

## SECTION-II

### Q-NO 6 (a)

SOLUTION:

Given that

Arithmetic mean of 9, 8, 10, k, 12  
is 15

Find = k

Arithmetic mean =  $\frac{\text{Sum of numbers}}{\text{Total numbers}}$

$$\Rightarrow 15 = \frac{9+8+10+k+12}{5}$$

$$\Rightarrow 15 \times 5 = k + 39$$

$$\Rightarrow 75 = k + 39$$

$$\Rightarrow k = 75 - 39$$

$$\boxed{k = 36}$$

Value of k is 36

(b)

SOLUTION:

Given  
ratio of sugar solution  
and colored water in a  
mixture is 4:3

$$\Rightarrow S : C = 4 : 3$$

If 10 liters colored water  
is added, the ratio becomes 4:5

$$\Rightarrow S : C = 4 : 5$$

Find = Initial quantity of Sugar  
solution in mixture.

STEP-1:

Consider solution ~~is~~ = 100 liters

STEP-2:

Sum of ratio before 10 liter  
colored water  $\therefore = 4 + 3$   
 $= 7$

STEP-3:

$$\text{Sugar} = \frac{4}{7} \times \text{initial mixture}$$

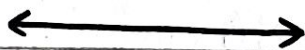
$$\text{Sugar} = \frac{4}{7} \times 100$$

$$= \frac{400}{7}$$

$$= 57.1 \text{ liter}$$

$\Rightarrow$  Sugar solution = 57.1 liter

Initial quantity of sugar solution is 57.1 liter.



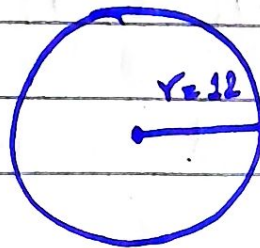
(C)

SOLUTION:

Given data

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

Volume of Football = ?



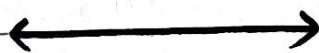
$$\text{Volume} = \frac{4}{3} \pi r^3 \longrightarrow (A)$$

Substituting values in Eq (A)

$$\begin{aligned} \Rightarrow \text{Volume} &= \frac{4}{3} \times \pi \times (12)^3 \\ &= \frac{4}{3} \times \pi \times (1728) \\ &= \left(\frac{4}{3}\right) \times \left(\frac{22}{7}\right) \times (1728) \\ &= 2304 \times 3.14 \end{aligned}$$

$$\text{Volume} = 7234.56 \text{ cm}^3$$

Thus, volume of given football is  $7234.56 \text{ cm}^3$ .



(d)

SOLUTION:

Given data

-10, -8, 6, 40, 102, ?

Find = question mark term

-10, -8, 6, 40, 102, ?

difference  $\rightarrow$   $\leftarrow$   $\leftarrow$   $\leftarrow$   $\leftarrow$

2                      14                      34                      62

difference  $\rightarrow$   $\leftarrow$   $\leftarrow$   $\leftarrow$

12                      20                      28

$\downarrow$

$\downarrow$

$$12 + 8 = 20$$

$$20 + 8 = 28$$

Therefore,

a pattern of term 8  
i.e. on adding 8, we get  
next number.

$$\text{Thus, } 28 + 8 = 36$$

Missing Term = 200

Given series become

-10, -8, 6, 40, 102, 200



# Q-NO 7 (a)

SOLUTION:

Given data

$$20\% \times x = y$$

Find  $y\% \times 20$  in terms of  $x$

So,

$$20\% \times x = y$$

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

$$\frac{2}{10} \times x = y$$

$$\frac{1}{5} \times x = y$$

$$\Rightarrow \frac{x}{5} = y \quad \text{--- (1)}$$

Now,

$$y\% \times 20 = \frac{y}{100} \times 20$$

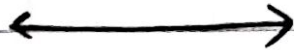
$$= y \times \frac{20}{100}$$

using value of  $y$  from  
equation (1)

$$\begin{aligned}\Rightarrow y\% \times 20 &= \frac{x}{5} \times \frac{20}{100} \\ &= x \times \frac{1}{25} \\ &= x \times (0.04)\end{aligned}$$

$$\boxed{y\% \times 20 = 0.04x}$$

Which is required



(b)

SOLUTION:

