

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Textile and Apparel Technology



Study Programme	: Post Graduate Diploma in Apparel Production and Management.
Name of the Examination	: Final Examination
Course Code and Title	: TTY7191 Research Methodology
Academic Year	: 2017/18
Date	: 16 th February 2019
Time	: 0930-1230hrs
Duration	: 3 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Seven (7)** questions in three **(3)** pages.
3. This is a Closed Book Test (CBT).
4. Write down your Index Number in all the pages of answer scripts.
5. Answer five (05) questions. Each question carries 20 marks.
6. Answer for each question should commence from a new page. If a question has many parts, all the parts should be answered in the chronological order under the same question.
7. Write down the answered question numbers in the answer book.
8. Do not answer more than five (05) questions.
9. Answers should be in clear hand writing.
10. Do not use red colour pens to write the answers.

- (Q1) (a) People use the term "Research" incorrectly in various situations. Giving at least five (05) examples justify the given statement. (10 marks)
- (b) Discuss the importance and benefits of research to the society. (10 marks)
- (Q2) (a) Write a comprehensive note comparing qualitative and quantitative approaches of research. (10 marks)
- (b) Briefly describe a suitable procedure you should follow when selecting a research problem. (10 marks)
- (Q3) (a) Briefly discuss the elements of a good research problem. (06 marks)
- (b) Explain the importance of carrying out literature surveys/reviews in relation to research. (08 marks)
- (c) Discuss in brief, why is it important to include references in research publications. (06 marks)
- (Q4) (a) Briefly discuss the meaning of "Research design". (04 marks)
- (b) Write a short note on the "Features of a good research design". (08 marks)
- (c) Describe the below given two techniques, which can be used to reduce the experimental errors in research.
- (i) Counter balancing
 - (ii) Standardizing the experimental conditions
- (2 x 4marks = 08 marks)
- (Q5) (a) Giving examples, describe the following sampling techniques used in research activities.
- (i) Convenience sampling
 - (ii) Stratified random sampling
 - (iii) Cluster sampling
- (3 x 4 marks= 12 marks)

- (b) Discuss the advantages and disadvantages of "Telephone surveys" used for data collection in research. (08 marks)
- (Q6) (a) Write a comprehensive note on the factors, which should be considered when designing questionnaires for data collection purposes in research. (12 marks)
- (b) With the aid of suitable graphs, describe the below given measurement errors, which may occur during research activities.
- (i) Random measurement error
 - (ii) Systematic measurement error (2 x 4 marks = 08 marks)
- (Q7) (a) Reliability of the data is an essential factor of a successful research. Describe the below given three types of reliability estimation methods, which can be employed in research.
- (i) Test -Retest reliability
 - (ii) Parallel forms reliability
 - (iii) Internal consistency reliability
- (3 x 4 marks = 12 marks)
- (b) Discuss the importance of ethical conduct of research. (08 marks)

