(SECTION – B)

Q. 6. (a) Find the area of a rectangular field whose length is 20 m and the length of its diagonal is 25m. (5)

(b) A Crow travels 5 km due South, 3 km due West, 4 km due North and 2 km toward South-East. How far is crow from its starting position? (5)

(c) Three persons, Zain, Ali and Umar started a bussiness with Rs. 150,000, Rs. 190,000 and Rs. 120,000 respectivily. Zain manages the bussiness and receives allowance of Rs. 160,000 for this management. After 5 months Ali withdraws Rs. 90,000 and bussiness is closed after 9 months. What did each receive in the profit of Rs. 580,000. (5)

(d) Mst. Razia Begum died leaving behind her property of Rs. 802,500 which was to be distributed among her husband, her mother and two daughters. The husband got 1/4 , mother got 1/6 and remaining for 2 daughters. Rs. 7500 was spent on her burial. Find the share of each one. (5) (20)

GENERAL KNOWLEDGE-I (GENERAL SCIENCE & ABILITY)

Q. 7 (a) In a certain country, 7% of the total workforce is employed in tourism. 24.4 million **(5)** overseas visitors came to this country in 2014. 2014 was a record year for inbound tourism. This level of visitors was 3% higher than in 2013. It eclipsed the previous record of 24 million visitors recorded in 2008. In 2014 the average overseas visitor spent US$ 110 but average daily spend per visitor in 2013 was US$ 60 while in 2014, it was US$ 76.20.

What percentage increase in daily average amount spent occurred between 2013 and 2014?

(b) How many visitors came to this country in 2013? **(5)**

(c) What was the approximate percentage increase on the previous record number of visitors? **(5)**

(d) If there are 30 m people employed in this country's workforce, how many work in the tourism sector? **(5) (20)**

Q. 8. (a) The sum of two numbers is 48. If the smaller number is one-fifth of the larger number, find the two numbers. *Parselet* **(5)**

(b) Find out the correct word from the jumbled spellings given below. **(5)**
IUPNRT, AERPSTEL, LLARIVTTOUE, DCAAOOV, ANAISSSOITANS

(c) A sphere of diameter 26 cm is half filled with honey. The honey is poured into a cylindrical beaker of diameter 16 cm. Find the depth of honey in the beaker. **(5)**

(d) The breadth, length, and height of a room is 14 feet, 20 feet and 10 feet respectively. **(5) (20)** There is also a door of room having height 8 feet and with 5 feet. Two windows of 4 feet by 5 feet are also there. The cost of paint and labour inside room is Rs. 100 per square foot. How much will it cost to paint the inner walls and roof of the room?
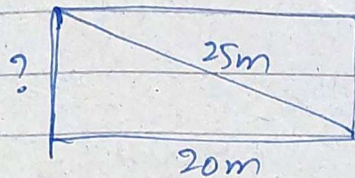
Q6(a) Find the area of a rectangular field whose length is 20m and Length of its Diagonal is 25m.

solution:-

Length of rectangle = 20m
Diagonal length = 25m
Area = ?

find out
To ~~know~~ the area we must know base of rectangle which could be find out by:-

pythagoras -theorem.

$$(Hyp)^2 = (Perp)^2 + (Base)^2$$
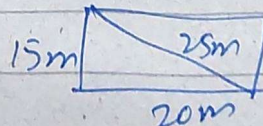$$25^2 = (20)^2 + (x)^2$$
$$625 = 400 + x^2$$
$$625 - 400 = x^2$$
$$225 = x^2$$

Taking root on B/S

$$\sqrt{225} = \sqrt{x^2}$$
$$\boxed{15m = x}$$

Area of rectangle = b × h
Area of rectangle = 20 × 15
$$\boxed{Area \ of \ rectangle = 300 m^2}$$

$$\begin{array}{r} 25 \\ \underline{\times 25} \\ 125 \\ \underline{50\times} \\ 625 \end{array}$$

$$\begin{array}{r} 20 \\ \underline{20} \\ 00 \\ \underline{40\times} \\ 400 \end{array}$$

$$\begin{array}{r} 25 \\ \underline{\times 15} \\ 125 \\ \underline{25\times} \\ 225 \end{array}$$

$$\begin{array}{r} 625 \\ \underline{-400} \\ 225 \end{array}$$

$$\begin{array}{r} 15 \\ \underline{\times 15} \\ 75 \\ \underline{15\times} \\ 225 \end{array}$$

