Course Title: Mathematics II   Full Marks: 40
Code No: CAMT154   Pass Marks: 16
Semester: Second   Time: 2 hours

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

Group B

Attempt any four questions: [4×5=20]

2. If a function $f(x)$ is defined as

$$f(x) = \begin{cases} x + 3 & if\ x \geq 2 \\ x^2 + 1 & if\ x < 2 \end{cases} \text{ at } x = 2$$

   Discus the continuity of the function at $x = 2$

3. Find the derivative of $f(x) = 3x + 5$ by using definition.

4. Using L-Hospital's rule evaluate

   $$\lim_{x \to 0} \frac{e^x - 1}{\sin x}$$

5. Find maximum and minimum values of $f(x) = 2x^3 + 15x^2 + 36x + 10$

6. Evaluate

   a). $\int_0^1 (2x - x^3)dx$ b). $\int x \cdot e^{2x}\ dx$

Group C

Attempt any one questions: [1×10=10]

7. Using Trapezoidal rule, compute $\int_0^1 \frac{dx}{1+x^2}$, $n = 2$

8. State the Rolle's Theorem and verify it for the function,

   $f(x) = x^2 - 2$ in $-3 \leq x \leq 3$

Best of Luck

Tribhuvan University
Faculty of Humanities and Social Sciences
Bachelor in Computer Application
Mahendra Multiple Campus Nepalgunj

First Terminal Examination
2024 (2081 BS)

Course Title: C Programming
Code No: CACS151
Semester: Second

Full Marks: 40
Pass Marks: 16
Time: 2 hours

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

Group B

Attempt any four questions: [4×5=20]

2. Differentiate between iteration and recursion.
3. Explain the structure of C program with suitable example program.
4. Explain different types of repetitive statement with syntax and example.
5. Write a program to display the following pattern.

```
1
1     2
1     2     3
1     2     3     4
1     2     3     4     5
```

6. Write a program to check whether the number is palindrome or not.
7. What is program development life cycle? Explain the phases of program development life cycle.

Group C

Attempt any one questions: [1×10=10]

8. Write a program to perform following:
   a) Sorting the elements of 1D array.
   b) Searching an item in an array.
9. Write a program to read two M*N matrices and display their sum.

Best of Luck

Tribhuvan University
Faculty of Humanities and Social Sciences
Bachelor in Computer Application
Mahendra Multiple Campus Nepalgunj

<u>First Terminal Examination</u>
2024 (2081 BS)

Course Title: English II
Code No: CAEN153
Semester: Second

Full Marks: 40
Pass Marks: 16
Time: 2 hours

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

Group B

Attempt any four questions: [4×5=20]

2. What future condition of the world does the writer present in the story "Who Can Replace a Man " by Brian W. Aldiss?

3. Explain the phrase "critical thinking."

4. Prepare a memo on the behalf of Tribhuvan University Central Office to its all the constituent campuses to conduct all types of examinations in more disciplined and academic way strictly following the academic calendar.

5. Explain shortly the three rules of good writing.

6. What is the relation between argument, reasoning and conclusion? Give a short example.

Group C

Attempt any one questions: [1×10=10]

7. Suppose you are the managing director of a book distributor in Kathmandu Nepal. Write an email to Cambridge Publication New Delhi India expressing your desire to distribute the new Nepali- English- Nepali Cambridge dictionary in Nepal.

Write a sample Meeting Minute for Mahendra Multiple Campus Nepalgunj, Department of BCA Program regarding the agenda on commencement of new classes in the first semester, and distribution of prizes to the top five students of the recent previous batch. Also, make decisions on the agenda discussed.

Best of Luck

Tribhuvan University
Faculty of Humanities and Social Sciences
Bachelor in Computer Application
Mahendra Multiple Campus Nepalgunj

First Terminal Examination
2024 (2081 BS)

Course Title: English II
Code No: CAEN153
Semester: Second

Full Marks: 40
Pass Marks: 16
Time: 2 hours

Name: _____
Roll No: _____

Group A

[10×1=10]

Attempt All the questions

1. Circle (O) the best answer

i. Who is credited for the creation of the first science fiction novel in the history of English literature?
   a. George Orwell   b. H.G. Wells   c. P.B. Shelly   d. Mary Shelly

ii. H.G. Well's story "The Land Ironclads" in which issue of Strand Magazine?
   a. Nov. 1903   b. Dec. 1903   c. June 1903   d. July 1903

iii. The war correspondent was one of those ....people who always want the beaten side to win.
   a. ideal   b. energetic   c. inconsistent   d. vigorous

iv. Tyburn College Museum is related to.......
   a. The Metal Man   b. Burning Chrome   c. lieutenant   d. Billennium

v. Which one of the following science fiction stories talks about futuristic world in which machines are capable of thinking based on the tasks they have been designed to perform in their software?
   a. Burning Chrome   b. Billennium   c. The Metal Man   d. Who Can Replace a Man?

