# Research Methods Homework Questions

Note: Research Methods is more about applying knowledge to psychology research. Here are some knowledge based questions. However, in order to get the best experience, you should try the exam style sections on the website as well.

## Variables & Hypothesis Writing
1) Explain the difference between an independent variable and a dependent variable. (2)
2) Identify the name of the variable that psychologists measure in experiments. (1)
3) Explain what is meant by extraneous variables. Give two examples. (4)
4) A psychologist wanted to see if temperature affects exam performance. Identify the independent variable, dependent variable and write a hypothesis for this study. (4)
5) A psychologists wanted to see if sugar affected how much sleep a person got. Identify the independent variable, dependent variable and write a hypothesis for this study. (4)

## Experimental Designs
1) Explain the repeated measures design. (2)
2) Explain the independent groups design. (2)
3) Explain the matched pairs design. (2)
4) Explain what is meant by order effects. (2)
5) Explain what is meant by participant variables. (2)
6) Evaluate the repeated measures design. (4)
7) Evaluate the independent groups design. (4)
8) Evaluate the matched pairs design. (4)
9) Explain what is meant by counterbalancing. (2)
10) Explain how a psychologist could ensure that there are no biases in the groups of an independent groups design. (3)

## Experiments & Standardisation
1) Evaluate the use of lab studies in psychology. (4)
2) Evaluate the use of natural studies in psychology. (4)
3) Explain what is meant by standardised instructions. (2)
4) Explain why it is important to have standardised instructions in psychology studies. (3)
5) Explain the difference between a brief and a debrief. (3)

## Sampling Methods
1) Explain what is meant by a population and a sample. (2)
2) Explain how a psychologist could use random sampling to select a sample. (3)
3) Explain how a psychologist could use systematic sampling to select a sample. (3)
4) Explain how a psychologist could use opportunity sampling to select a sample. (3)
5) Explain how a psychologist could use stratified sampling to select a sample. (3)
6) Evaluate random sampling. (3)
7) Evaluate systematic sampling. (3)
8) Evaluate opportunity sampling. (3)
9) Evaluate stratified sampling. (3)
10) Explain what psychologists mean by 'representative'. (2)

## Other Research Methods
1) Explain the difference between an open and a closed question. (2)
2) Write one open question and one closed question about the 'effectiveness of homework. (2)
3) Evaluate the use of questionnaires as a method of collecting data. (3)
4) Explain the difference between a structured interview and an unstructured interview. (3)
5) Evaluate structured interviews as a method of collecting data. (3)
6) Evaluate unstructured interviews as a method of collecting data. (3)
7) Explain what is meant by a case study. (2)

8) Evaluate case studies as a method of collecting data. (3)
9) Explain what is meant by categories of behaviour when running an observation. (2)
10) Evaluate observations as a method of collecting data. (3)
11) Explain how a psychologist could improve the reliability of an observation. (3
12) Explain what is meant by a correlation. (2)
13) Draw a negative correlation, a positive correlation and a no correlation graph. (3)
14) Evaluate correlations as a method of collecting data. (3)

## Ethics
1) Identify and explain two ethics that psychologists must consider when running research. (4)
2) Identify and explain two ethics broken in the Milgram obedience study. (4)

## Data
1) Explain the difference between qualitative and quantitative data. (3)
2) Explain the difference between primary and secondary data. (3)
3) Choose 10 random numbers.
    a. Calculate the mean. (2)
    b. Calculate the mode. (2)
    c. Calculate the media. (2)
    d. Calculate the range. (2)
4) Choose a random fraction. Calculate this fraction as a percentage. (2)
5) Six out of fifteen people scored over half marks on a recent maths test. Calculate the percentage people who scored under half marks. Show your working. (2)
6) Look at your answer to number 5. Draw a graph to represent the number of people who scored over and under half marks on the maths test. (4)

Data – you also need to be able to draw conclusions from averages and ranges. Have a go at this in the practice papers on the website!