

Full Marks: 60
Pass Marks: 24
Time: 3 hours

Symbol No:

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

Group A

[10×1 = 10]

Circle (O) the correct answer.

- Which of the following doesn't require an & for the input in scanf()?
a) char name[10]; b) int name[10];
c) float name[10]; d) double name[10];
- What is the memory size of float data type in C?
a) 4 Bytes b) 8 Bytes
c) Depends on the system/compiler d) Cannot be determined.
- What will be the output of the following C code?

```
#include<stdio.h>  
int main()  
{  
    int x = 3,y;  
    y = (++x) + (x++);  
    printf("%d",y);  
    return 0;  
}
```


a) 6 b) 8 c) 7 d) 9
- Which keyword is used to come out of a loop only for that iteration?
a) break b) continue c) return d) void
- Bitwise operators can operate upon?
a) Double and chars b) floats and doubles
c) int and floats d) int and chars
- In C, if you pass an array as an argument to a function, what actually gets passed?
a) Value of elements in an array. b) First element in an array.
c) The address of first element in an array. d) The address of last element in an array.
- Which operator is used to access the members of structure using structure variable?
a) Address operator (&) b) Dot operator (.)
c) Pointer operator (*) d) Arrow operator (→)
- Which function is used to record input from file?
a) ftell() b) fwrite() c) fprintf() d) fread()
- Which of the following is a keyword used for a storage class?

a) printf

b) goto

c) external

d) break

10. What will be the size of following union declaration?

union test

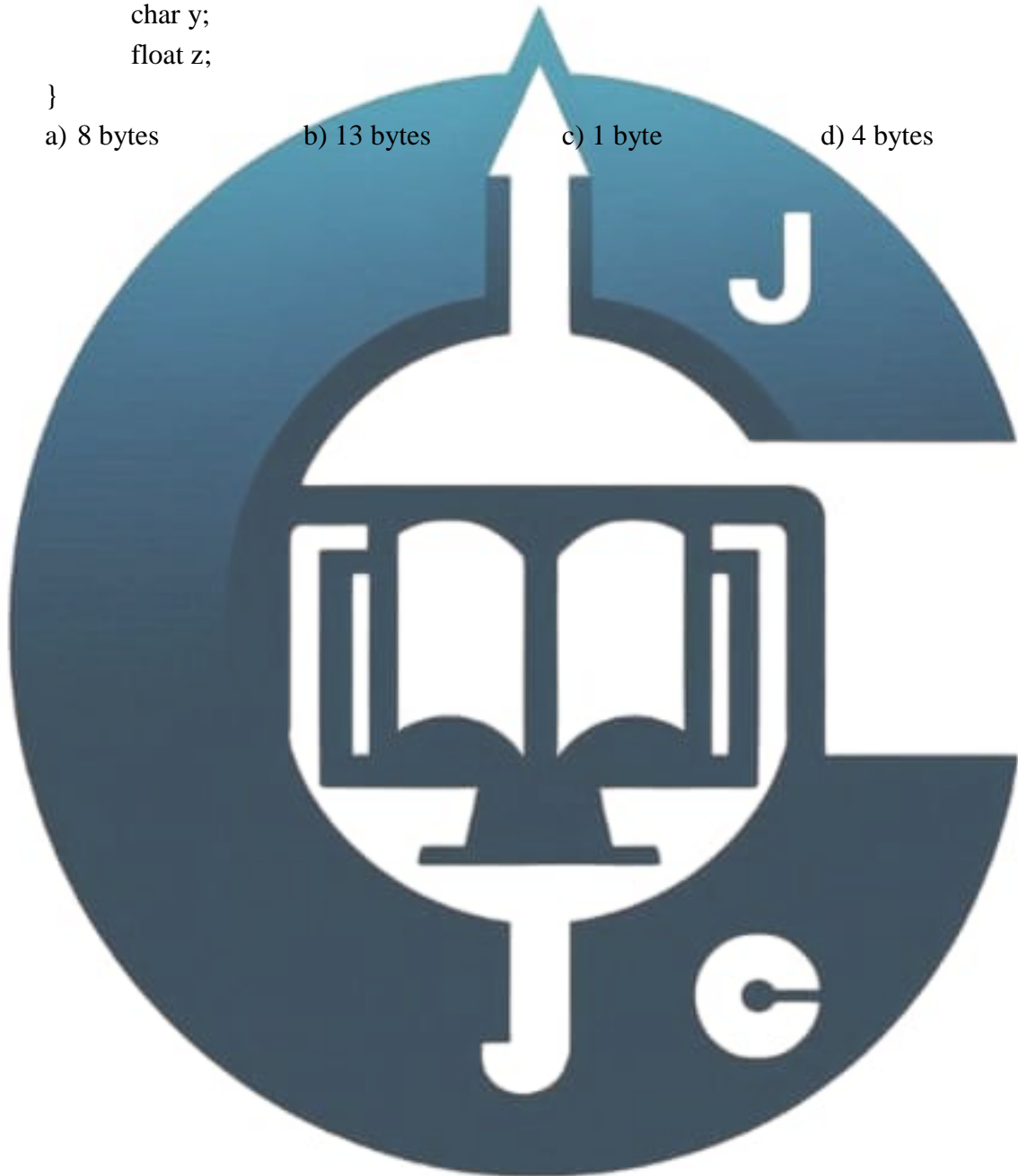
```
{  
    int x;  
    char y;  
    float z;  
}
```

