ANUJJINDAL.IN

RBI PHASE 1 RECAP

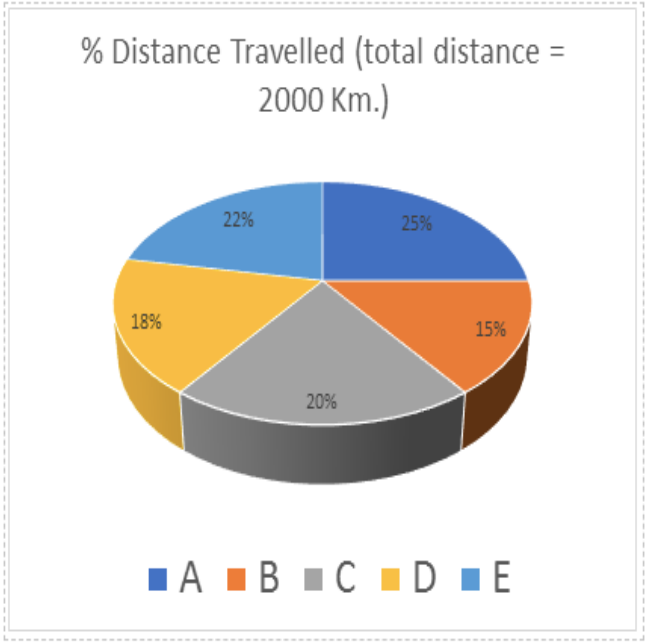
10th August '18

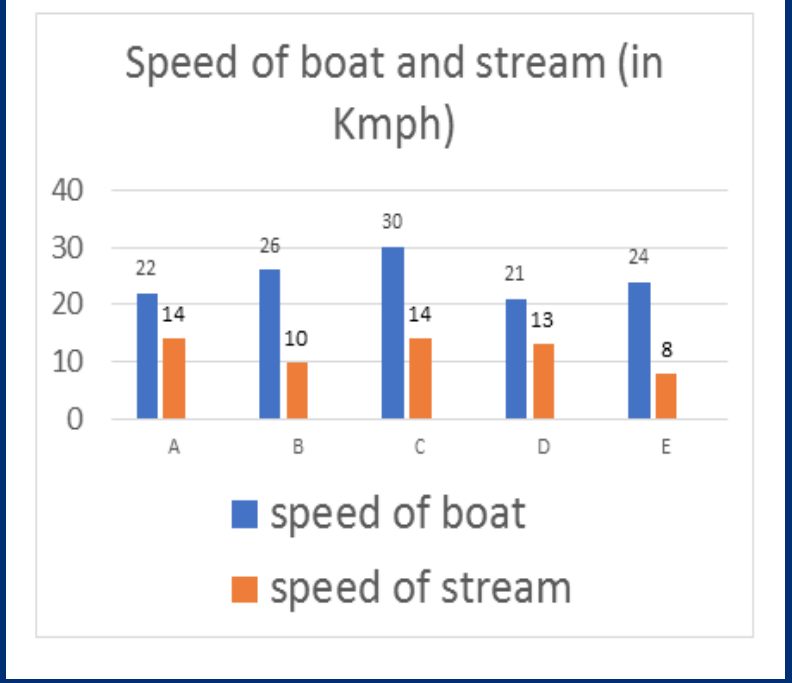
QUANT – DATA INTERPRETATION (Boat And Stream)

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

I. These Questions are based on the following pie chart and graph.





DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Q.1) Sudhir and Santosh decided to travel 450 Km. till point X in downstream. Sudhir is on boat B and Santosh is on boat D. After completing 80% of his journey, Sudhir found that his boat gets malfunctioned but immediately he got help from Sham who is travelling in the same direction as Sudhir and is on boat E. Santosh travelled at his speed till 350 km and then he reduced his speed by 5 kmph. Then find out Santosh took how much more time than Sudhir to reach on point X?

[a] 1.1 hrs.

[b] 0.9 hrs.

[c] 2.1 hrs.

[d] none of these

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Solution (b)

Speed of boat in down-stream= speed of boat + speed of stream

Speed of Sudhir = 26+10 = 36 kmph

Travelled 80% of 450 (360 km) on speed 36 kmph

Time taken= distance / speed

So, time taken to complete 360 km = 10 hrs.

Remaining distance = 90 km

Speed of Sham = 32 kmph

Time taken = 90/32

= 2.8 hrs.

