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OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

STANDING ORDER NO. 1 ( ONE )  
DATED THE 8-1-1971

In exercise of the powers conferred by Rule 26(1) of the Rajasthan Police Sub-ordinate ~~Rules~~ services Rules 1966, and in supersession of the standing order No.1 dated 6.2.1968, the Inspector General of Police Rajasthan hereby prescribes the following syllabi for the Qualifying Examinations for selection for promotion Cadre Courses for the posts mentioned below and details given in the enclosed appendices :-

I. QUALIFYING EXAMINATIONS

1. Constables to the rank of Head Constable Radio Operators .. Appendix 'A' ✓
  2. Constables to the rank of Head Consts Mechanics (Electrician/Fitter) ...-do-'B' ✓
  3. Head Consts. Radio Operators to the rank of A.S.I. Radio Operators ..-do-'C' ✓
  4. Head Consts. Mechanics to the rank of A.S.I. Mechanics. ...-do-'D' ✓
  5. Head Consts. Operator/Mechanic to the rank of A.S.I. Radio Technician. ...-do-'E' ✓
  6. A.S.I. Radio Operators to the rank of Sub-Inspector Radio Operator. ...-do-'F' ✓
  7. A.S.I. Radio Technician to the rank of Sub-Inspector Radio Technician ..-do-'G' ✓
  8. S.I. Radio Operators to the rank of S.I. Radio Supervisor Operators. ...-do-'H' ✓
  9. S.I. Radio Technicians to the rank of S.I. Radio Supervisor Technician ..-do-'I' ✓
  10. S.I. Radio Supervisor Operator/Techs. to the rank of Inspector Police Radio ..-do-'J' ✓
2. The qualifying examinations shall carry 200 Marks.
3. The various Committees shall prepare list of Officers for under going Promotion Cadre Courses as provided in Rule 23 and 24 of the Rajasthan Police Sub-Ordinate Service Rules 1966. Details of the syllabi for Promotion Cadre Course for the post mentioned below shall be as given in the enclosed appendices:—

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II PROMOTION CADRE COURSE

- 1. Constables to the rank of Head Consts. & Radio Operators. .. Appendix 'K'
- 2. Constables to the rank of Head Consts. Mechanics (Fitter/Electrician) .. -do- 'L'
- 3. Head Consts. Radio Operators to the rank of A.S.I. Radio Operators .. -do- 'M'
- 4. Head Consts. (Mechanics) to the rank of A.S.I. (Mechanic) .. -do- 'N'
- 5. Head Consts. Mechanic/Operator to the rank of A.S.I. ~~Mechanic~~ Radio Technician. .. -do- 'O'
- 6. S.I. Radio Supervisor Operators/Techs. to the rank of Inspector of Police Radio .. -do- 'P'

- 4. Those who secure 35% in written test, 40% in Practical and out door tests and 45% in aggregate shall be considered as passed in the Promotion Cadre Course.
- 5. The various Committees referred to in Rule 24 of the Rajasthan Police Sub-ordinate Service Rules 1966, shall fix the dates and places of the examination. They shall conduct the examination and shall declare the result.

*Sultan Singh*

(SULTAN SINGH)  
Inspector General of Police  
Rajasthan, Jaipur.

Copy forwarded to :-

- 1. The Chief of Intelligence, CID Raj. Jaipur.
- 2. All the D.I.G of Police Rajasthan including ADP Kota/ RAC Jodhpur/CID IB, CID CB and ACD Jaipur.
- 3. The Director, State Police Wireless Rajasthan, Jaipur.
- 4. The Asstt. I.G. of Police I, II and Traffic Raj. Jaipur.
- 5. All Supdts. of Police Rajasthan including CID IB, CID CB, ACD Jaipur, GRP Ajmer, CID Zone Jodhpur.
- 6. The Director FSL, Rajasthan, Jaipur.
- 7. Principal Police Training School, Kishangarh.
- 8. All Commandants RAC Ins. Rajasthan including MBC Kherwara.
- 9. All Dy. Supdts. of Police (Radio) Rajasthan, Jaipur.
- 10. Sr. Accts Officer, PHQ Rajasthan Jaipur.
- 11. All Asstt. Accts. Officers PHQ Jaipur.
- 12. All the Inspectors of Police (Radio) Rajasthan.
- 13. All the Station Officers, Police (Radio) Station Rajasthan.
- 14. All Sub-Inspector (Supervisors) Police Radio Rajasthan.
- 15. Office Asstt., State Police Wireless Jaipur.
- 16. Force Clerk State Police Wireless Jaipur.
- 17. All Group Incharges, Force Branch PHQ, Jaipur.
- 18. T.A. to the Director, State Police Wireless, Raj. Jaipur.