a) 8 bytes

b) 13 bytes

c) 1 byte

d) 4 bytes





Tribhuvan University
Faculty of Humanities & Social Sciences
OFFICE OF THE DEAN
2018

Bachelor in Computer Applications
Course Title: C-Programming
Code No: CACS 151
Semester: II

Full Marks: 60
Pass Marks: 24
Time: 3 hours

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

Group B

Attempt any SIX questions.

[6×5 = 30]

11. What is software process model? Differentiate between cohesion and coupling in programming. [1+4]
12. Define keyword and identifiers. Explain rules for defining valid identifiers. [2+3]
13. List the operators used in C on the basis of utility. Explain the concept of bitwise operator. [2+3]
14. Differentiate between while loop and do while loop. Write a C program to find input number is prime or composite. [2+3]
15. What is DMA? Write a program to find the largest and smallest number in a list of N number using DMA. [1+4]
16. What is difference between binary file and text file? Write a C program to write some text "Welcome to BCA program" in a file test.text. [2+3]
17. Explain any four graphics functions in C. Write a program to draw two concentric circles with center (50, 50) and radii 75 and 125. [2+3]

Group-C

Attempt any two questions

[2×10=20]

18. What is one dimensional array? How it is initialized? Write a C program to find the sum of two matrix of order m×n. [1+1+8]
19. Define structure and union? Write a C program using structure that reads the records of 35 students with members roll, name, address and makes and display the record of students who have obtained greater than 250 marks. [2+8]
20. What is function? List its advantages. Explain the concept of function call by value and function call by reference with example. [1+2+7]



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2018

Bachelor in Computer Applications
Course Title: English II
Code No: CAEN 153
Semester: II

Full Marks: 60
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Time: 3 hours

Centre:

Symbol No:

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

Group A

Attempt all the questions.

[10×1 = 10]

Circle (O) the correct answer.

13. The world of science fiction is a world that
a) could never be b) could be c) seems improbable d) seems fantastic
14. Which of the following words is an argument indicator word?
a) although b) therefore c) despite d) moreover
15. Which of the following categories is not used in a business letter?
a) enquiry b) reply c) confirmation d) collection of data
16. One should not use in a fax message,
a) salutation b) fax letter head c) fax number d) copy to
17. The introductory part of a memo explains
a) Facts and figures b) reasons for writing c) action to be taken d) deadline
18. A special report is written
a) regarding a change of policy b) regarding a progress
c) regarding an accident d) regarding sales visit
19. Main heading of minutes includes
a) apologies for absence b) minutes of last meeting
c) matters discussed d) place, day, date, and the time of the meeting held
20. An impromptu presentation is
a) prepared in advance.
b) given on the spot without prior preparation.
c) given looking at the prepared text.
d) given only by bosses in front of new employees.
21. In the story "the Land Ironclads", the young lieutenant lay beside the
a) war until b) war correspondent
c) the defender general d) young engineers
22. An argument can have
a) only one reason supporting a conclusion

- c) two or more reasons, each of which independently supporting the conclusion
- d) only the stated assumptions
- e) only the unstated assumption



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2018

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Code No: CAEN 153

Semester: II

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Time: 3 hours

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

Group B

Attempt any SIX questions.

[6×5 = 30]

23. How do you distinguish a science fiction from other kinds of fiction? Explain basing on the stories given in your textbook
24. What are the basic components of arguments? Explain with appropriate examples.
13. Lists are used in letters, e-mails, fax message, and memos. What are the major objectives and advantages of using lists and bullets? Explain.
20. In the story, "But Who Can Replace A Man", the penner claims to have class three brain. Why do the tractors and the field minder leave the penner behind rejecting his request for help? Why he becomes useless after crashing down to the ground? Explain.
21. What are the guidelines to be followed while designing leaflets? Explain basing on the text prescribed in your course.
22. What do you mean by brainstorming a topic? Explain with an appropriate example.
23. An argument states with a basic reason. Read the following sentence and draw an intermediate and then a main conclusion.
If Cigarette advertising were banned, Cigarette manufacturers would save the money they would otherwise have spent on advertising.
24. A lot can be done to make meetings effective. What measures would you suggest to make meeting effective if you were a member of a meeting? Explain.

