नाम
Name : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुक्रमांक
Roll No : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

प्राप्तांक
Marks Awarded :

पाठ्यक्रम
Course : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

दिनांक
Date : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुदेशक के आद्यक्षर
Instructor's Initial :

I. Identify the following External parts of the Frequency Modulated Token less Single Line Block Instrument and fill in the brackets with the identification numbers on the parts.

1. S1 and counter ( )
2. Galvo ( )
3. Single stroke bell ( )
4. Maintainer's key ( )
5. Buzzer window ( )
6. Time release indicator ( )
7. Telephone ( )
8. SM's key ( )
9. Operating Handle ( )
10. Shunt key ( )
11. TOL Indicator ( )
12. S2 and counter ( )
13. Push button PB1 & PB2 ( )
14. Turn Table ( )

II. (a) Write in brief the function of the following internal parts

1. Condenser C2 across the Galvo

2. Choke CH1

3. Buzzer-1 it is a PCB unit, actuated by TOLR & gives TOL buzzer.

4. Buzzer-2 it is a PCB unit, actuated by 2R & gives TAR buzzer.

5. Speaker

6. Lock magnet coil assembly

7. Transmitter

8. Level adjust switch: It is a three position (H, M & L) switch, associated with the Transmitter. This can select the level of the signal output of the transmitter.

9. Receiver

10. Attenuator: This switch can be set to compensate the required db loss on the received Signal. In DCC (Digital Communication & Control) receiver the attenuator switch is not available.

11. Impedance switch

12. Diodes connected in series with relays NR (D1 BY-126) & BLR (D2 BY-126)

13. Resistance connected across Block handle contacts in NR circuit R3 470 Ohm/2w

14. TOL Indicator

(b) Study the Block handle lock magnet and contact assembly and note the following

1. Number of contacts working: Spare:

2. How various contacts are obtained?

3. How the contacts are identified in the wiring diagram

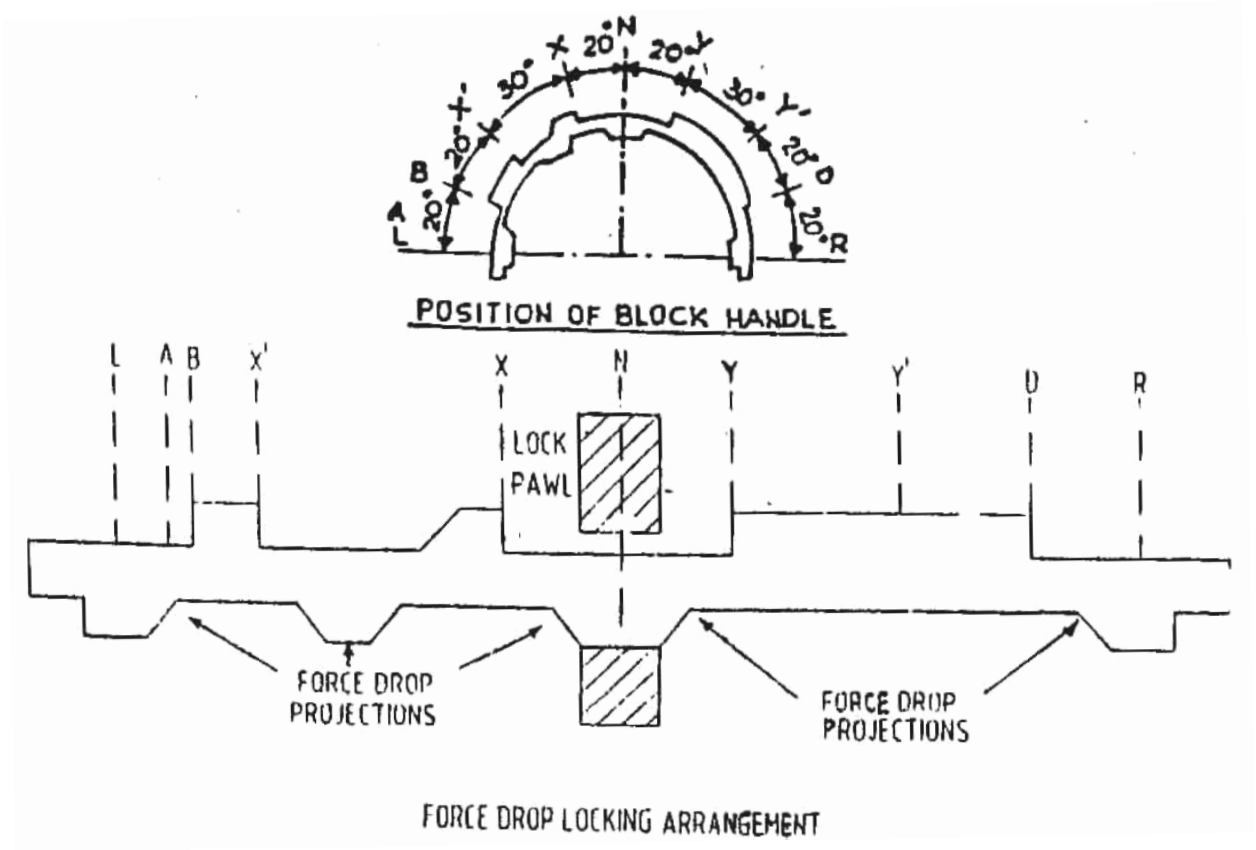
(c) Study the Terminal Block and mention how the terminals are identified in the wiring diagram:

1) Identified as

2) Location

3) Number of terminals

Mark the various locking & contact position and indicate the force-dropping bracket shown in the sketch below, also state the reason for having check lock arrangement while turning the handle to TGT



III. Study of SM's key

Keep the instruments at line closed and remove the SM's key at one end, and observe the following

a) When PB1 is pressed whether bell beat is transmitted to Stn.B **Yes/No**

b) When PB1 & PB2 are pressed whether the code is transmitted to Stn.B **Yes/No**

c) Whether the operating handle is mechanically locked at Stn.A **Yes/No**

d) Whether it is possible to operate S1 & S2 Switch at Stn.A? **Yes/No**

e) Whether it is possible to extract the Shunt key at Stn.A? **Yes/No**

f) Whether incoming code is received? **Yes/No**

g) Whether the incoming bell beats are received? **Yes/No**

h) Insert the SM's key and turn to ON position, extract the Shunt key and the SM's key, is it possible to insert the shunt key into the instrument when SM's key is out? **Yes/No**

Inference

For all the above operations, SM's key is required to be in the instrument and turned to _____ position.

IV. Study of Shunting Key

a) In Line closed condition try to extract the Shunt key at both ends

At Stn.A **Possible / Not possible**

At Stn.B **Possible / Not possible**

b) Remove the Shunt Key at one end say at Stn.A and note whether the Block Handle is locked mechanically **locked / not locked**

c) Try to extract Shunt Key with instrument at Stn.A in TGT and at Stn.B in TCF position

At Stn.A **Possible / Not possible**

At Stn.B **Possible / Not possible**

Inference

1) Shunting Key can be extracted in _____ and _____ position of the block

Handle, i.e., shunting behind a train is possible. (**TCF/TGT/Line closed**)

2) When Shunting Key is removed it locks the Block handle at line closed / TGT position _____

Signature of Trainee