*Sultan Singh*

(SULTAN SINGH)  
Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN"SYLLABUS FOR THE QUALIFYING EXAMINATION OF  
CONSTABLES FOR SELECTION FOR PROMOTION CADRE  
COURSE FOR PROMOTION TO THE RANK OF HEAD  
CONSTABLES RADIO OPERATORS"

\*\*\*\*\*

A. Written Test	...	50 Marks
B. Practical & Out-door	...	50 Marks
C. Interview & Record	...	100 Marks

A WRITTEN TEST :

1. Simple mathematics of Higher Secondary standard.
2. Radio Theory :  
Ohms' Law, Maintenance of P.G. and Secondary Batteries, Electromagnetic induction, series and parallel connections of electrical components.
3. Knowledge of Radio Procedure, specially CW and R/T Procedure.

B. PRACTICAL & OUT-DOOR :

1. Must know external maintenance of Wireless equipments.
2. Should be able to work as an Operator of out Station.

C. INTERVIEW & RECORD :

As per Rules.

*[Signature]*  
Inspector General of Police  
Rajasthan, Jaipur.

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APPENDIX 'B'

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

"SYLLABUS FOR THE QUALIFYING EXAMINATION OF CONSTABLES FOR SELECTION FOR PROMOTION COURSE FOR PROMOTION TO THE RANK OF HEAD CONSTABLE MECHANIC (ELECTRICIAN & FITTERS)"

\*\*\*\*\*

- A. Written Test ... 50 Marks
- B. Practical & Outdoor ... 50 Marks
- C. Interview & Record ... 100 Marks

A. WRITTEN TEST :

- a) 1. Maintenance and charging system of Secondary Batteries.
- 2. Working principle of two and four stroke Engines.
- b) 1. Magnetism and its properties.
- 2. Series and parallel connection of R.L. & C.
- c) 1. Duties of a Mechanic in P.R.O.

B. PRACTICAL & OUT-DOOR :

- 1. Repairing of running faults of a P.G.
- 2. Series and parallel connection of Batteries.
- 3. Wiring of mains Boards. Repairs of Generator side of a Battery Charger.

C. INTERVIEW & RECORD :

As per Rules.

*[Handwritten Signature]*

Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

"SYLLABUS FOR THE QUALIFYING EXAMINATION OF HEADS  
CONSTABLES (OPERATORS) FOR PROMOTION CADRE COURSE  
FOR PROMOTION TO THE RANK OF ASSISTANT SUB-INSPECTOR  
RADIO OPERATORS"

\*\*\*\*\*

A. Written Test	...	50 Marks
B. Practicals & Outdoor	...	50 Marks
C. Interview & Record	...	100 Marks

A. WRITTEN TEST :

1) Radio Theory :-

Ohms' Law, Series & Paralled connections of resistances, Inductors and ~~conductors~~, Charging of accumulators and their maintenance. Elementary knowledge of thermionic valves, Diodes, Triodes, Oscillators, Detectors and Modulators, Block and schematic Diagram of Trans-receiver. Elementary knowledge of wave propogation on the medium and high Frequencies.

Condens-  
sers

ii) Radio Procedure of III Grade standard.

iii) Duties of Station Officer of Radio Station and method of maintaining its record. Knowledge of ~~monthly~~ <sup>quarterly</sup> and annual returns required to be sent from a Radio Station.

six  
monthly

B. PRACTICAL AND OUT DOOR :

- i) Should be able to work as a Control Operator of a Multi-channel W/T Link.
- ii) Should be able to Operate and tune any one out of two types of Low Power Sets used in State Police Wireless and must know the installation practice of outdoor antennas.

