



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad-500043

## COMPUTER SCIENCE AND ENGINEERING TUTORIAL QUESTION BANK

Course Name	:	RESEARCH METHODOLOGY
Course Code	:	BCS703
Class	:	I M tech II SEMESTER
Branch	:	Computer Science and Engineering
Year	:	2016 – 2017
Faculty	:	Ms. K Lakshmi Revathi, Associate Professor, MBA

### OBJECTIVES

SNo	QUESTION	Blooms taxonomy level	Course Outcomes
<b>UNIT – I</b>			
<b>INTRODUCTION TO RESEARCH METHODOLOGY</b>			
<b>Part - A(Short Answer Questions)</b>			
1	<b>Define</b> research ?	Remember	1
2	<b>Explain</b> the concept of research methodology?	Analyze	1
3	<b>Define</b> applied research ?	Remember	1
4	<b>Explain</b> about the quantitative research?	Remember	1
5	<b>Define</b> qualitative research?	Remember	1
6	<b>What</b> is Collaborative research?	Remember	2
7	<b>What</b> do you mean by Randomization?	Remember	2
8	<b>Explain</b> Practitioner research?	Remember	2
9	<b>Define</b> exploratory research?	Analyze	2
10	<b>Write</b> about the research approaches?	Apply	2
11	<b>Write</b> about types of research ?	Remember	2
12	<b>Define</b> research process?	Remember	2
13	<b>Explain</b> about the research idea?	Understand	2
14	<b>Write</b> about the research process?	Understand	2
15	<b>Define</b> about the reliability?	Remember	2
16	<b>Discuss</b> about the formulative studies	Understand	2
17	<b>What</b> do you mean by validity?	Apply	2
18	<b>Explain</b> Research Design?	Remember	2
19	<b>Define</b> Descriptive Research ?	Remember	1
20	<b>Why</b> Exploratory Research ?	Apply	1

<b>Part - B (Long Answer Questions)</b>			
1	<b>Define</b> research and write the importance of research methodology?	Remember	1
2	<b>Define</b> research design and different types of research design ?	Remember	1
3	<b>What</b> are the basic principles of experimental design?	Remember	2
4	<b>Write</b> about the steps in research design?	Remember	2
5	<b>Explain</b> in detail about the research approaches?	Understand	2
6	<b>What</b> are the features of good design?	Understand	2
7	<b>Explain</b> different types of research?	Understand	2
8	<b>Explain</b> in detail about the research process ?	Analyze	2
9	<b>Explain</b> the validity and reliability in research?	Understand	2
10	<b>Distinguish</b> between quantitative and qualitative research ?	Understand	2
<b>Part - C (Analytical Questions)</b>			
1	“Research is much concerned with proper fact finding, analysis and evaluation” “Do you agree with this statement? Give reasons in support of your answer?”	Analyze	1
2	Briefly describe the different steps involved in research process?	Analyze	1
3	What is the research design? Discuss the basis of stratification to be employed in sampling public opinion on inflation?	Analyze	2
<p style="text-align: center;"><b>UNIT - II</b>  <b>MEASUREMENT AND SCALING TECHNIQUES</b></p>			
<b>Part – A (Short Answer Questions)</b>			
1	<b>Define</b> sampling?	Understand	3
2	<b>Write</b> about Associative Models?	Remember	3
3	<b>Define</b> test of validity?	Understand	3
4	<b>Define</b> qualitative forecasting methods	Understand	3
5	<b>Explain</b> quantitative forecasting methods	Analyze	3
6	<b>Explain</b> Test of Practicality ?	Remember	3
7	<b>Define</b> test of reliability?	Understand	3
8	<b>Discuss</b> about Summated Scales?	Understand	3
9	<b>Explain</b> about the arbitrary scales?	Understand	4
10	<b>What</b> do you mean by forecast?	Remember	4
11	<b>Explain about</b> interpolation ?	Remember	4
12	<b>Explain</b> about Differential Scales	Understand	4
13	<b>What</b> is Multidimensional scaling	Remember	4
14	<b>State</b> scale construction techniques?	Remember	4
15	<b>Explain</b> about the Cumulative scales?	Understand	4
16	<b>Explain</b> about Factor Scales?	Understand	4
17	<b>What</b> are the different types of forecast?	Remember	4
18	<b>What</b> do you mean by extrapolation?	Remember	4
19	<b>Write</b> about time series analysis ?	Understand	4
20	<b>State</b> different types of forecasting methods ?	Remember	4
<b>Part - B (Long Answer Questions)</b>			

