

PYQSide

NEET MOTION IN A STRAIGHT LINE — RELATIVE VELOCITY IN ONE DIMENSION — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ)

- Q.1** Two cities X and Y are connected by a regular bus service with a bus leaving in either direction every T min. A girl is driving scooter with a speed of 60 km/h in the direction X to Y notices that a bus goes past her every 30 minutes in the direction of her motion, and every 10 minutes in the opposite direction. Choose the correct option for the period T of the bus service and the speed (assumed constant) of the buses. [NEET (UG) 2025]

- (1) 10 min, 90 km/h (2) 15 min, 120 km/h
(3) 9 min, 40 km/h (4) 25 min, 100 km/h

Scan or tap for the full solution



- Q.2** Preeti reached the metro station and found that the escalator was not working. She walked up the stationary escalator in time t_1 . On another day, if she remains stationary on the moving escalator, then the escalator takes her up in time t_2 . The time taken by her to walk up on the moving escalator will be [NEET 2017]

- (1) $\frac{t_1 t_2}{t_2 - t_1}$ (2) $\frac{t_1 t_2}{t_2 + t_1}$ (3) $t_1 - t_2$ (4) $\frac{t_1 + t_2}{2}$

Scan or tap for the full solution



- Q.3** A bus is moving with a speed of 10 m s^{-1} on a straight road. A scooterist wishes to overtake the bus in 100 s. If the bus is at a distance of 1 km from the scooterist, with what speed should the scooterist chase the bus? [AIPMT 2009]

- (1) 40 m s^{-1} (2) 25 m s^{-1} (3) 10 m s^{-1} (4) 20 m s^{-1}

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	2	2	4								