higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

MULTIMEDIA SERVICE
NQF LEVEL 4

(10040184)

8 March 2018 (Y-Paper)
13:00–16:00

This question paper consists of 6 pages.

Copyright reserved

TIME: 3 HOURS
MARKS: 150

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Write neatly and legibly.

Copyright reserved

SECTION A

QUESTION 1

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.1–1.15) in the ANSWER BOOK.

1.1 To create an HTML document you require a high-powered computer.

1.2 Pair tags are used to enclose a text in HTML.

1.3 There are a total of six different heading tags in HTML.

1.4 The code <font colour = “red”> can be used to display the colour red in an HTML document.

1.5 The tag <**black**> can be used to bold text in HTML.

1.6 <TITLE> ...</TITLE> tag must be within the body tag in HTML.

1.7 Text within <EM> ...</EM> tag is displayed as italics.

1.8 <OL> ...</OL> is used to display a numbered list in HTML.

1.9 <script> should appear at the very end of your JavaScript code.

1.10 JavaScript entities start with a *semicolon* and end with a *colon*.

1.11 A router in a network forwards each packet to all the outgoing links.

1.12 Subnetting is used to divide one large network into several smaller ones.

1.13 The transport layer of an OSI model lies directly between the network and the application layers.

1.14 UDP is an unreliable protocol.

1.15 Token Ring is data link technology best suited for local area networks.

(15 × 1) **[15]**

QUESTION 2

Write the following abbreviations in full next to the question number (2.1 – 2.10) in the ANSWER BOOK.

2.1 TCP/IP

2.2 HTTPs

2.3 XHTML

2.4 XML

2.5 UDP

2.6 MAN

2.7 URL

2.8 POP

2.9 IIS

2.10 SQL

(10 × 1) **[10]**

TOTAL SECTION A: 25

SECTION B

QUESTION 3

3.1 With the use of an example, identify the SQL statements that are used to modify a column in a database. (4)

3.2 Briefly describe the difference between 'varchar' and 'char' data types in a SQL database. (2)

3.3 You intend to delete a row or record in one of your tables in your database.

Determine the outcome if the 'where' clause is omitted in the delete statement. (2)

3.4 Discuss the importance of normalisation when you are developing a database. (5)

3.5 Explain any SIX benefits of using the MySQL database in an organisation. (12)
[25]

Copyright reserved

QUESTION 4: NETWORKS AND SERVERS

4.1 Your manager wants you to install a server in the company. She asks you to brief her on the prerequisites required to configure a server. (3)

4.2 Tabulate THREE differences between a *workgroup* and a *domain*. (9)

4.3 Define the term *Internet Protocol (IP).* (2)

4.4 Describe *network topology.* (2)

4.5 Explain ONE disadvantage of a peer-to-peer network. (2)

4.6 Explain the purpose of a default gateway. (2)

4.7 Identify the functions of a network administrator. (3)

4.8 Define the term *VPN*. (2)
[25]

QUESTION 5: WEB DESIGN

5.1 Explain any SIX best practices to follow when designing user interfaces for web pages. (12)

5.2 Define the term *web hosting*. (3)

5.3 Discuss any FOUR basic components of a website that are included when developing a website. (8)

5.4 Explain how *bandwidth* affects users on a website. (2)
[25]

QUESTION 6: WEB PROGRAMMING

6.1 Study the webpage given below and answer the questions that follow:



6.1.1 Produce the HTML code for the password field. (6)

6.1.2 Produce the HTML code for the submit button. (6)

6.1.3 Identify any FIVE guidelines for creating strong passwords. (5)

6.2 You are informed that the website above will have a minimum of 15 webpages.

List FOUR reasons for using external cascading style sheets for styling webpages. (4 × 2) (8)

[25]

QUESTION 7: INTERNET SECURITY

7.1 Explain the use of internet browsers in website attacks. (3)

7.2 Tom is a student at Heck TVET College. He received an SMS (text) message from Utini Bank showing that his Uncle has deposited R45 000,00 for him to help buy food, clothes, pay for transport, and other school related expenses for the whole year.

He uses the Public Internet Café at the student support to check his account balances. After school, at the Taxi Rank he uses another Internet Café to log into his Account in order to print a bank statement to show his parents at home.

Early the following morning he got another SMS (text) from his bank stating that his account is overdrawn by –R360,00. Upon going to the bank he was told that someone located in America, logged into his account just after midnight and transferred all the money to an overseas account. This person used the correct username and pin/password to gain access Tom's account…….

The bank also told him that they had 13 other similar complaints from their customers in the last two weeks.

7.2.1 Identify any THREE types of tools the attackers might have used to perform the above attacks on the Utini Bank Web Server. (3 × 3) (9)

7.2.2 Briefly explain FIVE ways how an intrusion blocking systems can help prevent attacks like the one on Tom's bank account? (5)

7.2.3 Explain FOUR methods you would use to reduce or prevent attacks on the bank server. (4 × 2) (8)

[25]

TOTAL SECTION B: 125
GRAND TOTAL: 150

Copyright reserved