

BBM / Second Semester / MTH 212: Business Mathematics - II

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions:

[6 × 1 = 6]

1. If $A = \begin{bmatrix} 2 & 0 \\ 1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & -1 \\ 7 & 3 \end{bmatrix}$ find the product AB.
2. Solve: $\frac{dy}{dt} = 2y$.
3. Find the total cost function if the marginal cost function is $MC = 2x - 5$ and fixed cost is 10.
4. Given production function $Q(L, K) = K^2 + 2K + 3L^2$, evaluate MP_L and MP_K for $k = 3$ and $L = 1.5$. Hence write down the values of MRTS.
5. Find the area bounded by the x-axis and the curve $y = 3x^2 - 2$ and the ordinates $x=1, x=4$.
6. What is the order and degree of the following differential equation?

$$\left(\frac{dy}{dx}\right)^4 - 3\left(\frac{d^3y}{dx^3}\right)^2 + 12y = 4$$

Group "B"

Descriptive Answer Questions:

[6 × 3 = 18]

7. Solve the difference equation $y_t - 10y_{t-1} = 900, y_0 = 20$. Also find the value of y_5 .
8. Solve by determinant or matrix method; $2x + y + z = 6, 2x - 3y + 3z = 10, x + 2y - 4z = -6$.
9. Find the consumer's surplus and producer's surplus if the demand and supply functions are $p_d = 300 - x$ and $p_s = x + 100$ at equilibrium.
10. Maximize (by using simplex or graphical method) $P = 2x + 3y$ subject to the constraints; $x + 2y \leq 10, 2x + y \leq 14, x \geq 0, y \geq 0$.
11. Find the minimum value of $z = x^2 + y^2$ subject to the condition $x + y = 6$.
12. Integrate the following: $\int \frac{x+1}{\sqrt{x^2+2x-15}} dx$.

Group "C"

Analytical Answer Questions:

[4 × 6 = 24]

13. In an oligopolistic market the two rival firms X and Y have the following reacting functions

$$P_t^X = -580 + 1.2 P_{t-1}^Y$$

$$P_t^Y = -580 + 1.2 P_{t-1}^X$$

Derive the solution to the difference equation that determines P_t^X and use it to determine the price for 5th period of time assuming the initial price determined by X is 2500.

14. Solve: $\frac{dy}{dx} + \frac{2xy}{1+x^2} = \frac{4x^2}{1+x^2}$
15. A perfectly competitive market has the demand and supply functions $Q_d = 170 - 8P$ and $Q_s = -10 + 4P$. When the market is out of equilibrium the rate of adjustment of price is a function of excess demand such that $\frac{dP}{dt} = 0.5(Q_d - Q_s)$. In the initial time period price P_0 is 10. Derive a function for P in terms of t and comment on the stability of the market. Also find the price in 5 time periods.
16. The data below are about an economy of two industries P & Q. the values are in millions of rupees

Producers	Users		Final Demand
	P	Q	
P	30	70	50
Q	30	20	50

Determine the outputs if the final demand changes to 200 for P and 120 for Q.

Group "D"

Comprehensive Answer Questions:

[1 × 12 = 12]

17. A company manufactures two products. The price function for product A is $p = 12 - 0.5x$ (where $x \leq 24$) and that for product B is $q = 20 - y$ (where $y \leq 20$) both in thousands of dollars, where x and y are the quantities of products A and B respectively. If the total cost function is $C = 9x + 16y - xy + 7$. Find
- Total revenue function and total profit function.
 - Quantities and the prices that maximize profit.
 - Maximum profit.



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April 2022

Full Marks: 60
Pass Marks: 30
Time: 3 Hrs.

BBM / Second Semester / PSY 201: Psychology

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions:

[6 × 1 = 6]

1. Who is the father of modern psychology?
2. Point out the shortcuts in judging others.
3. What is motivated forgetting?
4. Define emotional labor.
5. Mention the algorithm approach of problem solving.
6. Point out the Group factor theory of intelligence.

Group "B"

Descriptive Answer Questions:

[6 × 3 = 18]

7. What is prejudice? Describe the techniques to reduce it.
8. Describe the tools of thinking.
9. How do psychologists use naturalistic observational method to understand behavior?
10. What is emotional intelligence? Explain.
11. Describe the different modules of long-term memory.
12. Define learning and differentiate between maturation and learning.

Group "C"

Analytical Answer Questions:

[4 × 6 = 24]

13. How can you use knowledge of psychology in solving everyday life problems? Explain
14. What is creative thinking? Can creativity be learned?
15. Define intelligence. Write a short note on individual differences in intelligence.
16. What is personality? Explain with reference to big five model.

