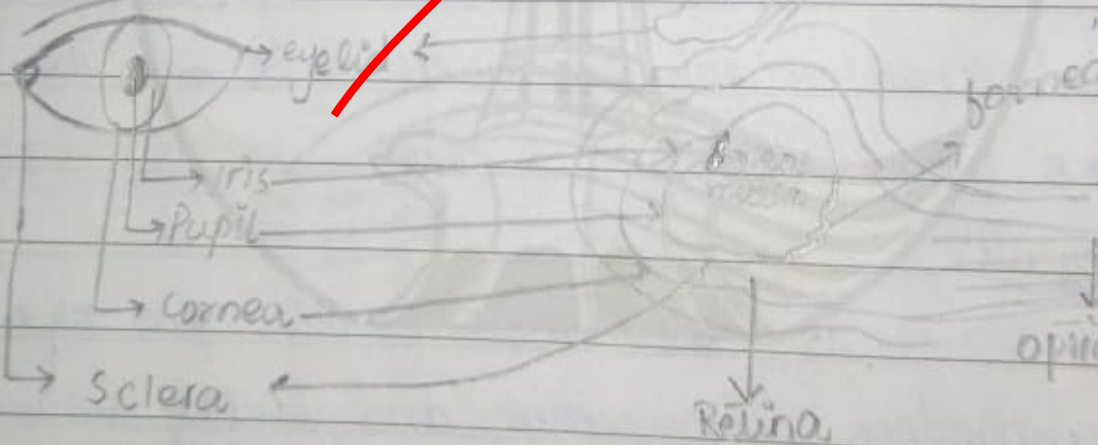
Disorders

- Near-sightedness → Myopia → cured by concave lens
- far-sightedness → used by convex lens
- Cataract → opaque lens → gives blurry vision
- colour blindness → inherited → can't see green, red or blue colour.

Arrange pages in order
Write complete logic and steps in math portion
Increase length of theory portion

Diagram :-



Back of eye

lens | vitreous body | Retina | Macula | optic Nerve

lens :-

Part of eye immediately after iris that controlled by the ciliary muscles.

vitreous body :-

It is gel like transparent substance that support the sphere of eye ball. It shows intravascular metabolism.

Retina :-

It is the inner most layer of eye. It have photo receptors which react on the presence and intensity of light.

Macula :-

It is the most sensitive part of eye. It is responsible for central and reading vision

optic nerve :-

It contain nerve fibre which takes information from retina and transfer to brain

Rods → It helps in perceiving colour and details

Cons → Helps in Night vision, Peripheral or side vision

The dark hole is altered in shape by iris affected by the amount of light that let into eye.

If light is:

1- Low or dark outside → Large

2- High or day outside → Tiny

Sclera:-

white part of eye. which is visible when we see in mirror.

The part of eye which sewes as protective outer layer.

It is made up of Elastic and collagen

Eye lid:

It helps hold eye in its place.

It is the first protective layer of eye.

Conjuctiva:-

Inner layer of eye lid

It covers the Sclera and provide mucus, tears for eye lubrication and bacterial infection prevention

It does not cover cornea.

Back of the eye:-

If we divide parts of eye on the basis of location we also get five parts which are not visible but sewes important function

Part C:

Explain the structure of Eye.

ANSWER:

Human Eye:-

1 inch (2.5 cm) in diameter.

Parts of Eye

Iris	Cornea	Pupil	Sclera	Conjunctiva
The Pig-mented Part	A clear done over Iris	Black circular opening in Iris	The white Part.	Invisible clear layer of tissue

Iris:-

It is coloured Part of eye. It is important because it control size of pupil.

Cornea:-

Clear covering over Iris and pupil (66% optic power)

This is the reason that contacts are dome shaped because they sit over Iris.

Pupil:-

Pupil is the dark circle inside the center of the eye.

