & 6 & 8 & 2 & 4 & 0 & 4 \\ \hline 3 & 8 & 6 & 8 & 1 & 8 & 1 & 7 & 3 \end{array}$$

$\therefore$ Total population of the states is 3868173 **Ans.**

4. Three Candidates got the vote

$$\begin{array}{lcccccccc} & & \mathbf{1} & \mathbf{2} & \mathbf{1} & \mathbf{1} & \mathbf{1} & \mathbf{1} & \\ \text{Ist} & & 6 & 5 & 8 & 7 & 2 & 9 & 0 \\ \text{IInd} & & 2 & 3 & 6 & 4 & 3 & 5 & 1 \\ \text{IIIrd} & & & 5 & 8 & 0 & 4 & 0 & 9 \\ \hline & & 9 & 5 & 3 & 2 & 0 & 5 & 0 \end{array}$$

Total number of votes polled are 9532050

5. A Godown has bag of
$$\begin{array}{lcccccccc} & \mathbf{1} & & \mathbf{1} & \mathbf{1} & \mathbf{2} & \mathbf{1} & \mathbf{2} & \\ \text{Wheat} & & 6 & 0 & 4 & 6 & 7 & 7 & 9 \\ \text{Rice} & 2 & 0 & 0 & 0 & 0 & 8 & 2 & 7 \\ \text{Sugar} & 1 & 8 & 8 & 5 & 5 & 8 & 8 & 4 \\ \hline & 4 & 4 & 9 & 0 & 3 & 4 & 9 & 0 \end{array}$$

Total number of bags were 44903490

6. Ajay expenditure to build the house

	1	**1**	**1**	**1**	**1**	
Land	2	6	1	9	9	9
Material	4	9	5	1	2	5
Labour	2	0	5	4	3	5
	9	6	2	5	5	9

Money spent in all ₹ 962559

7.

	7	**12**	**13**	**16**	**18**	**4**	**9**	**14**
	8	3	4	7	8	5	0	4
–	3	6	4	8	9	3	2	5
	4	6	9	8	9	1	7	9

∴ 46989179 must be subtracted from 83478504 to get 36489325

8. The population of city

			7	**14**	**11**	**14**	**10**	**9**	**10**
Current population	1	0	8	5	2	5	1	0	0
10 years ago	–	3	0	5	8	5	3	2	5
Popultion raised		7	7	9	3	9	7	7	5

The 77939775 population raised in 10 years.

9. In a year factory's toys

	3	**14**	**9**	**16**	**6**	**11**	**18**
Produced	4	5	0	6	7	2	8
Sold –	3	9	1	7	5	3	9
Unsold	0	5	8	9	1	8	9

So, 589189 toys were left unsold in the year.

10. Given, Total votes polled 3 4 8 7 5 5 0 2
Ist candidate votes – 9 8 2 3 2 8 5
IInd candidate votes 1 3 5 7 9 5 2 3

So, IIIrd candidate votes = Total – Ist – IInd

as 34875502 – 9823285 – 13579523

	2	**14**			**4**	**9**	**12**
	3	4	8	7	5	0	2
–		9	8	2	3	2	8	5
	2	5	0	5	2	2	1	7

	4	**9**	**14**	**11**	**11**	**11**	
	2	5	0	5	2	2	1	7
–	1	3	5	7	9	5	2	3
	1	1	4	7	2	6	9	4

So 11472694 votes were polled for IIIrd candidate in his favour.

Exercise

1. (a)

	5	1	4	3
×			2	8
	4	1	1	4	4
	1	0	2	8	6	0
	1	4	4	0	0	4

(b)

	7	4	0	8
×			3	8
	5	9	2	6	4
	2	2	2	2	4	0
	2	8	1	5	0	4

(c)

	3	4	0	0	9
×				9	6
	2	0	4	0	5	4
3	0	6	0	8	1	0
3	2	6	4	8	6	4

(d)

	4	7	9	9	
×			4	6	5
	2	3	9	9	5	
	2	8	7	9	4	0
1	9	1	9	6	0	0
2	2	3	1	5	3	5

(e)
$$\begin{array}{r} 7098 \\ \times\ 879 \\ \hline 63882 \\ 496860 \\ 5678400 \\ \hline 6239142 \end{array}$$

(f)
$$\begin{array}{r} 70989 \\ \times\ 707 \\ \hline 496923 \\ 0000000 \\ 49692300 \\ \hline 50189223 \end{array}$$

(g)
$$\begin{array}{r} 4405 \\ \times\ 9043 \\ \hline 13215 \\ 176200 \\ 0000000 \\ 39645000 \\ \hline 39834415 \end{array}$$

(h)
$$\begin{array}{r} 81007 \\ \times\ 7653 \\ \hline 243021 \\ 4050350 \\ 48604200 \\ 567049000 \\ \hline 619946571 \end{array}$$

2. Quotient and remainder

(a)
$$\begin{array}{r|l} 68 & 89770 \\ \cline{2-2} & 68 \\ \cline{2-2} & 217 \\ & 204 \\ \cline{2-2} & 137 \\ & 136 \\ \cline{2-2} & 10 \\ & 0 \\ \cline{2-2} & 10 \end{array}\ 1320$$

Quotient = 1320
Remainder = 10

(b)
$$\begin{array}{r|l} 39 & 952342 \\ \cline{2-2} & 78 \\ \cline{2-2} & 172 \\ & 156 \\ \cline{2-2} & 163 \\ & 156 \\ \cline{2-2} & 74 \\ & 39 \\ \cline{2-2} & 352 \\ & 351 \\ \cline{2-2} & 1 \end{array}\ 24419$$

Quotient = 24419
Remainder = 1

(c)
```
56 ) 918974 ( 16410
     56
     ---
     358
     336
     ---
      229
      224
      ---
       57
       56
       --
        14
         0
        --
        14
```

Quotient = 16410
Remainder = 14

(d)
```
83 ) 2334567 ( 28127
     166
     ---
      674
      664
      ---
       105
        83
       ---
        226
        166
        ---
         607
         581
         ---
          26
```

Quotient = 28127
Remainder = 26

(e)
```
45 ) 74253802 ( 1650084
     45
     --
     292
     270
     ---
      225
      225
      ---
       03
        0
       --
       38
        0
       --
       380
       360
       ---
        202
        180
        ---
         22
```

Quotient = 1650084
Remainder = 22

(f) 637) 907984 (1425

637

2709

2548

1618

1274

3444

3185

259

Quotient = 1425
Remainder = 259

(g) 358) 8984200 (25095

716

1824

1790

342

0

3420

3222

1980

1790

190

Quotient = 25095
emainde = 190

(h) 484) 38754231 (80070

3872

34

0

342

0

3423

3388

351

0

351

Quotient = 80070
Remainde = 351

(i) 801) 710060028 (886466

6408

6926
6408

5180
4806

3740
3204

5362
4806

5568
4806

762

Quotient = 886466
Remainder = 762

(j) 8400) 7880490 (938

75600

32049
25200

68490
67200

1290

Quotient = 938
Remainder = 1290

(k) 1008) 666224 (660

6048

6142
6048

944
0

944

Quotient = 660
Remainder = 944

(l) $5432\overline{)738213369}\,135900$

5432	
19501	
16296	
32053	
27160	
48933	Quotient = 135900
48888	Remainder = 4569
456	
0	
4569	

3. Simplify

(a) $4128 \div 258 + 8384 \div 524 \times 18$

$16 + 16 \times 18 = 16 + 288 = 304$

(b) $6250 \div 250 - 4110 \div 822 - 10$

$25 - 5 - 10 = 10$

(c) $(32 + 24) - (4 \times 12)$

$56 - 48 = 8$

(d) $(40 \times 16) \div (20 \text{ of } 8)$

$640 \div 160 = 4$

(e) $48 + 30 \div 6 \times (8 - 4)$

$48 + 5 \times 4 = 48 + 20 = 68$

(f) $5 \times \{19 - (15 - 8)\}$

$5 \times \{19 - 7\} = 5 \times 12 = 60$

(g) $40 + \{10 \times (144 - 84)\}$

$40 + \{10 \times 60\} = 40 + 600 = 640$

(h) $(60 \div 20) + \{(12 \times 12) \div 16\}$

$3 + \{144 \div 16\} = 3 + 9 = 12$

(i) $\{7 + (5 \times 3)\} - 12 + 6 \text{ of } 3$

$\{7 + 15\} - 12 + 6 \text{ of } 3$

$22 - 12 + 6 \text{ of } 3 = 22 - 12 + 18 = 28$

(j) $23 - [24 - 3\{7 - (8 - 5)\}]$

$23 - [24 - 3\{7 - 3\}]$

$23-[24-3\{4\}$

$23-[24-12]=23-12=11$

(k) $100-\{(7\text{ of }8+4)\div 5\}$

$100-\{(56+4)\div 5\}$

$100-\{60\div 5\}=100-\{12\}=88$

Exercise

1. There are 543 apples in a box.
   In 839 boxes apples are = 543 × 839

$$\begin{array}{r} 543 \\ \times\ 839 \\ \hline 4887 \\ 16290 \\ 434400 \\ \hline 455577 \end{array}$$

There are 455577 apples.

2. In 1 day 23515 breads are produced.
   Leap year = 366 days
   Thus in a leap year bread produced =

$$\begin{array}{r} 23515 \\ \times\ 366 \\ \hline 141090 \\ 1410900 \\ 7054500 \\ \hline 8606490 \end{array}$$

   Therefore, number of bread produced in a leap year = 8606490.

3. Iron nail packet in one box = 49527
   Number of boxes = 7515
   Thus iron nail packet in boxes are

$$
\begin{array}{r}
49527 \\
\times\ 7515 \\
\hline
247635 \\
495270 \\
24763500 \\
346689000 \\
\hline
372195405
\end{array}
$$

Therefore 372195405 iron nails packed in such boxes.

4. A cartoon hold = 144 oranges
   Number of Cartons = 15475
   Total number of oranges = 15475 × 144

$$
\begin{array}{r}
15475 \\
\times\ 144 \\
\hline
61900 \\
61900 \\
1547500 \\
\hline
2228400
\end{array}
$$

Therefore,2228400 number of oranges bought to the market.

5. In a newspaper
   No. of columns = 72
   No. of lines = 165
   1 line have = 36 letters
   Thus total letters = 72 × 165 × 36

$$
\begin{array}{r}
165 \\
\times\ 72 \\
\hline
330 \\
1155\times \\
\hline
11880
\end{array}
\qquad\qquad
\begin{array}{r}
11880 \\
\times\ 36 \\
\hline
71280 \\
356400 \\
\hline
427680
\end{array}
$$

Therefore, 427680 are the total number of letters.

6. An engine draws water in an hour = 68950 litre
   1 day it work = 12 hours
   1 week = 7 days
   Water draw in a week = $68950 \times 12 \times 7 = 68950 \times 84$

$$\begin{array}{r} 68950 \\ \times\ 84 \\ \hline 275800 \\ 5516000 \\ \hline 5791800 \end{array}$$

   Therefore 5791800 litre of water brawn in a week.

7. Product of two number = 133225
   One number = 365
   Another number = $133225 \div 365$

$$\begin{array}{r|l} 365 & 133225 \quad 365 \\ & 1095 \\ \hline & 2372 \\ & 2190 \\ \hline & 1825 \\ & 1825 \\ \hline & \times \\ \hline \end{array}$$

   Another number is 365.

8. Total sum = ₹ 3916250
   Shared among = 325 persons
   Each one get = $3916250 \div 325$

$$\begin{array}{r|l} 325 & 3906250 \quad 12050 \\ & 325 \\ \hline & 666 \\ & 650 \\ \hline & 162 \\ & 0 \\ \hline & 1625 \\ & 1625 \\ \hline & 00 \\ & 0 \\ \hline & \times \\ \hline \end{array}$$

   Ans. Each one get ₹12050

9. 1 bundle = 275 m pipe
No. of bundles in 287546m pipe = 287546 ÷ 275

$$
\begin{array}{r|l|r}
275 & 287546 & 1045 \\
 & 275 & \\
\hline
 & 125 & \\
 & 0 & \\
\hline
 & 1254 & \\
 & 1100 & \\
\hline
 & 1546 & \\
 & 1375 & \\
\hline
 & 171 & \\
\hline
\end{array}
$$

So, there were 1045 bundles and 171 m of pipe remain unpacked.

10. Number of books = 5346250
Arranged equally on = 1250 selves
Books on each shelf = 5346250 ÷ 1250

$$
\begin{array}{r|l|r}
1250 & 5346250 & 4277 \\
 & 5000 & \\
\hline
 & 3462 & \\
 & 2500 & \\
\hline
 & 9625 & \\
 & 8750 & \\
\hline
 & 8750 & \\
 & 8750 & \\
\hline
 & 0 & \\
\hline
\end{array}
$$

One shell contain 4277 books.

Lesson – 3 : Rounding Off Numbers

Exercise

1. (a) 24 = 20 (b) 38 = 40 (c) 48 = 50 (d) 55 = 60
   (e) 186 = 190 (f) 373 = 370 (g) 590 = 590 (h) 164 = 160
2. (a) 125 = 100 (b) 456 = 500 (c) 345 = 300 (d) 746 = 700
   (e) 908 = 900 (f) 632 = 600 (g) 289=300 (h) 946=900
3. (a) 5315 = 5000 (b) 9685 = 10000
   (c) 8017 = 8000 (d) 46234 = 46000
   (e) 653214 = 653000 (f) 632583 = 633000
   (g) 992859 = 993000
4. (a) 84057 = 80000 (b) 95462 = 100000
   (c) 10003 = 10000 (d) 61003 = 60000
   (e) 723564 = 720000 (f) 724445 = 720000

Exercise

1. (a) 23 = 20 (b) 76=80 (c) 82 = 80 (d) 38=40
   (e) 206=210 (f) 249=250 (g) 762=760 (h) 197=200
   (i) 5799=5800 (j) 7032 = 7030
2. (a) 256 = 300 (b) 581 = 600
   (c) 1183 = 1200 (d) 1749 = 1700
   (e) 63481 = 63500 (f) 28481 = 28500
   (g) 10809 = 10800 (h) 5008 = 5000
3. (a) 3939 = 4000 (b) 4556 = 5000
   (c) 4678 = 5000 (d) 7816 = 8000
   (e) 5374 = 5000 (f) 15768 = 16000
   (g) 15496 = 15000 (h) 80500 = 81000
4. (a) 71.55 = 72 (b) 14.983 = 15
   (c) 772.2 = 772 (d) 542.843 = 543
   (e) 1140.892 = 1141 (f) 1.835 = 2
5. (a) 5.26 = 5.3 (b) 8.52 = 8.5
   (c) 9.09 = 9.1 (d) 8.69 = 8.7
   (e) 13.45 = 13.5 (f) 16.07 = 16.1
   (g) 98.0046 = 98.0 (h) 11.152 = 11.2
6. (a) 6.285 = 6.29 (b) 7.777 = 7.78
   (c) 9.016 = 9.02 (d) 8.532 = 8.53
   (e) 13.708 = 13.71 (f) 27.574 = 27.57
   (g) 30.004 = 30.00 (h) 39.875 = 39.88

Lesson – 4 : Ratio
Exercise

1. (a) $\frac{15}{25} = \frac{3}{5}$ (b) $\frac{78}{39} = \frac{2}{1}$ (c) $\frac{24}{36} = \frac{2}{3}$ (d) $\frac{96}{72} = \frac{4}{3}$

   (e) 1 minute = 60 seconds
   3 minutes = $3 \times 60 = 180$

   $$\frac{20}{180} = \frac{1}{9}$$

   (f) 1 week = 7 days
   4 days = 4

   7 days = 7 $\frac{4}{7}$ or 4 : 7

   (g) 1 year = 12 months

   7 year = $7 \times 12 = \frac{7}{7 \times 12} = \frac{1}{12}$

   (h) 1 day = 24 hours

   $$\frac{1}{24} = \frac{1}{24}$$

2. (a) 12 boys, 15 girls = $\frac{12}{15} = \frac{4}{5}$

   (b) Girls to boys = $\frac{15}{12} = \frac{5}{4}$

   (c) Girls to the total students = $\frac{12}{12+15} = \frac{12}{27} = \frac{4}{9}$

   (d) Girls to the total students = $\frac{15}{27} = \frac{5}{9}$

3. $\frac{\text{Length}}{\text{Breadth}} = \frac{5}{4}$

If length = 25 m

$$\text{Breadth} = \frac{5}{4} \times \text{length} = \frac{5}{4} \times 25 = \frac{125}{4} = 31.25$$

4. Ratio of their money is $= \frac{5}{6}$

   Riya has ₹60

   then Kruti had $= \frac{6}{5} \times 60 = 72$

   Kruti had ₹72.

5. Ratio of distribution = 5 : 3
   Total money = ₹ 800

   Manu got $= \frac{5}{8} \times 800$

   As the total ratio of distribution comes out to be = 5 + 3 = 8

   So out of it Manu got $= \frac{5}{8} \times 800 = ₹500$

6. The ratio between man and women is $\frac{3}{2}$

   As total ratio comes out to be = 3 + 2 = 5

   As 165 are total men, and women so men $= \frac{3}{5} \times 165 = 99$

   There are 99 men.

7. Total fruits = 440

   The ratio apple to mangos $= \frac{5}{6}$

   Total ratio = 5 + 6 = 11

   Mangoes in basket $= \frac{6}{11} \times 440 = 240$

8. The water content = 4 lts

The ratio between water and acoehol = $\frac{2}{3}$

Alcohol content = $\frac{3}{2} \times 4 = 6$ lts

9. Sides ratio = 5 : 6 : 13
Perimeter = 48 cm
All side total ratio = 5 + 6 + 13 = 24

The ratio = $\frac{48}{24} = \frac{2}{1}$

So sides are = 5 × 2 = 10cm
= 6 × 2 = 12 cm
= 13 × 2 = 26 cm

Lesson – 5 : Profit and Loss

Exercise

1. (a) C.P. = ₹370; S.P. = ₹400
Profit = S. P. – C.P.
= 400 – 370 = ₹30

(b) C.P. = ₹425; S.P. = ₹375
Loss = C. P. – S.P.
= 425 – 375 = ₹55

(c) S.P. = ₹ 995; C.P. = ₹ 918
Profit = S.P. – C.P.
= 995 – 918 = ₹ 77

(d) S.P. = ₹ 1100; S.P. = ₹1180
Loss = 1180 – 1100 = ₹80

2. (a) C.P. = ₹880; Profit = ₹ 88
S.P. = Profit + C.P.
= 880 + 88 = ₹ 968

(b) C.P. ₹ 1320; Loss = ₹ 254
S.P. = C.P. – loss
= 1320 – 254 = ₹ 1066

(c) S.P. = ₹ 4425; Gain = ₹442
C.P. = S.P. – Gain

$= 4425 - 442 = ₹\,3983$

(d) S.P. $= ₹\,13565$; Loss $= ₹\,554$

C.P. $=$ Loss + S.P.

$= 554 + 13565 = ₹14119$

3. C.P. of hockey $= ₹\,250$

S.P. $= ₹\,310$

Profit $=$ S.P. $-$ C.P.

$= 310 - 250 = ₹\,60$

4. C.P. of a goggles $= ₹\,184$

S.P. to his friend $= ₹\,175$

Loss $=$ C.P. $-$ S.P.

$= 184 - 175 = ₹\,9$

5. Total Cost price $= ₹13285 + ₹\,245 = ₹13530$

S.P. $= ₹\,14500$

Profit $= 14500 - 13530 = ₹\,970$

6. 360 eggs of ₹18 per dozen

Damaged eggs $= 40 + 20 = 60$

Left eggs $= 360 - 60 = 300$

As he sale 300 eggs at ₹21 per dozen

1 dozen $= 12$ eggs

C.P. ₹18 per dozen $= \frac{18}{12} \times 360 = ₹540$

S.P. of 300 eggs @ ₹21 per dozen $= \frac{21}{12} \times \frac{300}{1} = ₹525$

Loss $= ₹540 - ₹525 = ₹15$

7. C.P. of moped $= ₹16000$

Profit $= ₹1560$

S.P. $=$ Profit + C.P.

$= 1560 + 16000 = ₹\,17560$

8. C.P. of Shirt $= ₹\,125$

Loss $= ₹\,45$

S.P. $=$ C.P. $-$ loss

$= 125 - 45 = ₹\,80$

9. S.P. of sofa = ₹ 3875
   Loss = ₹ 1516
   C.P. = S.P. + loss
   = 3875 + 1516 = ₹ 5391

10. S.P. of 1 book = ₹20
    S.P. of 12 books = $12 \times 20 = 240$
    Profit = ₹ 24
    C.P. = S.P. – profit
    = $240 - 24 = 216$
    C.P. of 1 book = $216 \div 12$ = ₹18

Lesson – 6 : Simple Interest
Exercise

1. Principal = ₹ 900; time = 2 years; rate = 10%

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{900 \times 2 \times 10}{100} = ₹\ 180$$

2. P = ₹ 1600; T = 1 year; R = 12%

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{1600 \times 12 \times 1}{100} = ₹\ 192$$

3. P = ₹ 2500; R = 5%; $T = 2\frac{1}{2}$ years

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$S.I. = \frac{2500 \times 5}{100} \times \frac{5}{2} = ₹\ 312.50$$

P = ₹ 312.50

4. A man borrows ₹ 8000
   Time = 1 year; interest = 5%

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{8000 \times 5 \times 1}{100} = 400$$

Amount = Principle + Interest
= 8000 + 400 = ₹8400

5. Principal = ₹ 15000; interest rate = 10%; time = 2 years

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{15000 \times 10 \times 2}{100} = ₹\ 3000$$

6. Principal = ₹ 1500; rate = 9%; Time = 5 years

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{1500 \times 9 \times 5}{100} = 675$$

Amount = 1500 + 675 = ₹ 2175

7. Principal = ₹15750; Interest = 10%; Time = 10 years

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{15750 \times 10 \times 10}{100} = 15750$$

Amount = Principal + Interest
= 15750 + 15750 = ₹31500

8. Principal = ₹ 10400; Interest = $7\frac{1}{2}\% = \frac{15}{2}\%$; $T = 3\frac{1}{2} = \frac{7}{2}$

$$\text{S.I.} = \frac{P \times R \times T}{100}$$

$$= \frac{10400 \times 15 \times 7}{100 \times 2 \times 2} = 2730$$

Amount = Principal + Interest

= 10400 + 2730 = ₹ 13130

Lesson – 7 : Lines, Angles And Circles

Exercise

1. Infinite 2. Infinite 3. Only one
4. a line segment
5. (a) Vertex O (b) Vertex Y (c) Vertex B
6. (a) XY and YZ (b) PO and OQ
   (c) RS and ST
7. (a) 45° (b) 135°
8. (a) Right (b) Acute (c) Obtuse (d) Obtuse
   (e) Acute (f) Straight

Exercise

1. Do yourself
2. (a) $90° - 35° = 55°$ (b) $90° - 55° = 35°$
   (c) $90° - 60° = 30°$ (d) $90° - 78° = 12°$
   (e) $90° - 89° = 1°$
3. (a) $180° - 80° = 100°$ (b) $180° - 72° = 108°$
   (c) $180° - 150° = 30°$ (d) $180° - 90° = 90°$
   (e) $180° - 105° = 75°$

Exercise

1. (a) equal (b) equal (c) diameter (d) 2
   (e) radius $= \frac{\text{Diameter}}{2} = \frac{4}{2} = 2\text{cm}$
2. (a) X, Z, Y (b) P, Q, O (c) R, S
3. (a) O (b) OC, OA and OB
   (c) AOB (d) DE, AOB
   (e) ACB and AEB (f) 2
   (g) 1/2 (h) M, N, L

4. (a) infinite (b) infinite (c) No (d) Infinite
   (e) Yes
5. Length of diameter is double the length of radius
6. (a) $3\text{cm} = \text{radius} = \frac{3}{2} = 1.5\text{ cm}$
   (b) $\text{radius} = \frac{2}{2} = 1\text{ m}$ (c) $\text{radius} = \frac{4.5}{2} = 2.25\text{ cm}$
7. (a) $6\text{ cm}, \text{diameter} = 6 \times 2 = 12\text{ cm}$
   (b) $9\text{ cm}, \text{diameter} = 9 \times 2 = 18\text{ cm}$
   (c) $10.8\text{cm}, \text{diameter} = 10.8 \times 2 = 21.6\text{ cm}$

Lesson – 8 : Pictorial Representation of Data

Exercise

1. (a) Kolkata (b) Chennai
   (c) One crore as difference between Banglore and Mumbai is $(10 - 9 = 1)$
2. (a) 3000 books
   (b) 2000 books (as Maths = 3500 and Social Studies is 1500 so $3500 - 1500 = 2000$)
   (c) 1500 books (as Social Studies = 1500 and Science = 3000 so $3000 - 1500 = 1500$)
   (d) 12500 (as $2500 + 2000 + 3500 + 1500 + 3000 = 12500$)
3. (a) 45
   (b) in section D, by 50 students
   (c) in section C, by 35 students
   (d) 170 (as $45 + 35 + 50 + 40 = 170$)
4. (a) The Times of India (b) The Hindu
   (c) 70,000 ($20000 + 25000 + 15000 + 10000 = 70000$)
   (d) 10,000

Lesson – 9 : Temperature

Exercise

1. (a) Thermometer (b) Clinical thermometer
   (c) 100°C (d) 32°F (e) 37
2. Celsius

	Temp	–32	×5	÷9	Temp °C in °F
(a)	41°	41–32=9	9×5=45	45÷9	5°C
(b)	77°	77–32=45	45×5=225	225÷9	25°C
(c)	180°	180–32=148	148×5=740	740÷9	82.22°C
(d)	194°	194–32=162	162×5=810	810÷9	90°C
(e)	203°	203–32=171	171×5=855	855÷9	95°C
(f)	245.8°	245.8–32=213.8	213.8×5=1076	1076÷9	118.78°C
(g)	176°	176–32=144	144×5=720	720÷9	80°C

3. **Faraheneit**

	Temp in °C	× 9	÷5	+32	Temp °F
(a)	25°	25×9=225	225÷5=45	45+32	77°C
(b)	50°	50×9=450	450÷5=90	90+32	122°C
(c)	85°	85×9=765	765÷5=153	153+32	185°C
(d)	110°	110×9=990	990÷5=198	198+32	230°C
(e)	70°	70×9=630	630÷5=126	126+32	158°C
(f)	80.5°	80.5×9=724.5	724.5÷5=144.9	144.9+32	176.9°C
(g)	133°	133×9=1197	1197÷5=239.4	239.4+32	271.4°C

4. Maximum temperature = 143°F
   Minimum temperature = 86°F
   Difference = 143° – 86° = 57° F or 31.67°C
5. Temperature = 36°C
   $36 \times 9 = 324 \longrightarrow 324 \div 5 = 64.8$
   $64.8 + 32 = 96.8 \longrightarrow 96.8°F > 36°C$
   another is 36°F
   Object 1 is hotter by 96.8 – 36 = 60.8°F
6. Temperature = 101°F
   So in C it will be 101 – 32 = 69 × 5 = 345 ÷ 9 = 38.33°C
   Temp. above normal = 38.33 – 37 = 1.33°C

Computer

Lesson – 1 : Windows

1. (a) (i) (b) (i) (c) (iii)
   (d) (i)
2. (a) True (b) True (c) False
   (d) False (e) True
3. (a) windows (b) Graphic user interface
   (c) Multitasking (d) icons
   (e) desktop (f) start button
   (g) Rectangular (h) Title bar
4. (a) Windows 3.1, Windows 95, Windows , Windows 2000, Windows XP, Windows 7
   (b) Programs, documents, help, run , shift, down
   (c) Maximize button, minimize button, restore button, close button.
5. (a) Windows operating system and window :
   Windows is an operating system which provides a graphical screen to the user to perform various options whereas the rectangular shaped boxes displayed on the screen are called windows.
   (b) Application window and dialog box :
   The window where the application appears is called the application window, as MS Word, MS Paint, etc whereas the small window providing list of options and few command buttons designed for a specific purpose for eg save dialog box, new dialog box etc. are called dialog boxes.
   (c) Files and folder :
   File is a collection of information where as folder are like shelves that hold many files and folders together.
6. (a) Recycle bin :
   This represents the place where all the deleted files or folders are kept for temporary period. If you have deleted any file by mistake you can recall it by giving few commands fot it.

(b) Network Neighbourhood

It represent all the resources available in the network.

(c) My computer : This icon shows all the contents available in the computer system. It helps us in viewing the contents of different storage devices.

7. (a) Windows is an operating system which provides a graphical screen to the user to perform various actions.

(b) Windows are becoming popular because of the following reasons :

(i) It is easy to use.

(ii) It is graphical user interface.

(iii) It supports multitasking.

(iv) Data could be exchanged or transferred among different softwares.

(v) Compatible for different applications.

(c) Windows is called GUI i.e. Graphical user interface as it provides the users with small pictures called icons on its screen.

(d) Common components of windows operating system are icons, desktop, start button, taskbar and system tray.

(e) Whatever work you do on computer is stored in the computer's memory in the form of files. Every file is specified with a file name. Filename consists of two parts :

Primary name and secondary name.

Primary name is the name you give to your file and the second name name is the file extension - followed by (.) dot.

(f) The windows explorer is the software provided by windows operating system to organize files and folders easily. Some of the features of windows explorer are :

(i) Single view of all the files and folders.

(ii) It is flexible and easy to use.

(iii) It shows rich information about objects and details.

(g) To start windows explorer follow the steps below :

(i) Click on start button.

(ii) Click on programs.

(iii) Click on windows explorer option.

(h) The main components of windows explorer scrren are :

(i) Folder (ii) File

(iii) Left pane (iv) Right pane

8. (a) Copy the file from windows explorer :

(i) Click on file.