C. INTERVIEW & RECORD :

As per Rules.

Inspector General of Police  
Rajasthan, Jaipur.

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APPENDIX I

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

"SYLLABUS FOR QUALIFYING EXAMINATION OF HEAD-CONSTABLES (MECHANICS) FOR PROMOTION CADRE COURSE FOR PROMOTION TO THE RANK OF ASSISTANT SUB-INSPECTOR (MECHANICS)"

\*\*\*\*\*

- A. Written Test ... 50 Marks
- B. Practical & Out door ... 50 Marks
- C. Interview & Record ... 100 Marks

A. WRITTEN TEST I

- 1. Principles of working of two and four Stroke Engines and names of parts and their functions.
- 2. Probable faults, symptoms and their remedy of Secondary Battery and Petrol Engines used in ~~Police~~ State Police Wireless
- 3. Properties and applications of resistance, Capacitance and inductances.
- 4. Winding principles of transformers.

B. PRACTICALS & OUT DOOR :

- 1. Repairs of all types of P.Gs used in ~~Police~~ State Police Wireless.
- 2. Grouping of Cells in series and parallel for current, Voltage and capacities.
- 3. Repairs of house wiring, Electric Fans, Heater and other electric apparatus.
- 4. Repairs of Motors & Dynomotors.
- 5. Winding of Transformers.

C. INTERVIEW & RECORD :

As per Rules.

*[Handwritten Signature]*

Inspector General of Police  
Rajasthan, Jaipur.

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APPENDIX 171

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

"SYLLABUS FOR THE QUALIFYING EXAMINATION OF HEAD CONSTABLES OPERATORS/MECHANICS FOR SELECTION FOR PROMOTION CADRE COURSE FOR PROMOTION TO THE RANK OF ASSTT. SUB-INSPECTORS RADIO TECHNICIANS"

\*\*\*\*\*

- A. Written Test ... 50 Marks
- B. Practical & Out Door ... 50 Marks
- C. Interview & Record ... 100 Marks

A. WRITTEN TEST:

1. Series and parallel connection of resistances, Inductors and condensers, Charging systems and maintenance of Secondary Batteries. Full wave and half wave rectifiers, Block and schematic diagram of trans-receivers, Functions of different stages of a communication receiver, different types of oscillators. Knowledge of wave propagation and different types of aerials used in State Police Wireless.
2. Duties of a Radio Technician in the Work-shop. Knowledge of records maintained in the Work-shop.

B. PRACTICAL & OUT-DOOR :

1. Must be able to measure the voltages and current of stages of a Receiver with the help of Meters.
2. Must know the calculations of Aerial length of a given frequency.

c. INTERVIEW & RECORD :

As per Rules.

*[Handwritten Signature]*

Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

"SYLLABUS FOR THE QUALIFYING EXAMINATION OF ASSTT. SUB-INSPECTORS (OPERATORS) FOR PROMOTION CADRE COURSE FOR PROMOTION TO THE RANK OF SUB-INSPECTOR RADIO OPERATORS"

\*\*\*\*\*

A. Written Test	... 50 Marks
B. Practical & Out door	... 50 Marks
C. Interview & Record	... 100 Marks

A. WRITTEN TEST :

- i) Charging system, maintenance and precautions of Secondary Batteries, Use of P.Gs/Main Chargers. Knowledge of Diodes, Triodes, Oscillators, Detectors and modulators, Block and schematic diagram of Trans-receiver, Knowledge of wave propagation on the high frequencies and V.H.F.. Advantage of a transistor over a valve and precautions to handle the transistorised equipment, Amplifiers A, B, & C Calculation of Aerial length and its installation, Critical frequency O.W.F. skip distance, Dead Zone, Sun spot activity, Sensitivity, selectivity and fidelity of a Communication Receiver - Its definition and meaning, Installation practice of VHF Aerials.

ii) Radio Procedure.

