IT Department- College of Applied science -Tishk International University

Research Methods – Questions Bank

Q1: What is your method to complete the puzzle?

Q2: The goal of research methodology is to find ----------- ---- to questions through ----------------- and ---------------- ----- means.

Q3: What is research methodology?

Q4: Mention the first four steps in research Process (In sequence)

Q5: The research problem or problem statement is a description of ……………..

Q6: What is the problem statement of treasure hunter scenario? (Mention it in your own words)

Q7: _____ is a broad statement that describes the overall purpose or goal of the study

Q8 : If the problem statement is : "The use of passwords as a security measure for accessing sensitive information is becoming increasingly unreliable and subject to hacking. Suggest an Aim for the research.

Q9: What is the difference between objectives and aim?

Q10: Suggest three objectives for Treasure Hunter Scenario

Q11: Mention one literature study to enhance password security

Q12: Once upon a time, there was a computer scientist named Sarah who was working on a new project. She was tasked with developing a new computer program that could help predict the weather more accurately. Before she could start coding, Sarah knew that she needed to plan her approach carefully.

1.   Literature Review: Sarah started by conducting a thorough literature review of the existing weather prediction programs. She gathered information about their strengths and

weaknesses, as well as the latest research in the field. She also learned about the different algorithms and approaches that had been used in the past and what had worked best.

2.   Research Objectives: After reviewing the literature, Sarah wrote her research objectives, which outlined what she hoped to achieve with her project. She wanted to create a program that could predict the weather more accurately than any existing program and make it easier for people to plan their day-to-day activities.

3.   Research Aim: Sarah then wrote her research aim, which was the overall goal of her project. Her aim was to develop a cutting-edge computer program that could revolutionize the way weather was predicted.

Sarah used her literature review, research objectives, and aim to guide her project. She carefully planned each step of her research, including the methodology she would use, the data she would collect, and the tests she would perform to ensure the program met her goals. In the end, Sarah's weather prediction program was a success and helped many people plan their activities more effectively.

Questions for students:

Q12 What did Sarah do at the beginning of her project to plan her approach?

Q13 What were Sarah's research objectives?

Q14 What was the overall goal of Sarah's project (her research aim)?

Q15 How did Sarah use her literature review to guide her project?

Q16 Can you identify any strengths and weaknesses of the existing weather prediction programs that Sarah discovered in her literature revie

Choose the correct Answer:

Q17 What is a literature review in research methodology?
a. A review of existing knowledge about a topic
b. A review of new information about a topic
c. A review of the research objectives and aims D. d review of the research design

Q18 What is the ultimate goal of research methodology?
a. To collect data
b. To analyze data
c. To report results
d. To advance knowledge and understanding

Q19 What is the relationship between objectives and research methodology?
a. Objectives are independent of research methodology
b. Objectives guide the choice of research methodology
c. Research methodology is independent of objectives
d. Research methodology determines the objectives

Q20 What is the relationship between aims and objectives in research methodology?
a. Aims and objectives are independent of each other
b. Objectives are specific and detailed while aims are broad and general
c. Objectives and aims are interchangeable
d. Aims determine the objectives

Q 21 What is the aim of IT department at TIU?

Q22: Short story
Once upon a time, there was a psychologist named Sarah who was interested in studying the relationship between stress and memory. She was particularly interested in understanding whether stress could have a negative impact on memory and whether this impact could be reduced by engaging in mindfulness meditation.
To conduct her research, Sarah followed the following
Sara presented her problem statement and defined the objectives and aims of her research. She wanted to determine whether stress has a negative impact on memory and whether mindfulness meditation can reduce this impact.
Literature Review: Sarah began by reading existing research articles and books about stress, memory, and mindfulness meditation. She noted the key findings and identified gaps in the existing knowledge that her research could fill.

1. Problem statement can be : The relationship between stress and memory has not …

Q 23 Define research methodologies and state two of it benefits.

Q 24 What is the difference between research aim and research objectives?

Q 25 Suggest a research title that combines computer with psychology.

Story : Once upon a time, there was a psychologist named Sarah who was interested in studying the relationship between stress and memory. She was particularly interested in understanding whether stress could have a negative impact on memory and whether this impact could be reduced by engaging in mindfulness meditation.
To conduct her research, Sarah followed the phases of research methodology:
1. Literature Review: Sarah began by reading existing research articles and books about stress, memory, and mindfulness meditation. She noted the key findings and identified gaps in the existing knowledge that her research could fill.
2. Objectives and Aims: Sarah then defined the objectives and aims of her research. She wanted to determine whether stress has a negative impact on memory and whether mindfulness meditation can reduce this impact.

Dr. Taha Basheer

3.   Hypothesis: Based on her literature review, Sarah developed a hypothesis that stress will have a negative impact on memory and that mindfulness meditation will reduce this impact.

4.   Methodology: Sarah designed an experiment to test her hypothesis. She randomly assigned participants to either a stress group or a stress-mindfulness meditation group. She measured the participants' memory before and after the stressor or mindfulness meditation session.

5.   Results: Sarah analyzed the data and found that the stress group showed a decrease in memory performance, while the stress-mindfulness meditation group showed improved memory performance compared to before the meditation session.

6.   Conclusion: Based on her results, Sarah concluded that stress has a negative impact on memory and that mindfulness meditation can reduce this impact.

Q26: What was Sarah interested in studying?
Q27: What were the objectives and aims of Sarah's research?
Q28: What hypothesis did Sarah develop?
Q29: What methodology did Sarah use to test her hypothesis?
Q30: What did Sarah find in her results?
Q31: What conclusion did Sarah draw from her results?

Q32:   Draw a flowchart for a simplified version of TIU system, in which there are three types of users: admins, lecturers and students. Admins can add, remove and modify accounts, while lecturers can read, add and modify marks, in addition to enter attendance. Students, can read marks and check their attendance.

Q33:   A car shop website is planned by a web designer, the website has access to all users without login, they can search for cars, compare cars and contact the company by email; however, page admin should login to add, remove or modify cars. Draw a flowchart for the website that includes at least one conditional statement (30 Marks).

Q34 Draw a flowchart for a simplified version of TIU system, in which there are three types of users: admins, lecturers and students. Admins can add, remove and modify accounts, while lecturers can read, add and modify marks, in addition to enter attendance. Students, can read marks and check their attendance.

Q35: What are he main phases of research methodology

Read the paragraph below and answer the following:

Q36 -What is the problem statement of the research.
Q37 -What is the aim.
Q38-Write three objectives for the research.
Q39-Mention 5 keywords that the researcher (Savan) might use to search for literature studies in the area of her project.

Savan, an IT specialist, embarked on a research mission to identify the most pressing issues with mobile devices. She interacted with consumers, reviewed industry reports, and analyzed market trends. Her findings indicated that while mobile devices were becoming more advanced, there were still significant limitations when it came to camera quality and AI can be enhanced. Consumers expressed a strong desire for mobile devices with high-quality cameras that could capture sharp and clear images, especially in low-light conditions. She wanted to make research in which she can design a new algorithm to enhance captured images and to add an AI feature that can show people in different ages (by changing the face details) while capturing the images.

Q40: How the research gap can be found?

Dr. Taha Basheer