



# Tribhuvan University

## Faculty of Humanities and Social Science

### Semester: II

### Subject: Microprocessor and Computer Architecture

### 2019 Batch

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#### Group B

##### Attempt any SIX questions

2. Explain the addressing modes of 8085 with suitable example.
3. Draw the timing diagram for MVI A, 35H and explain in brief.
4. What do you mean by instruction mapping? Explain how to convert an instruction code to a microinstruction address.
5. Define stack. Explain the stack organization.
6. Explain the arithmetic pipeline with example. with example.
7. Explain the following instructions
  - a) LDA 7050H
  - b) CPI 35H
  - c) PUSH B
8. What are the typical characteristics of CISC instruction set architecture? Explain.

#### Group C

##### Attempt any TWO questions.

9. Define the term mnemonics, instruction cycle and machine cycle. There are two tables holding twenty data whose starting address is 3000H and 3020H respectively. Write a program to add the content of first table with the content of second table having same array index. Store sum and carry into the third and fourth table indexing from 3040H and 3060H respectively.
10. For the expression
$$Y = (A + B) * (C + D)$$
Write down the code for one address, two address and three address instruction formats.
11. What is parallel processing? Explain the benefits of parallel processing. Explain the classifications of parallel processing by M. J. Flynn.

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**Tribhuvan University**  
**Faculty of Humanities and Social Science**  
**Semester: II**  
**Subject: Mathematics**  
**2019 Batch**

**Attempt any SIX questions.**

**[6×5 = 30]**

- 2. Evaluate the limit  $\lim_{x \rightarrow 0} \frac{\sin ax + bx}{ax + \sin bx}$
- 3. Find derivative of the function  $f(x) = \frac{1}{\sqrt{x}}$  by using first principle.
- 4. Show that the rectangle of largest possible area for a given perimeter is a square.
5. Evaluate the integral  $\int e^{ax} \cos bx \, dx$ .
6. Find the area bounded by the curve  $y^2 = 4x$  and the line  $y = x$ .
- 7. Use the trapezoidal rule with  $n = 5$  to approximate the integral  $\int_1^2 \frac{1}{x} \, dx$ .
- 8. Solve the linear differential equation:

$$(1 + x^2) \frac{dy}{dx} + 2xy = 4x^2$$

**Group C**

**Attempt any TWO questions.**

**[2×10 = 20]**

9. State Rolle's theorem and Lagrange's mean value theorem with their geometrical interpretation. Verify Rolle's theorem for the function  $f(x) = \sin x$ ,  $x \in [0, \pi]$ . Also find a point in the curve represented by given function where the tangent is parallel to the x-axis.
10. Define true error and percentage error. Write three causes which suggest to stop the process bisection while solving a equation. Solve the following system of equations using Gauss elimination partial pivoting method.  
$$\begin{aligned} 4x_1 + 2x_2 - 3x_3 &= 4 \\ x_1 - x_2 + x_3 &= 0 \\ 2x_1 + 4x_2 + x_3 &= 7 \end{aligned}$$
11. Define Newton-Raphson method, write it's formula and use it to find the solution of the equation  $x^3 + x - 1 = 0$  in the interval  $[0, 1]$  accurate to within  $10^{-4}$ .

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**Tribhuvan University**  
**Faculty of Humanities and Social Science**  
**Semester: II**  
**Subject: English II**  
**2019 Batch**

