જાહેરાત ક્રમાંકઃ GPRB/202526/2

સરકારશ્રીના ગૃહવિભાગ, ગાંધીનગરના તા.૦૩.૧૦.૨૦૨૪ના ઠરાવ નં.GHG/106/2024/PWS/102024/1031/C1 ના Appendix-II મુજબ પોલીસ સબ ઇન્સ્પેકટર (વાયરલેસ) અને ટેકનીકલ ઓપરેટર સંવર્ગની સ્પર્ધાત્મક પરીક્ષાનો અભ્યાસક્રમ:

Scheme of Examination

Total Marks – (200) Duration – (3 Hours) Total MCQs-(200)

The Written Examination shall consist of Part A and Part B as follows:

PART-A:

1. 80 Marks, 80 MCQs
2. 40% minimum qualifying standard
3. Negative marking 0.25
4. 0 (Zero) marks for "E" option

Sr. no.	Subject	Marks
1	Reasoning and Data Interpretation	25
2	Quantitative Aptitude	25
3	Constitution of India	15
4	Current affairs and General Knowledge	15
TOTAL		**80**

PART-B:

1. 120 Marks, 120 MCQs
2. 40% minimum qualifying standard
3. Negative marking 0.25
4. 0 (Zero) marks for "E" option

Sr.no.	Subject	Marks
1	**Electronics Components, Devices and Circuits:** Conducting Materials, Magnetic Materials, Insulating Materials, Semiconductors, Electronics Components, Semiconductor physics and diodes, Diode applications and other terminal devices, Transistor, Transistor amplifier, Transistor biasing circuits and thermal stability, Frequency response of small signal transistor amplifier, Hybrid parameter, Regulated Power Supply, Feedback in transistor amplifiers and oscillators, transistor power amplifier, pulse circuits, field-effect transistor, linear integrated circuits.	**120**
2	**Digital Electronics & VLSI:** Binary number systems, logic gates and logic families, Boolean algebra, combinational circuits, flip-flops, counters & registers, memory, PLA, A to D and D to A conversion, Introduction to VLSI Design, MOS Transistor and Inverters, Combinational & Sequential MOS Circuits, FPGA, Introduction to VHDL.	

3	**Electronics Networks and Instruments & Measurements:** Network Theorems, Resonance & Couples Circuits, Attenuator, Equalizers, Filters, Transmission line theory, Hardware Structure for Networks, Introduction, Bridges, Basic Parameter Measurements, Oscilloscopes, Signal Generators, Frequency Counters, Transducers, Component Testers and Analyzers .	
4	**Communication Engineering:** Introduction to Communication systems, AM, FM, PM, AM Radio Receiver, FM Receiver, Antenna wave propagation, SSB techniques, SSB receivers, communication receiver, pulse & digital modulation, source coding & multiplexing, data communication, Electronic Space Division switching, speech Digitization and Coding, Time Division switching, Traffic Engineering, Telephone networks.	
5	**Communication Applications:** **Microwave Engineering:** Microwave propagation & components, mw tube oscillators and amplifiers, semiconductor microwave devices, microwave measurements, RADAR systems, satellite communication systems. **Fibre Optics Engineering:** Principles of optical ray transmission, optical fibres and cables, Optical sources, detectors and components, optical communication systems and fibre optic measurements **Mobile Communication:** Cellular telephone concepts, GSM, CDMA, Mobile Handset and Introduction to Advance Concepts **Television Engineering:** Essential of Television system, TV Optics and Video Signal, Color theory and color signal processing, TV signal modulation and TV systems, PAL-D Color Receiver, receiver servicing and Alignment, Advance topics in TV technology.	
6	**Microprocessors & Microcontrollers:** Microprocessor Architecture & Microprocessor system, 8085 instruction and timing, 8085 Instruction Set, Programming techniques, Advance Microprocessor, Main memory system. Evolution of Microcontrollers and Introduction to Microcontrollers, Introduction to Assembly Language Programming (8051), Advance Programming Techniques, External peripheral devices and advance RISC machines.	
7	**Computer Networks:** Reference Models, LAN Technologies, Network devices,TCP/IP and Internet, IP protocol IP V4 Header & protocol functions ,IP addressing schemes, Network security and application, Introduction to High Speed Networking Technologies, Internet Applications.	
8	**Essentials of Network Security:** Introduction of Information Security, System Security, Basic Arithmetics in Encryption, Symmetric Encryption Algorithm, Asymmetric Key Encryption, Operating System Security	
9	**Web Technology:** Features of ASP.NET , Differences between ASP.NET and Classic ASP , Web Applications and Webpage , Components of Web application , Client Server	

	Architecture , Explain utilization of various parts of IDE , Creating simple Web Application in ASP.NET ,1 Introduction to Visual Studio , Creating a New Web Project (ASP.NET), start page, the menu system, toolbars, the new project dialog box, graphical designer, code designer.	
10	**Android Application Development:** Android OS : Concepts, Android, Architecture, Android Activities and UI Design, Advanced UI Programming, Toast, Menu, Dialog, List and Adapters, Working with Database.	
11	Current Trends (4G LTE, POLNET, Disaster Management communication, Real Time Surveillance etc.) and Recent Advancement in the relevant field	