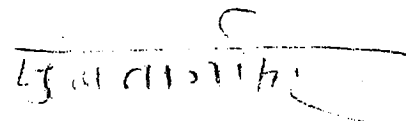
- iii) Duties and responsibilities of Station Officer of a District Radio Station. Maintenance of a Multi-channel Station. Methods of keeping secrecy and precautions in handling secret documents of a District Station.

B. PRACTICALS & OUT-DOOR :

- i) Must be able to receive and transmit 12 messages consisting of 1350 characters in 15 minutes at a speed of 18 w.p.m. securing 65% marks.
- ii) Must be able to operate and tune any one out of four types of sets used in State Police Wireless. He should be able to detect the external faults of TX/RX and Dynamotors. Must have the knowledge of installation of out door antennas.

C. INTERVIEW & RECORD :

As per Rules.

  
 Inspector General of Police  
 Rajasthan, Jaipur.



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OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

" SYLLABUS FOR THE QUALIFYING EXAMINATION OF ASST. SUB-INSPECTOR (RADIO TECHNICIANS) FOR PROMOTION CADRE COURSE FOR PROMOTION TO THE RANK OF SUB-INSPECTOR RADIO TECHNICIANS."

\*\*\*\*\*

- A. Written Test ... 50 Marks
- B. Practicals & Out door ... 50 Marks
- C. Interview & Record ... 100 Marks

A. WRITTEN TEST :

- I) 1. AF, IF & RF Transformers - special types of Chokes, condensers and Transformers.
2. Vacum tubes, their principles of working, Valve constants and their relation, Tube noise, non-linear distortion- Miller effect, transit time effect.
3. Sensitivity, selectivity, Image reflection, fidelity of a high grade communication RX.
4. DSB & QSB Transmission. Balanced modulation and side band suppression.
5. V & I relation ship in a transmission line, Matching circuits. Adjusting load for matched termination. Stub matching. SWR measurements.
6. Voltage and current distribution in Aerials, HF directional aerial systems, Rhombic, Yagi and U.H.F. Antennas.
7. Difference between HF and VHF, Mobile and static communication and aerials used therein.
8. Transistorised Power Supply Circuits.
- II) 1. Duties and responsibilities of a Radio Technician in the Work-shop, Methods of maintaining Job-cards Stores and other records of a Work-shop.

B. PRACTICAL & OUT-DOOR :

- a. Must be able to repair all types of equipments (transistorised and otherwise) used in P.R.O. S.P.W. upto 75 Watt. Signal tracing, methods, should know the use of testing instruments of a Regional Work-shop.

C. INTERVIEW & RECORD :

As per Rules.

*(Signature)*  
Inspector General of Police  
Rajasthan, Jaipur.

## OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

## " SYLLABUS FOR THE QUALIFYING EXAMINATION OF SUB-INSPECTOR OPERATORS FOR PROMOTION CADRE COURSE FOR PROMOTION TO THE RANK OF SUB-INSPECTORS RADIO SUPERVISOR OPERATORS"

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- |                         |     |           |
|-------------------------|-----|-----------|
| A. Written Test         | ... | 50 Marks  |
| B. Practical & Out door | ... | 50 Marks  |
| C. Interview & Record   | ... | 100 Marks |

WRITTEN TEST :

- I) 1. Block diagram of all the stages of HF Receiver and Transmitter.
2. Class A, B and C Amplifiers and their uses.
3. Types of modulations and percentage modulation.
4. Principles of SSB Techniques.
5. Details of Hartley and Colpitt Oscillators.
6. A.V.C. and Delayed A.V.C.
7. Knowledge of propagation of Radio waves, skip distance, ground and sky waves.
8. Different types of aerials, feeders and their matching, SWR
9. Ionosphere and its effect on HF and VHF.
10. Block diagram of VHF circuits, aerials for mobile and static operation, VHF Aerials for point to point communication.
- II. 1. Radio Procedure.
- III. 1. Duties of Supervisor of a Sector or Multi-channel Station. Methods of maintaining records/stores and knowledge of all returns required to be sent to Hqs. & to be received from out Stations. Precautions in handling and maintaining secret documents of Radio Station/Sector.

