GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: English F.M.:100
Time: 3 hrs. P.M.: 40

Set 'A'

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt **all** questions

1. Read the following passage and answer the questions that follow: [15]

If there were no mountains or oceans and if the winds circled the earth with perfect regularity then the amount of heat and then length of the farmer's growing season would progress uniform by from north to south. Instead, there are all kinds of unexpected differences in climate, as temperature maps of the United States show. For instance, all along the western coast, the temperature changes little between winter and summer. In some places, the average difference between July and January is as little as 10 degrees centigrade. The climate along the northern part of this coast is similar to that of English. But in the north central part of the country, summer and winter are worlds apart. There the average difference between July and January is 36 degrees centigrade and more violent extremes are common. The coldest days of a typical January may be 40 degrees centigrade, and the hottest July day may be 45 degrees. This is the sort of climate that is also found in central Asia, far from the moderating influence of the oceans. In the eastern part of the United States, the difference between summer and winter is also very distinct, but not nearly so extreme. Near the southwestern corner of the country, the climate is mild and spring like in winter, but in summer the temperature may reach equatorial intensity. In Alaska, almost continuous daylight in summer makes the short growing season an intense one. The variations in temperature within the United States have had a marked effect on the country's economy and living standards.

Questions:

a. What are the causes of unexpected differences in climate?
b. In what part of the United States are summer and winter worlds apart?
c. What is the temperature of January in the north?
d. What is the effect of continuous daylight in summer on growing season in Alaska?
e. What is the passage mainly about?

2. If you were shipwrecked alone on a desert island, which five common objects would you want to have with you? Why? [10]

3. Write your experience as a student at Global College of Management. [10]

4. Make a list of experiences and achievements in at least 5 sentences for the following situations. [5]
   a. She has had an amazingly successful film career.
   b. The company has had one of the worst years in its history.

5. Look at the example:
   Example: I can't go to sleep
   - This is the first time I've ever slept in a tent.
   - I've never flown at night before.
   - I'm not used to having siestas.

   Continue the remarks below as in the example. [5]
   a. He's absolutely delighted.
   b. She's feeling terribly nervous.

6. Change the following sentences using **seems**. [5]
   a. He's highly cooperative.
   b. He's very friendly.
   c. He doesn't spend much time out of doors.
   d. He watches television a lot.
   e. He lived a very interesting life.

7. Say approximately (i) when these people were born and
(ii) what age they are now

Example: He was born in the ……..
He is in his…… [5]

a. Richard 1930/03
Date (i) ……
Age (ii) ……..
b. Alison 1941/03
Date (i) ……
Age (ii) ……..

8. Write a 'police description' of a person who has been missing for five months: [5]

9. Add an appropriate relative clause to these sentences [5]
a. I eventually found the letter, …, in my jacket pocket.
b. When I came back, I found that my car, … had disappeared.
c. We were all very grateful to Richard, ….
d. At last they managed to repair the telephone, ….
e. I found the pen this morning, ….

10. Rewrite the following sentences beginning 'If there's one thing: [5]
a. People who smoke in restaurants annoy me.
b. People who are cruel to animals upset me.
c. People who break promises make me angry.
d. I hate people who smoke in restaurants
e. I detest people who interrupt when I'm speaking.

11. Explain what the following people had possibly been doing [5]
a. Jack's eyes were all red …….…….
b. Angela was out of breath …….…….
c. Peter was covered in dirt …….…….
d. Shiela felt very cold …….…….
e. Michael couldn't stand up straight …….…….

12. Answer the following questions: (**any five)** [3×5=15]
a. How does the poet know his grandmother's hands and voice? [Grandmother]
b. Why was Anna mentally disturbed at the end of the story? [About Love]
c. Is death meaningful in the poem? [Full Fathom Five Thy Father Lies]
d. How is Karnali economically liked with the lowland regions to the south? [Hurried Trip to Avoid a Bad Star]
e. Why is the poet very sad? [Traveling Through the Dark]
f. Why does the poet spit into the face of time? [The Lamentation of the Old Pensioner]

13. What is the apparent purpose of the speech "I Have a Dream".
OR
How does the story describe the growth of an ordinary boy to an assertive young man? [The Last Voyage of the Ghostship] [10]

The End.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2068

Grade: XII Subject: English F.M.:100
Time: 3 hrs. P.M.: 40

Set 'B'

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt **all** questions

1. Read the following passage and answer the questions that follow: [15]

The voice that came over the intercom of the British airways Jumbo as it cruised at 38,000. It over Southern Sumatra was cool, calm and collected.

"Good evening, ladies and gentlemen," It said. "This is your captain speaking. We …. Er … have a small problem …. All four engines have stopped. We are doing best to get them going again, and we trust you will not be given to much distress". Though the stricken Boeing 747 plunged emthwars at up to 2000 feet a minute the pilot struggled desperately with the controls.

For captain Eric Moody, 28 years a pilot, it was the understatement of the year. The giant jet had just flown into a cloud of volcanic ash, putting all its four rolls-Royce engines out of action. Even as the 41 year-old pilot was fighting his life-or-death battle in the cramped cockpit to regain control of the damaged airliner, and trying to reassure the 239 passengers at the same time, the plane's cabin was filling with ash and smoke. "It was coming out of the air events, "Said Mr. Jerry Middleton, who was on his way from Kuala Lumpur to Perth. I looked through the window to see an engine apparently on fire, then all the engines stopped and we went to steep dive. It seemed to go on for an eternity. Everybody was terrified. By the time we pulled out, everybody was almost on their knees praying.

All the captain told us first was that the aircraft had met will turbulence and that we were not to worry. But the oxygen masks dropped down and the emergency exit signs lit up. We knew that it was more serious.

Questions:

a. How did the passengers know that there was a real emergency?
b. What did the narrator see when he looked out of the window?
c. What did the captain not tell the passengers when the made his announcement?
d. What did the captain tell the passengers?
e. Why is the captain's announcement called the understatement of the year?

2. Rewrite the sentences below using must, can't, may/might. [5]
   a. I'm sure he's not having lunch.
   b. Perhaps he wasn't telling the truth.
   c. I'm convinced he was delayed.
   d. Perhaps he didn't hear you.
   e. It's possible that they're going away.

3. If you were shipwrecked alone on a desert island which five common objects would you want to have with you. Why? [10]

4. Develop the notes below into short paragraph listing the person's experiences and achievements. Begin with the sentence given: [5]
   At 60, Brian considers that he's not had a very exciting life so far,
   Notes: same job (30 years), Never move house, Go abroad once – day trip, Calais 1965, London-three times, never visit night-club.

5. Continue the remarks below with a sentence using (not) used to + ing [5]
   Example: The traffic doesn't wake him up at night…
   Answer: He's used to sleeping in the street.
   a. He's going to find it hard work working on a building site…
   b. She was quite surprised when I gave her some flowers…
   c. I get a bit lonely sometimes, now that she's gone…
   d. It's quite hard work doing all my own washing and cleaning…
   e. Ooh dear. I've got a stomach-ache…

6. Continue the following remarks with **look, sound, smell, feel or taste + like**… [5]
   Example: Surely he's not a manual worker…
   Answer: He looks like a businessman to me.
   a. Are you sure this is tea?...
   b. I wonder who wrote that music…
   c. What's that you're cooking?...
   d. They've got very similar faces…
   e. I've got something in my shoe…

7. Fill the gaps in the sentences below with for, in, until or by. [5]
   a. They got the lunch ready … 12.30.
   b. My father ran a bookshop … two years.
   c. He saved up £200 … Easter.
   d. We did all our housework … a couple of hours.
   e. He stayed in bed … lunch time.

