Subject: Business Statistics -ICourse Code: MGMT 421/321Full Marks: 60Pass Marks: 30Time: 3: 00 Hours

You are required to answer in your own words as far as applicable. Figures in the margins indicate full marks. SECTION A: VERY SHORT ANSWER QUESTIONS (10 X 1 = 10 MARKS)

Answer ALL the questions.

- 1. What are the limitations of statistics?
- 2. Find the median of 8, 6, 2, 15, 12, 4, 10,18.
- 3. The average marks of 70 boys in a class is 75 and that of 30 girls is 65 then find the average marks of all students.
- 4. Find the standard deviation if: N = 50, $\sum fd' = -6$, $\sum fd'^2 = 54$, h = 5.
- 5. If the correlation coefficient between X and Y is 0.6, the probable error of r is 0.0432, what will be the value of n?
- 6. The regression coefficient of x on y is 0.32 and that of y on x is 0.73, find the correlation coefficient.
- 7. Find 5AB, if $A = \begin{pmatrix} 2 & 1 \\ -3 & 0 \end{pmatrix}, B = \begin{pmatrix} 0 & 2 & 3 \\ 1 & -1 & 0 \end{pmatrix}$.
- 8. Evaluate: 43 1 6 35 7 4 17 3 2
- 9. If n(U) = 100, n(A) = 75, n(B) = 40, $n(A \cup B) = 80$. Find n(A B)
- 10. A card is drawn from a pack of 52 cards. Find the probability that it is a queen of red colour.

SECTION B: SHORT ANSWER QUESTIONS (3 X 8 = 24 MARKS)

Answer any **THREE** questions.

11. From the information given below, find:

	Factory A	Factory B
No. of wage earners	250	200
Average daily wages	Rs. 45	Rs. 47.5

i. Which factory pays larger amount as given below?

ii. What is the average daily wage for the workers of the two factories taken together?

12. The score of two golfers for 10 rounds each are:

Golfer A	58	59	60	54	65	66	52	75	69	52
Golfer B	84	56	92	65	86	78	44	54	78	68
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Which may be regarded as more consistent player?

13. Following series are the marks secured by 10 students in a class test in Mathematics and Statistics.

Marks in math	45	70	65	30	90	40	50	75	85	60
Marks in Stat.	35	90	70	40	95	40	60	80	80	50

i. Find the Karl Pearson's coefficient of correlation.

ii. Calculate probable error and test for the significance of the result.

14. Solve the problem graphically.

Maximize Z = 4x + 3y

Subject to the constraints,

 $2x + y \le 10$ $x + y \le 6$ $x, y \ge 0$

15. i) If $A = \begin{bmatrix} 1 & 2 \\ 3 & 1 \end{bmatrix}$, show that $A^2 - 2A - 5I = 0$, where 0 is the 2×2 null matrix and I be an identity matrix

of order 2.

(ii) Solve the following equation by using Cramer's rule: 3x + 6y = 30, 6x + 3y = 42.

SECTION C: LONG ANSWER QUESTIONS (2 X 13 = 26 MARKS)

Answer any **TWO** questions.

16. The followings are the weekly production in units (output) of 60workers of a factory.

72	23	48	51	64	82	12	33	50	39	57	35
88	77	25	39	52	48	64	49	52	41	72	62
49	32	54	67	46	55	57	82	44	75	56	51
63	59	69	53	42	75	85	68	55	52	45	40
57	20	75	46	51	50	16	62	56	54	40	55

The management has decided to give the bonus of Rs. 5000, Rs. 6000, Rs. 7000, Rs.8000 and Rs. 9000 to each worker in the respective output group 40 to 50, 50 to 60 and so on.

Find:

- i. Mean output of all the workers
- ii. Average bonus received by the workers
- iii. Standard deviation of bonus.
- 17. Lives of two models of refrigerators in a recent survey are:

Life (no. of years)	Numbers of refrigera				
	Model A	Model B			
0-2	5	2			
2-4	16	7			
4-6	13	12			
6-8	7	19			
8-10	5	9			
10-12	4	1			

In which distribution do you think that mean is more representative?

18. A consumer products company wants to measure the effectiveness of different types of advertising media in the promotion of its product. Specifically, the company is interested in the effectiveness newspaper advertising. A sample 69 cities with approximately equal populations is selected for study during a test period of one month. The data of sales of the product and newspaper advertising media expenditure is given below.

Advertising	Sales of the product							
expenditure	0-500	500-1000	1000-1500	1500-2000	2000-2500			
0-200	12	6	-	-	-			
200-400	2	18	4	2	1			
400-600	-	4	7	3	-			
600-800	-	1	-	2	1			
800-1000	-	-	1	2	3			

Now you are required to find

- i. Correlation coefficient.
- ii. Estimate the total sales of product when the advertising expenditure is Rs. 1200.

Subject: Macro Economics Full Marks: 60 Pass Marks: 30 Course Code: MGMT 422/322 Time: 3: 00 Hours

You are required to answer in your own words as far as applicable. Figures in the margins indicate full marks.

SECTION A: VERY SHORT ANSWER QUESTIONS (10 X 1 = 10 MARKS) *Answer ALL the questions.*

- 1. What are the two basic features of macroeconomics?
- 2. When the consumption expenditure of a country is Rs. 6000 million and saving of the country is Rs. 2000 million what will be the disposable income of a country?
- 3. What do you mean by double counting in national income accounting?
- 4. Write four assumptions of classical theory of employment.
- 5. How much will be the value of MPC, if MPS is 0.15?
- 6. If the value of investment multiplier is 10, calculate the value of MPC.
- Find the equilibrium interest rate with the given equations; IS schedule Y=600-200i LM schedule Y= 100i
- 8. Distinguish between inflation and deflation.
- 9. Which inflation gives the positive effect in an economy?
- 10. List the quantitative instruments of monetary policy.

SECTION B: SHORT ANSWER QUESTIONS (3 X 8 = 24 MARKS)

Answer any THREE questions.

- 11. Define microeconomics and macroeconomics. Distinguish between microeconomics and macroeconomics.
- 12. Define employment. Explain the labour market equilibrium in classical theory of employment. [2+6]
- 13. Calculate the GDPmp, GNPmp, NNPmp, NI and PCI with the help of the following schedule;

[4+1+1+1+1]

[3+5]

Items	Amount (Rs in Crore)
1. Compensation of employees	2000
2. Profit	800
3. Mixed income from self employed	5000
4. Dividends	200
5. Interest	600
6. Net factor income from abroad	250
7. Rent	400
8. Consumption of fixed capital	300
9. Indirect taxes	1200
10. Subsidies	500
11. Population	200

14. Discuss the Keynesian psychological law of consumption.

15. Explain the different instruments of fiscal policy to stabilize the economy.

SECTION C: LONG ANSWER QUESTIONS (2 X 13 = 26 MARKS)

Answer any **TWO** questions.

- 16. How equilibrium level of income is determined in four sector economy? Consider the four sector economy with following behavioural equation: [6+5+1+1]
 - C = 300 + bYdT = 120 + 0.2YI = 100 millionG = 200 millionM = 20 + 0.1YX = 30b = 0.6Gt = 50 million
 - a. Compute equilibrium national income.
 - b. Calculate total import.
 - c. Calculate trade balance.
- 17. Explain the general equilibrium with the help of IS-LM model in three sector economy. [13]
- 18. What do you mean by inflation? Discuss the different types of inflation on the basis of speed, inducement, time, government reaction and scope. [1+3+3+2+2+2]

Subject: Introduction to Finance - I	Course Code: MGMT 423/323
Full Marks: 60 Pass Marks: 30	Time: 3: 00 Hours

You are required to answer in your own words as far as applicable. Figures in the margins indicate full marks. SECTION A: VERY SHORT ANSWER QUESTIONS (10 X 1 = 10 MARKS)

Answer ALL the questions.

