

I. Entry Level Examination (Self Knowledge Based) (M.M. - 100)
(Min. Pass Marks- 50)

Training Module for C(Radio) to HC(Radio) P.P.Course

S.No	Topic	Synopsis
1	Radio Theory	<p>Ohms Law, KVL, KCL and its numerical exercises.</p> <p>Batteries - Charging and discharging. Fault and remedy for the lead acid batteries. Effect of over charging and discharging, sulphation, Ni-MH batteries-their construction & maintenance. VRLA & Tubular batteries.</p> <p>Semi Conductors :- P-N Junction diode and its characteristics. Zener diode. Light emitting diode (LED), Seven segment display.</p> <p>Transistors- Introduction, Construction, Operation of PNP and NPN, Transistor Biasing and characteristic of CE configuration.</p> <p>Logic Gates- Introduction, Basic logic gates with truth table.</p> <p>Rx & TX.- Difference between AM and FM modulation. Block diagram of FM receiver.</p> <p>Repeaters & Networking- VHF and HF networking in MP, General maintenance of repeaters and their importance repeater, simplex, semi duplex, full duplex.</p> <p>RTS- Introduction, Block diagram and function. Comparison with conventional communication System.</p>
2	Telecommunication Procedure	<p>Wave propagation, Antenna, Transmission line.</p> <ol style="list-style-type: none"> 1. Pro sign, Authorized abbreviation. Operating signals. 2. Types of message, Section and component of formal message, Component used in procedure message, Service message. 3. General instruction on message writing. Use of priorities, security. 4. Out message, In message, Through message, N.R slip, delay memo. 5. Call and call sign, preliminary calling and answering, establishing communication, discipline to be exercised when calling and answering, offering message. 6. "F" method, "G" method, Broadcast method (B.C.) difficult communication method (D.C.) 7. Operating rules, Radio log, Recording of message, Handing and taking over charge the watch. 8. Abbreviated procedure. 9. Distress signal, Alarm signal, Urgency signal, Safety signal. 10. General types of R/T communication, How to speak, Preliminary calling and answering, Control working, initiating R/T conversation, Transmitting and receiving formal message, Abbreviated R/T procedure, Security. 11. Q code and P code. 12. D.S.R. 13. Basic knowledge of communication security, PWCC. 14. Duties of OIC (R) watch and S.S.O. Signal security. 15. Handling of CSD/Cipher document
3	Computer Practical	<p>Fundamental of Computer, Windows, Hardware/ software installation, Hindi/English Typing, MS Word, Excel, Power point, email-internet, bulk SMS, Skype, configuration of Internet, Printers. computer hardware & networking.</p>

II. Technical Knowledge (Theory)

Training Module for Constable (Radio) to H.C.(Radio) P.P.Course

[TOTAL PERIODS = 120]


Topic	Synopsis	No. of Period (60)
Rectifiers	Rectifiers- Difference among HW, Center Tapped FW, Bridge FW Rectifiers. Filter- Different types of passive Filters.	3
Power Supply	Power Supply- Basic block diagram and function of Power Supply. Voltage regulators with Zener diode and transistor. Difference between UPS and SMPS.	3
Radio Trunking System	Digital Trunking System-Working function of main components, Advantages etc, Introduction of TETRA system.	3
Dial-100	Dial-100 :- Net viewer, Call taker, Call Dispatcher, SPOC, MDT, Point of Interest.	5
VHF Network	VHF Network :- Repeater, Simplex, Semi duplex, Full duplex, Full-full duplex, Patch unit repeater, Frequency allotment in VHF network, Geographical maps, Radio Mobile software.	4
6.1 Introduction of Video Conferencing	1. Introduction 2. Parts of video conferencing 3. Modes of video conferencing 4. Video conferencing component & equipments. 5. Component functions 6. Remote control button & there use 7. Installation procedure of video conferencing 8. Benefits of video conferencing	2
6.2 UAV	1. Overview 2. Main features 3. Performance parameters 4. Specifications 5. Important features 6. Surveillance tool 7. Application areas 8. Deployment method 9. Benefits 10. Precautions before, after & during UAV flight 11. Govt. regulations regarding UAV flight.12. Anti Drone Technology	3
6.3 Biometric Attendance System (BAS)	1. Overview 2. Working Procedure 3. BAS use in organisation 4. Registration method 5. Requirements for BAS 6. Precautions in installation of BAS Machine 7. Types of report and there analysis.	2
6.4 CCTV	System Architecture and operation, A.N.P.R. system, R.L.V.D. System, Video management system (V.M.S.)	6
6.5 ROIP	1. Overview & Working Components of ROIP, Advantages of ROIP System. Common frequent problems & there Solution methods for ROIP System.	2
6.6-CUG	1. Overview 2. Working Procedure 3. Important Features 4. CUG Portal	2
Computer	1. Hindi/English Typing 2. MS Word, Excel, Power point 3. E-mail, Internet, Bulk SMS, Skype	10
Social Media	Operation of Social networking like Whatsapp, Twitter, Facebook etc 1. Whatsapp - Installation, Privacy settings etc. 2.-X (Twitter) - Installation, Profile updating, Privacy settings. 3. SMS - Message sending procedure. 4. Facebook - ID creation, Profile, settings, Privacy settings	4
Behavioral Science	Telephone talk, Wireless talk and their etiquettes .	2
Digital Mobile Radio (DMR)	Introduction, Modes of DMR, Dispatcher and microwave link Advantages and Disadvantages. Introduction of LTE Based Radio	6


