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Somaiya Vidyavihar

SOMAIYA
VIDYAVIHAR UNIVERSITY

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

QUESTION PAPERS

BRANCH: Bachelor of Commerce (Data Analytics)	**SEM: IV**
ATKT	**JUN-2026**

Sr. No.	Subject	Available
1.	131U01G401 – Statistical Techniques I	
2.	231U76C401 – Financial Account II	
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

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ATKT
BCOM DS
sem - IV

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Semester (June 2026) Examination: End Semester Examination April 2024 (UG Programmes)		
Programme code: 01 **Programme: SYBCOM DS**	**Class:** SY	**Semester:** IV
Name of the Constituent College: SKSCBS	**Name of the Department** : Commerce	
Course Code: 131U01G401	**Name of the Course: Statistical Techniques - 1**	
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 Attain ment
Q.1 a)	Find Inverse of $A=\begin{bmatrix} 1 & -2 & 4 \\ 3 & 5 & -2 \\ 2 & -1 & 3 \end{bmatrix}$ using Adjoint method.	10	CO1
Q.1 b)	If $A=\begin{bmatrix} 9 & 1 \\ 4 & 3 \end{bmatrix}$ and find A^2+A-I	05	CO1
	OR		
Q.1 a)	Solve the following system of equations. x+2y-z=4 7x-y-2z=3 2x-3y+5z=4	10	CO1
Q.1 b)	If $A=\begin{bmatrix} 2 & 1 \\ 3 & -1 \end{bmatrix}$ and $B=\begin{bmatrix} 1 & -2 \\ 3 & -4 \end{bmatrix}$ verify whether $A^2=B^2$	05	CO1
Q.2 a)	Solve following LPP using simplex method, Maximize Z= 10x1+20x2 Subject to, 10x1+4x2<=40 6x1+8x2<=48 x1,x2>=0	08	CO2
Q.2 b)	Solve following LPP Graphically, Minimize Z=20x1+10x2 Subject to, x1+2x2<=40 3x1+x2>=30 4x1+3x2>=60 x1,x2>=0	07	CO2
	OR		
Q.2	Solve following LPP using Simplex method. Maximize Z= 30x1+40x2+20x3	15	CO2

	Subject to, 10x1+12x2+7x3<=10000 7x1+10x2+8x3<=8000 x1+x2+x3<=1000 x1,x2,x3>=0		
Q.3	The following table gives the probability distribution of the return of two shares X and Y. find the expected value and the total risk for both shares and comment.	15	CO3

Probability	0.2	0.1	0.3	0.1	0.3
Return on share X (%)	5	6	4	8	9
Return on share Y (%)	3	5	7	9	8

OR

Q.3 a)	Two types of batteries are tested for their length of life and the following data is obtained.	10	CO4

	Size of sample	Mean	Std. dev.
Type A	9	620	11
Type B	8	640	12

Is there a significant difference between the two means? Test at 5% level of significance.

Q.3 b)	A portfolio consists of 3 shares S1, S2 and S3 with the following properties:	05	CO3

	S1	S2	S3
Proportion in the portfolio	0.5	0.2	0.3
Beta	1.2	0.9	1.1
Unsystematic risk	25	5	60

The total risk from the market is 40. Express the total risk of the portfolio as the sum of its systematics and unsystematic risk.

Q.4	Answer following questions	15	CO1,2, 3,4
1)	Define Key row and Key column.		
2)	The total risk for share S and market M is 30 and 40 respectively, while the covariance between the returns of S and M is 30. Separate the total risk of the share S into systematic and unsystematic risk.		
3)	Calculate expected return,		

Probability	0.35	0.35	0.25	0.05
Return (%)	34	46	35	23

4)	Explain any three types of Matrices.		
5)	Briefly explain steps for LPP simplex method.		

ATKT
B.com (DS)
Sem-IV

SOMAIYA
VIDYAVIHAR UNIVERSITY

JUNE 2026 Examination: ATKT (UG Programmes)		
Programme code: 76 Programme: B.COM [Specialisation in Data Science]	Class: SY	Semester: IV
Name of the Constituent College: S.K. SOMAIYA	Name of the Department: COMMERCE	
Course Code: 231U76C401	Name of the Course: FINANCIAL A/C - II	
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.		

Q. No.		Max. Marks	Co
Q.1.	Miss Prapti entered into the following transactions of purchase and sales of 12% debentures of Rs.100 each of Swami Ltd. interest is payable on 30th June and 31st December every year. Transactions are as under:	15	03

Date	No. of Debentures	Terms
1/4/2024	800	Opening Balance at a cost of Rs.76,000
1/6/2024	300	Sold at Rs.105 each cum-interest
1/9/2024	700	Purchased at Rs.98 each ex-interest
1/12/2024	400	Purchased at Rs.108 each cum-interest
1/2/2025	900	Sold at Rs.97 each ex- interest

Prepare investment Account of 12% Debentures in the books of Prapti for the year ended 31st March,2025. The market value on 31st March,2025 was Rs.67,500 of the said investment. (Apply AS13)

OR

Q.1. (Max. Marks: 15, Co: 03)

On 1/4/2024 Mr. Shiva had 30,000 equity shares (of Rs.10 each) in Shree Ltd. at the cost of Rs.4,80,000.
On 1/7/2024 he acquired 12,000 more shares in the same company for Rs.2,40,000.
On 31/7/2024 he further acquired 18,000 more shares at Rs.25 per share.
On 10/8/2024 Shree Ltd. announced bonus shares to the then equity shareholders in the ratio of 1 bonus share for every 4 shares held as on 5/8/2024. Shiva received the bonus shares on 22/8/2024.
The directors of Shree Ltd. issued right shares to the equity shareholders on the following terms.
Right shares to be issued to the existing shareholders as on 31/8/2024.
Right offered was at the rate of Rs.12 per share in the ratio 1 share for every 5 shares held. Full amount was payable on or before 15/10/2024.
Shareholders would be entitled to renounce their entitlement either wholly or in part to the outsiders.
Shiva exercised his right of option under the issue for 9,000 shares and sold the balance to Mr. Ravi @ Rs.5 per share. On 20/10/2024 Shree Ltd. declared the dividend @ Rs.3 per share for the year ending 31/3/2024.
On 10/1/2025 Shiva sold 10,000 shares @ Rs.30 per share.
Prepare investments a/c. in the books of Mr. Shiva for the year ended 31/3/2025.