8. Join the following sentences together using a relative clause. [5]
   A. a. Mrs. Aldrich never recovered consciousness
      b. She was married with two children
   B. a. The old house was finally sold.
      b. The family had lived in it for 300 years.
   C. a. Nobody liked the eldest son.
      b. Old lord Banbury had left all his money to him.
   D. a. Harold finally asked her to marry him.
      b. She had always been in love with him.
   E. a. He proudly showed me round his house.
      b. He had paid $ 100,000 for it.

9. Rewrite the sentences beginning "If there's one thing…. [5]
   a. People who smoke in restaurants annoy me
   b. Its after midnight, and the people next door are playing loud music.
   c. I detest people who interrupt when I'm speaking.
   d. Someone's just spat in the street. I'm offended.
   e. People who break promises make me angry.

10. Write a letter to a newspaper saying how you feel about growing use of computers in our daily lives. [10]

11. Report the following remarks beginning **He told me . . .** [5]
   a. I'll tell her when I see her.
   b. I've been sleeping very badly.
   c. Thrice of petrol's going to up.
   d. I wasn't telling the truth.
   e. I have had my car serviced.

12. Answer any **five** questions [3×5=15]
   a. How does the speaker recognize his grandmother? [Grandmother]
   b. What is the central idea of the poem? [God's Grandeur]
   c. Why is death meaningful in the poem "Full Fathom Five Thy Father Lies"?
   d. Why were the people processing "Silajit" in the forest not in "Sinja"? [Hurried Trip to Avoid a Bad Star]
   e. Why did the poet become so sad in the poem "Traveling Through the Dark"?
   f. Why is the poet expressing sorrow in the poem "The Lamentation of the Old Pensioner"?

13. Summarize the story about love. [About Love] [10]

OR

Give a description of the outing as Thomas would describe it. [A story]

The End.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam - 2069

Grade: XII Subject: Accountancy F.M.: 100
Time: 3:00 hrs. P.M.: 40

Set-A

Attempt all questions:

1. Write the meaning of cost accounting and explain in short any two objectives of cost accounting. [2+2=4]

2. What do you mean by classification of cost according to control? Explain in brief. [4]

3. Briefly explain any four objectives of materials control. [4]

4. Write about allocation and apportionment of overhead. [2+2=4]

5. Give the meaning of Financial Statement Analysis and mention any two objectives of its. [3+1=4]

6. The trial balance of a trader, at the end of Chaitra, was as under:

Debit	Rs.	Credit	Rs.
Purchases	3,50,000	Sales	6,00,000
Opening stock	1,30,000	Bank loan	50,000
Wages	20,000	Reserve	10,000
Building	1,00,000	Creditors	30,000
Plant	1,20,000	Commission	10,000
Debtors	1,00,000	P/L app. account	50,000
Interim dividend	4,000	Capital	2,00,000
Bills receivable	45,000		
Insurance	21,000		
Salaries	50,000		
	9,40,000		**9,40,000**

Additional information:
(i) Outstanding wages Rs.5,000
(ii) Write off bad debts 1,000
(iii) Prepaid insurance Rs. 2,000
(iv) Proposed dividend @ of 10%.

Required: Adjustments entries and work sheet. [2+ 8=10]

7. Following balances have been extracted from the books of Co. Ltd. on 31st.Chaitra :

Particulars	Rs.	Particulars	Rs.
Stock opening	98,000	Sales	11,00,000
Purchases	8,00,000	Creditors	30,000
Bank charges	10,000	Profit & Loss A/C	80,000
General Expenses	5,000	General reserve	7,000
Cash	26,000	Share Capital	1,50,000
Machinery	2,00,000	Rent Received	5,000
Discount	2,000	10% debentures	50,000
Wages	1,20,000	Provision for tax for	
10% Investment	1,00,000	last year	20,000
Salaries	45,000		
Carriage	20,000		
Debtors	7,000		
Tax paid for last year	5,000		
Repairs	2,000		
Interest on Debentures	2,000		
	14,42,000		14,42,000

Additional information :
a. The closing stock was valued at Rs.2,00,000.
b. Wages outstanding Rs.2,000 and pre-paid salary Rs.5,000 .
c. Write off bad debts @ 10%.
d. Depreciation on machinery @10%.
e. Provision for income tax made @50%
f. Proposed dividend @ of 10% per annum.

Required:
(i) Trading Account
(ii) Profit and Loss Account
(iii) Profit and Loss Appropriation Account
(iv) Balance Sheet [3+5+2+5=15]

8. From the following particulars are given:
July 1: Opening balance 500 units of Rs.10 per unit
July7: Received 400 units of Rs.11 per unit
July10: Issued 800 units
July15: Return from departments 50 units
July22: Received 200 units @ Rs.12 per unit
July25: Return to vendor 10 units
July28: Stock verification found surplus 10 units

Required : Store ledger under FIFO method. [5]

9. The following are the details of receipt and issues of materials:

Magh 1	Opening stock 400 units @ Rs.50 each
Magh 4	Purchased 300 units @ Rs.55 each
Magh 9	Issued 400 units
Magh 10	Purchased 300 units @ Rs.60 each
Magh 14	Returned to vendors 50 units
Magh17	Issued 400 units
Magh22	Returned to store 20 units
Magh28	Stock verification shortage 10 units

Required: Store ledger under LIFO method. [5]

10. The working hours of a worker for a week is as under:

Monday	10 hours	Thursday	11 hours
Tuesday	12 hours	Friday	9 hours
Wednesday	15 hours		

Additional information:

Normal working hour per day 10 hours
Normal wage rate Rs. 100 per hour
Overtime rate 90% of normal rate

Required: Total wages of the worker for one week. [5]

11. The following information is given:

Re-order quantity : 1,500 units
Maximum usage : 400 units
Normal usage : 300 units
Minimum reorder period: 2 days
Average reorder period : 4 days

Required: Average stock level [5]

12. Following are the information relating to a firm:

Annual requirement = 64,000 units
Cost per unit = Rs.350
Carrying Cost per unit = 10% per unit cost (Excluding insurance Rs.5)
Ordering cost per order = Rs.50

Required: (i) Economic order quantity (ii) No. of orders per year
(iii) Total cost at EOQ. [3+1+1=5]

13. The beginning and ending balances of a manufacturing company for a month are as under:

	Beginning	**Ending**
Raw material	Rs.50,000	Rs.60,000
Work-in-progress	Rs.5,000	Rs.2,000
Finished goods	1,000 units	

The information available from the cost records for the month ended was as follows:

Material purchased	1,00,000	Drawing Office Salary	6,000
Rent	10,000	Carriage Inwards	5,000
General Charges	5,000	Repair to Plants & Tools	10,000
Manager's Salary	15,000	Wages	60,000
Gas & Water Factory	2,000	Depreciation on Plants	4,000
Directors Fees	7,000	Dep. on Furniture	1,000

Selling & distribution overhead Rs. 5 per unit sold and profit 20% on sales.
Units produced 20,000
Unit sold 19,000

Required: Statement of cost sheet and profit per unit [10]

14. Following was the details of cost and profit for 4,000 units with produced and sold during 2068:

Raw material	Rs. 40,000
Wages	Rs. 20,000
Factory overheads	Rs. 10,000
Office overheads	Rs. 8,000
Selling overheads	Rs. 6,000

Profit 20% on selling price

The manufacturer decided to produce 1,000 units during 2069. It is estimated that-

(a) The cost of raw material will be increased by 10%.
(b) Office overheads are 60% is variable and 40% is fixed.
(c) Selling overhead per unit will be reduce Rs.0.50
(d) The rate of profit will remain the same.

