

**SPECIFY TYPE OF
EXAMINATION**

FIRST ATTEMPT
FIRST RESIT
SECOND RESIT
RE-TAKE



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF COMPUTER
SECURITY AND FORENSICS
4TH YEAR 1ST SEMESTER 2020/2021 ACADEMIC YEAR
MAIN CAMPUS**

COURSE CODE: IIT 3432

COURSE TITLE: FORENSIC COMPUTING CAPSTONE RESEARCH

DATE: 18TH NOVEMBER, 2020

TIME: 9.00-12.00 NOON

TIME: 2 HOURS

Instructions:

1. Answer **ALL questions in Section A and B** and **ANY other TWO questions in Section C**
2. Tick the most correct alternative in Section A
3. Answers to Questions in Section B and C must be written in the spaces provided on the question paper.
4. Candidates must ensure they submit their work by clicking “finish and submit attempt” button at the end.



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SECTION A: 20 Marks (Each question carries 1 mark)

1. The capstone project is selected from the standpoint of
 - a. Financial support
 - b. One's interest
 - c. Social relevance
 - d. Availability of relevant literature
2. What is plagiarism?
 - a. A violation of academic norms.
 - b. An offense against the author.
 - c. Applies to both licensed and unlicensed content.
 - d. All of the above.
3. Prototyping has a number of application. It is not used to
 - a. Standardize the final product.
 - b. Get the project evaluated.
 - c. Identifying the key concepts.
 - d. Capturing the user input.
4. Every capstone project requires development of project documents. Which of the documents listed below is one of the project documents?
 - a. Project manual.
 - b. Project synopsis.
 - c. Risk analysis
 - d. None of the above.
5. Which of the following is not included in the written proposal of the capstone project?
 - a. Abstract
 - b. Description
 - c. Procedures
 - d. Objectives
6. How is random sampling helpful?
 - a. Reasonably accurate
 - b. An economical method of data collection
 - c. Free from personal biases
 - d. All of the above
7. In order to pursue the research, which of the following is required first?
 - a. Developing a research design



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- b. Formulating a research question
 - c. Deciding about the data analysis procedure
 - d. Formulating a research hypothesis
8. Where do you provide a step-by-step account of what the capstone researcher and participants did during the project?
- a. Introduction
 - b. Abstract
 - c. Procedure
 - d. Design
9. What is the main role of research in education?
- a. To upsurge one's social status.
 - b. To increase one's job prospects.
 - c. To augment one's personal growth.
 - d. To help an applicant in becoming a renowned educationalist.
10. What are the core elements of the project report?
- a. Introduction; Data Collection; Data Analysis; Conclusions and Recommendations
 - b. Introduction; Literature Review; Methodology; Results; Discussions and Conclusions
 - c. Executive Summary; Literature Review; Data Gathered; Conclusions; Bibliography
 - d. Project Plan; System Design; Implementation; References
11. How do we judge the depth of any capstone project?
- a. By project title
 - b. By project duration
 - c. By project objectives
 - d. By total expenditure on the project
12. It is in this section that you fully interpret and evaluate your results.
- a. Introduction
 - b. Method
 - c. Results
 - d. Discussion
13. Which is an important problem solving consideration for proper planning of your project?
- a. Building a supportive team.
 - b. Making cautious and valid decisions.
 - c. Avoiding procrastination
 - d. All of the above.



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14. You have already developed a preliminary draft of your project statement using plain language. Which of the following is an important consideration to address so as to refine the statement?
 - a. The research methodology to be used.
 - b. The source of financing for the project.
 - c. The project participants.
 - d. All of the above.
15. Select the odd one out. Modern qualitative research can generally involve a detailed study of:
 - a. Psychological characteristics of interesting individuals.
 - b. Media content.
 - c. Text.
 - d. Conversational exchanges between people and interviews.
16. Which of the following is not one of the 3Ps of objective types?
 - a. Product
 - b. Planning
 - c. Process
 - d. People
17. Which of the following is true about a contingency plan?
 - a. It provides solutions for the individual risks that occur.
 - b. It caters for all the risks that have been identified in the risk analysis.
 - c. It enables one to handle debilitating roadblocks.
 - d. Resorting to a contingency plan may mean changing your entire project completely.
18. Which of the following features are considered as critical in qualitative research?
 - a. Collecting data with the help of standardized research tools.
 - b. Design sampling with probability sample techniques.
 - c. Collecting data with bottom-up empirical evidence.
 - d. Gathering data with top-down schematic evidence.
19. During post-project reflection, which of the following activities is undertaken?
 - a. Hold a party with friends.
 - b. Prepare to improve the project in the next iteration.
 - c. Discuss the things that were learned during the project.
 - d. None of the above.
20. How would you evidence your project for evaluation?
 - a. Annotated Web site screen shots
 - b. Feedback reports
 - c. A letter from the stakeholder.
 - d. All of the above.
21. A research problem is feasible only when