III. Professional/Official Approach (Administrative Role)
Training Module for Constable (Radio) to H.C.(Radio) P.P.Course


S.No	Topic	Synopsis	No. of Period (10)
1	Disaster Management	Definition of Natural calamitiës & disaster, Role of NDRF and SDRF, Role of police during disaster.	02
2	Store & Purchase Rules	Function of DDO, Sanctioning authority of officers in Police, Procedure of keeping store ledgers. Purchase Process. Condemnation process and write off of store items, Inventory Portal	03
3	Handling of Cipher documents and communication	Introduction & definition of security, Types of message, Security destruction maintenance of records etc.	03
4	Office Administration	Official correspondence and filling Proper way of documentation in PC, leave rules, TA rule, Medical rules, Police regulation, Maintenance of registers in admin, record keeping.	02

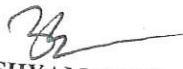
IV. Practical approach and innovation
Practical Training Module for Constable (Radio) to H.C.(Radio) P.P.Course


S.No	Module Categories	Practical Topic	No. of Period (50)
1	Instruments	1.1 (AVO) Multi-meter and its type.	02
		1.2 Component test.	
2	Software uses	2.1 Programming of various DMR/VHF/HF sets.	03
		2.2 Basic knowledge of VHF and HF frequencies allotted for use in M.P.	04
3	Fault finding	3.1 Fault diagnosis and remedy of battery charger.	03
4	Fabrication	4.1 Elementary knowledge of light, Fan and power wiring.	03
		4.2 To Study the Secondary Batteries Charging procedure by using Mains Battery Charger.	02
		4.3 Fabrication of patch units/universal repeater.	04
5	Communication Network Installation	5.1 Installation of 60 ft. and 80 ft. aerial mast for VHF antenna.	04
		5.2 To study the installation & operation of DMR/VHF/HF sets.	04
		5.3 Basic installation & operation of CCTV.	04
		5.4 Installation & operation of biometric attendance system.	04
		5.5 To study the installation of Solar Power Pack/Bank	02
6	Practical Demonstration	6.1 Installation & operation of MDT & Net viewer.	04
		6.2 Operation of Biometric attendance system(BAS)	05
			02



ANIL SHUKLA
 SI(R) WORKSHOP
 PRTS INDORE


AFZAAL KHAN
 I(R) COURSE
 PRTS INDORE


R.K.SWAMI
 I(R) STORE
 PRTS INDORE



GHANSHYAM SINGH
 DSP(R) INDOOR TRNG.
 PRTS INDORE


C.S CHANDRAWAT
 SP (RADIO)
 PRTS INDORE


 एच. एन. अहिरवार
 पुलिस अधीक्षक (रेडियो)
 रेडियो मुख्यालय भोपाल
 4

सजनि(रेडियो) का कार्य विवरण एवं उत्तरदायित्व

1. एम.एस.वर्ड एवं एक्सेल का ज्ञान होकर कार्यालयीन पत्राचार एवं MER/अन्य टेबल बनाना ।
2. डायल-100 की सम्पूर्ण (FRV, MDT, Net Viewer, SPOC, SOP Etc.) जानकारी ।
3. CCTV , V.C., BAS, ROIP,UAV आदि तकनीकों का व्यावहारिक ज्ञान ।
4. व्हीएचएफ नेटवर्क एवं रिपीटर स्टेशन स्थापित करना ।
5. स्टोर/प्रशासन/एमटी/संचार शाखा/भवन आदि सभी शाखाओं के प्रभार एवं दायित्व कार्य ।
6. संचार उपकरणों की रिपेयरिंग, सेट इंस्टालेशन का ज्ञान ।
7. वर्कशॉप एवं विभिन्न शाखाओं के रिकॉर्ड का रखरखाव का कार्य एवं सुधार कार्य ।
8. पत्र लेखन शैली, शासकीय पत्राचार एवं जानकारियों को निर्धारित प्रोफार्मा में तैयार करने का ज्ञान ।
9. कल्याणकारी गतिविधियों में सहभागिता, सामान्य शिष्टाचार, स्टाफ के मध्य समन्वय कार्य में रूचि ।
10. शाखा प्रभारी के कार्यों के कार्यकारी दायित्वों के निर्वहन का ज्ञान ।


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