DI Mixed Chart Questions for SBI Clerk Mains, IBPS Clerk Mains, SBI PO Pre and IBPS PO Pre Exams.

DI Mixed Chart No.79

Directions : Study the following pie and bar chart carefully and answer the questions given beside.

Directions : Study the following pie, line and table chart carefully and answer the questions given beside.

The following pie chart shows time (in hrs) taken by the different pipes to fill a swimming pool and the bar graph shows time (in hrs) taken by different pipes to empty the same pool.

Time taken by different pipes to fill the pool

Time taken by different pipes to empty the pool
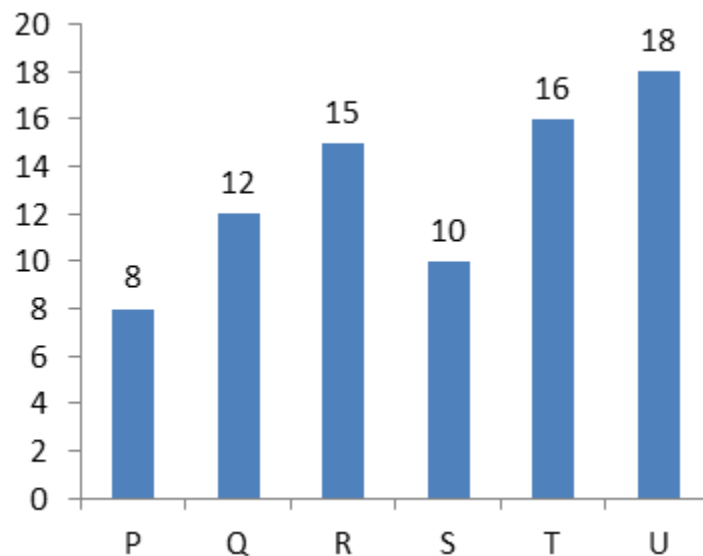
1. **Pipes A, C and E were opened together at 2:00 pm to fill the pool but at 3:00 pm the Pipe C was closed and both the remaining pipes were opened till 4:00 pm, then find the percentage of pool that was filled during this time?**

A. 30.15%   B. 35.22%   C. 25.67%   D. 32.22%   E. 20.33%

2. **Pipes D and F were opened together to fill the pool but after 4 hours pipe Q was also opened, then find the total time taken to fill the pool?**

A. 12.23 hours   B. 8.42 hours   C. 13.24 hours   D. 15.44 hours   E. 16.32 hours

3. **If the Pipes A, B and E were opened for 1 hour alternatively starting with Pipe A, then Pipe E and then Pipe B, then find the time required by these pipes to fill the pool?**

A. 12 hours   B. 15 hours   C. 17 hours   D. 20 hours   E. 26 hours

4. **Two pipes E and F were opened together to fill a pool. After 3 hours pipe D was also opened to fill the pool but by mistake Pipe S was opened in place of Pipe D. When it was noticed after 1-hour Pipe S was closed and the pipe D was opened. What is the total time required to fill the pool?**

A. 6.35 hours   B. 4.54 hours   C. 9.04 hours   D. 8.25 hours   E. None of these

5. **Pipes P, Q and T were used together to empty a full pool. Find the time after which Pipe T should be closed so that the pool gets emptied in 4.5 hours.**

A. 3 hours   B. 2 hours   C. 1 hour   D. 4 hours   E. 8 hours

Correct Answers:

1	2	3	4	5
D	B	C	A	C

Explanations :

1. Total units of work = 360 (LCM of three times given)

Work done by pipe A in one hour = 30 units

Work done by pipe C in one hour = 20 units

Work done by pipe E in one hour = 18 units

Units of work done by three pipes till 3 : 00 pm = (30 + 20 + 18) units = 68 units

Units of work done by two pipes A and E till 4 : 00 pm = 48 units

Total pool filled = (68 + 48) units = 116 units

Percentage of pool that was filled = $\dfrac{116}{360}$ × 100 = 32.22%

Hence, option D is correct.

2. Let, Total units of work = 240 (LCM of 12, 16, 10)

Work done by D and F for 4 hours = (15 + 24)4 = 156 units

Units of work done per hour when Q was opened = (15 + 24) − 20 = 19 units

Time required to fill the remaining pool = $\dfrac{240 - 156}{19}$ = 4.42 hours

Total time taken = (4 + 4.42) = 8.42 hours

Hence, option B is correct.

3. Total units of work = 300 units (LCM of 12, 25, 20)

Work done by Pipes A, E and B in 3 hours = (25 + 15 + 12) = 52 units

Work done in 15 hours (pipes will work alternatively) = 52 × 5 = 260 units

Remaining units = 40 units

On 16th hour A does 25 units

On 17th hour E does 15 units

∴ Work gets completed in 17 hours

Hence, option C is correct.

4. Total units of work = 80 units

Work done by E and F in 3 hours = (8 + 4) × 3 = 36 units

Work done by Pipe E and Pipe F when S was opened for 1 hour by mistaken = (12 − 8) = 4 units

Remaining work = 80 − (36 + 4) = 40

Work done by E, F and D in one hour = (4 + 8 + 5) = 17

Remaining pool will be filled in = $\dfrac{40}{17}$ hours

Total time reqd. = 3 + 1 + $\dfrac{40}{17}$ = $\dfrac{108}{17}$ = 6.35 hours

Hence, option A is correct.

5. Total units of work = 48

Work done in 1 hour by P = 6

Work done in 1 hour by Q = 4

Work done in 1 hour by T = 3

Pipe P and Q will be opened for 4.5 hours whole time = 4.5 × 10 = 45 units

For 3 units three pipes worked together

∴ Pipe T should be opened for

= $\dfrac{\text{Remaining work}}{\text{Pipe T's one hour work}}$ = $\dfrac{3}{3}$ = 1 hour

Hence, option C is correct.