Group "D"

Comprehensive Answer Questions:

[4 × 3 = 12]

17. Read the following case carefully and answer the questions that follow:

There are two college going students, name Dipesh and Suresh, and at super market. To make ends meet and help pay for college fee. Both works for different departmental supervisor Shankar respectively. Dipesh's supervisor Ramesh assign him same work for days, as he believes that practicing the same thing over and over again master the job. Dipesh was being de-motivated by doing same work every day.

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At the same time Suresh's supervisor Shankar takes care of his employees interests and use to assign them work each week. The outcome of this practice was that his employees were motivated and were satisfied with the work assigned to them because they were having different task to perform each week that they were more enthusiastic towards the work.

It was observed by the employees of the supermarket that Dipesh's supervisor Ramesh was being bias with his employees. For, instance, he was providing 200 more rupees pay to a girl who used to say good and sweet things to him as compare to Dipesh. He was also strict with lunch timing which was 45 minutes for all employee of the supermarket but he expects his employees to finish it within 30 minutes.

On the other hand, Suresh's supervisor shankar motivates his employees by giving them an opportunity and responsibility to complete certain task without interfering in them and by providing them bonus for completion of work in given time.

Questions:

- a. Describe the problem in the above case.
- b. Analyze Dipesh and Suresh's motivation using equity theory and expectancy theory.
- c. If you were Dipesh's boss, what could you do to positively influence his motivation?
- d. Does motivation come from within a person or it is a result of the situation? Explain.



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BBM / Second Semester / ENG 212: English II

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions

[6 × 1 = 6]

1. Read the following and add periods, commas and capital letters where necessary.
when we are born into family unit or brought into it through adoption or as a step-child we take a certain place in the family hierarchy we become only child oldest child middle child or youngest child the first and most obvious effect of taking a certain position in the family is the relationship we have with respect to the people already there
2. Rewrite the following sentences using the correct form of verb in parenthesis.
 - a. Politics (has / have) never made much sense to me.
 - b. Neither of my brothers (have / has) the time to help me.
 - c. Either my sister or my parents (plans / plan) to watch my house while I'm gone.
3. What are 'Following and Flouting' conventions?
4. Rearrange the following information to make a complete sentence.
 - a. his/ doesn't/ brush/ he/ after meals/ always/ teeth/.
 - b. time/ at home/ have/ seldom/ on weekdays/ lunch/ I/ to cook/.
5. Suggest the proverbial meanings for the following:
 - a. Lions only roar when they are hungry.
 - b. Fasten your seat-belt before takeoff.
6. Rewrite the sentences using the given modifiers.
 - a. (Nearly) I took most of the students three hours to write their compositions.
 - b. (that was so difficult) The student did not appreciate another assignment from their teacher.

Group "B"

Short Answer Questions

[6 × 3 = 18]

7. Do you agree with Dr. Peale that our lives would be happier if we all had better manner? Explain.
8. What didn't George Ramsay like about his brother Tom? Do you feel the same way about Tom?
9. What did Dr. King mean when he said, "Justice is invisible" in the essay "The Trumpet of Conscience"?

10. Can you be as good friends with someone from another culture as with someone from your own culture? Why? Why not?
11. Does the article titled *How Birth Order Influences your Life Adjustment* make sense to you? Do you find it logical? Why?
12. Characterize the old judge in the story *The Lion's Hair*?

Group "C"

Long Answer Questions

[4 × 6 = 24]

13. Is new technology always beneficial to a low income generating country such as Nepal? Why or why not?
14. Do women make friends more easily than men do? It is believed that they know how to be better friends than men do? Explain your point of view.
15. List the allusions used in the poem *The Lunatic* and explain each of them briefly.
16. What are 'live' and 'dead' metaphors? When does a metaphor become 'dead'? What does the word 'halo' suggest in the sentence "The rock singer sang in a halo of spotlight"?

Group "D"

Analytical Answer Question:

[1 × 12 = 12]

17. Are there universal good manners? In other words, is there a core of good manners that polite people of all countries recognize? Or are good manners different for each individual culture? Explain with examples.

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BBM / Second Semester / ACC 201: Financial Accounting

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions:

[6 × 1 = 6]

1. Write the meaning of accounting. Also, give one objective of accounting.
2. Explain in brief about the "accounting period" concept of accounting.
3. What is "debit note"?
4. The following transaction is provided to you:
Cheque worth Rs 144,000 is issued to creditors after deducting Rs 16,000 as discount.

