[LH 0815] **AUGUST 2015** **Sub. Code: 2436**

BACHELOR IN PROTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY/PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss various methods of observational study.
2. Describe various sources of demographic data.
3. Discuss diagrammatic presentation of data.

II. Write notes on: **(8 x 5 = 40)**

1. Normal distribution.
2. Chi-square test.
3. Parametric test.
4. Advantages of cohort study design.
5. Graphical representation of data.
6. Measurement in research.
7. Describe methods of data collection.
8. Cross sectional study.

III. Short answers on: **(10 x 3 = 30)**

1. Prevalence and incidence.
2. Differentiate discrete and continuous variables.
3. Define survey.
4. Differentiate statistics and biostatistics.
5. Disadvantages of cohort study.
6. Define Randomization.
7. Qualitative study.
8. P-value.
9. What is primary data?
10. Define mean, median, mode.

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[LI 0216] FEBRUARY 2016 **Sub. Code: 2436**

B.Sc. PROSTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY/PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Elaborate Experimental study design.
2. What is sampling? Write about the types of sampling techniques and criteria for selecting sampling procedure.
3. Explain various parametric and non-parametric tests?

II. Write notes on: **(8 x 5 = 40)**

1. Histogram Vs bar diagram.
2. Chi-square test.
3. ANOVA.
4. Advantages of cross sectional study design.
5. Types of Randomization.
6. What is hypothesis? Explain null and alternate hypothesis.
7. Test of significance.
8. What is hypothesis? Write the basic concepts related to testing of hypothesis.

III. Short answers on: **(10 x 3 = 30)**

1. Differentiate biostatistics and statistics.
2. Differentiate discrete and continuous variables.
3. Advantages of sampling.
4. Meta analysis.
5. Double blinding.
6. Define Randomization.
7. Differentiate standard deviation and standard error
8. What is secondary data?
9. Advantages of Cluster sampling.
10. Reliability Vs Validity.

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[LJ 0816] AUGUST 2016 **Sub. Code :2456**

B.Sc. PROSTHETICS AND ORTHOTICS
(New Syllabus 2013-2014)

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY / PROJECT DEVELOPMENT

Q.P. Code: 802456

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Define variables. Explain in detail about the types of variables.
2. Describe various method of data collection.
3. How to you define research problem? Write in detail about necessity of defining research problems.

II. Write notes on: **(8 x 5 = 40)**

1. Uses of bio-statistics.
2. Types of survey.
3. Distinguish Cumulative frequency and relative frequency.
4. Differentiate case control and cohort study.
5. Classification of data.
6. Bar diagram.
7. Frequency curve.
8. Components of research protocol.

III. Short answers on: **(10 x 3 = 30)**

1. What is primary data?
2. Define hypothesis with example.
3. Qualitative variables.
4. Define sampling.
5. ANOVA.
6. Statistical Table.
7. Define Frequency polygon.
8. p-value.
9. Line diagram.
10. Define mean, median, mode.

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[LK 0217] FEBRUARY 2017 **Sub. Code: 2436**

B.Sc. PROSTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY / PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. What is analysis of data? Explain different types of analysis in research.
2. Define Research. Describe in detail about Experimental Research Design.
3. What is sampling? Enumerate various method of sampling technique.

II. Write notes on: **(8 x 5 = 40)**

1. Histogram.
2. Statistical table.
3. Explain and illustrate the procedure of selecting a random sample.
4. Case control study.
5. Pictogram.
6. Analytical study.
7. Research hypothesis.
8. Types of Error.

III. Short answers on: **(10 x 3 = 30)**

1. What is Secondary data?
2. Descriptive study.
3. Cluster sampling.
4. Measurement and scaling technique.
5. Cartogram.
6. Define Objectives of research.
7. Why do we need research design?
8. Classification of data.
9. Advantages of cross sectional study.
10. Define confidence interval.

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[LM 0218] FEBRUARY 2018 **Sub. Code: 2436**

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY / PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. What is hypothesis? Mention its types. How do you test the hypothesis?
2. Elaborate on procedures involved in limb orthotics project development.
3. Elaborate case study method and its uses.