Required: (a) Cost sheet [3]
(b) Tender sheet [7]

15. The net profit of a company for the year was Rs.20,000 as shown by the Cost Account.

(i) Factory Overhead charged in financial Account Rs.20,000 and cost Account Rs.15,000.

(ii) Interest received Rs. 2,000.

(iii) Depreciation charged in Financial Account Rs. 15,000 but in Cost Account Rs. 19,000.

(iv) Income Tax Paid Rs. 10,000.

(v) Closing stocks over valuation in Financial Account Rs.6,000

Required: Reconciliation statement. [5]

16. The Balance sheet of A Co. Ltd as on 31st Chaitra, 2068 is as under:

Liabilities	Rs.	Assets	Rs.
Share capital	2,00,000	Fixed Assets	2,00,000
Retained earning	1,50,000	Investment	1,23,000
10% debenture	70,000	Sundry Debtors	1,00,000
Sundry creditors	30,000	Inventory	50,000
Overdraft	20,000	Preliminary expenses	7,000
Outstanding expenses	10,000		
Total	**4,80,000**		**4,80,000**

Additional information:

(a) Fixed Assets turnover ratio 3

(b) Gross profit Rs.60,000

Required: (i) Sales amount (ii) Current ratio **(**iii) Quick ratio (iv) Debt-equity ratio (v) Gross Profit ratio [5]

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam - 2069

Grade: XII Subject: Accountancy F.M.: 100

Time: 3:00 hrs. P.M.: 40

Set-B

Attempt all questions:

1. Give any four difference between financial and cost account. [4]
2. Write the meaning of piece wages system and write in brief any three advantage of its. [2+2=4]
3. Write about Fixed and variable cost with exempla. [2+2=4]
4. What do you mean by classification of overheads according to function? Explain in brief. [4]
5. Give the meaning of Financial Statement write in brief any two limitation of its. [2+2=4]
6. The trial balance of Trading Co. Ltd. on Chaitra 31 is as follows :

Dr.			Cr.
Particulars	**Amount**	**Particulars**	**Amount**
Land and building	1,00,000	Sales	5,00,000
10% Investment	50,000	Return	2,000
Dividend paid for last year	5,000	Interest on investment	2,500
Rent	10,000	10% Debenture	30,000
Sundry expenses	1,000	General Reserve	10,000
Bad debts	1,000	Creditors	20,000
Carriage Outwards	1,500	Provision for Tax (last year)	5,000
Commission	500	Provision for Bad debts	2,000
Royalties	2,000	Dividend	2,500
Cash in hand	10,000	Share Capital	1,50,000
Debtors	20,000		
Bills Receivable	5,000		
Opening Stock	40,000		
Purchases	3,60,000		
Returns	5,000		
Wages and Salaries	20,000		
Power and Fuel	4,000		
Salaries and Wages	15,000		
Insurance	5,000		
Interest on debentures	2,000		
Furniture	67,000		
	7,24,000		7,24,000

Additional Informations:

(a) The stock was valued at Rs. 2,00,000.
(b) Outstanding salaries and wages Rs. 2,000.
(c) Depreciation on furniture @ 20%.
(d) Provision for tax @ 50%.
(e) Final dividend @ 10% and Rs.5,000 transfer to general reserve.
(f) Write of bad debts @10%

Required:

(i) Trading Account
(ii) Profit and Loss Account.
(iii) Profit and Loss Appropriation
(iv) Balance Sheet. [3+5+2+5=15]

7. The Trail Balance of a company as on 31st Chaitra, last year is given below:

Particulars	Debit (Rs.)	Credit (Rs.)
Machinery	1,00,000	
Purchases	2,50,000	
Creditors		60,000
Rent received		20,000
Share capital		1,00,000
Cash at bank	40,000	
Debtors	14,000	
Insurance	6,000	
Profit & Loss account		30,000
Sales		3,10,000
Wages	17,000	
Salaries	50,000	
Sundry expenses	30,000	
Interest	9,000	
Director fees	4,000	
Total	**5,20,000**	**5,20,000**

Additional Information:

a) Outstanding salary Rs.1,000
b) Depreciation on machinery @ 10%
c) Pre – paid insurance Rs.1,000.
d) The directors proposed a dividend @ 10% per annum.

Required: Adjustment entries & work sheet [2+8=10]

8. From the following particulars are given:

July 1:	Opening balance 1,000 units of Rs.2 per unit
July7:	Received 1,500 units of Rs.3 per unit
July10:	Issued 2,000 units
July15:	Return from departments 100 units
July22:	Received 2,000 units @ Rs.1.50 per unit
July25:	Return to vendor 200 units
July28:	Stock verification found surplus 100 units

Required : Store ledger under LIFO method. [5]

9. The following are the details of receipt and issues of materials:

Magh 1	Opening stock 500 units @ Rs.5 each
Magh 4	Purchased 400 units @ Rs.6 each
Magh 9	Issued 700 units
Magh 10	Purchased 300 units @ Rs.7 each
Magh 14	Returned to vendors 50 units
Magh17	Issued 400 units
Magh22	Returned to store 20 units
Magh28	Stock verification shortage 10 units

Required: Store ledger under FIFO method. [5]

10. Following are the information relating to a firm:

Annual requirement = 36,000 units
Cost per unit = Rs. 1
Carrying Cost per unit = 10% of per unit cost (Excluding insurance)
Ordering cost per order = Rs. 25
Insurance per unit = Rs. 0.10

Required:
(i) Economic order quantity (ii) No. of orders per year
(iii) Total cost at EOQ. [3+1+1=5]

11. Following information are given:

Re-order quantity 1,200 units
Re-order period 3 to 5 days
Maximum consumption 400 units per day
Normal consumption 300 units per day

Required: (a) Maximum stock level (b) Minimum stock level
(c) Average stock level [2+2+1=5]

12. The working hours worked by worker in last week was 50 hours and he earned Rs. 1000. The wage rate in coming week will be decreased by 25% and planned to earn more by 20% in coming week.

Required: Necessary working hours for earning 20% more in coming week. [5]

13. Following was the details of cost and profit for 500 units with produced and sold during 2068:

Raw material	Rs. 50,000
Wages	Rs. 25,000
Factory overheads	Rs. 12,000
Office overheads	Rs. 17,400
Selling and distribution expenses	Rs. 2,000
Profit 20% on selling price	

The manufacturer decided to produce 200 units during 2069. It is estimated that-
(a) The cost of wages will be increased by 10%.
(b) Factory overheads are 50% is variable and 50% is fixed.
(c) Selling overhead per unit will be reduce by 50%
(d) The rate of profit will remain the same.

Required:
(a) Cost sheet [3]
(b) Tender sheet [7]

14. The beginning and ending balances of a manufacturing company for a month are as under:

	Beginning	**Ending**
Raw material	Rs.1,00,000	Rs.80,000
Work-in-progress	Rs.15,000	Rs.20,000
Finished goods	2,000 units	

The information available from the cost records for the month ended was as follows:

Material purchased	90,000	Direct expenses	20,000
Rent	10,000	Carriage Inwards	10,000
General Charges	5,000	Repair to Plants & Tools	5,000
Salary	15,000	Wages	60,000
Indirect materials	2,000	Depreciation on Plants	4,000
Directors Fees	7,000	Dep. Delivery Van	1,000

Other selling & distribution overhead Rs. 2 per unit sold and profit 20% on sales.
Units produced 24,000
Unit sold 25,000

Required: Statement of cost sheet and selling price per unit [8+2=10]

15. The net loss of a company for the year was Rs.50,000 as shown by the Cost Account.
   (i) Factory Overhead charged in financial Account Rs.2,000 and cost Account Rs.5,000.
   (ii) Interest received Rs. 1,000.
   (iii) Depreciation charged in Financial Account Rs. 5,000 but in Cost Account Rs. 9,000.
   (iv) Income Tax Paid Rs. 10,000.
   (v) Closing stocks charged in Financial Account Rs.10,000 but in cost account Rs.7,000.

