Institution of Railway Signal Engineers

Candidate Number

2018 Examination, Module 2, Layout 1

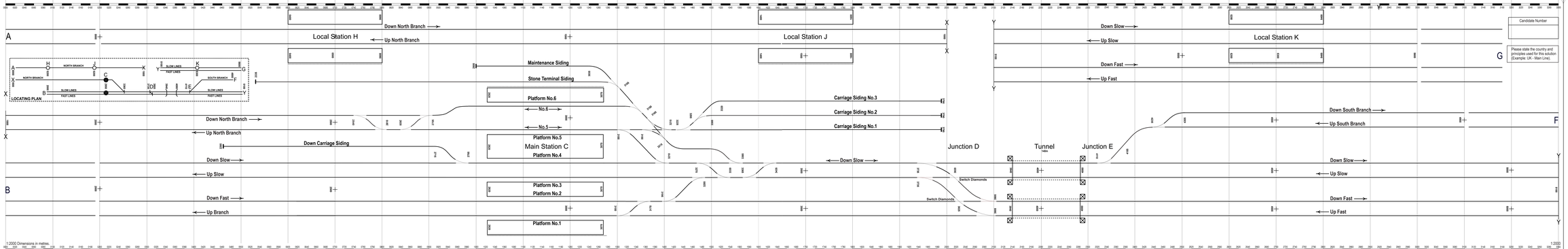
Main Line

Train lengths	Non stopping passenger trains. Stopping passenger trains. Freight trains.	250m. 92 or 184 m. 600m.
Acceleration and braking rates	Passenger trains. Freight trains.	0.8m/sec/sec. 0.5m/sec/sec.
Maximum permitted speed for train type	Passenger: Fast & Slow lines. Branch lines. Freight: All lines.	160 km/h. 100 km/h. 100 km/h.
Restriction of speed for all trains	Down Slow between **E** & **C** in the Up direction. Divergence over running line turnouts at **D**. Divergence over remaining running line turnouts. Turnouts into and out of and within yards and sidings.	40 km/h. 100 km/h. 40 km/h. 25 km/h.
Weekday peak train running requirements in each direction	Non stopping passenger trains Fast Lines between **B** & **G**. Stopping passenger trains Slow Lines between **B** & **G**. Stopping passenger trains Slow Lines between **A** & **G**. Stopping passenger trains Slow Lines between **A** & **F**. Stopping passenger trains Slow Lines between **B** & **F**.	15 per hour. 4 per hour. 2 per hour. 2 per hour. 2 per hour.
Freight trains in each direction	Freight trains between **B** & **G**. Freight trains between **B** & **C** and **C** & **G**.	4 per night. 1 per night.
Operating requirements	. At weekends & nights all trains may use either Fast or Slow lines for engineering. . Trains attach from either direction at Station **C** branch platforms **5** and **6**. . The sidings at **C** and between **C** and **D** are used to stable empty passenger trains. . Loaded freight trains arrive from **B** and reverse into the Stone Terminal siding at **C**. . The locomotive is detached and runs to **G**. . Once the train is unloaded, a locomotive arrives from **G** and returns the train to **G**.	
Important notes for candidates	. Signals located outside the scale area of the plan must be dimensioned. . Method of block working on all running lines and across boundaries must be shown. . All running lines and connections with running lines must be fully signalled. . Shunting moves connecting with running lines must be fully signalled. . The method of propelling trains into the Stone Terminal must be described in detail. . All running lines shown are controlled from a Signalling Centre 150 km away. . In question 1b) the headway speed is not the maximum permitted speed.	
Scale	1:2000	**Gradients** Level
Scale check	1 centimetre actual represents 20m.	1in 80 1in 100 1in 200 1in 400 1in 40 1in 50 1in 100 1in 200

Please read the above information carefully

clw <RSE (Main Line) Layout 1 Year 2018 (Unsignalled) Version 4-09-07-2018>

73.25 mm x 11 mm.



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Please state the country and principles used for this solution (Example: UK - Main Line).