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UNIVERSITY EXAMINATIONS 2024/2025

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE, BACHELOR OF SCIENCE IN STATISTICS, BACHELOR OF SCIENCE IN MATHEMATICS, BACHELOR OF SCIENCE IN MATHEMATICS AND COMPUTER SCIENCE, BACHELOR OF SCIENCE IN MATHEMATICS AND PHYSICS, BACHELOR OF SCIENCE IN BIO/CHEM, BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT, BACHELOR OF SCIENCE, BACHELOR OF SCIENCE IN PHYSICS AND BACHELOR OF SCIENCE IN BIOTECHNOLOGY

SCU 3103: INFORMATION MANAGEMENT AND COMMMUNICATION FOR SCIENCE

DATE: JANUARY 2025 **TIME: 2 HOURS**

INSTRUCTIONS: Answer Question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

a) Define communication in the context of scientific work [2 Marks]

b) Explain the key components of communication (sender, message, receiver, feedback) and how they apply in a scientific setting. [6 Marks]

c) Differentiate between interpersonal communication and intrapersonal communication in scientific collaborations. [4 Marks]

d) Discuss the role of public communication in the dissemination of scientific information. [4 Marks]

e) Explain the difference between hearing and listening, specifically in a scientific discussion. [6 Marks]

f) Discuss the significance of cybersecurity practices in the protection of scientific information. [4 Marks]

g) Define critical thinking and its significance in scientific debates. [4 Marks]

QUESTION TWO (20 MARKS)

a) Explain why is it important to adhere to proper citation styles (APA, IEEE, Nature) in scientific writing. [8 Marks]

b) Discuss the impact of 'fake news' on public understanding of science. [6 Marks]

c) Describe the challenges and benefits of cross-cultural communication in global scientific collaborations. [6 Marks]

QUESTION THREE (20 MARKS)

a) Explain the role of critical thinking in reading and interpreting scientific literature, and describe how this skill can affect the quality of research conclusions. [6 Marks]

b) Discuss the functions of communication in the context of scientific research, highlighting how each function contributes to the dissemination and understanding of scientific information. [6 Marks]

c) Analyze how effective interpersonal communication can influence the success of scientific collaborations, using specific examples from research environments. [8 Marks]

QUESTION FOUR (20 MARKS)

a) Explain the role of feedback in ensuring effective communication in scientific exchanges, providing examples of how feedback can influence research outcomes. [6 Marks]

b) Describe the primary differences between oral and written communication in science. [6 Marks]

c) Describe how can a scientist overcome speech apprehension during presentations. [8 Marks]

QUESTION FIVE (20 MARKS)

a) How does the audience's understanding of scientific content impact the delivery of a presentation? Provide examples of how speakers can adjust their presentations to suit different audiences. [6 Marks]

b) Outline the different types and sections of scientific reports. [8 Marks]

c) Explain what are the key cybersecurity issues related to scientific data, such as viruses, PINs, passwords, and scams. [6 Marks]