   Required: Reconciliation statement. [5]

16. The Balance sheet of A Co. Ltd as on 31st Chaitra, 2068 is as under:

Liabilities	Rs.	Assets	Rs.
Share capital	2,00,000	Fixed Assets	2,30,000
Retained earning	1,50,000	Investment	1,23,000
10% debenture	1,00,000	Sundry Debtors	1,00,000
Sundry creditors	30,000	Inventory	50,000
Overdraft	20,000	Preliminary expenses	7,000
Outstanding expenses	10,000		
Total	5,10,000		5,10,000

Additional information:
   (a) Inventory turnover ratio 10
   (b) Net profit Rs.50,000

Required: (i) Sales amount (ii) Current ratio **(**iii) Quick ratio
(iv) Debt to total capital ratio (v) Net Profit ratio [5]

.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam-2069

Grade: XII | Subject: Business Mathematics | F.M.: 100
Time: 3 hrs | P.M.: 40

Set A

Candidates are required to give their answers in their own words as far as possible. The figures in the margin indicate full marks.

Attempt all questions:

GROUP A **[10 × 2 × 3 = 60]**

1. (a) Rewrite: $-5 < x < -2$ in absolute value form.
   (b) If $x - iy = \frac{2 - 3i}{2 + 3i}$, prove that: $x^2 + y^2 = 1$.

2. (a) In a market survey of 600 consumers of tea it was found that 300 purchased Mechi tea, 250 purchased Muna tea and 150 purchased both brands. How many purchased neither of them?
   (b) Let A = {1, 2, 3}. Find the relation in A × A satisfying the condition $x>y$ for all $(x, y) \in A \times A$. Find the domain of the relation.

3. (a) In an arithmetic sequence, the 4^{th} and the 15^{th} terms are 11 and 44 respectively. Find the first term and the common difference.
   (b) Find the sum of the series 3 + 33 + 333 + 3333 + …… to n terms.

4. (a) If $A = \begin{bmatrix} 1 & 2 \\ 3 & 1 \end{bmatrix}$, show that $A^2 - 2A - 5I = 0$, where I and 0 are identity and null matrices of order 2×2 respectively.
   (b) If $A = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$, $B = \begin{pmatrix} 1 & 0 \\ 2 & -3 \end{pmatrix}$ and $C = \begin{pmatrix} 1 & -1 \\ 0 & 1 \end{pmatrix}$, verify that: A (BC) = (AB)C

5. (a) Find the equation of the straight line through the point (2,3) and making equal intercepts on the axes.
   (b) Show that the triangle formed by joining the co-ordinates of the two points (4, 3) and (5, 0) with the origin is an isosceles triangle.

6. (a) Find the equation of a straight line passing through the point of intersection of the line $3x + y = 6$ and $x - y = 2$ and the point (- 1, 3).
   (b) Evaluate: $\lim_{x \to 0} \frac{\sqrt{3 + x^2} - \sqrt{3 - x^2}}{x^2}$

7. (a) $\lim_{x \to \infty} \frac{6x^2 + 5x - 8}{8x^2 + 9x + 3}$
   (b) Find $\frac{dy}{dx}$ if $y = \sqrt{ax^2 + bx + c}$

8. (a) Find $\frac{dy}{dx}$ if $y = \frac{1}{\sqrt{x + a} - \sqrt{x - b}}$
   (b) Find $\frac{dy}{dx}$ if $x = t^2 - 1$, $y = t^4 - 1$

9. (a) If four quantities a, b, c and d are such that a:b = 3:4, b:c = 6:7 and c:d = 8:9, then find the ratio between a and d, and also the continued ratio.
   (b) X, Y and Z are partners in a business and invest Rs. 40,000, Rs. 50,000 and Rs. 60,000 respectively. Divide a profit of Rs. 30,000 among them in proportion of their investments.

10. (a) Determine the exchange rate between England and Germany assuming that £1 = 123.27 grains of gold $\frac{11}{12}$ fine and 10 Marks = 61.4 grains of gold $\frac{9}{10}$ fine.
    (b) A bill of Rs. 5,050 drawn for 6 months is discounted in the bank at 4%p.a.How much does the holder of the bill receive from the bank?

GROUP B [8 × 5 = 40]

11. The sum of three numbers in G.P. is 14 and their product is 64. Find the numbers.

12. Prove that: $\begin{vmatrix} 1 & x & yz \\ 1 & y & zx \\ 1 & z & xy \end{vmatrix} = (x - y)(y - z)(z - x)$

13. Examine the continuity of the following function at the point x = 5.

$$f(x) = \begin{cases} \dfrac{x^2 - 25}{x - 5} & \text{when } x \neq 5 \\ 10 & \text{when } x = 5 \end{cases}$$

14. Find from first principle, the differential coefficients of: $2x^2+3x+1$.

15. 20 men can do a piece of work in 24 days. After working for 6 days an additional number of men is taken to finish the work in 21 days from the beginning. Find the number of additional men.

16. Dharma, Marma and Karma enter into a partnership. Dharma invests Rs. 25,000 for the whole year, Marma investing Rs. 32,000 at first and then increasing it to Rs.40,000 at the end of 5 months while Karma invests Rs. 40,000 at first but withdraws Rs. 5,000 at the end of 8 months. How should they divide a profit of Rs. 61,500 at the end of the year?

17. A student going to Australia for study changed his entire amount Rs. 44992 into Australian dollars at the rate of 1 Australian dollar = Rs. 56.24. He spent 400 Australian dollars in Australia. On returning to Nepal he changed the amount left with him and got Rs. 22600, find the new rate of exchange between Nepal and Australia.

18. The difference between the true and the banker's discount on a certain bill due three months hence is Rs. 18. The rate of interest being 12%, find
(i) True discount (ii) Amount of the bill.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam-2069

Grade: XII | Subject: Business Mathematics | F.M.: 100
Time: 3 hrs | P.M.: 40

Set B

Candidates are required to give their answers in their own words as far as possible. The figures in the margin indicate full marks.

Attempt all questions:

GROUP A **[10 × 2 × 3 = 60]**

1. (a) If $-14 < 3x - 8 < -2$, prove that $-2 < x < 2$.
   (b) Find the conjugate of: $\frac{8 + 6i}{5 - 12i}$.

2. (a) If A = {a, b, c, d, e}; B = {a, c, e, g}; C = {b, e f, g}, prove that $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
   (b) If $f(x) = x + |x|$, find f (2), f (–5/2) and f (–2).

3. (a) A firm produced 1000 radio sets during its first year. The total number of radio sets produced at the end of 10 years is 14,500. Assume that the production increases uniformly each year. Estimate the increase in production each year.
   (b) The sum of a series in geometric progression having common ratio 3 is 728 and the last term is 486. Find the first term.

4. (a) If $A = \begin{bmatrix} 2 & 0 & -1 \\ 3 & -1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -5 & 2 \\ -1 & 2 & -4 \end{bmatrix}$, find $A^T B$.
   (b) Show that: $\begin{vmatrix} b-c & b+c & b \\ c-a & c+a & c \\ a-b & a+b & a \end{vmatrix} = 0$

5. (a) Show that the points A (1, 2), B (3, 4) and C(- 3, - 2) are collinear.
   (b) If the points (–2, –1), (1, 0), (x, 3) and (1, y) represent the vertices of a parallelogram. Find the values of x and y.

