# Chapter - 5

# **Information Processing**

## Ex 5.1

#### Question 1.

Convert the following numerical expressions into Tree diagrams

(i)  $8 + (6 \times 2)$ (ii)  $9 - (2 \times 3)$ (iii)  $(3 \times 5) - (4 - 2)$ (iv)  $[(2 \times 4) + 2] \times (8 - 2)]$ (v)  $[(6 + 4) \times 7] - [2 \times (10 - 5)]$ (vi)  $[(4 \times 3) - 2] + [8 \times (5 - 3)]$ 

Solution:



**Question 2.** Convert the following tree diagrams into numerical expressions.



#### Solution:

- (i) The numerical Expression is  $9 \times 8$
- (ii) The numerical expression is (7 + 6) 5
- (iii) The numerical expression is (8 + 2) (6 + 1)
- (iv) The numerical expression is  $(5 \times 6) (10 \div 2)$

## Question 3.

Convert the following algebraic expressions into tree diagrams.

(i) 10 v (ii) 3a - b(iii) 5x + y(iv)  $20t \times p$ (v) 2(a + b)(vi)  $(x \times y) - (y \times z)$ (vii) 4x + 5y(viii)  $(Im - n) \div (pq + r)$ 

Solution:



**Question 4.** Convert Tree diagrams into Algebraic expressions.



#### Solution:

(i) Algebraic Expression is p + q

- (ii) Algebraic Expression is l m
- (iii) Algebraic Expression is  $(a \times b) c (or) (ab) c$
- (iv) Algebraic Expression is (a + b) (c + d)
- (v) Algebraic Expression is  $(8 \div a) + [(6 \div 4) + 3]$

# Ex 5.2

#### **Miscellaneous Practice Problems**

Question 1.

Write the missing numbers in the trees.



Solution:





### Question 2.

Write the missing operations in the trees.



Solution:



### Question 3.

Check whether the Tree diagrams are equal or not.



**Solution:**  $c \div (a \div b), a \div (b \div c)$  Not equal

# **Challenge Problems**

## Question 4.

Convert ti e following questions into tree diagrams:

(i) The number of people who visited a library in the last 5 months were 1210, 2100, 2550, 3160 and 3310. Draw the tree diagram of the total number of people who had used the library for the 5 months.

(ii) Ram had a bank deposit of Rs. 7,55,250 and he had withdrawn Rs. 5,34,500 for educational purpose. Find the amount left in his account. Draw a tree diagram for this.

(iii) In a cycle factory, 1,600 bicycles were manufactured on a day. Draw tree

diagram to find the number of bicycle produced in 20 days.

(iv) A company with 30 employees decided to distribute Rs. 90, 000 as a special bonus equally among its employees. Draw tree diagram to show how much will each receive?

Solution:



#### Question 5.

Write the numerical expression which gives the answer 10 and also convert into tree diagram.

Solution:



#### Question 6.

Use brackets in appropriate place to the expression 3 x 8 – 5 which gives 19 and convert it into tree diagram for it.

Solution:



$$= 5 \times 8 - 5$$
  
= (3 × 8) - 5 = 24 - 5  
= 19

# Question 7.

A football team gains 3 and 4 points for successive 2 days and loses 5 points on the

third day. Find the total points scored by the team and also represent this in tree diagram.

Solution:

