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Tribhuvan University
Faculty of Humanities and Social Science
Semester: II

Subject: Microprocessor and Computer Architecture
2018 Batch

Group B

Attempt any SIX questions

2. Define CPU, Differentiate between Microprocessor and Microcontroller with example.
3. Define instruction cycle. Explain the opcode fetch machine cycle for MOV A, B with timing diagram. (Opcode: MOV A, B = 78h)
4. Write an ALP using 8085 to check number stored in memory location 8080h is either even or odd.
5. What is cache memory? Explain the elements of cache design.
6. Explain the organization of Microprogrammed Control Unit.
7. What is pipeline? Explain the four segment instruction pipeline.
8. Write short notes on (any two):
 - a) Accumulator
 - b) 8085 Interrupts
 - c) Structure of Hard Disk

Group C

Attempt any TWO questions.

9. Define instruction set. Classify the instructions available in 8085 with example.
10. Define the addressing mode. Explain the various instruction addressing modes with example.
11. Define micro-program? Describe symbolic micro-program for instruction FETCH routine. Explain the organization of micro-program sequencer for control memory with suitable diagram.

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Tribhuvan University
Faculty of Humanities and Social Science
Semester: II
Subject: Mathematics II
2018 Batch

Group B

2. Write expansions for $\log(1+x)$ and e^x and use the expansion e^x to prove $\lim_{x \rightarrow 0} \frac{e^x - 1}{x} = 1$.
3. Find derivative of $\sqrt{2x-3}$ using definition.
4. Show that the rectangle of largest possible area for a given perimeter 'P' is a square.
5. Evaluate the integral, $\int (3 \sin x - 4)^2 \cos x dx$
6. Solve the differential equation $\frac{dy}{dx} = \frac{x^2 + y^2}{2x^2}$.
7. Evaluate the limit, $\lim_{x \rightarrow \theta} \frac{x \cos \theta - \theta \cos x}{x - \theta}$.
8. Using Newton-Raphson's method to find the square root of 153 correct to three places of decimals.

Group C

Attempt any TWO questions.

[2×10 = 20]

9. Using simplex method find the optimal solution of the following linear programming problem

maximize, $z = 2x_1 + 12x_2 + 8x_3$

subject to $2x_1 - 2x_2 + x_3 \leq 100$

$$x_1 - 2x_2 + 5x_3 \leq 80$$

$$10x_1 + 5x_2 + 4x_3 \leq 80, \quad x_1, x_2, x_3 \geq 0$$

10. a) State Mean value theorem and interpret it geometrically.
b) Find the intervals in which the function $f(x) = x^3 - 3x^2 + 5$ concave upwards and concave downward.
11. a) Find the area bounded by the parabola $y^2 = 4x$ and y axis between the points $y = 0$ to $y = 2$.

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Tribhuvan University
Faculty of Humanities and Social Science
Semester: II
Subject: English II
2018 Batch

Group B

Attempt any SIX questions

2. How do you distinguish hard science fiction from Space Opera? Explain on the basis of texts you have read.
3. How does the writer present the picture of dystopia in the story 'Billenium'?
4. How do flaws appear in reasoning? Do they deceive the readers? How?
5. What skills of language use are discussed in 'two skills in the use of language'? Explain them in brief.
6. Using the method of rational decision making process that you have learned in this course, answer the question, should female criminals who have children be exempted from imprisonment?
7. Define communication? What are some of the barriers of communication?
8. Think of a job that you really like. Then, write a job application for the post.

Group C

Attempt any TWO questions.

9. Write an essay on a tourist destination that you think is specially beautiful, historic or significant. In the essay, specifically mention the location, ways to reach there, and unique experience tourists are likely to experience upon the visit.
10. You work in the Public Relation Department of Nepal Bank Ltd. Prepare a press release to announce the moving of your bank to new location.
11. Who do you think is superior- 'man' or 'machine'? Argue on the basis of Brian W. Aldiss' story 'But Who Can Replace Man?'.

OR

How has William Gibson presented the dystopian elements of future crime, ambition, love, and loss in the story 'Burning Chrome'? What does this story tell about human obsession with technology?

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Tribhuvan University
Faculty of Humanities and Social Science
Semester: II
Subject: C programming
2018 Batch

Group B

Attempt any SIX questions

2. What is computer programming? Differentiate between top down and bottom up approach of programming.
3. What is the purpose of size of operator? Write a C program to swap the value of two integers without using third variable.
4. Write a program in C to find all possible roots of quadratic equation $ax^2 + bx + c = 0$.
5. Why an array is required in programming? Write a C program to input age of 30 employees into array and find out second largest age from array.
6. What is recursive function? Write C program to generate the Fibonacci series up to 13th term I using recursive function.
7. What is the advantage of pointer? Write a C program to store 10 integers into memory and find out minimum and maximum using dynamic memory allocation (DMA).
8. What is the use of `initgraph()` in C program? Write a program to draw line and circle and rectangle using graphic function.

Group C

Attempt any TWO questions.