6. (a) Find the equation to the straight line passing through the point (3, –4) and cutting off intercepts, equal but of opposite signs, from the axes.
   (b) Evaluate: $\lim_{x \to 0} \frac{\sqrt{x+4} - 2}{x}$

7. (a) Evaluate: $\lim_{x \to \infty} \sqrt{x}\left(\sqrt{x+1} - \sqrt{x}\right)$
   (b) Find $\frac{dy}{dx}$ if $y = z^3 + 2z + 1, \quad x = z^2 + 2$

8. (a) Find $\frac{dy}{dx}$ if $y = \frac{1}{x + \sqrt{a^2 + x^2}}$
   (b) Find $\frac{dy}{dx}$ when $ax^2 + 2hxy + by^2 = 0$

9. (a) A road 300 meter long was constructed by 45 men in 27 days working 8 hours a day. How many men will be required to construct one kilometer of the same road in 20 days if they work 9 hours a day?
   (b) Mani and Bijaya invested Rs. 60,000 and Rs. 36,000 in a firm. They agreed to receive 10% interest on their capital out of the annual profits and the remaining profits are shared in the ratio of their capitals. If Mani receives a total amount of Rs. 16,500, find Bijaya's share.

10. (a) If the exchange between London and Paris is £1 for 14.28 Francs, between Paris and New York 100 Francs for $15, between New York and Calcutta $1 for Rs. 63, between Calcutta and Moscow Rs. 650 for 100 roubles. Calculate the arbitrary rate of exchange between London and Moscow?

(b) A banker discounts a bill which has 25 days to run before it is legally due at $5\frac{1}{16}\%$ p.a. This discount amounts to Rs. 20.25. For what sum was the bill drawn?

GROUP B [8 × 5 = 40]

11. Three numbers are in the ratio 1:2:3. If 2, 4 and 11 are added to them respectively, the resulting numbers are in G.P. Find the original three numbers.

12. Solve the following equation using Cramer's rule:
$x + y - 2z = -3$; $2x - 7z = -19$; $x + y - z = 0$

13. Examine the continuity of the function:

$$f(x) = \begin{cases} \dfrac{x^2 - 4x}{x - 4} & x \neq 4 \\ 3 & x = 4 \end{cases} \text{ at } x = 4$$

14. Find, from the first principles the differential coefficient of $\dfrac{1}{\sqrt{2x + 3}}$.

15. If the railway carriage for 840 kg for a distance of 40 km is Rs. 210. What will be the charge for conveying 950kg for 120 km, calculating half rate for the last 40 km?

16. A started business with a capital of Rs. 7,000 in the beginning of the year. After 4 months, he admitted B with a capital of Rs. 6,000; after 6 months they admitted C with a capital of Rs. 8,000. If the profit at the end of the year amounts to Rs. 15,000, find their profits individually.

17. A merchant in America owes Rs. 36,570 to a merchant in Kathmandu. If the exchange in Kathmandu is at the rate of Rs. 71.00 per dollar while the exchange in London is at the rate of £24 = $45 and the exchange between London and Kathmandu is £4 = Rs. 795. Find how much the merchant will gain or loss by remitting through London instead of direct.

18. If the banker's discount of Rs. 28000 at 3.5% p.a. be equal to the true discount on Rs. 28735 for the same time at the same rate, when are the sums due?

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Business Studies F.M.:100
Time: 3 hrs. P.M.: 40

Set 'B'

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group 'A' (Short answer questions)

Attempt any **eight** questions:

1. What is middle level management? Distinguish between management & administration. [2+6]
2. Explain the major functions of management in brief. [8]
3. Define management and justify management as a profession. [8]
4. What is meant by scientific management? Explain the principles of scientific management. [2+6]
5. Explain the principles of delegation of authority. [8]
6. Explain the steps involved in planning process. [8]
7. Define organization and explain its importance. [2+6]
8. What is decentralization of authority? Explain the factors affecting decentralization of authority. [2+6]
9. Define decision making. Explain the importance of decision making in the organization. [2+6]
10. Explain the types of plan & types of managerial decision. [4+4]

Group 'B' (Long answer questions)

Attempt any **two** question:

11. Describe line organization with its advantages & disadvantages. [4+7+7]
12. Define departmentation and its benefits. Describe various methods of departmentation. [4+4+10]
13. Explain the concept of planning and describe its advantages & disadvantages. [4+8+6]

The End

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Business Studies F.M.:100
Time: 3 hrs. P.M.: 40

Set 'A'

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group 'A' (Short answer questions)

Attempt any **eight** questions:

1. Define management. Explain the characteristics of management. [2+6]
2. Explain the levels of management and mention the functions of each level. [2+6]
3. Justify management as Science and Art. [8]
4. Define bureaucratic organization. Explain the principles of bureaucratic theory. [2+6]
5. Explain the characteristics of planning. [8]
6. What is departmentation? Explain any four methods of departmentation. [2+6]
7. What is centralization of authority? Differentiate between decentralization and delegation of authority. [2+6]
8. Explain the procedures of planning. [8]
9. Define decision making. Explain the steps in decision making process. [2+6]
10. Explain the steps involved in organizing process. [8]

Group 'B' (Long answer questions)

Attempt any **two** questions:

11. Describe the principles of management contributed by Henry Fayol. [18]
12. Describe line and staff organization with its advantages & disadvantages. [4+7+7]
13. Describe the concept of delegation of authority, responsibility and accountability. Explain the factors affection decentralization. [12+6]

The End

GLOBAL COLLEGE OF MANAGEMENT

Firs Term Exam - 2069

Grade: XII Subject: Computer Science FM: 75
Time: 3:00 hrs PM: 30

(SET I)

Group A

Attempt all questions: [4×10=40]

1. a. Draw a flowchart and C program to find the middle one among three numbers.
   b. Define conditional operator. Write a program to find out the greatest between two numbers using conditional operator.
2. a. What is looping? Write a C program to display the series 1 4 7 10…..n up to n^{th} term.
   b. Write flowchart and C program to calculate factorial of given number.
3. What is an array? Write a program to reorder the given set of numbers in ascending order.
4. What is string? Write a program to count the number of vowels, consonants, white space and digits from a line of text.

Group B

Attempt any **seven** questions [7×5=35]

5. List various types of operators used in C language.
6. Who is System Analyst? Explain the characteristics and the responsibility of a good System Analyst.
7. What is prototype? Explain the prototype model of SDLC.
8. Define DB and DBMS. List the advantages of database system over flat file system.
9. Differentiate between centralized and distributed database systems.
10. Define computer network. Explain various types of network on the basis of size.
11. What is network architecture? Differentiate between client server and peer to peer network architecture.
12. Write short notes on:
    - Repeater
    - Primary Key and Foreign Key

The End

GLOBAL COLLEGE OF MANAGEMENT

Firs Term Exam - 2069

Grade: XII Subject: Computer Science FM: 75
Time: 3:00 hrs PM: 30

(SET II)

Group A

Attempt all questions: [4×10=40]

1. a. Draw a flowchart and C program to find greatest and smallest among three numbers.
   b. Define logical operator. Write a program to check the given number is divisible by 5 and not divisible by 10.
2. a. Differentiate between break and continue statement with respective examples.
   b. Write flowchart and C program to check the given number is prime or not.
3. Write advantages and disadvantages of array. Write a program to find the greatest and the smallest among given set of numbers.
4. What is table of strings? Write a program to reorder the given set of strings in ascending order.

Group B

Attempt any **seven** questions [7×5=35]

5. What is type casting? Explain implicit and explicit type casting with respective example.
6. What is feasibility study? Explain the importance of different levels of feasibility studies.
7. What is spiral model? Explain the spiral model of SDLC.
8. What is normalization? States the laws of first, second and third normal forms with respective examples.
9. Define data security and data integrity. Explain the different types of integrity constraints with respective examples.
10. What is network topology? Explain various types of network topologies.
11. What is transmission media? Explain various types of guided and unguided media.
12. Write short notes on:
    - Router
    - Data Dictionary

The End

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam -2069

Grade: XII | Subject: Economics | F.M.: 100
Time: 3 hrs | P.M.: 40

Set A

Candidates are required to give their answers in their own words as far as possible. The figures in the margin indicate full marks.