(ii) Right click there.

(iii) Click on copy option.

(iv) So to the destination location where you need to place the file.

(v) Right click on blank area and click on paste.

(b) Cut the file from windows explorer :

(i) Click on file. (ii) Right click on it.

(iii) Click on cut option.

(c) Rename the file from windows explorer :

(i) Click on file.

(ii) Right click on it.

(iii) Click on rename option.

(iv) Give the new name to the file.

(d) Delete the file from windows explorer :

(i) Click on file.

(ii) Right click on it.

(iii) Click on delete option and the file reach the recycle bin.

Lesson – 2 : MS Word

1. (a) (iv) (b) (i) (c) (iii)

(d) (ii) (e) (i)

2. (a) True (b) False (c) True
   (d) False (e) True
3. (a) Microsoft office (b) Word Processing
   (c) Title Bar (d) The Menu bar
   (e) Toolbars (f) New file
   (g) document (h) office assistant
   (i) on the clipboard (j) ctrl + C
   (k)
4. New Open Save
   left align
5. Keyboard shorcuts :

Ctrl + B	Bold
Ctrl + S	Save
Ctrl + I	Italic
Ctrl + N	New
F7	Spelling and Grammar
Ctrl + X	Cut
Ctrl + O	Open
Ctrl + U	Underline
Ctrl + V	Paste

6. (a) Start MS Word
   (i) Click on start button
   (ii) Select program
   (iii) Select MS Word
   (b) Open a file :
   (i) Go to file Menu and choose open
   or
   Click on open (icon) on the standard toolbar
   or
   Press Ctrl + O
   (c) Create a new file :
   Open MS Word and go to file menu

Choose new then click on blank document. New file is created

or

Click on new document icon on the standard tool bar.

or

Ctrl + N

(d) Change a view :

(i) Go to view on the Menu bar.

(ii) Choose the view you want to you by clicking on it.

(e) To cut and paste a text :

(i) Using the standard toolbar. Click on cut icon to cut the text and than paste icon to paste the text.

(f) Copy and paste a text :

(i) To copy a text click on copy icon on the standard toolbar and then paste icon to paste the text.

(g) Change Alingment :

To change alignment, select the text/graphic you want to align.

Click on the alignment button from the formatting toolbar. Here you can choose left, centre, right or justify alignment.

(h) To check the spelling mistakes :

Click on spelling and grammar icon from the standard toolbar or press F7 key.

7. (a) MS Word is a software which gives some course of action on word or text to make it attractive and presentable, so it is known as word processing software.

(b) Some of the special features of MS-Word are :

(i) It is easy and simple to use.

(ii) Lots of tools are available to make the text look attractive.

(iii) It helps to correct the spelling mistakes.

(iv) It helps us to insert attractive pictures, graphs, table, etc.

(c) Title bar displays the name of the document on which you are currently working.

(d) The main part of the MS Word screen are : Title bar, menu bar, formatting toolbar, standard tool bar, work area, scroll bar.

(e) Toolbars provide shortcuts of menu command. Toolbars are generally located just below the menu bar. There are many toolbars present in MS Word. Standard and formatting toolbars are two important toolbars in MS Word.

(f) Views are different ways in which word shows the same document in the different manner. There are four different types of views :

(i) Normal view (ii) web layout

(iii) print layout (iv) outline.

(g) Normal view does not show graphic images whereas every component of word is shown in the print layout view.

(h) The office assistant are interative characters that can be displayed on your screen to provide helping tips to work on the software.

(j) The cut command removes the selected text/document from the on given data, whereas copy command does not remove the selected text/object from the original data.

(j) Spelling and grammar option helps us to check the spelling mistakes we do while typing the text. Wrong spellings are indicated by red squiggly line whereas grammatical mistakes are indicated by green squiggly line.

8. (a) Toolbars : The standard toolbar and the formatting toolbar

(b) Views : Normal view, web layout view, print layout and outline view.

(c) Editing tools
Cut, copy and paste.

(d) Alignments
Left alignment

Right alignment
Center alignment
Justified alignment

9. Word Art : Allows you to make the text, creative and attractive in style whereas cliparts are the ready made image formed in Microsoft office in its clip gallery.

Lesson – 3 : MS PowerPoint

1. (a) (ii) (b) (ii) (c) (iii)
   (d) (i) (e) (iii)
2. (a) True (b) False (c) False
   (d) True (e) False
3. (a) presentation (b) text
   (c) blank (d) Work area
   (e) auto layout menu (f) four
   (g) slide show (h) transition
4. New Save Slide
   Open Slide sorter Slide show view
5. Ctrl + N to open new presentation
   Ctrl + O to open existing presentation
   F5 to run the slide show
   Ctrl + V to insert a new slide
6. (a) Auto content wizard (b) Design templates
   (c) Normal view (d) Slide view
   (e) Slide sorter view
7. (a) PowerPoint is a presentation software use to make the effective presentation by adding text, diagrams, images, designs and automated special effects.
   (b) (i) We can create a presentation.
   (ii) In addition to slides, you can print audience, handouts, outlines and speaker's notes.
   (iii) You can format all the slides in the presentation.
   (iv) You can keep your entire presentation in a single file.
   (c) The three ways supported by PowerPoint to create a presentation are :
   (i) Auto content wizard

(ii) Design templates.
(iii) Blank presentation.

(d) Running a slide in slide presentation.

(e) Auto layout displays different styles of the new slide. Click on the layout you want and then click OK.

(f) PowerPoint provide four screen layouts for designing presentation with additional slide show view. They are normal, outline, slide sorter and slide view. You can select the view by clicking the buttons at the bottom of the page.

(g) Normal view, slide view, outline view and slide sorter view.

(h) To format text in PowerPoint select your text by either highlighting it or click on the border line that surrounded the text so that it turns to little dots. There are formatting toolbar to apply changes to your text as you wish.

(i) Transition is the way of setting the display of slide as a user move one slide to another.

(j) Animation is the process to make the presentation lively by providing movement to different objects on a slide.

General Knowledge

Lesson – 1 : Your's I. Q.

1. 3, 2. RVGU, 3. J (January, June, July), 4. Air, 5. A,B,E, 6. 1, 7. East, 8. 25 minutes.

Lesson – 2 : Abbreviations

1. Anxillary Cadet Core , 2. Archasological Survey of India, 3. Associated Chamber of Commerce and Industry (India), 4. Bharat Heavy Electricals Limited, 5. British Broadcasting Corporation, 6. Comptroller and Auditor General, 7. Central Bureau of Investigation, 8. Di-oxyribo – Nucleic Acid, 9. Defence Research Development Organisation , 10. Electronic Voting Machine, 11. First Information Report, 12. Gross National Product, 13.

Human Immuno - deficiency Virus , 14. Indian Farmers Fertilizers Cooperative, 15. International Organisation for Standardisation, 16. Kindergarten, 17. Line of Control (Pakistan), 18. Bachelor of Medicine and Bachelor of Surgery , 19. National Agricultural and Marketing Federation, 20. All Correct.

Lesson – 3 : Word Power

1. Transmitter, 2. Tester, 3. Terrorist, 4. Surveyor, 5. Subvention, 6. Guardian, 7. Godfather, 8. Falconer, 9. Explorer, 10. Exhibitor, 11. Champion, 12. Capitalist, 13. Bigamist, 14. Applicant, 15. Apologist.

Lesson – 4 : Similies

1. bat, 2. proud, 3. lark, 4. sly, 5. mouse, 6. frisky, 7. hills, 8. silent, 9. thieves, 10. bright, 11. barrel, 12. light, 13. hatter, 14. right, 15. picture, 16. black, 17. velvet, 18. bold, 19. cucumber, 20. deaf.

Lesson – 5 : Books And Authors

1. (e), 2. (a), 3. (j), 4. (r), 5. (t), 6. (k), 7. (s), 8. (q), 9. (b), 10. (i), 11. (l), 12. (m), 13. (h), 14. (f), 15. (n), 16. (c), 17. (g), 18. (d), 19. (p), 20. (o).

Lesson – 6 : World Language

1. (t), 2. (a), 3. (p), 4. (s), 5. (e), 6. (g), 7. (b), 8. (d), 9. (c), 10. (f), 11. (h), 12. (r), 13. (i), 14. (q), 15. (j), 16. (k), 17. (o), 18. (n), 19. (m), 20. (l).

Lesson – 9 : National Flag

1. China, 2. Pakistan, 3. Afghanistan, 4. Nepal, 5. Bhutan, 6. Bangladesh, 7. Mayanmar 8. Sri Lanka

Lesson – 10 : India Wins Freedom

1. 1857, 2. 1885, 3. 1858, 4. 1919, 5. 1920, 6. 1942, 7. 1921, 8. 1930, 9. 1935, 10. 1906, 11. 1943, 12. 1946, 13. 1905, 14. 1929, 15. 1947.

Lesson – 11 : Festivals of India

1. Mahavira Jayanti, 2. Buddha Purnima, 3. Guru Purnima, 4. Christmas, 5. Janamashtami, 6. Pongal, 7. Vaisakhi, 8. Onam, 9. Vijayadashmi, 10. Id-ut-Fitar.

Lesson – 14 : Leaders of First Freedom Struggle

1. Bahadur Shah Zafar, 2. Nana Saheb, 3. Tantya Tope, 4. Mangal Pandey, 5. Kunwar Singh, 6. Lakshmi Bai.

Lesson – 15 : Affiliation of Personalities with places

1. (vi), 2. (xv), 3. (i), 4. (x), 5. (xiii), 6. (iv), 7. (xii), 8. (ii), 9. (iii), 10. (xi), 11. (v), 12. (xiv), 13. (vii), 14. (viii), 15. (ix).

Lesson – 16 : Samadhis

1. (v), 2. (vii), 3. (iii), 4. (vi), 5. (ii), 6. (ix), 7. (x), 8. (viii), 9. (iv), 10. (i).

Lesson – 17 : Missing Numbers

1. (d), 2. (b), 3. (d), 4. (b), 5. (c), 6. (d).

Lesson – 18 : Counting of Figures

1. 10, 2. 10, 3. 12, 4. 25, 5. 6, 6. 6.

Lesson – 19 : Scientific Instruments

1. (x), 2. (xv), 3. (i), 4. (vi), 5. (xiii), 6. (iii), 7. (v), 8. (ii), 9. (viii), 10. (xii), 11. (ix), 12. (xi), 13. (iv), 14. (vii), 15. (xiv).

Lesson – 20 : Quiz on Indian Polity

1. (a), 2. (d), 3. (c), 4. (a), 5. (c), 6. (c), 7. (d), 8. (a), 9. (b), 10. (d).

Moral Values

Lesson – 1 : Never Hate Anyone

1. (a) (iv) Kindergarten teacher (b) (iii) person
   (c) (iii) 5 (d) (i) hatred of the heart

2. (a) True (b) True
   (c) False (d) False
3. (a) Kindergarten (b) patato, hates
   (c) unpleasant (d) forgiving
4. Answer in one word only :
   (a) Kindergarten (b) Potato
   (c) A week (d) Hatred
5. (a) Kindergarten classes includes the classes from pre-nursery upto U.K.G.
   (b) Mr. Das ask the children to bring along a plastic bag containing a few potatoes.
   (c) Mrs. Das asked the children to give each potato the name of a person that the child hated, hence, the number of potatoes that a child will put in the plastic bag will depend on the number of people he or she hates.
   (d) Mrs. Das told the children to carry the potatoes with them wherever they went, even to the toilet, for a week.
   (e) After few days, children started to complain due to unpleasant smell let out by the rotten potatoes. Besides, those having five potatoes also had to carry heavier bags.
   (f) Mrs. Das wanted to teach that "forgiving others is the best attitude to take. Learn to forgive and forget. Throw away any hatred for anyone from the heart."

Lesson – 2 : The Important of Love

1. (a) (i) front yard of the house
   (b) (ii) enter the house in the absence of woman's husband
   (c) (iii) first to enter the house
   (d) (iv) all of these
2. (a) False (b) True
   (c) False (d) True
3. (a) long (b) together
   (c) discuss (d) love
4. Love : We should give respect to elders and love to youngers.

Success : Honesty is the key to success.
Wealth : Health is wealth.

5. (a) The three old men were - Love, wealth and success.
   (b) Husband wanted to invite wealth first.
   (c) No, the wife did not agreed to what the husband said.
   (d) She wanted to invite success first.
   (e) The daughter in law proposed to invite love first in the house.
   (f) All three of them come in together as the lady invited 'love' first and whereever there is love, the wealth and success followed love automatically.

Lesson – 3 : Means to Unravel Truth

1. (a) (ii) Vaishali (b) (ii) seven floors
   (c) (iii) mother (d) (i) black
2. (a) T (b) F (c) F
   (d) F (e) T
3. (a) mother (b) searched
   (c) statements (d) ground
4.

	A	B
(a)	Vardhaman	Prince of Vaishali
(b)	Trishala	Mother of Vardhaman
(c)	Suddhodana	Father of Vardhaman
(e)	Teerthankar Mahaveer	Prince Vardhaman

5. (a) The king of Vaishali was Suddhodana and queen was Trishala.
   (b) Vardhaman was the prince of Vaishali. He was the son of king Suddhodana.
   (c) When Vardhaman's friend asked about Vardhman from his mother, she replied that he was upstairs and on asking to Vardhman's father, he replied that he is downstairs.
   (d) According to Vardhman the body of crow is black but the crow is also red because of its blood colour and it is also white because of its white bones.
   (e) We view same thing from different angles because every body has different point of view and everything has a number of different aspects to explore the truth.

हिंदी - 5

पाठ - 1 : कोई नहीं पराया

1. **सही विकल्प पर सही (✓) का चिह्न लगाओ :**
   क. (स) ख. (अ) ग. (अ)
2. **क्रिया किसे कहते हैं? इन वाक्यों में क्रियाएँ छाँटिए :**
   क. निकल ख. रो ग. पढ़
   घ. पिया ङ. खेलते च. रहती
3. **उपसर्ग लगाकर नये शब्दों को बनाइए :**
   अन + शन - अनशन सु + कुमार - सुकुमार निर् + बल - निर्बल
   निर् + मल - निर्मल अ + पूर्ण - अपूर्ण आ + चरण - आचरण
4. **नीचे लिखी क्रियाओं के सही रूप बनाकर खाली स्थानों को भरिए:**
   क. पानी लगाता है। ख. दौड़ता है। ग. बताते हैं।
   घ. हंसते हैं। ड. बनाती है।
5. **निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :**
   क. कवि के घर की सीमाएँ सारा संसार है।
   ख. कवि मन्दिर-मस्जिद के स्थान पर आदमी देवालय में मस्तक झुकाने को तत्पर है।
   ग. कवि देवत्व और अमरत्व के स्थान पर मनुजत्व को स्वीकारता है।
6. **निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :**
   क. कवि के हृदय में संसार के दुखी लोगो के लिए बहुत सहानुभूति है वह कहता है कि यह संसार दुखी लोगों से भरा पड़ा है। मैं उनके दुखों को गीत गाकर सबको बताना चाहता हूँ। वह संसार के लोगो से कहता है कि मैं जो दर्द भरे गीत गा रहा हूँ मुझे गाने से मत रोको। यह मेरा अकेले का दर्द नहीं है यह तो पूरे संसार का दर्द है।
   ख. कवि कहता है कि इस तरह हँसो कि इस संसार के दलित व्यक्ति भी तुम्हारे साथ हँसे अर्थात् उनको भी अपने साथ शामिल कर लो और चलते समय इस बात का ध्यान रखों कि फूल तो फूल तुम्हारे पैरों से कोई काँटा भी न कुचल जाए।
7. **निम्नलिखित पंक्तियों का भाव-सौन्दर्य स्पष्ट कीजिए :**
   क. कवि एकता का संदेश देते हुए कहते है कि उसका आराध्य मनुष्य मात्र है और उसके लिए देवालय हर इंसान का घर है।
   ख. इस तरह हँसों कि तुम्हारे साथ यह दलित संसार भी हँसने लगें।
   ग. जब फूल खिलते है तो बगीचा महकने लगता है बगीचा देखने में बहुत सुदंर लगता है मानो वह (फूल) उपवन का शृंगार हो। डाली का तो उसे बाद में कहा जाएगा कि गुलाब का फूल डाली पर लगा है या गेंदे का फूल डाली पर लगा है। पहले उसे बगीचे की शोभा ही कहा जाएगा।

घ. छोटे से छोटे व्यक्ति भी आपके साथ-साथ ऐसे चले कि काँटे भी उसके पैरों तले आकर कुचल न जाए।

पाठ - 2 : अनुपम जगमग

1. **सही विकल्प पर सही (✓) का चिह्न लगाओ :**
   क. (ब) ख. (स)
2. **इसी प्रकार इन शब्दों के तद्भव रूप लिखिए:**
   व्याकुल - बैचेन मृत्यु - मरना व्यय - खर्च
   कृत्रिम - बनावटी वितरित - बाँटना
3. **उदाहरण के अनुरूप शब्दों को जोड़कर उनके पुनः सही रूप लिखिए:**
   अनाथ + आलय - अनाथालय, उप + हार - उपहार,
   कारा + आवास - कारावास, सह + अनुभूति - सहानुभूति
   सु + आगत - स्वागत, अ् + वाक् - अवाक्
4. **सही शब्द भरकर वाक्यों को पूरा करो :**
   क. से ख. से
   ग. पर घ. को
5. **इन शब्दों को अपने वाक्यों में प्रयोग कीजिए :** स्वयं कीजिए।
6. **निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :**
   क. नरेश के जन्म दिवस पर माँ ढेरो पकवान बनाती है।
   ख. माँ ने नरेश से पूछा:''नरेश तुमने अपने सभी मित्रों को कल शाम के लिए आमंत्रित कर दिया न।''
   ग. नरेश का एक मित्र अनाथालय में रहता था।
   घ. नरेश के मित्र ने कहा कि वह कॉपी लाना भूल गया है, कभी कहता कि कॉपी खो गई।
7. **निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :**
   क. नरेश का जन्मदिवस प्रतिवर्ष बड़ी धूमधाम से मनाया जाता था। माँ ढेरों पकवान बनाती, मेहमान आमंत्रित किए जाते, बधाइयों की गूँज से आँगन भर उठता। नरेश को भी अपने लिए ये सब आयोजन होता देख बड़ा हर्ष होता।
   ख. नरेश ने अपने जन्मदिन पर अनाथालय जाने का निश्चय किया क्योंकि वह सब रुपये जो घर के लोग उसके जन्मदिन पर व्यय करते हैं, उसकी कॉपी-किताबें आदि खरीदकर अनाथालय ले जाएगा और वहाँ रहने वाले बच्चों को वितरित करेगा।''
   ग. वह बहुत दिनों से कॉपी नहीं ला रहा था। अध्यापक महोदय के पूछने पर भी वह बहाने बनाता रहा कि वह कॉपी लाना भूल गया है, कभी कहता कि कॉपी खो गयी है। आज उसे सारा दिन बैन्च पर खड़ा रहना पड़ा।
   घ. नरेश अनाथ बच्चों को कॉपी-किताबें वितरित करना चाहता था।

च. नरेश ने अनाथालय के अधीक्षक से अनुरोध किया कि ''श्रीमान मैं यहाँ के बच्चों के लिये कुछ उपहार लाया हूँ। यदि आप मुझे अनुमति दें तो मैं उन्हें अपने हाथों से इसे भेंट करना चाहूँगा।''

छ. नरेश ने सभी को लाई हुई भेंट वितरित की। सभी ने उसे धन्यवाद किया। उन सबकी आँखों में एक विशेष चमक उभर आयी थी। नरेश को लगा कि उस कृत्रिम चकाचौंध से यह चमकती हुयी आँखों की खुशी कितनी अधिक उज्जवल है, जो चकाचौंध उसके जन्मदिवस पर रंगीन बल्बों से की जाती है। लोगों से ढेर सारे उपहार पाकर भी ऐसा संतोष उसे पहले कभी नहीं हुआ था, जैसा संतोष उसे इन साधारण वस्तुओं को बाँट कर हुआ था। उसे लगा कि यथार्थ रूप में आज पहली बार उसने अपना जन्मदिन मनाया है।

पाठ – 3 : जीने का तरीका

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (अ)

2. निम्नलिखित वाक्यों को नीचे दी गई सूची से शब्द छाँटकर पूरा कीजिए :

क. फारले ख. भूख ग. ज्यादा

घ. बगल ङ. गंदगी

3.

हिन्दी	**उर्दू**
रोगी	मरीज
लक्षण	निशानी
मुलाकात	भेंट
कसरत	व्यायाम
आश्चर्य	हैरानी

4. वाक्यों में प्रयोग कीजिए :

क. रवि गिरगिट की तरह रंग बदलता है।

ख. नींद पूरी होने पर सोनिका का चेहरा तरोताजा सा दिखने लगा।

ग. रास्ते में डॉक्टर साहब मरीज से हल्की-फुल्की बातें कर रहे थे।

घ. मोहन परीक्षा में फेल हो गया उसने परीक्षा में उत्तीर्ण होने की उम्मीद ही छोड़ दी।

5. निम्नलिखित शब्दों के विलोम शब्द लिखिए :

ताजी – बासी बुरी – अच्छी स्वस्थ – अस्वस्थ

भूख – प्यास असहाय – सहाय अमित – परिमित, मित

जवाब – सवाल नकारात्मक –सकारात्मक

6. निम्नलिखित प्रश्नों के उत्तर केवल एक शब्द में लिखिए :

क. टी०एस० आर्थर ख. डॉक्टर का ग. शॉल

घ. मिसेज चार्लटन

7. निम्नलिखित प्रश्नों के दीर्घ उत्तर लिखिए :

क. मैं खुद को बड़ा कमजोर महसूस कर रही हूँ। न मैं खुद खड़ी हो सकती हूँ। ऐसा लगता है कि मुझसे ज्यादा ताकत तो किसी बच्चे में होगी।' इतना कहते-कहते उन्होंने अपनी आंखें बंद कर लीं और गर्दन को कुर्सी पर टिकाकर कुछ सोचने लगीं।

ख. मिसेज चार्लटन ने मुस्कराते हुए कहा, 'मेरी ज्यादा इच्छा तो नहीं है, फिर भी आप कहते हैं तो मैं चल सकती हूँ।

ग. उसने हर सवाल का जवाब हँसते हुए दिया, जबकि वह ठीक से बोल भी नहीं पा रही थी।

घ. दूसरी रोगिणी महिला कमरे के बीचों-बीच एक महिला कुर्सी पर तकिये के सहारे टिक कर बैठी हुई थी। उसकी गोद में एक बच्चा सो रहा था। उसके शरीर में इतनी ताकत नहीं थी कि वह उठकर खड़ी होती। उसने हर सवाल का जवाब हँसते हुए दिया, जबकि वह ठीक से बोल भी नहीं पा रही थी।

ङ. मिसेज चार्लटन की बीमारी का वास्तविक कारण घर में बेकार बैठना था।

च. डॉक्टर की दूसरी मरीज से मिलने के बाद मिसेज चार्लटन को जिंदगी को जीने के सही तरीके के बारे में पता चला।

पाठ - 4 : निर्मल मन

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (द) ख. (स)

2. हिंदी के शब्द-भंडार में अनेक शब्द अरबी-फारसी मूल से आए हैं और अब हिंदी भाषा ही घुल-मिल गये हैं। नीचे कुछ ऐसे ही शब्द हैं जो इस पाठ में प्रयुक्त हुए हैं। इनके हिंदी पर्याय लिखिए:

नियामतें - अनमोल उपहार इर्द-गिर्द - अगल-बगल

चोली-दामन - गहरी मित्रता शेखी-बघारना - अपनी प्रशंसा स्वयं करना

3. निम्न शब्दों के विलोम लिखिए :

दुर्भावना - सद्भावना मलिन - निर्मल स्थूल - सूक्ष्म

अहंकार - निरहंकार सुविधा - असुविधा दूषित - स्वच्छ

पावन - दूषित, अपावन

4. इन शब्द युग्मों के बीच 'के', 'और' आदि शब्द आवश्यकतानुसार प्रयुक्त कीजिए :

धूलिकण - धूल के कण रोमछिद्र - रोम के छिद्र,

शोभाशाली - शोभा मैले-कुचैले - मैले और कुचैले,

रूखे-बिखरे - रूखे और बिखरे रागद्वेष - राग और द्वेष

5. निम्नलिखित शब्दों में से उपसर्ग छाँटकर अलग लिखिए:

अनायास - अन + आयास अपकरण - अप + करण

सुचारू - सु + चारू प्रशिक्षण - प्र + शिक्षण

अमूल्य – अ + मूल्य दुरूपयोग – दुर् + उपयोग

6. निम्नलिखित प्रश्नों के लघउत्तर लिखिए :

क. 'निर्मल मन' नामक पाठ में अनमोल यंत्र काया को कहा गया है।

ख. क्रोध, बैर, हिंसा, ईर्ष्या ये सब मन की मलिनताएँ हैं।

ग. व्यक्ति के प्रत्येक व्यवहार से उसके मन की दशा का पता चलता है।

घ. जो व्यक्ति अपने मन को पावन बना लेते हैं वे ही वंदनीय एवं श्रद्धा के पात्र बनते हैं। मन की निर्मलता से ही व्यक्ति सन्त बन जाता है। कबीरदास का जीवन इस बात का प्रत्यक्ष प्रमाण है।

7. निम्नलिखित प्रश्नों के दीर्घ उत्तर लिखिए :

क. जो लोग स्वच्छता की आदत अपनाते हैं वे स्वस्थ व शोभाशाली तो बने ही रहते हैं, उन्हें स्वयं भी सदैव एक उल्लास व आनंद का अनुभव होता रहता है।

ख. क्रोध, बैर, हिंसा, ईर्ष्या, ये सब मन की मलिनताएँ हैं। व्यक्ति के प्रत्येक व्यवहार से उसके मन की दशा का पता चलता है।

ग. स्वच्छ मन वाला व्यक्ति दूसरों के प्रति स्नेहभाव रखता है। उसकी बातें सहज व सादगीपूर्ण होती है।

घ. जिसका मन स्वच्छ है वह सहज ही दूसरों के प्रति स्नेहभाव रखता है। सत्य उसकी वाणी का अंग ही बन जाता है। उसकी बातें सहज व सादगीपूर्ण होती हैं। वह झूठी शेखी नहीं बघारता, अहंकारपूर्ण उद्घोषणा नहीं करता। दूसरों को अपमान करके स्वयं को उच्च नहीं मानता। नन्हें-नन्हें बच्चे अनायास ही दूसरों को मन मोह लेते हैं, इसका कारण उनका स्वच्छ मन ही है। राग-द्वेष की धूल अभी उनके मनरूपी दर्पण पर नहीं जमी होती। इसीलिये उनके व्यवहार में एक ताजगी व उत्फुल्लता होती है।

ड. अच्छी संगति तथा श्रेष्ठ साहित्य मन को स्वच्छ बनाने के उपकरण हैं। सत्य साबुन है व प्रेम पानी। इनसे नित्य प्रति इस दर्पण की धूल धो देनी आवश्यक है।

च. मनुष्य तन से भी अधिक मन की देखभाल करे तभी वह उच्च लक्ष्यों तक पहुँचकर महामानव कहलाने का अधिकारी बन सकेगा।

पाठ – 5 : श्री जगदीश चन्द्र बसु

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (अ) ख. (अ)

ग. (स)

2. निम्नलिखित प्रश्नों के उत्तर 'हाँ' या 'नहीं' में दीजिए :

क. नहीं ख. हाँ

ग. हाँ घ. हाँ

ङ. हाँ

3. **पाठ में कुछ शब्द अंग्रेजी भाषा के भी प्रयुक्त हुए हैं, उन्हें छाँटकर लिखिए :**

सेन्ट जेवियर कॉलिज, प्रैसीडेन्सी कॉलिज सर
मार्कोनी इटली क्लोराफॉर्म

4. **इसी प्रकार नये शब्द बनाइए :**

प्रारंभ + इक – प्रारंभिक विज्ञान + इक – वैज्ञानिक
प्रमाण + इक –प्रमाणिक विचार + इक – वैचारिक
दर्शन + इक – दार्शनिक बुद्धि + इक – बौद्धिक

5. **नीचे दिये गये 'विशेषणो' के 'विशेष्य' पाठ से चुनकर लिखिए :**

अद्भुत – यन्त्र जड़ – पदार्थ शारीरिक – पीड़ा
सूक्ष्म – निरीक्षण प्रारंभिक – शिक्षा

6. **नीचे लिखे शब्दों के विलोम शब्द लिखिए :**

अस्त – उदय प्रभाव – दुष्प्रभाव पीड़ा – आराम
विष – अमृत प्रारम्भ – अंत प्रतिक्रिया – क्रिया
संकुचन – प्रसारण अद्भुत – सामान्य प्रसन्न – अप्रसन्न
निर्माण – नाश, ध्वंश

7. **निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :**

क. जगदीश चन्द्र बसु का जन्म तीस नवम्बर 1948 में पूर्वी बंगाल के एक छोटे से गाँव में हुआ था।

ख. पेड़-पौधों के संगीत, आघात् व विष के प्रति प्रतिक्रिया को बसु ने सबके सामने प्रदर्शित किया।

ग. बसु ने रेडियो तरंगों पर भी काफी कार्य किया था, किन्तु इसी बीच उनकी रुचि भौतिकी से वनस्पति जगत की ओर हो गयी, अतः उन्होंने रेडियो तरंगों का कार्य बीच में ही छोड़ दिया।

घ. वैज्ञानिक शोध के प्रति उनका लगाव चरम सीमा पर था। उसी उद्देश्य लिये अपनी सारी सम्पत्ति देकर उन्होंने 'बसु विज्ञान मंदिर' की स्थापना की।

