Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

April 2024

Full Marks: 100
Pass Marks: 50
Time: 3 Hrs.

BIM / Fourth Semester / ACC 202 : Cost and Management Accounting

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

Group "A"

Brief Answer Questions: *[10 × 2 = 20]*

1. State any two objectives of cost account.
2. What is JIT system of Inventory Control System?
3. Define variable cost with example.
4. Write about uncontrollable cost.
5. What is time rate wages system?
6. A manufacturing company provides you the following information of a material:
   - Annual requirement 60,000 units
   - Ordering cost per order = Rs 600
   - Cost per unit of material Rs 20
   - Carrying cost is 10% of inventory value

   Required: EOQ
7. The following information is provided in respect of AG & Co.:

Machine Hours	1,000	7,000
Total Semi Variable Cost	10,000	22,000

   Required: Total estimated cost for 5,000 machine hours
8. Mr Shrestha is allowed 9 hours to finish a given job, but he completed the entire job in 6 hours. The wages rate per hour is 100.

   Calculate: Total earnings of Mr. Shrestha as per Rowan Bonus Plan.
9. The following data of a factory are as under:

   Actual output 1,800 units
   Actual time 8,500 machine hours
   Actual overhead incurred Rs 335,000
   Standard fixed overheads (10,000 hours normal capacity) Rs 100,000
   Standard time required for two unit of output 10 machine hour
   Standard overhead rate per machine hour Rs 19

   Required: Overhead Capacity Variance

10. KK Company Ltd. is working at its annual normal capacity of 60,000 units. The total cost per unit is Rs 15. The annual fixed costs are Rs 600,000.

Required: Total cost of 50,000 units.

Group "B"

Short Answer Questions: (Attempt any SIX Questions) *[6 × 5 = 30]*

11. What is service costing and why it is needed?
12. What are the objectives of cost volume profit analysis?
13. Differentiate between relevant and irrelevant cost.
14. KK Department Store that has three major departments: Groceries, General merchandise, and Drugs. The management is considering dropping groceries, which have consistently shown a net loss. The present annual net income is reported in the following table (in thousands rupee.)

	Total	Groceries	General Merchandise	Drugs
Sales Rs	12,000	6,000	4,000	2,000
Variable cost of sales Rs	9,000	4,000	3,500	1,500
Contribution margin Rs	3,000	2,000	500	500
Fixed cost Rs				
Avoidable	2,000	1,500	300	200
Unavoidable	800	600	100	100
Total fixed expenses	2,800	2,100	400	300
Operating income	200	(100)	100	200

Required: Which alternative would you recommend?

15. The following information of materials are given:

Standard:

Material	Quantity	Standard Price per kg
A	14 kg	Rs 8
B	16 kg	Rs 7

Actual:

Material	Quantity	Actual Price per kg
A	70 kg	Rs 9
B	130 kg	Rs 6

Standard Loss is 10% and Actual output is 180 kg

Required: Material variances

16. The following are the information of production department:
   - Cost of machine Rs 130,000 with Rs 30,000 residual value at end of 5 years.
   - Annual working hours of machine 4,000 hours.
   - Repair & maintenance and lubricating Rs 4 per machine hours
   - Annual lighting expenses Rs 24,000
   - Machine attendance annual salary Rs 36,000
   - Power consumption Rs 2 per 30 minutes working

   Required: Overhead rate per machine hour

17. Betu Manufacturing Company with normal capacity of 40,000 units supplied you with the following particular for the ending Chaitra 31st :

Opening stock 4,000 units	Production 30,000 units	Sales 32,000 units

Direct Material cost per unit	Rs 8
Direct Labour cost per unit	Rs 6
Variable Manufacturing cost per unit	Rs 4
Fixed manufacturing overhead	Rs 200,000
Unit variable selling and administrative cost	Rs 3
Fixed selling & administrative cost	Rs 40,000
Unit selling price	Rs 40

Required: (a) Income statement under Absorption Costing System

(b) Reconciled profit as per Variable Costing *[4+1]*

Group "C"

Long Answer Questions: (Attempt any THREE Questions) *[3 × 10 = 30]*

18. "Neither over nor under investment in inventory is the main essence of Inventory Management". Justify this statement with the help of objectives of Inventory Management.