Attempt all questions:

GROUP A

1) What do you mean by shift in supply curve? Explain factors causing the shift in supply curve. [4+6]

2) Define price elasticity of demand. How price elasticity of demand is measured through total outlay method? Explain. [2+8]

3) Explain law of substitution. [10]

4) Critically examine optimum theory of population. [10]

5) Define TP_L, AP_L and MP_L. Explain relationship between TP_L, AP_L and MP_L under short run. [3+7]

6) What is TR, AR and MR? Derive AR and MR from TR under perfect competition. [3+7]

7) Short answer questions (**Any Six**) [6×5=30]
   a) E xplain about interaction between market demand and market supply.
   b) E xplain about income elasticity of demand.
   c) W hat are criticisms of concept of consumer's surplus? Explain.
   d) D iscuss about characteristics of capital.
   e) E xplain features of partnership organisation.
   f) D efine concept of returns to scale. Explain features of increasing returns to scale.
   g) E xplain relationship between short run average cost curves and marginal cost curves.
   h) E xplain features of monopoly market.

8) Very Short answer questions. Answer all [5×2=10]
   a) D efine market economy.
   b) W hat is cross elasticity of demand?
   c) D efine concept of consumer's surplus.
   d) S tate factors affecting efficiency of labour.
   e) D istinguish firm and industry.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam-2069

Grade: XII | Subject: Economics | F.M.: 100
Time: 3 hrs | P.M.: 40

Set B

Candidates are required to give their answers in their own words as far as possible. The figures in the margin indicate full marks.

Attempt all questions:

GROUP A

1) What do you mean by shift in demand curve? Explain factors causing the shift in demand curve. [4+6]

2) What is price elasticity of demand? Explain various degrees of price elasticity of demand [2+8]

3) Define total utility and marginal utility. Explain law of diminishing marginal utility. [2+8]

4) Critically examine Malthusian theory of population. [10]

5) Explain law of variable proportion. [10]

6) What is TR, AR and MR? Derive AR and MR from TR under perfect competition. [3+7]

7) Short answer questions (**Any Six**) [6×5=30]
   a) E
   xplain features of market economy.
   b) E
   xplain about cross elasticity of demand.
   c) W
   hat are importance of concept of consumer's surplus? Explain.
   d) W
   hat do you know about meaning of capital formation? Explain process of capital formation.
   e) D
   iscuss about features of Joint Stock Company.
   f) D
   efine concept of returns to scale. Explain features of decreasing returns to scale.
   g) D
   erive all short run total cost curves.
   h) E
   xplain features of perfect competition market.

8) Very Short answer questions. Answer all [5×2=10]
   a) D
   istinguish between desire and demand.
   b) W
   hat is income elasticity of demand?
   c) S
   tate assumptions of concept of consumer's surplus.
   d) W
   hat are merits of division of labour?
   e) W
   hat is meaning of equilibrium?

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Hotel Management F.M.: 75
Time: 3 hrs. P.M.: 30

Set 'A'

1. Write (T) for true and (F) for false. [5×1=5]
   a) Spring cleaning is done once every month.
   b) In 5 star hotels, beds are made by using 3 bed sheets.
   c) Florist deal with various floors.
   d) Poaching is cooking in stock.
   e) Hops are used for providing aroma in the wine.

2. Tick the correct answer: [5×1=5]
   a) MoMos are prepared by which method:
      i) poaching ii) stewing iii) boiling iv) steaming
   b) Which at these is not a mode of reservation.
      i) Internet ii) telephone iii) voucher iv) fax
   c) steaks are prepared by which method:
      i) roasting ii) grilling iii) frying iv) praching
   d) Bldet is installed within a
      i) bedroom ii) bathroom iii) kitchen iv) laundry
   e) Evening turn down service is given to
      i) vacant room ii) departure room iii) occupied roo iv) DND room

3. Mathch the phrase by putting correct alphabet. [5×1=5]

1	Cancellation	1	Chance guest
2	Lobby	2	Safe-deposit
3	Wake-up call	3	Telephone
4	Locker	4	Bell desk
5	FIT	5	Reservation

4. Short questions: Attempt any six. [6×5=30]
   a) Explain different types of room rate and the basis of charging.
   b) List any ten types of cleaning equipment and explain their uses.
   c) Show the difference between tufted and woven carpet.
   d) Write down cooking process of boiling.
   e) Define cooking and write their Aims and objectives.
   f) Write down the difference between traveler cheque and voucher.
   g) Define floor and write down their types.
   h) Write down the cleaning procedure of mopping.

5. Long questions: Attempt any three. [3×10=30]
   a) Discuss the step by step procedure of cleaning occupied room.
   b) What do you understand by the term metal surface? What are the various types at method found in a hotel and their cleaning methods?
   c) Write a confirmation letter of MS Jessica in New York of 10 double for No. 7-10th 2012 but regret for 6 doubles at Nov 21 – 24th 2012.
   d) Define reservation. Explain purpose and procedure of reservation.
   e) What are the various steps involved in cleaning an occupied room. Explain the steps in sequence.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Hotel Management F.M.: 75
Time: 3 hrs. P.M.: 30

Set 'B'

1. Attempts any three questions: [3×10=30]
   a) Write a various steps involved in cleaning occupied room.
   b) Define Reservation. Explain Factor affecting of Reservation.
   c) Define cooking and write down the cooking process of boiling & poaching.
   d) What are the modes of payment used in hotel?

2. Attempts any six questions: [6×5=30]
   a) Write down posting procedure of V.T.L.
   b) What are woven & tufted carpet? Explain.
   c) What are the important points to be considered while shampooing carpet?
   d) What are the aim & objective of cooking?
   e) Write down the cooking process of stewing.
   f) Define kitchen and write down the equipment used in kitchen.
   g) write a letter to Golden Gate Travels in Nepal regretting, yet aftering alternatives for 10 double room from 0ct 5th - 15th 2012
   h) Define reservation & write purpose of Reservation.

3. Tick the correct answer: [5×1=5]
   a) All the request for reservation is first entered into
      i) Guest folio ii) Hotel Diary iii) Reservation slip iv) none
   b) Travelers cheque should be converted into
      i) Us Doller ii) Pound sterling iii) Euro doller iv) Local currency
   c) Simmering in done while making
      j) Salad ii) Roast iii) Stock iv) Egg
   d) Au bleu is a French term reters to cook meat in method of
      i) roasting ii) Frying iii) Baking iv) Grilling
   e) Brass is an alloy of
      i) Steel & brass ii) Copper & zine
      iii) copper & Iron iv) None of the above

4. Write short note [5×1=5]
   a) Bast b) Canape c) Crouton d) Bidet e) Faucet

5. Write full form: [0.5×10=5]
   a) ARR b) BOD c) CEO d) EMT e) FC
   f) GNS g) POS h) B&B (plate) i) HRD j) VAT

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XI Subject: Hotel Management F.M.: 75
Time: 3 hrs. P.M.: 30

Set 'A'

1. Write full form [10×0.5=5]
   a. BOD b. ARR c. EMT d. EDR e. GIT
   f. GRE g. MOCTCA h. TIA i. WTO j. HOD

2. Tick the correct answer: [5×1=5]
   a. Mechanical cleaning equipment is
      i) Hoover ii) Brush iii) MOP iv) Duster
   b. Thick Fabric used for furniture decore is
      i) Liner ii) Uniform iii) Upholstery iv) None
   c. Which of these is not located at the Front desk.
      i) Reception ii) F.O. Cashier
      iii) information iv) Telephone operator
   d. Safe deposit boxes are handled & controlled by
      i) F.O cashier ii) Reservation clerk
      iii) House keeper iv) Bell boys
   e. Lobby is also termed on
      i) concierge ii) Facsimile iii) Fexer iv) None

3. Write True & False [5×1=5]
   a. Resort hotels are city hotel.
   b. The term scanty baggage referred to guest with huge luggage at low value.
   c. Standard check-out time of houseguest is 10:00 am.
   d. A master key opens all the guest room of the hotel.
   e. Lost & found section also handles valuable at the guest.