Q.2. The Balance Sheet of DJC LTD. as on 31st March 2025 was as follows: **15** **02**

Liabilities	Rs.	Assets	Rs.
Equity Shares of Rs.10 each	12,00,000	Fixed Assets	32,00,000
Preference Shares of Rs.100 each	4,00,000	Investments	4,00,000
Securities Premium A/c	6,00,000	Current Assets	30,00,000
General Reserves	4,00,000		
Profit and Loss A/c	4,00,000		
Debentures	32,00,000		
Current Liabilities	4,00,000		
	66,00,000		**66,00,000**

Keeping in view the legal requirements, ascertain the maximum number of equity shares that DJC LTD. can buy back @ RS. 30 per share.
Prepare necessary workings & Pass journal entries & Prepare Balance Sheet after Buy Back.

OR

Q.2. The Balance Sheet of MAU Ltd. as on 31-3-2025 is as follows: **15** **02**

Liabilities	Rs.	Assets	Rs.
Equity Shares of Rs.10 each	6,25,000	Fixed Assets	10,00,000
Securities Premium A/c	1,25,000	Investments	3,75,000
General Reserves	2,50,000	**Current Assets:-**	
Profit and Loss A/c	2,50,000	Bank Balance	3,75,000
10% Debentures	6,25,000	Other Current Assets	6,25,000
Current Liabilities	5,00,000		
	23,75,000		**23,75,000**

Keeping in view all the legal requirements ascertain: -

1. Maximum number of Equity shares that company can Buy Back.
2. The maximum purchase price it can offer.
3. Pass necessary Journal Entries & prepare Balance Sheet after Buy Back.

Q.3. **15** **04**

Prepare a Stores Ledger Account from the following transactions
assuming that issues of stores have been made on the principle
both the methods:- FIFO & WAM
JUNE-2025:-
1 - Opening Stock 1000 units at Rs. 20 per unit.
3 - Received 350 units at Rs. 21 per unit.
5 - Issued 700 units at ₹ 22 per unit.
7 - Issued 400 units at ₹ 25 per unit.
12 - Received 550 units at Rs. 22 per unit.
16 - Issued 350 units at ₹ 30 per unit.
21 - Received 100 units at Rs. 23 per unit.
24 - Issued 500 units at ₹ 40 per unit.
Calculate Cost Of Goods Sold & Profit or Loss on sale.

OR

Q.3. The following is the summarized Balance Sheet of Prapti Ltd. As on 31st March 2025 — 15 — 01

LIABILITIES	₹	ASSETS	₹
Share Capital: -		Fixed Assets	9,00,000
5,000 Equity shares of ₹100	5,00,000	Investments	2,00,000
3,000 8% Pref. shares of ₹100 each @ ₹80 paid up	2,40,000	Current assets	1,00,000
4,000, 9% pref. shares of 100 each fully paid up	4,00,000	Stock	2,00,000
Capital Reserve	1,00,000	Debtors	3,00,000
General Reserve	1,60,000	Cash	
Profit & Loss a/c	2,00,000		
Creditors	1,00,000		
	17,00,000		**17,00,000**

On 1st April 2025 the company redeemed fully paid-up preference shares at a premium of 10%.

In order to pay off the preference shareholders, the company sold the investments realizing ₹2,10,000 & also issued 2,000, 7% preference shares of ₹100 each which were fully subscribed in cash.

On the same date the company issued fully paid bonus shares in the ratio of one for every two shares held.

Show the journal entries & also prepare Balance Sheet after redemption.

Q.4. ANSWER THE FOLLOWINGS: - [5 MARKS EACH] — 15

A. Mr. Swami had 45,000 shares of Samarth Ltd. He further purchases 9,000 equity shares of the same company, — 03
After that company declared one bonus share for every three shares held.
After that he sold 9,000 shares.
After that company issued right shares, one share for every six shares held.
Right shares are offered at ₹14 each.
Mr. Swami exercised his option and subscribed for 75% of his entitlement and the balance of rights, he sold to OM for a consideration of Rs.2 per share.
Calculate number of bonus shares & show working for Right Shares.

B. The following is the information available of Prashant Ltd. As on 31st March.2025: - — 02
20,000 Equity Shares of ₹100 each fully paid up. ₹ 20,00,000.
10,000 ,10% Preference shares of ₹100 each fully paid up ₹ 10,00,000.,
Capital Redemption Reserve ₹ 2,00,000.
Security Premium a/c ₹ 1,60,000, General Reserve ₹ 4,00,000.
P & L a/c ₹ 2,00,000, 12% Debentures ₹ 20,00,000.
On the same date it was decided to buy back the maximum number of equity shares at the maximum price possible under the law.
You are required to: -
a. Ascertain the maximum number of equity shares that company can buy back.
b. Maximum price that company can offer.

C. Opening Stock ₹ 1,40,000, Closing Stock ₹ 1,50,000, — 04
Total Purchases ₹ 2,75,000
Sales are as follows
6500 units @ ₹ 35, 5500 units @ ₹ 45, 3000 units @ ₹ 50
Find out cost of goods sold & profit or loss on sale.