नाम Name	:	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
अनुक्रमांक Roll No	:	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	प्राप्तांक Marks Awarded	:
पाठ्यक्रम Course	:	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _		
दिनांक Date	:	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _	अनुदेशक के आद्यक्षर Instructor's Initial	:

Study of Push back operation, wiring and supply connections in Push Button type Tokenless Block Instrument. Podanur Make. IRS Specification: S.32/66

I. **Push back Operation:**

Take Line clear at Station 'A' & dispatch train into Block section. Let Station 'B' acknowledges the TOL buzzer as usual. Allow the train to push back to station 'A' by taking 'OFF' the home signal & later normalise the home signal lever after the arrival of the train.

a) Press BCB & LCB buttons at Station 'A' & observe whether the instruments at both ends are set to Line closed conditions. **Yes/No**

b) Press BCB & LCB buttons at Station 'A', with Station 'B' also pressing BCB & LCB buttons simultaneously & observe whether the instruments at both Stations 'A' & 'B' are set to Line closed condition. **Yes/No**

c) Now let Station 'A' press & release Cancel & BCB buttons & observe whether counter reads next higher number. **Yes/No**

d) Let Station 'A' alone press BCB & LCB buttons & note whether instruments at Stations 'A' & 'B' come to Line closed condition. **Yes/No**

e) Let Station 'A' now obtain co-operation of Station 'B', with pressing of BCB & LCB at 'B' & also Station 'A' shall also press BCB & LCB simultaneously & note whether both instruments at Stations 'A' & 'B' come to Line closed. **Yes/No**

INFERENCE:

i) The counter registers next higher number when Cancel & BCB buttons are pressed & released, provided the train is pushed back properly on _____ signal. **(LSS, Home)**

ii) Co-operation of the other end SM is _____ for Push back cancellation, like Normal cancellation for setting instruments to Line closed. **(Optional, Must)**

II. Study the Terminal details of the Q series Push button Block Instrument and record their voltages:-

S.No.	**Terminal No.** **+ve** **-ve**	**Description & Observation**
1	1 4	Line battery
2	6 7	Line wire no 1 Line wire no 2
3	9&10 15 & 16	Local Battery
4	11 12	Telephone Battery
5	13 15	TAR Buzzer
6	17 43	SNR
7	19 45	ASTR
8	23 46	TAR
9	9 & 10 35	SHKR
10	29 31 30 31	LSS Red LSS Green
11	36 15 & 16	SCKR

III. Write the voltages recommended for the following supplies:

TYPE OF SUPPLY	**VOLTAGE**	**TYPE OF CELLS**
1. LINE SUPPLY		
2. LOCAL SUPPLY		
3. LOCATION SUPPLY		
4. TELE SUPPLY		

IV. Classify the relays as powered by the different supplies:

S.No.	**TYPE OF SUPPLY**	**RELAYS POWERED BY**
1	LINE SUPPY	
2	LOCATION SUPPLY	
3	LOCAL SUPPLY	

V. Write the salient features of Push Button Block Instrument:

VI. **REVIEW QUESTIONS:**

a) Write down few advantages of Push button block instrument over FM handle type tokenless block instrument

b) Explain why provision of Galvo is not considered in Push button like used in FM handle type block instrument?

c) Can this instrument be used in RE area? If not, give reasons.

Since _____ and _____ provided in the Filter Unit circuit comes in series with block lines & the _____ of DC pulses cannot be avoided. Hence this instrument _____ be used in RE areas. **(Resistance, Chokes, condensers, Distortion, cannot)**

d) Have you maintained this instrument, If so state few common faults which you have come across during the course of maintenance.

Signature of the trainee