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

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

प्राप्तांक
Marks Awarded :

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

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

अनुदेशक के आद्यक्षर
Instructor's Initial :

Study of the Operating Panel, Relays with terminals in the Relay cabinet of Push Button type Tokenless Block Instrument Podanur Make. IRS Specification: S.32/66.

PROCEDURE:

I. Identify the following parts of the block instrument with colour and fill the identification numbers in the brackets provided.

Part:	**Colour**	**Identification No.**
1) Line Closed Button	( )	( )
2) TGT Button	( )	( )
3) Bell Code Button	( )	( )
4) Cancel Button	( )	( )
5) SCK Button	( )	( )
6) SHK Button	( )	( )
7) Line Closed Indicator	( )	( )
8) TCF Indicator	( )	( )
9) TGT Indicator	( )	( )
10) TOL Indicator	( )	( )
11) FREE Indicator	( )	( )
12) LSS Indicator	( )	( )
13) SNR Indicator	( )	( )
14) SM Key with Knob	( )	( )
15) Counter		( )
16) Maintainer's Key		( )
17) Telephone		( )
18) Window for Buzzer		( )

II. Open the front door of the relay cabinet and write the position of the relays, type of relays & their condenser units of the Relay cabinet in below boxes

Terminals:

1 - - - - - - - - - - 10
11 - - - - - - - - - - 20
21 - - - - - - - - - - 30
31 - - - - - - - - - - 40
41 - - - - - - - - - - 50

_____ (SP) _____ (SP)

S.No.	Relay Type	Resistance	Working Voltage	Name of the relays	Contact configuration
1	QB3	200 Ohms	12V	CRR(R),CRR(N) TCKR	4F/2B
2	QL1	680(R)/145 (N) Ohms	24V	TCFR, TGTR TOLAR, TAR	8F/6B
3	TIMER		24V	Q-BASED ELECTRONIC TIMER	
4	QN1	200 Ohms	24V	SNR,ASTR,CTR CTPR,PTR,NTR RCKR,RDR, LR LPR,PCR,ASCR 1CR,2CR, 3CR P2R,N2R, ASR TCFPR, TGTPR TOLTR, LCCPR CAR, SHKR SCKR, BCBR, TGBR, LCBR.	8F/8B

III. Distribution of Condenser Units

Condenser Unit	Relays
Unit No. 1	CTR, CTPR & RCKR
Unit No. 2	2CR, LR, LPR, TOLTR & SHKR
Unit No. 3	1CR, 3CR, CAR, PCR & Counter
Unit No. 4	ASR, CRR (N/R) Diodes & Bell circuit resistance.

IV. Codes used in Push Button Block Instruments:

a) **Bell Code** ----- +ve (Single +ve pulse)

b) **Operating Code:** All operating codes are of 3 DC pulses
There are 4 operating codes as given below:-
i) TCF code ------- -ve, +ve, -ve,
ii) TGT code ------- -ve, -ve, +ve,
iii) TOL code ------- -ve, -ve, -ve,
iv) LC code ------ -ve, +ve, +ve,

V. SM lock is made of SM Key and SM Key Knob.
SM Key Knob is of two positions as 'N' and 'R' position:
SM Key can be inserted and removed in 'R' position while it gets locked in 'N' position
i) SM Key Knob in 'N' position means Operating Panel in working mode.
ii) SM Key Knob in 'R' position means Operating Panel in locked mode.

VI. Keep both the instruments in Line Closed condition & remove SM Key by turning the SM Key Knob to 'R' position at one end, say at Station A end. Observe the following & indicate.

i) Press Bell Code button at Station A, whether bell beat is transmitted to Station B **Yes/No**
ii) Press Bell Code & Train Going To buttons at Station A, whether any code is transmitted to Station B. **Yes/No**
iii) By pressing SHK button at Station A, whether it is possible to extract the Shunt Key. **Yes/No**
iv) Insert SM key at Station A & now press SHK button, whether it is possible to extract the Shunt Key. **Yes/No**

Inference: For all the above operations SM Key is required to be inserted in the instrument and turned to _____ position. **(Normal, Reverse)**

Signature of the trainee