- 1. What is agency problem?
- 2. List out the managerial functions of financial management.
- 3. Write the two DuPont equations.
- 4. Differentiate between the discounting and compounding methods of time value of money.
- 5. Find the present value of Rs. 400 per year for 10 years at 10 percent (ordinary annuities).
- 6. A company's common stock has a beta of 1.4. If the risk-free rate is 6% percent and the expected rate of return on the market is 10%, Calculate the cost of equity.
- 7. Write the formula of weighted average cost of capital.
- 8. What is crossover rate?
- 9. The Himalaya Herbal Company has an inventory conversion period of 40 days. Receivable conversion period is 30 days and the payable deferral period is 20 days. Calculate the cash conversion cycle of the company.
- 10. The annual requirements of materials to produce the product is 400,000 units, the purchase price of material is Rs. 5 per unit, cost of placing order is Rs 25, and carrying cost of one unit is 20% of material value. Calculate the economic order quantity.

SECTION B: SHORT ANSWER QUESTIONS (3 X 8 = 24 MARKS)

Answer any **THREE** questions.

- 11. Differentiate between the profit maximization and the wealth maximization objectives of financial management. [8]
- 12. Complete the balance sheet and the sales information in the table that follows Mechi Pottery Industries using the following financial data: [8]

Debt ratio = 50% Quick ratio = 0.8 times Total assets turnover ratio = 1.5 times DSO = 36 days Gross profit margin = 25% Inventory turn-over = 5 times

	Balance sheet								
Assets	Amount Rs.	Capital & liabilities	Amount Rs.						
Cash	?	Notes payable	?						
Account Receivable	?	Long Term debt	60000						
Inventories	?	Common stock	?						
Plant and equipment	?	Retained earning	97,500						
Total assets	Rs. 300,000	Total liabilities & capital	?						
sales	?	Cost of goods sold	?						

Bank A pays 8 percent interest compounded quarterly on its money market account. The manager of bank B wants its money market account equal to bank A's effective annual rate, but the interest is to be compounded on a monthly basis. What simple rate (Nominal rate) must bank B set? [8]

- 14. State and explain the factors affecting the size of working capital of a manufacturing company. [8]
- 15. Hulas Industry was recently formed to manufacture a new product. It has the following capital structure in the market value terms:

Debenture	Rs. 6000,000
Preferred stocks	Rs. 2000,00
Common stocks	Rs. 8000,000
Total	Rs. 16000,000

The company has a marginal tax of 40 percent. The cost of common equity is about 17 percent, cost of debt capital is 13 percent and the preferred stock has a cost of capital of 12 percent. Calculate the weighted average cost of capital of Hulas Industry. [8]

[7]

[6]

[5+3+5]

SECTION C: LONG ANSWER QUESTIONS (2 X 13 = 26 MARKS)

Answer any **TWO** questions.

16.

- a. Explain the limitations of financial ratio analysis.
- b. Describe the components of credit standard.

17. Prepare the cash flow statement of the following balance sheet as on December 2022 (Rs in '000'):

Assets	2021	2022	Liabilities&Equity	2021		2022
Cash	84	98	Account payable	312		344
Account Receivable	165	188	Notes payable	231		196
Inventories	393	422	Long term debt	531		463
Net fixed assets	2731	2880	Shareholders' equity	500		550
			Retained earnings	1799		2035
Total	3373	3588	Total	3373		3588
ncome Statement for th	ne year end	led Decen	nber 2022 (Rs in '000')			
Sales	2311					
Cost of goods sold	(1344)					
Depreciation					(27)	6)
EBIT					691	
Interest paid					(13	5)
Taxable income					312	
Tax at 44%					(24	4)
Net income					312	
Dividend paid					76	
Addition to retain earn	ning				236	

18. Your company is considering two mutually exclusive projects, A and B, whose costs and cash flows are as below: [5+5+3]

Year	0	1	2	3	4
Project A (Rs)	(14,000)	8,000	6,000	2,000	3,000
Project B (Rs)	(22,840)	8000	8,000	8,000	8,000

The projects are equally risky and their cost of capital is 12 percent. You must make the recommendation which project should be purchased. To determine which project is more appropriate, compute the NPV and IRR of each project.