Group-C

Attempt any two questions

[2x10=20]

25. Of late, major cities, especially the capital city, of Nepal have become notorious become of frequent traffic congestion. In this context, write an argumentative essay about the benefits and disadvantages of our widespread use of the motor cars. Come to a conclusion as to whether the motor can be a good thing or bad thing in light of daily problem faced by the commuters in the capital city and elsewhere in Nepal.
26. You work for Aurora Holdings Plc, a large manufacturing company. In a recent board meeting, it was decided to review the company's staff benefits. At present they include only a company pension scheme and a subsidized canteen. The human resource director asks you to research the additional benefits which could be

introduced. You should also recommend three benefits which you consider would be most welcome by all members of staff. Compile a formal report following the prescribed series of headings as discussed in your text of Communication for Business.

27. In the story "The Land Ironclads", the young lieutenant believes that there are other things in life better worth having than proficiency in war. However, the war correspondent argues that civilization has science, which has invented rifles and guns used by us. What happens after the guns are fired at the illusion of the lieutenant? Does it mean the war correspondent is more realistic than the lieutenant? Discuss.

OR

Discuss "Billennium" by J.G. Ballard as a story of for future where it is not war, but overpopulation that threatens the human race.





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Bachelor in Computer Applications

Course Title: Financial Accounting

Code No: CAAC 152

Semester: II

Full Marks: 60

Pass Marks: 24

Time: 3 hours

Centre:

Symbol No:

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

Group A

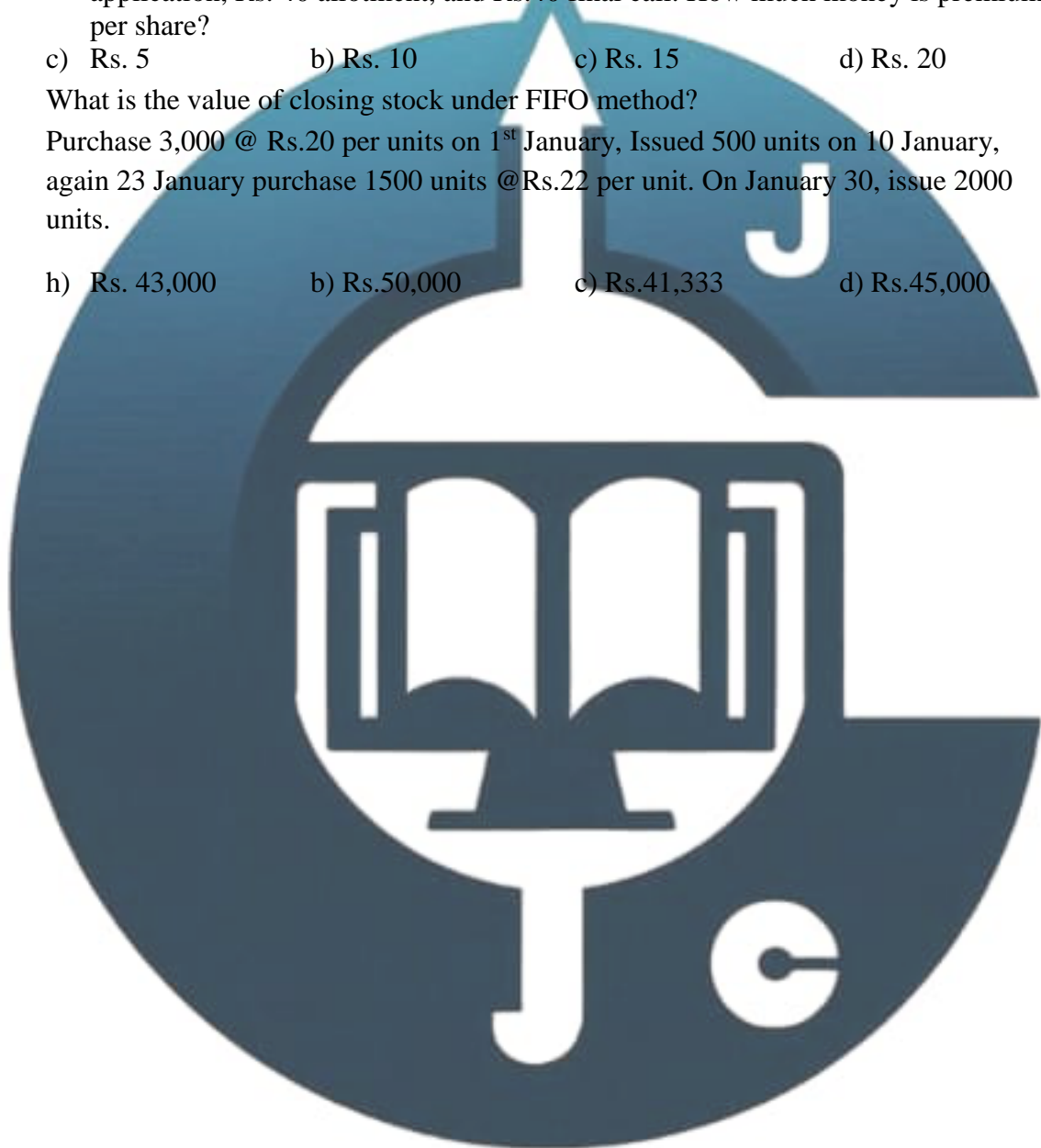
Attempt all the questions.

