

# **PREPARATION FOR MSC PROJECT**

**Student name:**

**Student ID:**

## Table of Contents

Question 1 .....	3
Question 2 .....	3
Question 3 .....	3
Question 4 .....	4
Question 5 .....	5
Question 6 .....	5

## **Question 1**

It is very important to support ethical principles that can help to maintain dignity of the research participants. All the research, which involves human beings, needs to be reviewed in an effective way so that no unethical practice can observe. Highest ethic stranded needs to maintain in research that involves human subject so that ethical standard is maintained in an effective way. The main reason for which research related human is in need of an approval that it ensures that the research process can conduct ethically. In addition, this process ensures that the research on involvement of human will happen in a responsible way and leads to a beneficial outcome.

## **Question 2**

### **Part A**

(Xiang and Trevor, 2008)

### **Part B**

Xiang, H. and Barker, T., 2008. Using artificial intelligence techniques to grade essays. *The Journal of Computer Science*, 26(3), pp. 126-132.

## **Question 3**

### **Random sample**

In the sampling, random sample is a part of this technique where the samples have equal probability of being chosen. The random sampling is chosen in unbiased manner.

### **Quota Sample**

In sampling technique, quota sampling is a methodology where every data is collected from a definite homogeneous group. it is a two-step process which uses two variables.

### **Population**

Population can refer as a group of people, or any objects from which a statistical sample can draw.

## **Statistic**

The static is a form of data that can obtain from a large number of numerical values.

## **Parameter**

Parameter is a numerical factor that is the outline of an area.

## **Mean**

Mean is the value that can calculate with the help of sum of all values then dividing total value.

## **Median**

Median can be described as the value, which divides the random variable in half based on the probability.

## **T-test**

T test is a part of statistical test through which a comparison in mean value can observe between two entities.

## **P-value**

P-value is defined as the probability, which help to represent the statistical measure in the standard deviation.

## **Significant deference**

The significant deference is the measurable deference, which happens between two entity or two point.

## **Question 4**

### **Part A**

The term confounding variable is a factor that is introduced for examining a cause effect relationship.

### **Part B**

There are four ways through which the effect of confounding variable can be reduced are,

***Randomization***

Through the way a random distribution is done that can help to reduce the effect of this variable.

***Restriction***

Restricting entry of confounding factors with others can help to reduce the effect of this variable.

***Stratification***

The effect of the variable can be reducing if the confounders are distributed in an even manner.

***Multivariate analysis***

This process works if the confounders are measured according to the requirement and in this way, the effectiveness of this variable can reduce.

**Question 5**

**Quantitative research**

Quantitative research is a type of research methodology that helps to do a systematic investigation by gathering different information and data by performing different techniques. Different techniques can include statistical technique, the computational technique or the mathematical technique. Quantitative research is done by gathering different data, which are numerical.

**Qualitative research**

The qualitative research is a research processes that involves in collecting data, which are non-numerical. Through the qualitative data the concepts can be understand. The main aim of this research is that it helps to gain a deeper knowledge about a specific entity. This research helps to gather quality information by providing a furnish structure of the issue.

**Question 6**

**Part A**

What is the relationship between bandwidth and video download speed?

**Part B**

The aim of this research is to understand the bandwidth

Objective of this study is to

**Part C**

Video download speed is not dependent on bandwidth.

**Part D**

The Bandwidth is independent variable

**Part E**

The download time is depending on the bandwidth that is why it can be said that it is a dependent variable.

**Part F**

In order to get a systematic enquiry, the pilot study was used.

**Part G**

To access any differences or calculate any presence of traffic in bandwidth the repetition of each condition is calculated. In order to find system frequency response 30 repetition are used.

**Part H**

Time spending on internet and internet speed are confounding variable.

**Part I**

Time spending can be reduced if the speed of the internet is increased. On the other hand, if the internet speed is reduced then the video downloading time will increase.

**Part J**

With the help of legal practice, no breach in can observe.

The social can help to analyze society and human behavior.

With the help of ethical practice, the morale can improve in a positive way.

Professional issues that can observe in this study are a difference in beliefs.

### **Part K**

It can be possible to allocate suitable budget for obtaining bandwidth as per required video download time.