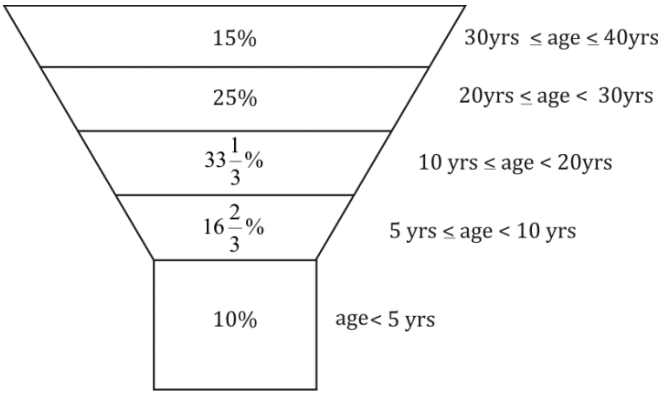
Directions (1-5): - Funnel chart given below shows percentage distribution of five different age groups of a particular city.

Funnel DI



Q1. If total population of city is 72000, then what is the average of population of persons having ages below 5 yrs, above or equal to 5 yrs but below 10 yrs and above or equal to 10 yrs but below 20 yrs
(a) 10400
(b) 14400
(c) 11400
(d) 14300
(e)none of these

Q2. If total population is 144000 and persons having age of 25 yrs, 35 yrs and 16 yrs are $33\frac{1}{3}\%$, 80% and 75% respectively of their respective age group, then what is the total population having age of 25 yrs, 35 yrs and 16 yrs together?
(a) 36280
(b) 57280
(c) 65280
(d) 53280
(e) none of these.

Q3. If ratio of male to female whose age is greater than or equal to 30yrs and below or equal to 40yrs and greater than or equal to 20yrs and below 30yrs are 3 : 2 and 8 : 7 respectively. Find no. of males whose age is greater than or equal to 30yrs and below or equal to 40yrs is how much percent more or less than no. of female whose age is greater or equal to 20yrs and below 30 yrs?
(a) $22\frac{6}{7}\%$
(b) 12.5%
(c) $33\frac{1}{3}\%$
(d) $21\frac{6}{7}\%$
(e) can't be determined.

Q4. If difference between persons whose age group is greater than equal to10 yrs or less than 20 yrs and persons with age group greater than or equal to 5 yrs but less than 10 yrs is 15000, then find the number of person with age group less than 5 yrs.
(a) 2700
(b) 4500
(c) 90000
(d) 9000
(e) 27000

Q5. If the total population increases at rate of 10%p.a and total population previously known was 60,000. then find the population of age group of $5 \leq x < 10$ and $10 \leq x < 20$ after 3 yrs? [if percentage distribution remains the same]

(a) 33030
(b) 39930
(c) 38930
(d) 42080
(e) 37990

S1. Ans.(c)

Sol.

$16\frac{2}{3}\% = \frac{1}{6} \quad 33\frac{1}{3}\% = \frac{1}{3}$

Required average $= \left(\frac{10}{100} \times 72000 + \frac{1}{6} \times 72000 + \frac{1}{3} \times 72000\right) \times \frac{1}{3}$

$= \frac{1}{3}(72000 + 12000 + 24000)$

$= \frac{1}{3} \times 43200$

$= 14400$

S2. Ans.(c)

Sol.

Population whose age is 25 yrs $= \frac{1}{3} \times \frac{25}{100} \times 144000$

= 12000

Population whose age is 35 yrs $= \frac{80}{100} \times \frac{15}{100} \times 144000$

= 17280

Population whose age is 16 yrs $= \frac{75}{100} \times \frac{1}{3} \times 144000$

= 36000

Required population $= 12000 + 17280 + 36000$

= 65280

S3 Ans.(a)

Sol.

	Male : Female	
$30 \leq$ age $\leq 40 - 15x$	$9x$	$6x$
$20 \leq$ age $< 30 - 25x$	$\frac{40}{3}x$	$\frac{35}{3}x$

Required percentage $= \frac{\frac{35}{3}x - 9x}{\frac{35}{3}x} \times 100$

$= \frac{8x}{35x} \times 100$

$= 22\frac{6}{7}\%$

S4. Ans.(d)

Sol.

Let total value of group be y

$(20 > x \text{ yrs} \geq 10) - (10 > x \geq 5) = 15000$

$\left(33\frac{1}{3}\% - 16\frac{2}{3}\%\right) y = 15000$

$y = 90000$

Required population $= \frac{10}{100} \times 90{,}000$

$= 9000$

S5. Ans.(b)

Sol. Required population$= 60000 \times (1.1)^3 \times \frac{50}{100}$

$= 39930$