

**(SAMPLE QUESTION)**

**Centre for Engineering Research and Development**

**RESEARCH APTITUDE TEST**

Maximum Marks : 50

Time : 90 Minutes

1. Classify the following as pure or applied research. ( 2 marks)
  - (a) How to prevent copying of films
  - (b) To prove that a particular algebraic series is convergent
2. Which of the following is a fact and which is opinion? Why? ( 2 Marks)
  - (a) Sun rises in the east.
  - (b) Greece is a great country
3. Which of the following are the important characteristics of a statistical data? (5 Marks)
  - (a) Central tendency (b) Dispersion (c) Colour (d) Odour (e) Skewness
  - (f) Strength (g) Kurtosis
4. Point out obvious mistakes in the following reference citations (6 marks)

[1] Park. J., Industrial Robotics, Programming , Simulation and Applications, Verlag, Croatia. Optimal Motion Planning for Manipulator Arms Using Nonlinear Programming.

[2] Martin., B ., Bobrow, J,"minimum-Effort Motions for Open-Chain Manipulators with Task-Dependent End-Effector Constraints," on 1999 in IEEE Transactions on Robotics , 18 (2), pp . 213.
5. Write short notes on the following ( 5 x 5 marks )
  - (a) Structure of a Research Report
  - (b) Types of Bibliography
  - (c) Blind, double blind and open peer review
  - (d) Simulation Models
  - (e) Explanatory and conclusive research.
6. Waste disposal is one of the major problems faced by urban population. You are asked to study the waste disposal problem in a one of the cites. Explain how will you conduct a research study to provide solution to this problem. (10 Marks)