[10×1 = 10]

Circle (O) the correct answer.

25. Which one is not an accounting process?
 - a) Identification of financial transactions.
 - b) Recording of financial transactions.
 - c) Classifying financial transactions.
 - d) Preparing trial balance.
26. Which accounting concept tells us business and business man are different.
 - a) Going concern concept
 - b) Matching concept
 - c) Period concept
 - d) Business entity concept
27. Which one is accounting package of computer software?
 - a) SPSS
 - b) Minitab
 - c) Tally
 - d) Excel
28. An accountant prepared trial balance for
 - a) Completing the accounting process.
 - b) Knowing the debit and credit amount in accounts.
 - c) To shows all the balance of accounts in a statement.
 - d) Examining the arithmetical accuracy of the books of account.
29. Who prepared the cash book?
 - a) Teacher
 - b) Business man
 - c) Accountant of the business
 - d) Employee of the bank
30. A company is known as an artificial person because
 - a) It registered at company registers' office or government bodies.
 - b) It recognized by all the people.
 - c) It has rights and duties as a natural person.
 - d) It has own accounting system.
31. Thapa purchased goods of Rs.60,000 from Karim on cash, which journal entry is recorded in the account book of Thapa?

- c) Cash Dr 60,000
To Purchase A/C 60,000
- b) Purchase A/CDr 60,000
To Cash 60,000
- c) Purchase.....Dr 60,000
To Karim A/C 60,000
- d) Karim A/CDr 60,000
To Purchase A/C 60,000
32. The total amount of purchase book showed Rs.2,00,000 is transfer into
- f) Debit side of purchase return account b) Debit side of purchase account
c) Credit side of sales account d) Credit side of purchase account.
33. A company issued shares of Rs. 100 each, but the money is called Rs. 30 on application, Rs. 40 allotment, and Rs.40 final call. How much money is premium per share?
- c) Rs. 5 b) Rs. 10 c) Rs. 15 d) Rs. 20
34. What is the value of closing stock under FIFO method?
Purchase 3,000 @ Rs.20 per units on 1st January, Issued 500 units on 10 January, again 23 January purchase 1500 units @Rs.22 per unit. On January 30, issue 2000 units.
- h) Rs. 43,000 b) Rs.50,000 c) Rs.41,333 d) Rs.45,000





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Group B

Attempt any SIX questions.

[6×5 = 30]

35. Define accounting. What are its function. [1+4]
36. Following transactions relating to a business were given to you 31st November 2018. On 30th Chaitra, the cash book showed debit balance Rs. 16,000
- a. Balance as per cash book Rs.35,000
 - b. Cheque issued for payment but not presented at bank Rs.5,000
 - c. Cheque sent for collection at bank but not credited by the bank Rs.15,000
 - d. A customer directly deposited Rs.10,000 to the bank but not recorded in cash book.
 - e. The bank has paid electricity bill of Rs.4,000 under preapproval from the firm but not recorded in cash book.

Required: Bank reconciliation statement

(5)

13. The following information were provided to you by Gurung Suppliers Mhendra Pool

1 November 2018 sales of goods to Shrestha store at Birauta

50 bags Mansuli rice @ Rs. 2,000 each.

30 bags Pokharali masino rice @ 2,500 per bag

70 bags Onion @ 1500 per bag.