ड. क्लोरोफार्म का जैसा प्रभाव मनुष्य पर पड़ता है, ठीक वैसा ही प्रभाव वृक्ष की चेतना पर भी पड़ता है। यदि मनुष्य को क्लोरोफॉर्म सुँघा कर बेहोश कर दिया जाए तो उसे शारीरिक पीड़ा का अनुभव नहीं होता, भले ही उस समय उसका कोई अंग ही क्यों न काट लिया जाए। इसी प्रकार क्लोरोफॉर्म देकर वृक्ष को काटा जाए तो उसे भी पीड़ा नहीं होती। इन तथ्यों को बसु ने सबके सामने सिद्ध करके दिखाया।

पाठ – 6 : दोहे व पद

1. **सही विकल्प पर सही (✓) का चिह्न लगाओ :**

क. (स) ख. (ब) ग. (अ)

2. **निम्नलिखित शब्दों के शुद्ध रूप लिखिए :**

कछू – कुछ भेस – भेष सेस – शेष

मानस – मनुष्य　　महेस – महेश　　अभिय – अभय
गनेस – गणेश　　सरनागति – शरणागत　　सुक – सुख

3. **निम्नलिखित वाक्यों में शब्द का प्रयोग किया गया है। जो दोनों वाक्यों में अलग-अलग अर्थ दे रहा है:**

क. गांठ : 1. दादी की संदूक की चाबी उनकी गांठ में रहती थी।
2. प्रेम का धागा जब टूट जाता है तो उसे जोड़ने पर गांठ पड़ जाती है।

ख. घड़ी : 1. घड़ी समय बताती है।
2. दु:ख की घड़ी निकल गई अब परेशान मत हो।

ग. बस : 1. सड़क पर चल रही बस में 25 यात्री बैठे थे।
2. बहू को सास रोज परेशान करती थी तंग आकर बहू ने कहा बस और नहीं।

घ. सोना : 1. मालती ने गले में सोने की चैन पहन रखी है।
2. रविवार के दिन बच्चे देर तक सोते हैं।

4. **निम्नलिखित मुहावरों को अपने वाक्यों में प्रयोग कीजिए :**

गाँठ बाँधना : गुरु ने कहा-मेरी कही गई बात अगर तुम गाँठ बाँध लेते तो आज तुम्हें पछताना नहीं पड़ता।

समय रहते जागना : समय रहते जाग जाओ, वरना फिर पछताना पड़ेगा।

दाँत खट्टे करना : भारतीयों ने स्वतंत्रता संग्राम में अंग्रेजों के दाँत खट्टे कर दिए।

चाँदी काटना : आजकल प्राइवेट डॉक्टर मनमानी फीस लेकर चांदी काट रहे हैं।

5. **निम्नलिखित संधि शब्दों को ध्यानपूर्वक पढ़िए और अन्य शब्दों को जोड़कर नये शब्द बनाइए :**

पुस्तक + आलय – पुस्तकालय　　मह + ऋषि – महर्षि
शिव + आलय – शिवालय　　सप्त + ऋर्षि – सप्तर्षि

6. **निम्नलिखित प्रश्नों के उत्तर लिखिए:**

क. रहीमदास जी विपत्ति को इसलिए भली मानते हैं क्योंकि यह थोड़े समय के लिए आती है।

ख. प्रेम का धागा जब टूट जाता है तो दोबारा जोड़ने पर उसमें गांठ पड़ जाती है।

ग. कवि के अनुसार सबसे दौड़कर मिलना चाहिए पता नहीं किस भेष में हमें भगवान के दर्शन हो जाए।

घ. यदि कोई घर बुलाकर प्रेम से विष पीने को दे तो रहीम दास जी उसे भी पी जाने को तत्पर है।

ङ. उस कौवे का बहुत बड़ा सौभाग्य है जो कृष्ण के हाथ से माखन रोटी झपटकर उड़ गया।

च. अहीर की लड़कियाँ कृष्ण को थोड़े से माखन पर नाचने के लिए विवश कर देती है।

7. निम्नलिखित दोहे तथा पद के भावार्थ लिखिए -

क. भावार्थ - कुछ दिन रहने वाली विपदा ही भली क्योंकि इसी समय पता चलता है कि दुनिया में कौन हमारा हित या अनहित सोचता है।

ख. भावार्थ - ऐसी मान्यता है कि कण-कण में भगवान व्याप्त है। वह किसी भी रूप में हमारे सामने आ सकता है अतः हमें किसी का निरादार नहीं करना चाहिए। क्या पता हम जिसका निरादर करते हैं वह परिवर्तित रूप में भगवान ही हो। रहीम दास जी कहते है कि इस जग में वास करते हुए सभी से नेक आचरण करना चाहिए। कोई मिल जाए तो उसी अवहेलना करना अनुचित है। सबसे उत्साहपूर्वक मिलना चाहिए क्योंकि यह निश्चित नहीं है कि न जाने किस रूप में नारायण सामने आ खड़े हों।

ग. प्रस्तुत पद में रसखान बताते हैं कि बाल कृष्ण कोई साधारण बालक नहीं हैं, बल्कि ये वही निगुर्ण निराकार ईश्वर है जिनकी महिमा गाते शेषनाग, शिव, गणेश जी, सूर्य देव और इन्द्रदेव भी नहीं अघाते।

नारद सुकदेव और व्यास जैसे प्रकाण्ड पंडित भी अपनी पूरी कोशिश करके जिसके स्वरूप का पता न लगा सके और हार मानकर बैठ गए, उन्हीं कृष्ण को अहीर की लड़कियाँ छछिया-भर (अंजली-भर) छाछ के लिए नाच नचाती हैं।

पाठ - 7 : महान् नीतिज्ञ-चाणक्य

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (अ) ख. (अ)

2. विलोम शब्द लिखिए :

उपयोगी - अनुपयोगी	शत्रु - मित्र	विश्वास - अविश्वास
नीति - अनीति	निर्बलता - सबलता	विवेक - अविवेक
सम्पूर्ण - अपूर्ण		

3. इसी प्रकार निम्नलिखित के लिए एक-एक शब्द दीजिए :

कर्णकटु	आक्रामक
राजकुमार	बाल्यकाल
विद्वान	

4. कारक किसे कहते हैं? नीचे दिए गए कारकों को उनके विभक्ति चिह्नों से मिलाइये :

कारक की परिभाषा - संज्ञा या सर्वनाम शब्द का वाक्य में क्रिया के साथ संबंध प्रकट होना ही कारक कहलाता है

कर्ता - ने	कर्म - को	सम्बोधन - ए! हे!, अरे!
अपादान - से	संबंध - का, की, के	

5. नीचे दिए गये संज्ञा शब्दों से विशेषण बनाइए :

भारत – भारतीय	सप्ताह – साप्ताहिक	आनंद – आनंदित
मास – मासिक	गुण – गुणी	कृपा – कृपालु
विदेश – विदेशी	राष्ट्र – राष्ट्रीय	

6. निम्नलिखित प्रश्नों के अति लघुउत्तर लिखिए :

क. चाणक्य के बाल्यकाल का नाम विष्णुगुप्त था।

ख. चाणक्य की शत्रुता नन्द से थी।

ग. चाणक्य ने चन्द्रगुप्त नामक साहसी नवयुवक योद्धा को प्रशिक्षित किया।

घ. चाणक्य ने यूनानी आक्रमणकारी सिकन्दर को समझौता करने के लिए बाध्य किया।

ड. 'अर्थशास्त्र' नामक पुस्तक के रचयिता 'चाणक्य' थे।

7. निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :

क. एक महान् मेधावी बालक के रूप में चाणक्य ने एक निर्धन ब्राह्मण परिवार में जन्म लिया। बाल्यकाल में इनका नाम विष्णुगुप्त था। यह एक कुशाग्र बुद्धि के होनहार बालक थे।

ख. एक बार राजा नन्द के दरबार में ये उन्हें देशभक्ति के विषय में समझाने के लिये गये किन्तु नन्द ने इनका अपमान किया। तिरस्कृत होकर भरी सभा में चाणक्य ने शपथ ली कि वह जब तक विलासी देशद्रोही नन्द का विनाश नहीं कर लेंगे, तब तक एक क्षण भी चैन से नहीं बैठेंगे।

ग. चाणक्य ने अपने स्वप्न चन्द्रगुप्त के माध्यम से साकार किए।

घ. विष्णुगुप्त, कौटिल्य और वात्स्यायन चाणक्य के ही नाम हैं। 'अर्थशास्त्र' और 'चाणक्य नीति' चाणक्य द्वारा रचित पुस्तकें हैं।

ड. 1. 'बात सत्य होने पर भी यदि किसी श्रोता को कर्णकटु लगे तो उससे मत कहो और सत्य का अपमान न करवाओ।'

2. 'उपयोगी बातें नगण्य व्यक्तियों से भी सुन लेनी चाहिएँ। बच्चों से भी उचित बातें सीखी जा सकती है।'

पाठ – 8 : रंग-रंगीला राज्य : पंजाब

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (अ)

2. उपसर्ग लगा कर विलोम शब्द लिखिए :

ख्याति – कुख्याति, अख्याति	सुंदर – असुंदर
भय – अभय	हाल – बेहाल

3. वाक्य बनाइए :

उर्वर – पंजाब की धरती बहुत उर्वर है।

अन्तर्राष्ट्रीय – हमारी अन्तर्राष्ट्रीय भाषा अंग्रेजी है।

अथक् – विनय ने अथक परिश्रम से धन-दौलत कमाई।

आकर्षित – मोदी जी के भाषण सुनकर सभी लोग आकर्षित हो जाते हैं।

5. निम्नलिखित वाक्यों में संज्ञा छाँटिए तथा उनका प्रकार लिखिए :

क. शहर– स्थानवाचक संज्ञा ख. रवि – व्यक्तिवाचक संज्ञा

ग. दुश्मनी – भाववाचक संज्ञा घ. सीमा पर – स्थानवाचक संज्ञा

6. निम्नलिखित शब्दों के बहुवचन बनाइए :

बन्दूक – बन्दूके	कौआ – कौए	दरवाजा – दरवाजे
गद्दा – गद्दे	मिठाई – मिठाइयाँ	कन्या – कन्याएँ
मित्र – मित्रों	हथनी – हथनियों	पत्रिका – पत्रिकाएँ
चाकू – चाकुओं	मकान – मकानों	पुष्प – पुष्पों

7. निम्न मुहावरों को अपने वाक्यों में प्रयोग कीजिए :

क. दूध की नदियाँ बहना : श्री कृष्ण के युग में हमारे देश में दूध की नदियाँ बहती थीं।

ख. डटकर खाना : हमारे कुत्ते ने डटकर खाना खाया और चैन की नींद सो गया।

ग. आसमान सिर पर उठाना : अध्यापक के कक्षा में ना रहने से बच्चे आसमान सिर पर उठा लेते हैं।

घ. खून खौलना : जैसे ही नितिन ने सुना कि अजय ने उसके खेत पर कब्जा कर लिया तो नितिन का खून खौलने लगा।

8. निम्न प्रश्नों के उत्तर लिखिए :

क. पंजाब का संबंध सतलज, रावी, व्यास, झेलम और चिनाव नदियों से हैं।

ख. गेहूँ उत्पादन में पंजाब का हमारे देश में द्वितीय स्थान है।

ग. 'लोहड़ी' और 'बैसाखी' पंजाबियों के मुख्य पर्व हैं।

घ. लंगर वह भोज है, जिसमें धनी, निर्धन ऊँची व निम्न जाति के लोग मिलजुलकर एक ही पंक्ति में जमीन पर या बैठकर भोजन करते हैं।

9. निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए:

क. पुरुष प्रायः लुंगी, ढीला कुर्ता और सिर पर पगड़ी बाँधते हैं तथा स्त्रियाँ सूट सलवार तथा सिर पर दुपट्टा ओढ़ती हैं।

ख. चंडीगढ़ एक अत्यंत सुंदर व भव्य शहर है। यहाँ के उद्यानों व स्वच्छ वातावरण से आकर्षित होकर अनेक लोग यहाँ पर्यटन के लिए आते हैं। चंड़ीगढ़ एक सुसंस्कृत, कलात्मक व समृद्ध शहर है। यह पंजाब का गौरव है।

ग. वास्तव में 'सिक्ख' शब्द 'शिष्य' शब्द का परिवर्तित रूप है। गुरु नानकदेव ने यह गुरु सिक्ख (शिष्य) परंपरा चलाई थी। इस श्रृंखला में सिक्खों के दस गुरु हुए। उन्होंने सिक्खों को 'केश', 'कड़ा', 'कंघा', 'कृपाण', व 'कच्छा' इन पाँच वस्तुओं को अनिवार्य रूप से धारण करने की परंपरा चलायी।

घ. 1. सिक्खों का पूजा स्थल गुरुद्वारा कहलाता है।

2. यहाँ पर 'गुरु ग्रन्थसाहब' के सम्मुख सभी आने वाले शीश नवाते हैं।
3. गुरु ग्रन्थसाहब में सन्त गुरुओं द्वारा रचित वाणी संग्रह है।
4. इसमें गाए जाने वाले पदों को 'सबद' कहा जाता है।

ड. सेना में 'सिक्ख रेजीमेन्ट' अपनी बहादुरी के लिये विशेष रूप से जाना जाता है। पाकिस्तान से हुये युद्ध के दौरान पंजाब के सिक्ख वीरों ने मातृभूमि के लिये अपने प्राणों की आहुतियाँ हँसते-हँसते दीं। देश के 'बार्डर' पर सिक्ख रेजीमेन्ट के वीर योद्धा हमारे देश की सीमाओं के सजग प्रहरी हैं। वास्तव में पंजाब भारत की आन-बान और शान का प्रतीक है।

पाठ - 9 : कुबेर का कोष

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (स)

2.

हॉस्टल	टेबुल फैन	मैस
लंचटाइम	प्लेट	शर्ट

3. पाठ में आए निम्नलिखित वाक्यांशों को अपने वाक्यों में प्रयुक्त कीजिए :

प्रशंसा के पुल बाँधना : मधु की खूबसूरत ड्रेस को देखकर रीना ने उसकी प्रशंसा के पुल बांधने शुरु कर दिए।

उत्साह की लहर : दीपावली पर बोनस मिलने की खबर सुनने पर मेरे ऑफिस में उत्साह की लहर दौड़ गई।

फूट-फूट कर रोना : परीक्षा में अनुत्तीर्ण होने की खबर सुनकर सीता फूट-फूटकर रोने लगी।

मुँह में जुबान न होना : पिताजी ने राजू से पूछा कि कहाँ गए थे तो वह ऐसा ही गया जैसे उसकी मुँह में जुबान ना हो।

रोनी सूरत : रवि की रोनी सूरत देखकर मोहन को उस पर दया आ गई।

आनन-फानन : दामाद जी अचानक लड़की को लेने ससुराल पहुँच गए तो आनन फानन में उनकी खातिरदारी ठीक से नहीं हो पाई।

मीठी झिड़की : माँ की मीठी झिड़कियों की तो मुझे आदत पड़ गई है।

4. निम्न की भाँति पाठ में से ऐसे शब्द युग्म छाँटिए जिनमें योजक चिन्ह (-) का प्रयोग हो:

घ. रंग-रूप	च. धीमे-धीमे	छ. आनन-फानन
ज. सुख-सुविधाओं,	झ. लम्बी-लम्बी	ञ. बीचों-बीच
ट. देखा-देखी	ठ. ऊबड़-खाबड़	ड. छोटी-सी

5. 'प्रति' उपसर्ग लगाकर चार शब्द लिखिये:

ख. प्रतिकार ग. प्रतिरूप घ. प्रतिशोध

ङ. प्रतिनिधि

6. सर्वनाम किसे कहते हैं? इसके भेद लिखिए।

जो शब्द संज्ञा के स्थान पर प्रयोग किए जाते हैं सर्वनाम कहलाते हैं।

जैसे : मैं, तुम, वह, हम, वे आदि।

सर्वनाम के तीन भेद होते हैं :

1. पुरुषवाचक सर्वनाम
2. निश्चयवाचक सर्वनाम
3. अनिश्चयवाचक सर्वनाम

7. निम्नलिखित प्रश्नों के लघु उत्तर लिखिए:

क. बड़े भैया का दाखिला 'रूड़की इंजीनियरिंग विश्वविद्यालय' में हो गया था।

ख. लेखक बड़े भैया के लिए कनस्तरी में देशी घी के बने लड्डू ले गया था।

ग. लेखक ने खाना खाने के लिए छुरी व काँटा हाथ में ले लिया किन्तु जैसे ही उसने उसे आलू की तरी में आधे डूबे आलू पर टिकाया, आलू फिसलकर उछल पड़ा। पास बैठे भाईसाहब की सफेद शर्ट पर घी व हल्दी के धब्बे लग गए।

घ. घर में माँ के लिए सामान खरीदकर लाना और बिस्तर आदि लगाना।

8. निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए:

क. बड़े भैया मेधावी तो थे ही, साथ ही उनका शान्त व संतुलित व्यक्तित्व, वस्त्र पहनने का नफासत भरा अंदाज तथा धीमी आवाज उनके एक कुलीन व सभ्य परिवार के होने की गवाही देते थे।

ख. माता जी बड़े भैया की सुख-सुविधाओं के लिए चिन्तित थीं। भैया क्या खायेंगे? कैसे रहेंगे? उन्हें गर्मी में कहीं बिना पंखे के तो नहीं सोना पड़ेगा! आदि-आदि।

ग. लेखक को अपनी हास्यास्पद स्थिति का पता तब चला जब उन्होंने हॉस्टल प्रांगण में कुछ लड़कों को अपने पर हँसते पाया। जल्दी ही भैया आ गये और एक मीठी झिड़की देते हुए अपने कमरे ले गये।

घ. वहाँ लम्बी-लम्बी मेजों पर बड़े सुन्दर सफेद कढ़ाईदार कवर बिछे थे जिनके बीचों-बीच सब्जियों के ढोंगे रखे हुए थे। साथ ही खाना-खाने के लिए साफ धुली प्लेटें रखीं हुयीं थीं। प्रत्येक प्लेट में एक छुरी, एक काँटा और दो चम्मचें रखीं थी। प्लेटों में रखे ये सब अस्त्र-शस्त्र मुझे भयभीत कर रहे थे।

ड. तुम तो बड़े परिश्रमी और सेवा करने वाले हो। घर में माँ के लिए सामान खरीद कर लाना और बिस्तर आदि लगाना, घर की देखभाल और भी न जाने कितने काम तुम ही तो करते हो.....! यह कहकर भैया ने लेखक की सराहना की।

च. ''कभी भी स्वयं हो हीन नहीं समझना चाहिए। किसी में कुछ गुण होते हैं तो कुछ कमियाँ भी होती हैं। लगातार अपनी कमियों को लेकर स्वयं को कोसते रहना, अपने ही प्रति अन्याय है। स्वयं अपना सम्मान करना सीखो, तभी दूसरे भी तुम्हारा सम्मान करेंगे....।''

छ. स्वयं कीजिए।

Semester – II

English

Lesson –1 : At The Field

Comprehension

1. (a) (iii) (b) (i) (c) (iii)
   (d) (iii)
2. (a) Anil's uncle is a farmer by profession.
   (b) The man was ploughing the field by tractor.
   (c) Plants get nutrients from fertilizers.
   (d) Radish, carrot and turnips are the roots which are used as vegetables.
   (e) Because onions have scale-leaves and fibre roots below them.
   (f) A farmer grows food for us.

Word Knowledge

Roots	***stems***
carrot	ginger
turnip	potato
beet-root	groundnut
	maize
	barley

Grammar Skill

1. (a) The threshed corn was put into bags.
   I threshed my crop in the field.
   (b) The harvest was ready for reaping.
   The farmer harvested his crop.
   (c) Water is necessary to life.
   The farmers waters the plants.
   (d) Manured is prepared by dung.
   We manured the plants.
   (e) I saw a pile of quilts.
   The boy piled the books on the table.

2. (a) My mother went to market to buy cooking oil.
   (b) The teacher punished the boys to improve them.
   (c) The doctor gave medicine to the patient to cure him.
   (d) The English misbehaved with Indians to insult them.
   (e) The player practised bowling for a long time to be a good bowler.
3. (a) profession (b) reached (c) stopped
   (d) get (e) nearby
4. (a) true (b) false (c) true
   (d) false (e) true (f) true

Composition

A bag of medium size and blue colour was lost yesterday near the post office at 12:30 p.m. The bag has five books, 5 answer books and a tiffin box of grey colour, made of steel. If someone finds it, kindly summit it on the address below :

Address : Anil S/o Sh. Ravi Kumar
D-150, Ram Krishanpuram
New Delhi - Mobile No.

Lesson – 2 : The Mountain And The Squirrel

Comprehension

1. (a) (i) (b) (ii) (c) (iii)
   (d) (i)
2. (a) There was a quarrel between a squirrel and a mountain.
   (b) The mountain was proud of its bigness.
   (c) The poet who composed this poem is Ralph Waldo Emerson.
   (d) The squirrel can crack a nut but the mountain can't.
3. (a) Must be taken in together.
   (b) You are not so small as I.
   (c) 'If' I cannot carry forests on my back.

Word Knowledge

1.

quarrel	big
together	sphere
make	back

2. mountain bun
doubtless all
make weather

3. (a) cheque (b) prize (c) weather
(d) effect (e) sale (f) dairy

Grammar Skill

1. His building haunts the people.
This piece of writing inspires.
The carpenter gave me furniture when he had polished it.
She wore clothes when those wore ironed.
The speech of the leader affected the audience as he desired.

2. (a) why (b) how (c) why
(d) how (e) how

Composition

It is cricket pitch. The captains of Ashoka Academy and Krishna Academy tossed. The captain of Ashoka Academy cricket team won the toss. The match started between the teams. The players of Ashoka Academy started batting. The captain was opener and scored half century. He was run out by Ram. Two players became victims of LBW and caught behind. One player was out after scoring only two runs. The bowling of Vardhman team was very nice. His batsman Pawan started batting but he was catch out.

Lesson – 3 : The Story of Ice and Ice-cream

Comprehension

1. (a) (iv) (b) (i) (c) (i)
(d) (iii) (e) (i) (f) (iii)

2. (a) Vegetables, fruits and cooked food are preserved using refrigerator.

(b) In ancient times, the Egyptians used to put some water out in shallow earthen ware. During the night, the temperature in sandy areas like Egypt falls below

0° celsius that is why a lot of ice formed on the surface of the water inside the earthen wares.

(c) Two thousand year ago.

(d) Babur, ordered his people to bring snow from snow caps of mountains located in Kabul.

(e) Yes, they bring ice for Babur from the mountains located in Kabul.

(f) Marco Polo was an italian traveller. He was served milk and ice by the Chinese caliph Kubali Khan.

(g) The people in Tundra region used to cut the ice in blocks and preserved it in dark caves wrapping in straw and saw dust.

(h) Egyptians and people of Tundra region.

(i) The first ice-cream was made by Dolly Madison. The wife of American President.

Word Knowledge

1. (a) summer (b) several (c) Egyptians
   (d) cold (e) cream (f) France
2. FILE OTHER BASIC
   INDIA LOCAL
3. (a) (ii) (b) (i) (c) (ii)
   (d) (i) (e) (i) (f) (i)

Grammar Skill

1. (a) I bought my car and went to my village.
   (b) He was very clever yet he was deceived.
   (c) Sachin tried much but he could not score hundred runs.
   (d) We worked hard but could not succeed.
   (e) The sun rose and the birds began to chirp.
   (f) They had a lot of money but they had not least pride.
2. Judgement stopment
   valuable homourness
   kindness beautiful
   hopeful government

	strongness	friendly
	attention	employment
3.	improve	unlucky
	disconnect	informal
	unhappy	disobey
	dishonest	illegal
	displace	improper
	unstop	disarrange
	impart	dismount
	absent	display
	unable	unmost

Composition

Dear Ravi,

I went to Nainital in the summer holidays. It was a ten day trip. I went there with my family. We went to see all the Taals including Bheem Taal and other. All the Taals comprises of beautiful lakes. The natural beauty there is mind blowing. Many boats used to float in the lake. Houses are built on the hills. It is a beautiful hill station in Uttarakhand. Many tourists came to visit there. It is really a wonderful place. I advice you to go there with your parents. It will be a nice place to visit.

Your friend

xyz

Lesson – 4 : Edison - A Child with Bright Brain

Comprehension

1. (a) (i) (b) (i) (c) (iii)
   (d) (i) (e) (ii)
2. (a) Edison was an American scientist.
   (b) One day young Edison was at school, his teacher was telling the students a story about birds. Edison repeatedly asked silly questions to the teacher. The teacher got irritated and asked his parents to take him out of school.

(c) Edison made a mixture of some worms by beating them into a pulp and asked the servant girl to drink it. The simple girl believed him and drank the mixture. Her stomach was upset and she fell ill.

(d) Edison saw a hen hatching its eggs on the poultry farm.

(e) Edison went to the market and bought a dozen eggs home and sat on them. He went on sitting for some time. All the eggs were smashed and spoilt his shorts when his mother saw it, she beat him badly.

(f) In 1878 he started working on an electric lamp and in 1880 he was successful in making it.

(g) Edison invented gramophone, electric bulb and forty war time inventions were also made by him.

Word Knowledge

1. (a) doing (b) dozen (c) girl
   (d) series (e) America
2. serves inventions believe
   experiment mixture childhood
3.

A	B
question	answer
never	always
few	more
replied	asked
satisfy	dissatisfy
silly	intelligent

Grammar Skill

1. (a) my (b) she (c) his
   (d) it (e) him (f) your
   (g) I, me (h) our
2. (a) Each boy and teacher will bring his luggage.
   (b) Everyone should do his duty.
   (c) None of us is doing his duty properly.
   (d) You and me will be punished.

(e) He, you and me will go to a movie tomorrow.

(f) You and he completed his work.

Composition

It is a crossing in city. A policeman is giving signals to vehicles. Traffic lights are also helping the drivers of the vehicles. School kids are watching for their turn to cross the road. They will cross through the Zebra strips. A person is walking on the footpath. The footpath is for pedestrians. We should obey the policeman on the duty. The traffic will run smoothly and accidents would be avoided.

Lesson – 5 : The Skylark

Comprehension

1. (a) (iv) (b) (i) (c) (ii)
   (d) (i) (e) (i)
2. (a) The Earth was green and the sky was blue.
   (b) The skylark was in the dir.
   (c) The butterfly danced on the wing.
   (d) The nest was among the stalks in the cornfields.
   (e) This poem was composed by Christine Rossetti.
3. (a) A skylark hang between the two.
   (b) And silent sank and roared to sing.
   (c) To right and left beside my walks.
   (d) While swift the sunny moments slid.

Word Knowledge

1. Corn soared wing
   green walks song
2. dry big
   below seen
   sad short
   noisy above
   slow hard

Grammar Skill

1.

buses	boxes
foxes	studios
donkeys	hooves
umbrellas	quizes
turkeys	volcanoes
chieves	families
wives	trophies

2. (a) a (b) a (c) an
   (d) a (e) a
3. (a) for (b) since (c) since
   (d) for (e) for (f) since

Composition

We should not waste water by making its misuse. We should not leave the water taps running. It is our duty to put them off when they are out of use. We should use wash-basin for brushing our teeth and washing our mouths and hands. We should bath in only one bucket of water, clothes should not be dry wetted while dripping fast.

Lesson – 6 : Mother Teresa

Comprehension

1. (a) (iii) (b) (ii) (c) (iv)
   (d) (ii) (e) (i) (f) (ii)
   (g) (iii) (h) (iv)
2. (a) The full name of Mother Teresa was Agnest Gonwasha Bojakshio.
   (b) During her nun training, she became in contact with a French nun named Teresa. Teresa believed that it is not necessary to do a great deed to please god. She gave it the name of 'Little Way'. Agnesh was much impressed with this notion and she changed her name Teresa.
   (c) Mother Teresa was born in Albania.

(d) When she was only 12 years old, an idea of serving people came to her mind and she decided to became a nun.

(e) That Agnesh will not meet her family after becoming a nun. She went to Dublin (Ireland) to get training of a nun at the age of eighteen.

(f) Mother Teresa said, "Which native country? The whole world is my country. Now India is my country. If I see some disabled, helples or ill person anywhere in the world, I shall attend him. She is mine and I am for his/her service."

(g) Once the American senator Canedy met with her by chance. He saw that Mother Teresa had been engaged herself in the service of refugees in India. She was attending a patient who was vomiting and discharging tools. Canedy was much impressed to see Mother Teresa.

(h) Mother Teresa was given the following awards :

(i) Order of British Empire

(ii) Temple Award by Philip, the prince of England

(iii) John of Canedy award of America

(iv) J. L. Nehru Peace Prize by Govt. of India.

(v) Bharat Ratna and Padam Shree by Govt. of India.

(vi) Pope Peace Award by Pope.

Word Knowledge

1.

A	B
Nun	person under the rule of missionary
Nurse	one who attends the patient
Senator	the member of American Senate
Journalist	professional who writes for newspaper and TV
Refugee	person who leaves his own country to take asylum in another country

2. (a) father (b) she (c) become
(d) pleased (e) people (f) hesitated

3. snake night
tail weather
fare knew
vane floor

Grammar Skill

1. (a) Our parents are obeyed by us.
(b) Their elders are not insulted by them.
(c) English grammar is taught to us by the teacher.
(d) My work is not done properly by me.
(e) We are not relied upon by him.
2. (a) without (b) by (c) in
(d) in (e) for (f) at
3. (a) true (b) false (c) true
(d) true (e) true (f) true

Composition

Akhil
Nehru Hostel
BH Road, Delhi-65
Dated : .....
Respected Mummy,

I am doing well at my studies in my school and hostel. You know that winter has come and I have no woollen garment; so kindly send me ` 2000. I shall buy a new coat. Love to baby Maan from me. Rest on meeting.