Given Data

Average salary of P and Q = Rs. 5050

Average salary of Q and R = Rs. 6250

Average salary of P and R = Rs. 5200

Find = Salary of P

Average salary of P & Q

$$\frac{P+Q}{2} = 5050$$

$$\Rightarrow P+Q = 10100 \text{ --- (1)}$$

Average salary of Q & R

$$\frac{Q+R}{2} = 6250$$

$$\Rightarrow Q+R = 12500 \text{ --- (2)}$$

Average salary of R & P

$$\frac{P+R}{2} = 5200$$

$$\Rightarrow P+R = 10400 \text{ --- (3)}$$

Now,

Solving Eq (2) & Eq (3)

$$+Q+R = +12500$$

$$+P+R = +10400$$

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$$Q-P = 2100$$



$$\Rightarrow Q - P = 2100 \text{ --- (4)}$$

Solving Eq (4) & Eq (3)

$$+P + Q = +10100$$

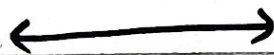
$$-P + Q = +2100$$

$$\begin{array}{r} + \quad - \\ \hline 2P = 8000 \end{array}$$

$$\Rightarrow 2P = 8000$$

$$\Rightarrow \boxed{P = 4000}$$

Therefore, monthly income of P is 4000 rupees.



(C)

SOLUTION:

Given data

Tossed Total coins = 500 times

Total Number Coins = 2

No. of Two-heads = 105 times

one-head = 275 times

No head = 120 times

Probability = ?

$$\text{Probability (two heads)} = \frac{105}{500}$$

$$\text{Prob (two heads)} = \frac{21}{100}$$

$$\text{Probability (one head)} = \frac{275}{500}$$

$$\text{Prob (one head)} = \frac{55}{100}$$

$$\text{Probability (no head)} = \frac{120}{500}$$

$$\text{Prob (no head)} = \frac{24}{100}$$

This completes the solution.



(d)

SOLUTION:

let age of Jamie =  $x$

then age of Jamie's dad =  $4x$

After 14 years

$$4x + 14 = 2(x + 14) \rightarrow (1)$$

↳ given condition

Solving Eq (1)

$$4x + 14 = 2x + 28$$

$$\Rightarrow 2x = 14$$

$$\Rightarrow x = 7$$

Age of Jamie = 7 years

$$\text{Jamie's Dad age} = 4x = 4 \times 7 = 28$$

Age of Jamie's dad = 28 years



# SECTION - I

## Q-NO 2 (a)

### WHAT IS DENGUE?

Dengue is a viral disease which is spread through the bite of mosquito.

### → CAUSES OF DENGUE

When a mosquito bites an infected person, parasite enter body of mosquito. As a result, mosquito becomes infected. When that mosquito bites a person then parasite transfer into the body of that person's bloodstream where it multiply.

### → SYMPTOMS OF DENGUE

An infected person

has mild symptoms or no symptoms, and recovers within 2-7 days. However, when symptoms appear it takes 3-9 days for recovery. Symptoms are:

- Fever,
- Fatigue, Tiredness,
- Pain behind eyes,
- Malaise,
- Nausea, Vomiting,
- Diarrhea, etc

## → TREATMENT OF DENGUE

There is no treatment of dengue, only body pain are reduced by giving medicine. **Paracetamol** is taken by the patient.

## → PERSON WHO IS INFECTED

- An infected person
- use mosquito net,

- Drink plenty of liquids
- a proper diet which is recommended by Dr.