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**Group B**

**Attempt any SIX questions**

2. Describe the conflict among the machines in the story "Who Can Replace a Man?" What does the story claim by showing the machine obeying human order at the end of the story?
3. What are the points to be considered while making an oral presentation? Explain them in short.
4. As the CEO of Investment Company, write a memo informing all employees to follow social distancing protocol and other precautions in the office to avoid all possible infection of COVID-19.
5. Prepare a textual brochure highlighting the specialties of Lumbini so that the world will know it better.
6. The world is facing a major problem of overpopulation today. Point out the issues of overpopulation the story "Billennium" raises.
7. What is flaw in reasoning? How is an argument flawed? Identify the flaws in the following piece of reasoning:  
A fantastic basketball team could be created if the best player from each of the best teams formed a new club. Basketball would then become an exciting game for fans everywhere.
8. ABC Fiber, a large company with more than 500 employees has followed a flexible policy in the dress code. The employees here can wear the casual dress and yet they are supposed to look professional. For the last few months, the dress code has created some problems, and a discussion is going on about the changing of dress code. You as the president of the company, write an electronic mail to the manager calling a staff meeting to discuss the issue.

**Group C**

**Attempt any TWO questions.**

9. If "The Land Ironclads" presents the war fought with weapons, "Burning Chrome" presents the war fought with the computer keyboard. Compare and contrast between the wars presented in these two stories.
10. Write a report on the popularity of fast food restaurants in the cities in recent years.
11. Write a five paragraph argumentative essay on "Impact and Challenges of COVID-19 Pandemic and the Role of Information Technology on Education."

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**Tribhuvan University**  
**Faculty of Humanities and Social Science**  
**Semester: II**  
**Subject: C programming**  
**2019 Batch**

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**Group B**

**Attempt any SIX questions**

2. What are keywords? Explain the compiling process of C program.
3. Differentiate between iteration and recursion.
4. Define an array? Write a program to generate the following output using loop.

```
1
12
123
1234
12345
```

5. Define operator. Explain any four types of operators available in C?
6. Why function is required in C programming? Write a program to find smallest number from the array using function.
7. Why DMA is used in C language? Write a program to enter age of 20 students and count age between 18 and 25 from the array using DMA functions.
9. Write a C program to generate the following output graphic functions

BCA Program

**Group C**

**Attempt any TWO questions.**

10. What is union? Write a C program to enter bid, title, price, pages of 100 book into structure variable called book and sort them in descending order on the basis of their title with use of pointer.
11. What is the use of data file in C? Write a program to accept 100 numbers from user and store them in odd.txt file (if number is odd) or even.txt (If number is even) then display odd numbers reading from odd.txt file.
12. What do you mean by System design tools? Explain any four design tools with suitable examples.

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**Tribhuvan University**  
**Faculty of Humanities and Social Science**  
**Semester: II**  
**Subject: Financial Accounting**  
**2019 Batch**

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Group B

**Attempt any SIX questions**

2. What are the objectives of accounting?
3. Following cash and banking transactions were given to you.
  - 1, January, Debit balance of cash in hand Rs.10,200 and in bank cash book Rs. 35,500.
  - 7, January, Received a cheque of Rs. 15,000 from Kabi.
  - 12, January Goods purchased at Rs. 15,000 and paid in cash Rs. 4,000 and balance by cheque.
  - 20, January, Cash drawn from bank for office use Rs.8,000.
  - 31, January, Paid salary Rs. 10,000 by cheque and Rs.2,000 office rent in cash.**Required:** Cash book with cash and bank column.
4. Following sales transactions were given to you
  - 1, Falgun, Sold following items to Ale Store Damauli
    - 30 table fans @ Rs.1000 each.
    - 20 ceiling fans @ Rs.1500 each.
  - 15, Falgun sold following items to Gurung Store Kaireni
    - 15 electronic heater @ Rs.1500 each
    - 10 Rice cookers @Rs.1200 each(Trade discount 10 percent)
  - 22, Falgun Sold 10 pressure cookers @ Rs.1500 each on cash to Shrestha Store Dumre.
  - 25, Falgun, Sold following items to Tiwari Store Talchok
    - 20 table fans @ Rs.1000 each with trade discount 5 percent.
    - 10 ceiling fans @ Rs.1000 each on cash.**Required:** Sales book and sales account.
5. A company purchase a machinery at Rs. 1000,000 on 1st January 2017. The expected scrap value will be Rs. 200,000 at the end of its' life. The life of machine is 10 years.  
**Required:** Machinery account from 2017 to 2021.