Lesson – 7 : The Perfect Life

Comprehension

1. (a) (i) (b) (ii) (c) (i)
(d) (i)
2. (a) The poet is Ben Johnson and the poem is Perfect Life.
(b) An oak tree lives for three hundred years.
(c) The end of an oak tree is to fall as a log at last dry, bald and sere.

(d) A lily of a day mean to live a life of one day like a lily flower.

(e) A lily fairer far in May.

2. (a) In bulk doth make Man better be.

(b) Although it fall and die that night.

(c) In small proportions we just beauties see.

Word Knowledge

1. be make
   sore tree
   light plant
   be last
2. hungry nationality
   dangerous central
   weak beautiful
   poor honest

Grammar Skill

1. (a) where (b) what (c) which
   (d) when (e) why (f) whose
2. (a) did not read (b) did not buy
   (c) is not (d) did not write
   (e) do not eat (f) did not wash
3. the, an, a, an, a, the, an, the, The, a

Composition

It is a railway platform. Some passengers are doing without thinking. We should follow the following Don'ts :

Lesson – 8 : Who Is More Intelligent

Comprehension

1. (a) (ii) (b) (i) (c) (ii)
   (d) (i) (e) (ii) (f) (ii)
2. (a) The merchant was worried because he was not certain that his two sons might be able to inrease his money after his death.

(b) He wanted to give all his money to his sons who proved himself to be the cleverer of the two.

(c) The problem was how to find out which of the two sons was the cleverer. He solved it by thinking of a plan about their testing.

(d) The first son bought a cart full of hay.

(e) The second son bought some candles.

(f) The candles filled the room with bright light.

Word Knowledge

1.

A	B
problem	solution
old	young
directly	indirectly
reluctant	willing
despair	hope

2. (a) reluctant (b) hay (c) bullock-cart
   (d) despair (e) merchant

Grammar Skill

1. (a) How many sons did the merchant have?
   (b) How did he solve the problem?
   (c) Where did the first son go directly?
   (d) What did the second son buy for a rupee?
   (e) What was bought for a rupee at last?

2. (a) cheaper (b) highest (c) lighter
   (d) intelligent (e) better (f) favourite

3. (a) true (b) false (c) true
   (d) true (e) true (f) false

4. (a) lived (b) laid (c) called
   (d) picked (e) deal (f) market

Composition

A tortoise and a rabbit were good friends. Once there was a bet between them for a faster racer. Final touch was

marked by a red flag. The race started. In the beginning the rabbit ran fast and got tired in the middle of the way. On the other hand the tortoise went on walking steadily. The tortoise was nearer the winning point, when the rabbit got up and began to run fast but in the mean while, the tortoise touched the red flag and won the race.

Lesson – 9 : The Great Saint : Maharshi Dayanand

Comprehension

A. (a) The childhood name of Swami Dayanand was Mool Shanker.

(b) His father was Krishan Ji Trivedi and mother was Shobha Rai.

(c) His father wanted that Mool Shanker should have been educated so that he might handover the charge of household duties and landlordship to him.

(d) Swami Dayanand was skilled in Sanskrit language.

(e) (i) eldest (ii) like

B. (a) Swami Dayanand left his house at the age of 21 to find out a true teacher who might take him under his guardianship.

(b) Swami Purnanand was a learned and saint of high calibre.

(c) Swami Purnanand.

(d) He eradicated the superstitions, purdah system - child marriage openly. He was also in favour of widow remarriage.

(e) Swami Dayanand died in 1883.

C. (a) Swami Dayanand.

(b) Krishna Ji Trivedi and Shobha Rai.

(c) A mouse climbed on Shivlinga and began to eat the offerings of Shiva.

(d) She died of cholera.

(e) Swami Purnanand.

(f) He eradicated the superstitious, purdah system and child marriage openly.

Word Knowledge

1. (a) society (b) Mool Shanker (c) primary
   (d) learnt (e) without (f) illness
2. (a) cauliflower (b) cabbage (c) hospital
   (d) pencil (e) tiger (f) highland
3. parents women
   mice ladies
   houses duties
   men offerings

Grammar Skill

1. (a) The student is sad because he has failed in the exam.
   (b) The night fell and he went to sleep.
   (c) The beggar did not beg so I gave him nothing.
   (d) The gate was closed so I could not get in.
   (e) Lakkhimal was a miser but he had a beautiful pair of shoes.
   (f) Anmol could not go to school because he was not feeling well.
2. playing beginning
   running telling
   eating trying
   stopping waving
3. (a) I went to a fair.
   The decision was fair.
   (b) Let us play hide and seek.
   A hide is an animal skin.
   (c) I have a right to do this.
   Yes, you are right.
   (d) A donkey bear heavy load.
   I will not bear this mistake again.

4. (a) false (b) true (c) false
   (d) true (e) true (f) true

Composition

(a) JRD gave India wings to fly in 1932.

(b) The Indian Government joined JRD to launch the Air India.

(c) JRD excelled not only as an aviator but also as a philanthropist, educationist, sportsman, poet and sculptor.

(d) JRD was awarded the Bharat Ratna in 1992.

EVS

Lesson –1 : Relationship

1. (a) (iv) Singapore
   (b) (iii) Diwali
   (c) (i) they had more job opportunities in the urban areas
   (d) (iii) another country
   (e) (i) educated, employed women
2. Say True or False :
   (a) True (b) False
   (c) True (d) True
3. (a) suffered (b) Industrilization (c) children
   (d) sized (e) Nuclear
4. (a) Manavi aunty lives in Singapore.
   (b) Anil last met Prachi when he was three years old and Prachi has been five years old.
   (c) Reasons for the breaking up of joint families are following :
      (i) Large sized families.
      (ii) Educated, employed, independent women
      (iii) Industrilization
   (d) Yes, I have relative living in another country.

Lesson – 2 : Shifting Around

1. (a) (iii) Rampur village (b) (ii) stream
   (c) (iii) lack of water (d) (ii) one room flats
   (e) (iv) dhaba
2. (a) True (b) False (c) True
   (d) True (e) True
3. (a) land (b) water (c) another city
   (d) Radhey (e) village
4.

A	B
(a) Earthquake	5. natural disaster
(b) Mandi	1. market
(c) Stream	2. small river
(d) Tent	3. temperory house made of canvas
(e) Dhaba	4. a shop that provides food

5. (a) Radhey lived in village Rampur.
   (b) Radhey got water from a nearby stream for his field.
   (c) The stream got dry under the heat of the scorching sun.
   (d) The bullock got died because of lack of water.
   (e) Radhey left the village because many people and animals began dying due to drought.
6. The reasons for people shifting around are following :
   (i) Transfer due to job.
   (ii) Natural disasters like flood, landslides, earthquakes, drought, etc.
   (iii) Situations and problems caused by battles or wars.
   (iv) Constructions like dams, roads, flyovers, hostels, residential areas or factories.
7. I am Radhey. There were more than 15,000 people at the camp. The little food and water was provided to us. But it couldn't bring much relief. We were forced to live in squalour as the days thrned to weeks and then months.

The announced money for compensating loss of land and house left behind in the village never reached to me and others like me.

Lesson – 3 : All Are Unique

1. (a) (iii) joint family (b) (iii) cousins
   (c) (iv) pickle and pudding (d) (i) jolly person
2. (a) True (b) False (c) True
   (d) False (e) False
3. (a) unique (b) silver-white (c) Rohan
   (d) pickles and pudding
4. Match these properly :

A	B
(a) Aunt Meena	5. professional ornament designer
(b) Prachi	1. artist
(c) Kashaira	4. dancer
(d) Rohan	2. football player
(e) Maradona	3. great footballer

5. (a) I live in a joint family.
   (b) There are eight members in my family.
   (c) Students do yourself.
   (d) I have a special quality of drawing natural scenes.
   (e) I would like quality of my mother in myself of making delicious food.

Lesson – 4 : Our Likes

1. (a) (iii) five sense organs (b) (iv) tongue
   (c) (i) Indipop and film songs (d) (iii) vegetarian
2. (a) True (b) False (c) False
   (d) True
3. (a) part (b) parents (c) hot
   (d) Indian (e) calm

4. (a) sweet things
   (b) for bright coloured floral printed dresses
   (c) postal shades in colours of clothes
   (d) listenings to Indipop songs and film songs.
5. (a) Our five sense organs (eyes, ears, nose, tongue and skin) help us to learn from experiences.
   (b) Some experiences are liked by us and some are disliked. They become our habit.
   (c) The tongue helps us to taste various foods, salty, sour, bitter, hot, sweet, etc.
   (d) I like Indian melodious music.
   (e) I dislike the smells of kerosine, garlik, cow-dung and paint.
   (f) I eat vegetarian food.
   (g) I like to watch bollywood comedy movies.

Lesson – 5 : Reading By Feeling

1. (a) (ii) blind and deaf
   (b) (iii) companion and teacher of Helen Keller
   (c) (ii) Braille method
   (d) (i) French man
2. (a) True (b) False (c) True
   (d) True (e) True
3. (a) dumb (b) Braille (c) pattern
   (d) sign (e) alphabets
4. (a) People tacking some physical activities are called special people or people with special needs.
   (b) People with special needs be treated by spending our time with them by playing, reading or sharing jokes. It can make them very happy.
   (c) Helen Keller was a blind and deaf lady.
   (d) Anne Sullivan was Helen Killer's companion and teacher. Anne helped her to learn to read and write.

(e) Braille is a method of writing that blind people can understand.

(f) Deaf and dumb people uses sign language.

(g) We can help people with special needs by giving them love, support and encouragement to develop some other qualities they have.

Lesson – 6 : Games : Teams Play

1. (a) (iv) all of these (b) (iii) team spirit
   (c) (ii) cricket (d) (i) hockey
   (e) (ii) wrestling
2. (a) True (b) True (c) True
   (d) False (e) False
3.

A	B
(a) Hockey	6. National game of India
(b) Sachin Tendulkar	1. Won 20-20 World Cup 2007
(c) Kapil Dev	2. Won world cup 1983
(d) Mahendra Singh Dhoni	5. cricket player
(e) Maradona	3. football player
(f) Sania Mirza	4. Lawn Tennis player

4. (a) spirit (b) lack (c) captain
   (d) akhara (e) martial
5. (a) Cricket, hockey and football.

   (b) Team spirit is important because it is the basis of a team. If the group or team work together towards a common goal, it must win.

   (c) The team's captain must be a person who is competent and he must have leadership qualities. He must keep the team together by encouraging each member to give the best for the team. This motivation power is of all most importance.

   (d) India won the ICC Cricket T-20 World Cup in 2007.

   (e) Some martial arts of Inida are kho-kho, kabaddi,

lathhi, mallayuddha, kalaripayattu, mallakhambh, kattu varisai and varma kalari.

(f) Sania Mirza plays lawn tennis.

Lesson – 7 : How We Breathe

1. (a) (ii) oxgyen (b) (iii) lungs
   (c) (i) second (d) (iii) 25
   (e) (iii) carbon dioxide
2. (a) True (b) False (c) True
   (d) True (e) True
3.

	A		B
(a)	Trachea	5.	a pipe in throat
(b)	Bronchi	4.	part of trachea
(c)	Alveoli	1.	tiny pockets of bronchi
(d)	Elephant	2.	breathes 10 times a minute
(e)	Diaphragm	3.	draws air in and out of the lungs

4. (a) 20 times a minute
   (b) carbon dioxide
   (c) breathe out, you seem to be blowing smoke
   (d) different rates depending on the oxygen they need
   (e) downwards from the back of the throat to the lungs which fill the chest cavity
5. (a) All living beings (human beings, plants and animals) take in oxygen, a gas from the water or air and give out carbon dioxide. This process is called respiration.
   (b) We breathe in oxygen gas.
   (c) We breathe out carbon dioxide gas.
   (d) A candle is stopped burning when we blow at it because our breath carries carbon dioxide which does not help in burning.
   (e) The moisture in our breathe forms moisture on a mirror when we breathe out on it.

Lesson – 8 : Helpers We Need

1. (a) (ii) Municipal Corporation

(b) (iii) both (i) and (ii)
(c) (ii) looked down
(d) (iii) Mahatma Gandhi
(e) (iii) toilets

2. (a) True (b) True (c) True
(d) False (e) True

3. (a) bring (b) officer
(c) toilets (d) untouchables
(e) small

4. (a) The work of sanitation and cleanliness of our street and public toilets is considered 'dirty' and 'menial'.
(b) Garbage pickers pick garbage cans and bins. They help to keep environment clean so that no epidemics spread.
(c) Helpers who sweep the streets are important for us; as by sweeping the street they help to keep our environment clean so that no epidemics spread.
(d) Mahatma Gandhi believed in that all works are equal as it would be paper work or scavenging.
(e) In our thinking, the helpers who sweep the streets do a great social work for us. It is a respectable job. They are important members of our society and deserve all our respect.

Lesson – 9 : Energy From Fuels

1. (a) (iv) all of these
(b) (iii) non-conventional source of energy
(c) (iii) coal
(d) (ii) remains of plants and animals
(e) (iv) refined petroleum

2. (a) True (b) True (c) True
(d) False (e) True

3. (a) non-conventional (b) crude oil
(c) remains (d) refinery

(e) by-product

4.

	A		B
(a)	Petrol	2.	conventional source of energy
(b)	CNG	4.	is used in vehicles
(c)	LPG	1.	cooking gas
(d)	Water	3.	non-conventional source of energy
(e)	Koresene	5.	condenses at the top of fractionaling column

5. (a) Two types of sources of energy are conventional (non-renewable) and non-conventional (renewable).

(b) Fuel wood was replaced by coal in the 16th century because wood became scarce.

(c) Fuel woods and dung cakes are not to be used because these sources of energy are depleting forest cover and spreading air pollution.

(d) The uses of coal are :

(i) Coal is used as a raw material for industies.

(ii) It is burnt on the fire to give us heat.

(iii) It is burnt by power stations to produce electricity.

(iv) Coal tar, ben coal, ammonia and other gaes also yield by the process of carbonization, and from these raw materials, perfumes, insecticides, drugs, dyes, plastics, saccharine, fertilisers, resins and tar can be made.

(e) Petroleum was formed from the remains of ancient marine organisms.

(f) Petroleum is refined at the refinery. The first step in processing is distillation, or fractionation which seperated the crude oil into its constivent or fractions. The petroleum is heated in a furnace and passed into a fractionaling uluma. The fractions seperate into different trays in the column according to their boiling points. Petrol and light oil condense at the top and heavy fuel oil at the bottom. Petrolum gas is also

a by product of petroleum.

(g) LPG is liquefied petroleum gas which is used in our kitchens.

(h) CNG is compressed Natural Gas which is used in our vehicles.

Lesson – 10 : The Mountaineers

1. (a) (i) Mt. Everest (b) (i) IMF
   (c) (iv) all of these (d) (ii) 1953
2. (a) False (b) False (c) True
   (d) True (e) True
3. (a) Bachhendri Pal (b) protective
   (c) overhanging (d) altitudes
   (e) light weight
4. (a) Bachhendri Pal is the first Indian woman to climb Mt. Everest.

   (b) Sir Edmund Hillary and Tenzing Norgay were the first to climb Mt. Everest.

   (c) (i) Cleats are rubberwedges on the sole of mountaineers boots for sure footing.

   (ii) Crampons are metal spikes; to which mountaineers attach to their boots on ice.

   (d) Ropes are used by mountaineers because they tie the member of the party to one-another so that if someone slips the other stops his fall. Ropes also help to climb up overhanging rocks and for coming down slopes quickly.

   (e) Ice axe is used for testing the ice for cutting steps into it, and for balance.

   (f) The base camp is used as a starting point for climbers during their acent and descent.

Lesson – 11 : From A Spacecraft

1. (a) (iii) water on it (b) (iii) blue planet

(c) (i) Ursa major (d) (ii) sun

(e) (iii) Discovery

2. (a) True (b) False (c) True

(d) False (e) False

3.

	A	B
(a)	Squardron leader Rakesh Sharma	3. Soyuz T-11
(b)	Kalpana Chawla	4. Columbia Shuttle
(c)	Sunita Williams	1. Discovery Shuttle
(d)	Discovery shuttle	2. returned to land in June 2007

4. (a) 10th December 2006

(b) 19th November 1997

(c) as a bright blue jewel

(d) would not appear to twinkle at all

5. (a) The earth appears blue in space because of water present on it.

(b) Many stars seem to group together and have a definite shape or pattern. These groups are called constellations.

(c) Ursa Major and Scropio.

(d) A shooting star is a meteor which is often visible on dark nights.

(e) The achievement of Rakesh Sharma is that he was the first Indian to go into space.

Lesson – 12 : Agriculture

1. (a) (iii) farmers (b) (i) cereal crop

(c) (iii) fibre crop (d) (iii) soil erosion

(e) (iii) cut crops

2. (a) True (b) False (c) True

(d) False (e) True

3.

	A		B
(a)	Animal manure	5.	dung and vegetation wastes
(b)	Fertilizer	1.	chemical mixture
(c)	Sugar cane	2.	hot regions
(d)	Tea	3.	tropical areas
(e)	Cotton	4.	fibre crop

4. (a) Farmers grow many kinds of crops.

(b) Fibre crops are field crops grown for their fibres, which are traditionally used to make paper, cloth or rope.

(c) Growing different crops on the same land from year to year is called crops rotation.

(d) Man gained land for cultivation by cutting downs areas of forest.

(e) A tractor is used for pulling many kinds of implements on lands to prepare it for seeds, to plant the seeds and to help to cultivate and harvest the crops.

(f) Ploughts and harrows are used for breaking the soil for planting seeds.

(g) A combine harvester harvests crops. It gather wheat, cut it, thresh it, place it in bags and deposit the cut stalks back on the ground.

2. (a) Tractor : Tractor is the main farming machinery. It pulls many kinds of implements on land to prepare it for seed, to plant the seed and to help to cultivate and harvest the crops. It has replaced the horse and ox in many farming nations.

(b) Seed drills : Seed drills place the seeds in rows in the soil and can also add fertilisers to help the crop grow.

(c) Harrows : Harrows are pulled by tractors to break the soil for planting seeds.

Mathematics

Lesson – 1 : Highest Common Factor & Lowest Common Factor

Exercise

1. (a) All the factors of 25 are = 1, 5, 25
   All the factors of 45 are = 1, 3, 9, 15, 45
   Common factors = 1, 5

   (b) All the factors of 24 are = 1, 2, 3, 4, 6, 8, 12, 24
   All the factors of 60 are = 1, 2, 3, 4, 5, 6, 10, 12, 15, 30, 60
   Common factors = 1, 2, 3, 4, 6, 12

   (c) All the factors of 77 are - 1, 7, 11, 77
   All the factors of 110 are = 1, 2, 5, 11, 22, 55, 110
   Common factors = 1, 11

   (d) All the factors of 75 are = 1, 3, 5, 15, 25, 75
   All the factors of 100 are = 1, 2, 4, 5, 10, 20, 25, 50, 100
   Common factors = 1, 5, 25

   (e) All the factors of 120 are = 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120
   All the factors of 160 are = 1, 2, 4, 5, 8, 10, 16, 20, 40, 80, 160
   Common factors = 1, 2, 4, 5, 8, 10, 20, 40

   (f) All the factors of 150 are = 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150
   All the factors of 250 are = 1, 2, 5, 10, 25, 50, 125, 250
   Common factors = 1, 2, 5, 10, 25, 50

   (g) All the factors of 300 are = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 25, 30, 50, 60, 75, 100, 150, 300
   All the factors of 400 are = 1, 2, 4, 5, 8, 10, 20, 25, 40, 80, 100, 200, 400
   Common factors = 1, 2, 4, 5, 10, 20, 25, 100

2. (a) 70 and 98

2	70
5	35
7	7
	1

2	98
7	49
7	7
	1

$70 = 2 \times 5 \times 7$
$98 = 2 \times 7 \times 7$
common factor = 2, 7

H.C.F. $= 2 \times 7 = 14$

(b) 176 and 96

2	176
11	88
2	8
2	4
2	2
	1

3	96
2	32
2	16
2	8
2	4
2	2
	1

$176 = 2 \times 2 \times 2 \times 2 \times 11$
$96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$
common factor=2, 2, 2, 2

H.C.F. $= 2 \times 2 \times 2 \times 2 = 16$

(c) 108 and 315

2	108
2	54
3	27
3	9
3	3
	1

3	315
5	105
3	21
7	7
	1

$108 = 2 \times 2 \times 3 \times 3 \times 3$
$315 = 7 \times 5 \times 3 \times 3$
Common factor = 3, 3

H.C.F. $= 3 \times 3 = 9$

(d) 315 and 120

3	315
5	105
3	21
7	7
	1

2	120
2	60
2	30
3	15
5	5
	1

$315 = 7 \times 5 \times 3 \times 3$
$120 = 3 \times 2 \times 5 \times 2 \times 2$
Common factor = 3, 5

H.C.F. $= 3 \times 5 = 15$

(e) 105 and 280

5	105
3	21
7	7
	1

2	280
2	140
7	70
2	10
5	5
	1

$105 = 5 \times 3 \times 7$
$280 = 2 \times 2 \times 7 \times 2 \times 5$

H.C.F. $= 7 \times 5 = 35$

(f) 175 and 225

5	175
5	35
7	7
	1

5	225
5	45
3	9
3	3
	1

$175 = 5 \times 5 \times 7$
$225 = 5 \times 5 \times 3 \times 3$
Common factors = 5, 5
H.C.F. $= 5 \times 5 = 25$

3. (a) 105, 85, 140

5	105
3	21
7	7
	1

5	85
17	17
	1

2	140
2	70
5	35
7	7
	1

$105 = 5 \times 3 \times 7$; $85 = 5 \times 17$; $140 = 5 \times 2 \times 2 \times 7$

H.C.F. $= 5$

(b) 116, 145, 290

2	116
2	58
29	29
	1

5	145
29	29
	1

29	290
2	10
5	5
	1

$116 = 2 \times 2 \times 29$; $145 = 5 \times 29$; $290 = 2 \times 5 \times 29$

H.C.F. $= 29$

(c) 45, 495, 990

3	45
5	15
3	3
	1

5	495
3	99
3	33
11	11
	1

11	990
3	90
3	30
2	10
5	5
	1

$45 = 3 \times 5 \times 3$; $495 = 5 \times 3 \times 3 \times 11$; $990 = 11 \times 3 \times 3 \times 2 \times 5$

H.C.F. $= 3 \times 3 \times 5 = 45$

(d) 128, 221, 470

2	128
2	64
2	32
2	16
2	8
2	4
2	2
	1

3	221
7	77
11	11
	1

2	470
5	235
47	47
	1

$128 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$; $221 = 3 \times 7 \times 11$; $470 = 2 \times 5 \times 47$

H.C.F. $= 1$

(e) 306, 408, 224

2	306
3	153
3	51
17	17
	1

2	408
2	204
2	102
3	51
17	17
	1

2	224
2	112
2	56
2	28
2	14
7	7
	1

$306 = 2 \times 3 \times 3 \times 17$; $408 = 2 \times 2 \times 2 \times 3 \times 17$; $224 = 2 \times 2 \times 2 \times 2 \times 2 \times 7$

H.C.F. $= 2$

(f) 144, 576, 804

2	144
2	72
2	36
2	18
3	9
3	3
	1

2	576
2	288
2	144
2	72
2	36
2	18
3	9
3	3
	1

2	804
2	402
3	201
67	67
	1

144=2×2×2×2×3×3; 576=2×2×2×2×2×2×3×3

804=2×2×3×67

H.C.F. = 2×2×3 = 12

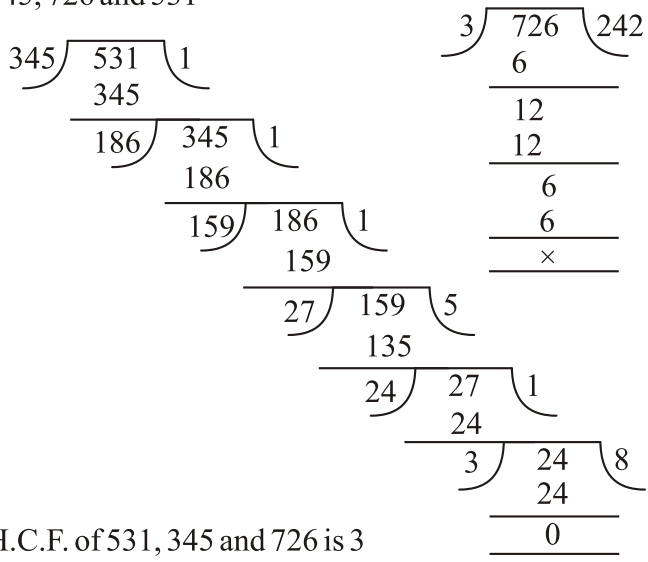
4. (a) 192, 576 and 880

192 / 880 / 4
768
112 / 192 / 1
112
80 / 112 / 1
80
32 / 80 / 2
64
16 / 32 / 2
32
0

16 / 192 / 12
16
32
32
×

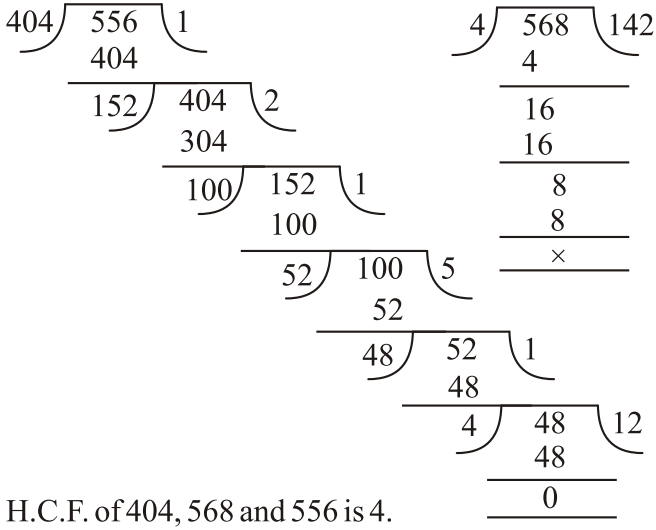
H.C.F. of 192, 576 and 880 is 16.

(b) 345, 726 and 531



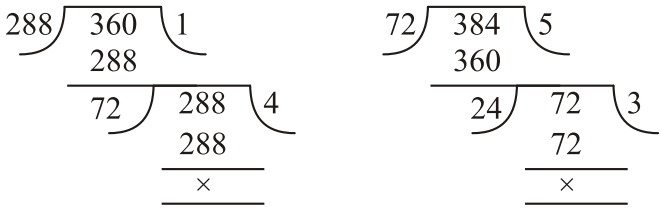
H.C.F. of 531, 345 and 726 is 3

(c) 404, 568 and 556



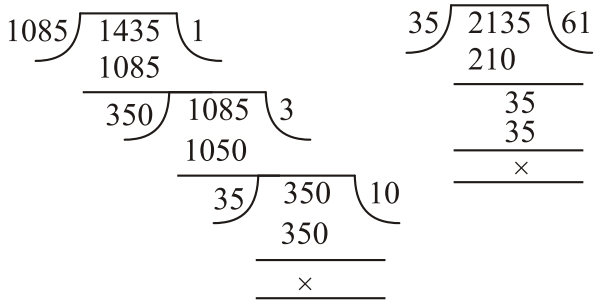
H.C.F. of 404, 568 and 556 is 4.

(d) 288, 360 and 384



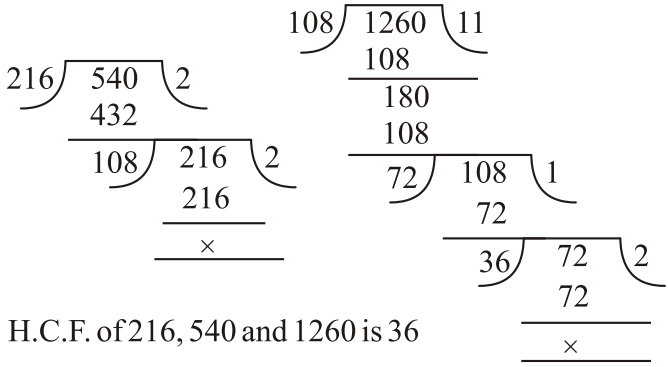
H.C.F. of 288, 360, 384 is 24.

(e) 1435, 1085 and 2135



H.C.F. of 1435, 1085 and 2135 is 35.