9. What is structure? Write a C program to enter id, name and address of 25 structure variable called employee and sort them in ascending order on the basis with use of pointer.
10. Is break keyword mandatory in switch statement? Write a program to calculate arithmetic operations (+, -, *, /) using switch case statement.
11. What do you mean by Software Development Life Cycle? Explain waterfall m advantage and disadvantage.

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Tribhuvan University
Faculty of Humanities and Social Science
Semester: II
Subject: Financial Accounting
2018 Batch

Group B

Attempt any SIX questions

2. Following cash and banking transactions were given to you.

1, December, Balance of cash in hand Rs. 6,200 and at bank Rs. 25,500.
9, December, Received a cheque of Rs. 5,000 from Pravin.
15, December, Goods purchased at Rs. 12,000 and paid in cash 4,000 and balance by Cheque.
22, December, Cash drawn from bank for office use Rs. 8,000.
31, December, Paid salary Rs. 7,000 by cheque and Rs. 3,000 office rent in cash.

Required: Cash book with a cash and bank column.

3. Following sales transactions were given to you:

1. Chaitra Sold following items to Gurung Store, Pokhara
20 table fans @ Rs. 1,500 each.
10 ceiling fans Rs. 1,000 each.
10, Chaitra Sold following items to Saru Brothers, Damauli
15 pressure cookers Rs. 1,000 each.
10 rice cookers Rs. 800 each.
(Trade discount 10 percent)
18, Chaitra Sold 13 pressure cookers Rs. 900 each on cash to Shrestha Store, Gorkha
25, Chaitra Sold following items to Puri Store, Parbat.
25 table fans Rs. 1,500 each with trade discount 5 percent.
10 ceiling fans Rs. 1,000 each.

Required: Sales book and sales account.

4. A company purchase a machinery at Rs. 5,00,000 on 1st January 2015. The company charged 10 percent depreciation under diminishing method. The machine has found unsuitable and sold at Rs. 2,40,000 on 1st July 2017. On the same date another machinery of costing Rs. 7,50,000 was purchased and charged 10 percent depreciation under diminishing depreciation method on 31st Dec. each year

Required: Machinery account from 2015 to 2017.

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5. Nepal Supply company is registered at 2,00,000 equity shares @ Rs. 100 each. But the company issued 1,00,000 shares to publics. The money called up Rs. 50 on application, Rs. 25 on allotment and Rs.20 on first and final call. The company received application for 90,000 shares and accepted in full. A shareholder Rina holds 200 shares unpaid money of first and final call.

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

6. A manufacturing company provides abstracts of material transactions of July.

- 1, July, Opening balance of materials 1,000 units @ Rs.10 each.
- 5, July, Issued 700 units
- 12, July, Purchased 800, units @ Rs.11 each.
- 18 July, Issued 700 units
- 22, July, Returns 50 units from work order July, 5.
- 24, July, Purchased 700 units @ Rs.12 per unit.

Required: Store ledger under LIFO method

7. What are the features of company? Explain.
8. Describe matching and periodic concepts of accounting with example.

Group C

Attempt any TWO questions.

9. Mr. Raj started business from Baishakh 2075. He had given following information of business for the month.

- 1, Baishakh, started business in cash Rs. 3,00,000 and computer Rs. 50,000.
- 3, Baishakh, Purchased goods on cash Rs. 1,00,000 and credit Rs. 1,00,000 from Thapa supplier.
- 4, Baishakh, Opened bank account at Prime Commercial Bank Rs. 90,000.
- 5, Baishakh, goods sold on cash Rs. 50,000 and on credit to Shrestha Rs. 30,000.
- 10 Baishakh, Goods purchased at Rs. 50,000 on credit from Thapa supplier.
- 15, Baishakh, Cash received from Shrestha Rs. 28,500 as full settlements.
- 22, Baishakh, Cash paid to Thapa supplier Rs. 98,000 and discount received Rs.2000.
- 24, Baishakh, Goods purchased from Nepal suppliers at Rs. 50,000, partial payment made by Cheque Rs. 20,000.
- 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: Journalized the above transactions and prepared ledger account of purchase, and Thapa supplier.

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10. Following is the trial balance of a Tharu Store on the year ending December, 31, 2018.

Particulars	Dr. Rs.	Particulars	Cr. Rs.
Furniture	1,22,000	Capital	2,88,000
Debtors	90,000	Sales	8,15,000
Purchase	5,20,000	Creditors	40,000
Opening stock	50,000	Discount received	5,000
Rent	36,000		
Cash in hand and bank	29,000		
Drawing	3,000		
Salary	48,000		
Carriage inward	7,000		
Prepaid insurance	15,000		
Discount allowed	4,000		
Wages	23,000		
Commission to salesmen	12,000		
Bad debts	2,000		
Carriage on sales	3,500		
Vehicle	1,83,500		
	11,48,000		11,48,000

Adjustment

- Provide depreciation on furniture, 10% and vehicle 20%
- Prepaid insurance expired Rs. 10,000 only.
- Outstanding salary Rs. 12,000.
- Closing stock Rs. 40,000

Required:

- Trading account
- Profit and loss account
- Balance sheet

11. Define accounting. Explain scopes of accounting and its functions.

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