Total time taken by Sudhir = 10 + 2.8 = 12.8 hrs.

Santosh's speed = 21 + 13 = 34 kmph

Time taken to cover 350 km = 10.3 hrs.

Remaining distance = 100 km

Time taken to cover = 100 / 29 kmph

= 3.44 hrs.

Total time taken by Santosh = 10.3 + 3.4

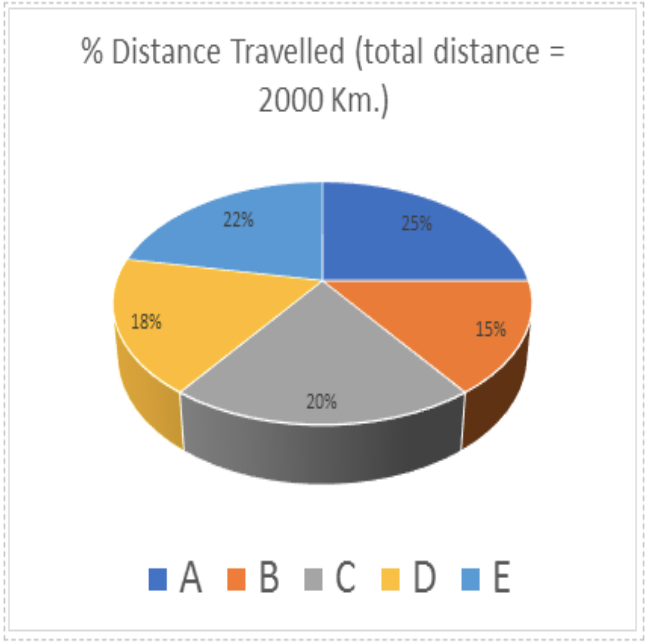
= 13.7 hrs.

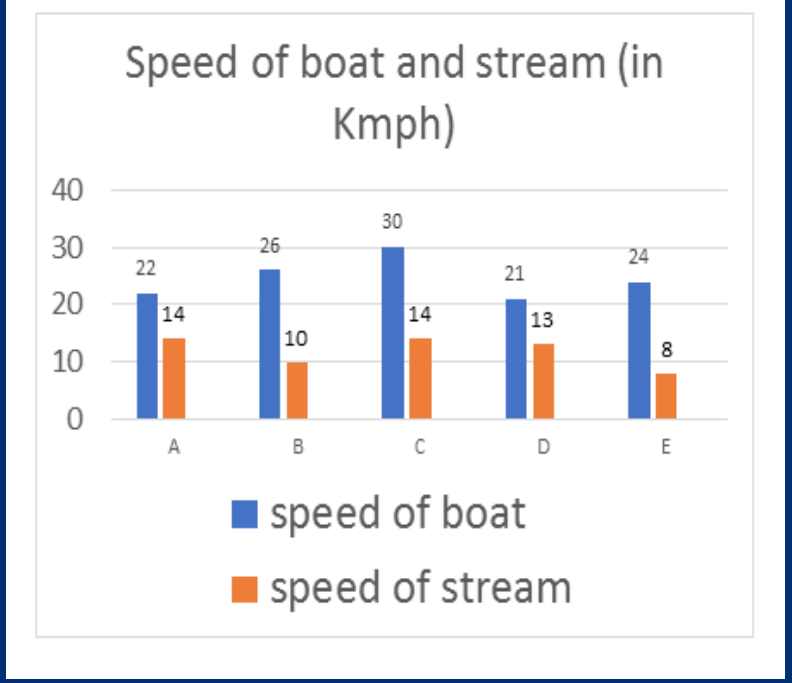
Difference in time = 13.7 – 12.8 = 0.9 hrs.

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

I. These Questions are based on the following pie chart and graph.





DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Q.2) Arun wants to cover 1792 km. He took a new boat G whose speed is 30% more than the speed of boat C and speed of stream for boat G is 45% more than the speed of stream B. Then find the difference between time taken by new boat and boat C (both upstream) to cover the given distance.

[a] 38.86 hrs.

[b] 45.43 hrs.

[c] 42.78 hrs.

[d] 58.00 hrs.

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Solution (a)

Speed of new boat = (130 x 30) /100 = 39 kmph

Speed of stream for new boat = (145 x 10) / 100 = 14.5 kmph

Speed of boat in upstream = speed of boat - speed of stream

Speed of new boat in upstream = 39 – 14.5 = 24.5 kmph

Time taken to cover 1792 km by new boat = 1792/24.5

= 73.14 hrs.

