ADVANCED LEVEL NATIONAL EXAMINATIONS, 2016,
TECHNICAL AND PROFESSIONAL STUDIES

EXAM TITLE: Microsoft Office and Networking

OPTIONS: Computer Science (CSC)
Computer Science and Management (CSM)

DURATION: 3 hours

INSTRUCTIONS:
The paper is composed of three (3) main Sections as follows:

Section I: Twenty-two (22) compulsory questions. 55 marks
Section II: Attempt any three (3) out of five questions. 30 marks
Section III: Attempt any one (1) out of three questions. 15 marks

Note:
Every candidate is required to carefully comply with the above instructions. Penalty measures will be applied on their strict consideration.
Section I. Twenty-two (22) Compulsory questions

01. What is computer networking? 3 marks
02. Explain the term protocol. 3 marks
03. What is a Digital Subscriber Line (DSL)? 3 marks
04. Define Nslookup tool in networking? 4 marks
05. Give at least five Radio waves frequencies which are used in a wide range of wireless communication. 5 marks
06. Explain the considerations to bear in mind when selecting or buying a NIC to use on a network? 5 marks
07. In MS-Word, for what does ruler help? 3 marks
08. Which portion of LAN management software restricts access, records user activities and audit data etc? 2 marks
09. What is the central device in star topology? 2 marks
10. Which server allows LAN users to share computer programs and data? 2 marks
11. Which topology is used for large networks? 2 marks
12. Why are pairs of wires twisted together in UTP cable? 3 marks

Read carefully and fill in the following statements with the convenient response.

**NB: Write complete sentences.**

13. A character that is raised and smaller above the baseline is known as:...........
   - Raised, - Capscript,
   - Outlined, - Superscript

14. Which of the following formulas will not be calculated using Excel?
   \[
   \text{SUM(Sales);} \quad \text{SUM(A1:A5)}/(10-10);
   \text{SUM(A1:A5)*0.5;} \quad \text{SUM(A1:A5)-10}
   \]

15. Which button do you click to add up a series of numbers?
   - The AutoSum button; - The Quick Total button;
   - The Formula button; - The Total button

16. When using PowerPoint, to play a Power Point show for previewing the show, select .........................
   - View, slide sorter; - View, slide show;
   - View, slide; - View outline

WDA / TVET – CSC&CSM — MS Office and Networking — Academic Year 2016
17. The device used in a data communication network to perform the conversion between analogue and digital signals, is called a.................
- Front end processor;  
- Modem;  
- Decoder;  
- Multiplexer 

2marks

18. The Internet offers different services. Distinguish among the following which one listed below is incorrect?
- Chat room;  
- Electronic mail;  
- Off line shopping;  
- World Wide Web  

2marks

19. A router ........................................
- Determines on which outgoing link a packet is to be forwarded  
- Forwards a packet to all outgoing links  
- Forwards a packet to the next free outgoing link  
- Forwards a packet to all outgoing links, except the link upon which the packet originated.  

2marks

20. The Internet is an example of a ........................................
- Cell switched network;  
- Packet switched network;  
- Circuit switched network  

2marks

21. The device operating at Data link layer is .................
- Bridge;  
- Router;  
- Repeater  

2marks

22. If a computer on the network shares resources for others to use, it is called.......  
- Server;  
- Client;  
- Mainframe  

2marks

Section II. Choose and answer any three (3) questions.  

30marks

23. (A) Consider the address 192.168.10.0 /28 calculate the No of subnet.

(B) What are common software problems can lead to network defects?

(C) Give some examples of private network addresses.  

10marks


10marks

25. Explain four phases of how dhcp client get ip address from dhcp server.  

10marks


10marks
27. Write formulas for the operations (a) – (d) based on the spreadsheet given below along with the relevant cell address:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SNO</td>
<td>Name</td>
<td>Science</td>
<td>Maths</td>
<td>Computers</td>
<td>Total</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>RUKUNDO</td>
<td>70</td>
<td>80</td>
<td>87</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>AMANI</td>
<td>90</td>
<td>98</td>
<td>89</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>RUGWIRO</td>
<td>90</td>
<td>90</td>
<td>98</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>KAMANZI</td>
<td>60</td>
<td>76</td>
<td>78</td>
<td>--</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>KALISA</td>
<td>50</td>
<td>45</td>
<td>67</td>
<td>--</td>
</tr>
<tr>
<td>7</td>
<td>Max</td>
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<tr>
<td>8</td>
<td>Total</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

a. Calculate the Total Marks as sum of Science, Maths & Computers for each student and display them in column F.

b. Calculate the average marks for each student and display them in column G.

c. Calculate the highest marks in Computers and display it in cell E7.

d. Calculate the total number of students appearing for the Science test and display it in cell C8.  

Section III. Choose and answer any one (1) question.  

28. The data encapsulation is the process by which the data get modified by each layer being prepared to be transmitted over the network. During that process some layer will add different headers. Which are the OSI layer responsible for the below different types of headers:

   a. Frames       c. Packets
   b. Segments     d. Bits

29. Differentiate a router from a switch? And give the layer of TCP/IP model by which we found the router and the switch?

30. What is the difference between the HALF-DUPLEX and FULL-DUPLEX?