15 November. Sales of goods to Bindabasini store at Bagar

30 bags potato @ Rs.1000 per bag

10 bags Sugar @ Rs.3000 per bag

(Trade discount 10%)

Required: Closing stock of material on 31 December, 2018 under First in First out (FIFO) method. [5]

31. The Hydropower company Ltd is issued 1,00,000 shares of Rs.100 each. The money called on application Rs.20, on allotment Rs.40 and Rs.30 on first call. The application is received for 90,000 only. The Board of director decided that all the share applications allotted in full. All the shareholders paid money in full except Shrijana holds 300 in first call.

Required: Journal entries in the book of company.

[5]

Group-C

Attempt any two questions

[2x10=20]

32. Defined company. What are the types of company? Justify share differ with debenture.
33. The following transactions provided by Kathmandu trader to you.

July, 1, 2018 Started business on cash Rs.5,50,000 and Furniture Rs.50,000

July, 2, Cash deposited into bank Rs.1,00,000

July,6, Goods purchased from Newa store on credit Rs. 1,00,000 and cash Rs.50,000.

July, 8, Goods sold on cash Rs.30,000.

July, 12, Goods sold to Dangol store at Rs.45,000.

July, 18, Goods of Rs.25,000 purchase from Tamang store.

July, 22, Payment made by cheque to Newa Store Rs. 90,000 in full settlement (discount received Rs.10,000).

July, 25, Cash received from Dangol store as partial payment in cash Rs.24,000 and discount given Rs. 1,000.

July, 28, Purchase of computer for office use at Rs.50,000 and paid made by cheque.

July,29, Goods of Rs.5000 drawn by owner for private purpose.

July 30, Paid salary in cash Rs.12,000 and rent by cheque Rs.8,000

Required: a. Journal entries b. Ledger accounts c. Trial balance [5+4+1]

34. The following trial balance of a trader as on 31 December 2018 given bellow.

Particular	Rs.	Particulars	Rs.
To opening stock	43,000	By sales	2,76,000
To purchase	1,87,500	By capital	80,000
To wages	18,000	By 12 % bank loan	50,000
To carriage inward	5,000	By creditors	35,000
To Office stationery	4,000	By Discount and commission	3,000

To Office expenses	3,000		
To Telephone and water	2,000		
To Drawing	2,500		
To Interest on loan	5,000		
To Computer	50,000		
To Furniture	40,000		
To debtors	30,000		
To prepaid insurance	25,000		
To bad debts	2,000		
To Discount	4,000		
To cash in hand	8,000		
To cash at hand	15,000		
	4,44,000		4,44,000

Additional information

- Closing stock found Rs.45,000
- Provide depreciation on computer and furniture by 10 percent.
- Prepaid insurance expired by 15,000
- Interest payable Rs.1,000
- Discount and commission receivable Rs.2,000

Required: a Trading account

b. Profit and loss account

c. Balance sheet

[3+4+3=10]



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2018

Bachelor in Computer Applications

Course Title: Mathematics II

Code No: CAMT 154

Semester: II

Full Marks: 60

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

Group A

Attempt all the questions.

[10×1 = 10]

Circle (O) the correct answer.

37. For all rational values of n , $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$ is equal to
a) na^{n-1} b) $\frac{a^{n+1}}{n+1}$ c) na^{n+1} d) $n.a^{n+2}$
38. If $\lim_{x \rightarrow x_0} -f(x) \neq \lim_{x \rightarrow x_0} +f(x)$ then $f(x)$ is said to be
a) Removable discontinuity b) An ordinary discontinuity
c) Infinite discontinuity d) Finite discontinuity
39. Derivative of $\tan^{-1}x$ is equal to
a) $\frac{1}{\sqrt{-x^2}}$ b) $\frac{-1}{1+x^2}$ c) $\frac{1}{1+x^2}$ d) $\frac{-1}{x\sqrt{1^2-1}}$
40. The value of $\lim_{n \rightarrow 0} \frac{e^x - 1}{x}$ is equal to,
a) e^x b) 1 c) 0 d) -1
41. The differential equation: $\left(\frac{d^2y}{dx^2}\right)^2 + 5\left(\frac{dy}{dx}\right)^2 + 2y = 0$ is known as
a) Second degree second order b) Second degree first order
c) First degree second order d) First order second degree
42. One important condition to satisfy Rolle's Theorem by a function $f(x)$ in $[a, b]$ is
a) $f(a) > f(b)$ b) $f(a) < f(b)$ c) $f(a) = f(b)$ d) $f(a) = f(b) \neq 0$
43. Formula for the composite trapezoidal rule is