(f) 216, 540 and 1260



H.C.F. of 216, 540 and 1260 is 36

(g) 460, 920 and 1380

H.C.F. of 460, 920 and 1380 is 460

Exercise

1. (a) GCD (b) Smallest (c) Highest (d) Equal
   (e) co-prime
2. (a) 24, 36

2	24
2	12
2	6
3	3
	1

3	36
2	12
2	6
3	3
	1

$24 = 2 \times 2 \times 2 \times 3$
$36 = 2 \times 2 \times 3 \times 3$

L.C.M. $= 2 \times 2 \times 2 \times 3 \times 3 = 72$

(b) 54, 114

2	54
3	27
3	9
3	3
	1

2	114
3	57
19	19
	1

$54 = 2 \times 3 \times 3 \times 3$
$114 = 2 \times 3 \times 19$
L.C.M. $= 2 \times 3 \times 3 \times 3 \times 19 = 1026$

(c) 36, 21

2	36
2	18
3	9
3	3
	1

3	21
7	7
	1

$36 = 2 \times 2 \times 3 \times 3$
$21 = 3 \times 7$
L.C.M. $= 2 \times 2 \times 3 \times 3 \times 7 = 252$

(d) 15, 45 and 225

3	15
5	5
	1

3	45
3	15
5	5
	1

5	225
3	45
5	15
3	3
	1

$15 = 3 \times 5$; $45 = 3 \times 3 \times 5$; $225 = 5 \times 3 \times 5 \times 3$
L.C.M. $= 3 \times 3 \times 5 \times 5 = 225$

(e) 12, 16, 24 and 32

2	12
2	6
3	3
	1

2	16
2	8
2	4
2	2
	1

2	32
2	16
2	8
2	4
2	2
	1

$12=2\times2\times3$; $16=2\times2\times2\times2$; $32=2\times2\times2\times2\times2\times2$

L.C.M. $=2\times2\times2\times2\times2\times3=96$

(f) 18, 35, 60 and 100

2	18
3	9
3	3
	1

5	35
7	7
	1

2	100
2	50
5	25
5	5
	1

$18=3\times3\times2$; $35=5\times7$; $100=2\times2\times5\times5$

L.C.M. $=2\times2\times5\times5\times3\times3\times7=6300$

(g) 8, 12, 18 and 20

2	8
2	4
2	2
	1

3	12
2	4
2	2
	1

2	18
3	9
3	3
	1

2	20
2	10
5	5
	1

$8=2\times2\times2$; $12=3\times2\times2$; $18=2\times3\times3$; $20=2\times2\times5$

L.C.M. $=2\times2\times2\times3\times3\times5=360$

(h) 60, 84, 96 and 120

2	60
2	30
3	15
5	5
	1

2	84
2	42
3	21
7	7
	1

2	96
2	48
2	24
2	12
2	6
3	3
	1

2	120
2	60
2	30
3	15
5	5
	1

$60 = 2\times2\times3\times5$; $84 = 2\times2\times3\times7$;

$96 = 2\times2\times2\times2\times2\times3$; $120 = 2\times2\times2\times3\times5$

L.C.M. $= 2\times2\times2\times2\times2\times3\times7\times5 = 3360$

(i) 66, 88, 110 and 77

11	66
3	6
2	2
	1

2	88
2	44
2	22
11	11
	1

7	77
11	11
	1

11	110
2	10
5	5
	1

$66 = 11\times3\times2$ $88 = 11\times2\times2\times2$

$77 = 7\times11$ $110 = 11\times2\times5$

L.C.M. $= 11\times2\times2\times2\times3\times7\times5 = 9240$

3. (a) 108, 228

2	108	228
2	54	114
3	27	57
19	9	19
3	9	1
3	3	1
	1	1

L.C.M. $= 2\times2\times3\times19\times3\times3 = 2052$

(b) 64, 80 and 36

2	64	80	36
2	32	40	18
2	16	20	9
2	8	10	9
2	4	5	9
2	2	5	9
5	1	5	9
3	1	1	9
3	1	1	3
	1	1	1

L.C.M. = $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5 \times 3 \times 2 = 2880$

(c)

2	16	24	32
2	8	12	16
2	4	3	8
2	2	3	4
3	1	3	2
2	1	1	2
	1	1	1

L.C.M. = $2\times2\times2\times2\times3\times2=96$

(d) 112, 252 and 99

2	112	252	99
2	56	126	99
2	28	63	99
3	14	63	99
7	14	21	33
11	2	3	33
3	2	3	3
2	2	1	1
	1	1	1

L.C.M. = $2 \times 2 \times 2 \times 3 \times 7 \times 11 \times 3 \times 2 = 11088$

(e) 32, 56, 84

2	32	56	84
2	16	28	42
2	8	14	21
7	4	7	21
2	4	1	3
2	2	1	3
3	1	1	3
	1	1	1

L.C.M. $= 2 \times 2 \times 2 \times 7 \times 2 \times 2 \times 3 = 672$

(f) 78, 39 and 156

2	78	39	156
13	39	39	78
3	3	3	6
2	1	1	2
	1	1	1

L.C.M. $= 2 \times 13 \times 3 \times 2 = 156$

(g) 110, 132 and 154

11	110	132	154
2	10	12	14
5	5	6	7
7	1	6	7
3	1	6	1
2	1	2	1
	1	1	1

L.C.M. $= 11 \times 2 \times 5 \times 7 \times 3 \times 2 = 4620$

4. H.C.F. × L.C.M. = Product of two number

$28 \times 336 = 112 \times$ 2nd number

$$\frac{9408}{112} = \text{2nd number}$$

2nd number = 84

5. H.C.F. × L.C.M. = Product of two number

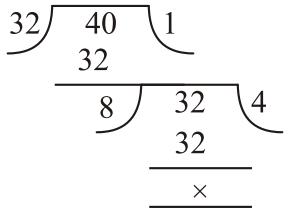
$96 \times 8 = 32 \times$ 2nd number

$$\frac{768}{32} = \text{2nd number}$$

2nd number = 24

6. L.C.M. of $(2\times3\times5)$ and $(3\times5\times7)$ is equal to $2\times3\times5\times7 = 210$

7. (a) 32 and 40



H.C.F. = 8

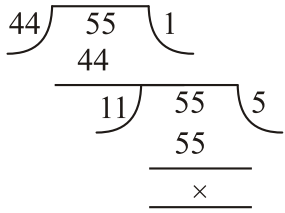
H.C.F. × L.C.M. = product of two numbers

$8 \times$ L.C.M. $= 32 \times 40$

$$\text{L.C.M.} = \frac{1280}{8}$$

L.C.M. = 160

(b) 55 and 44



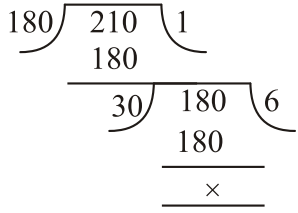
H.C.F. = 11

H.C.F. × L.C.M. = product of two numbers

$11 \times$ L.C.M. $= 55 \times 44$

L.C.M. = 220

(c) 210 and 180



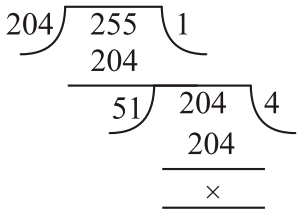
H.C.F. = 30

H.C.F. × L.C.M. = product of two number

$30 \times$ L.C.M. $= 210 \times 80$

L.C.M. = 1260

(d) 204 and 225



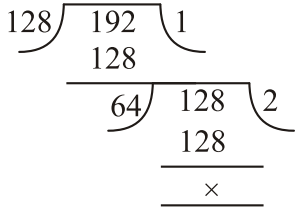
H.C.F. = 51

H.C.F. × L.C.M. = product of two numbers

$51 \times$ L.C.M. $= 204 \times 225$

$$\text{L.C.M.} = \frac{204 \times 255}{51} = 1020$$

(e) 128 and 192



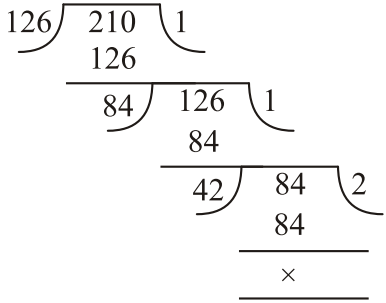
H.C.F. = 64

H.C.F. × L.C.M. = product of two numbers

$64 \times$ L.C.M. $= 128 \times 192$

L.C.M. =384

(f) 126 and 210



H.C.F. = 42

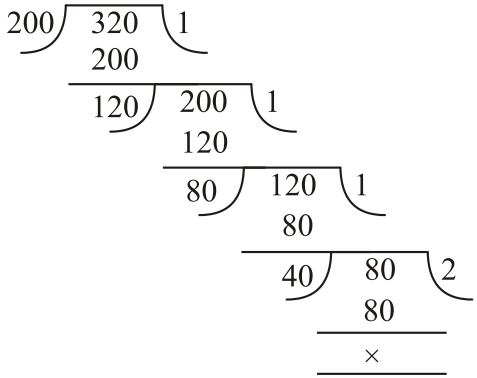
H.C.F. × L.C.M. = product of two numbers

$42 \times \text{L.C.M.} = 210 \times 126$

$\text{L.C.M.} = 630$

Exercise

1. L.C.M. of 200 and 320.



So, greatest number that will exactly divisible by 200 and 320 is 40.

2. L.C.M. of 8, 12, 15

2	8	12	15
3	4	6	15
2	4	2	5
	2	1	5

$\text{L.C.M.} = 2 \times 2 \times 3 \times 2 \times 5 = 120$

and 3 is remainder in each case.

$= 120 + 3 = 123$

3. L.C.M. of 100, 140 and 180

2	100	140	180
2	50	70	90
5	25	35	45
	5	7	9

$\text{L.C.M.} = 2 \times 2 \times 5 \times 5 \times 7 \times 9 = 6300$

So, 6300 is the smallest number that can exactly divisible by 100, 140 and 180.

4. H.C.F. × L.C.M. = product of two number

$96 \times 8 = 32 \times$ 2nd number

Second number = 24

5. Product of two numbers = H.C.F. × L.C.M.

$$216 = 3 \times \text{L.C.M.}$$

$$\frac{216}{3} = \text{L.C.M.}$$

$$72 = \text{L.C.M.}$$

6. We have to find L.C.M. of 4, 5, 7, 8 and 10.

2	4	5	7	8	10
2	2	5	7	4	5
5	1	5	7	2	5
	1	1	7	2	1

L.C.M. = 2 × 2 × 5 × 7 × 2 = 280 sec

So, all the bell ring together after 280 seconds.

7. Smallest 4-digit number is 1000

L.C.M. of numbers 12, 18, 21 and 28

2	12	18	21	28
2	6	9	21	14
7	3	9	21	7
3	3	9	3	1
	1	3	1	1

L.C.M. = 2 × 2 × 7 × 3 × 3 = 252

252) 1000 (3
756
244

Smallest number exactly divisible = 1000 + (252 – 244) = 1008

Remainder = 3

Thus, the smallest number of four-digit which leaves 3 as remainder to = 1008 + 3 = 1011 Ans.

8. 18m, 27m, 162m

18) 27 (1
18
9) 18 (2
18
×

9) 162 (18
9
72
72
×

H.C.F. = 9

The length great as possible is 9 and third length 162 is being divided.

$162 \div 9 = 18$

$\therefore$ Into 18 portion third rod will divided.

9. Three bell rang together at 7:30 am interval of 4, 5 and 6 minutes.

L.C.M.

2	4	5	6
	2	5	3

L.C.M. $= 2 \times 2 \times 5 \times 3 = 60$

As after 60 minutes the bell will rang as 60 min = 1 hour.

So at 8:30 am the bell with rang together.

10. C

Lesson – 2 : Multiplication And Division of Fractions

Exercise

1. (a) $\frac{3\times1}{4\times1}=\frac{3}{4}$, $\frac{3\times2}{4\times2}=\frac{6}{8}$, $\frac{3\times3}{4\times3}=\frac{9}{12}$, $\frac{3\times4}{4\times4}=\frac{12}{16}$

   $\frac{3}{4}$, $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{16}$

   (b) $\frac{5}{6}$, $\frac{5\times2}{6\times2}=\frac{10}{12}$, $\frac{5\times3}{6\times3}=\frac{15}{18}$, $\frac{5\times4}{6\times4}=\frac{20}{24}$

   $\frac{5}{6}$, $\frac{10}{12}$, $\frac{15}{18}$, $\frac{20}{24}$

   (c) $\frac{1}{3}$, $\frac{1\times2}{3\times2}=\frac{2}{6}$, $\frac{1\times3}{3\times3}=\frac{3}{9}$, $\frac{1\times4}{3\times4}=\frac{4}{12}$

   $\frac{2}{6}$, $\frac{3}{9}$, $\frac{4}{12}$

   (d) $\frac{9\times2}{16\times2}=\frac{18}{32}$, $\frac{9\times3}{16\times3}=\frac{27}{48}$, $\frac{9\times4}{16\times4}=\frac{36}{64}$

   $\frac{18}{32}$, $\frac{27}{48}$, $\frac{36}{64}$

   (e) $\frac{7\times2}{11\times2}=\frac{14}{22}$, $\frac{7\times3}{11\times3}=\frac{21}{33}$, $\frac{7\times4}{11\times4}=\frac{28}{44}$

   $\frac{14}{22}$, $\frac{21}{33}$, $\frac{28}{44}$

2. (a) $\frac{20}{45}\div\frac{5}{5}=\frac{4}{9}$ as H.C.F. of 20 & 45 is 5.

   (b) $\frac{65\div13}{91\div13}=\frac{5}{7}$ H.C.F. is 13

   (c) $\frac{60\div12}{96\div12}=\frac{5}{8}$ H.C.F. is 12

(d) $\frac{21 \div 21}{147 \div 21} = \frac{1}{7}$ H.C.F. is 21

(e) $\frac{32 \div 16}{80 \div 16} = \frac{2}{5}$ H.C.F. is 16

3. (a) $\frac{14}{3}$

$3\overline{)14}\ 4$, 12, 2

$= 4\frac{2}{3}$

(b) $\frac{38}{7}$

$7\overline{)38}\ 5$, 35, 3

$= 5\frac{3}{7}$

(c) $\frac{31}{5}$

$5\overline{)31}\ 6$, 30, 1

$= 6\frac{1}{5}$

(d) $\frac{60}{11}$

$11\overline{)60}\ 5$, 55, 5

$= 5\frac{5}{11}$

(e) $\frac{87}{10}$

$10\overline{)87}\ 8$, 80, 7

$= 8\frac{7}{10}$

4. (a) $2\frac{1}{5} = \frac{(2 \times 5) + 1}{5} = \frac{10 + 1}{5} = \frac{11}{5}$

(b) $2\frac{2}{9} = \frac{(2 \times 9) + 2}{9} = \frac{18 + 2}{9} = \frac{20}{9}$

(c) $11\frac{7}{8} = \frac{(11 \times 8) + 7}{8} = \frac{88 + 7}{8} = \frac{95}{8}$

(d) $12\frac{7}{8} = \frac{(12 \times 8) + 7}{8} = \frac{96 + 7}{8} = \frac{103}{8}$

(e) $3\frac{7}{9} = \frac{(3\times 9)+7}{9} = \frac{27+7}{9} = \frac{34}{9}$

5. Denominators of fractions are 4, 12, 16, 20

L.C.M. of 4, 12, 16, 20 = 240

Then

$240 \div 4 = 60$

$240 \div 12 = 20$

$240 \div 16 = 15$

$240 \div 20 = 12$

$\frac{3\times 60}{4\times 60} = \frac{180}{240}$, $\frac{7\times 20}{12\times 20} = \frac{140}{240}$, $\frac{11\times 15}{16\times 15} = \frac{165}{240}$,

$\frac{9\times 12}{20\times 12} = \frac{108}{240}$

$\frac{180}{240}$, $\frac{140}{240}$, $\frac{165}{240}$, $\frac{108}{240}$,

(a) Smallest fraction is $\frac{108}{240}$ i.e. $\frac{9}{20}$

(b) Biggest fraction is $\frac{180}{240}$ i.e. $\frac{3}{4}$

6. (a) $4\frac{3}{5} + 2\frac{2}{5}$

$\frac{(4\times 5)+3}{5} + \frac{(2\times 5)+2}{5}$

$\frac{23}{5} + \frac{12}{5} = \frac{23+12}{5} = \frac{35}{5} = 7$

(b) $5\frac{2}{3} + 3\frac{1}{6}$

$\frac{(5\times 3)+2}{3} + \frac{(3\times 6)+1}{6} = \frac{17}{3} + \frac{19}{6}$

L.C.M. is 6

$6 \div 3 = 2$

$6 \div 6 = 1$

$$\frac{17\times2}{3\times2}+\frac{19\times1}{6\times1}=\frac{34}{6}+\frac{19}{6}=\frac{34+19}{6}=\frac{53}{6}\text{ or }8\frac{5}{6}$$

(c) $3\frac{4}{9}+2\frac{5}{9}$

$$\frac{(9\times3)+4}{9}+\frac{(2\times9)+5}{9}$$

$$\frac{31}{9}+\frac{23}{9}=\frac{31+23}{9}=\frac{54}{9}=6$$

(d) $3\frac{2}{3}+2\frac{5}{6}$

$$\frac{(3\times3)+2}{3}+\frac{(6\times2)+5}{6}=\frac{11}{3}+\frac{17}{6}$$

L.C.M. = 6

$$\frac{11\times2}{3\times2}+\frac{17\times1}{6\times1}=\frac{22}{6}+\frac{17}{6}=\frac{22+17}{6}=\frac{39}{6}=\frac{13}{2}=6\frac{1}{2}$$

7. (a) $4\frac{1}{4}-2\frac{1}{4}$

$$\frac{(4\times4)+1}{4}-\frac{(2\times4)+1}{4}$$

$$\frac{17}{4}-\frac{9}{4}=\frac{17-9}{4}=\frac{8}{4}=2$$

(b) $4\frac{2}{7}-3\frac{3}{7}$

$$\frac{(4\times7)+2}{7}-\frac{(3\times7)+3}{7}$$

$$\frac{30}{7}-\frac{24}{7}=\frac{30-24}{7}=\frac{6}{7}$$

(c) $3\frac{2}{3}-2\frac{5}{6}$

$$\frac{(3\times3)+2}{3}-\frac{(2\times6)+5}{6}$$

$$\frac{11}{3}-\frac{17}{6}=\frac{11\times2}{3\times2}-\frac{17}{6} \qquad \text{(L.C.M.} = 6)$$

$$\frac{22}{6}-\frac{17}{6}=\frac{22-17}{6}=\frac{5}{6}$$

(d) $3\frac{5}{9}-2\frac{1}{6}$

$$\frac{(3\times9)+5}{9}-\frac{(2\times6)+1}{6}$$

$$\frac{32}{9}-\frac{13}{6}=\frac{32\times2}{9\times2}-\frac{13\times3}{6\times3} \qquad \text{(L.C.M.} = 18)$$

$$\frac{64}{18}-\frac{39}{18}=\frac{64-39}{18}=\frac{25}{18}=1\frac{7}{18}$$

Exercise

1. $\frac{2}{3}\times4\Rightarrow\frac{2}{3}\times\frac{4}{1}=\frac{8}{3}=2\frac{2}{3}$
2. $\frac{15}{16}\times6=\frac{45}{8}=5\frac{5}{8}$
3. $\frac{16}{21}\times8\Rightarrow\frac{16\times8}{21}=\frac{128}{21}=6\frac{2}{21}$
4. $16\frac{3}{4}\times18\Rightarrow\frac{(16\times4)+3}{4}\times18$

   $$\frac{67\times18}{4}=\frac{603}{2}=301\frac{1}{2}$$

5. $15\frac{9}{25}\times5\Rightarrow\frac{(15\times25)+9}{25}\times5$

   $$\frac{384\times5}{25}=\frac{384}{5}=76\frac{4}{5}$$

6. $\frac{9}{16}\times 12 \Rightarrow \frac{9\times 12}{16} = \frac{27}{4} = 6\frac{3}{4}$

7. $12\frac{2}{15}\times 20 \Rightarrow \frac{(15\times 12)+2}{15}\times 20$

$$\frac{182\times 20}{15} = \frac{728}{3} = 242\frac{2}{3}$$

8. $\frac{3}{4}\times\frac{7}{8} = \frac{3\times 7}{4\times 8} = \frac{21}{32}$

9. $1\frac{2}{3}\times\frac{3}{50} = \frac{(1\times 3)+2}{3}\times\frac{3}{50} = \frac{5\times 3}{3\times 50} = \frac{1}{10}$

10. $5\frac{3}{7}\times\frac{7}{19} \Rightarrow \frac{(7\times 5)+3}{7}\times\frac{7}{19} = \frac{38\times 7}{7\times 19} = 2$

11. $17\frac{2}{3}\times 4\frac{4}{5}$

$$\frac{(17\times 3)+2}{3}\times\frac{(4\times 5)+4}{5}$$

$$\frac{53}{3}\times\frac{24}{5} = \frac{53\times 24}{3\times 5} = \frac{424}{5} = 84\frac{4}{5}$$

12. $105\frac{7}{8}\times 14\frac{2}{3}$

$$\frac{(105\times 8)+7}{8}\times\frac{(14\times 3)+2}{3}$$

$$\frac{847\times 44}{8\times 3} = \frac{9317}{6} = 1552\frac{5}{6}$$

13. $19\frac{3}{4}\times 15\frac{3}{7}$

$$\frac{(19\times 4)+3}{4}\times\frac{(15\times 7)+3}{7}$$

$$\frac{79\times 108}{4\times 7} = \frac{2133}{7} = 304\frac{5}{7}$$

14. $21\frac{1}{7}\times 13\frac{1}{8}$

$$\frac{(21\times 7)+1}{7}\times\frac{(13\times 8)+1}{8}$$

$$\frac{148\times 105}{7\times 8}=\frac{555}{2}=277\frac{1}{2}$$

15. $\frac{4}{7}$ of $\frac{6}{11}\Rightarrow\frac{4\times 6}{7\times 11}=\frac{24}{77}$

16. $\frac{8}{11}$ of $\frac{44}{48}\Rightarrow\frac{8\times 44}{11\times 48}=\frac{2}{3}$

17. $\frac{5}{7}$ of $\frac{14}{15}\Rightarrow\frac{5\times 14}{7\times 15}=\frac{2}{3}$

18. 80 of $\frac{7}{10}\Rightarrow\frac{80\times 7}{10}=56$

19. 52 of $\frac{4}{13}\Rightarrow\frac{52\times 4}{13}=16$

20. 7 of $2\frac{1}{7}\Rightarrow\frac{7\times 15}{7}=15$

21. $\frac{1}{2}\times\frac{1}{4}\times\frac{1}{6}=\frac{1}{48}$

22. $\frac{6}{7}\times 15\times\frac{14}{3}\times\frac{8}{5}=96$

23. $\frac{3}{2}\times 4\frac{1}{2}\times\frac{3}{9}=\frac{3}{2}\times\frac{9}{2}\times\frac{3}{9}=\frac{9}{4}=2\frac{1}{4}$

24. $3\frac{1}{4}\times 5\frac{1}{3}\times\frac{12}{13}=\frac{13}{4}\times\frac{16}{3}\times\frac{12}{13}=16$

25. $\frac{7}{10}\times 30=21$

26. $\frac{7}{13}\times 156=84$

27. $\frac{5}{6}\times 180=150$

Exercise

1. $\frac{1}{7}$
2. $\frac{9}{13}$
3. $\frac{1}{9}$
4. $\frac{7}{9}$
5. $\frac{1}{2}$
6. $\frac{1}{25}$
7. $\frac{3}{4}$
8. $\frac{3}{10}$
9. $8\frac{1}{3}$
10. $5\frac{6}{7}$
11. $\frac{0}{4}=0$
12. $\frac{8}{7}$
13. $\frac{7}{8}$
14. 0

Exercise

Multiplication Inverse

1. $\frac{2}{7}=\frac{7}{2}$
2. $\frac{3}{8}=\frac{8}{3}$
3. $\frac{5}{6}=\frac{6}{5}$
4. $\frac{7}{12}=\frac{12}{7}$
5. $\frac{11}{4}=\frac{4}{11}$
6. $\frac{15}{8}=\frac{8}{15}$
7. $\frac{16}{9}=\frac{9}{16}$
8. $8=\frac{1}{8}$
9. $12=\frac{1}{12}$
10. $2\frac{1}{3}=\frac{7}{3}=\frac{3}{7}$
11. $3\frac{3}{4}=\frac{15}{4}=\frac{4}{15}$
12. $8\frac{1}{3}=\frac{25}{3}=\frac{3}{25}$

Exercise

1. $\frac{5}{7} \div \frac{1}{14} = \frac{5 \times 14}{7} = 10$
2. $\frac{4}{5} \div \frac{1}{10} = \frac{4 \times 10}{5} = 4 \times 2 = 8$
3. $\frac{2}{5} \div \frac{7}{10} = \frac{2}{5} \times \frac{10}{7} = \frac{2 \times 2}{7} = \frac{4}{7}$
4. $\frac{7}{15} \div \frac{14}{25} = \frac{7}{15} \times \frac{25}{14} = \frac{1 \times 5}{3 \times 2} = \frac{5}{6}$
5. $2\frac{4}{5} \div \frac{7}{9} = \frac{14}{5} \div \frac{7}{9} = \frac{14}{5} \times \frac{9}{7} = \frac{2 \times 9}{5} = \frac{18}{5} = 3\frac{3}{5}$
6. $2\frac{3}{4} \div \frac{9}{16} = \frac{11}{4} \div \frac{9}{16} = \frac{11}{4} \times \frac{16}{9} = \frac{11 \times 4}{9} = \frac{44}{9} = 4\frac{8}{9}$
7. $2\frac{7}{9} \div \frac{10}{21} = \frac{25}{9} \div \frac{10}{21} = \frac{25}{9} \times \frac{21}{10} = \frac{5 \times 7}{3 \times 2} = \frac{35}{6} = 5\frac{5}{6}$
8. $\frac{8}{15} \div 1\frac{7}{9} = \frac{8}{15} \div \frac{16}{9} = \frac{8}{15} \times \frac{9}{16} = \frac{1 \times 3}{5 \times 2} = \frac{3}{10}$
9. $\frac{16}{25} \div 2\frac{6}{7} = \frac{16}{25} \div \frac{20}{7} = \frac{16}{25} \times \frac{7}{20} = \frac{4 \times 7}{25 \times 5} = \frac{28}{125}$
10. $2\frac{2}{3} \div 1\frac{1}{6} = \frac{8}{3} \div \frac{7}{6} = \frac{8}{3} \times \frac{6}{7} = \frac{8 \times 2}{7} = \frac{16}{7} = 2\frac{2}{7}$
11. $\frac{15}{32} \div 4\frac{3}{8} = \frac{15}{32} \div \frac{35}{8} = \frac{15}{32} \times \frac{8}{35} = \frac{3 \times 1}{4 \times 7} = \frac{3}{28}$
12. $\frac{7}{12} \div 2\frac{4}{5} = \frac{7}{12} \div \frac{14}{5} = \frac{7}{12} \times \frac{5}{14} = \frac{5 \times 1}{12 \times 2} = \frac{5}{24}$
13. $\frac{1}{2} \div 2 = \frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$
14. $\frac{1}{8} \div 6 = \frac{1}{8} \times \frac{1}{6} = \frac{1}{48}$
15. $1\frac{1}{2} \div 4 = \frac{3}{2} \div 4 = \frac{3}{2} \times \frac{1}{4} = \frac{3}{8}$

16. $1\frac{3}{4} \div 6 = \frac{7}{4} \div 6 = \frac{7}{4} \times \frac{1}{6} = \frac{7}{24}$

17. $3\frac{3}{8} \div 9 = \frac{27}{8} \div 9 = \frac{27}{8} \times \frac{1}{9} = \frac{3 \times 1}{8} = \frac{3}{8}$

18. $4\frac{2}{3} \div 7 = \frac{14}{3} \div 7 = \frac{14}{3} \times \frac{1}{7} = \frac{2 \times 1}{3 \times 1} = \frac{2}{3}$

19. $2\frac{1}{7} \div 10 = \frac{15}{7} \div 10 = \frac{15}{7} \times \frac{1}{10} = \frac{3 \times 1}{7 \times 2} = \frac{3}{14}$

20. $2\frac{2}{9} \div 12 = \frac{20}{9} \div 12 = \frac{20}{9} \times \frac{1}{12} = \frac{5 \times 1}{9 \times 3} = \frac{5}{27}$

21. $18 \div \frac{3}{4} = 18 \times \frac{4}{3} = 4 \times 6 = 24$

22. $60 \div \frac{15}{8} = 60 \times \frac{8}{15} = 4 \times 8 = 32$

23. $48 \div \frac{12}{7} = 48 \times \frac{7}{12} = 4 \times 7 = 28$

24. $15 \div 2\frac{1}{2} = 15 \div \frac{5}{2} = 15 \times \frac{2}{5} = 3 \times 2 = 6$

25. $8 \div 3\frac{3}{7} = 8 \div \frac{24}{7} = 8 \times \frac{7}{24} = \frac{7}{3}$ or $2\frac{1}{3}$

26. $16 \div 2\frac{2}{15} = 16 \div \frac{32}{15} = \frac{16 \times 15}{32} = \frac{15}{2}$ or $7\frac{1}{2}$

Exercise

1. (a) $\frac{15}{29} \div 1 = \frac{15}{29} \times 1 = \frac{15}{29}$

   (b) 1

   (c) $3\frac{1}{3} \div \frac{10}{3} = \frac{10}{3} \div \frac{10}{3} = 1$

   (d) $0 \div \frac{5}{13} = \frac{0 \times 13}{5} \div \frac{0}{5} = 0$

(e) $0 \div 0 = 0$

(f) $0 \div \frac{19}{37} = 0$

(g) 1

(h) $\frac{7}{15} \div \frac{7}{15} = 1$

(i) $5\frac{7}{9} \div 5\frac{7}{9} = 1$

(j) $\frac{4}{7} \div 1 = \frac{4}{7}$

(k) $0 \div 1 = 0$

(l) $1 \div 0 = \infty$

2. (a) $3\frac{1}{5} \div 0 = 0 \neq 3\frac{1}{5}$ (F)

(b) $5\frac{1}{3} \div 1 = 5\frac{1}{3}$ (T)

(c) $0 \div 1\frac{4}{5} = 0$ (F)

(d) $3\frac{1}{4} \div 3\frac{1}{4} = 1 \neq 0$ (F)

(e) $0 \div \frac{8}{15} = 0 \neq \frac{8}{15}$ (F)

(f) $0 \div \frac{8}{7} = 0$ (T)

(g) $\frac{8}{5} \div \frac{8}{5} = 1$ (T)

(h) $\frac{3}{7} \div 1 = \frac{3}{7} \neq 0$ (F)

Exercise

1. Weight of 1 packet = $\frac{1}{2}$ kg

   Weight of 12 packets = $12 \times \frac{1}{2} = 6$ kg

2. Number of ice-cream cups = 3
   She divided among 4 persons

So each child will get = $\frac{3}{4}$

3. Ribbon length = $7\frac{1}{2}$ m

She cut into = $2\frac{1}{2}$ m length

So $7\frac{1}{2} \div 2\frac{1}{2} = \frac{15}{2} \div \frac{5}{2} = \frac{15}{2} \times \frac{2}{5} = 3$ pieces

4. Read part of book = $\frac{3}{4}$

Pages left = 16 pages

Unread part of book = $1 - \frac{3}{4} = \frac{4-3}{4} = \frac{1}{4}$

Pages left = 16

Pages in book = $16 \div \frac{1}{4} = 16 \times 4 = 64$

So, there are 64 pages in the book.

