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Question Paper Code: BCS703



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

M.Tech II Semester End Examinations (Supplementary) - January, 2019

Regulation: IARE-R16

RESEARCH METHODOLOGY

Time: 3 Hours

(Common to All Branches)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) What are the problems encountered by research in India? [7M]
(b) What do you mean by research? Explain its significance in modern times. [7M]
- (a) Define the research problem? State the components of a research problem. [7M]
(b) Write short notes on [7M]
 - Pilot survey
 - Experience survey

UNIT – II

- (a) What are the sources of errors in measurement in the research study? [7M]
(b) Explain the different techniques involved in developing measurement tools. [7M]
- (a) Distinguish between regression and correlation with the help of an example. Explain how the two concepts are used together in detail. [7M]
(b) Use the sales data given in Table 1 to determine: [7M]
 - The least squares trend line
 - The predicted value for 2008 sales.

Table 1

Year	2001	2002	2003	2004	2005	2006	2007
Sales	100	110	122	130	139	152	164

UNIT – III

5. (a) Distinguish between primary and secondary data. Discuss the various methods of collecting primary data. [7M]
(b) State the essentials of good questionnaire and interview questions. [7M]
6. (a) Write the principles of ethics in science and engineering research. [7M]
(b) State some frequent frauds in science and engineering research by considering few case studies. [7M]

UNIT – IV

7. (a) Explain the techniques of interpretation describing both qualitative and quantitative methods. [7M]
(b) Discuss the various mechanics of writing a research report. [7M]
8. (a) Explain the layout of research paper enumerating the various fields in it. [7M]
(b) What are steps involved in making a technical presentation? [7M]

UNIT – V

9. (a) What is intellectual property right? Explain the five different types of intellectual property rights. [7M]
(b) What is the law of copy rights and list out the various works that can be copy righted. [7M]
10. (a) What are the main provisions of Indian Patent Amendment Act -2005? [7M]
(b) Explain the features of a trade mark symbol and other marks. [7M]

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