- d) $\frac{h}{2}[(y_0 + y_n) + 2(y_1 + y_2 + y_3 + \dots + y_{n-1})]$
- e) $\frac{h}{2}[(y_0 + y_n) + 4(y_1 + y_2 + \dots + y_{n-1})]$
- f) $\frac{h}{3}[(y_0 + y_n) + 3(y_1 + y_2 + \dots + y_{n-1})]$
- g) $\frac{3h}{8}[(y_0 + y_n) + 3(y_1 + y_3 + y_5 + \dots + y_{n-1})]$

44. While applying Simpson's $\frac{3}{8}$ rule the number of sub-interval should be
 g) Odd b) 8 c) Even d) Multiple of 3
45. In Gauss Elimination method the given system of simultaneous equation is transformed into
 d) Lower tri-angular equation b) Unit matrix
 c) transpose matrix d) upper triangular matrix
46. In Newton-Raphson method, if x_n is an approximate solution of $f(x) = 0$ and $f'(x_n) \neq 0$ the next approximation is given by
 k) $x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}$ b) $\frac{1}{2} \left(x_0 \frac{a}{x_n} \right)$
 c) $x_n = x_{n+1} - \frac{f(x_n)}{f'(x_n)}$ d) $x_{n+1} = x_{n-1} \left(x_n + \frac{a}{x_n} \right)$



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Bachelor in Computer Applications
Course Title: Mathematics II
Code No: CAMT 154
Semester: II

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

Group B

Attempt any SIX questions.

[6×5 = 30]

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

$$f(x) = \begin{cases} 3x^2 + 2 & \text{if } x < 1 \\ 2x + 3 & \text{if } x > 1 \\ 4 & \text{if } x = 1 \end{cases}$$

Discuss the continuity of function at $x = 1$.

48. Find the derivative of $\sin 3x$ by using definition.

13. Using L-Hospital's rule evaluate:

$$\lim_{x \rightarrow \infty} \frac{2x^2 + 3x}{1 + 5x^2}$$

35. If demand function and cost function are given by

$$P(Q) = 1 - 3Q \text{ and}$$

$C(Q) = Q^2 - 2Q$ respectively, Where Q is the quality (number) of the product then find output of the factor for the maximum profit.