B. PRACTICAL & OUT-DOOR :

1. Must be able to receive and transmit 13 messages of 1500 characters in 15 minutes at a speed of 20 w.p.m. securing 70% marks.
2. Must be able to operate and tune all types of low power sets used in S.P. CW should be able to rectify external faults of RX/TX/PS/Dynacouder/PGs and Batteries.

He should be well conversant about the methods of installation of out door Antennas of different types. He should have full knowledge about the arrangements of installation of V.H.F. Sets required for VIP's duties.

C. INTERVIEW & RECORD :

As per Rules.

*(Signature)*  
Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

" SYLLABUS FOR THE QUALIFYING EXAMINATION OF SUB-INSPECTOR RADIO TECHNICIANS FOR PROMOTION COURSE FOR PROMOTION TO THE RANK OF SUB-INSPECTOR SUPERVISOR RADIO TECHNICIANS "

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- |                         |              |
|-------------------------|--------------|
| A. Written Test         | ... 50 Marks |
| B. Practical & Out Door | ... 50 Marks |
| C. Interview & Record   | ...100 Marks |

A. WRITTEN TEST :

- I) 1. High and Low pass filters, Attenuators,  
 2. Tuned RF Voltage/Power Amplifiers, Negative Feed back and D Amplifiers, Differentiator & integrator circuits.  
 3. Transistors circuits, cascode and boot trap circuits, Tunnel Diodes, Varistors, Zener diode and its use.  
 4. High Grade Communication Receivers and their special circuits, AFC  
 5. Various types of circuits of 50/75 Watt, HF CW/Mcw/ RF transmitters used in State Police Wireless FSK Units DSB & SSB WTs, safety devices and interlock system, VHF-FM Trans-receivers. Special VHF Techniques regarding Mobile communications for multi channel operation. Automatic repeaters.  
 6. Aerial, Transmission Lines :-  
 Broadside and end fire transmitting and receiving arrays, Rhombic, Yagi, Logperiodic aerial, Polar diagrams, Fading, Diversity reception system, Harmonic suppression by Filters, Antenna matching circuits, VHF & UHF propagation, characteristic.
- II) 1. Duties and responsibilities of a Supervisor (Tech) as Incharge of a Sector Work-shop, Methods of maintaining records/stores and knowledge of all returns required to be sent to Hqs. from a Sector Work-shop.

B. PRACTICAL & OUT-DOOR :

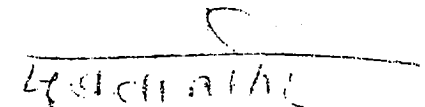
1. Measuring & Test Instruments :-

Selectivity and sensitivity measurements in Radio Receivers, Audio frequencies response measurements use of VTVMs & HF Oscilloscopes.

2. Locating and repairing all kinds of faults in communication equipments, Radiograms, Tape-recorders Testing instruments, VHF Equipments.

C. INTERVIEW & RECORD :

As per Rules.

  
 Inspector General of Police  
 Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

" SYLLABUS FOR THE QUALIFYING EXAMINATION OF SUB-INSPECTOR  
RADIO SUPERVISOR OPERATORS/TECHNICIANS FOR PROMOTION  
CADRE COURSE FOR PROMOTION TO THE RANK OF INSPECTOR RADIO  
POLICE

A. Written Test	... 50 Marks
B. Practical & Out-door	... 50 Marks
C. Interview & Record	... 100 Marks

A. WRITTEN TEST :

- I) 1. Electronically stabilised power supplies.  
 2. Negative and Feed back, amplifiers.  
 3. Integrator and differentiator circuits.  
 4. Different types of Oscillators.  
 5. Characteristics of a high grade communication receiver and its special circuits.  
 6. SSB, its advantage and dis-advantages over DSB.  
 7. Frequency phase and pulse modulation.  
 8. Different types of HF and VHF Aerials and their installation.  
 9. Propagation of HF and VHF waves.  
 10. Transistor Static and Dynamic characteristics.
- II) 1. Radio Procedure.
- III) 1. Duties of Supervisor of a Sector. Knowledge of maintaining secrecy and methods of holding secret documents of a Station/Sector.