vi. Which of the following is not preferable in oral conversation?
   a. Long speech   b. short speech   c. question   d. KISS

vii. Identify the type of writing in the sentence- "The Meeting commences exactly at 3 O'clock."
   a. clear   b. general   c. pompous   d. technical

viii. The first free email was......
   a. Gmail   b. Hotmail   c. yahoo mail   d. rediff mail

ix. What does DNS stand for?
   a. Direct Network Service   b. Domain Name System
   c. Duel Name Service   d. Direct News Service

x. Which is not an argument indicator?
   a. so   b. hence   c. therefore   d. however

Tribhuvan University
Faculty of Humanities and Social Sciences
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Mahendra Multiple Campus Nepalgunj

First Terminal Examination
2024 (2081 BS)

Course Title: Microprocessor & Computer Architecture   Full Marks: 40
Code No: CACS155   Pass Marks: 16
Semester: Second   Time: 2 hours

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

Group B

Attempt any four questions: [4×5=20]

2. Explain common bus.

3. Explain any five types of addressing modes with example.

4. Explain Vector Processing. A non-pipeline system takes 30 ns to process a task. The same task can be processed in a six-segment pipeline with a clock cycle of 6 ns. Determine the speedup ratio of the pipeline for 93 tasks. What is the maximum speedup that can be achieved?

5. Differentiate between microprogram control and hardwired control.

6. Define instruction pipeline. Explain the four-segment instruction pipeline with example.

Group C

Attempt any one questions: [1×10=10]

7. Draw and explain microprogram sequencer in detail.

8. Write down the following equation in three address, two address, one address instruction and zero address instructions.

    a. $Y = AB + (C/D)$.

Best of Luck

Tribhuvan University
Faculty of Humanities and Social Sciences
Bachelor in Computer Application
Mahendra Multiple Campus Nepalgunj
First Terminal Examination
2024 (2081 BS)

Course Title: Financial Accounting   Full Marks: 40
Code No: CAAC152   Pass Marks: 16
Semester: Second   Time: 2 hours
Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any Four questions: [4×5=20]

2. The following transactions are given:
   i. Sold goods to Shiva: 15,000 ii. Paid rent for the month: 5,000
   iii. Cash withdrawn from the bank: 2,000
   iv. Shiva return goods worth Rs. 2,000 and received cash Rs. 8,000.
   Required: a. Journal Entries. b. Shiva's Account

3. Following sales transactions are abstracted from a book of traders.
   Baishakh 1: Sold to Pashupati traders Rs. 2,50,000.
   Baishakh 2: Sold to Sumnima traders, Lagankhel:
   10 table fan @ Rs. 1,500 each
   20 micro ovens @ Rs. 3,000 each.
   Baishakh 7: Sold to Gorkhali traders, Balaju:
   15 electric irons @ Rs.500 each.
   Trade discount 10%
   Baishakh 17: Sold goods to Swikar traders, putalisadak for cash:
   25 tube lights @ Rs. 100 each.
   Required: (a) Sales book. (b) Sales a/c

4. Transactions related to the furniture are as follows:
   1 January,2001: Purchased furniture Rs. 50,000.
   1 July,2001:Additional furniture purchased Rs. 10,000.
   1 April,2002:Further addition of furniture Rs. 40,000.
   1 January, 2003: Furniture purchased on January 2001, has been disposed for Rs. 35,000.
   Depreciation has been charged @ 10 per annum using straightline method. The accounts are closed on 31" Dec. each year.
   Required: Furniture account from year 2001 to 2003.

5. From the following particulars, prepare the store ledger account showing the pricing of materials issue by adopting the FIFO method.
   2020 Jan 1: Opening stock 1200 units at Rs. 2 each
   Jan 3: Purchased 800 units at Rs. 3 each
   Jan 5: Issued 1300 units
   Jan 12: Purchased 1500 units at Rs.4
   Jan 17: Issued 1600 units
   Jan 20: Purchased 900 units at Rs. 5 each.
   Jan 25: Issued 600 units

6. Define accounting. What are its function.

Sold good incomes

Shiva

Group C

Attempt any one question: [1×10=10]

7. Differentiate between Going concern concept and Business entity concept.

8. Given below is the trial balance of a Trader as on 30 Chaitra 2063.

Particulars	Debit (Rs.)	Credit (Rs.)
Capital		300000
Purchases	400000	
Opening stock	350000	
Purchase return		10,000
Sales		6,90,000
Sales return	10,000	
Carriage outwards	10,000	
Debtors	42,000	
Creditors		30,000
Advertisement expenses paid	4,000	
Discount	2,000	
Insurance expenses	10,000	
Salaries paid	65,000	
10% Bank loan		80,000
Interest on bank loan paid	4,000	
General expenses	20,000	
Wages	40,000	
Carriage inwards	8,000	
Furniture	50,000	
Rent paid	40,000	
Bank and cash balance	55,000	
Total	11,10,000	11,10,000

Additional information:

a. Closing stock Rs. 3,75,000.
b. Bad debts Rs. 2,000.
c. Provide reserve for bad debts 5% of debtors.
d. Advance for salaries Rs. 5,000.
e. Outstanding wages Rs. 2,000.
f. Bank loan was taken at the beginning of the year.
g. Depreciation furniture at 5% p.a.

Required:

Trading account.

Profit and loss account.

Balance sheet as at 30 Chaitra 2063.