1	<b>Explain</b> the errors in measurement ?	Understand	3
2	<b>Explain</b> Curve fitting in time series analysis	Understand	3
3	<b>Explain</b> Exponential smoothing in time series analysis?	Analyze	3
4	<b>Explain</b> about the types of forecasting?	Analyze	3
5	<b>Explain</b> the different types of forecasting techniques?	Remember	3
6	<b>Explain</b> about the scaling and scale construction techniques?	Understand	4
7	<b>Explain</b> about the interpolation and extrapolation?	Apply	4
8	<b>Write</b> detail about the time series analysis?	Apply	4
9	<b>What</b> do you mean by tests of sound measurement?	Understand	4

**Part - C (Analytical Questions)**

1	Why measurement is done in research? Explain it with giving examples?	Analyze	4
2	Point out the possible sources of error in measurement. Describe the tests of sound measurement?	Analyze	4
3	Why forecasting is done in research? write about the different types of forecasting techniques?	Analyze	4

**UNIT-III**  
**METHODS OF DATA COLLECTION**

**Part - A (Short Answer Questions)**

1	What is "Primary Data" collection? What are different major areas of measurement?	Understand	8
2	Explain about observation in Primary Data Collection?	Analyze	8
3	Distinguish the main merits and demerits of observation methods of collecting information?	Understand	8
4	Define questionnaire? What are different types of questionnaire?	Remember	8
5	What are the factors would you take into account while designing a questionnaire?	Remember	8
6	Explain Mail Questionnaire? What are its advantages and limitations?	Understand	8
7	Classify the methods of collecting Primary Data? Discuss each method with respective merits and demerits.	Remember	8
8	What would you cover in introduction of Research Report	Understand	8
9	Discuss the major differences between oral and written report	Remember	8
10	What considerations are relevant in oral presentation?	Analyze	8
11	Explain the difference between primary and secondary data	Analyze	8
12	Discuss the advantages of secondary data over the primary data? Explain three different methods for primary data collection. (ii) What would be the best source for the following data? (a) Weekly earnings of full time salaried workers for the range 1995 – 2000 in an established software firm. (b) Annual sales of the top ten fast food companies	Remember	8
13	Distinguish the different approaches to interview as a method of data collection? Explain their relative merits and demerits	Remember	8
14	Write the Essentials of a good Questionnaire.	Remember	8
15	Write five ethical issues in science and engineering faced in present scenario	Remember	8
16	Write the different types of interview.	Understand	8
17	Write two famous frauds in science.	Analyze	8
18	What are the types of data collection?	Remember	8