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PART D:-

USES of:-

ANSWER:-

Microwave:-

- cooking
  - used for cooking and reheating food quickly
- Heating
  - Various substance in industrial process
- communication
  - As in microwave oven, satellite communication

Ultraviolent (UV)

- Sterilization
  - used for sterilization surface, air, water
- Tanning
  - beds to stimulate the production of melanin
- Flourescence
  - flourescent substance imaging of

X-Rays:-

- Medical Imaging
- Security screening
- Industrial film inspe-

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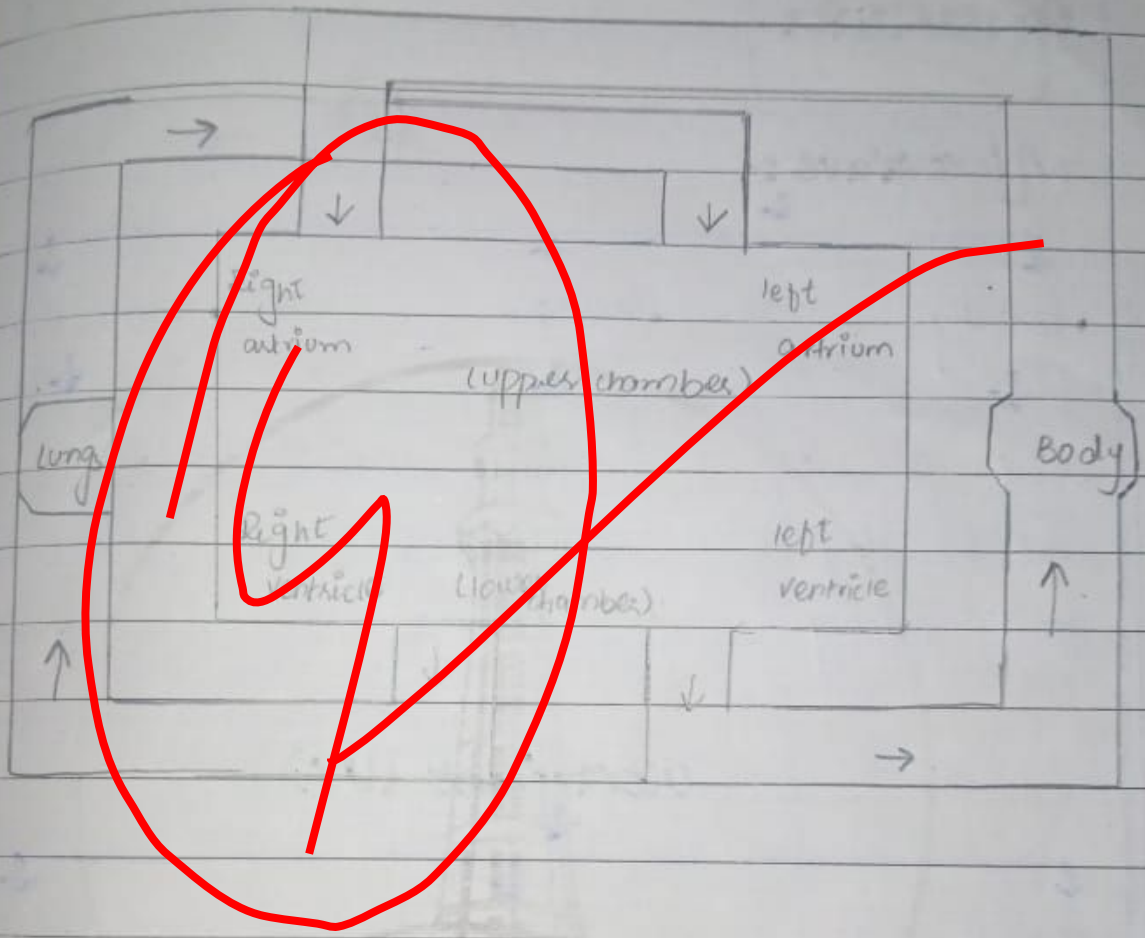
Normal blood circulation :-