Required: Journal entries

5. The following information is provided to you:

Furnitures	Rs 80,000	Creditors	Rs 60,000
Machinery	Rs 120,000	Debtors	Rs 90,000
Cash in hand	Rs 40,000	Bank loan	Rs 70,000

Required: Opening entries

6. The following information is provided:
Sales for the year is Rs 800,000.
Cost of goods sold is Rs 480,000.
Administrative and selling expenses is Rs 80,000.

Required: Net profit.

$$(8,00,000 - 4,80,000) - 80,000$$

Group "B"

Descriptive Answer Questions:

[6 × 3 = 18]

7. Explain in brief about the different parties interested to use accounting information.
8. Define "the accounting equation". Explain the rules for debit and credit for transactions based on accounting equation.
9. The following transactions are provided to you:
 - a. Commenced business with a bank balance of Rs 250,000.
 - b. Goods worth Rs 80,000 were purchased from Everest Company.
 - c. Goods worth Rs 40,000 were sold for Rs 48,000.
 - d. A cheque worth Rs 36,000 was issued to Everest Co. and a discount of Rs 4,000 was received.

Required: Accounting equation.

10. The following transactions related to sales are given:
Chaitra 5 Sold goods to XYZ Books and Stationery

- 25 Maths books @ Rs 200 each.
 20 English books @ Rs 300 each.
 (Trade discount: 10%)
 Chaitra 10 Sold goods to Everest Pustak Bhandar
 20 Nepali books @ Rs 500 each.
 40 Marketing books @ Rs 250 each with trade discount 15%.
Required: Sales book

11. The following information is extracted from the book of trading business:

Trial Balance
As on 30th Chaitra 2078

Particulars	Debit (Rs.)	Credit (Rs.)
Trade debtors	64,000	
Bad debts	8,000	
Provision for doubtful debts		10,000

Additional information:

- New bad debts: Rs 4,000.
- Create provision for doubtful debts: 5% of trade debtors.

Required: Provision for doubtful debts account

12. The following accounting errors are identified before preparation of the trial balance.

- a. A salary of Rs 25,000 was paid to Mr. Motiram which was debited to his personal account.
- b. A computer purchase for office use of Rs 75,000 was debited to purchase account.
- c. A credit purchase of goods worth Rs 90,000 from Hemanta was recorded in sales book.

Required: Journal entries for rectification of accounting errors

Group "C"

Problem Solving Questions:

[4 × 6 = 24]

13. Explain any two types of accounting errors disclosed by trial balance and other two types of accounting errors that are not disclosed by trial balance.
14. "Preparation of cash flow statement includes cash flow from operating, investing, and financing activities." Explain with suitable example.
15. The following transactions are extracted from the books of business concern for the month of Falgun 2078.

- Falgun 1 Cash balance of Rs 70,000 and bank balance of Rs 90,000
 Falgun 5 Purchased goods worth Rs. 80,000 from ABC Ltd. and partial amount of Rs 30,000 paid in cash
 Falgun 10 Sold goods worth Rs 50,000 to XYZ Ltd. and partial payment of Rs 20,000 received in cash

- Compr
1-
- Falgun 15 Cheque of Rs 45,000 issued to ABC Ltd.; discount worth Rs 5,000 received
- Falgun 25 Cheque of Rs 28,000 received from XYZ Ltd. in full settlement of debt
- Falgun 28 Cash withdrawal of Rs 20,000 for personal use
- Falgun 30 Rent of Rs 10,000 and salary of Rs 30,000 are paid
- Required:** Triple column cash book

16. A company had purchased a machinery worth Rs 250,000 on 1st Baisakh 2076. The company further purchased another machinery worth Rs 150,000 on 1st Kartik 2077. The machinery purchased on 1st Baisakh 2076 was sold for Rs 165,000 on 30th Ashwin 2078. On the same day, a new machine worth Rs 200,000 was purchased. Depreciation is charged using straight line method @12%. Accounts are closed on 30th Chaitra each year.

Required: Machinery account for 2076 to 2078 for three years

[1+2+3]

Group "D"

Comprehensive Answer Questions:

[1 × 12 = 12]

17. An unadjusted trial balance of a company as on 30th Chaitra 2078 is provided below:

Dr.		Cr.	
Particulars	Rs.	Particulars	Rs.
Opening stock	40,000	Share capital	200,000
Purchases	120,000	15% Bank loan	120,000
Carriage inward	4,000	Accounts payable	70,000
Salaries	43,000	Discount received	10,000
Insurance	20,000	Sales revenue	250,000
Cash and bank	67,000		
Accounts receivable	40,000		
Land and building	230,000		
Furnitures	80,000		
Discount allowed	6,000		
	650,000		650,000

Additional information:

- Closing stock: Rs 60,000.
 - Depreciation charged on furniture: @ 25% p.a.
 - Salary outstanding: Rs 5,000.
 - Insurance prepaid: Rs 5,000.
- a. Interest on bank loan is fully outstanding.

