

BHAVNAGAR MUNICIPAL CORPORATION

Syllabus of Written Exam for the recruitment of “Assistant Hardware & Network Engineer”

Advertisement No: BMC/201718/2

No	Subject / Topic	Marks
1	General knowledge, geography, history, reasoning, mental ability, current affairs	25
2	<p>Basic Fundamental of Computer Network (LAN, WAN, MPLS, Scattered Cabling, Interconnecting Network Devices, Network Firewall Configuration on Devices, Configuration of Access List, Authentication Server, Router Security and Packet Filtering, NMS, EMS Suite Configuration Operation, RADIUS/TACACS, Troubleshooting the Boot Process and Other System Issues)</p> <p>Operating System Basics & Installation (Introduction to OS, Types of Operating systems, System files FAT and NTFS Dos 6.22, Windows XP, Windows Vista, Windows 7 and Windows 8 and RedHat Linux and Multi Boot Operating System),</p> <p>Various types of Software Installation, Device Installation (Graphics Card, Sound Card, LAN Card, Wireless LAN Card, SCSI Card, External Drive, Flash Cards, Web Camera, CCTV Camera, Mobile Devices, Pen Drive, Firewire Cards, Modem, Plotter, Wireless LAN, Access Point etc.),</p> <p>Diagnostic Tools & PC Maintenance (Introduction, Virus and its types, Effect of Virus for Computer System, Scanning and Antivirus remover tools, Antivirus Utilities for Diagnostic, Safety and Preventive Maintenance Tools, Data Recovery, Concept of Fax and E-mail, PC care and Maintenance, Electrical Power Issues, Troubleshooting PC Hardware:- O/S Troubleshooting issues in computer System)</p> <p>Basic Network Introduction & Installation (Introduction About Network, Installing Network Operating System Windows 2003 Server and Windows 2008 Server, Cable Crimping, Network Sharing and user Permission, Internet Connection, E-Mail, Cloud Networking, Google Drive, SkyDrive, Dropbox etc.)</p>	10
3	<p>Network Hardware and Components (Concept of Server, client, node, segment, backbone, host etc. Analog and Digital transmission, Network Interface Card, Crimping tools and Color standards for Straight crimping and Cross crimping Functions of NIC, Repeaters, Hub, Switches, Routers, Bridges, Router etc.),</p> <p>Transmission Media and Topologies Media types: STP cable, UTP cable, Coaxial cable, Fiber cable, Base band and Broadband transmission. Cables and Connectors, Physical and logical topologies, Bus, Star, Ring and Mesh topologies</p> <p>Protocols and Services HTTP, FTP and other Different types of protocols, OSI Model, Media Access Method, DNS services, DHCP services, WINS services and RAS services, Web services, Proxy Services etc.</p> <p>TCP/IP and Sub-netting Introduction about TCP/IP and Sub-nettings, configuring IP address and subnettings with different Routers and Network, TCP/IP Errors and Solutions, Super-netting, Classless Addressing, Routing Protocol.</p>	10
4	<p>Introduction and Installation of Server Installation of server like windows 2003 and 2008 or above, Apache Server, Samba Server, Proxy Server, FTP Server, Web Server, implementing DNS server, Mail Server, user account administration, group management creating a Domain account, File system NTFS permission, IIS Configuration, Windows 2012/2016 Server, Single Sign on Configuration</p> <p>Configuring Services Printing services, Active Directory services, DNS services, DHCP services, RAS, Volumes and Disk management, Auditing and Resource Access, Gateway services, Terminal services, Configuring & implementing VPN, Local and Domain security policy, Group Policies</p> <p>Network Administration Installing and Configuring Wire & Wireless Network, Network Troubleshooting, Installing Manageable Switches, Routers, Wi-Fi Device, Printer, CCTV Camera, IP Camera and Other Network Devices, Storage Solution– TAPE Drive</p> <p>WANs and Remote Connectivity Public networks, Remote connectivity for server and clients, Indoor and Outdoor Wireless, WLAN- WIFI and WIMAX, PCI Wireless Card, USB Wireless Card, Wireless Access Point, Security of networks like Firewalls Hardware and Software, VPN</p>	20

5	<p>Introduction and installation of Linux Server History of Linux, Linux distributions, Features of Linux, advantages of Linux Installation of Red Hat and SUSE Linux and Fedora Edition, System requirements, Disk partition, Mount points, Installation method, creating the boot disk.</p> <p>Working with Linux GNOME and KDE User Management, Mounting, X- windows Desktop environment, Using Gnome and KDE Desktop environment, Linux commands, Linux file system, directories, Text Editors, Linux Shell, Feature of Shell, Shell available.</p> <p>Networking with Linux Installing and setting up a Network card, Setting TCP/IP parameters with Linux, Testing the network, Utilities of Linux, TAR Program, Send Mail, Send mail Configuration, Pine, Browsers, NFS and Samba Configuration, Network Printing and Interoperability with windows.</p> <p>Linux Services and Network Security Administering user accounts and groups, command line tool, Network Services, Proxies, Firewalls, NIS and Host Security, Diskless Terminal, Web Server, Overview of Clustering, File systems, IP address, DNS and Internet, Security fundamentals, system security, choosing user ID's for services, Network security, IT laws and security.</p>	10
6	<p>Windows Troubleshooting Basic Windows Troubleshooting Approach, Localize and Identify the Problem, Resolve the Problem, Performing a Differential Diagnosis, Dealing with Startup Issues, Operational Issues, Shutdown Issues Working, Through the Phases, Windows Troubleshooting Tools, Operating System Management Tools, Windows 98 MSI Tool, Shutdown and Related Problems, Resource Loss and System Monitoring, The Windows 98 System and Resource Monitor, Resource Meter, Registry Recovery, MS-DOS Application Incompatibilities, Wrong MS-DOS Version, Printing Problems, Not booting problems</p>	5
7	<p>Implementing Virus Protection Install Virus Protection Software, Configure Virus Protection Software, Create a Clean Boot Disk, Manually Update Virus Definitions, Remove a Virus</p> <p>Configuration & Management VLAN configuration, Data Centre [Electrical Infrastructure, Cooling Systems, Security Surveillance Systems (Access Control, Rodent Repellent System, Fire Alarm System, Water Leak Detection System)], Blade server & chassis, Backup management using tape library, SAN storage management, L2&L3 switch, Online UPS, POE switch, Fiber cable network, P2P, Lease line, NVR & CCTV Camera, Virtualization- VMWare virtualization, Firewall, Router</p>	20

- **Medium (language) of Exam = English**
- **Type of Questions = Multiple Choice Questions-MCQ**
- **No. of Questions = 100**
- **Duration of Exam = 90 Minutes**
- **Marking System:- One (1) Mark will be awarded for every RIGHT Answer AND 0.25 Mark will be deducted for every WRONG Answer. However, there will be No Penalty for Unattempted Questions.**

NOTE = EXAM WILL PROBABLY BE HELD IN SECOND HALF OF AUGUST-2017