19. "Management accounting uses information from the different accounting fields." Explain this statement with the help of scope of Management accounting.

20. Following are the information of a renowned Nursing Home in Kathmandu

    Annual expenses (Rs) summary:

    - Food supplied to patient = 25,000 per month
    - Medicine expenses = 20,000 per month
    - Laundry charge = 6,000 per month
    - Cost of oxygen and x-ray = 6,000 per month
    - Lighting and heating = 12,000 per annum

- Repair and maintenance = 9,000 per annum
- Administration expenses = 18,000 per month
- Rent of buildings = 240,000 per year
- Depreciation of fixed assets = 15% of Rs.600,000
- Insurance = Rs.10,000 per month
- Miscellaneous = Rs 100,000 per annum

Others:

- Fees paid to expert doctors = 300,000 per year
- 2 Supervisor staff 10,000 per month each
- 6 Nurses Rs 9,000 per month each
- 4 Ward boys Rs 5,000 per month each
- Profit margin 25% on cost

Assume that total occupied bed position 40 beds for 300 days

Required:

a. Operating cost statement

b. Cost per day per patient

c. Chargeable price per patient per day *[6+2+2]*

21. The given information depicts the operating result of a trading concern for the past two years.

Year	Year - I	Year - II
Sales in Rs	Rs 700,000	Rs 800,000
Net profit	Profit Rs 15,000	Profit Rs 55,000

Required:

a. Profit Volume Ratio

b. Amount of Fixed Cost

c. Break-Even Point in Rs.

d. Sales required to earn a desired profit of Rs 100,000

e. Sales required to earn a desired profit after tax of Rs 150,000 if tax rate is 25%

f. Profit when sales are Rs 14,00,000

g. Margin of safety if actual sales is Rs 11,00,000 *[1+1+2+2+2+1+1]*

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: *[20]*

22. A renowned organization is planning to prepare functional budget for their decision purpose from the following information:

Total sales for six months are 500,000 units, which are apportioned as:

Chaitra 15%, Baisakh 20%, Jestha 20%, Ashad 15%, Shrawan 10% and Bhadra 20% respectively. Selling price per unit will be Rs.12

Purchase: One unit of finished goods requires 3 kg of material and rate per kg is Rs 4.

Wages: Each unit of finished goods will need 2 labour hours and rate per labour hour will be Rs 4

Overhead: Variable manufacturing cost will be Rs 3 per unit and fixed manufacturing cost for the year will be Rs 90,000

Selling and administrative expenses will be 15% of sales

Inventory policy: Material: 100% of the subsequent month's requirement

Finished goods: 50% of the subsequent month's sale

Required for four months from Baisakh to Ashad:

a. Sales budget
b. Production budget
c. Material purchase budget
d. Labour budget
e. Manufacturing overhead budget
f. Selling and administrative expenses budget
g. Cost of goods sold budget
h. Explain the importance of budget to the organizations. ***[2+3+4+2+2+1+3+3]***

✡✡✡✡

1580

Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

April 2024

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

BIM / Fourth Semester / IT 239: Web Technology II

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

Group "A"

[10 × 1 = 10]

Brief Answer Questions:

1. What are the uses of regular expression?
2. List any two string functions with their uses.
3. What is the task of array – merge ( ) function?
4. Write the process to connect database in PHP.
5. Mention the method to create and destroy cookies.
6. Define HTTP Authentication.
7. List any two property of good web frame work.
8. Differentiate between cookies and session.
9. What is namespace?
10. Define indexed array.