Subject: Computer in Management Full Marks: 60 Pass Marks: 30 Course Code: MGMT 424/324 Time: 3: 00 Hours

You are required to answer in your own words as far as applicable. Figures in the margins indicate full marks. SECTION A: VERY SHORT ANSWER OUESTIONS (10 X 1 = 10 MARKS)

Answer ALL the questions.

- 1. Define computer system.
- 2. Explain the scope of system software.
- 3. What is primary memory?
- 4. State the importance of artificial intelligence in modern life.
- 5. How does email work?
- 6. Enumerate one difference between internet and intranet?
- 7. Write any two uses of networking in an organization.
- 8. What are B2B and B2C in e-commerce?
- 9. What is data mining?
- 10. What is the difference between data and information?

SECTION B: SHORT ANSWER QUESTIONS (3 X 8 = 24 MARKS)

Answer any THREE questions.

11. Define operating system.	Mention the different functions	performed by an o	perating system.	[2+6]
11. Define operating system.	mention the anterent ranetions	periornica of an o	peruning system.	

- 12. Write any six differences between e-commerce and e-business.
- 13. Explain, in brief, the concept of Data Management System. List out its importance and types in brief.

[2+2+4]

[4+4]

[4+4]

- 14. Suppose you are the supervisor of your company. Write an essay to be presented to the employee of your company on the change in working lifestyle and the role computer and internet play in everyday work.
- 15. Write short notes on any two:
 - i. Random Access Memory iii. Browser
 - ii. TCP/IP

SECTION C: LONG ANSWER QUESTIONS (2 X 13 = 26 MARKS)

Answer any TWO questions.

- 16. Describe the characteristic features of computer system. What are the scopes of computer in the different sectors of the country? [8+5]
- 17. Explain Network Topology. Mention any four types of networks and explain them in brief with a suitable diagram. [1+3+3+3+3]

18. Define generation of computer. Mention any three generations of computer with their special features.

[1+4+4+4]

Subject: Agri-Business Management Full Marks: 60 Pass Marks: 30 Course Code: MGMT 425/325 Time: 3: 00 Hours

You are required to answer in your own words as far as applicable. Figures in the margins indicate full marks.

SECTION A: VERY SHORT ANSWER QUESTIONS (10 X 1 = 10 MARKS)

Answer ALL the questions.

- 1. Define Agri-business.
- 2. Write about the unorganized traditional source related to agriculture finance.
- 3. List out any four dimensions of agricultural quality parameter.
- 4. What is floriculture?
- 5. Write any two factors that should be considered for maintaining chick quality.
- 6. What is crisis management in poultry industry?
- 7. What is horticulture?
- 8. Write about the waste management in related with poultry industry.
- 9. List out any two reasons for storage of Agri product.
- 10. Write any two objectives of fruits processing.

SECTION B: SHORT ANSWER QUESTIONS (3 X 8 = 24 MARKS)

Answer any **THREE** questions.

- 11. Discuss the important problems relating to farm or agriculture supplies. [8]12. Describe the needs and applications of bio-technology for agricultural uses and benefits in Nepal. [8]
- 13. Write the objectives of diseases surveillance on agriculture sector in Nepal. [8]
- 13. Write the objectives of diseases survemance of agriculture sector in Nepal.
 [8]

 14. Mention the general and economics importance of floriculture.
 [8]
- 15. Describe the government policy and incentives for domestic and global trade of fruit business. [8]

SECTION C: LONG ANSWER QUESTIONS (2 X 13 = 26 MARKS)

Answer any **TWO** questions.

16. What are the recent changes and emerging trends on agribusiness sector in Nepal. Explain.		
17. What is poultry industry? Explain the role of management in poultry industry. Also discuss the		
economic role of poultry industry for nation.	[2+5+6]	
18. Mention the considering factors on packing, branding and storage of fruits.	[13]	