



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF COMPUTING AND INFORMATICS
DEPARTMENT OF INFORMATICS, JOURNALISM AND MEDIA TECHNOLOGY

QUALIFICATION: BACHELOR OF INFORMATICS	
QUALIFICATION CODE: 07BAIF	LEVEL: 7
COURSE: ENTERPRISE WEB APPLICATION DEVELOPMENT	COURSE CODE: EWD621S
DATE: NOVEMBER 2022	PAPER: THEORY
DURATION: 2 hrs : 00 min	MARKS: 50

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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THIS QUESTION PAPER CONSISTS OF 8 PAGES
(Including this front page)

INSTRUCTIONS TO STUDENTS:

1. Read all the questions, passages, scenarios, etc., carefully before answering.
2. Answer all the questions.
3. Number each answer clearly and correctly.
4. Write neatly and legibly.
5. Making use of any crib notes may lead to disqualification and disciplinary action.
6. Use the allocated marks as a guideline when answering questions.
7. Looking at other students' work is strictly prohibited.
8. This paper consists of SIX **(8)** pages including the cover page.

SECTION A: Multiple Choice Questions [10 Marks]

- The section consists of 10 questions. Answer all the questions.

Select one option from the list of possible answers to the questions below.

1. Which of the following is based on a suite of integrated software modules and a common central database? (1 Mark)
 - a. Enterprise systems
 - b. Network operating systems
 - c. Transaction processing systems
 - d. Management information systems
2. Which of the following is considered to be the leading enterprise software vendor? (1 Mark)
 - a. Oracle
 - b. SAP
 - c. BAAN
 - d. PeopleSoft
3. What kind of HTTP request does the `text` generated? (1 Mark)
 - a. POST
 - b. GET
 - c. PUT
 - d. DELETE
4. In ERP, data migration refers to (1 Mark)
 - a. Upgrading ERP software
 - b. Upgrading both hardware and ERP software
 - c. Backup of data in an ERP system
 - d. Moving, copying and re-structuring data from an existing system to an ERP system
5. What is the term for incremental changes to processes in an organization using information technology? (1 Mark)
 - a. Business Process Improvement
 - b. Business Process Reengineering
 - c. Business Process Change
 - d. Business Process Advance
6. A _____ is a special computer that serves webpages (1 Mark)
 - a. Server
 - b. Host
 - c. Client
 - d. Router

7. A _____ computer requests web pages from the server. (1 Mark)
- a. Server
 - b. Host
 - c. Client
 - d. Router
8. A _____ web page is not interactive and is used to display information only. (1 Mark)
- a. Dynamic
 - b. Static
 - c. Server
 - d. Client
9. The background colour of a Web page is determined by the _____ property. (1 Mark)
- a. BackColor
 - b. BackgroundColor
 - c. BgColor
 - d. BColor
10. The application protocol that makes the Web work is _____ (1 Mark)
- a. HTML
 - b. HTTP
 - c. SMTP
 - d. IP

SECTION B: Descriptive Questions [26 Marks]

- Answer all the questions in the provided blanks and empty spaces where necessary.
- The section consists of 6 questions.

1. Define the following concepts. (10 Marks)

a. An Enterprise

b. Business process

c. Web Application

d. Enterprise Application

e. Process Management

2. Define the client-server computing model. (6 Marks)

3. What is modelling and how is it relevant for Enterprise Applications Development? (4 Marks)

4. Given the scenario in *Figure 1* below, define its context and the scientist responsible for the development of the abstracted technology. (3 Marks)

The World Wide Web was designed originally as an interactive world of shared information through which people could communicate with each other and with machines. Since its inception in 1989 it has grown initially as a medium for the broadcast of read-only material from heavily loaded corporate servers to the mass of Internet connected consumers. Recent commercial interest, its use within the organization under the "Intranet" buzzword takes it into the domain of smaller, closed, groups, in which greater trust allows more interaction. In the future we look toward the web becoming a tool for even smaller groups, families, and personal information systems. Other interesting developments would be the increasingly interactive nature of the interface to the user, and the increasing use of machine-readable information with defined semantics allowing more advanced machine processing of global information, including machine-readable signed assertions.

Figure 1: The context

5. Which data type is represented or applied in the code snapshot below? (2 Marks)

```
var person = {  
  "firstname" : "John",  
  "lastname" : "Nakuta",  
  "age" : "55",  
  "Occupation" : "Director"  
};
```

6. Which of the following APIs is almost entirely based on and uses the data structure in question 4 above? (1 Mark)

- a. JQUERY
- b. JSON
- c. AJAX
- d. JAVA

SECTION C: Practical Questions [20 Marks]

1. Considering the following HTML code, produce a design of the page it would display when executed via the browser. (10 Marks)

```
<h2>Simple Product Purchase</h2> //1 mark
<form> //1 mark
<table> //table elements optional
<tr><td><b>Full Name:</b></td><td><input type="text"></td></tr> //1 mark
<tr><td><b>Email Address:</b></td><td><input type="email"></td></tr> //1 mark
<tr><td><b>Website URL:</b></td><td><input type="url"></td></tr> //1 mark
<tr><td><b>Comment:</b></td><td><textarea></textarea></td></tr> //1 mark
<tr><td><b>My Products:</b></td><td><input type="checkbox"> Product 1 <b>N$100</b> //1 mark
<input type="checkbox">Product 2 <b>N$250</b></td></tr> //1 mark
<tr><td><input type="submit" value="Submit Details"></td></tr> //1 mark
</table> //table elements optional
```

Figure 2: HTML Code

Use the following empty space for your answer.

2. Produce a PHP script that will receive and process data from the HTML Form.

(10 Marks)

Storing Form data in Database

First Name:

Last Name:

Gender:

Address:

Email Address:

Figure 3: HTML Form

Use the following empty page for your answer.

***** End of the Paper *****



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