$$\begin{array}{r} 20 \\ \underline{\times 15} \\ 100 \\ \underline{20\times} \\ 300 \end{array}$$

b) A crow travels 5km due south, 3kms due west, 4km due North and 2km towards south East. How far is crow from its starting position?
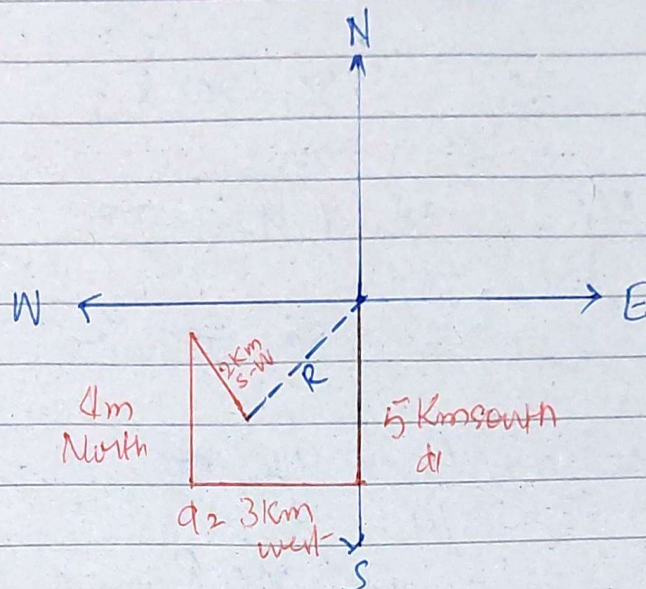
c) Data:-

Total profit = 580,000

Zain's allowance for business management = 160,000

Profit remaining = 420000

Zain investments for 9 months = 150,000 × 9
$$= 1350000$$

Ali investment for 5 moths = 190000 × 5 + 100000 × 4
$$= 1350000$$

umar investment for 9 months = 120,000 × 9
$$= 1080000$$

umar	zain	Ali
1350000	1350000	1080000
45	45	36

15	:	15	:	12
5	:	5	:	4

Share of Ali zain = $\dfrac{5}{14}$ x 420.000

= 150,000 Rs

Share of Ali = $\dfrac{5}{14}$ x 420,000

= 150,000 Rs

umar's share = $\dfrac{4}{14}$ x 420,000

= 120,000 Rs

$\dfrac{An}{2}$

(d) Data:-
Total property - Rs 802500
Husband share $\dfrac{1}{4}$
mother $\dfrac{1}{6}$
Remaining = 2 daughters.
money spent on = 7500 Rs.
her burial
find share of each.

Sol:-

First find money after burial
802500 - 7500
[Money = Rs. 795000]

Share of husband = $\dfrac{1}{4}$ x 795000

802500
7500
79500

$\boxed{\text{Share of husband} = \text{Rs. } 198\,750}$

Share of mother $= \dfrac{1}{6} \times 795000$

$\boxed{\text{Share of mother} = \text{Rs. } 132500}$

Remaining for 2 daughter

Remaining = Total after funeral charges -
  Mother's share + husband's share

Remaining = $795000 - (198750 + 132500)$
$= 795000 - 331250$

$\boxed{\text{Remaining} = 463750}$

Daughter's share $\dfrac{463750}{2}$

$\boxed{\text{Share of each daughter } 231\,875\text{R}}$

A_2

Q7(a)
Data :-
7% = work force employed in tourism
visitors visited in 2014 = 24.4 million
visitors in 2013 = 3% less of 24.4 million
visitors in 2008 = 24 million
2014 US spend = US$ 110
Aug daily spend in 2013 = US$ 60
"   "   "   "   2014 = US$ 76.20

(i) What percentage increase in daily average amount spent occured b/w 2013 and 2014.

Sol:-

$$\text{Percentage increase} = \frac{\text{New amount} - \text{old amount}}{\text{old amount}} \times 100$$

$$\text{Percentage increase} = \frac{76.20 - 60}{60} \times 100$$

$$\text{Percentage increase} = \frac{\overset{5.4}{16.20}}{\underset{3}{60}} \times \overset{5}{100}$$

Percentage increase = 5.4%

(ii) How many visitor came to this country in 2013.

