RESEARCH METHODOLOGY (SEMESTER - 2)

CS/MBA(OLD)/SEM-2(FT & PT)/MB-210/09

1. .....
Signature of Invigilator

2. .....
Signature of the Officer-in-Charge

Reg. No. | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | |

CS/MBA(OLD)/SEM-2(FT & PT)/MB-210/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009

RESEARCH METHODOLOGY (SEMESTER - 2)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

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FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

	Group – A										Group – B			Group – C			***Total Marks***	***Examiner's Signature***
Question Number																		
Marks Obtained																		

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Head-Examiner/Co-Ordinator/Scrutineer

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GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10

i) The quantitative character of a statistical information is known as

a) Variable b) Attribute

c) Both (a) & (b) d) None of these. ☐

ii) A genuine research problem

a) must have a pragmatic solution

b) may not have any solution

c) none of these. ☐

iii) A hypothesis is a proposal which

a) may be proved to be correct/incorrect

b) must be proved to be correct

c) must be proved to be incorrect

d) none of these. ☐

iv) In a sample study method

a) whole universe is taken as a sample

b) a small part of the universe is taken as a sample

c) a major part of the universe is taken as a sample

d) none of these. ☐

v) 'Type-I Error' is

a) rejecting a true null hypothesis

b) accepting a false null hypothesis

c) either (a) or (b)

d) none of these.

vi) Statistical measures of a sample, is known as

a) statistics b) parameters

c) either (a) or (b) d) none of these.

vii) In Chi-square distribution the value of x varies

a) from 0 to infinity b) from 1 to infinity

c) from 0 to 1 d) none of these.

viii) An estimator is efficient whose

a) mean is least b) median is least

c) variance is least d) none of these.

ix) Variance will always be

a) + Ve b) – Ve

c) either (a) or (b) d) none of these.

x) Chi-square distribution is used

a) to test for goodness of fit b) to test for independence of attribute

c) to test for a specified S.D. d) all of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Define the concept of Type I and Type II errors.

3. Define Research design. What are the various steps involved in its preparation ? 2 + 3

4. Define the concept of mapping. Give example.

5. State the difference between component analysis and factor analysis.

6. A random sample of size 20 from a normal population gives a sample mean of 42 and sample standard deviation of 6. Test the hypothesis that the population mean is 44. State clearly the alternative hypothesis you allow for and the level of significance adopted.

GROUP – C

(Long Answer Type Questions)

Answer any *three* questions. 3 × 15 = 45

7. a) How can observation methods be classified ? What are the key distinctions among the various types ?

   b) State the limitations of projective technique and interview method.

(4 + 5) + (3 + 3)

8. a) Define random sampling. Is a random sampling always better than other forms of sampling in the context of socio-economic surveys ?

   b) What types of sample would you recommend for the following projects ?

      i) A study of brand loyalty in the cosmetic market.

      ii) An estimate of distribution by income class of household expenditure for recreational goods & services.

   Give reasons for your choice in each case. (2 + 4) + 9

9. a) Define nominal, ordinal, interval and ratio measurements. What statistics can be used with each type of measurement ?

   b) Describe the advantages and limitations of Likert scale. 8 + 7

10. Ashwin, owner of a business unit, is concerned about the sales pattern of his product. He realises that there are many factors that might help explain sales, but believes that advertising and prices are major determinants. He was collected the following data :

Sales (unit sold) :	37	65	75	87	22	29
Advertising (no. of add) :	7	10	14	17	13	10
Prices (Rs.) :	129	115	140	130	145	140

   a) Calculate the regression equation to predict sales from advertising & price.

   b) If advertising is 11 and price is Rs. 132, what sales would you predict ? 15

11. Write notes on any *two* of the following : $2 \times 7\frac{1}{2}$

   a) Social Science Research

   b) Questionnaire

   c) Primary data and Secondary data

   d) Hypothesis Selection.

END