Institution of Railway Signal Engineers

Candidate Number

2019 Examination, Module 2, Layout 2

Rapid Transit

Candidates must include a brief definition of signals/codes/etc. which must be supported by a form of ATP.

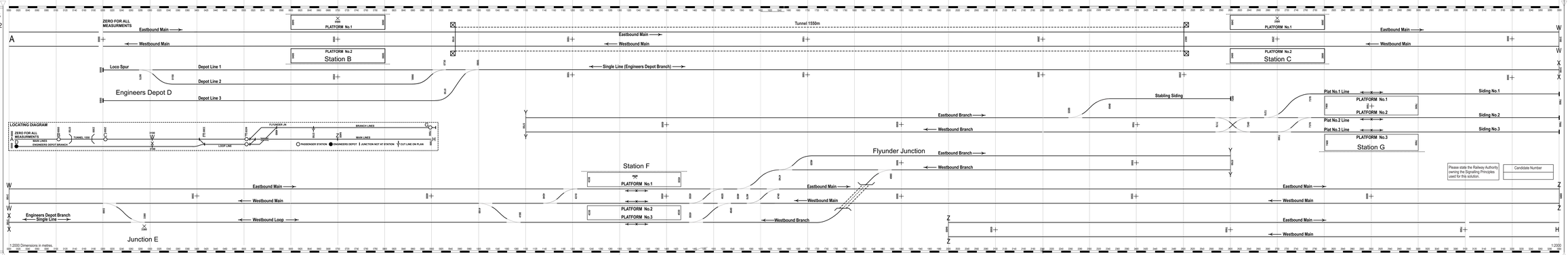
Passenger Rolling Stock:		**Electric multiple unit.**
Passenger train length:		**150 metres.**
Engineers Rolling Stock:		**Battery locomotive & wagons.**
Engineers train length:		**140 metres.**
Line Speed:		**80 km/h.**
Turnout Speed:		**60 km/h.**
Gradients:		**Assume level throughout.**
Platform dwell times:	**Station B.**	**47 seconds.**
	Station C.	**54 seconds.**
(Traffic in normal conditions)	**Station F.**	**39 seconds.**
	Station G.	**180 seconds.**
Recovery Margin:		**20 seconds.**
Timetabled train services:	**A to G**	**10 trains per hour.**
	A to H	**15 trains per hour.**
	D to H	**1 train per day (off peak only).**
Service braking rate:		**0.8 m/s/s.**
Emergency braking rate in the open.		**1.1 m/s/s.**
Emergency braking rate in a tunnel.		**1.3 m/s/s.**
Acceleration rate:		**0.9 m/s/s.**

At station F, signalled emergency reversing moves shall be provided for all platforms.

Scale: 1:2000, 1 cm represents 20m.

0m 20m 40m 60m 80m 100m
0m 20m 40m 60m 80m 100m

Please read the above information carefully



Please state the Railway Authority owning the Signalling Principles used for this solution.

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