B. PRACTICAL & OUT-DOOR :

(a) FOR S.I. SUPERVISOR (OPERATORS)

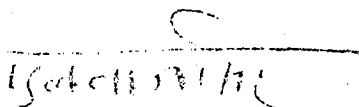
1. Must be able to supervise the working of a Control Station with atleast 4 out stations on A1 with QRM3 according to Police Radio Procedure.
2. Should be able to tune and operate any one out of HF type of Sets used in G.R.C. after removing faults from the Set.

(b) FOR S.I. SUPERVISOR (TECHNICIANS):

1. Must be able to rectify three major faults in any type of equipments, Radiogram, Tape Recorders Testing Instruments.
2. Fabrication of a circuit with the help of given data.

C. INTERVIEW & RECORD :

As per Rules.

  
 Inspector General of Police  
 Rajasthan, Jaipur.

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OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

"SYLLABUS FOR PROMOTION CADRE COURSE OF CONSTABLES FOR PROMOTION TO THE RANK OF HEAD CONSTABLES (OPERATORS)".

\*\*\*\*\*

Duration of the Course ... 3 Months.

- A. Written Test ... 50 Marks
- B. Practical & Outdoor ... 40 Marks
- C. Rules & Regulations ... 10 Marks

A. WRITTEN TEST :

State  
Police  
Wireless

1. Maintenance of Secondary Batteries and P.G. Engines, their defects, symptoms and remedies. Charging systems of Secondary Batteries, Calculation of Dipole and other Antennas used for H.F. communication in ~~Police~~ Block diagram of Super Heterodyne Receiver and Transmitter.
2. Police Radio Procedure :-

Working knowledge of CW & R/T Procedure including operating signals. Registration of Messages and maintenance of Radio Log Books.

3. Duties of an Operator and Station Officer of a Out Station, Maintenance of Records and details of returns to be sent from the Station.

B. PRACTICAL & OUT-DOOR :

1. Should be able to receive and transmit messages at the III Grade standard.
2. Must be able to operate and tune any two types of Transmitters and Receivers used in State Police Wireless. Must be able to instal H.F. Aerial.

C. ~~EXAMINATION~~ RULES & REGULATIONS :

1. Knowledge of Police Radio Organisation, its branches and their system of work.
2. Elementary knowledge of Police Act/ and/ Police Sub-ordinate ~~Rules~~ Service Rules. 1861 Rajasthan

*[Signature]*  
Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN

" SYLLABUS FOR PROMOTION CADRE COURSE OF CONSTABLES  
FOR PROMOTION TO THE RANK OF HEAD CONSTABLES  
MECHANIC/FITTER AND ELECTRICIANS  
\*\*\*\*\*

- |                           |               |
|---------------------------|---------------|
| 1. Duration of the course | ... 3 Months. |
| A. Written Test           | ... 50 Marks. |
| B. Practical and Outdoor  | ... 40 Marks. |
| C. Rules & Regulations    | ... 10 Marks. |

A. WRITTEN TEST:

1. Working system of a Generator and Alternator.
2. Function and Handling of mains Charger.
3. Preparation of Electrolyte and measuring of its specific gravity.
4. Initial charging, Regular charging and Trickle charging of Secondary Battery, Normal Charging and discharging.
5. Effect and remedies of over charging ~~and~~ over discharging of a Battery.
6. Relation between voltage, current, resistance and power in electrical circuits.
7. Ohm's Law, Faraday's Law, Lenz's Law, Flemings Rules for Motors and Generators.
8. Main faults, symptoms and remedies of Secondary Batteries and Patrol Generators.
9. Duties of Head Constable Mechanic in P.R.O. State Police Wireless.

B. PRACTICAL & OUT-DOOR :

1. All major repairs of P.Gs and Batteries used in P.R.O.
2. Series and parallel connection of Batteries for charging and their use.
3. Fitting of Tube light, Electric Bell and other apparatus and their repairing.
4. Repairs of Motors and Dynamotors.
5. Wiring of Transformer and Armatures.
6. House wiring mains Board wiring and stair case wiring.