4. Short questions: Attempt any six. [6×5=30]
   a) Write job responsibility of receptionist.
   b) Explain the minor department in hotel.
   c) What are the Check-In procedure.
   d) Explain term control desk and par stock.
   e) Write down the lost and found procedure.
   f) What are the importances of organization chart.
   g) Draw the organization chart of housekeeping department.
   h) Define registration and write their activities.

5. Long questions: Attempt any three. [3×10=30]
   a) Draw the organization chart of large hotel and explain their major section.
   b) Define hotel and classified the hotel according to location.
   c) Define housekeeping and explain their sections.
   d) Write down the job responsibility of Front Office manager.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XI Subject: Hotel Management F.M.: 75
Time: 3 hrs. P.M.: 30

Set 'B'

1. Write Full form [10×0.5=5]

a. MAP b. OJT c. FOM d. NATTA e. EMT
f. CRS g. OOO h. HOD i. EHK j.YMCA

2 Tick the correct [5×1=5]

a. Locating the guest within the hotel premises is termed on.
i) Briefing ii) Braising iii) Paging iv) Vacuuming
b. A Room that is taken, occupied and paid for but not slept is known as
i) stay over ii) sleep on iii) stay on iv) slept out
c. A five star hotel must have
i) Attached baths ii) shopping Centre
iii) conference Centre iv) all the above
d. A hotel may be categorized on medium hotel if it has
i) 25-100 room ii) 101-300 rooms
iii) 50-100 rooms iv) none at the above
e. A guest comment form is filled up by
i) all gusts ii) group only
iii) Vip guest only iv) in house guest only

3. Write True & false [5×1=5]

a. Control desk supervisor handles and controls guest room keys.
b. Florist is a person dealing with various guest floors.
c. Dam asks is a type at liner used in hotel.
d. Guest check out is done by F.O Cashier.
e. Information section maintains rooms keys.

4. Short questions: Attempt any six. [6×5=30]

a) Draw the organization chart of F.O. department and write job responsibility of night auditor.
b) Write down the job responsibility of room maid.
c) What are the attributes of housekeeping staff?
d) What are the control stages of housekeeping linen?
e) Define room and write types of room.
f) Define sundry service and write their types.
g) Explain the housekeeping section.
h) Write down the difference between motel and resort.

5. Long questions: Attempt any three. [3×10=30]

a) Define F.O. & explain their section.
b) Draw the organization chart of housekeeping and write short brief of their section.
c) Write down the check-in and check-out procedure.
d) Explain the major and minor department in hotels.

GLOBAL COLLEGE OF MANAGEMENT

Firs Term Exam - 2069

Grade: XII Subject: Marketing FM: 80
Time: 3:00 hrs PM: 32

GROUP-A

Brief Answer Questions
Attempt **ALL** the questions: [10×1=10]

1. Define marketing.
2. What are 4Ps?
3. Identify any three characteristics of Nepalese market.
4. Point out any two strengths and two weaknesses of air transport.
5. What is marketing environment?
6. Point out any four reasons for branding a product by the marketer.
7. What is the difference between quantity discount and trade discount?
8. Point out any two functions of marketing
9. What is sales promotion
10. State the components of macro environment.

GROUP-B

Short Answer Questions
Attempt any **FIVE** questions: [5×8=40]

11. Why marketing important to firm and society? Explain. [8]
12. What are the differences between selling concept and marketing concept? [8]
13. What is water transport? Why is it important to a landlocked country like Nepal? Explain briefly. [3+5]
14. Differentiate consumer products from industrial products. [4+4]
15. Explain the 6 buying motives. [8]
16. Describe the evolution of marketing after industrialization stage. [8]

GROUP-C

Comprehensive Answer Questions
Attempt any TWO questions [2×15=30]

17. Explain all facilitating functions in details.
18. What are the ingredients of marketing mix? Explain
19. Describe the product concepts with examples.

GLOBAL COLLEGE OF MANAGEMENT

Firs Term Exam - 2069

Grade: XII Subject: Marketing FM: 80
Time: 3:00 hrs PM: 32

GROUP-A

Brief Answer Questions
Attempt **ALL** the questions: [10×1=10]

1. Define marketing.
2. What are 4Ps?
3. Identify any three characteristics of Nepalese market.
4. Point out any two strengths and two weaknesses of air transport.
5. What is marketing environment?
6. Point out any four reasons for branding a product by the marketer.
7. What is the difference between quantity discount and trade discount?
8. Point out any two functions of marketing
9. What is sales promotion
10. State the components of macro environment.

GROUP-B

Short Answer Questions
Attempt any **FIVE** questions: [5×8=40]

11. Why marketing important to firm and society? Explain. [8]
12. What are the differences between selling concept and marketing concept? [8]
13. What is water transport? Why is it important to a landlocked country like Nepal? Explain briefly. [3+5]
14. Differentiate consumer products from industrial products. [4+4]
15. Explain the 6 buying motives. [8]
16. Describe the evolution of marketing after industrialization stage. [8]

GROUP-C

Comprehensive Answer Questions
Attempt any TWO questions [2×15=30]

17. Explain all facilitating functions in details.
18. What are the ingredients of marketing mix? Explain
19. Describe the product concepts with examples.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Basic Mathematics F.M.: 100
Time: 3 hrs. P.M.: 40

Set A

Attempt all the questions:

Group A [5×3×2]

1. a) In how many ways can a student choose 5 courses out of 9 courses, if 2 courses are compulsory for every student?
   b) Find the middle term in the expansion of $\left(x - \frac{1}{2y}\right)^{12}$.
   c) $1 + \frac{1+2}{2!} + \frac{1+2+3}{3!} + \frac{1+2+3+4}{4!} + \ldots$

2. a) Find the center, vertices, eccentricity and foci of the ellipse $3x^2 + 2y^2 = 18$.
   b) Find the equation of hyperbola in standard position satisfying the following conditions:
      foci at (± 3, 0) and eccentricity = 3/2.
   c) Find the ratio in which the point (1, 3, 2) divides the join of (–1, –1, –1) and (5, 11, 8).

3. a) Find the intercepts made by the plane $2x + 3y + 4z = 24$ on the coordinate axes.
   b) Prove that the points $2\vec{i} + \vec{j} - \vec{k}$, $3\vec{i} - 2\vec{j} + \vec{k}$ and $\vec{i} + 4\vec{j} - 3\vec{k}$ are collinear.
   c) If $\vec{a} = -2\vec{i} + 3\vec{j} + 4\vec{k}$, $\vec{b} = 3\vec{i} - 6\vec{k}$ and $\vec{c} = 2\vec{i} + \vec{k}$, show that $\vec{a} \times \vec{b} = -9\vec{c}$.

4. a) Find the derivative of $x^{\cosh^{-1}\frac{x}{a}}$.
   b) Evaluate $\int \sqrt{3 - 4x - 4x^2}\ dx$.
   c) Evaluate $\int \frac{dx}{1 - 3\cosh^2 x}$.