II. Write notes on: **(8 x 5 = 40)**

1. What are the elements of Informed Consent?
2. Define reliability. What is Intra rater and Inter rater reliability?
3. What is the scope of statistics in limb Prosthetics research? Provide suitable examples.
4. Write Characteristics of normal distribution.
5. Define Validity. Writes its types. Provide an example of a situation from clinical Orthotics where construct validity methods might be applied.
6. How is the Null Hypothesis stated? Explain with suitable examples from limb prosthetics.
7. What are the points to be considered while identifying and selecting a problem for research?
8. How do you compute mean for ungrouped data?

III. Short answers on: **(10 x 3 = 30)**

1. What do you understand by level of significance?
2. Explain Snowball sampling. Give an example.
3. Which diagram will help in calculating median and quartiles?
4. How will you interpret correlation coefficient?
5. How will you choose class interval?
6. How will you draw Frequency Curve?
7. What is Skewness? Define Kurtosis.
8. What is coefficient of Variation?
9. Define Bias. Mention various biases during a research work.
10. What are the contents of a research proposal?

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[LN 0818] AUGUST 2018 **Sub. Code: 2436**

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY / PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Define Research Variable. What is meant by Independent and Dependent Variable? Design a research problem from limb prosthetics and identify independent and dependent variable.
2. Elaborate on various research designs applicable in Orthotic/Prosthetic projects.
3. Explain the meaning and utility of percentile. Elaborate the ways and means for the interpretation of a computed co-efficient of correlation.

II. Write notes on: **(8 x 5 = 40)**

1. Distinguish between 'Ratio Scale' and 'Interval Scale'. In which situation Likert scale is used?
2. Discuss, in brief, the need for stratified random sampling. Is the mean of the stratified random sample unbiased estimator of the population mean? Justify your answer.
3. Write short notes on (a) frequency polygon (b) histogram.
4. Explain in brief :- Type I and Type II errors.
5. What is PICO model? Formulate a research question using this model.
6. Explain Chi square test. Mention its uses.
7. Write a note on Inductive logic in Orthotic/Prosthetic studies.
8. When there are more than two group with continuous outcome measure, explain the procedure of Test of Hypothesis?

III. Short answers on: **(10 x 3 = 30)**

1. What is positive Correlation and Negative Correlation?
2. What is scatter diagram?
3. What are requisites of good Average?
4. Define Tabulation in collection of data.
5. How will you interpret correlation coefficient?
6. What do you mean by Operational Definition? Give a suitable example.
7. What is normative data? Give examples.
8. What is pilot testing? Write its advantages.
9. What do you mean by Scientific Enquiry? Give examples from clinical orthotics.
10. What is literature review and why it is necessary?

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[LP 0819] AUGUST 2019 **Sub. Code: 2436**

BACHELOR IN PROSTHETICS AND ORTHOTICS

THIRD YEAR

PAPER VI – RESEARCH METHODOLOGY / PROJECT DEVELOPMENT

Q.P. Code: 802436

Time: Three Hours **Maximum : 100 Marks**

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Elaborate on various research designs applicable in Orthotic/Prosthetic projects?
2. Explain various parametric and non parametric tests.
3. What is Sampling? Enumerate various method of sampling technique.

II. Write notes on: **(8 x 5 = 40)**

1. Normal distribution.
2. Cross sectional study.
3. Calculation of Mean for Ungrouped data.
4. Explain in brief Type I and Type II error.
5. Histogram Vs bar diagram.
6. What is hypothesis? Explain null and alternate hypothesis.
7. Case control Study.
8. What are the elements of Informed Consent?

III. Short answers on: **(10 x 3 = 30)**

1. Interpretation of correlation coefficient.
2. Cluster sampling.
3. Define confidence interval.
4. What is scatter diagram?
5. What is literature review and why is it necessary?
6. Define randomization.
7. Define Mean, Median and Mode.
8. Prevalence and incidence.
9. What are the contents of research proposal?
10. Disadvantage of cohort study.

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