4 (iii) let no. of right answers $= x$

no. of wrong answers $= y$

acc to condition I

$3x - y = 40 \cdots (i)$

acc to condition II

$4x - 2y = 50 \cdots (ii)$

$(i) \times 2 - (ii) \times 1$

$6x - 2y = 80$

$4x - 2y = 50$

$2x = 30$

$\Rightarrow x = 15$

Sub in (i)

$3 \times 15 - y = 40$

$\Rightarrow y = 45 - 40$

$= 5$

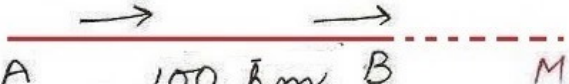
$\therefore$ total questions $= 15 + 5$

$= 20$

4 (iv) let speed of car starting from A $= x$ km/h

speed of car starting from B $= y$ km/h

acc. to condition I

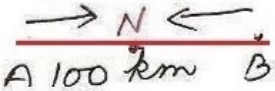


Car A	Car B
$s = x$ km/h	$s = y$ km/h
$t = 5$ h	$t = 5$ h
$D = s \times t$	$D = s \times t$
$= 5x$ km	$= 5y$ km

$5x - 5y = 100$

$(\div 5)\ x - y = 20 \cdots (i)$

acc. to condition II



Car A	Car B
$s = x$ km/h	$s = y$ km/h
$t = 1$ h	$t = 1$ h
$D = s \times t$	$D = s \times t$
$= x$ km	$= y$ km

$x + y = 100 \cdots (ii)$

$(i) + (ii)$

$x - y = 20$

$x + y = 100$

$2x = 120$

$\Rightarrow x = 60$

Sub (i)

$60 - y = 20$

$\Rightarrow y = 40$

Speed car A $= 60$ km/h

Speed car B $= 40$ km/h