higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

MULTIMEDIA SERVICES
NQF LEVEL 4

(10040184)

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09:00–12:00

This question paper consists of 8 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
MULTIMEDIA SERVICES
NQF LEVEL 4
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. Use only black or blue pen.
5. Write neatly and legibly.

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SECTION A

QUESTION 1

1.1 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

1.1.1 Use … tags to create an unnumbered list on a webpage.

A <*col*>
B <*ol*>
C <*ul*>
D <*li*>

1.1.2 Use the following HTML code to include a picture named *Bird* on a webpage:

A <*href img = "Bird.jpg*">
B <*image pic = "Bird.jpg*">
C <*img href = "Bird.jpg*">
D <*pic img = "Bird.jpg*">

1.1.3 The correct HTML code for password input is …

A <*input type = "password" size = "15/*">
B <*password input type = "password" = "15/*">
C < *input password type = "password' = "15/*">
D < *input size = "password" = type = "15/*">

1.1.4 HTTPs stands for …

A Hypertext Transfer Protocol Services
B Hypertext Transfer Protocol Secure
C Hypertext Transfer Protocol Sessions
D Hypertext Transfer Process Secure

1.1.5 Which ONE of the following is not a valid IP address?

A 881.223.12.10
B 192.45.99.1
C 120.18.10.10
D 190.11.11.10

1.1.6 The major function of a DNS server is …

A to connect one user's computer to another on the Internet.
B to function as the Internet's system for converting alphabetic names into numeric IP addresses.
C to convert IP addresses to real names on the Internet.
D to serve as the only language that the Internet understands.

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1.1.7 A forward lookup zone …

A is used to link a name to an IP address.
B is used to change a name on the Internet.
C always keeps all IP addresses private.
D helps the server keep IP addresses.

1.1.8 Which ONE of the following is not a requirement to secure a web server?

A Windows services that are not used should be disabled.
B User accounts should have a strong password.
C Guest accounts should be disabled.
D The server should always be switched off during weekends.

1.1.9 The following command is used to edit information in a SQL database:

A *INSERT INTO*
B *DELETE*
C *UPDATE*
D *SELECT*

1.1.10 The purpose of *queries* in a database is to …

A manipulate information in a database.
B insert data in a database.
C change user data in the database.
D authenticate user data.

(10 × 1) (10)

1.2 Indicate whether the following statements are TRUE or FALSE, by writing only 'True' or 'False' next to the question number (1.2.1–1.2.15) in the ANSWER BOOK.

1.2.1 A SQL query automatically eliminates duplicates.

1.2.2 The *DROP* statement in SQL can be used to remove a database or table from the system permanently.

1.2.3 A SQL table can have more than one primary key.

1.2.4 The HTML and HTTP standard are defined by WWW consortium.

1.2.5 HTML allows a developer to use 12 levels of headings.

1.2.6 The communication protocol used by the Internet to transfer hypertext documents is SMTP.

1.2.7 An object is a structure and consists of methods and properties.

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1.2.8 A class C IP address provides a maximum of only 254 host addresses per network ID.

1.2.9 Creeper is the first computer virus.

1.2.10 A computer's firewall should be turned on to protect the computer from hackers.

1.2.11 A computer virus can be used to access private data like user IDs and passwords.

1.2.12 Trojan Horse is an example of malware.

1.2.13 <SELECT> is used to create a dropdown list in HTML form.

1.2.14 <input type="checkbox"> is used to create a checkbox in an HTML form.

1.2.15 The *.htl* extension is used to save an HTML file.

(15 × 1) (15)
[25]

TOTAL SECTION A: 25

SECTION B

QUESTION 2

2.1 Produce the correct SQL statements for the following actions:

2.1.1 Create a new database called *testDB*. (2)

2.1.2 Delete a database named *musicaDB.* (2)

2.1.3 Back up your latest work to the D disk in a database named *slimgym*DB. (4)

2.1.4 Display all the columns from a table named *Customers*. (4)

2.2 The *students* table below is part of a database with the name *dynamicCollege*DB*.* Study the table and answer the questions that follow:

students

studentID	surname	name	cell	school
1	Mathonsi	Miriam	0835569300	Marketing
2	Fourie	Jacques	0612259633	Tourism
3	Mahlangu	Joseph	0825549632	ICT
4	Baloyi	Simon	0617472310	ICT

Produce the correct SQL statements for the following:

2.2.1 Create an index of students' surnames. (4)

2.2.2 Remove the last column of the table. (3)

2.2.3 Mathonsi has changed schools to Hospitality. Update Mathonsi's information. (6)

[25]

QUESTION 3

3.1 Discuss FIVE design principles which a developer should keep in mind when planning a webpage. (5 × 2) (10)

3.2 Name THREE types of websites according to their purpose. Give ONE example of each in your answer. (3 × 2) (6)

3.3 The following questions relate to TCP/ IP:

3.3.1 Expand the term TCP/IP (2)

3.3.2 Define the function of TCP/IP in an Internet network. (3)

3.3.3 Define an IP address. (2)

3.3.4 Explain the purpose of an IP address. (2)

[25]