Group "B"

Short Answer Questions: (Attempt any FIVE Questions) *[5×3 = 15]*

11. Discuss the advantages of using PHP framework.
12. Design a web form to take the information about a patient in hospital. Use your own assumption.
13. Write a program to describe the use of break and continue statement.
14. Why do we need static method and properties? Example.
15. Discuss about starting, ending and setting a timeout for session.
16. List the access modifiers. What might be the problems of multiple inheritance.

Group "C"

Long Answer Questions: (Attempt any THREE Questions) *[3 ×5 = 15]*

17. Why do you need form? A file named "num.txt" contains 10 integers. Write a program to read that file and print the largest one.
18. Discuss about any two PHP frameworks and its limitation.
19. Assume a database named FOM with table BIM(id, semester, course). Write a program to set the course to Java of fourth semester.
20. How do you retrieve elements of associate array using for each? Explain.

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: *[2 × 10 = 20]*

21. Do we need to explicitly define the data type of variable in PHP? How do you declare constant? Write a program to define a function to take integer from 1 to 12 and return the name of corresponding month..

22. What are the significances of abstract classes and interface over concrete class? Specify the chain of constructor and destructor in inheritance. How do you handle exception? Illustrate with your own assumption.

✡✡✡

Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
April 2024

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

BIM / Fourth Semester / IT 241: Operating System

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

Group "A"

[10 × 1 = 10]

Brief Answer Questions:

1. Differentiate between real time operating system and batch operating system.
2. Define process model.
3. How preemptive scheduling differs from non-preemptive scheduling?
4. What is resource allocation graph?
5. Mention the limitation of paging.
6. What do you mean by virtual memory?
7. List out the types of file.
8. What is the advantage of interrupt driven I/O over programmed I/O?
9. Differentiate between authentication and authorization.
10. List out any two advantage of distributed operating system.

Group "B"

Short Answer Questions: (Attempt any FIVE Questions) *[5×3 = 15]*

11. Explain different state of process.
12. Discuss how deadlocks can be recovered through preemption with its advantages and disadvantages.
13. Explain the procedure for controlling access to resources.
14. What were the limitations of single level and two-level directory? How can multi-level directory help to come over them?
15. Explain any three types of disk scheduling algorithm.
16. How do mobile operating systems differ from PC operating systems like windows and Linux? Explain their similarities too.

Group "C"

Long Answer Questions: (Attempt any THREE Questions) *[3 ×5 = 15]*

17. Define Mutual Exclusion. Explain Petersons' algorithm to avoid race condition with its advantages and limitations.
18. Explain message passing in distributed system with example.

19. Consider the following resource allocation matrix. use Bankers' algorithm to distribute remaining resources such that all processes will complete without forming a deadlock.

Process	Allocated	Maximum
P1	4	9
P2	2	4
P3	3	7
P4	0	5
P5	2	6

Remaining: 3

20. What is page fault? Consider the following page reference string: 3, 3, 5, 4, 7, 1, 5, 5, 1, 4, 3, 7, 6, 3, 4, 1. How many page faults would occur for LRU page replacement algorithms assuming 4 page frames?

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: ***[2 × 10 = 20]***

21. Explain the need of system call in OS. Explain segmentation with its need and drawback.
22. What is file system implementation? Compare Contiguous allocation, Linked allocation and Inode Implementation in file system.

✡✡✡

Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

April 2024

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

BIM / Fourth Semester / IT 240: Business Data Communication and Networking

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

Group "A"

[10 × 1 = 10]

Brief Answer Questions:

1. Define data communication.
2. Which application allows users to remotely access and control another computer?
3. List out any two limitations of circuit switched network.
4. What role does the Media Access Control (MAC) address play in data transmission?
5. Define multicasting.
6. List any two features of Network Operating System.
7. Write any two benefits of using Virtual LANs.
8. List out any two factors for improving circuit capacity.
9. Define wi-max.
10. How is network traffic managed in a managed network?