Speed of boat C upstream = 30 – 14 = 16 kmph.

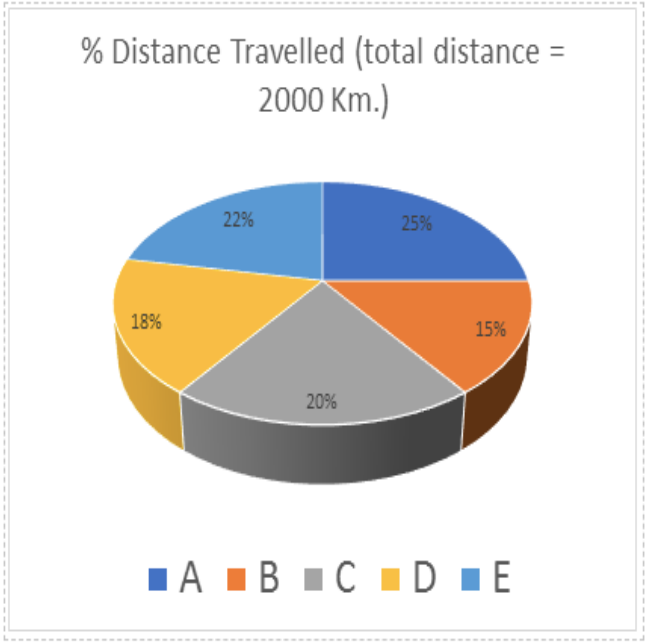
Time taken to cover 1792 = 112 hrs.

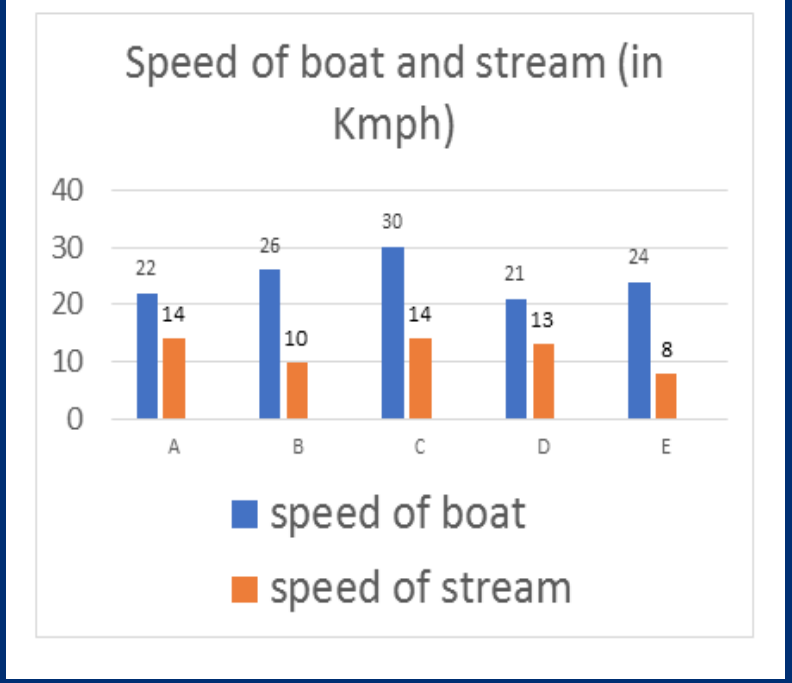
Difference in time = 112 – 73.14 = 38.86 hrs.

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

I. These Questions are based on the following pie chart and graph.





DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Q.3) By using boat D, a man covers the respective distance of boat D in 10 hrs. By mistake he drops his goggles at the starting point. The speed of the goggles is 24 kmph. If the man starts travelling back towards his googles. After how much time, the man will get his goggles (since dropping).

[a] 15 hrs.

[b] 2 hrs.

[c] 12 hrs.

