



PAN AFRICA CHRISTIAN UNIVERSITY

(BBIT/BCOM/BBLD/BSIT/DICT)

END-OF-SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BIT311, BSIT311, BUS2313, BCM304

CAMPUS: ROYSAMBU

COURSE TITLE: BUSINESS RESEARCH METHODS

EXAM DATE: WEDNESDAY, DATE (DDTH MONTH YEAR)

TIME: START HOUR – END 08:00-11:00HRS

INSTRUCTIONS

- This exam script has **six** Questions.
- Read all questions carefully before attempting.
- Answer Question **ONE** and any other **three** questions
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets, and computers are NOT permitted in Theory Papers

QUESTION 1

A postgraduate student is conducting research on the impact of mobile-based smart farming applications on crop yield among smallholder farmers in rural Kenya. The goal is to evaluate how these applications help farmers make better decisions on irrigation, pest control, and planting. The student plans to interview farmers, use farm records, and analyze yield differences before and after adoption.

- a) Based on the SmartFarm case study, identify and justify one research problem **(2 marks)**
- b) Formulate one specific objective for the SmartFarm research project. **(2 marks)**
- c) Justify a research design most appropriate for the SmartFarm project **(2 marks)**
- d) State one purpose of conducting a literature review for the SmartFarm research **(1 mark)**
- e) Name one primary and one secondary data collection method suitable for the SmartFarm study. **(2 marks)**
- f) Suggest one method the student could use to analyse the impact of smart farming apps on yield. **(1 mark)**

QUESTION 2

Study this extract from a literature review to answer the questions below:

...Ibrahim et al., (2015) observed how the education system at most universities in Malaysia is exam-oriented – and so it is in many other universities across the globe such that attaining the highest score in an exam is viewed as ‘coup det tat’ of one’s academic life. The researchers however observed that despite their excellent performance in exams, things turn out to be tragic when these graduates start seeking jobs because they lack the necessary skills needed by the employer. To remedy this, they recommend collaborative (peer-to-peer) learning arguing that it makes the learning process more meaningful and interesting. Stoerger (2008) added that focusing on collaborative learning encourages the development of new modes of interaction in the educational community. Another study conducted in Australia by Chandrasekaran et al., (2016) revealed that via social learning, learners get exposed to the same degree of knowledge and they can easily access relevant study materials through peer-to-peer engagement. Students admitted that they learn a lot through discussion forums and by interacting with other students online. RIT (2014) categorizes online educational interaction into three distinct yet convergent categories: learner-content, learner-instructor, and learner-learner. In this case, the concern is on the learner-to-learner which is so paramount that University accrediting agencies such as the Middle States Higher Education Commission require proof of it in online courses and program design. Student-to-student interaction supports successful and effective learning and helps students develop analytical and problem-solving skills (RIT, 2014).

- a) Explain how technology has helped to make the above case a good literature review **(2 marks)**
- b) Explain any TWO significances of literature review to the research project mentioned in the above case. **(4 Marks)**
- c) Describe TWO attributes that will qualify the above case as a good literature review **(4 Marks)**

QUESTION 3

A public health researcher is conducting a study to evaluate the prevalence of lifestyle diseases such as diabetes and hypertension among adults aged 30–60 in Nairobi County. Due to budget and time constraints, the researcher cannot assess every adult in the population, so they decide to use sampling techniques and validated questionnaires to collect data on diet, exercise habits, and medical history.

- a) Define target population as used in the case study **(1 mark)**
- b) Identify the target population in the context of the HealthTrack study **(1 mark)**
- c) Justify the reason for sampling in the HealthTrack study **(2 marks)**
- d) Describe one appropriate sampling technique for selecting participants in the HealthTrack study. **(2 marks)**
- e) Explain how measurement validity applies to the use of questionnaires in the HealthTrack study. **(2 marks)**
- f) State one method to ensure the reliability of data collected using the questionnaire in the HealthTrack study **(2 marks)**

QUESTION 4

XYZ Retail is a national retail chain with a focus on providing high-quality consumer products. Despite having a loyal customer base, the company has seen a decline in customer satisfaction over the past year. Management believes that identifying the underlying causes and addressing them effectively could significantly improve customer retention and increase revenue. However, they are unsure of the best course of action. The company has decided to undertake a research project to identify the factors affecting customer satisfaction and come up with strategies to improve it. The research will be conducted over a six-month period, using various research methods to gather and analyze data. This study aims to understand customer preferences, their experiences with the store, and how to address their concerns.

- a) Identify THREE ethical concerns while conducting this research **(3 marks)**
- b) Based on the XYZ Retail case study, propose three research objectives that would guide the study on customer satisfaction. **(3 marks)**
- c) Explain TWO key areas you should focus on while reviewing existing research on customer satisfaction **(4 marks)**

QUESTION 5

A research team is evaluating the impact of an online learning platform (EduTech) on student performance in three universities. The team chooses to use a structured questionnaire to collect data from students about their experience using EduTech, including ease of use, accessibility, content quality, and academic improvement. The questionnaire includes both closed-ended and open-ended questions, and is administered online. Before full deployment, the team conducts a pilot test to refine the tool.

- a) Justify the need for conducting pilot test on questionnaire before full data collection the EduTech researchers **(2 marks)**
- b) Give one example of a closed-ended question the EduTech team could include in their questionnaire. **(2 marks)**
- c) State two advantages of using a structured questionnaire in the EduTech study **(2 marks)**
- d) Explain one reason why the EduTech researchers might include open-ended questions in their questionnaire. **(2 marks)**
- e) Describe how the EduTech researchers can ensure validity of their questionnaire **(2 marks)**

QUESTION 6

A group of researchers conducted a study to assess how small-scale farmers in County X use digital tools (like mobile apps and weather alerts) to improve crop productivity. They collected quantitative data using structured questionnaires from 300 farmers, including variables such as farm size, crop yield, digital tool usage, and income levels. After data collection, they used SPSS to analyze the results and interpret trends and correlations.

- a) State a type of data analysis most appropriate for examining the relationship between digital tool usage and crop yield in the SmartFarm study **(2 marks)**
- b) Justify the to clean data before analysis in the SmartFarm study **(2 marks)**
- c) Name one descriptive statistic the researchers could use in summarizing data on crop yields. **(2 marks)**
- d) State four advantages of using software like SPSS in data analysis. **(4 marks)**