As it is given that 3% less than 2014 visited in 2013.

visitors in 2014 = 24.4 million

visitors in 2013 = $\frac{3}{\underset{25}{\underset{50}{100}}} \times \overset{12.2 \quad 6.1}{24.4} \doteq 24.4$ $\frac{\begin{array}{r}6.1\\9\,3\end{array}}{18.3}$

Visitors in 2013 = 0.732 ⊕ 24.4

= 24.4 − 0.732

= 23.689 million   An

second method

$\frac{24.4 - x}{x} \times 100$

= 23.689 million

(c) What was the approximate percentage increase on the previous record number of visitors?

% increase = $\frac{24.4 - 24}{24} \times 100$

% increase = $\frac{0.4}{\frac{24}{12}} \times 100$

$\boxed{\text{% increase} = 1.667\%}$

$$\begin{array}{r} 100 \\ \underline{04} \\ 400 \\ \underline{0.00 \times} \\ 04\ 0.0 \end{array}$$

$$24\ \overline{)40}\ \frac{1.}{} \\ \underline{-24} \\ 160$$

d) If 30m people are employed in the country's workforce. How many work in the tourism sector

Sol.
Workforce in tourism sector = 7%.

$\frac{7}{100} \times 30 = \frac{21}{10}$

= 2.1 million people in tourism Department.

$$10\ \overline{)21}\ \frac{2.1}{} \\ \underline{-20} \\ 10 \\ \underline{-10}$$

Ans

Q 8
(a)
Data:-
Sum of two number = 48
Assume Larger = x
smaller # = $\frac{1}{5} \times x$
Sum = 48.

Sol.-
$x + \frac{x}{5} = 48$

$\frac{5x + x}{5} = 48$

$\frac{6x}{5} = 48$

$6x = 48 \times 5$

$x = \frac{48 \times 5}{6}$

$\boxed{x = 40}$

$40 + 8 = 48$

B.

IUPNIRT	TURNRP
AERPSTEL	PLAS
LLARIVTIOUE	ULTRAVIOLET
DCAAOOU	AVACODO
ANAISSSOITANS	ASSASSINATION

C. Data:-

sphere Dia = 26 cm
Sphere is half Filled
Cylindrical Beaker Diameter = 16 cm

Sol:-

$$\text{Volume of sphere} = \frac{4}{3} \pi r^3 \qquad r = \frac{d}{2}$$

$$\text{Volume of sphere} = \frac{4}{3} \times 3.14 \times (13)^3 \qquad r = \frac{26}{2} = 13$$

$$= 1.333 \times 3.14 \times 2179$$

$$= 9198.735$$

Since sphere is half filled = $\frac{9198.735}{2}$

$$\boxed{\text{Sphere Volume} = 4599.36 \text{ cm}^3}$$

$$\text{Volume of cylinder} = \pi r^2 h$$

$$4599.36 = 3.14 \times (8)^2 \times h$$

$$h = \frac{4599.36}{3.14 \times 64} = \frac{4599.36}{200.96}$$

$$\boxed{h = 22.88 \text{ cm}}$$

1) Data:-
   breadth = 14 feet
   Height = 10 feet
   length = 20 feet

   Door = 8 feet × 5 feet
2 Windows = 4 feet by 5 feet
cost of paint & labour = 100 per sq foot.
Cost to pains the inner walls and roof
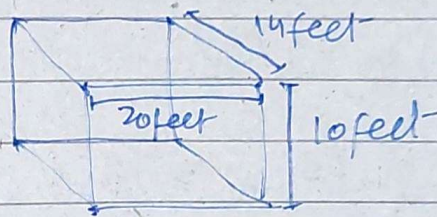
Area of 2 Sides of wall
Area = 2(10 × 20)
Area = 2 × 200 ft²
Area = 400 sq ft

Area of other sides of wall
   Area = 2(14 × 10)
   Area = 2 × 140
   Area = 280 sq ft

Area of roof = 20 × 14
            = 280

Total area of room =
      280 + 280 + 400 = 960 sq ft

Area of door = 8 × 5
            = 40 sq ft

Area of windows = $2 \times (4 \times 5)$
Area of windows = 2×20
Area of 2 windows 40

Total are - (Area of door + window)
960 -   40   +   40

960 - 80
Total area to be coloured = $880 ft^2$

Price for 100 sqfoot =
Cost of labour = Rs. 100 per square foot

Cost of labour = 880×100
Cost of labour = 88000 Rs