



MBA DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2022)

Second Semester

MBA - PROJECT MANAGEMENT

P22MPB2911 : Research Methodology

COURSE OUTCOMES

CO1: Explain the principles of research and its role in supporting decision making.

CO2: Formulate the foundations for carrying out research

CO3: Display ability to perform various statistical tools on Research.

Time: Three Hours

Maximum Marks: 100

PART A (20Q x 1 Mark = 20 Marks)

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|----|--|-----|-------------------|
| 1 | “Raw Material Availability” has impacted your project completion period. Identify the variable type “Raw Material Availability”. | CO1 | [K ₁] |
| 2 | Outline the elements of citing a research article in APA format. | CO1 | [K ₂] |
| 3 | List the three types of research designs majorly used in business research. | CO1 | [K ₁] |
| 4 | Contrast snowball and judgement sampling methods. | CO1 | [K ₂] |
| 5 | Explain probability sampling. | CO1 | [K ₂] |
| 6 | Recall the minimum sample size for a population of 10000 and above? | CO1 | [K ₁] |
| 7 | Explain Experimental Research. | CO1 | [K ₂] |
| 8 | Illustrate Area sampling method. | CO1 | [K ₂] |
| 9 | What is an extraneous variable? | CO1 | [K ₁] |
| 10 | Explain Type I error. | CO1 | [K ₂] |
| 11 | Interpret “Temperature” and “Productivity” with KP coefficient of Correlation of -1 (minus one). | CO2 | [K ₂] |
| 12 | Recall the thumb rule to decide on the null hypothesis rejection. | CO2 | [K ₂] |
| 13 | Quality inputs have impacted your Final Finish of a product with a beta coefficient of 0.2 and a significance of 0.02. Illustrate the influence. | CO2 | [K ₁] |
| 14 | What statistical analysis can be used to measure the impact of an independent variable? | CO1 | [K ₁] |
| 15 | Omit the statistical test that does not belong to the others in the following set. {t test, F test, U test, regression analysis} | CO2 | [K ₁] |
| 16 | Outline an alternate hypothesis for 3 groups for test of homogeneity. | CO2 | [K ₂] |
| 17 | Explain kurtosis with a value of - 3.4 (minus three point four) | CO2 | [K ₂] |
| 18 | Relate Median and 50 th percentile. | CO2 | [K ₂] |

19 Find the range value in the following data set. CO2 [K₁]
 [45, 37, 11.7, 41, 38.8, 18, 51.7,]

20 Recall the formula to check outliers. CO2 [K₁]

PART B (5 Q x 8 Mark = 40 Marks) Answer Any Five Questions only

21 Examine the significance of different types of variables in business research with suitable examples. CO1 [K₄]

22 “Initiating a new business research would be exploratory research, at the start”. Explain the statement discussing various types of research designs. CO1 [K₅]

23 Distinguish probability and non-probability sampling methods. CO1 [K₄]

24 Examine each scale/item in the following output. Discuss your decision on this pilot study, to proceed for a major survey. CO2 [K₄]

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Attitude2_MisleadingInformation	33.21	48.736	.499	.868
Attitude3_GreenSheenDeceives	33.40	47.072	.593	.861
Attitude4_Eco Friendly	33.40	45.333	.623	.909
Purchase Intention 1	33.04	50.737	.324	.880
Purchase Intention 2	33.64	44.192	.708	.852
Purchase Intention 3	33.51	46.734	.618	.860
Purchase Intention 4	33.32	47.005	.588	.862
Purchase Intention 5	33.62	45.415	.549	.866
Purchase Intention 6	33.87	43.331	.685	.454
Purchase Intention 7	33.70	43.083	.745	.848

25 ZION Hospitals is into ortho-care that has its presence in various cities. The total number of outpatients visiting in each hospital during the last winter season is considered for analysis of variance across seven cities, Chennai – Hyderabad – Pune – Coimbatore – Bangalore - Cochin and Indore. The output table is given below. Conclude on the difference in the outpatient visit rate based on your null hypothesis statement. CO2 [K₅]

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1709.446	6	284.907606	0.493984744	0.809974	2.275388
Within Groups	30567.95	53	576.753856			
Total	32277.4	59				

26 Compare and Contrast various data collection methods. CO2 [K₄]

Part – C (2Q x 20 Mark = 40 marks) Answer Any Two Questions Only

27 Explain research process with the illustration of an appropriate questionnaire for an assumed research work . CO1 [K₅]

28 Appraise with the step wise procedure on this Regression Analysis based on the following data and the output tables.

CO2 [K5]

S.No	GMAT Score	No. of Hours spent on Extra Curricular Activities	General Performance Index
1	688	45	3.72
2	647	56	3.44
3	652	76	3.21
4	608	43	3.29
5	680	23	3.91

Regression Statistics	
Multiple R	0.893209459
R Square	0.797823138
Adjusted R Square	0.78659109
Standard Error	0.155870258
Observations	20

	Coefficients	Standard Err	t Stat	P-value
Intercept (Const)	0.300323308	0.361577	0.830593	0.417085185
GMAT (Beta)	0.004870226	0.000578	8.427987	1.15758E-07

29 Calm Groves, a beach resort in Konkan Coast have three types of properties. There are a few reasons identified, for customers not coming back to an already stayed property. “Reasons for not Returning” and “Type of property” are categorical responses, and the market analyst of Calm Groves did a chi-square analysis to find out the association between these two variables.

CO2 [K6]

- i. Develop null and alternate Hypothesis for the above case let. (5 Marks)
- ii. Interpret the following output. (10 Marks)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.272 ^a	12	.001
Likelihood Ratio	36.266	12	.000
N of Valid Cases	80		

a. The minimum expected count is .11.

- iii. Discuss the assumptions and requirements for performing chi-square analysis. (5 Marks)