[d] none of these

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

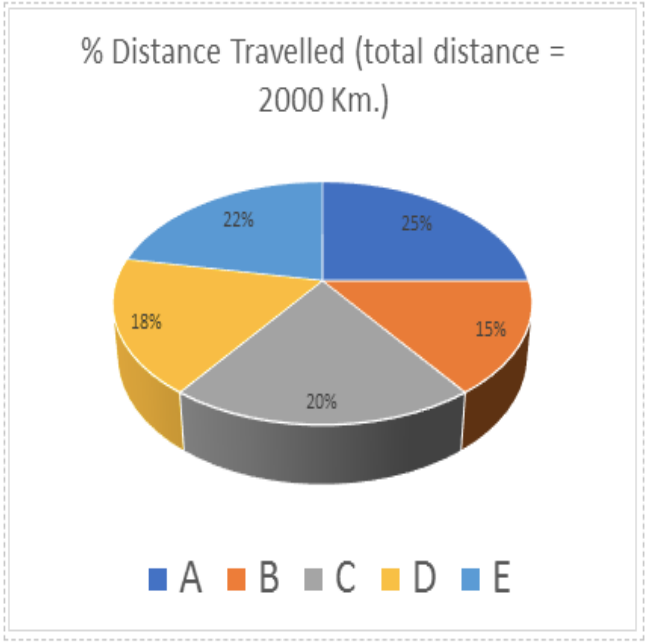
Solution (c)

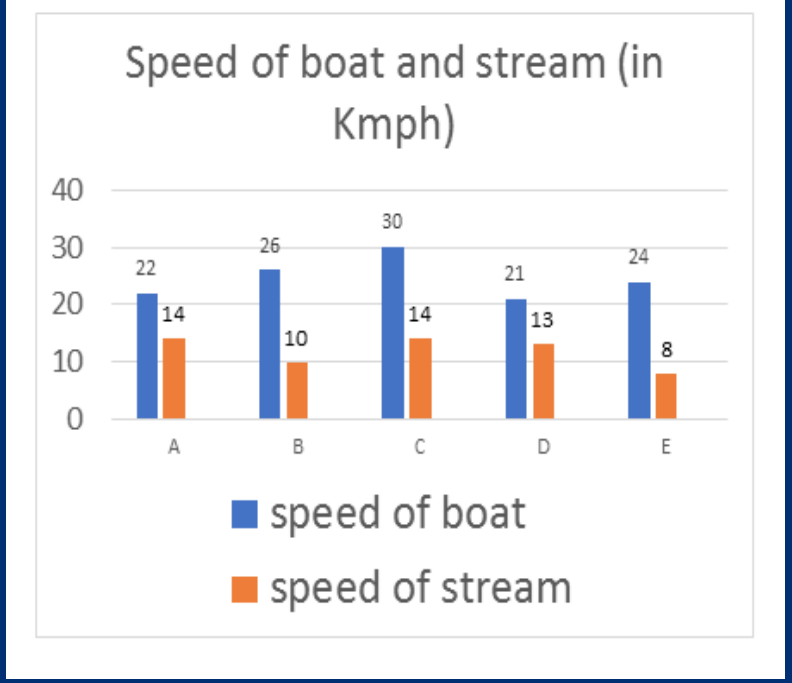
Respective distance of boat D = 18% of 2000
= 360 km
Speed = distance / time
Speed of boat D = 360/10 = 36 kmph
Speed of goggles = 24 kmph
Distance = time x speed
In 10 hrs. goggles cover= 10 x 24 = 240 km
After 10 hrs. distance between man and goggles = 360 – 240
=120 km
Speed of man and goggles together = 24+ 36 = 60 kmph
Time taken to cover 120 km by both of them= 120 / 60 = 2 hrs.
So, the man will get his googles after (10 +2) = 12 hrs. from the time he dropped it.

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

I. These Questions are based on the following pie chart and graph.





DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Q.4) A race is organized in which all the boats are divided in two teams - X and Y. Boat A, B and C are in team X and boat D, E and a new boat F whose speed is 36.36 kmph in upstream are in team Y. Find the ratio of time taken between team X to team Y to cover the total distance (2000 km) in upstream.

[a] 10:11

[b] 11:10

[c] 12:11

[d] 11:12

DATA INTERPRETATION (Boat And Stream)