36. Evaluate: a) $\int \frac{dx}{1 - \sin x}$ b) $\int_0^1 (x^2 + 5) dx$

37. Solve: $\frac{dy}{dx} = \frac{xy + y}{xy + x}$

38. Examine the consistency of the system of equation and solve if possible.

$$x_1 + x_2 - x_3 = 1$$

$$2x_1 + 3x_2 + 3x_3 = 3$$

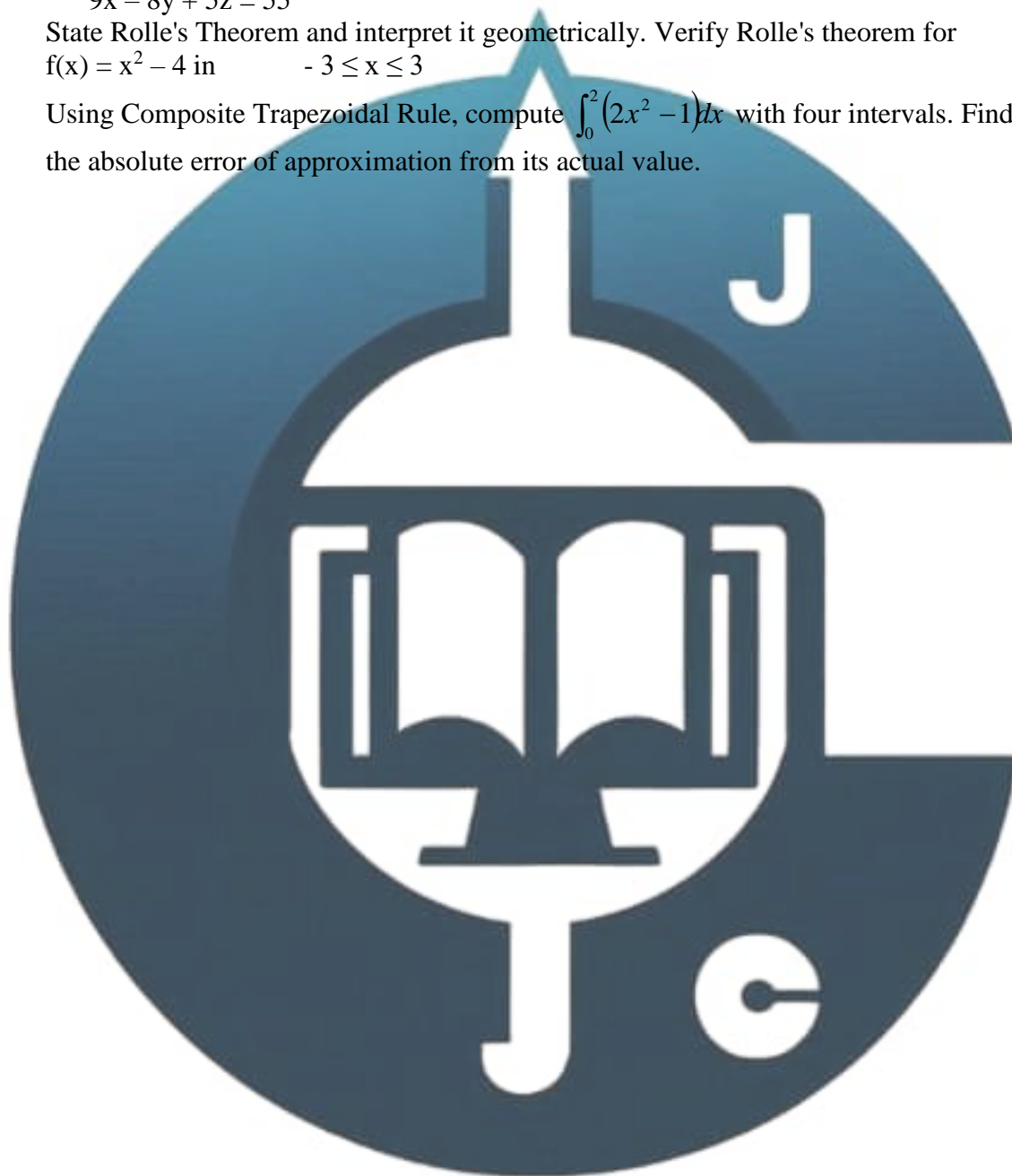
$$x_1 - 3x_2 + 3x_3 = 2$$

Group-C

Attempt any two questions

[2x10=20]

39. Define Homogeneous equation and solve the following system of equations using Inverse Matrix Method.
- $$\begin{aligned} -2x + 2y + z &= -4 \\ -8x + 7y - 4z &= -47 \\ 9x - 8y + 5z &= 55 \end{aligned}$$
40. State Rolle's Theorem and interpret it geometrically. Verify Rolle's theorem for $f(x) = x^2 - 4$ in $-3 \leq x \leq 3$
20. Using Composite Trapezoidal Rule, compute $\int_0^2 (2x^2 - 1) dx$ with four intervals. Find the absolute error of approximation from its actual value.





Tribhuvan University
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2018

Bachelor in Computer Applications

Course Title: Microprocessor and Computer Architecture

Code No: CACS 155

Semester: II

Full Marks: 60

Pass Marks: 24

Time: 3 hours

Centre:

Symbol No:

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

Group - A

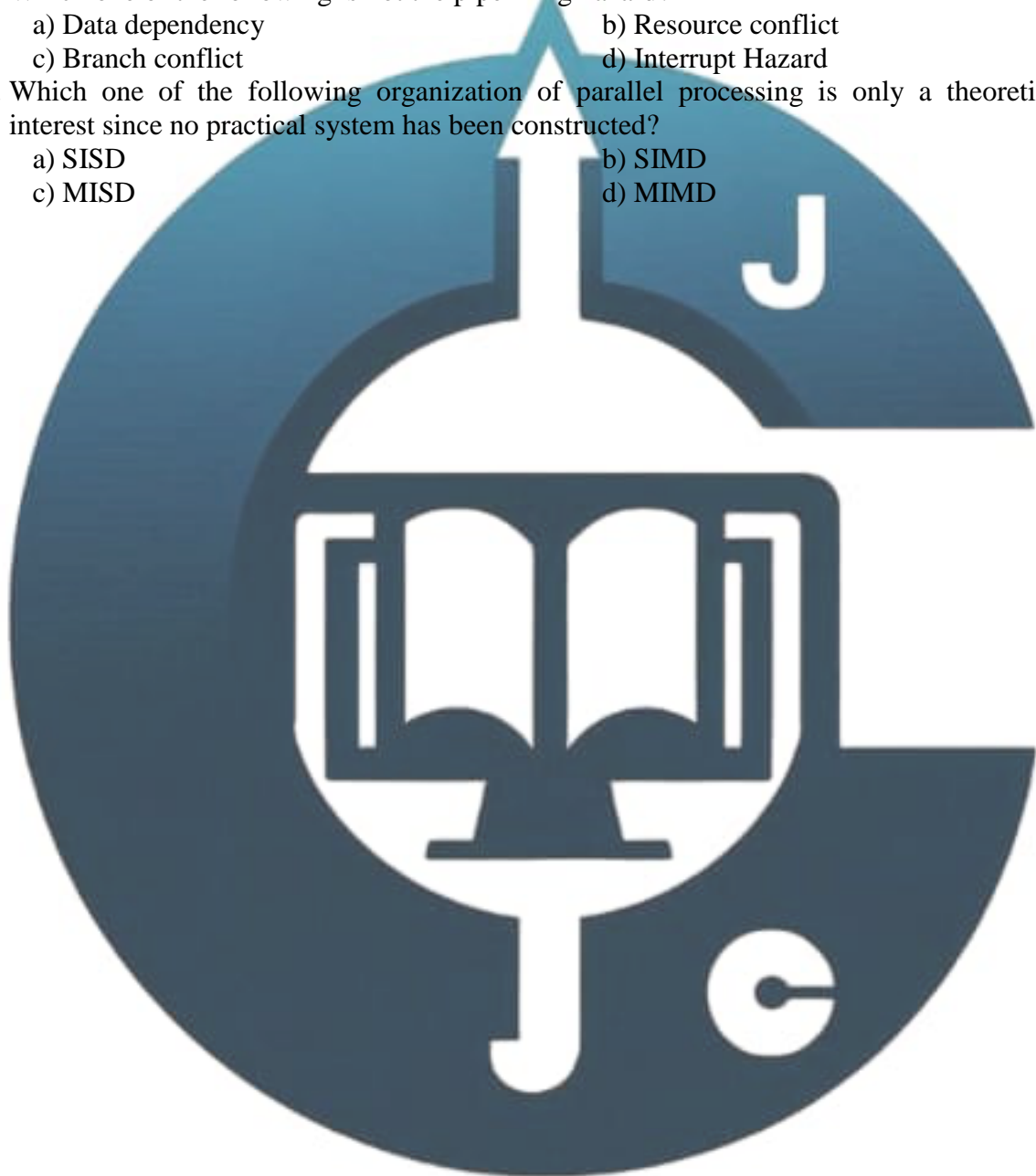
Attempt all the questions.

[10×1 = 10]

Circle (O) the correct answer.

- How many number of pins are there in 8085 Microprocessor?
a) 16
b) 20
c) 32
d) 40
- Which one of the following interrupt has the highest priority?
a) RST7.5
b) TRAP
c) RST6.5
d) RST5.5
- How many bytes make a word of 32 bits?
a) One Byte
b) Two Bytes
c) Three Bytes
d) Four Bytes
- Which one of the following flag has set or reset value on the basis of even or odd number of 1's in result?
a) Zero
b) Carry
c) Parity
d) Sign
- What is the size of MOV B, A instruction in 8085 Microprocessor?
a) One Word
b) Two Word
c) Three Word
d) Four Word
- Which one of the following bit(s) specify the direct or indirect address?
a) Address bits
b) Opcode Bits
c) Mode Bit
d) Control Word

7. Which one of the following term is correct for the process of transformation of the instruction code bits to an address in control memory where the routine is located?
- a) Mapping
 - b) Pipelining
 - c) Sequencing
 - d) Acknowledging
8. Which one of the following is not a logical and bit manipulation operation?
- a) Enable Interrupt
 - b) Increment
 - c) Clear Carry
 - d) Clear
9. Which one of the following is not the pipelining hazard?
- a) Data dependency
 - b) Resource conflict
 - c) Branch conflict
 - d) Interrupt Hazard
10. Which one of the following organization of parallel processing is only a theoretical interest since no practical system has been constructed?
- a) SISD
 - b) SIMD
 - c) MISD
 - d) MIMD





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Group - B

Attempt any SIX questions.

[6 x 5 = 30]

11. Explain the Bus organization of 8085 Microprocessor.
12. Explain the opcode fetch machine cycle for MVI A, 32H with timing diagram.
13. Explain the 8085 Instruction addressing modes with example.
14. Explain the memory hierarchy with diagram.
15. Explain the organization of Microprogrammed Control Unit.
16. Define control word. Explain the procedure for generating control word for specific operation.
17. Define instruction pipeline. Explain the four-segment instruction pipeline with example.

Group - C

Attempt any Two Questions.

[10 x 2 = 20]

18. Explain the functional block diagram of 8085 Microprocessor.
19. Explain the design and control logic of Accumulator.
20. Explain the different data transfer and manipulation instructions with example.