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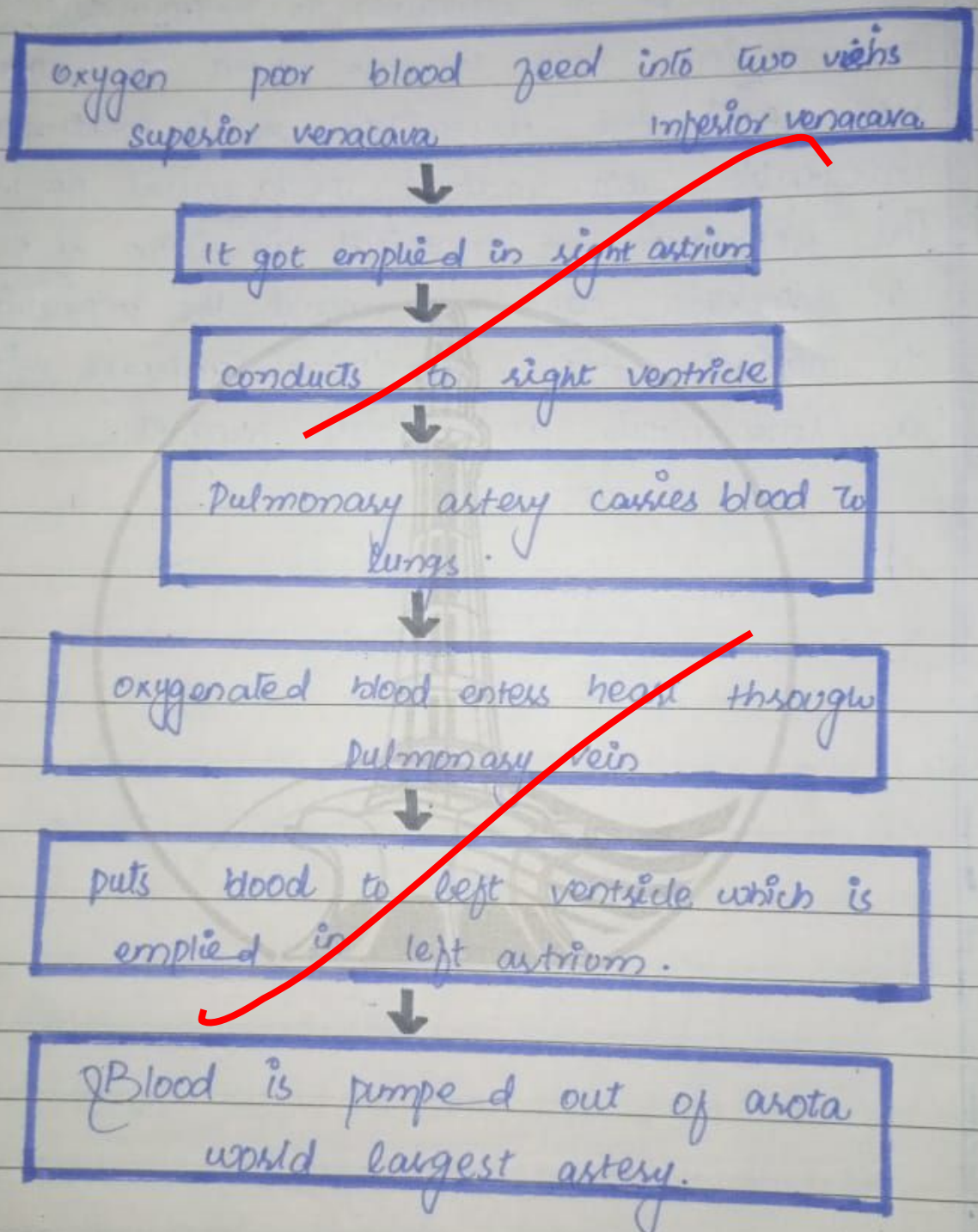
Flow Chart of steps:-



Human heart follows the pattern and converts the

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PART b:-

HUMAN HEART

ANSWER:-

Introduction

- Human heart is a fist size, muscular organ
- It pumps upto 2000 gallons (7600 liter) of blood
- It beats about 100,000 times.