Group "B"

Short Answer Questions: (Attempt any FIVE Questions) *[5 × 3 = 15]*

11. How can improving device performance benefit WAN operations?
12. Explain the services provided by transport layer.
13. How the Internet Works? Explain.
14. List the differences between Asynchronous Transmission and Synchronous Transmission.
15. Explain any three types of networking device.
16. How do packet-switched networks handle data transmission?

Group "C"

Long Answer Questions: (Attempt any THREE Questions) *[3 × 5 = 15]*

17. Explain the working mechanism of CSMA and compare it with CSMA/CD.
18. Explain the importance of data encoding. Encode 110110 using any three Digital data Digital Signal Encoding technique.
19. Define VPN and explain its type.
20. Compare and contrast the OSI model with the Internet model. Discuss the similarities and differences between the two models in terms of their layer structures and functions.

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: *[2 × 10 = 20]*

21. Suppose an ISP owns the block of addresses of the form 200.201.202.0 and it wants to create six subnets from this block, with each block having the same number of IP addresses. Calculate subnetmask, range, netid, broadcast id and prefixes (of form a.b.c.d/x) for the six subnets.

22. As a network administrator of your college, you are required to upgrade your college network, explain the factors you consider while designing the network.

✡✡✡

Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

April 2024

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

BIM / Fourth Semester / IT 220: Database Management System

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

Group "A"

[10 × 1 = 10]

Brief Answer Questions:

1. Define Database Management System.
2. Define the term Tuple Relational Calculus.
3. Write any example of multivalued attribute.
4. What do you mean by Growing phase?
5. Give an example of lossy decomposition.
6. Does Specialization increase the size of Schema? Give reason.
7. Why is store procedure used?
8. Define Big Data.
9. What is the use of Default keyword in SQL?
10. Write a syntax to create a view.

Group "B"

Short Answer Questions: (Attempt any FIVE Questions) ***[5×3 = 15]***

11. Explain different type of relationship with example.
12. What are the properties of Relational Decomposition? Explain.
13. Explain the Best practices of Naming Convention in Database management System.
14. Explain Read condition of time stamp ordering concurrency control.
15. Explain Right, left and Full Join with example.
16. How Database System can be made secure? Explain.

Group "C"

Long Answer Questions: (Attempt any THREE Questions) ***[3 ×5 = 15]***

17. Explain the recovery process using NO-UNDO / REDO with an example.
18. Explain the benefits and significance of using a Relational Database system compared to a traditional file system.
19. Define Multivalued Dependency. Illustrate with example how a table can be Normalized using fourth normal form.

20. From the following relation

Student (ID, S_Name, Address, Gender, Age)

Write Relation Algebra

a. To find all rows where Age is less than 20
b. To list all the student
c. To list Name and gender of students
d. To list Name and Address of students whose gender is 'M' and age is greater than 30

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: *[2 × 10 = 20]*

21. Consider the given schema design for Department Store.

Customer (c_id, C_Name, address, gender, age, phone, email, created_date)

Product (pr_id, P_name, product_price, mfg_date, exp_date)

Purchase (id, c_id, pr_id, qunatity, total_price, entered_by, entered_at)

a. Find the name and price of product whose name start from 'K' and end in 'T'.
b. Find the name of customer who purchases 'Pen'.
c. Insert the record of new customer.
d. Delete the product 'Pen'
e. Increaser the price of all product by 25%
f. Write DDL statement for creating above relation *[1+1+1+1+1+5]*

22. How strong entity, weak entity and relationship set is represented in table? Explain with example.

✡✡✡

Only for 2021 AD admitted Regular Students

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

April 2024

Full Marks: 100
Pass Marks: 50
Time: 3 Hrs.

BIM / Fourth Semester / ECO 206: Economics for Business

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

Group "A"

Brief Answer Questions: *[10 × 2 = 20]*

1. What are the characteristics of microeconomics?
2. Write any four instruments of monetary policy.
3. Write the economic indicators that are used to compute the rate of inflation.
4. Prepare a list of types of investment.
5. How is advertisement elasticity of demand computed by the arc method?
6. Consider the consumption function: C = a + bYd and interpret the components.
7. What are the phases of trade cycles?
8. Why is SAC U-shaped?
9. Why does MP decrease when TP increases at a decreasing rate?
10. What are the degrees of price elasticity of supply?

