



SOMAIYA

VIDYAVIHAR UNIVERSITY

Dr. Shantilal K. Somaia School of Commerce and Business Studies

QUESTION PAPERS

BRANCH: Bachelor of Commerce (HONS)	SEM: II
ATKT	JUN-2026

Sr. No.	Subject	Available
1.	231U77K201 – Statistical Analysis & Optimization	
2.		
3.		
4.		
5.		
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7.		
8.		
9.		
10.		



LIBRARY



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16 JUN 2026

Semester (June 2026)		
Examination: End Semester Examination June 2026 (UG Programmes)		
Programme code: 77	Class: FY	Semester: II
Programme: FYBCOM HONS		
Name of the Constituent College:		Name of the Department : Commerce
Course Code: 231U77K201	Name of the Course: Statistical Analysis and Optimization	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1) All Questions are compulsory. 2) Figures to the right indicate full marks. 3) Use of SIMPLE Calculator is allowed. 4) Graph paper will be provided on request.		

Question No.		Max. Marks	CO Attainment																
Q 1 A	1) Illustrate string functions in Excel. 2) Suppose an investor knows that they need \$50,000 for a child's college education in 18 years, and they have \$15,000 to invest today. How much does the average rate of return need to be to reach that objective?	03 04																	
B	1. Explain with respect to Excel: i. Cell references j. Any 2 financial functions Write steps in Excel to enter amount, rate of interest and no of years in cell A1 to A3 and calculate simple and compound interest in cell C1 and C2	08																	
	OR																		
Q.1. C	1) What is ANOVA? Explain its types. 2) Write steps in Excel to do the following : Assume basic salary is typed in cell B1. Calculate i) HRA which 10% of basic in cell C1 ii) HRA which 10% of basic or 2750 whichever is more in cell C3	03 04																	
D	1) How will you do the following in Excel: i) Hide column C ii) Insert a row above row no 10 iii) Delete column D iv) make a copy of your sheet1 2) Mr. X borrowed Rs. 20,000 at 4% p.a. compounded annually for 10 years. Find the periodic payment he has to make.	08																	
Q 2 A	Find standard deviation for following data <table border="1"><tr><td>Marks</td><td>0-10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td></tr><tr><td>No. of students</td><td>4</td><td>23</td><td>45</td><td>55</td><td>64</td><td>43</td><td>13</td></tr></table>	Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	No. of students	4	23	45	55	64	43	13	08	CO2
Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70												
No. of students	4	23	45	55	64	43	13												

Q 2 B	Find optimal assignment for following data					07	CO4
	P	Q	R	S			
A	120	100	80	90			
B	80	90	110	60			
C	110	140	120	100			
D	90	90	80	90			
OR							
Q 2 C	Find Mean, Median and Mode for following data					15	CO2
	CI	20-40	40-60	60-80	80-100		
	F	89	76	67	125		
OR							
Q 3	Solve following LPP using simplex method, Maximize $Z = 3x_1 + 2x_2 + 5x_3$ Subject to, $x_1 + 2x_2 + 2x_3 \leq 8$ $3x_1 + 2x_2 + 6x_3 \leq 12$ $2x_1 + 3x_2 + 4x_3 \leq 12$ $x_1, x_2, x_3 \geq 0$					15	CO3
OR							
Q 3	Find IBFS using NWCR, LCM and VAM for following transportation schedule.					15	CO3
		W1	W2	W3	W4	Supply	
	F1	7	8	5	2	14	
	F2	5	10	4	9	20	
	F3	2	7	6	9	16	
	Demand	15	10	12	13		
OR							
Q 4	Answer the following (Any 3 out of 5)					15	CO 1,2,3, 4
1.	Give formula to calculate future and present value of annuity						
2.	For population mean 56 and sample mean 45 with standard deviation 13 of 100 observations. Write Null and alternate hypothesis also define the type of hypothesis with respective formula.						
3.	List down all four types of level of confidences with their standard values.						
4.	Find Median for 45,67,65,54,35,67,89,65						
5.	If mode=130 find missing term,						
	CI	60-75	75-90	90-105	105-120	120-135	135-150
	F	3	3	6	-----	7	6