19	Explain the characteristics of case study method in research methodology?	Understand	8
20	Describe the professional attitude with pros and cons.	Understand	8
<b>Part - B (Long Answer Questions)</b>			
1	What is sampling? What is probability sampling and non probability sampling method? Explain with examples. How does quota sampling differ from stratified sampling?	Understand	3
2	Why tabulation is considered essential in a research study? Write briefly about the different forms of data presentations devices.	Understand	3
3	What is the importance and applicability of regression analysis in research methodology? What are the major objectives of business researchers in using regression analysis?	Analyze	3
4	Computer graphics will have an impact on the research report writing format. Elaborate this in the light of computer application of report writing.	Analyze	3
5	Explain and distinguish with examples "prima data" and "secondary data". What are the precautions one should take while administering "Data Collection"?	Remember	3
7	Discuss how the selection appropriate method is taken place while collecting the data.	Apply	4
8	Differentiate between survey and experiment method and its scope.	Apply	4
9	Explain the processing analysis of data under processing operations	Understand	4
10	Classification according class intervals involve three main problems : 1. How many classes should be there? 2. How to choose class limits? 3. How to determine class frequency? State how these problems should be tackled by researcher?	Apply	4
11	Examine the merits and limitations of the observation method in collecting material. Illustrate your answer with suitable examples?	Understand	4
<b>Part - C (Analytical Questions)</b>			
1	Judge the statement "Questionnaire must contain simple but straight forward directions for the respondent".	Analyze	4
2	Railway commuters in Delhi have been facing various problems during travel. You have been assigned the task of finding their problems. Design a suitable questionnaire to be used in this study. Use Likert scale for designing ten questions	Understand	5
3	Explain the nature and purpose of a 'questionnaire' used for research studies. How will you design a questionnaire for conducting a market survey?	Understand	5
4	Judge the statement "Questionnaire must contain simple but straight forward directions for the respondent".	Understand	5
5	Write the advantages in concept of excellence under research methodology.	Apply	4
6	"Research is much concerned with proper fact finding, analysis and evaluation." Do you agree with this statement? Give reason in support of your answers.	Apply	4
7	"It is never safe to take published statistics at their face value without knowing their meaning and limitation". Elucidate this statement by enumerating and explaining the various points which you would consider before using any published data.	Understand	4
<b>UNIT-IV</b>			
<b>INTERPRETATION OF DATA AND REPORT WRITING</b>			
<b>Part - A (Short Answer Questions)</b>			
1	<b>Define</b> interpretation?	Analyze	5
2	<b>Discuss</b> the techniques of the writing report?	Apply	6
3	<b>Discuss</b> characteristics of a good research report?	Remember	6
4	<b>Explain</b> bibliography and its importance in context of research report?	Remember	6

5	<b>Describe</b> rewriting and polishing of report?	Understand	6
6	<b>Describe</b> technical report?	Apply	6
7	<b>Explain</b> popular report?	Remember	5
8	<b>Explain</b> task of interpretation?	Understand	5
9	<b>Define</b> bibliography?	Remember	5
10	<b>Write</b> the preparation of the index	Remember	6
11	<b>Discuss</b> the final draft?	Remember	7
12	<b>Explain</b> layout?	Remember	7
13	<b>Write</b> the technical appendixes?	Understand	7
14	<b>Explain</b> types of report?	Remember	10
15	<b>Explain</b> nature of the study?	Remember	10
16	Explain the logical analysis of the subject matter ?	Remember	10
17	Write about the statement of findings and recommendations?	Apply	6
18	Write about logical analysis of the subject matter?	Remember	5
19	Write about the statement of findings and recommendations?	Understand	5
<b>Part – B (Long Answer Questions)</b>			
1	<b>Write</b> a brief note on the task of Interpretation in context of Research Methodology ?	Understand	5
2	<b>Explain</b> interpretation is a fundamental component of Research Process? Explain why so?	Understand	5
3	<b>Describe</b> the precautions that the researcher should take why interpreting is findings?	Analyze	5
4	<b>Describe</b> interpretation is an art of drawings inference depending upon the skill of the researcher ?	Apply	6
5	<b>Explain</b> the techniques of interpretation ?	Understand	5
6	<b>Explain</b> the significance of a research report and narrate various steps involved in writing such a report ?	Understand	6
7	<b>Describe</b> in brief the layout of a research report covering all relevant points?	Understand	7
8	<b>Write</b> a short note on documentation in the context of research report?	Understand	10
9	<b>Write</b> the different types of report particularly pointing out the difference between the technical report and a popular report?	Analyze	5
10	<b>Explain</b> the technique and importance of Oral presentation of research findings?	Remember	10
<b>Part - C (Analytical Questions)</b>			
1	Discuss interpretation is an art of drawing inference depending upon the skill of the researcher and the given statement and explain the technique of the final draft?	Understand	5
2	Maintain the different types of interpretations particular pointing out the difference of a report and the interpretation?	Understand	5
3	Write different points will you keep in mind while preparing a research report ?Explain?	Understand	5
4	Describe “Discriminate different forms in which a research work may be reported”	Understand	5
<p style="text-align: center;"><b>UNIT-V</b>  <b>INTRODUCTION TO INTELLECTUAL PROPERTY</b></p>			
<b>Part - A (Short Answer Questions)</b>			