5. a) Solve $\frac{dy}{dx} = \frac{y}{x} + \tan\frac{y}{x}$.
   b) Solve $\frac{dy}{dx} = e^{x+y} + 3x^2 e^y$.
   c) Find the binomial distribution when mean = 16 and standard deviation = $2\sqrt{3}$.

Group B [5 × 2 × 2]

6. a) Prove that the number of permutations of n distinct objects taken r objects at a time is given by
   $$P(n, r) = n(n-1)(n-2)\ldots(n-r+1) = \frac{n!}{(n-r)!} \quad (n \geq r)$$
   b) Find the sum of the infinite series: $\frac{1.2}{1!} + \frac{2.3}{2!} + \frac{3.4}{3!} + \ldots$

7. a) Find the area of the triangle formed by the lines joining the vertex of the parabola $y^2 = 12x$ to the ends of its latus rectum.
   b) Find the equation of a plane which passes through the origin and is perpendicular to each of the planes $x + 2y + 2z = 0$ and $2x + y - 2z = 0$.

8. a) Prove using vectors that a parallelogram whose diagonals are equal is a rectangle.
   b) Find the angle of intersection of the curves:
      $x^2 + y^2 = 5$ and $y^2 = 4x$.

9. a) Evaluate $\int \frac{x}{x^4 - x^2 - 2}\ dx$.
   b) Solve $(1 - x^2)\frac{dy}{dx} - xy = 1$.

10. a) Two cards are drawn one by one from a well-shuffled ordinary deck of 52 cards. Find the probability that they are both aces. If the first card is (i) replaced (ii) not replaced.
    b) Ten unbiased coins are tossed simultaneously. Find the probability of obtaining (i) at least 8 heads (ii) Not more than 3 heads.

Group C [5 × 6]

11. Expand $\frac{1}{\sqrt{1+2x}}$ up to four terms. Prove that

$$1-\frac{1}{4}+\frac{1.3}{4.8}-\frac{1.3.5}{4.8.12}+\ldots=\sqrt{\frac{2}{3}}.$$

12. Define a conic section. Derive the equation a tangent to a parabola $y^2 = 4ax$ at a point (x_0, y_0) on the parabola.

13. Write the direction cosines of the line joining two points $P(x_1, y_1, z_1)$ and $Q(x_2, y_2, z_2)$. Find the direction cosines of two lines which are connected by the relations:

$2l + 2m - n = 0$, $mn + nl + lm = 0$.

14. Define the vector product of two vectors. Using vector method, prove that

$$\frac{a}{\sin A}=\frac{b}{\sin B}=\frac{c}{\sin C}.$$

15. i) Verify that the function $f(x) = x(x - 3)^2$ on $[0, 3]$ satisfies conditions of Rolle's theorem and find c prescribed in the theorem.

ii) Evaluate $\lim_{x\to 0}\frac{\tan x-\sin x}{x-\sin x}$.

GLOBAL COLLEGE OF MANAGEMENT

First Term Exam – 2069

Grade: XII Subject: Basic Mathematics F.M.: 100

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Set 'B'

Attempt all the questions:

Group A [5×3×2]

1. a) Eight boys are participating in a race. In how many ways can the first three prizes be won?

   b) $\frac{1}{1.3}+\frac{1}{2.5}+\frac{1}{3.7}+\frac{1}{4.9}+\ldots = 2(1-\ln 2)$.

   c) Find the constant term in the expansion of $\left(\frac{4x^2}{3}-\frac{3}{2x}\right)^9$.

2. a) Find the centre, vertices, eccentricity and foci of the ellipse $5x^2 + 9y^2 = 45$.

   b) Find the equation of hyperbola in standard position satisfying the given condition:
   Vertices at $(0, \pm 7)$, $e = 4/3$.

   c) Find the equation of sphere whose centre is (1, 2, –3) and radius is 4.

3. a) Reduce the equation $4x + 12y - 6z - 28 = 0$ of the plane to the normal form.

   b) Prove that the points $\vec{i} - 2\vec{j} + 3\vec{k}$, $2\vec{i} + 3\vec{j} - 4\vec{k}$ and $-7\vec{j} + 10\vec{k}$ are collinear.

   c) Find the projection of vector $\vec{a} = \vec{i} - 2\vec{j} + \vec{k}$ on the vector $\vec{b} = 4\vec{i} - 4\vec{j} + 7\vec{k}$.

4. a) Find the derivative of $(\sinh x)^{\cosh^{-1}x}$.

   b) Evaluate: $\int \frac{3x-6}{\sqrt{x^2-4x+5}}\,dx$.

   c) Evaluate: $\int \frac{2x-11}{x^2+x-2}\,dx$.

5. a) Solve $\sec^2 x \tan y\,dx + \sec^2 y \tan x\,dy = 0$.

   b) Solve $4\frac{dy}{dx} + 8y = 4e^{-3x}$.

   c) In 8 throws of a die, turning of 1 or 6 is considered to be a success. Find the mean and standard deviation.

Group B [5 × 2 × 2]

6. a) A committee of 5 is to be formed out of 6 gents and 4 ladies. In how many ways can this be done when at least two ladies are included?

   b) Find the sum of the infinite series: $1 + \frac{2^2}{2!} + \frac{3^2}{3!} + \frac{4^2}{4!} + \ldots$

7. a) Prove that the line $x - 4y + 28 = 0$ is a tangent to the parabola $y^2 = 7x$.

   b) Prove that the general equation $ax + by + cz + d = 0$ represents a plane.

8. a) If $\vec{a} = 2\vec{i} - 3\vec{j} + \vec{k}$, $\vec{b} = 3\vec{i} + 7\vec{j} - 2\vec{k}$ and $\vec{c} = -\vec{i} + 5\vec{j} + 2\vec{k}$, verify that $\vec{a} \times (\vec{b} + \vec{c}) = \vec{a} \times \vec{b} + \vec{a} \times \vec{c}$.

   b) Find the angle of intersection of the curves:
   $y = 4 - x^2$ and $y = x^2$.

9. a) Evaluate $\int \frac{dx}{5 + 4\sin x}$.

   b) Solve $x^2dy + y(x + y)\,dx = 0$.

10. a) A company produces electronics chips by a process that normally average 20% defective products. A sample of four chips is selected at random and the parts are tested for certain characteristics, what is the probability that (i) no chip is defective, (ii) one chip is defective, (iii) more than one chip are defective.

b) The mean and variance of binomial distribution are 6 and 3. Find (i) $P(x = 0)$ (ii) $P(x = 1)$ (iii) $P(x \geq 2)$.

Group C [5 × 6]

11. Expand $(1 - 3x)^{-2/3}$ up to four term. Prove that

$$1 + \frac{7}{18} + \frac{7.9}{18.36} + \frac{7.9.11}{18.36.54} + \ldots = \left(\frac{9}{8}\right)^{7/2}$$

12. What is a parabola? Derive the equation of a parabola in standard form.

13.i) Given two points $P(x_1, y_1, z_1)$ and $Q(x_2, y_2, z_2)$ and a line with the direction cosines l, m and n, what is the projection of PQ on the line?

ii) Find the direction cosines of two lines which are connected by the relations $4l + 3m - 2n = 0$, $lm - mn + nl = 0$.

14. Prove using vectors that

i) The median to the base of an isosceles triangle is perpendicular to the base.

ii) $\cos(A + B) = \cos A \cos B - \sin A \sin B$.

15.i) Verify that the functions $f(x) = e^{1-x^2}$ on $[-1, 1]$ satisfies conditions of Rolle's theorem and find c prescribed in the theorem.

ii) Evaluate: $\lim_{x \to 0} \frac{\ln x}{\cot x}$.