Parts of heart:-

- 1st upper chamber
- 2nd upper chamber
- left artia
- right artia

or

- Receving chambers sometime also called Auricles
- They collect blood.

How does blood circulate in body:-

The blood returning from a trip around the body gives up its most of oxygen and collected carbon-di-oxide.

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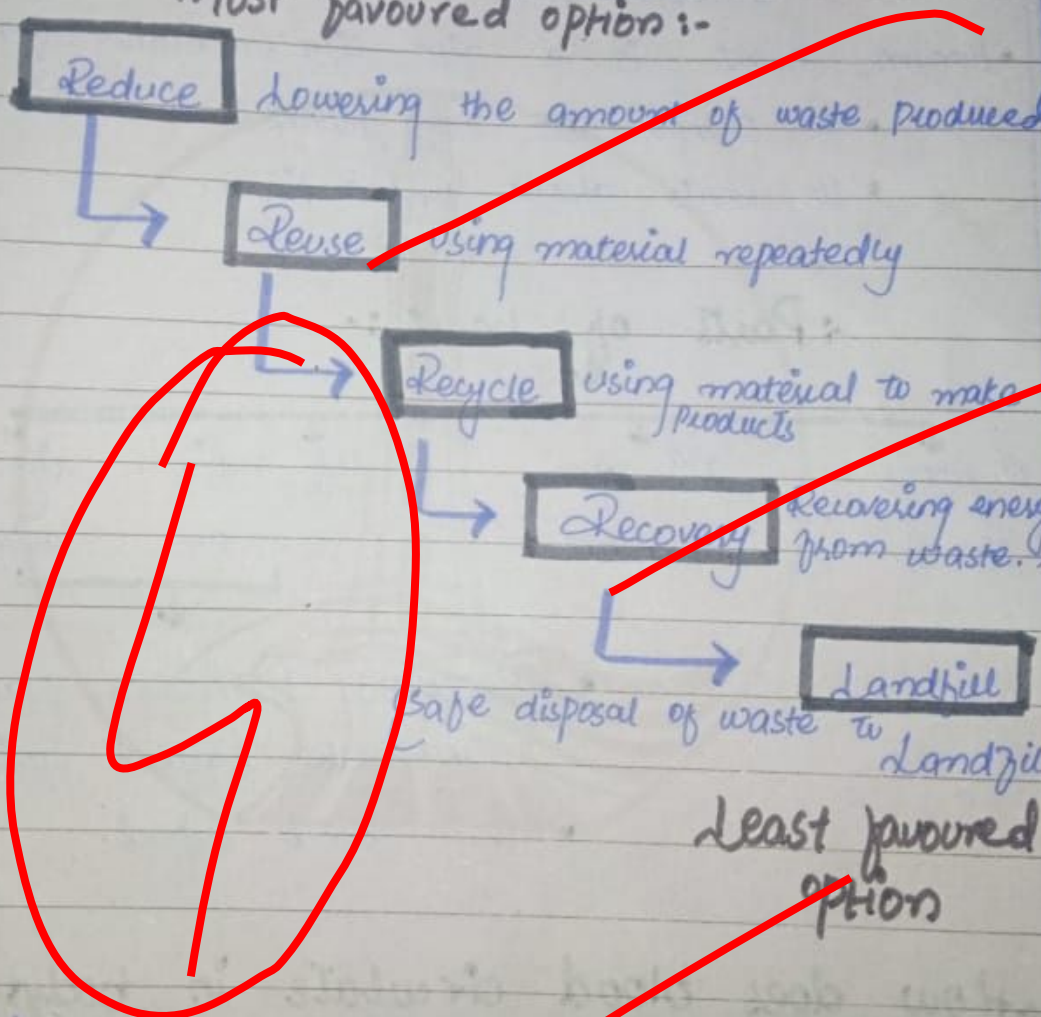
Waste disposal:-

Waste disposal is final stage of solid waste managment.

It can be defined as the discharge, deposit, injection, dumping or placing waste into or on land and water.