5. A man has ₹ 250

$\frac{1}{2}$ of money to eldest brother

i.e. $\frac{1}{2} \times 250 = ₹125$

Remaining money = $250 - 125 = ₹125$

To younger son = $\frac{1}{5} \times 125 =$ ₹25

Remaining money = $125 - 25 = ₹100$

He gave ₹ 100 to his daughter.

6. 1 kg sugar cost = $₹18\frac{1}{2}$ or ₹ $\frac{37}{2}$

$3\frac{1}{4}$ kg of sugar cost = $3\frac{1}{4} of \frac{37}{2}$

$= \frac{13}{4} \times \frac{37}{2} = \frac{481}{8} = 60\frac{1}{8}$

7. 1 m cloth cost = ₹20

$6\frac{1}{2}$ m cloth cost = $20 \times \frac{13}{2} = 130$

The cloth cost ₹ 130

8. Product = $7\frac{1}{3} = \frac{22}{3}$

One is = $1\frac{5}{6} = \frac{11}{6}$

Other number $\frac{22}{3} \div \frac{11}{6} = \frac{22}{3} \times \frac{6}{11} = 2 \times 2 = 4$

Other number = 4

9. Let he has ₹1 in the beginning

Money spent in one shop = $\frac{1}{2}$ of ₹ 1 = ₹ $\frac{1}{2}$

Remaining money = $1 - \frac{1}{2}$ = ₹ $\frac{1}{2}$

Money spent on auto rickshaw fare = $\frac{1}{2}$ of $\frac{1}{3}$ = ₹ $\frac{1}{6}$

Remaining money = $\frac{1}{2} - \frac{1}{6} = \frac{3-1}{6} = \frac{2}{6} =$ ₹ $\frac{1}{3}$

Total money = $40 \times \frac{1}{3} = 40 \times 3 =$ ₹120

10. A parking hold = 150 cars

$\frac{3}{5}$ of parking is full

So, $\frac{3}{5} \times 150 = 90$

More cars that can be kept = $150 - 90 = 60$

So, 60 cars can be kept at that time.

Lesson – 3 : Decimal

Exercise

1. (a) 48.07 — integral part = 48; decimal part = 0.07
   (b) 5.327 — integral part = 5, decimal part = 0.327
   (c) 753.8 — integral part = 753; decimal part = 0.8
   (d) 2345.879 — integral part = 2345; decimal part = 0.879
2. (a) $78.07 = 70 + 8 + 0.07$
   (b) $142.02 = 100 + 40 + 2 + 0.02$
   (c) $204.002 = 200 + 4 + 0.002$
   (d) $481.29 = 400 + 80 + 1 + .2 + 0.09$
   (e) $815.016 = 800 + 10 + 5 + .01 + 0.006$
   (f) $989.988 = 900 + 80 + 9 + .9 + .08 + .008$
   (g) $615.615 = 600 + 10 + 5 + .6 + 0.01 + .005$
   (h) $2145.038 = 2000 + 100 + 40 + 5 + .03 + .008$
3. (a) 5 tens + 2 ones + 1 tenth + 3 hundredths

$$50 + 2 + \frac{1}{10} + \frac{3}{100} = 52.13$$

(b) 5 hundreds + 7 tenths + 4 thousandths

$$500 + \frac{7}{10} + \frac{4}{1000} = 500.704$$

(c) 2 hundreds + 5 ones + 6 hundreths + 4 thousandths

$$200 + 5 + \frac{6}{100} + \frac{4}{1000} = 205.064$$

(d) 7 hundreds + 3 tens + 1 ones + 4 thousandths

$$700 + 30 + 1 + \frac{4}{1000} = 731.004$$

(e) 4 hundreds + 1 ten + 2 ones + 5 tenths + 9 thousandths

$$400 + 10 + 2 + \frac{5}{10} + \frac{9}{1000} = 412.509$$

4. (a) $\frac{4}{10} = 0.4$ (b) $\frac{15}{100} = 0.15$

(c) $\frac{37}{1000} = 0.037$ (d) $\frac{105}{100} = 1.05$

(e) $\frac{8}{1000} = 0.008$ (f) $\frac{245}{1000} = 0.245$

(g) $\frac{12345}{1000} = 12.345$ (h) $\frac{145798}{10000} = 14.5798$

5. (a) $0.7 = \frac{7}{10}$ (b) $0.05 = \frac{5}{100}$

(c) $1.7 = \frac{17}{10}$ (d) $3.75 = \frac{375}{100}$

(e) $12.275 = \frac{12275}{1000}$ (f) $18.005 = \frac{18005}{1000}$

(g) $17.375 = \frac{17375}{1000}$ (h) $17.25 = \frac{1725}{100}$

Exercise

1. (a) 3.9, 17.3
   The highest number of digit in the decimal place = 1
   3.9 = 3.9; 17.3 = 17.3
   It is a pairs of like decimal
   (b) 9.12, 6.72
   The highest number of digit in the decimal place = 2
   9.12 = 9.12; 6.72 = 6.72
   It is a pair of like decimal.
   (c) 79.9, 7.99
   The highest number of digit in the decimal place = 2
   79.9 = 79.90; 7.99 = 7.99
   It is not a pair of like decimal, so it is unlike decimal.
   (d) 3.004, 3.40
   The highest number of digit in the decimal place = 3
   3.004 = 3.004; 3.40 = 3.400

It is not a pair of like decimal so it is an unlike decimal.

(e) 123.257, 23.028

The highest number of digit in the decimal place = 3

123.257 = 123.257; 23.028 = 23.028

It is a pair of like decimal.

2. (a) It is unlike decimal and so it is wrong.
   (b) It is like decimal, so it is wrong.
   (c) It is like decimal, so it is wrong.
   (d) It is like decimal so it is right.
   (e) It is unlike decimal so it is wrong.
3. (a) 0.2, 3.02, 1.5

   The highest number of digit in the decimal place = 2

   0.2 = 0.20; 3.02 = 3.02; 1.5 = 1.50

   (b) 1.06, 3.3, 5.620

   The highest number of digit in the decimal places = 3

   1.06 = 1.060; 3.3 = 3.300; 5.620 = 5.620

   (c) 3.654, 3.0, 4.9

   The highest number of digit in the decimal place = 3

   3.654 = 3.654; 3.0 = 3.000; 4.9 = 4.900

   (d) 5.006; 0.03; 0.3

   The highest number of digit in the decimal place = 3

   5.006 = 5.006; 0.03 = 0.030; 0.3 = 0.300

   (e) 18.025, 100.03, 150.7

   The highest number of digit in the decimal place = 3

   18.002 = 18.002; 100.03 = 100.030; 150.7 = 150.700

   (f) 2.198, 18.1415, 62.07

   The highest number of digit in the decimal place = 4

   2.198 = 2.1980; 18.1415=18.1415; 62.07=62.0700

4. (a) $0.83 > 0.38$ (b) $0.52 < 0.8$
   (c) $0.350 < 0.512$ (d) $0.800 > 0.125$
   (e) $0.314 > 0.110$ (f) $0.09 < 0.9$
   (g) $0.1551 < 0.2000$ (h) $4.20 > 3.12$
   (i) $8.13 < 81.30$
5. (a) 2.34, 2.609, 3.1, 2.05

   $2.05 < 2.34 < 2.609 < 3.1$

Ascending order = 2.05, 2.34, 2.609, 3.1

(b) 1.01, 0.101, 1.001, 0.010
0.010 < 0.101 < 1.001 < 1.01
= 0.010, 0.101, 1.001, 1.01

(c) 3.33, 3.30, 3.03, 3.003
3.003 < 3.03 < 3.30 < 3.33
3.003, 3.03, 3.30, 3.33

(d) 88.77, 88.8, 66.5, 66.36
66.36 < 66.5 < 88.77 < 88.8
66.36, 66.5, 88.77, 88.8

6. (a) 16.03, 19.9, 7.898
19.9 > 16.03 > 7.898
19.9, 16.03, 7.898

(b) 3.004, 5.33, 8.7
8.7 > 5.33 > 3.004
= 8.7, 5.33, 3.004

(c) 1.82, 2.32, 2.81, 3.52
3.52 > 2.81 > 2.32 > 1.82
3.52, 2.81, 2.32, 1.82

(d) 14.1, 15.25, 5.25, 10.51
15.25 > 14.1 > 10.51 > 5.25
15.25, 14.1, 10.51, 5.25

Exercise

1. (a) 8.3 + 9.7 + 12.5

$$\begin{array}{r} 8.3 \\ 9.7 \\ +12.5 \\ \hline 30.5 \end{array}$$

Ans. 30.5

(b) 8.06 + 14.87 + 26.84

$$\begin{array}{r} 8.06 \\ 14.87 \\ +26.84 \\ \hline 49.77 \end{array}$$

Ans. 49.77

(c) 103.74 + 6.64 + 23.44

Ans. 133.82

```
  103.74
    6.64
+ 23.44
--------
  133.82
```

(d) 5.475 + 14.574 + 25.888

Ans. 45.937

```
   5.475
  14.574
+ 25.888
--------
  45.937
```

(e) 0.4345 + 0.0054 + 0.105

Ans. 0.5449

```
  0.4345
  0.0054
+ 0.1050
--------
  0.5449
```

(f) 91.52 + 13.34 + 1.8532

Ans. 106.7132

```
  91.5200
  13.3400
+  1.8532
----------
 106.7132
```

2. (a) 14.04, 21.88, 6.82, 19.9

```
  14.04
  21.88
   6.82
+ 19.90
--------
  62.64
```

Ans. : 62.64

(b) 85.405, 66.666, 29.18, 0.8964

```
  85.4050
  66.6660
  29.1800
+ 00.8964
---------
 182.1474
```

Ans. : 182.1474

(c) 9.0004, 0.50001, 0.31, 0.9143

$$\begin{array}{r} 9.00040 \\ 0.50001 \\ 0.31000 \\ +\ 0.91430 \\ \hline 10.72471 \end{array}$$ Ans. : 10.72471

(d) 195.92, 514.4, 940.1, 431.92

$$\begin{array}{r} 195.92 \\ 514.40 \\ 940.10 \\ +\ 431.92 \\ \hline 2082.34 \end{array}$$ Ans. : 2082.34

(e) 1.4295, 2.014, 1.4914, 19.432

$$\begin{array}{r} 1.4295 \\ 2.0140 \\ 1.4914 \\ +\ 19.4320 \\ \hline 24.3669 \end{array}$$ Ans. : 24.3669

(f) 7.8314, 8.0053, 1837.31, 14.3

$$\begin{array}{r} 7.8314 \\ 8.0053 \\ 1837.3100 \\ +\ 14.3000 \\ \hline 1867.4467 \end{array}$$ Ans. 1867.4467

3. (a) 45.742 – 28.575

$$\begin{array}{r} 45.742 \\ -\ 28.575 \\ \hline 17.167 \end{array}$$ Ans. 17.167

(b) 62.734 – 47.587

$$\begin{array}{r} 62.734 \\ -\ 47.587 \\ \hline 15.147 \end{array}$$ Ans. : 15.147

(c) 16.425 – 9.768

$$\begin{array}{r} 16.425 \\ -\ 9.768 \\ \hline 6.657 \end{array}$$ Ans. : 6.657

(d) 35.643 – 28.786

$$\begin{array}{r} 35.643 \\ -\ 28.786 \\ \hline 6.857 \end{array}$$ Ans. : 6.857

(e) 85.064 – 36.279

$$\begin{array}{r} 85.064 \\ -\ 36.279 \\ \hline 48.785 \end{array}$$ Ans. : 48.785

(f) 90.205 – 74.638

$$\begin{array}{r} 90.205 \\ -\ 74.638 \\ \hline 15.567 \end{array}$$ Ans. : 15.567

5. Total of two numbers = 50.035
One number is = 25.45
Another number = 50.035 – 25.45

$$\begin{array}{r} 50.035 \\ -\ 25.450 \\ \hline 24.585 \end{array}$$ Ans. : 24.585

6. Sum of 83.121 and 7.8043

$$\begin{array}{r} 83.1210 \\ +\ 7.8043 \\ \hline 90.9253 \end{array}$$

Subtraction 7.005 from 90.9253

$$\begin{array}{r} 90.9253 \\ -\ 7.0050 \\ \hline 83.9203 \\ \hline \end{array}$$

7. Difference of 15.1508 and 9.325

$$\begin{array}{r} 15.1508 \\ -\ 9.3250 \\ \hline 5.8258 \\ \hline \end{array}$$

Add 32.8040 to 5.8258

$$\begin{array}{r} 32.8040 \\ +\ 5.8258 \\ \hline 38.6298 \\ \hline \end{array}$$

At last we get 38.6298

8.
$$\begin{array}{r} 67.9143 \\ -\ 16.0635 \\ \hline 51.8508 \\ \hline \end{array}$$

So, 51.8508 should be subtracted from 67.9143 to get 16.0635

9.
$$\begin{array}{r} 50.000 \\ -\ 29.345 \\ \hline 20.655 \\ \hline \end{array}$$

So, 20.655 should be added to 29.345 to get 50

Lesson – 4 : Multiplication And Division of Decimals

Exercise

1. (a)
$$\begin{array}{r} 16.058 \\ \times\ 4 \\ \hline 64.232 \end{array}$$

(b)
$$\begin{array}{r} 6.014 \\ \times\ 5 \\ \hline 30.070 \end{array}$$

(c)
$$\begin{array}{r} 9.1435 \\ \times\ 8 \\ \hline 73.1480 \end{array}$$

(d)
$$\begin{array}{r} 705.325 \\ \times\ 3 \\ \hline 2115.975 \end{array}$$

(e)
$$\begin{array}{r} 204.763 \\ \times\ 9 \\ \hline 1847.867 \end{array}$$

(f)
$$\begin{array}{r} 105.895 \\ \times\ 7 \\ \hline 741.265 \end{array}$$

(g)
$$\begin{array}{r} 32.5 \\ \times\ 24 \\ \hline 1300 \\ 6500 \\ \hline 780.0 \end{array}$$

(h)
$$\begin{array}{r} 58.9 \\ \times\ 37 \\ \hline 4123 \\ 17670 \\ \hline 2179.3 \end{array}$$

(i)
$$\begin{array}{r} 7.28 \\ \times\ 13 \\ \hline 2184 \\ 7280 \\ \hline 94.64 \end{array}$$

(j)
$$\begin{array}{r} 29.35 \\ \times\ 18 \\ \hline 23480 \\ 29350 \\ \hline 628.3 \end{array}$$

2. (a)
$$\begin{array}{r} 5.7 \\ \times\ 4 \\ \hline 22.8 \end{array}$$

(b)
$$\begin{array}{r} 5.05 \\ \times\ 12 \\ \hline 1010 \\ 5050 \\ \hline 60.60 \end{array}$$

(c)
$$\begin{array}{r} 3.003 \\ \times\ 135 \\ \hline 15015 \\ 90090 \\ 300300 \\ \hline 405.405 \end{array}$$

(d)
$$\begin{array}{r} 3.56 \\ \times\ 138 \\ \hline 2848 \\ 10680 \\ 35600 \\ \hline 491.28 \end{array}$$

(e)
$$\begin{array}{r} 84.831 \\ \times\ 27 \\ \hline 593817 \\ 1696620 \\ \hline 2290.437 \end{array}$$

(f)
$$\begin{array}{r} 82.45 \\ \times\ 92 \\ \hline 16490 \\ 742050 \\ \hline 7584.40 \end{array}$$

(g) $17.801 \times 100 = 178.01$

(h) $8.1123 \times 1000 = 8112.3$

(i)
$$\begin{array}{r} 219.52 \\ \times\ 6000 \\ \hline 0000000 \\ 131712000 \\ \hline 131712.000 \end{array}$$

(j)
$$\begin{array}{r} 203.843 \\ \times\ 20 \\ \hline 000000 \\ 4076860 \\ \hline 4076.860 \end{array}$$

3. (a) $0.4 \times 0.3 = 4 \times 3 = 12$

$0.4 \times 0.3 = 0.12$

(b)
$$\begin{array}{r} 815 \\ \times\ 3 \\ \hline 2445 \end{array}$$
$8.15 \times 0.3 = 2.445$

(c)
$$\begin{array}{r} 612 \\ \times\ 35 \\ \hline 3060 \\ 18360 \\ \hline 21420 \end{array}$$
then $6.12 \times 3.5 = 21.420$

(d)
$$\begin{array}{r} 7134 \\ \times\ 32 \\ \hline 14268 \\ 214020 \\ \hline 228288 \end{array}$$
then $7.134 \times 0.32 = 2.28288$

(e)
$$\begin{array}{r} 112 \\ \times\ 43 \\ \hline 336 \\ 4480 \\ \hline 4816 \end{array}$$
$11.2 \times 4.3 = 48.16$

(f)
$$\begin{array}{r} 1712 \\ \times\ 8 \\ \hline 13696 \end{array}$$
$17.12 \times 0.08 = 1.3696$

(g)
$$\begin{array}{r} 236 \\ \times\ 14 \\ \hline 944 \\ 2360 \\ \hline 3304 \end{array}$$
$0.236 \times 1.4 = 0.3304$

(h)
$$\begin{array}{r} 1137 \\ \times\ 28 \\ \hline 9096 \\ 22740 \\ \hline 31836 \end{array}$$
$1.137 \times 2.8 = 3.1836$

(i)
$$\begin{array}{r} 24725 \\ \times\ 59 \\ \hline 222525 \\ 1236250 \\ \hline 1458775 \end{array}$$
$24.725 \times 5.9 = 145.8775$

(j)
$$\begin{array}{r} 4375 \\ \times\ 349 \\ \hline 39375 \\ 175000 \\ 1312500 \\ \hline 1526875 \end{array}$$
$43.75 \times 3.49 = 152.6875$

Exercise

1. (a) $0.2 \times 0.2 = 0.04$ (b) $0.2 \times 0.3 = 0.06$
   (c) $0.4 \times 10.4 = 4.16$ (d) $1.4 \times 0.5 = 0.7$
   (e) $0.02 \times 0.7 = 0.014$ (f) $3.3 \times 3.3 = 10.89$
   (g) 4.3×6.5
$$\begin{array}{r} 4.3 \\ \times\ 6.5 \\ \hline 215 \\ 2580 \\ \hline 2795 \end{array}$$
27.95

   (h) $7.5 \times 5.7 = 42.75$
$$\begin{array}{r} 7.5 \\ \times\ 5.7 \\ \hline 525 \\ 3750 \\ \hline 4275 \end{array}$$
42.75

2. (a)
$$\begin{array}{r} 137 \\ \times\ 24 \\ \hline 548 \\ 2740 \\ \hline 3288 \end{array}$$
$0.137 \times 0.24 = 0.03288$

(b)
$$\begin{array}{r} 316 \\ \times\ 135 \\ \hline 1580 \\ 9480 \\ 31600 \\ \hline 42660 \end{array}$$
$0.316 \times 0.135 = 0.004266$

(c) 2.4316 by 2.35
$$\begin{array}{r} 24316 \\ \times\ 235 \\ \hline 121580 \\ 729480 \\ 4863200 \\ \hline 5714260 \end{array}$$
$2.4316 \times 2.35 = 5.71426$

(d) 1.0004 by 0.35
$$\begin{array}{r} 10004 \\ \times\ 35 \\ \hline 50020 \\ 300120 \\ \hline 350140 \end{array}$$
$1.0004 \times 0.35 = 0.350140$

(e) 0.008×3.12
$$\begin{array}{r} 8 \\ \times\ 312 \\ \hline 16 \\ 80 \\ 2400 \\ \hline 2496 \end{array}$$
$0.008 \times 3.12 = 0.02496$

(f) 4.0075 by 4.0205
$$\begin{array}{r} 40075 \\ \times\ 40205 \\ \hline 200375 \\ 000000 \\ 8015000 \\ 1603000000 \\ \hline 1611215375 \end{array}$$
$4.0075 \times 4.0205 = 16.112154$

3. (a) $0.8 \times .7 = 7 \times 0.8$ (b) $12 \times 11.48 = 11.48 \times 12$
(c) $4.5 \times 1.2 = 1.2 \times 4.5$
(d) $1.6 \times (4.2 \times 0.7) = (16 \times 4.2) \times 0.7$
(e) $(5 \times 5.6) \times 1.3 = 5 \times (5.6 \times 1.3)$

4. (a) $24.35 \times 1 = 24.35$ (b) $1 \times 4.8 = 4.8$
(c) $235.001 \times 1 = 235.001$ (d) $51.6 \times 0 = 0$
(e) $0 \times 0.475 = 0$

5. Multiply :

(a) $5.1 \times 0.5 \times 0.5 = 5.1 \times 0.25$

$$\begin{array}{r} 51 \\ \times\ 25 \\ \hline 255 \\ 102\times \\ \hline 1275 \end{array}$$

$5.1 \times 0.5 \times 0.5 = 1.275$

(b) $0.3 \times 0.3 \times 0.3 = 0.09 \times 0.3 = 0.027$

(c) $0.5 \times 8.7 \times 0.66 = 0.5 \times 0.66 = 0.330 = 0.33 \times 8.7$

$$\begin{array}{r} 87 \\ \times\ 33 \\ \hline 261 \\ 261\times \\ \hline 2871 \end{array}$$

$8.7 \times 0.5 \times 0.66 = 2.871$

(d) $0.308 \times 3.37 \times 0.07 = 0.02156 \times 3.37$

$$\begin{array}{r} 2156 \\ \times\ 337 \\ \hline 15092 \\ 64680 \\ 646800 \\ \hline 726572 \end{array}$$

$0.308 \times 3.37 \times 0.07 = 0.0726572$

(e) $1.01 \times 4.1 \times 0.001$

$$\begin{array}{r} 101 \\ \times\ 41 \\ \hline 101 \\ 4040 \\ \hline 4141 \end{array}$$

$0.01 \times 4.1 \times 0.001 = 0.004141$

(f) $0.48 \times 0.06 \times 2.3 \times 0.03 = .0288 \times .069$

$$\begin{array}{r} 288 \\ \times\ 69 \\ \hline 2592 \\ 17280 \\ \hline 19872 \end{array}$$ 0.0019872

Exercise

1. $9.5 \div 10 = 0.95$
2. $74.26 \div 10 = 7.426$
3. $843.5 \div 100 = 8.435$
4. $837.6 \div 1000 = 0.8436$
5. $531.27 \div 9 = 0.8376$

$$\begin{array}{r|l} 9 & 531.27 \\ 45 & \\ \hline 81 & \\ 81 & \\ \hline 2 & \\ 0 & \\ \hline 27 & \\ 27 & \\ \hline \times & \end{array}$$ 59.03

6. $39.026 \div 13$

$$\begin{array}{r|l} 13 & 39.026 \\ 39 & \\ \hline 026 & \\ 26 & \\ \hline \times & \end{array}$$ 3.002

7. $23.4 \div 18$

$$\begin{array}{r|l} 18 & 23.4 \\ 18 & \\ \hline 54 & \\ 54 & \\ \hline \times & \end{array}$$ 1.3

8. 8.016×24

$$\begin{array}{r|l} 24 & 8.016 \\ 72 & \\ \hline 81 & \\ 72 & \\ \hline 96 & \\ 96 & \\ \hline \times & \end{array}$$ 0.334

9. $1.008 \div 14$

$$\begin{array}{r|l} 14 & 1.008 \\ 98 & \\ \hline 28 & \\ 28 & \\ \hline \times & \end{array}$$ 0.072

10. $7.5 \div 1.25$

$$\frac{7.5}{1.25} \times \frac{100}{10}$$ as 1.25 has 2 place of decimals

$$= \frac{750}{125} = 6$$

11. $1.275 \div 0.85$

$$\frac{1.275}{0.85} \times \frac{100}{100}$$ as 0.85 has 2 place of decimals

$$= \frac{127.5}{85} = 1.5$$

12. $26.62 \div 2.2$

$$\frac{26.62}{2.2} \times \frac{10}{10}$$ as 2.2 has 1 place of decimal

$$= \frac{266.2}{22} = 12.1$$

13. $0.884 \div 0.34$

$$\frac{0.884}{0.34} \times \frac{100}{100}$$ as .34 has 2 place of decimal

$$= \frac{88.4}{34} = 2.6$$

14. $3.249 \div 0.09$

$$\frac{3.249}{0.09} \times \frac{100}{100}$$ as 0.09 has 2 place of decimal

$$= \frac{324.9}{9} = 36.1$$

15. $1.078 \div 0.7$

$$\frac{1.078}{0.7} \times \frac{10}{10} \quad \text{as .7 has 1 place of decimal}$$

$$= \frac{10.78}{7} = 1.54$$

Exercise

1. $24 \div 1.2 = \frac{24}{1.2}$ the divisor has 1 place decimal

$$\frac{24 \times 10}{1.2 \times 10} = \frac{240}{12} = 20$$

2. $75 \div 0.25 = \frac{75}{0.25}$ the divisor has 2 place of decimals

$$\frac{75}{0.25} \times \frac{100}{100} = \frac{7500}{25} = 300$$

3. $15 \div 0.5 = \frac{15}{0.5}$ the divisor has 1 place of dcimal

$$\frac{15}{0.5} \times \frac{10}{10} = \frac{150}{5} = 30$$

4. $90 \div 3.6 = \frac{90}{3.6}$ the divisor has 1 place of decimal

$$\frac{90}{3.6} \times \frac{10}{10} = \frac{900}{36} = 25$$

5. $625 \div 2.5 = \frac{625}{2.5}$ the divisor has 1 place of decimal

$$\frac{625}{2.5} \times \frac{10}{10} = \frac{6250}{25} = 250$$

6. $3060 \div 20.4 = \frac{3060}{20.4}$

$$\frac{3060}{20.4} \times \frac{10}{10} = \frac{30600}{204} = 150$$

7. $8421 \div 4.01 = \frac{8421}{4.01}$ as 4.01 has 2 place of decimals

$$\frac{8421}{4.01} \times \frac{100}{100} = \frac{842100}{401} = 2100$$

8. $3417 \div 20.1 = \frac{3417}{20.1}$ as 20.1 has 1 place of decimals

$$\frac{3417}{20.1} \times \frac{10}{10} = \frac{34170}{201} = 170$$

9. $31 \div 0.775 = \frac{31}{0.775}$ as 0.775 has 3 places of decimals

$$\frac{31}{0.775} \times \frac{1000}{1000} = \frac{31000}{775} = 40$$

10. $36 \div 0.45 = \frac{36}{0.45}$ as 0.45 has 2 place of decimals

$$\frac{36}{0.45} \times \frac{100}{100} = \frac{3600}{45} = 80$$

Exercise

1. Cost of 1m pipe = ₹10.50
   Cost of 9.5m pipe = ₹ 9.5×10.50 = ₹99.75
2. 1 shirt require = 2.25m cloth
   18 shirts require = $18 \times 2.25 = 40.5$ m
3. 1 bag capacity = 35.250kg
   45 bags capacity = $45 \times 35.250 = 1586.25$ kg
4. Cost of 16 saree = ₹728.40
   Cost of 1 saree = $728.40 \div 16$ = ₹453.65
5. 1 tin contain = 10.5l
   18 tin contain = $10.5 \times 18 = 189$ lt
6. 2.2m require for 1 shirt

   57.2m make = $\frac{57.2}{2.2} \times \frac{10}{10} = \frac{572}{22} = 26$ shirts

7. Neeru for 7 days got money = ₹89.25

For 1 day $= \frac{89.25}{7} = 12.75$

8. 1 cardboard thickness $= 0.0025$m
   Cardboards made of thickness $0.5 = 0.5 \div 0.0025$

$$= \frac{0.5}{0.0025} \times \frac{10000}{10000} = \frac{5000}{25} = 200$$

$= 200$ piece of cardboard

Lesson – 5 : Average

Exercise

1. Ages are 12, 13, 15 years
   There are 3 persons

$$\text{So, average} = \frac{\text{Total age}}{\text{No. of person}}$$

$$= \frac{12+13+15}{3} = \frac{40}{3}$$

$= 13$ years 4 months

2. Marks obtain are 65, 72, 96, 83, 74
   Total number of subjects = 5

$$\text{Average} = \frac{\text{Total marks}}{\text{Total No. of subject}}$$

$$= \frac{65+72+96+83+74}{5} = \frac{390}{5}$$

$= 78$ marks

3. Temperature record $= 36.2, 35, 32.3, 41.1, 31.5, 30.2, 37.2$
   No of days $= 7$

$$\text{Average} = \frac{\text{Temperature record}}{\text{No. of days}}$$

$$= \frac{36.2 + 35 + 32.3 + 30.2 + 37.2 + 31.5 + 41.1}{7}$$

$$= \frac{243.5}{7} = 34.79°C$$

5. Team A scored $= 216$ points
   Number of questions $= 8$

$$\text{Average} = \frac{\text{Scored points}}{\text{No. of questions}} = \frac{216}{8} = 27$$

Team B scored $= 288$ points
No. of questions $= 12$

$$\text{Average} = \frac{\text{Scored points}}{\text{No. of questions}} = \frac{288}{12} = 24$$

Average of team A > team B averag
So team A is better.