QUESTION 4

4.1 Specify the output of the following JavaScript code snippet:

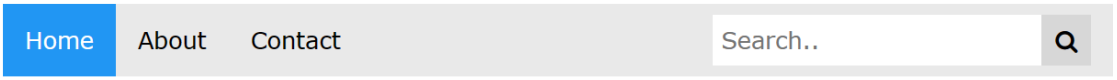
```
for (let i = 1; i <= 3; i++) {
  console.log(i);
}
```

(3)

4.2 Produce the full HTML code to make a website responsive. (6)

4.3 Identify the FOUR different states of links. (4)

4.4 Formulate the full HTML to create the output shown below:



(12)

[25]

QUESTION 5

5.1 Recommend THREE reasons why cybercrime is on the rise. (3)

5.2 Explain the purpose of a firewall in a network. (3)

5.3 Discuss THREE goals of Intrusion Detection Systems in a computer network. (3 × 3) (9)

5.4 There are many ways that hackers can target employees of a company and trick them into disclosing their login details.

Discuss how hackers use *phishing* to get information from users. (4)

5.5 List SIX types of hacking methods that are used by hackers to attack a website. (6)

[25]

QUESTION 6

6.1 Briefly discuss the functions of each of the following server components:

6.1.1 hard disk (3)

6.1.2 memory (2)

6.1.3 CPU (2)

6.1.4 power supply (2)

6.2 Explain the purpose of each of the following in an Internet network:

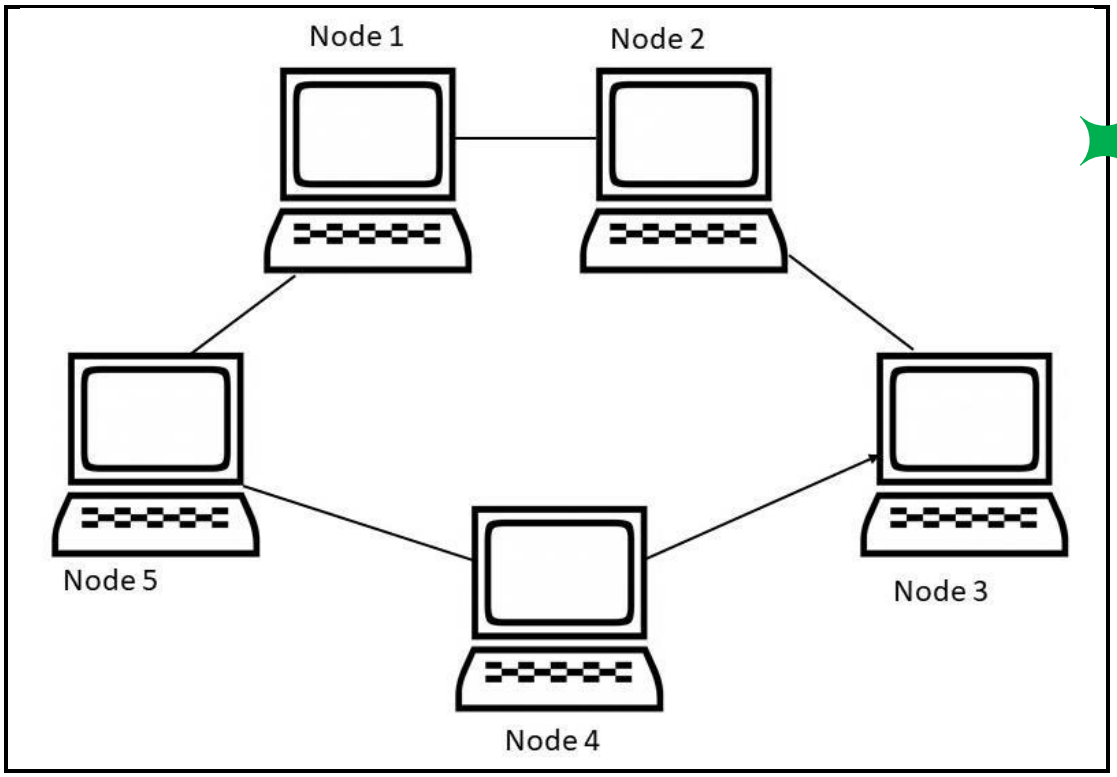
6.2.1 DNS server (3)

6.2.2 DHCP server (2)

6.2.3 ISP (2)

6.2.4 Forward Look-up Zones (3)

6.3 Study the network topology diagram below and answer the questions.



6.3.1 Name the type of network topology shown in the figure above. (1)

6.3.2 Explain how the nodes in this type of network exchange data. (3)

6.3.3 Discuss how data transfer from Node 1 to Node 3 will be affected if the cable between Node 4 and Node 5 is broken. (2)
[25]

TOTAL SECTION B: 125
GRAND TOTAL: 150

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