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**GASABO DISTRICT**

**DISTRICT COMPREHENSIVE ASSESSMENT, RTQF LEVEL… 2022-2023**

**TRADE: NETWORKING AND INTERNET TECHNOLOGIES**

**MODULE: WIRELESS NETWORK INDOOR INSTALLATION**

**DATE OF EXAM: ………………………… Duration: 3hours**

**ACADEMIC YEAR: 2022-2023**

**Instructions:**

1. **Answer all questions in section A (55 Marks)**
2. **Answer three question in section B (30 Marks)**
3. **Answer one question in section c (15 Marks**)

**SECTION A MULTIPLE CHOICE /55MARKS**

**1) In how many ways does a wireless LAN can be configured? 2marks**

 One

 Two

 Three

**Four**

**2). \_\_\_\_\_\_\_\_\_\_\_ are the examples of the standard WI-FI devices 4marks**

 Wireless routers

 Wireless Ethernet Bridge

 Wireless access point

 **All of the above**

**3).What is the standard form of WPA? 2marks**

 **Wireless Protocol Access**

 Wired Protocol Access

 WI-FI Protected Access

 None of the above

**4).What is the standard form of WEP? 2marks**

 Wireless Equivalent Protocol

 Wired Equivalent Protocol

 **Wired Equivalent Privacy**

 None of the above

**5).The range of 802.11 b standard is about \_\_\_\_\_\_\_\_\_\_\_\_2marks**

 5-10 Km

 5-20 Km

 **≤100 Km**

 5-25 Km

**6).The standard 802.11 supports \_\_\_\_\_\_ data rate 4marks**

 **1Mbps and 2Mbps**

 6Mbps and 9Mbps

 5.5Mbps and 11Mbps

 22Mbps and 33Mbps

**7).In which year the wireless technology WIMAX is designed? 2marks**

** 2002**

 2003

 2004

 2005

**8).What are the advantages of WIFI? 4marks**

 Flexible

 Ease of installation

 Reliability

 **All of the above**

**9).Which standard uses up to 60GHz frequency band? 2marks**

 **IEEE 802.11ad**

 IEEE 802.11ac

 IEEE 802.11n

 None of the above

**10).What is the standard form of VPN? 2marks**

 Virtual Protocol Network

 **Virtual Private Network**

 Virtual Privacy Network

 None of the above

**11).What is the standard form of VOIP? 2marks**

 Voice Over Integrity Protocol

 Voice Over Integrity Privacy

 **Voice Over Internet Protocol**

 None of the above

**12).What is the standard form of WI-FI? 3marks**

 Wired Fidelity

 Wired Function

 **Wireless Fidelity**

 None of the above

**13).The wavelength of the low-frequency transmission type is about \_\_\_\_\_\_\_\_\_\_ 3marks**

 33-10km

 **10-1km**

 1000-100m

 100-10m

**14. The throughput of the IEEE standard 802.11b is \_\_\_\_\_\_\_\_\_\_\_ 2marks**

 **≤11Mbps**

 ≤64Mbps

 ≤74Mbps

 None of the above

**15).The frequency range of WI-FI is around \_\_\_\_\_\_\_\_\_\_ 4marks**

 **2.4 GHz and 5GHz**

 2.9 GHz and 5GHz

 3.4 GHz and 5GHz

 4.4 GHz and 5GHz

**16). WI-FI provides support to \_\_\_\_\_\_\_\_\_\_\_ 3marks**

 Limited number of users

 **Large number of users compared to Bluetooth**

**17). Wireless MAC protocols are categorized into \_\_\_\_\_\_\_\_\_\_\_\_2marks**

 One

 **Two**

 Three

 Four

**18). WI-FI is \_\_\_\_\_\_\_4marks**

 More complex

 Simple to use

 Requires configuration of hardware and software

** All of the above**

**19).The throughput of the IEEE standard 802.11a is \_\_\_\_\_\_\_\_\_\_\_ 2marks**

** ≤54Mbps**

 ≤64Mbps

 ≤74Mbps

 None of the above

**20).The indoors and outdoors range of WIFI 4/IEEE 802.11n is around \_\_\_\_\_\_\_\_\_\_\_4marks**

 10m, 100m

 **70m, 250m**

 35m, 120m

 40m, 100m

**SECTION B ATTEMPT 3 QUESTIONS 10MARKS EACH**

Q21 a). Define the terms:

1. Wireless **1mark**

**Interconnection of two device without cable**

1. Wireless network **1mark**

**Interconnection of devices in the network without using cable and it can share resources**.

1. Networking **1mark**

**Is module study how to interconnect computing devices that can exchange data and share resources with each other?**

1. WPAN **1mark**

**Wireless Personal Area Network: ex Bluetooth**

1. WLAN **1mark**

**Wireless Local Area Network:** is a wireless computer network that links two or more devices using wireless communication to form a local area network.

1. WMAN **1mark**

**Wireless Metropolitan Area Network**

b) List any four function of using wireless network? **4marks**

1. **Increased mobility and collaboration**

• Roam without losing your connection

• Work together more effectively

1. **Improved responsiveness**

• Connect to the information you need when you need it

• Provide better customer service

1. **Better access to information**

• Connect hard-to-reach areas

• Improve your processes

1. **Easier network expansion**

• Add users quickly

• Grow your network cost-effectively

1. **Enhanced guest access**

• Give secure network access to customers and business partners

• Offer a value-added service

Q22. As technician you are selected by company to go to install wireless network indoor, list five wireless components you will use? **10marks**

* **Wireless router**
* **Wireless access point**
* **Wireless computer**
* **Wireless network interface card (NIC)**
* **Wireless repeater**
* **Wireless hub**

Q23. What of the following device is used in the network layer? And what is the standard of IEEE802.11 means **10marks**

1. Application gateway
2. Switch
3. Router
4. Repeater
5. Wi-Fi
6. **Both c and e are correct**

**SECTION C CHOOSE ONLY ONE QUESTION**

Q24 a). The IEEE 802.11 standard was designed to use in limited geographical areas like homes, office buildings, or on campuses. The IEEE 802.11 Wi-Fi is mainly for ………………………………. and in addition to this, 802.11 supports two additional features they are power management and security mechanism.

Complete one answer above **5marks**

1. Wireless LAN
2. Wired LAN

.b) Identify among the following which belongs to class A, class B and class C **10marks**

1. 121.12.12.248🡪**class A**
2. 172.12.12.248🡪**class B**
3. 192.12.12.248🡪**class C**
4. 222.12.12.248🡪**class C**

Q25. By using color coding write the color of **T-568A Straight-Through Ethernet Cable? 15marks**

|  |  |
| --- | --- |
| **Wire Color (T568A)** | **10Base-T Signal 100Base-TX Signal** |
| 1 | **White/Green** |  |
| **2** | **Green** |  |
| **3** | **White/Orange** |  |
| **4** | **Blue** |  |

**5 White/blue**

**6 Orange**

**7 White/Brown**

8 **Brown**