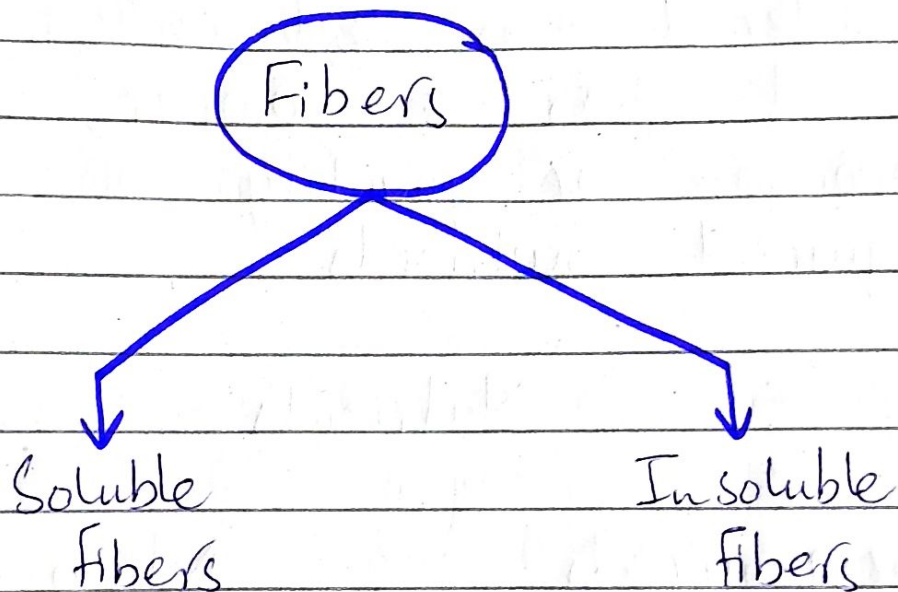
## → PREVENTION

- Use mosquito nets, tents, etc.
- Apply mosquito repellents.
- Wear Full sleeves to cover arms and body.

# Q-NO 4 (b)

## FIBERS

Fiber is a carbohydrates which are present in the plants such as fruits, grains and leafy vegetables.



### (a) SOLUBLE FIBER

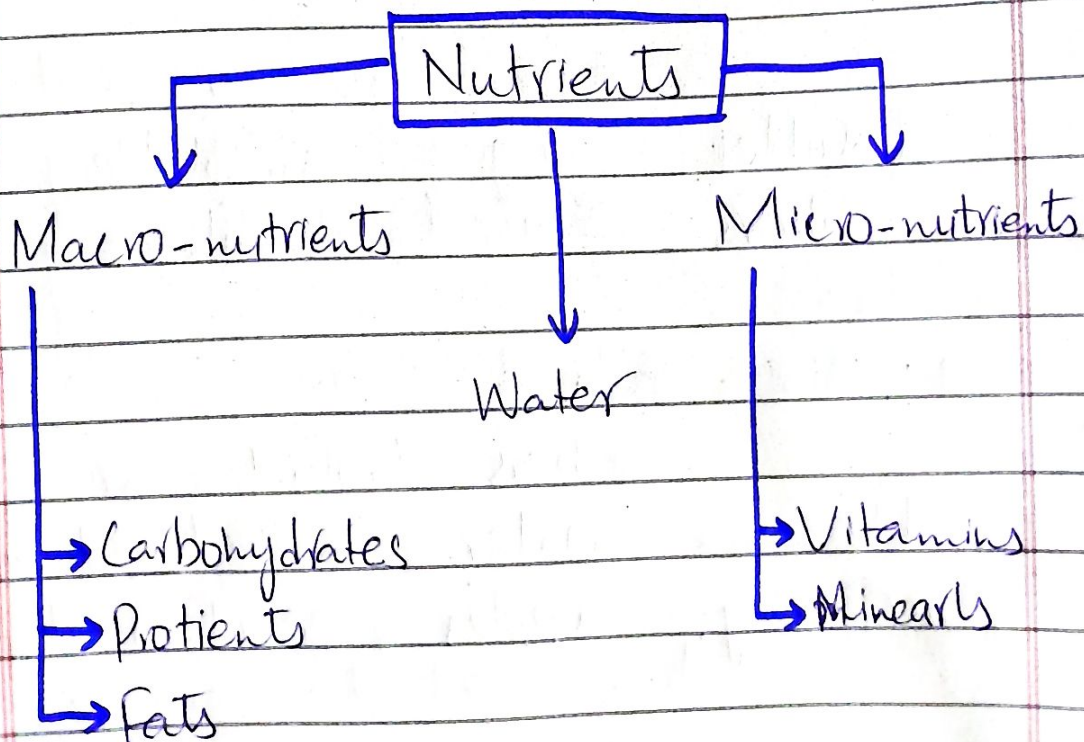
Fibers which are soluble in water called soluble fiber, e.g; apples, peaches etc

## (b) INSOLUBLE FIBER

Fibers which are not soluble in water known as insoluble fiber, e.g; corn, wheat, etc.

### → HOW A PLATTER OF FOOD CONSIDERED BALANCED?

A platter of food is considered as balanced food if it has a proper proportion or quantity of required nutrients.





## → EXPERTS RECOMMEND

Experts recommended that an adult person should take balanced diet where 25-30 gram of fiber in it.

## → SOURCES OF FIBER

- Corn,
- Wheat,
- Peaches,
- Apples,
- Barley,
- leafy green, etc

## → DEFFICENCY OF FIBER

- It may leads to the diarrhea.

## → EXCESSIVE INTAKE OF FIBER

- Constipation, and
- Rearly Intestine blockage.

