

Institution of Railway Signal Engineers

2009 Examination, Module 2, Layout 1.

Train lengths:	Passenger	180 metres
	Freight	400 metres
Acceleration & braking rate:	All trains	0.5 m/sec/sec
Maximum permitted speed:	Passenger trains - Main & Branch Lines	140 km/h
	Passenger trains - Spur Line	40 km/h
	Freight trains	100 km/h
	All running line turnouts	40 km/h

Required headways on Main Line at uniform minimum signal spacing at 120km/h:		
Fast passenger train following fast passenger train	2.5 minutes	
Fast passenger train following stopping passenger train	4 minutes	
Station dwell time	30 seconds	

Train running requirements in each direction:		
Passenger between A and F (fast)	2	per hour
Passenger between A and F (stopping)	2	per hour
Passenger between A and G (stopping)	1	per hour
Passenger between B and C	4	per hour
Freight between A and F	6	per day
Freight between F and G	6	per day

Operating requirements:	
Passenger trains from C terminate and start back from the Down Platform at B.	
Between trips the train can recess in the Down Siding.	
Freight trains between F and G run round on the Up Goods Line between B and D.	
The run round path is via the Up Main.	
The siding at E is used on an occasional basis by Engineering Trains and Plant.	

Important notes for candidates:
Signals located outside the scale area of the plan must be dimensioned.
The method of block working on all running lines must be shown.

Note that the quoted speed on which to base the headway calculations is not the same as the maximum permissible speed.

Original Scale: 1:2000
Check Scale: Actual 0 1cm 2cm 3cm 4cm 5cm
Represents 0 20m 40m 60m 80m 100m

Please read the above information carefully clw v3. 01/07/2009