Most favoured option:-

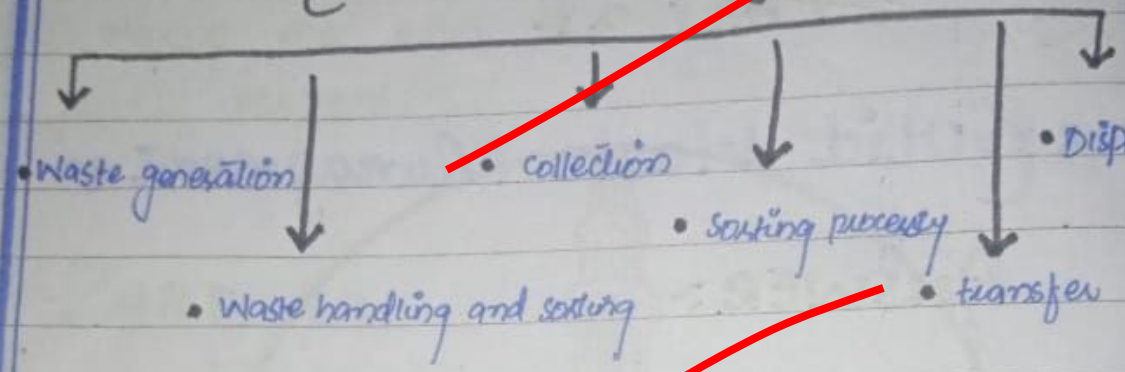


Least favoured option

Solid waste managment involve a series of processes and by which ~~data~~ waste got disposed off & is made ready to reuse.

The activities associated with the management of municipal solid waste can be grouped into

- Solid Waste Managment:-



Waste generation:-

It encompass of activities in which material is no longer considered important and thrown away.

Waste handling:-

It consist of process of collecting wastes seperating the type of waste.

Transfer and transport:-

It involves two steps

1- Transfer waste from secondary collection point to larger equipment or transfer point.

2- Subsequent transfer of waste usually long distance.

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SECTION - 1

QUESTION 4

PART a

Solid Waste Managment

ANSWER:-

Introduction :-

Solid waste is any refuse or waste material including semi solid sludge, produced from domestic, commercial or industrial premises or processes including mining and agricultural operations and water treatment plants.

Solid waste managment

It refers to systematic managment of the generation, collection, transfer, treatment recycling, recovery and disposal of solid waste. Solid waste managment involves a series of steps which can be considered if transfering waste into usefull or reusable material

$z = \frac{315}{15}$

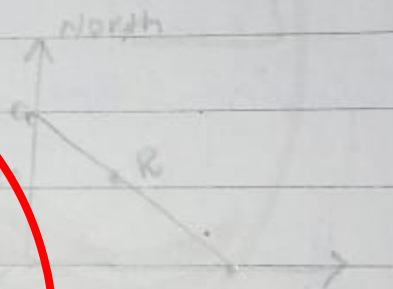
$z = 21$

Hence the ages of boys are 9, 15, 21 respectively.

PART A :-

Distance between Q and R

ANSWER :-



The difference between

$QR = \frac{QP}{2}$

$QP = \sqrt{(QO)^2 + (OP)^2}$

$= \sqrt{(400)^2 + (300)^2}$

$QP = 500 \text{ km}$

$QR = \frac{500}{2} = 250 \text{ km}.$

Difference between $QR = 250 \text{ km}$

of ages

The sum of numbers is 45

Solving for x

$$x = \frac{3}{3+5+7} \times (x+y+z)$$

$$x = \frac{3}{3+5+7} \times 45$$

$$x = \frac{3}{15} \times 45$$

$$x = \frac{135}{15}$$

$$\boxed{x = 9}$$

Solving for y

$$y = \frac{5}{3+5+7} \times 45$$

$$= \frac{5}{15} \times 45$$

$$= \frac{225}{15}$$

$$\boxed{y = 15}$$

Solving for z

$$z = \frac{7}{3+5+7} \times 45$$

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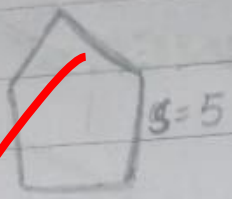
PART b:-

Perimeter of Pentagon:-

ANSWER:-



perimeter = 5 × s

= 5 × 5

= 25

Perimeter of Pentagon is 5.