Required:

- a. Income statement
- b. Balance sheet
- c. Current ratio, debt equity ratio, and inventory turnover ratio

[5+4+3]

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BBM / Second Semester / ECO 212: Introductory Macroeconomics

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

Brief Answer Questions:

[6 × 1 = 6]

1. Write any four assumptions of classical theory of employment.
2. Derive government expenditure multiplier.
3. Write any four determinants of saving function.
4. List out any two sources of deficit financing.
5. Write any four components of current account of BOP.
6. What are the causes of market failure?

Group "B"

Descriptive Answer Questions:

[6 × 3 = 18]

7. Explain the concept of macro dynamic analysis.
8. How is national output determined in a four sector economy?
9. Derive IS curve.
10. Describe any three causes of demand pull inflation.
11. Explain the quantitative instruments of monetary policy.
12. Differentiate economic growth and economic development.

Group "C"

Problem Solving Questions:

[4 × 6 = 24]

13. Consider the following information at MPC = 0.8

Y_d	C	S
100	120	---
200	---	---
300	---	---
400	---	---
500	---	---
600	---	---

- i) Complete the table from the given information.
- ii) Using graph, explain three propositions of psychological law of consumption function.

[2+4]

14. Consider the following figures for national income accounts.

Description	Rs in Billion
Rent	20
Mixed income	160
Employer's contribution to social security	40
Consumption of fixed capital	80
Indirect taxes	100
Addition to stocks	(-20)
Net domestic fixed capital formation	120
Net factors income from abroad	(-40)
Net Exports	(-20)
Wages and salaries	200
Government consumption expenditure	80
Private consumption expenditure	400
Operating surplus	80
Subsidies	20

- (a) Compute GDP_{MP} by both income and expenditure methods.
- (b) Do you agree that final product method avoids double counting? Justify. $[(2+2)+2]$
15. Let, investment function $I = 200 + 0.1Y$ and saving function $S = -400 + 0.2Y$
- Compute the equilibrium income, saving and investment.
 - Compute equilibrium income, saving and investment when planned saving increases by Rs 100 billion.
 - Does this condition reflect the concept of paradox of thrift? $[2+2+2]$
16. From the following information

Year	Price of goods X	Quantity of goods X	Price of goods Y	Quantity of goods Y
2019	10	1,000	20	500
2020	20	2,000	30	1,000
2021	30	3,000	40	1,500

- Compute Nominal GDP, Real GDP, GDP Deflator and rate of inflation.
- State the significance of real GDP in economic analysis. $[4+2]$

Group "D"

Comprehensive Answer Questions:

[12]

17. Read the following situations and answer the questions given below.

Foreign direct investment (FDI) is considered an indispensable mode of economic development. For a least developed-country (LDC) like Nepal with huge saving-investment gap; limited, albeit growing, contribution to gross domestic product (GDP) ratio; and limited amount of foreign aid flow. Even FDI is traditionally viewed as foreign investments made in manufacturing and services sectors, which undoubtedly contribute to employment opportunities as well as economic growth, they are increasingly attracted by host country Nepal for meeting financing requirements for large infrastructure projects. This is an area in which foreign investors used to shy away from investing in the past due to various risks associated with such projects resulting from long gestation and pay back periods. In the context of Nepal, although FDI is generally welcome in all sectors, due to acute dearth of resources for infrastructure financing, it has become an imperative in the latter sector. It is to be noted that the utility of foreign investment for a country like Nepal does not end there. It is an instrument for the transfer of technology from the technology-rich countries to technology-deficient countries. Similarly, leadership and managerial skills transferred by foreign investors and eventual expansion of local knowledge and skill base. As Nepal welcomes FDI in all sectors of the economy, it has several obstacles like political instability, labour conflict, market etc. for investment friendly environment so; those unwanted situations should be removed.

- a. What are the causes for poor inflow FDI in Nepal?
- b. Do you agree that FDI helps in solving the problems of unemployment and technological backwardness faced by developing country like Nepal? Justify.
- c. What types of fiscal measures would you suggest to attract more FDI in Nepal?

[4+4+4]

