## CONTENTS

## A.-LIFTS-GENERAL

| Knowledge required | ... | $\ldots$ | $\ldots$ | $\ldots$ | A1 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current supply and switchgear | ... | ... | ... | $\ldots$ | A2 | 7 |
| Start and change of duty ... | $\ldots$ | ... | $\ldots$ | $\ldots$ | A3 | 9 |
| Switching into and out of service |  | $\cdots$ | $\ldots$ | $\ldots$ | A4 | 9 |
| Cleanliness | ... | $\ldots$ | ... | ... | A5 | 10 |
| Renewal of electric lamps ... | ... | $\ldots$ | $\ldots$ | $\ldots$ | A6 | 10 |
| Direction of passengers ... | ... | $\ldots$ | $\ldots$ | $\ldots$ | A7 | 10 |
| Landing and travel indicators | ... | ... | ... | ... | A8 | 10 |
| Capacity | ... | $\ldots$ | ... | $\ldots$ | A9 | 11 |
| Operation of airworked doors an | d ga |  | $\ldots$ | $\ldots$ | A10 | 11 |
| Air supply | ... | ... | ... | $\ldots$ | A11 | 12 |
| Regulation of service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | A12 | 12 |
| Irregular working or failure | $\ldots$ | $\ldots$ | $\ldots$ | $\cdots$ | A13 | 12 |
| Overrunning ... | ... | $\ldots$ | $\ldots$ | $\ldots$ | A14 | 14 |
| Slow speed running... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | A15 | 15 |
| Transfer of passengers in shaft | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | A16 | 15 |
| Operation from control board | ... | $\ldots$ | $\ldots$ | $\ldots$ | A17 | 17 |
| Hand-winding | ... | $\ldots$ | $\ldots$ | $\ldots$ | A18 | 17 |
| Monthly hand-winding test | ... | $\ldots$ | $\ldots$ | $\ldots$ | A19 | 17 |
| Lifts taken over for maintenance | ... | $\ldots$ |  | ... | A20 | 18 |
| Greasing ... | ... | $\ldots$ | $\ldots$ | $\ldots$ | A21 | 18 |
| Machine rooms | $\ldots$ | $\ldots$ | ... | ... | A22 | 18 |
| Lift pits ... ... | $\cdots$ | $\ldots$ | ... | ... | A23 | 19 |
| Monthly test of emergency door | lock | $\ldots$ | $\ldots$ | $\ldots$ | A24 | 20 |
| Lift emergency alarms ... | ... | $\ldots$ | $\ldots$ | $\ldots$ | A25 | 20 |
| Types of lifts ... ... | $\cdots$ | ... | ... | $\cdots$ | A26 | 22 |

## B.-CAR CONTROL

| Equipment provided | $\ldots$ |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Preparation for service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B1 | 24 |
| Operation $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B2 |
| Locking of doors $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B3 | 27 |
| Taking out of service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B4 | 28 |
| Telephones in lifts $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B6 | 28 |
| Emergency whistles... | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B7 | 29 |
| Hand-winding $\quad \ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | B8 | 29 |

## C.-LANDING AND TICKET OFFICE CONTROL

| Equipment provided | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C1 | 30 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Preparation for service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C2 | 31 |
| Operation $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C3 |
| Taking out of service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C4 | 32 |
| Failure in shaft-landing control | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C5 | 33 |  |
| Failure in shaft-ticket office control | $\ldots$ | $\ldots$ | $\ldots$ | C6 | 34 |  |  |
| Failure of doors and gates $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C7 | 34 |  |
| Use of bell in emergency | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | C8 | 35 |

## D.-MODERNISED LANDING CONTROL

Equipment provided

Preparation for service-except at Hampstead Preparation for service-Hampstead
Operation at Aldwych
Irregular working or failure
Slow speed running..
Operation from control cabinet in machine ....
Switching out of service
$\begin{array}{ll}\text { D3 } & 39 \\ \text { D4 } & 39 \\ & \end{array}$
D5 40
D6 40
D7
D8
D
$\begin{array}{ll}\text { D8 } & 42 \\ \text { D9 } & 42\end{array}$
E.-OTIS AUTOMATIC-EARL'S COURT

| Additional equipment | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | E1 | 44 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Preparation for service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | E2 | 45 |
| Operation | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ |
| ... | E3 | 45 |  |  |  |  |  |