PART D:-

ANSWER:-

let their ages be x, y, z

Their average = 15

$\frac{x+y+z}{3} = 15$

Solving equation we get

x+y+z = 45

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QUESTION NO 7:

PART C:

Determine IQ

ANSWER:

Formula for determination of IQ = $\frac{\text{Mental age}}{\text{Chronical age}} \times 100$

In given question:-

$= \frac{11}{9} \times 100$

$= 1.222 \times 100$

IQ = 122.22

3

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PART D

AGES of SARA, Ali & Mother.

ANSWER:-

let Sara age = x

Mother age = 6x

Ali's age = 2x

In three year :-

Sara = x+3

Mother = 6x+3

Ali = 2x+3 As given

x+3 + 6x+3 + 2x+3 = 72

9x + 9 = 72

9x = 72 - 9

9x = 63

x = 63/9

x = 7. → age of Sara

Mother's age = 7x6 → 42

Ali's age = 2x7 → 14

Sara's age = 7

Mother's age = 42

Ali's age = 14

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PART a

Sum of 3 consective odd number 273

ANSWER:

let numbers be x, $x+2$, $x+4$.

$x + x+2 + x+4 = 273$

$3x + 6 = 273$

$3x = 273 - 6$

$3x = 267$

$x = \frac{267}{3}$

$x = 89 \rightarrow (i)$

$x+2 = 89+2 \Rightarrow 91 \rightarrow (ii)$

$x+4 = 89+4 \Rightarrow 93. \rightarrow (iii)$

So the three consecutive odd number are

89, 91, 93.

iv) 0, 2, 6, 12, 20, 30 — .

if we observe the series it is evident that number are increasing by adding even number to series.

0+2 = 2

2+4 = 6

6+8 = 12

12+8 = 20

20+10 = 30

30+12 = 42

so missing number in the series is 42.

v) 48, 24, 72, 35, 108 — .

If we look at the series numbers are given we divide first term by 2 and multiply next by 3 we get next term.

48 ÷ 2 = 24

24 × 3 = 72

72 ÷ 2 = 36

36 × 3 = 108

108 ÷ 2 = 54

Missing number in series is 54

*I was unable to solve 9's with 35 I solved it considering it a technical error if solution is wrong Please provide right one Thank you.

(ii) 30, 29, 29, 2 — , 20, 15

if we observe the pattern number are decreasing by subtracting 1, 2, 3, 4, 5 from each number respectively.

30 - 1 = 29

29 - 2 = 27

27 - 3 = 24

24 - 4 = 20

20 - 5 = 15

so the missing number is 24

(iii) 1, 7, 15, 25 — 51.

By observing the number we know that number are increasing by multiples of two as

1 + 6 = 7

7 + 8 = 15

15 + 10 = 25

25 + 12 = 37

37 + 14 = 51

so the missing number is 51

4- ONLNDO :-

LONDON

5- HIODALY:-

HoliDay.

PART b:-

Complete the given series:-

ANSWER:-

i) 4, 16, 36, 64 ___ 144.

if we observe the series it is observed that:-

4 is complete square of 2 number are increasing by square of next even number

$2^2 = 4$

$4^2 = 16$

$6^2 = 36$

$8^2 = 64$

$10^2 = 100$

$12^2 = 144$

So the missing numbere here is $\boxed{100}$.

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General Science And Ability

SECTION - II

:- QUESTION 8 :-

:- PART C :-

:- UNSCRAMBLE words :-

ANSWER:-

1- THRSI :-

- SHIRT.

2- GNDREA :-

- GARDEN

3- SCHAMOT :-

- MACHOS