



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

SUMMER-2024	
Exam Seat No.:	
Academic Year:2023-2024	Semester: IV
Class: SY	Program: MBA
Branch Code: M.B.A.	Pattern: 2022
Name of Course: Marketing Research	Course Code: MBA224105
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 3 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Question No. 1 Attempt following Question

- 1a) Define flowchart of Research process with the help of an example (6) CO1

Question No. 2 Attempt following Question

- 2a) Explain the difference between Quantitative and Qualitative research design. (6) CO2

Question No. 3 Attempt following Question

- 3a) Define below levels of measurement with the help of an example. (8) CO3

- 1) Nominal
- 2) Ordinal
- 3) Ratio
- 4) Interval

OR

- 3b) Define below terms. (8) CO3

Factor Analysis

Discriminant Analysis

- 3c) Prepare 12 questionnaire questions with options to find out the effectiveness of MBA program. (8) CO3

OR

- 3d) Prepare 12 questionnaire questions with options to find out if special road for cycling in Nashik will be useful or not. (8) CO3

Question No. 4 Attempt following Question

- 4a) K K Wagh college wants to estimate the number of students for their cultural festival Maverick. So they send 30 students per college to collect the information. To analyse the data HOD wants to collect the information from 10 students from each college. There are 5 colleges named Ashoka (A1 to A30), MGM (MG1 to MG30), MET (M1 to M30), Symbiosis (S1 to S30), RYK (R1 to R30). Select 10 students by using below methods. (Write down sample points for each method). (8) CO4

- 1) SRSWOR
- 2) Systematic Sampling
- 3) Cluster sampling
- 4) Stratified sampling

OR

- 4b) KFC wants to check quality of their product so they send their 25 persons for every centre to collect the data from 5 centres. Centres are Ambad, Villholi, College Road, Cidco and RK. (8) CO4

Manager wants to analyse the data by selecting 15 samples in total. So select the 15 samples from given data by using below method.

- 1) SRSWOR
- 2) Systematic Sampling
- 3) Cluster sampling
- 4) Stratified sampling

- 4c) A random sample of size 65 was taken to estimate the mean annual income of 100 families and the mean and Standard Deviation were found to be 6300 and 9.5 respectively. (8) CO4

Find a 95% confidence interval for the population.

$$Z_{\alpha} = 1.96$$

OR

- 4d) A random sample of size 100 has mean 15 the population variance being 25. Find the interval estimate of the population mean with a confidence level of 1) 99% and 2) 95% (8) CO4

$$Z_{99\%} = 2.58$$

$$Z_{95\%} = 1.96$$

Question No. 5 Attempt following Question

- 5a) While throwing 5 dice 30 times a person obtained success 23 times, securing a 6 which was considered a success. Can we consider the difference between the observed and the expected results as being significantly different? (8) CO5

Take $\alpha = 5\%$

$$Z_{95\%} = 1.96$$

OR

- 5b) In a sample of 300 units of manufactured products, 65 units were found to be defective and in another sample of 200 units there were 35 defectives. Is there significant difference in the proportion of defectives in the samples at 5% level of significance? (8) CO5

$$Z_{95\%} = 1.96$$

- 5c) A random sample of 1000 workers from south India show that their mean wages are Rs. 47 per week with a standard deviation of Rs. 28. A random sample of 1500 workers from North India gives a mean wage of Rs 49 per week with a standard deviation of Rs. 40. Is there any significant difference between their mean levels of wages? (8) CO5

$$Z_{95\%} = 1.96$$

OR

- 5d) Test was administered to 5 persons before and after they are trained. (8) CO5

The results are given below.

Candidates	I	II	III	IV	V
IQ Before	110	120	123	132	125
IQ After	120	118	125	136	121

Test whether there is any change in IQ after the training. Take level of significance as 99%.

$$t_{0.01} = 4.6$$

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