



**NAMIIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE

QUALIFICATION: BACHELOR OF COMPUTER SCIENCE (SYSTEM ADMINISTRATION AND CYBER SECURITY)	
QUALIFICATION CODE: 07BACS, 07BCCS	LEVEL: 6
COURSE: Web Technologies	COURSE CODE: WTN620S
DATE: January 2020	SESSION: 1
DURATION: 2 Hours	MARKS: 70

SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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MODERATOR:	Mr Gereon Koch Kapuire

THIS QUESTION PAPER CONSISTS OF 3 PAGES

(Including this front page)

INSTRUCTIONS

1. Answer ALL the questions on the answer scripts.
2. Write clearly and neatly.
3. Number the answers clearly.
4. NUST examination rules and regulations apply.

PERMISSIBLE MATERIALS

1. None.
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1) Discuss the following web technologies concerning developing interactive and Web 3.0 (Semantic Web) compliant web applications.

a) Bootstrap. [6]

b) eXtensible Stylesheet Language Transformations (XSLT). [6]

b) Simple Knowledge Organisation System (SKOS). [6]

2) Why is it incorrect to say that the Internet is the same as the World Wide Web? [4]

3) Describe the Three-Tier Architecture design pattern for developing a web application by specifying the possible technologies required for each layer. Note, a diagram can be used to demonstrate understanding. [10]

4) Is it worthwhile to implement a web application in a Three-Tier Architecture design pattern? [5]

5) By default JavaScript treats variables as of string data type that is inputted by the user this can be problematic when performing arithmetic operations. How can this be resolved? Provide sample code for clarification. [10]

6) Discuss the required technologies for Semantic Web accomplishment. [8]

- 7) Discuss how the Model-View-Controller framework was implemented in your Web Technologies group project. [15]
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-- End of Exam Question --