

## DI Pie Chart Questions for SBI PO Mains, IBPS PO Mains and RBI Grade B Exams.

DI Pie Chart No 55
Directions: Study the following pie chart carefully and answer the questions given beside.
The chart given below shows the time for distribution of time for which Six persons work on a project. A starts the work and 240 days later F completes the work.

$B$ joins the project on $55^{\text {th }}$ day and leaves 12 days after C joins the project.
$\mathrm{A}, \mathrm{B}$ and C work together for 5 days. F works alone for $17.5 \%$ of the total project time period.

D works with E for $75 \%$ more time than he works with C .
A left the project 79 days before E joined.
D joins the work on $108^{\text {th }}$ day and he works alone for 28 days.
E left 121 days after B left the project.
For $4 / 17$ fraction of his time E works with F.
(Imp Note: If A leaves 2 days before B or B leaves 2 days after $A$. Then if $B$ leaves on $13^{\text {th }}$ day, then $A$ leaves on $11^{\text {th }}$ day. Likewise, If $B$ leaves 2 days after $C$ joins, then If $C$ joins on 14 th day then $B$ leaves on $16^{\text {th }}$ day.

1. What is the central angle (in degrees) for the period that represents the time for which B works on the project?
A. 32
B. 28.5
C. 27
D. 34.5
$E$. None of these
2. What is the sum of the total number of days for which $B$ and $C$ work together and the time for which C and D work together?
A. 25
B. 32
C. 21
D. 20
E. 18
3. What is the sum of the central angle of the time period when exactly two persons were working together on the project?
A. $88^{\circ}$
B. $94.5^{\circ}$
C. $102^{\circ}$
D. $97.5^{\circ}$
E. $91^{\circ}$
4. $F$ joins ' $X$ ' days after $C$ and $D$ stop working together. What is the value of $X$ ?
A. 71
B. 69
C. 67
D. 65
E. 68

## Correct Answers:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
| :--- | :--- | :--- | :--- |
| D | A | B | E |

## Common Explanation:

Total time period of the work $=240$ days
B joins on $55^{\text {th }}$ day, so $A$ works alone for the first 54 days.

B leaves 12 days after C joins the project

So, $B$ and $C$ work together for $12+1=13$ days and $A, B$ and $C$ work together for 5 days
So, Just B and C work together (without A) for $13-5=8$ days

F works alone for $17.5 \%$ of the total project time period.

F works alone for $17.5 \%(240)=42$ days
A left the project 79 days before $E$ joined.

So, there is a gap of 78 days between the leaving of $A$ and Joining of $E$

E left 121 days after $B$ left the project.
So, there is a gap of 121 days between leaving of $B$ and leaving of $E$.
D joins the work on $108^{\text {th }}$ day and he works alone for 28 days.

So, D joins after 107 days of work has been done.

D works alone for 28 days.
Plotting the known values in image we get:


We can find the time for which C works alone, $=107+121+42-240=30$ days
Time for which C and D work together $=78-(8+30+28)=12$ days

Time for which just $A$ and $B$ work together $($ without $C)=107-(54+5+8+30)=10$ days
D works with E for $75 \%$ more time than he works with $C$.
$D E=\frac{175}{100} \times D C$
$D E=\frac{7}{4} \times 12=21$ days

For 4/17 fraction of his time E works with F.
Time for which E works $=121-(30+12+28)=51$ days
F \& E work for $\frac{4}{17} \times 51=12$ days
E works alone for 30-12 = 18 days
We get the values of distribution of time now we can find the central angles for any number of persons.


## Answers:

1. From the common explanation, we have

Required angle $=15+7.5+12=34.5^{\circ}$

Hence, option D is correct.
2. From common explanation, we have

Required sum $=5+8+12=25$

Hence, option A is correct.
3. From common explanation, we have

Required sum $=15^{\circ}+12^{\circ}+18.5^{\circ}+31.5^{\circ}+18^{\circ}=94.5^{\circ}$

Hence, option B is correct.
4. From common explanation, we have

Number of days gap between ending of C \& D working together and Joining of F=28+21+18=67
So, $F$ joins the work $67+1$ days after $C$ and $D$ stop working together

Required number of days $=68$

Hence, option E is correct.

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