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CICT PART III SECTION 6

RESEARCH METHODS

FRIDAY: 24 May 2019. **Time Allowed: 3 hours.**

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE
(a) (i) Explain the concept of literature review as used in research. (2 marks)

(ii) Examine six features of a poorly undertaken literature review. (6 marks)

(b) Describe the following terms as used in literature review:

(i) Methodological review. (2 marks)

(ii) Historical review. (2 marks)

(iii) Systematic review. (2 marks)

(c) Sampling theory is designed to attain the objectives of estimation, hypothesis testing and statistical inference.

With reference to the above statement:

(i) Distinguish between "statistical estimation" and "statistical inference". (4 marks)

(ii) Explain two factors that should be considered in the determination of sample size. (2 marks)

(Total: 20 marks)

QUESTION TWO
(a) Distinguish between "causal analysis" and "correlational analysis" as used in research. (4 marks)

(b) Discuss any two multivariate analysis methods. (4 marks)

(c) Explain two statistical measures that are used to summarise research findings data. (4 marks)

(d) A dental clinic has approximately 1,800 patients. The clinic has launched an automated appointment system for the patients. A sample size of 300 patients has been obtained to find out the patient attitude towards the new system of appointment.

Required:
Describe the steps a researcher would follow to select the sample using systematic sampling method. (8 marks)

(Total: 20 marks)

QUESTION THREE
(a) Summarise four essential features of the scientific method of research. (4 marks)

(b) Explain the following categories of research design:

(i) Exploratory research design. (4 marks)

(ii) Hypothesis testing research design. (4 marks)

(iii) Descriptive research design. (4 marks)

(c) Describe time series analysis as used in research. (4 marks)

(Total: 20 marks)

QUESTION FOUR

(a) Analyse four differences between "basic research" and "applied research". (4 marks)

(b) Explain three methods that could be used to draw a random sample. (3 marks)

(c) Discuss six advantages of using a questionnaire as an instrument of data collection. (6 marks)

(d) Suggest seven ways through which unethical research might occur. (7 marks)
(Total: 20 marks)

QUESTION FIVE

(a) Summarise four characteristics of good hypotheses. (4 marks)

(b) Highlight four advantages of using primary data in research. (4 marks)

(c) Suggest four factors that should be considered in determining whether a problem should be researched or not. (4 marks)

(d) Outline the layout of a research proposal. (8 marks)
(Total: 20 marks)

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