6. Number of employee $= 8$
   Salary got $= ₹4550$
   Total salary $= 4550 \times 8 = ₹36400$
   Salary $= ₹6010$ each
   No. of employee $= 4$
   Total salary $= 6010 \times 4 = 24040$
   Net salary $= 24040 + 36400 = 60440$
   Total employee $= 8 + 4 = 12$

$$\text{Average} = \frac{60440}{12} = 5036.66 = ₹5037$$

7. Man total income $= ₹6000 + ₹7800 = ₹13800$

Total months = $6+6=12$

Average = $\frac{\text{Income}}{\text{Months}} = \frac{13800}{12} =$ ₹1150

8. (a) Average = $\frac{90+57+70+84+74}{5} = \frac{375}{5} = 75$

average marks = 75

(b) Maths $90 > 75$ Science $84 > 75$

Only maths and science

(c) Social science, English, Hindi

Lesson – 6 : Percentage

Exercise

1. $\frac{1}{2} = \frac{1\times50}{2\times50} = \frac{50}{100} = 50\%$ $(\therefore 100 \div 2 = 50)$

2. $\frac{1}{4} = \frac{1\times25}{2\times25} = \frac{25}{100} = 25\%$ $(\therefore 100 \div 4 = 25)$

3. $\frac{3}{4} = \frac{3\times25}{4\times25} = \frac{75}{100} = 75\%$

4. $\frac{5}{8} = \frac{5\times12.5}{8\times12.5} = \frac{62.5}{100} = 62.5\%$ $(\therefore 100 \div 8 = 12.5)$

5. $\frac{3}{5} = \frac{3\times20}{5\times20} = \frac{60}{100} = 60\%$ $(\therefore 100 \div 5 = 20)$

6. $\frac{4}{5} = \frac{4 \times 20}{5 \times 20} = \frac{80}{100} = 80\%$

7. $\frac{13}{20} = \frac{13 \times 5}{20 \times 5} = \frac{65}{100} = 65\%$ $(\therefore 100 \div 20 = 5)$

8. $1\frac{2}{5} = \frac{7}{5} = \frac{7 \times 20}{5 \times 20} = \frac{140}{100} = 140\%$

9. $4\frac{1}{5} = \frac{21}{5} = \frac{21 \times 20}{5 \times 20} = \frac{420}{100} = 420\%$

10. $4\frac{3}{10} = \frac{43}{10} = \frac{43 \times 10}{10 \times 10} = \frac{430}{100} = 430\%$

11. $2\frac{3}{5} = \frac{13}{5} = \frac{13 \times 20}{5 \times 20} = \frac{260}{100} = 260\%$

12. $\frac{3}{50} = \frac{3 \times 2}{50 \times 2} = \frac{6}{100} = 6\%$ $(\therefore 100 \div 50 = 2)$

13. $0.5 = \frac{05 \times 10}{10 \times 10} = \frac{50}{100} = 50\%$

14. $0.15 = \frac{15}{100} = 15\%$

15. $0.35 = \frac{35}{100} = 35\%$

16. $0.215 = \frac{12.5}{100} = 12.5\%$

17. $0.05 = \frac{5}{100} = 5\%$

18. $1.25 = \frac{125}{100} = 125\%$

19. $2.05 = \frac{205}{100} = 205\%$

20. $3.5 = \frac{35 \times 10}{10 \times 10} = \frac{350}{100} = 350\%$

21. $6.25 = \frac{625}{100} = 625\%$

22. $1.03 = \frac{103}{100} = 103\%$

23. $0.02 = \frac{2}{100} = 2\%$

24. $0.05 = \frac{5}{100} = 5\%$

Exercise

1. $25\% = \frac{25}{100} = \frac{1}{4}$

2. $85\% = \frac{85}{100} = \frac{17}{20}$

3. $50\% = \frac{50}{100} = \frac{1}{2}$

4. $75\% = \frac{75}{100} = \frac{3}{4}$

5. $4\frac{1}{2}\% = \frac{9}{2}\% = \frac{9}{200}$

6. $6\frac{1}{4}\% = \frac{25}{4}\% = \frac{25}{400} = \frac{1}{4\times 4} = \frac{1}{16}$

7. $8\frac{2}{3}\% = \frac{26}{3}\% = \frac{26}{300} = \frac{13}{150}$

8. $12\frac{1}{2}\% = \frac{25}{2}\% = \frac{25}{200} = \frac{1}{8}$

9. $11\frac{1}{9}\% = \frac{100}{9}\% = \frac{100}{900} = \frac{1}{9}$

10. $140\% = \frac{140}{100} = \frac{7}{5} = 1\frac{2}{5}$

11. $150\% = \frac{150}{100} = \frac{3}{2} = 1\frac{1}{2}$

12. $300\% = \frac{300}{100} = 3$

13. $30\% = \frac{30}{100} = 0.30$

14. $55\% = \frac{55}{100} = 0.55$

15. $75\% = \frac{75}{100} = 0.75$

16. $4\% = \frac{4}{100} = 0.04$

17. $8\% = \frac{8}{100} = 0.08$

18. $4\frac{1}{2}\% = \frac{9}{2}\% = \frac{9}{200} = \frac{4.5}{100} = 0.045$

19. $13.5\% = \frac{135}{1000} = 0.135$

20. $115\% = \frac{115}{100} = 1.15$

21. $5\frac{1}{4}\% = \frac{21}{4}\% = \frac{21}{400} = 0.0525$

22. $4\frac{3}{5}\% = \frac{23}{5}\% = \frac{4.6}{100} = 0.046$

23. $5\frac{3}{4}\% = \frac{23}{4}\% = \frac{5.75}{100} = 0.0575$

24. $7\frac{1}{4}\% = \frac{29}{4}\% = \frac{7.25}{100} = 0.0725$

Exercise

1. (a) $5\%\ of 40$

$$\frac{5}{100} \times 40 = \frac{20}{10} = 2$$

(b) $8\%\ of 80$

$$\frac{8}{100} \times 80 = \frac{64}{10} = 6.4$$

(c) $12\frac{1}{2}\% of 300$

$$\frac{25}{2} = \frac{25}{2 \times 100} = \frac{1}{8} = \frac{1}{8} \times 300 = 37.5$$

(d) $60\%\ of 90$

$$\frac{60}{100} \times 90 = 54$$

(e) $75\%\ of 40$

$$\frac{75}{100} \times 40 = 30$$

(f) $25\%\ of 1200$

$$\frac{25}{100} \times 1200 = 300$$

2. (a) $4\%\ of ₹350$

$$\frac{4}{100} \times 350 = 14$$

(b) $30\%\ of ₹40$

$$\frac{30}{100} \times 40 = 12$$

(c) 50% of ₹800

$$\frac{50}{100} \times 800 = ₹\,400$$

(d) 2% of ₹1200

$$\frac{2}{100} \times 1200 = ₹24$$

(e) 20% of 8km

$$\frac{20}{100} \times 8 = 1.6 \text{ km}$$

(f) $6\frac{1}{4}\%of 160km$

$$\frac{25}{4}\% \times 160 = \frac{25}{100 \times 4} \times 160 = 10 \text{ km}$$

3. $\frac{72}{100} \times 100 = 72\%$

4. 1 year = 365 days

292 days of a year = $\frac{292}{365} \times 100 = 80\%$

6. 33 as a per cent of 165 = $\frac{33}{165} \times \frac{100}{1} = 20\%$

Word Problem

7. 60% of total votes

$$\frac{60}{100} \times 20{,}000 = 12000$$

12000 votes is of winning and for defeated candidate

$$= 20{,}000 - 12000 = 8{,}000 \text{ votes}$$

8. Student scored = 576 out of 900

Percentage got = $\frac{576}{900} \times 100 = 64\%$

9. 25% of a pair of shoe price is 720

$$\text{Amount of rebate} = \frac{25}{100} \times 720 = ₹180$$

Amount of rebate is ₹180

10. Neha weight = 45kg

Brother weight = 20% more than Neha

So, 20% of 45

$$\frac{20}{100} \times 45 = 9$$

So, her brother's weight $= 45 + 9 = 54$ kg

Lesson – 7 : Speed, Distance And Time

Exercise

1. (a) Distance = 90, time = 2 hr

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

$$= \frac{90}{2} = 45 km/hr$$

(b) Distance = 750, time = 15 hr

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{750}{15} = 50 km/hr$$

(c) $\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{525}{5} = 105 km/hr$

(d) $\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{1875}{25} = 75 km/hr$

(e) $\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{1200}{3/2} = \frac{1200 \times 2}{3} = 800 km/hr$

2. Distance = 360 km; time = 4 hour

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{360}{4} = 90 km/hr$$

3. Distance = 650km; Time = 10 hours

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{650}{10} = 65 km/hr$$

4. Distance = 180 km; Time = 4 hour

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{180}{4} = 45 km/hr$$

5. Distance = 6 km Time = 10 minutes or $\frac{1}{6}$ hr

$$\text{Sheena Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{6 \times 6}{1} = 36 km/hr$$

$$\text{Priya Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{16}{15/60} = 64 km/hr$$

So, speed of Priya is greater than Sheena.

6. Distance = 72km; Time = 1 hr 30 min or 1+1/2 = 3/2 hours

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{72 \times 2}{3} = 48 km/hr$$

7. Rohan distance = 16 km, Time = 30 min or 1/2 hr

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{16 \times 2}{1} = 32 km/hr$$

Raghav distance = 12 km; Time = 20 min or 2/6 hr

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{12 \times 3}{1} = 36 km/hr$$

Raghav drive faster than Rohan.

Exercise

1. (a) 18km/hr; $\text{Speed} = \frac{18\text{km}}{1\text{ hr}} = \frac{18 \times 1000}{3600} = \frac{180}{36} = 5 m/s$

(b) 27km/hr; $\text{Speed} = \frac{27\text{km}}{1\text{ hr}} = \frac{27 \times 1000}{3600} = \frac{270}{36} = 7.5 m/s$

(c) $\text{Speed} = \frac{36\text{km}}{1\text{ hr}} = \frac{36 \times 1000}{3600} = 10 m/s$

(d) $\text{Speed} = \frac{150\text{km}}{1\text{ hr}} = \frac{150 \times 1000}{3600} = 41.67 m/s$

(e) $\text{Speed} = \frac{40\text{km}}{1\text{ hr}} = \frac{40 \times 1000}{3600} = 11.1 m/s$

(f) $\text{Speed} = \frac{14.4\text{km}}{1\text{ hr}} = \frac{14.4 \times 1000}{3600} = 4 m/s$

2. (a) 30m/sec $= \dfrac{30 \times \dfrac{1}{1000}}{1 \times \dfrac{1}{3600}} km/hr$

$= \dfrac{30 \times 3600}{1000} = 36 \times 3 = 108 km/hr$

(b) 12.5m/sec $= \dfrac{12.5 \times \dfrac{1}{1000}}{1 \times \dfrac{1}{3600}} km/hr$

$= \dfrac{12.5 \times 3600}{1000} = 45 km/hr$

(c) 90/msec $= \dfrac{90 \times \dfrac{1}{1000}}{1 \times \dfrac{1}{3600}} km/hr$

$= \dfrac{90 \times 3600}{1000} = 324 km/hr$

(d) 10m/sec $= \dfrac{10 \times \dfrac{1}{1000}}{1 \times \dfrac{1}{3600}} km/hr$

$= \dfrac{10 \times 3600}{1000} = 36 km/hr$

(e) 12m/sec $= \dfrac{12 \times \dfrac{1}{1000}}{1 \times \dfrac{1}{3600}} km/hr$

$= \dfrac{12 \times 3600}{1000} = 43.2 km/hr$

(f) 25m/sec $= \dfrac{25 \times 3600}{1000} = 90 km/hr$

3. Distance = 300m; Time = 40 sec

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{300M}{40\,\text{sec}} = \frac{300 \times \frac{1}{1000}}{40 \times \frac{1}{3600}} km/hr$$

$$= \frac{300 \times 3600}{40 \times 1000} = 27 km/hr$$

4. $\text{Speed} = \frac{1800M}{1\,\text{min}} = \frac{1800 \times \frac{1}{1000}}{\frac{1}{3600}} = \frac{1800 \times 60}{1000} = 108 km/hr$

5. $\text{Speed} = \frac{1650M}{1\text{hour}50\,\text{min}}$

1 hour 50 min $= 1 + \frac{50}{60} = \frac{11}{6} hours$

$$\text{Speed} = \frac{1650 \times 6}{11} = 900 km/hr$$

6. Distance = 204km; Time = 3hour

$$\text{Speed} = \frac{204}{3} = \frac{204 \times 1000}{3 \times 3600} = 18.9 km/hr$$

Exercise

1. Distance = Speed × time
   = 100 × 5 × 60 = 30000m (∵ 5 min = 5 × 60s)

2. $\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{360}{40} =$ 9 hour

3. $\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{20}{30} = \frac{2}{3}$ hour or 40 minutes

4. 30 km/r = speed of scooter

200 m/min speed of horse $= \frac{200 \times \frac{1}{1000}}{1/60} = 200 \times \frac{60}{1000} = 12\,\text{km/hr}$

So, scootrist speed is faster.

5. Anju speed of 25m/min

Distance = 2km 500m

= 2500m

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{2500}{25} = 100\,\text{min}$$

$$100\,\text{min} = \frac{100}{60} = 1\,\text{hour}\,40\,\text{minutes}$$

6. Speed = $3\frac{1}{2} = \frac{7}{2}$ km/hr; Time = 30 min or 1/2 hour

Distance = Speed × Time

$$= \frac{7}{2} \times \frac{1}{2} = \frac{7}{4} = 1.75km$$

7. Speed = 70km/hr; Time = 2 hr and 30 min = $2 + \frac{30}{60} = 2\frac{1}{2} = \frac{5}{2} hr$

Distance = Speed × Time

$$= 70 \times \frac{5}{2} = 175km$$

8. Speed = 900 km/hour; Time = 40 min or $\frac{40}{60}$ or $\frac{4}{6}$

Distance = Speed × Time

$$= 900 \times \frac{4}{6} = 600km$$

Lesson – 8 : Triangles And Quadrilaterals

Exercise

1. $PQ = 5, QR = 3\text{cm}, RP = 4\text{ cm}$
   (a) $(PQ + QR) > RP$
   $8 > 4$
   (b) $(QR + RP) > PQ$
   $(3 + 4) > 5$
   (c) $(RP + PQ) > QR$
   $(4 + 5) > 3 \quad = 9 > 3$
2. (a) $\angle P + \angle Q + \angle R = 180°$
   $60° + 90° + 30°$
   $180° = 180°$
   (b) $\angle P + \angle Q + \angle R = 180°$
   $50° + 50° + 50°$
   $150° \neq 180°$
   (c) $\angle P + \angle Q + \angle R = 180°$
   $90° + 90° + 20° = 200° \neq 180°$
   (d) $\angle P + \angle Q + \angle R = 180°$
   $110° + 90° + 30° = 230° \neq 180°$
3. (a) $\angle B + \angle A + \angle C = 180°$
   $\angle B = 180° - 90° - 30° = 60°$
   (b) $\angle P = 180° - 25° - 90° = 65°$
   (c) $\angle M = 180° - 45° - 45° = 90°$
   (d) $\angle O = 180° - 60° - 60° = 60°$
   (e) $\angle A = 180° - 90° - 45° = 45°$
   (f) $\angle R = 180° - 80° - 50° = 50°$

Exercise

1. Equalateral triangle $(\therefore AB = BC = CA)$

(b) Scalene triangle ($\therefore AB \neq BC \neq CA$)

(c) Scalene triangle ($\therefore AB \neq BC \neq CA$)

(d) Equilateral triangle ($\therefore AB = BC = CA$)

2. (a) Acute angle triangle (all angles are less than 90°)

(b) Acute angle triangle (all angles are less than 90°)

(c) Right angle triangle ($ABC = 90°$)

(d) Obtuse angle triangle ($BAC = 110°$)

Exercise

1. (a) True (b) False (c) True (d) True
   (e) False
2. (a) 90° (b) Rhombus (c) Trapezium
   (d) equal (e) 90°
3. (a) AB, BC, CD, DA (b) $\angle A, \angle B, \angle C, \angle D$
   (c) AC, BD (d) DC (e) BC
4. (a) 90° (b) 90° (c) ZY (d) Equal
   (e) 360°
5. (a) Square (b) Rhombus (c) Trapezium (d) Rectangle

Lesson – 9 : Area And Volume

Exercise

1. Area of square = side × side
   (a) area = $4 \times 4 = 16\ cm^2$
   (b) area = $13 \times 13 = 169\ cm^2$
   (c) area = $6.5 \times 6.5 = 42.25\ cm^2$
   (d) area = $3.5 \times 3.5 = 12.25\ cm^2$
   (e) area = $25.5 \times 25.5 = 650.25 cm^2$
   (f) area = $3\frac{1}{3} \times 3\frac{1}{3} = \frac{10}{3} \times \frac{10}{3} = \frac{100}{9} = 11.11 cm^2$ or $11\frac{1}{9} cm^2$
2. Area of rectangle = length × breadth
   (a) area = $9 \times 8 = 72 m^2$
   (b) area = $15 \times 12 = 180 cm^2$
   (c) area = $20 \times 10 = 200 cm^2$
   (d) area = $20\frac{1}{2} \times 5\frac{1}{2} = \frac{41}{2} \times \frac{11}{2} = 112.75 m^2$
3. Length = 14 cm; breath = 6 cm
   Area of rectangle = length × breath
   = $14 \times 6 = 84\ cm^2$
4. Side = 7 m
   Area of square = Side × side
   = $7 \times 7 = 79\ m^2$
5. Area of a rectangle=length × breadth
   length = 1.5 cm; breadth = 60 cm
   area = $1.5 \times 60 = 90\ cm^2$ or $0.009 m^2$
6. Carpet required = Area of room
   = length × breadth
   = $8 \times 5 = 40 m^2$
7. Area of figure A = $4.5 \times 3 = 13.5 cm^2$
   Area of figure B = $3.5 \times 2 = 7.0\ cm^2$

Area of Total figure $=(13.5+7)\ \text{cm2} = 20.5\text{cm}^2$

(b) Area of figure A $= 6 \times 2 = 12\text{cm}^2$

Area of figure B $= 3 \times 3 = 9\ \text{cm}^2$

Area of figure C $= 6 \times 2 = 12\ \text{cm}^2$

Area of total figure $= 12 + 9 + 12 = 33\text{cm}^2$

8. Length = 10m; Breadth = 8m

Area of hall $= 10 \times 8 = 80\text{m}^2$

Cost to cement $= 32 \times 80 = ₹2560$

9. Area of path $= 60 \times 1.2 = 72\text{m}^2$

Area of 1 stone $= 12 \times 7.5 = 90.0\ \text{cm}^2 = 0.009\text{m}^2$

Number of stones $= \dfrac{\text{Area of path}}{\text{Area of 1 stone}} = \dfrac{72}{0.009} = 8000$

Exercise

1. Volume of cube $= \ell \times \ell \times \ell$

(a) Volume $= 6 \times 6 \times 6 = 216\text{cm}^3$

(b) Volume $= 7.5 \times 7.5 \times 7.5 = 421.875\ \text{cm}^3$

(c) Volume $= 12 \times 12 \times 12 = 1728\ \text{cm}^3$

(d) Volume $= 15.5 \times 15.5 \times 15.5 = 3723.875\text{m}^3$

2. Volume of cuboid = length × breadth × height

(a) Volume $= 12 \times 9 \times 4 = 432\ \text{cm}^3$

(b) Volume $= 10.5 \times 7.5 \times 4 = 315\ \text{cm}^3$

(c) Volume $= 10 \times 8 \times 6 = 480\ \text{cm}^3$

(d) Volume $= 5 \times 3 \times 1.5 = 22.5\ \text{m}^3$

(e) Volume $= 4 \times 2.5 \times 1.5 = 15\text{m}^3$

3. Volume of wooden block $= \ell \times b \times h$

$= 13 \times 13 \times 13 = 2197\text{cm}^3$

4. Volume of the packet $= \ell \times b \times h$

$= 10 \times 6 \times 4 = 240\text{cm}^3$

5. Volume of soap cake $= \ell \times b \times h$

$= 7 \times 5 \times 2.5 = 87.5\ \text{cm}^3$

Volume of cardboard $= 56 \times 40 \times 25 = 56000\text{cm}^3$

Number of soap cakes $= \dfrac{56000}{87.5} = 640$

6. Volume of cuboid $= 6 \times 3 \times 3 = 54\ \text{cm}^3$

Volume of cube $= 4 \times 4 \times 4 = 64 cm^3$

Volume of cube is greater.

7. Volume of bricks $= 20 \times 10 \times 8 = 1600\ cm^3$

   Volume of wall $= 4 \times 3 \times .22 = 2.64 m^3$

   $$\text{No. of bricks} = \frac{2640000}{1600} = 1650$$

8. Length = 15cm; breadth = 6cm

   Volume of the rectangular box = $4500 cm^3$

   $$\text{Height of the box} = \frac{\text{Volume}}{\text{Length} \times \text{breadth}} = \frac{4500}{15 \times 6} = 50cm$$

9. Length = 50cm; breadth = 45 cm; height = 20cm

   Volume $= l \times b \times h$

   $= 50 \times 45 \times 20 = 45000 cm^3$

   Length = 5cm; breadth = 3cm; height = 1.5cm

   Volume $= l \times b \times h$

   $= 5 \times 3 \times 1.5 = 22.5 cm^3$

   $$\text{Number of matchboxes} = \frac{45000}{22.5} = 2000 \text{ matchboxes}$$

Computer Science

Lesson –1 : Flow Chart And Programming

1. (a) (ii) (b) (i) (c) (ii)
   (d) (ii) (e) (i)
2. (a) True (b) False (c) True
   (d) True (e) True
3. (a) software (b) multimedia
   (c) program (d) Programmers
   (e) flowchart (f) algorithm
   (g) language (h) logical orders
   (i) oval (j) arrow head
4. (a) Terminal Box (b) flow lines
   (c) decision box (d) Process box
   (e) Input/output box (f) connector
5. (a) People who design the program in computer understandable language and give the detailed procedure to solve the program are called programmers.
   (b) There are three steps to solve the problem i.e. algorithm, flowchart and program.
   (c) Pictorial representation of the step by step procedure to solve a problem is called a flow chart.
   (d) Flowchart is the pictorial representation of step by step procedure to solve a problem while the algorithim is the textual way of giving steps by step procedure to solve a program.
   (e) Following are the rules to make a flow chart.
      (i) Flow of chart should be either top to bottom or left to right.
      (ii) Arrow heads must be used as with flow lines showing the flow of sequence.
      (iii) Crossing lines should be avoided.
      (iv) If flow chart is using more than one page connectors must be used.

(f) Following are the uses of flow charts :
   (i) Problem solving is made simple.
   (ii) It is easy to understand.
   (iii) Data flow can be seen properly.
   (iv) It is not based on computer language.
   (v) Simple to make.

(g) Loop is the way to represent the repeated steps again and again.

Lesson – 2 : MS Excel

1. (a) (ii) (b) (i) (c) (ii)
   (d) (i) (e) (iii)
2. (a) True (b) True (c) False
   (d) False (e) True
3. (a) Spreadsheet
   (b) rows and columns
   (c) 65536 rows and 256 columns
   (d) .XLS
   (e) Alphabet
   (f) numbers
   (g) Adtive cell
   (h) Cell address
4. (a) Cell : Intersection of a row and a column is called a cell.
   (b) Active cell : Selected cell is called an active cell. Border line is displayed around it.
   (c) Worksheet : Collection of rows and columns in one screen is called a worksheet.
   (d) Workbook : Collection of many worksheets together in the file is called as workbook.
   (e) Formula : It is a collection of numbers, cell reference and operator to perform any collection. Always start a formula with an equal to sign (=).
5. (a) We can perform calculations in MS Excel.

(b) Click on start — click on program — click on MS Office — Select MS Excel from the list.

(c) Alphabetic data can be presented by MS Excel worksheet.

(d) Using cell address for calculation you can see that the result are automatically changing if any value of the cell changes.

(e) MS Excel workbook can be presented in attractive form by using various options in formatting toolbars.

Lesson – 3 : Internet : A Concept

1. (a) (iii) (b) (iii) (c) (i)
   (d) (iv) (e) (iii)
2. (a) True (b) True (c) False
   (d) True (e) True
3. (a) towers (b) computer network
   (c) internet (d) world
   (e) electronic mail (f) ARPANET
   (g) ISP's (h) website
4. (a) LAN Local Area Network
   (b) MAN Metropolitan Area Network
   (c) Internet International Network
   (d) URL Uniform Resource Location
   (e) Modem Modulator Demodulator
   (f) Arpanet Advance Research Projects Agency Network
   (g) VSNL Videsh Sanchar Nigam Limited
   (h) WAN Wide Area Network
   (i) MTNL Mahanagar Telephone Nigam Limited
5. (a) Network : A big connectivity, where anything is shared by many users from the common platform is termed as network.

   (b) URL : The own identifying address of a website or a webpage is defined as URL.

   (c) Internet : It is the very large network of computer

connected together to share resources across the world.

(d) Video Conferencing : It is a facility by which you can speak to the people by looking at them as if you are talking face-to-face.

(e) Modem : It is the device which converts telephone signals to digital signals and digital signals of computer to telephone signals.

(f) Webpage : Web pages are the pages on internet which form the www. It can contain text, graphics, audio, video and links to other page. It displays information.

(h) Website : Collection of webpages from a website.

(i) ARPANET : It was the first network set up by the department of Defence of USA. Its full form is Advance Research Project Agency Network.

6. (a) Connectivity between various computers is called conmputer network. It can be of following main tyes: (i) LAN (ii) WAN and (iii) MAN.

(b) Internet provides us resource sharing, email, video conferencing, information, sales and purchase facility.

(c) Emails are better than postal mails because they are fast, cheap and does not need paper. With the help of email we are capable of sending the same message to many people together. You can also send picture, music and video etc. If your address gets damaged, your email id is forever.

(d) To connect to internet computer, telephone line, modem, and internet connection is required.

(e) Telephone carries signals.

(f) Modem converts telephone signals to digital signals and digital signals to computer to telephone signals.

(g) URL is the identifying address of a website or a webpage.

(h) Email address is the location where your data/mails are stored. Email address remains same from

whereever you access internet. It is never changing unless you stop using your mail or you change it.

7. (a) Email (b) ARPANET
   (c) ISP (d) Internet connection
   (e) Web page

Lesson – 4 : Searching on Internet

1. (a) (i) (b) (ii) (c) (ii)
   (d) (iii) (e) (i)
2. (a) False (b) True (c) True
   (d) True (e) False
3. (a) webpage and website (b) web browsers
   (c) HTML (d) web browser
   (e) search (f) title bar
   (g) refresh (h) search engines
4.

HTML	Hypertext Markup language
Home	First page
Yahoo, Google	example of search engine
Website	collection of web pages
Internet	big network
Hyperlink	Underline text of webpage
Search item	is searched by search engine
History	shows all pages you visited
Netscape Navigator	type of web browser
Menu bar	has different menu options

5. (a) Web browsers are the softwares which enable the user to connect with a website and use the webpage.
   (b) Internet explorer and webpage navigator are the two common web browsers.
   (c) The main contents of the internet explorer are menu bar, address bar, title bar, display area and tool bar.
   (d) Some highlighted text or image when selected displays the information on the particular topic. It is called hyperlink.

(e) Some of the features of a hyperlink are :

it is underlined or it is given with different colour. When you move a pointer over it, its shape changes from arrow to hand shaped pointer showing hyperlink.

(f) Search engine are the websites that help you to search the information from the internet.

(g) Some search engines are : google.co.in, yahoo.com and altavista etc.

(h) To search the item from search engine follow these steps :

(i) On the address bar of web browser type the URL of search engine.

(ii) Once the search engine screen appears, type the search terms.

(iii) Click on search box.

6. (a) Home : It takes you to the first page of the website.

(b) Back : It takes you back to previous page.

(c) Forward : It takes you to next page.

(d) Stop : It stops the loading process of the webpage from internet.

(e) Refresh : It restarts the loading process.

(f) History : It saves/stores the previously viewed sites for a particular period.

General Knowledge

Lesson –1 : Mammals

1. (vi), 2. (x), 3. (ix), 4. (xiii), 5. (v), 6. (xi), 7. (xii), 8. (iii), 9. (xiv), 10. (i), 11. (iv), 12. (ii), 13. (viii), 14. (vii), 15. (xv).

Lesson – 2 : Is It True?

1. True, 2. False, 3. True, 4. True, 5. True, 6. True, 7. True, 8. False, 9. False, 10. True, 11. True, 12. True, 13. False, 14. True, 15. True.

Lesson – 3 : The Right Choice

1. (b), 2. (b), 3. (c), 4. (b), 5. (d), 6. (a), 7. (c), 8. (b), 9. (b), 10. (c).

Lesson – 4 : Our Government

1. (ii), 2. (i), 3. (iv), 4. (vii), 5. (vi), 6. (xii), 7. (xiii), 8. (xi), 9. (ix), 10. (x), 11. (v), 12. (viii), 13. (iii), 14. (xiv).

Lesson – 5 : Important Dates

1. 10th May 1857; 2. 2nd October, 1869; 3. 6th April 1930; 4. 30th January 1948; 5. 16th April 1853; 6. 28th December 1885; 7. 13th April 1919; 8. 8th August 1942; 9. 15th August 1947; 10. 26th January 1950; 11. 30th October 1945; 12. 29th May 1953; 13. 14th November 1889; 14. 15th September 1959; 15. 18th May 1974.