C. RULES & REGULATIONS :

1. Knowledge of Police Radio Organisation.
2. An elementary knowledge of Police Act, 1861
3. Knowledge of all ranks of Police Department.

Signature  
Inspector General of Police  
Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

" SYLLABUS FOR PROMOTION CADRE COURSE OF HEAD CONSTABLES  
(OPERATORS) FOR PROMOTION TO THE RANK OF ASSTT. SUB-  
INSPECTOR RADIO OPERATORS)"

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Duration of the course	... 3 months.
A. WRITTEN TEST	... 50 Marks.
B. Practical and Outdoor	... 40 Marks
C. Rules & Regulations	... 10 Marks.

A. WRITTEN TEST :

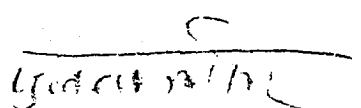
1. Ohm's law, Faradays and Lenzes Law, Defects and remedies of P.Gs and Secondary Batteries in details. Block & schematic diagram of communication Receiver and Transmitter, Care and maintenance of W/T equipments, Simple circuits of AF & RF Amplifiers, Full wave and half wave rectifiers. Installation of a Dipole aerial Method of the cutting of the length of aerial to a given frequency, Matching of windom, whip, ground plan aeriels, paralled wire and coaxial transmission lines.
2. Radio Procedure :- III Grade Operators standarts
3. Duties of Station Officer of a District Station, knowledge of all returns, knowledge of Radio security and an idea of the methods of keeping the secret documents secure.

B. PRACTICAL & OUT-DOOR :

1. Must be able to receive and transmit 11 messages ~~Q~~ (standard) in 15 minutes securing 45% marks.
2. Must be able to net, tune and operate any type of TX/RX used in State Police Wireless. Must know aerial installation. Use of frequency meter.

C. RULES & REGULATIONS :

1. An idea of Police Act 1861 <sup>Rajasthan</sup> and <sup>Police Sub-ordinate</sup> ~~Police~~ Service Rules.
2. Knowledge of Police Radio Organisation and working of its Branches (Sections)

  
 Inspector General of Police  
 Rajasthan, Jaipur.

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

" SYLLABUS FOR PROMOTION CADRE COURSE OF HEAD CONSTABLE  
MECHANICS FOR PROMOTION TO THE RANK OF ASST. SUB-  
INSPECTOR (MECHANICS)"

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Duration of the Course	... 3 months.
A. Written Test	... 50 Marks
B. Practical and out door	... 40 Marks
C. Rules & Regulations	... 10 Marks

A. WRITTEN TEST :

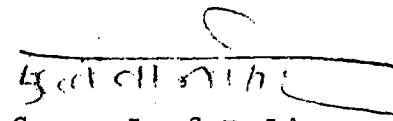
1. Operating principles of 2 & 4 strokes cycles, T.D.C., B.D.C?, Lead & Log.
2. Knowledge of fuel system, Ignition system, lubrication system, Governor system, cooling system and generating system of P.E.G.
3. Difference between a Petrol Engine and a Diesel Engine.
4. Working knowledge of Audio Amplifiers and horn, public address system and telephones.
4. Duties and responsibilities of an Incharge of Electric Shop, P.G. Workshop and Battery W/Shop.

B. PRACTICAL & OUT-DOOR :

1. Repairs of half wave, full wave and stabilised power supplies used for communication equipment.
2. Installation and repairs of Audio Amplifiers.
3. Repairs of Motors and Generators and Transformers.
4. Major repairs of all types of P.Gs, P.Ps and Diesel Engines used in ~~XXXXX~~ State Police Wireless.

C. RULES & REGULATIONS :

1. An idea of Police Act 1861.
2. An idea of Police Sub-ordinate ~~XXXXX~~ Service Rules.
3. Knowledge of Police Radio Organisation and its branches and administration.

  
 Inspector General of Police  
 Rajasthan, Jaipur.



