



**UNIVERSITY EXAMINATIONS
EXAMINATION FOR 2019 /2020 FOR BACHELOR OF SCIENCE IN COMPUTER
SCIENCE**

RCS 306: COMPUTER SCIENCE RESEARCH AND SEMINAR

DATE: 10TH DECEMBER 2019

TIME: 2 HOURS

GENERAL INSTRUCTIONS:

Students are NOT permitted to write on the examination paper during reading time.
This is a closed book examination. Text book/Reference books/notes are not permitted.

SPECIAL INSTRUCTIONS:

This examination paper consists Questions in Section A followed by section B.
Answer **Question 1 and any Other Two** questions.

QUESTIONS in ALL Sections should be answered in answer booklet(s).

- 1. PLEASE start the answer to EACH question on a NEW PAGE.**
- 2. Keep your phone(s) switched off at the front of the examination room.**
- 3. Keep ALL bags and caps at the front of the examination room and DO NOT refer to ANY unauthorized material before or during the course of the examination.**
- 4. ALWAYS show your working.**
- 5. Marks indicated in parenthesis i.e. () will be awarded for clear and logical answers.**
- 6. Write your REGISTRATION No. clearly on the answer booklet(s).**
- 7. For the Questions, write the number of the question on the answer booklet(s) in the order you answered them.**
- 8. DO NOT use your PHONE as a CALCULATOR.**
- 9. YOU are ONLY ALLOWED to leave the exam room 30minutes to the end of the Exam.**
- 10. DO NOT write on the QUESTION PAPER. Use the back of your BOOKLET for any calculations or rough work.**

SECTION A

QUESTION ONE (30 MARKS)

- a) Define the following:
(i) Sampling
(ii) Research Design.
(iii) Research proposal **(3 Marks)**
- b) Define what is research clearly showing the research characteristics **(8 Marks)**
- c) Discuss the features of a good research? **(4 Marks)**
- d) Compare the Two commonly used research methodologies **(6 Marks)**
i. Quantitative
ii. Qualitative
- e) Case study research is an approach in which the core theme of the research cannot be separated out from the context within which it exists. This inevitably means that multiple methods need to be used to help the researcher explore these connectivities. What are the strengths and the limitations of case study research? **(4 Marks)**
- f) Identify which of the following research could be Quantitative Research and which are Qualitative Research. **(5 Marks)**
1. Bournes and Mitchell (2002) undertook an in-depth study to describe the experience of waiting in a critical care waiting room.
 2. Hupcey (2000) undertook a study that involved the development of a model explaining the psychosocial needs of patients in the intensive care unit. Feeling safe was the overwhelming need of patients in the intensive care unit.
 3. McDonald, Freeland, Thomas, and Moore (2001) conducted a study to determine the effectiveness of a preoperative pain management intervention for relieving pain among elders undergoing surgery.
 4. Sadala and Mendes (2000) explored the experiences of 18 nurses who cared for patients who had been pronounced brain dead but kept alive to serve as organ donors.
 5. Reynolds and Neidig (2002) studied the incidence and severity of nausea accompanying combinative antiretroviral therapies among HIV infected patients, and explored patterns of nausea in relation to patient characteristics.

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO (20 Marks)

- a) Whether you are a new project manager, or an experienced leader, project management challenges are inevitable. Considering a project which has a research undertaking, Describe challenges that project managers experience and suggest practical solution to help overcome those challenges. **(10 Marks)**
- b) Give the Disadvantages of Close ended-Questions in Computer Science research work. **(4 Marks)**
- c) Discuss the Steps in the Formulation of Research Problem **(6 Marks)**

QUESTION THREE (20 Marks)

- a) There are four different research methods used in educational research. Discuss them clearly using examples where necessary. **(10 Marks)**
- b) Research reports are the product of slow, painstaking, accurate inductive work. Explain the steps involved in writing report **(10 Marks)**

QUESTION FOUR (20 Marks)

- a) A project for this class called for you to do Action Research. Discuss Action Research (characteristics, importance and the process). **(12 Marks)**
- b) Describe the Rules of Educational Research and why are they important? **(8 Marks)**

QUESTION FIVE (20 Marks)

- a) Differentiate between Null and Alternate hypothesis **(6 Marks)**
- b) Describe the Essentials of a good Questionnaire **(8 Marks)**
- c) Grounded Theory is an approach to research which is often misunderstood in business research projects. It is a highly complex but highly structured way of undertaking a qualitative investigation. What are the strengths and the limitations of using a grounded theory approach? **(6 Marks)**