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6. Nepal Star company is registered at 200,000 equity shares @ Rs.100 each. But the company issued 100,000 shares to public. The money called up Rs.30 on application, Rs.40 on allotment and Rs.20 on final call. The company received application for 95,000 shares and accepted in full. A shareholder Rachana holds 500 shares unpaid money of allotment, final call.

**Required:** Journal entries for share application, allotment and final call.

7. A manufacturing company provides abstracts of material transactions of March.

1, March, Opening balance of materials 800 units @ Rs.10 each.

5, March, Issued 700 units

12, March, Purchased 800, units @ Rs.11 each.

17, March, Purchased 700 units @ Rs.12 each.

18 March, Issued 700 units

22, March, Returns 100 units from work order July, 5.

24, March, Purchased 700 units @ Rs.11.5 per unit.

27, March, Issued 1100 units.

**Required:** Store ledger under FIFO method

8. What are the characteristics of company?

### Group C

**Attempt any TWO questions.**

9. Mr. X started business from Baishak 2077. He had given following information of business for the month.

1, Baishakh Started business in cash Rs. 400,000 and furniture Rs. 50,000.

2, Baishakh Purchased goods on cash Rs. 200,000 and credit Rs. 200,000 from Karki Supplier.

5, Baishakh Opened bank account at Nepal Bank Rs. 100,000.

8, Baishakh Goods sold on cash Rs. 70,000 and on credit to Shrestha Suppliers Rs. 80,000.

12, Baishakh Goods purchased at Rs. 150,000 on credit from Karki supplier.

18, Baishakh Cash received from Shrestha Supplier Rs. 50,000 and discount given Rs. 5,000.

19, Baishakh Goods sold at Rs. 50,000 and payment received by cheque.

20, Baishakh Goods sold to Shrestha Suppliers Rs. 100,000 on credit.

24, Baishakh Cash paid to Karki Supplier at Rs. 150,000 and discount received Rs. 5,000.

26, Baishakh Goods purchased from Nepal Suppliers at Rs. 150,000, partial payment made by cheque Rs. 50,000.

27, Baishakh Depreciate furniture by Rs. 2,000.

28, Baishakh Computer purchased at Rs. 50,000 and paid by cheque.

29, Baishakh Electricity bill Rs. 3,000 and house rent Rs. 10,000 paid by issue of cheques and salary Rs. 7,000 in cash.

**Required:** Journalize the above transactions and prepare ledger account; purchase, sales, Shrestha Suppliers and furniture account.

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10. Following is the trial balance of a Shrestha Store on the year ending December 31, 2021.

Particulars	Dr. Amount	Particulars	Cr. Amount
Office equipment.....	2,000	Capital .....	210,000
Furniture.....	100,000	10% Loan.....	70,000
Debtors .....	90,000	Sales .....	815,000
Purchase.....	540,000	Creditors .....	48,000
Opening stock .....	45,000	Commission .....	5,000
Rent .....	40,000		
Cash in hand and bank ....	25,000		
Drawing.....	8,000		
Salary.....	48,000		
Carriage inward.....	7,000		
Prepaid insurance .....	15,000		
Discount allowed.....	4,000		
Wages.....	23,000		
Sales commission.....	10,000		
Bad debts .....	2,000		
Carriage on sales.....	8,500		
Vehicles .....	180,500		
	1,148,000		1,148,000

**Adjustment:**

Provide depreciation on furniture, 10 percent and vehicle 20 percent.

Prepaid insurance expired Rs.5,000.only.

Advance salary Rs. 10,000.

stock Rs.50,000

Interest on loan is payable

**Required:**

- Trading account
- Profit and loss account
- Balance sheet

11. Explain any five accounting concepts

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