Group "B"

Short Answer Questions: (Attempt any SIX Questions) *[6 × 5 = 30]*

11. How is macroeconomics useful in examining the nature and extent of the domestic and international economic environment? Explain.
12. Differentiate between nominal GDP and real GDP.
13. Explain the concept of accounting profit and economic profit with suitable examples.
14. What is the production function? Explain its types.
15. What is economic efficiency? How is it measured?
16. Consider the following cost schedule:

Output(Q)	0	1	2	3	4	5	6	7	8
Total variable cost (TVC)	0	10	18	24	32	50	80	124	180

Compute TC, AFC, AVC, AC, and MC at TFC = 100

17. Compute profit-maximizing output, price, TR, and maximum profit when demand function, $P = 10 - 0.1Q$, and cost function, $C = 70 + 2Q$, where Q is the quantity and P is the price.

Group "C"

Long Answer Questions: (Attempt any THREE Questions) *[3 × 10 = 30]*

18. Explain the process of measuring GDP by product method with examples.

19. Consider the following demand schedule:

Points:	A	B	C	D	E
Px:	10	8	6	4	2
Qdx:	20	30	40	50	60

a. Compute price elasticity of demand at movement from B to C and C to B by proportion method.

b. Compute price elasticity of demand at midway between B and C and C and B by arc method.

c. Why is the arc method considered a more appropriate method than the proportion method? *[4+4+2]*

20. Let, demand functions, $P_A = 225\text{-}0.005Q_A$, $MR_A = 225 - 0.01Q_A$, $P_B = 125\text{-}0.00125Q_B$ $MR_B = 125\text{-}0.0025Q_B$, and Cost function, $TC = 1500000 + 25Q$, $MC = 25$

a. Determine TR_A, TR_B, TR, TC, and profit under price discrimination policy.

b. Compute TR, TC, and profit under a uniform pricing policy.

c. Which pricing policy will be more effective in maximizing both total revenue and profit? *[4+4+2]*

21. Let, production function, $Q = 100K^{1/2}L^{1/2}$, C = Rs 2000, P = Rs 2, r = Rs 100 and w = Rs 80.

a. Compute the marginal productivity of two inputs.

b. Determine optimal employment of two variable inputs, profit, and maximum output.

c. What will be the effect on output and profit when the firm increases its investment to Rs 4,000? *[3+4+3]*

Group "D"

Comprehensive Answer / Case / Situation Analysis Questions: *[20]*

22. Read the following situation and answer the following questions:

Market structure is the complete array of industry characteristics like number and size distribution of sellers and buyers, power balance between buyers and sellers, knowledge about the market, etc. that directly affect the price/output decisions made by the firm. A firm is, thus greatly affected by its market environment in pricing practices. The more competitive the market, the less discretion the firm has in determining its price. In the

extreme case of a perfect market, the pricing is entirely outside the control of firms and consumers: they are price takers. The perfect competition model describes the most vigorously competitive sectors of the economy, in which widespread price competition drives firms' profits to levels just sufficient to maintain the required investment

It is assumed that the cell phone market is perfectly competitive in Nepal. Suppose that 20,000 traders are involved in selling cell phones in Nepal. Similarly, a market survey shows that a large number of households use cell phones. In this reference, answer the following questions:

Questions:

a. How are the equilibrium price and quantity of cell phones determined?

b. What will be the effect on the equilibrium price and quantity of cell phones when the government increases VAT on cell phones?

c. What will be the effect on the equilibrium price and quantity of cell phones when the income of remittance recipients households increases due to a high inflow of workers' remittance?

d. What will be the simultaneous effect on the equilibrium price and quantity of cell phones when the government increases VAT and the income of remittance recipients households increases due to a high inflow of remittance?

✡✡✡