Lesson – 6 : The British Rule In India

1. Lord Clive, 2. Lord Cornwallis, 3. Lord Ripon, 4. Lord Curzon, 5. Warren Hastings, 6. Lord Mountbatten, 7. Lord Canning, 8. Lord Minto, 9. Simon

Lesson – 7 : Religious India

1. Valmiki, 2. Ved Vyas, 3. Tulsidas, 4. Four, 5. Rigveda, 6. 18, 7. 108, 8. 1028, 9. Siddhartha, 10. Kalidas.

Lesson – 8 : Countries And Capitals

1. (k), 2. (v), 3. (b), 4. (d), 5. (z), 6. (l), 7. (t), 8. (y), 9. (h), 10. (o), 11. (x), 12. (w), 13. (u), 14 (c), 15. (s), 16. (r), 17. (p), 18. (a), 19. (q), 20. (m), 21. (n), 22. (j), 23. (i), 24. (g), 25. (e), 26. (f).

Lesson – 9 : Old And New Names

Do Yourself

Lesson – 10 : Towns on River Banks

1. (a), 2. (s), 3. (k), 4. (t), 5. (m), 6. (d), 7. (x), 8. (r), 9. (b), 10. (n), 11. (c), 12. (y),13. (v), 14. (e), 15. (w), 16. (u), 17. (h), 18. (q), 19. (i), 20. (p), 21. (o), 22. (l), 23. (f), 24. (z), 25. (j), 26. (g).

Lesson – 12 : Dynasty

1. x	2. i	3. vi	4. iii	5. ii
6. ix	7. vii	8. viii	9. v	10. iv
11. xv	12. xi	13. xii	14. xiii	15. xiv
16. xx	17. xix	18. xvii	19. xviii	20. xvi

Lesson – 13 : Viceroys Of India

1. (t), 2. (a), 3. (j), 4. (b), 5. (o), 6. (e), 7. (l), 8. (q), 9. (s), 10. (p), 11. (r), 12. (d), 13. (c), 14. (n), 15. (m), 16. (k), 17. (h), 18. (f), 19. (i), 20. (g).

Lesson – 14 : Scientific Fields

1. (xv), 2. (xiii), 3. (xiv), 4. (i), 5. (xii), 6. (ii), 7. (xi), 8. (x), 9. (iii), 10. (ix), 11. (vi), 12. (iv), 13. (vii), 14. (v), 15. (viii).

Lesson – 15 : Quiz On History

1. (c), 2. (a), 3. (b), 4. (d), 5. (d), 6. (c), 7. (b), 8. (d), 9. (b), 10. (c).

Lesson – 16 : Research Institution

1. (r), 2. (l), 3. (k), 4. (p), 5. (a), 6. (d), 7. (j), 8. (c), 9. (t), 10. (n), 11. (b), 12. (g), 13. (f), 14. (m), 15. (s), 16. (i), 17. (e), 18. (h), 19. (q), 20. (o).

Lesson – 17 : Common Sense

1. (a), 2. (c), 3. (a), 4. (c), 5. (c).

Lesson – 18 : Mathematical Common Sense

1. (a), 2. (b), 3. (c), 4. (d) 5. (b) The position of the birds are  shown in the figures.

Moral Values

Lesson – 1 : The Crystal Ball

1. (a) (i) Shepherd boy (b) (iii) stars
   (c) (iv) beautiful crystal ball (d) (iii) rainbow
2. (a) True (b) True
   (c) True (d) True
3. (a) crystal (b) fulfill, wish
   (c) gold, jwellery (d) content, greedy
4. (a) Spain (b) Grandmother
   (c) flute
5. (a) Reuben was a shepherd boy, each day, early morning, he used to take his herd of goats up the hills to find a suitable place for them to graze.
   (b) At night, Reuben's grandmother told him the story of stars.
   (c) One day when Reuben take his herd for grazing, he found a transparent and beautiful crystal ball behind

the bushes. The crystal ball was glittering like a colourful rainbow.

(d) The ball said to Reuben, "You can make a wish that your heart desires and I will fulfill it".

(e) Reuben could not ask for a wish from the crystal ball because he had so many wishes in his heart that he was not able to decice, what to wish .

(f) Seeing Reuben so happy, one day a boy followed him to know the reason of his happiness. When Reuben fall asleep he took the crystal ball and ran away.

(g) The wishes that were asked by the people were :

(i) one asked for one bag full of gold

(ii) Another asked for two chests full of jwellery.

(iii) Some of them wished that they would have their own palace with grand door made of pure gold.

(h) No, the people were not happy after their wishes were fulfilled.

(i) Reuben finally wished that the village became the same as it was before.

Lesson – 2 : The Importance of Time

1. (a) (iv) time (b) (i) time properly
   (c) (i) time (d) (iii) laboratory
2. (a) True (b) True
   (c) False (d) True
3. (a) Time (b) Time
   (c) efficiently (d) Scientist
4. (a) Time (b) No
   (c) Scientist (d) Laboratory
5. (a) We should understand the value of time because once it is lost, it is forever lost.

   (b) If no one valued time then there will be confusion all around. Trains would not run on time, planes would not take off on time and if people did not work on time, there would be chaos and disorder everywhere.

(c) If the world has to function efficiently, everything must run according to a planned schedule.

(d) To make our day a happy one, we must be careful about dividing our time properly amongst all our daily activities.

(e) The time at school is our opportunity to learn and increase our knowledge to do better so that one day we can become a successful person.

(f) The difference lies in the way they make use of their time.

(g) His wife once asked him to take her out for a vaction.

(h) Edison most beautiful place was his laboratory.

Lesson – : Pride

1. (a) The boy had many kinds of fishes in his aquarium.

(b) The new fish was very beautiful. Her silvery fins sparkled with many different colours and her body was on amazing vivid scarlet.

(c) "Hey you everyone who lives in this old water bowl, come out and meet your queen!"

(d) The fish queen divided the aquarium into two parts. The biggest part and the smallest part.

(e)

(f) The boy noticed that his fish were not looking so well, and even seemed a bit thinner and he take the queen-fish out of the aquarium and put her in a glass jar.

(g) The cat carpet up to the jar with the little scarlet fish. The queen fish was sleeping and the cat was just about to stick his paw into her jar when something astonishing happened.

(h) The little crab saved the queen fish's life.

2. (a) scarlet (b) queen

(c) frightened (d) fill

(e) sparkled (f) disease, jar

3. Do yourself

हिंदी - 5

पाठ - 1 : भारतीय संस्कृति का प्रतीक : अक्षरधाम

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (ब) ख. (स) ग. (द)

2. नीचे दिए गये कथनों से प्रश्नों का निर्माण कीजिए :

क. एक सौ एकड़ भूमि पर बने अक्षरधाम मंदिर पर लगभग कितने रुपये खर्च हुए?

ख. पूरा मंदिर किस-किस रंग के पत्थरों से बना है?

ग. कुल कितनी मूर्तियाँ इस मंदिर की दीवारों-खंभो आदि को सुसज्जित कर रही हैं?

घ. मंदिर के किस सरोवर में 151 नदियों के पवित्र जल का संगम है।

3. नीचे लिखे वाक्यों को पूर्ण वाक्य बनाने के लिए !, ?, ।, ''...'', ',' में से उचित चिह्न लगाइए:

स्वयं कीजिए।

4. इन शब्दों के दो-दो पर्यायवाची शब्द लिखिए:

विष्णु : चक्रधर, श्रीधर शिव : पशुपति, महादेव

ब्रह्म : आत्मभू, कमलासन उपवन : बगीचा, वाटिका

हाथी : गज, मतंग

5. निम्नलिखित शब्द शब्द युग्मों को एक ही वाक्य में प्रयुक्त करके लिखिए:

स्वयं कीजिए।

6. मूल शब्द से अनेक शब्द बनाएँ :

ख. विशेष - विशेषता, विशेषण, विशेषज्ञ, विशेषत:

ग. मूर्ति - मूर्त, मूर्तिवत्, मूर्तवान, मूरत

7. निम्नलिखित प्रश्नों के लघुउत्तर लिखिए:

क. दिल्ली में यमुना के किनारे स्वामीनारायण अक्षरधाम मंदिर स्थित है।

ख. इस मंदिर के मुख्य भवन के निर्माण में स्टील का इस्तेमाल बिल्कुल भी नहीं हुआ है।

ग. मंदिर में प्रवेश दो मयूर द्वारों द्वारा होता है।

घ. अक्षरधाम मंदिर शाम को 6 बजे बंद होता है।

ड. नारायण सरोवर में 151 नदियों के पवित्र जल का संगम है।

8. निम्नलिखित प्रश्नों के दीर्घ उत्तर लिखिए :

क. इस विशाल कला के अद्‌भुत नमूने को तैयार होने में पूरे पाँच वर्ष लगे हैं, सात हजार कर्मियों ने दिन-रात काम किया। एक सौ एकड़ भूमि पर बने मंदिर पर लगभग दो सौ करोड़ रूपए खर्च हुए हैं।

ख. इसका निर्माण पूर्ण रूप से 'पिंक सैंड स्टोन' और 'सफेद मारबल' से किया गया है। गुलाबी पत्थर भक्ति का प्रतीक है और सफेद मारबल शांति का।

ग. अक्षरधाम में घूमने के लिए स्कूल के छात्रों, वृद्धों के लिए कुछ रियायत दी जाती हैं। और वहाँ वे प्रदर्शनी, संस्कृति विहार, संगीतमय फव्वारें व चलचित्र देख सकते हैं।

घ. नारायण सरोवर, जिसमें 151 नदियों के पवित्र जल का संगम है। जहाँ भगवान स्वामीनारायण गए थे। यहाँ 108 गोमुख बने हैं, जो देवताओं के 108 नामों की पहचान बने हैं।

ङ. यह सब कुछ देखकर पता लगता है कि भारत का अतीत भी गौरवशाली और भव्य था।

पाठ - 2 : करुणा एवं क्रूरता

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (अ)

2. निम्नलिखित वाक्यांशों को अपने वाक्यों में प्रयुक्त कीजिए :

पलक झपकते - चोर चोरी करके पलक झपकते ही गायब हो गया।

भला चंगा होना - रोहन ने कहा- कैसे हो? रवि ने कहा - भला-चंगा हूँ।

अंकुश लगाना - पिता ने बेटे से कहा- मैं तुम्हारे खर्चो पर अंकुश लगा रहा हूँ।

कोसो दूर - बचपन में दिनेश पढाई से कोसो दूर भागता था।

शरण में जाना - रावण ने विभीषण को महल से भगा दिया, तब विभीषण राम की शरण में गए।

3. निम्नलिखित शब्दों का पद विश्लेषण कीजिए :

4. 'अ' उपसर्ग जोड़कर शब्द बना है 'असंयम' इसी प्रकार 'सु' उपसर्ग जोड़कर पाँच शब्द बनाइए :

सुयश सुकुमार सुयोग्य

सुकर्म सुअवसर

5. नीचे दिये गये वाक्यों में जो शब्द रंगीन हैं, उनके कारकों के नाम लिखिए :

क. कर्ता ख. करण ग. सम्बोधन

घ. ङ. कर्म

6. निम्नलिखित प्रश्नों के उत्तर केवल एक शब्द में लिखिए :

क. प्रधानाचार्य ख. चालीस हजार

ग. प्रधानाचार्य का घ. आयुर्वेद

7. निम्नलिखित प्रश्नों के उत्तर लिखिए :

क. वह कहने लगे-''मेरा बहुत नुकसान हो गया। मैंने एक ट्रक भरकर बंदर चालीस हजार में खरीदे थे। रास्ते में न जाने कैसे बंदरों ने पिंजरे का कुंडा खोल दिया और सभी बन्दर निकल भागे।'' इसलिए कॉलेज के प्रधानाचार्य परेशान दिखाई दे रहे थे।

ख. लेखक का बेटा अमेरिका में वैज्ञानिक है। उसे अनुसंधान के लिए बन्दरों की आवश्यकता थी, लेकिन बन्दर तो भाग गए थे। ये बन्दर लेखक अपने बेटे को भिजवा रहा था। इस कारण लेखक उदास हो गया था।

ग. वैज्ञानिक प्रयोगों के नाम पर बेदर्दी से उनके अंगों को काटा-चीरा जाता है। दवाइयों के परीक्षण कर-कर के स्वस्थ बन्दरों को भी बीमार बना दिया जाता है। निरन्तर कूदने-फाँदने वाले प्राणी लाचार और दयनीय होकर, मूक दर्शक बने अपने पर होते ये अत्याचार देखते रहते हैं। मानवता को ताक पर रख कर, बड़ी बेदर्दी से इनको मौत व यन्त्रणा के गर्त्त में धकेल दिया जाता है। ये अपनी सहायता के लिये न तो फरियाद कर सकते हैं और न ही उन अत्याचारियों को कोई दण्ड दे सकते हैं।

घ. मनुष्यों को लापरवाही व असंयम से जब अनेकों रोग हो जाते हैं, तो अंधाधुंध डॉक्टरों की शरण में जाते हैं। वे चाहते हैं कि चिकित्सक उन्हें पलक झपकते ही भला-चंगा कर दें। चिकित्सक भी बाजार में उपलब्ध ऐसी दवाइयों को झटपट लिख देते हैं जो रोगी को तात्कालिक आराम दे दे।

ड. हमारे देश की प्राचीन आयुर्वेद की चिकित्सा पद्धति इस प्रकार की हिंसा से कोसों दूर है। वह केवल वनस्पति और जड़ी-बूटियों पर आधारित है।

च. मनुष्य को संवेदनशील बनाना ही समस्त साहित्य व धर्म का मूल प्रयोजन है।

पाठ - 3 : वार्त्ता और विवाद

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (ब) ख. (स)

2. कोष्ठकों से चुनकर सही शब्द भरिए :

क. स्वतंत्र ख. उन्नति ग. अनुकम्पा

घ. कुंठित

3. पाठ में आए मुहावरों को अपने वाक्यों में प्रयुक्त कीजिए :

स्वयं कीजिए।

4. निम्नलिखित शब्दों का शुद्ध उच्चारण कीजिए :

5. 'सुस्थिर' में 'सु' उपसर्ग लगा है, इसी प्रकार 'सु' उपसर्ग लगाकर चार शब्द बनाइए :

सु + धार - सुधार सु + योग्य - सुयोग्य

सु + पुत्र - सुपुत्र सु + अवसर - सुअवसर

6. निम्नलिखित वाक्यों में संज्ञा, सर्वनाम और विशेषण छाँटिए :

	संज्ञा,	सर्वनाम	विशेषण
क.	रोहन		होशियार
ख.	पौधे	अपना	हरे
ग.	विद्यालय	वह	रोज
घ.	फूल		सफेद, महक
ड.	अध्यापक	हम	

7. निम्नलिखित प्रश्नों के उत्तर लिखिए :

क. माँ सरस्वती इस बात पर आश्चर्य प्रकट करती है कि मनुष्य चन्द्रलोक

तक घूम चुका है, अनेको अविष्कार कर चुका है, निरन्तर सुख-साधनों में वृद्धि कर रहा है। फिर भी हताश व दु:खी है।

ख. मनुष्य लगातार और-और की याचना करता रहता है और जब जरूरत से ज्यादा मिलने लगता है तो मनमाने दुष्कर्म करता है देवी लक्ष्मी मनुष्य की लालसा की प्रवृत्ति पर खेद व्यक्त करती है।

ग. जो व्यक्ति माया में मोहग्रस्त हो जाते हैं, ऐसे व्यक्ति देवी सरस्वती का मार्गदर्शन पाने से वंचित रहते हैं।

घ. धन में ही सुख है इस भ्रम के टूटने पर व्यक्ति देवी सरस्वती की शरण में आते हैं।

ङ. दोनों देवियाँ अपनी-अपनी महान शक्तियों का बखान करने लगी। इस कारण उनकी वार्ता विवाद का रूप लेने लगी।

च. इस सृष्टि में एक अणु से लेकर अंतरिक्ष तक हर वस्तु, व्यक्ति व पदार्थ दिव्य है। सबका अपना-अपना महत्व व स्थान है।

छ. नारद तुम्हारी विनम्रता सचमुच सराहनीय है। तुमने जो कहा वह मनन करने योग्य है। वास्तव में ऊँचा-नीचा, छोटा-बड़ा हमारे विचारों की व्यर्थ उड़ान है। ईश्वर की समदृष्टि में इस प्रकार का विभाजन है ही नहीं।

पाठ - 4 : चाहता हूँ

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (द) ख. (ब) ग. (अ)

2. नीचे दिए गये शब्दों के विलोम शब्द लिखिए :

जीवन - मरण	छाया - धूप	धरती - आकाश
क्षमा - दंड, सजा	अकिंचन - धनाढ्य	बाँया - दाँया
ऋणी - धनी, उऋणी	बंधन - मुक्ति	

3. निम्नलिखित शब्दों के दो-दो पर्यायवाची लिखिए :

धरती - पृथ्वी, धरा	आकाश - नभ, गगन
सुमन - फूल, कुसुम	हाथ - कर, पाणि

4. निम्नलिखित वाक्यों से विशेषण तथा क्रिया-विशेषण छाँटकर लिखिए:

क.	विशेषण	लंगड़ा	क्रिया-विशेषण	चोर
ख.	विशेषण	तेज	क्रिया-विशेषण	सुपर फास्ट ट्रेन
ग.	विशेषण	नीले	क्रिया-विशेषण	मेरी पतंग
घ.	विशेषण	जल्दी	क्रिया-विशेषण	चिंकी
ड.	विशेषण	काला	क्रिया-विशेषण	कुत्ता

5. निम्नलिखित प्रश्नों के उत्तर लिखिए:

क. कवि देश की धरती को मन, तन और जीवन अर्पित करना चाहता है।

ख. मातृभूमि की धूल को सिर पर लगाने दो अर्थात् धूल का टीका लगाने दो।

ग. इस कविता में कवि के देश-प्रेम का भाव प्रकट हो रहा है।

घ. आशय स्पष्ट कीजिए -

गान..... समर्पित।

आशय : कविता के रचियता अपने शरीर, प्राण, अपने रक्त की आखिरी बूँद तक अपने सपने, अपने जीवन का प्रत्येक क्षण समर्पित करना चाहता है।

तोड़ता हूँ..... क्षमा दो।

हे मेरे आंगन, मेरे घर, मुझे तुम क्षमा कर दो क्योंकि मैं इस मोह के बंधन को तोड़कर देश सेवा के लिए जा रहा हूँ।

''यह सुमन .....समर्पित''

फूल समर्पित, बगिया (बगीचा) समर्पित अपने घर का हर एक तिनका समर्पित करना चाहता हूँ।

6. रामवतार त्यागी

पाठ - 5 : शिष्ट आचरण

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (द)

2. निम्नलिखित प्रश्नों के उत्तर 'हाँ' या 'न' में दीजिए :

क. हाँ ख. ना ग. ना

घ. हाँ

3. कोष्ठकों से चुनकर सही शब्द भरिए :

क. मन ख. बचपन ग. शीलवान

घ. बड़ा

4. निम्नलिखित में उपसर्ग और मूल शब्दों को अलग करके लिखिए :

कुचेष्टा - कु चेष्टा	सावधान - साव धान
तद्नुरूप - तद् अनुरूप	प्रत्येक - प्रति एक
विनम्रता - वि नम्रता	असह्य - अ सह्य
प्रदर्शित - प्र दर्शित	सुसंस्कार - सु संस्कार

5. निम्नलिखित मुहावरों को अपने वाक्यों में प्रयुक्त कीजिये :

फीका पड़ना - एक ही धुलाई में कपड़ों का रंग फीका पड़ गया।

पैर पटकना - चॉकलेट न मिलने पर रोहन पैर पटकने लगा।

शेखी बघारना - जंगल के दूसरे जानवरो के सामने लोमड़ी अपनी शेखी बघारने लगी।

पूजित होना - सभ्य व्यक्ति प्रत्येक जगह पूजित होते हैं।

6. निम्नलिखित शब्दों के उच्चारण का अभ्यास कीजिए : स्वंय कीजिए।

7. दी गई क्रियाओं से धातु (क्रिया-शब्द) बनाइए :

पाना - लभ्	सोना - शी	लाना - नी
बाँधना - बन्ध्,	देखना - दृश	लिखना - लिख्

8. निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :

क. शिष्टाचार से तात्पर्य ऐसा व्यवहार, वाणी एवं उठने-बैठने व चलने की क्रियाओं से है जो शालीन हों। जो सबको अच्छी लगे और जिनसे किसी

को कोई कष्ट न हो। विनम्रतापूर्वक बात करना, सच बोलना, संयमित बोलना, स्वच्छ वेशभूषा एवं ईमानदारी और प्रामाणिकता शिष्टाचार के मूल आधार है।

ख. प्रत्येक मनुष्य की यह हार्दिक अभिलाषा होती है कि लोग उसका आदर करें, उससे प्रेम करें। इसके लिये उसे शिष्ट आचरण की साधना अनिवार्य रूप से करनी होगी।

ग. अपने से बड़ों का अभिवादन न करना, चिल्ला-चिल्ला कर बातें करना, खाँवते समय मुँह पर हाथ न रखना, मुँह से निकलती दुर्गन्ध, पैर पटक-पटक कर चलना, शेखी बघारना, स्वयं सबसे पहले खा लेना, झूठ बोलना, बात-बात पर शपथ खाना आदि अशिष्ट आचरण के उदाहरण हैं।

घ. शिष्टाचार के विकास में एक-दूसरे के प्रति सद्भावना, सहानुभूति व सहयोग दिखाने वाले शिष्टाचारी व्यक्ति सहयोगी सिद्ध होते हैं।

ङ. कभी-कभी हमारा सामना अशिष्ट व्यक्तियों से भी हो जाता है। ऐसे समय में हम विषम संकट में पड़ जाते हैं। ऐसी स्थिति में बड़ी सूझ-बूझ से काम लेना चाहिए। प्रथम तो ऐसे व्यक्तियों से संपर्क ही नहीं रखना चाहिए किन्तु यदि कभी आकस्मिक रूप से उनसे वास्ता पड़ ही जाये तो भी उचित भाषा में, किन्तु कड़े शब्दों में उन्हें सावधान करें और स्पष्ट तौर पर उनके प्रति अपना आक्रोश प्रदर्शित करें।

पाठ - 6 : पंच देव

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (स)

2. ई, य, ता, आदि जोड़कर भाववाचक संज्ञा बनाइए :

शुद्ध - शुद्धता	अंधविश्वास - अंधविश्वासी
महान् - महानता	उपयोग - उपयोगी
नीरस - नीरसता	प्रचण्ड - प्रचण्डता

3. उदाहरण के अनुसार समस्त पदों का विग्रह कीजिए :

कीटाणुरहित - किटाणु से रहित,	काट-कूट - काट और कूट
खोद-खाद - खोद और खाद	उपकारकर्ता - उपकार करने वाला

4. खाली स्थानों में सही सर्वनाम भरिए :

क.	वे	ख.	कौन	ग.	मैं
घ.	तुम	ङ.	यह	च.	उन्होंने
छ.	हमको				

5. विशेषण की परिभाषा दीजिए तथा नीचे लिखे विशेषण शब्दों के साथ विशेष्य शब्दों को लिखिए :

लाल टमाटर	मीठा शहद	मोटा तरबूज
जहरीला साँप	लम्बा रास्ता	कड़वी दवाई
पतला आदमी	चार मीटर कपड़ा	

6. **निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :**

क. नरेश के जन्म दिवस पर माँ ढेरों पकवान बनाती है।

ख. माँ ने नरेश से पूछा:''नरेश तुमने अपने सभी मित्रों को कल शाम के लिए आमंत्रित कर दिया न।''

ग. नरेश का एक मित्र अनाथालय में रहता था।

घ. नरेश के मित्र ने कहा कि वह कॉपी लाना भूल गया है, कभी कहता कि कॉपी खो गई।

7. **निम्नलिखित प्रश्नों के उत्तर विस्तार से लिखिए :**

क. सूर्य को प्रातः अनेक भारतीय लोग जल चढ़ा कर नमस्कार करते हैं। यह उनका अद्‌भुत श्रद्‌धा भाव अकारण नहीं है। वे जानते हैं कि जो भी हम पर उपकार करता है, हमें उसका आभार और धन्यवाद करना ही चाहिए।

ख. सूर्यदेव प्रतिदिन नियमपूर्वक प्रातः आकर पूरे संसार को अपने अनमोल प्रकाश से आलोकित करते हैं। लाखों, करोड़ों बल्ब जला कर भी ऐसा प्रकाश कर पाना असंभव है। सूर्य देव हमें यह प्रकाश बिना किसी मूल्य के प्रदान करते हैं। इसके अतिरिक्त उनके प्रकाश से सीलन भरे स्थानों की दुर्गन्ध मिटती है। पृथ्वी का कोना-कोना कीटाणुरहित हो जाता है। वनस्पतियों, पशुओं व मनुष्यों में नये प्राणों का संचार होता है।

ग. हम चन्द्रमा को भी चन्द्र देव नाम से संबोधित करते हैं। रात की ठंडक शीतलता की मधुर अनुभूति चन्द्रमा द्‌वारा ही होती है। इसका ठंडा मधुर प्रकाश वनस्पतियों में रस का संचार करता है। सुन्दरता का तो मानों यह भंडार ही है। सभी सुन्दर चेहरों की उपमा चाँद से दी जाती है। रात को चन्द्र देव द्‌वारा छिटकायी चाँदनी के मद्‌धिम प्रकाश में आवश्यक वस्तु तो दिखायी दे ही जाती है। काली रात को श्रृंगार करने वाले इस अनुपम देव की भी अनेक अवसरों पर पूजा की जाती है।

घ. आज के वैज्ञानिक इसे एक नीरस चट्‌टानों का क्षेत्र या वीरान भूखंड सिद्‌ध करते हैं।

ड. 'पवन' अर्थात् 'वायु' को भी हमने देव की उपाधि से विभूषित किया है। वायु ही प्राणदायक है, इसका प्रवाह ही हमें जीवन देता है, बिना रुके प्रतिक्षण बहते रहना ही इस देव की कर्मसाधना है। वातावरण की गन्ध को अपने साथ बहा लेने जाने का गुण भी पवन देव की अपनी विशिष्टता है।

च. जल देव के उपकारों की भी कोई सीमा नहीं है। हमारे रक्त में रवानी और प्रवाह जल के ही कारण हैं। समस्त मलिनताओं से छुड़ा कर हमें स्वच्छ व निर्दोष बना देने का गुण जलदेव में अद्‌वितीय है। जीवन की हर गतिविधि में उनका अद्‌भुत योगदान है। वास्तव में तो जल ही जीवन है।

छ. पृथ्वी को भी दैवीय सम्मान दिया जाता है। इस धरती पर चलते-फिरते, इस पर उगे धान्य व अनाज का उपयोग करते, अनायास ही मन इसके उपकारों के सम्मुख झुक जाता है। इसकी सहनशीलता की कोई सीमा नहीं है। इसे खोदो, कूटो या कैसा भी निष्ठुर व्यवहार करो यह चुपचाप सह लेती है।

ज. यह हमारा अंधविश्वास नहीं वरन् शुद्ध श्रद्धाभाव है। हमारी महान् संस्कृति की इन्हीं विशिष्टताओं के कारण हम आज भी इस पर गर्व कर सकते हैं।

पाठ - 7 : मुक्ति गीत

1. सही विकल्प पर सही (✓) का चिह्न लगाओ :

क. (स) ख. (अ)

भाषा-बोधन:

2. इन मुहावरों को अपने वाक्यों में प्रयुक्त करें :

तख्ता पलटना: जनता ने तानाशाही के अत्याचारों से दुखी होकर तानाशाही सरकार का तख्ता पलट दिया।

जड़ से मिटाना : यू०पी० सरकार कोरोना महामारी को जड़ से मिटाने की कोशिश कर रही है।

विद्वेष की ज्वाला : कवि भगवान् से प्रार्थना करता है कि विद्वेष की ज्वाला को शांत कर दो।

भग्न हृदय : जिसका मन दु:खी होता हे वह भग्न हृदय वाला मनुष्य कहलाता है।

3. इन शब्दों के विलोम लिखिए :

दया - निर्दयी क्षमा - दंड, सजा प्रेम - घृणा

शत्रु - मित्र उजाला - अंधेरा नूतन - पुरातन

4. दिये गये शब्दों के स्त्रीलिंग लिखिए :

विद्वान - विदुषी शिक्षक - शिक्षिका कवि - कवयित्री

गायक - गायिका

5. संज्ञा किसे कहते हैं? संज्ञा के भेद लिखिए।

किसी प्राणी, वस्तु, स्थान या भाव के नाम को संज्ञा कहते हैं।

संज्ञा के तीन भेद होते हैं।

1. व्यक्तिवाचक संज्ञा
2. भाववाचक संज्ञा
3. जातिवाचक संज्ञा

6. निम्नलिखित काव्यांश को पढ़कर पूछे गये प्रश्नों के उत्तर लिखिए :

क. मुक्ति दूत ख. ग. दिशाओं के लिए

घ. मानवता

7. निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :

क. कवि इस संसार को और अधिक सुंदर व श्रेष्ठ बनाना चाहता है।

ख. कवि टूटे हृदय वाले व्यक्तियों का सहारा बनाना चाहता है।

ग. कवि के अनुसार मुक्ति के गीतों से पर्वत-घाटी गूँजे।

घ. कवि मनुजता से शत्रु का नाश करना चाहता है।

8. निम्नलिखित प्रश्नों के दीर्घ उत्तर लिखिए:

क. अत्याचारी का तख्ता पलट कर दिखा दें,

मनुजता के शत्रु को जड़ से मिटा दें।
मुक्त ह्रास से खनक उठे दिशाएँ
सत्य की राह कभी न रोके बाधाएँ

ख. कवि ईश्वर से प्रार्थना करता है कि वह इस संसार को और अधिक सुंदर व श्रेष्ठ बनाने में हमारी सहायता करें।