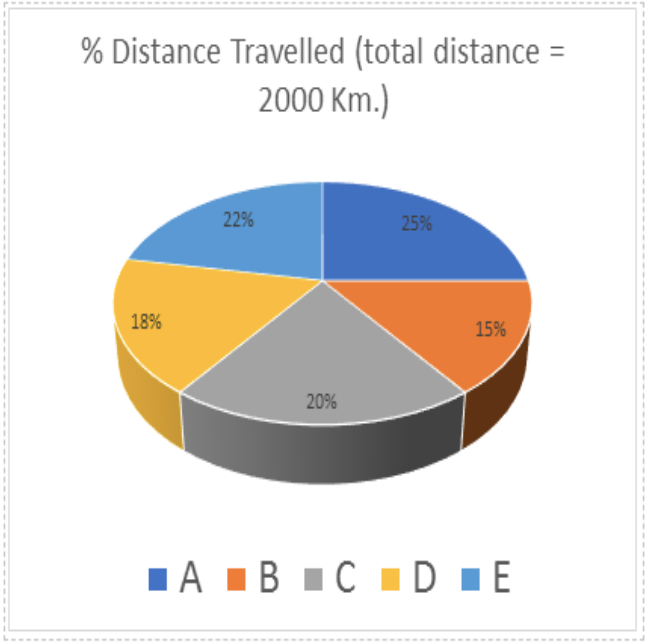
ANUJJINDAL.IN

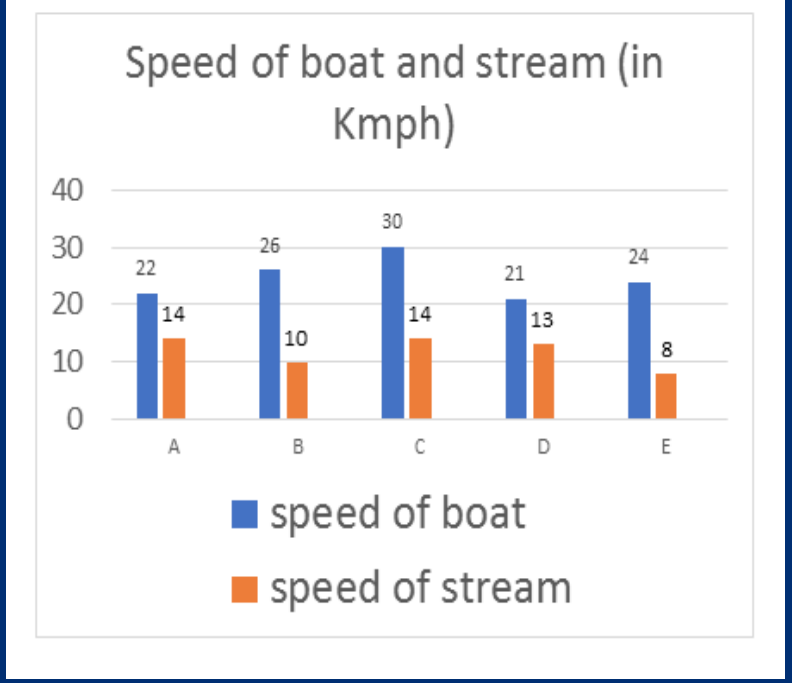
Solution (a)
Speed of team X = 22+26+30 = 78 kmph
Speed of stream for team X = 14+10+14 = 38 kmph
Speed of team X upstream = 78-38 = 40 kmph
Speed of (D+E)= 21 +24 = 45
Speed of stream = 13+8 = 21
Speed of D+E upstream = 45-21 = 24 kmph
Speed of team Y = 24+36.36 = 60.36 kmph
Time taken by team X to cover 2000 km = 2000 / 40 = 50 hrs.
Time taken by team Y to cover 2000 km = 2000 / 36.36 = 55 hrs.
Ratio = 50:55
=10:11 (ans.)

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

I. These Questions are based on the following pie chart and graph.





DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Q.5) What is the difference between average time taken in upstream to the downstream by all the boats to cover their respective distance. (find to one decimal point)

[a] 20.5 hrs.

[b] 22.4 hrs

[c] 21.5 hrs

[d] 24.7 hrs.

DATA INTERPRETATION (Boat And Stream)

ANUJJINDAL.IN

Solution (d)

Team	Distance covered (in km)	Speed of boat downstream (kmph)	Time taken while travelling downstream (in hrs.)	Speed of boat upstream (kmph)	Time taken while travelling upstream (in hrs.)
A	500	36	13.8	8	62.5
B	300	36	8.3	16	18.7
C	400	44	9	16	25
D	360	34	10.5	8	45
E	440	32	13.7	16	27.5

Average time taken in downstream = total time / number of boats
= 55.3 / 5 = 11 hrs.
Average time taken in upstream = 178.7 / 5= 35.7 hrs.
Difference in time = 35.7 – 11 = 24.7 hrs. (Ans.)