

GUJARAT TECHNOLOGICAL UNIVERSITY**MBA (IB)- SEMESTER– II EXAMINATION – WINTER 2019****Subject Code: 1529301****Date: 24-12-2019****Subject Name: Research Methodology & Applied Statistics****Time: 2.30 PM to 5.30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** Explain the following with suitable examples: **14**
- (a) Ordinal Scale Measurement
 - (b) Depth Interview
 - (c) Histogram
 - (d) Problem Identification Research and Problem-Solving Research
 - (e) Contrived Observation
 - (f) Data Coding
 - (g) Dichotomous Questions

- Q.2** (a) What is hypothesis. Explain Null and Alternative Hypothesis. **07**
- (b) Sweet Cookies is planning to launch a new line of cookies and wants to assess the market size. The cookies have a mixed chocolate-pineapple flavor and will be targeted at the premium end of the market. **07**
- a. What research design is appropriate? Why? Please give a detailed justification for your answer.
 - b. List various Research Questions which would be considered for the research.

OR

- (b) A wrist watch manufacturing company wants to enter into Indian market with New Smart Watch. Before entering the market, they want to conduct research for understanding buyers' preferences and purchase intentions for Smart Watch. For this client company prepare the following: **07**
1. What research design is appropriate? Why? Please give a detailed justification for your answer.
 2. List various Research Questions which would be considered for the research.

- Q.3** (a) Discuss Survey Methods citing suitable examples. **07**
- (b) As a research organization prepare a research proposal for an Indian cosmetics company who wants to launch Organic (Natural) Cosmetics in Indian market. **07**

OR

- Q.3** (a) Discuss various comparative scaling techniques with appropriate examples. **07**
- (b) In one study attempts were made to find out the level of cognitive (mental) development of children has anything to do with their capacity to recalling **07**

brand names of milk additives from TV commercials. The data collected are given in the following table:

Recall	Class 1 (6 years)	Class 3 (8 years)	Class 6 (11 years)
Name of Cereal	5	12	16
Cereal in general	17	12	7

Apply appropriate statistical test with 5% level of significance.

Q.4 (a) Explain the difference between Exploratory Research Design and Conclusive Research Design. **07**

(b) The number of cases of cola sold in the city after the different coupons were run in the local papers are given in the following table: **07**

Test Units	Coupon Plan 1	Coupon Plan 2	Coupon Plan 3
1	20	17	17
2	18	14	10
3	15	13	07
4	11	08	05

Which of the three coupon plans is more effective? Calculate One Way ANOVA with 5% level of significance.

OR

Q.4 (a) Discuss various data collection methods under causal research design. **07**

(b) The following data reflects the customer satisfaction data of regular and commercial accounts of a bank towards its service. Calculate Mann-Whitney U test to understand whether there is difference in attitudes of the two groups or not. **07**

Regular Accounts	Commercial Accounts
19	48
70	52
77	69
14	13
83	73
87	15
68	50
72	61
76	21
90	47
26	80
66	36
60	78
81	71
46	65

$\alpha = 0.05$

Q.5 Case Study
As a research organization your client wants you to identify the customers' willingness, perception and attitude related to international tour packages. You are required to perform the following for your client.

- (a) Identify the Management Problem, Research Problem and Research Objectives. **07**
- (b) Write the research questions including various variables you want to study. **07**

OR

- Q.5** (a) Which research design would you select for conducting this research? Justify your selection. **07**
- (b) Develop an attitude scale questionnaire for measuring consumers' attitude for joining a gym. **07**

GTUQuestionPapers.com