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APPENDIX 101

OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

"SYLLABUS FOR PROMOTION CADRE COURSE OF HEAD CONSTABLES  
MECHANICS/OPERIORS FOR PROMOTION TO THE RANK OF  
ASSISTANT SUB-INSPECTOR RATED TECHNICIANS"

Duration of the course	...	3 Months.
A. Written Test	...	50 Marks
B. Practical & Out door	...	40 Marks
C. Rules & Regulations	...	10 Marks

A. WRITTEN TEST :

1. Relation between Voltage, current, resistance and power in electrical circuits, Detailed study of various stages of a communication Receiver and its qualities, Types of modulation, Oscillators, Difference between a transistor and a Valve, Their advantages and disadvantages, Transistorised P.S.U Transistor characteristics, Difference between HF and VHF, DSB&SSB, FM & AM, their advantages and disadvantages. Schematic diagram of a Receiver/Transmitter and Power Supplies, Main faults, symptoms and remedies of Secondary Batteries and Petrol Generators.
2. Duties and responsibilities of a Radio Technicians in ~~xxxxxx~~ State Police Wireless.

B. PRACTICAL & OUT-DOOR :

1. Use of Multi-meters and other Meters generally Required in the Work-shop.
2. Repairs of two given faults in a Receiver/Transmitter or Power Supply transistorised or otherwise.
3. Tuning and alignment of VHF Sets.

C. RULES & REGULATIONS :

1. Knowledge of all Stations of ~~xxxxxx~~ State Police Wireless.
2. Elementary knowledge of Police Act., 1961
3. Knowledge of all ~~Ranks~~ ranks of Police Department.

*[Handwritten Signature]*

Inspector General of Police  
Rajasthan, Jaipur.

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APPENDIX 'P'

SYLLABUS  
OFFICE OF THE INSPECTOR GENERAL OF POLICE RAJASTHAN JAIPUR

"SYLLABUS FOR PROMOTION CADRE COURSE OF SUB-INSPECTOR SUPERVISORS (OPERATORS/TECHNICIANS) FOR PROMOTION TO THE RANK OF INSPECTOR POLICE RADIO"

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Duration of the course	...	3 Months.
A. Written Test	...	50 Marks
B. Practical and Out door	...	30 Marks
C. Rules & Regulations	...	20 Marks.

A. WRITTEN TEST:

- I. i) A comprehensive study of aeriels and various types of arrays, like Yagi, Rhombic, Log periodic aeriels etc.
- ii) Cross modulation, Image and adjacent channel interference.
- iii) Working knowledge of RTTY, Repeaters.
- iv) Study of special transistor circuit like boot strap cascade, transistor pump, differential amplifiers.
- II. 1) Radio Procedure.
- III.i) Duties of an Inspector of ~~XXXXXX~~ State Police Wireless, knowledge of security of secret documents used in S.P.W. Method of filling and checking of Log Books, Job Cards and other Record of a P.R. Station, Workshop, Stores and Sectors.
- ii) Scrutiny of traffic record at Central Check Office for irregularities and delays security aspects of Radio communication.
- iii) Method of making stores requirement estimates on scientific basis, preparation of plans and estimates of new installation.
- IV 1) Methods of establishing a V.H.F. back-bone system of communication. Paging system and their applications. Methods for improvements of traffic handling capacity by more modern systems.

B. PRACTICAL & OUT-DOOR :

- a) FOR S.I. SUPERVISOR (TECHNICIANS)  
Major repairs of HF & VHF sets ~~xxxxxxxxxxxxxx~~  
Radiograms, Tape-recorder etc. used in P.R.C.
- b) FOR S.I. SUPERVISOR (OPERATIONAL)  
Tuning and alignment of VHF Sets with the help of Meters, Use of Multimeters and SWR meters. Measurement of current and voltage ~~at~~ given points in a W/T Taps.

C. RULES & REGULATIONS :

- 1. Knowledge of Police Act, 1861.
- 2. Police Radio Organisation, its branches and administration
- 3. Rules & conductien, PE/DE, U/S 16&17 of CCA Rules, 1958.
- Raj. 4. Knowledge of Police-Sub-ordinate ~~xxxxxx~~ Service Rules.

Inspector General of Police  
Rajasthan, Jaipur.