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- a. It has utility and relevance
 - b. It is new and adds something to knowledge
 - c. It is researchable
 - d. All of the above
22. If you elected to make a copy of your proposal and rename it Capstone Project Final Report or other name as required by your instructor, what should you not do?
- a. Change the project title.
 - b. Change wording in the document to reflect the accomplishment of the proposed tasks.
 - c. Include evidence that was stated in the proposal.
 - d. Add anything to explain the project reality.
23. How would you best judge the fruitfulness of the capstone project?
- a. Whether or not the application worked.
 - b. Assessing the impact of the project on the public or other stakeholders.
 - c. In terms of the number of new ideas and insights it offers.
 - d. All of these.
24. Which of the following abbreviations can be used in a research report?
- a. IQ.
 - b. yr. for year.
 - c. mo. for month.
 - d. None of the above.
25. What is the purpose of the project proposal in a capstone project?
- a. To begin with the end in mind.
 - b. States the goals, objectives, and strategies for solving the problems to be addressed.
 - c. It is the starting point of the final project report.
 - d. All of the above.
26. To qualify as a research, the process must have certain characteristics. Which of the following is not one of them?
- a. Controlled.
 - b. Robust.
 - c. Valid and verifiable.
 - d. Systematic.
27. The conclusions/findings of which type of research cannot be generalized to other situations?
- a. Casual Comparative Research
 - b. Historical Research
 - c. Descriptive Research
 - d. Experimental Research



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28. Analyzing risk and risk management is a continuous process throughout the life of the project rather than an exercise that is done once at the beginning of a project. Which of the following is not part of the risk management process?
- Feasibility study.
 - Getting the right people involved in the project.
 - Developing a contingency plan.
 - Perform project evaluation.
29. The abstract should be about how many words?
- 50
 - 75
 - 120
 - 300
30. A _____ is placed within the text and includes the authors' last names and the publication year. A _____ is placed at the end of a project/paper and includes information on the authors, year, title of the source, and publication data to prevent plagiarism and give proper citation to work referred.
- quotation; citation.
 - reference list; quotation.
 - citation; reference list.
 - reference list; citation.

SECTION B: 20 Marks

- a) Consider the capstone project whose problem statement is given below:

“For mobile applications, faultless communication for data processing as well as accessing the information is the backbone for successful growth & operation shortly. The expansion of such infrastructure for mobile devices is a challenge. These devices demand that the storage space must be reliable and robust. In handheld devices, flash memory is an alternative because these are opposite to disks because of several features like less power consumption, small size and I/O speed is fast. But, it stops the Flash memory usage for storing the data. Different methods need to be developed for space usage optimization without changing the performance of the query to a high quantity. This project seeks to find a suitable compression technique for data storage on Flash memory without influencing the query act beyond a particular threshold.”

- Give a suitable title for the project (1 mark)
- What are the TWO artefacts that are expected from this project? (2 marks)
- When designing objectives, they should be SMART. Briefly highlight what this means clearly outlining each itinerant aspect of SMART. (5 marks)



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- iv) Develop ONE suitable general objective and AT LEAST THREE specific objectives and show how they conform to “M” under the SMART principles (8 marks)
- b) List any TWO reference and citation styles with the exception of the American Psychological Association (APA) format. (2 marks)
- c) Name any TWO reference management softwares. (2 marks)

SECTION C:20 Marks

- a) Discuss any five project proposal elements (10 marks)
- b) Discuss the FIVE stages you would follow as a researcher when conducting literature review. (10 marks)
- c) Discuss any FIVE characteristics of research in general. (10 marks)