F.-OTIS AUTOMATIC (HIGH SPEED)-GOODGE STREET

G.-OTIS AUTOMATIC (HIGH SPEED)-HAMPSTEAD

| Equipment provided | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G1 | 52 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Safety devices | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G2 | 54 |
| Preparation for service | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G3 | 55 |
| Operation $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G4 |
| Transfer of passengers in shaft | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G5 | 56 |  |
| Hand-winding | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G6 |
| Slow speed running.. | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G7 | 58 |
| Alternative power supply | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | G8 | 58 |

## H.-WADSWORTH (HIGH SPEED)-QUEENSWAY

| Types of operation ... | $\ldots$ | ... | ... | $\ldots$ | H1 | 59 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Indicators |  | ... | ... | $\ldots$ | H2 | 59 |
| Alarms and failure indicators |  | ... | ... |  | H3 | 59 |
| Safety devices |  | .. | ... |  | H4 | 59 |
| Location of motors, etc. | . | ... | $\ldots$ |  | H5 | 60 |
| Current Supply ... | .. | ... | ... |  | H6 | 60 |
| Controls |  | ... | ... |  | H7 | 60 |
| Operation of lifts ... | ... | $\ldots$ | ... | ... | H8 | 61 |
| Switching into and out of service |  | $\ldots$ | ... | $\ldots$ | H9 | 61 |
| Preparation for service ... | ... | ... | $\ldots$ |  | H10 | 62 |
| Taking out of service ... | ... | ... | $\ldots$ |  | H11 | 62 |
| Irregular working or failure | $\ldots$ | ... | ... |  | H12 | 62 |
| Slow speed running... | ... | $\ldots$ | . |  | H13 | 63 |
| Transfer of passengers in shaft | $\ldots$ | . | ... | .. | H14 | 63 |
| Hand-winding ... ... | ... | ... | ... |  | H15 | 63 |

J.-WADSWORTH SEMI-AUTOMATIC-TUFNELL PARK


## K.-ESCALATORS-GENERAL



## L.-"L" TYPE ESCALATORS

mergency devid
$\ldots$
$\ldots$
and switching ou
Restarting after operation of safety device
Lifting combs
Hand-winding
Slow speed running or "inching" arrangements
$\begin{array}{ll}\text { L6 } & 93 \\ \text { L7 } & 93\end{array}$

## M.-"LH.D -M" TYPE ESCALATORS

'LH.D-M" Escalators
M1 94
N.-"M", "MA", "MH", "MH.A", "MY", AND "MY.A"TYPE ESCALATORS
Emergency devices ... ... ... ... ... ... N1 97
Starting ..... N2 ..... 97
Changing speed-"MH", "MH.A" and "MY. A" types ..... N3 98
Stopping and switching out ... ... ... ... ..... N4 ..... 98
Restarting after operation of safety device ..... N5 ..... 99
Lifting combs ..... N6 ..... 99
Hand-winding ..... N7 ..... 99
Slow speed running or "inching" arrangements ..... N8 ..... 100
O.-"HALL" TYPE ESCALATOR
Alperton station escalator ..... O1 ..... 101
P.-"MARRYAT \& SCOTT" TYPE ESCALATOR
Old Street, No. 3 escalator .....  ... ... ..... P1 102
Q.-"RA-C" TYPE ESCALATORS
Emergency devices ... ... ... ... ... ... Q ..... Q1 103
Starting ... ... ... ... ... ... ... ..... Q2 ..... 103
Stopping and switching out .....  ..... Q3 104
Restarting after operation of safety device .....  ..... Q4 104
Lifting combs .... ... ... ..... Q5 ..... 104
Hand-winding ... ... ... ... ... ... ..... Q6 ..... 105
Slow speed running or "inching" arrangements ..... Q7 ..... 105
Emergency power supply-South Kensington ..... Q8 ..... 105