1	<b>Define</b> intellectual property?	Remember	5
2	<b>Discuss</b> intellectual property rights?	Remember	6
3	<b>Discuss</b> condition of purchase a book and make photocopies of it and sell, Is it violation?	Understand	6
4	<b>Explain</b> with an example of why intellectual properties need to be protected?	Understand	6
5	<b>Describe</b> how monopoly nature of owner is controlled by Patent Trademark Organization?	Understand	6
6	<b>Describe</b> how long will patent protections for the invention for which application was filed on August 10 and patent was issued on January 28, 2003 last?	Remember	6
7	<b>Explain</b> how long will the copy right last if a novel written by Moby Dick in 1851 and died in 1891?	Remember	5
8	<b>Explain</b> how long will protections for the song composed by bala in 1982 last?	Understand	5
9	<b>Define</b> the law of copyrights?	Analyze	5
10	<b>Write</b> the Fundamental of Copyrights laws was formulated	Remember	6
11	<b>Discuss</b> the originality of material in copyrights?	Remember	7
12	<b>Explain</b> the rights of reproduction in copy rights?	Analyze	7
13	<b>Write</b> the procedure of „rights to perform the work publicly“ in copy rights?	Remember	7
14	<b>Explain</b> how the copy right ownership issues are solved?	Analyze	10
15	<b>Explain</b> how the copy rights are registered?	Understand	10
16	<b>What</b> did you understand about Law of patents?	Remember	10
17	<b>Write</b> about the procedure for „the notice of the copy right“ is prepared?	Remember	6
18	<b>Define</b> the rights of ownership issues?	Analyze	5
19	<b>Write</b> surplusage in Copyright Notice?	Remember	5
20	<b>Describe</b> the procedure restoration of Copyright is done?	Remember	<b>5</b>

#### **Part - B (Long Answer Questions)**

1	<b>Explain</b> why agencies responsible for Intellectual Property Registration with any two examples?	Understand	5
2	<b>Describe</b> the importance of International organisation? When it was established?	Analyze	5
3	<b>Explain</b> why the International Organization, Agencies and Treaties were established? Give any Five International agreements and treaties that affect	Understand	6
4	Explain Vessel Hull Protection in Copyright?	Understand	5
5	Explain the reasons for increasing importance for Intellectual Property Rights?	Apply	6
6	Explain the International organizations, Agencies and treaties?	Remember	7
7	Express your views about the Intellectual Property Rights necessity for the countries?	Analyze	10
8	Explain about patent?	Understand	5
9	Explain about different types of Intellectual property??	Remember	10
10	Explain when the terminations of transfers of copyrights take place?	Analyze	<b>5</b>

#### **Part - C (Analytical Questions)**

1	Estimate the time period for the protection of son “Allentown” was composed Billy Joel in 1982?	Analyze	5
2	Devise an application for registration of different types of marks in PTO and an Indian IPR organization?	Understand	5

3	Explain the practical aspects of IP audits and process of conducting audit?	Analyze	5
4	Differentiate Contributory Infringement and Vicarious Infringement?	Analyze	5

**Prepared By:**