



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**

**[2x10=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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**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.**

13. In accounting, the terms debit and credit indicates  
a) Increase & Decrease                      b) Left & Right  
b. Expenses & incomes                      d) Assets & Liabilities
14. Resources invested by the owner refers to;  
a) Assets                      b) Liabilities                      c) Revenue                      d) Capital
15. Process of entering transaction into the journal is called;  
a) Posting                      b) balancing                      c) Journalizing                      d) None of above
16. In accounting, the terms 'Nominal accounts' indicates  
a) Increase & Decrease                      b) Left & Right  
c) Expenses & incomes                      d) Assets & Liabilities
17. The reason of depreciation is;  
b) Loss on sale                      b) Discount                      c) Purchase                      d) Accident
18. Wages paid for installation of machinery refers to;  
b) Capital expenditure                      b) Revenue expenditure  
c) Revenue receipts                      d) Capital receipts
19. A firm purchased machinery for Rs. 22000 having life 3 years. The estimated value at end Rs. 1000. What is the amount of depreciation under SLM?  
b) 6000                      b) 7000                      c) 9000                      d) 5000
20. Who prepared the cash book?  
b) Teacher    b) Business man  
c) Accountant of the business                      d) Employee of the bank
21. The maximum number of share of company as indicated;  
b) Issued Capital                                      b) Authorized Capital  
c) Paid up Capital                                      d) Called up Capital
22. Which transaction are not recorded in purchase book?  
b) Purchased goods from City Shopping Centre.  
c) Purchased goods from New Road Shopping Centre.  
d) Purchased goods from Astha Departmental Stores on credit;  
e) Purchased office computer for Rs. 35000 from Micro net Solution.

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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]**

23. Following cash and banking transaction of a month are given to you.
- 1 Balance of cash Rs. 30,000 and bank Rs. 40,000
  - 2 Purchased goods for Rs. 15,000, paid Rs. 5,000 on cash and balance by cheque after allowing discount of Rs. 500.
  - 15 Rent received Rs 12,000.
  - 22 Sale of goods Rs 21,000, received Rs 5,000 or cash and the balance through cheque after deduction discount of Rs. 1,600.
  - 27 Deposited cash into the bank Rs. 10,000

**Required: Cash book with cash and bank column**

24. Following information are given to you.  
On 30<sup>th</sup> Chaitra, the cash book showed debit balance Rs. 16,000
- Cheque sent for collection of Rs. 5,000 but credited by bank only Rs. 2,000.
  - Cheque issued of Rs. 4000 but not presented at bank.
  - Bank interest of Rs. 1,000 has been collected by bank but not recorded in cash book.
  - Service charges Rs. 200 shown in pass book only.
  - A debtor directly deposited Rs.2000 into bank.

**Required: Bank Reconciliation Statement**

13. The transactions related to machinery are as under:
01. 07. 2015 : Purchased a machinery for Rs. 60,000.
  01. 01. 2016 : Purchased machinery for Rs. 40,000
  30. 06. 2017 : Sold machinery purchased on 2015 for Rs. 48,235 and purchased next machinery for Rs. 20,000.

Accounts are closed on 31<sup>st</sup> December and rate of depreciation: @ 10%.

**Required: Machinery A/c from three years under reducing balance method**

20. Stores transactions during the month of Magh are as under:
- Magh 1: Opening balance: 500 Units @Rs. 10 Per Unit
- Purchased**
- Magh 4: 600 Units @ Rs. 11 Per Unit  
Magh 9: 600 Units @ Rs. 12 Per Unit  
Magh 20: 800 Units @ Rs. 12 Per Unit
- Issued**
- Magh 7: 500 Unit  
Magh 15: 500 Unit  
Magh 25: 400 Unit  
Stock Verification loss  
Magh 28: 20 Unit

**Required: Store ledger Under FIFO method**

21. Define accounting. What are the various users of accounting information? Explain.
22. Differentiate between Going concern concept and Business entity concept.

**Group-C**

**Attempt any two questions**

**[2x10=20]**

23. Following transactions are provided to you.
  - 01 March Started business with cash Rs. 200,000
  - 04 March Deposited cash into bank Rs. 50,000.
  - 13 March Purchased goods from creditors for 80,000 and paid cash only 30,000.
  - 17 March Sold goods on cash Rs. 100,000.
  - 20 March Paid salary Rs. 15,000 through cheque.
  - 23 March Received interest Rs. 10,000.
  - 30 March Paid to creditors cash Rs. 18,000 and received discount Rs. 2000.
  - 31 March Return goods to creditors of Rs. 5,000

**Required: Journal Entries and Creditors Account**

24. The following is the trial balance of a businessman as on 31<sup>st</sup> December 2017.

Particulars	Dr. Amount	Particulars	Cr. Amount
Opening stock	18,000	Sales	2,20,000
Purchase	71,000	Return outwards	1,500
Return inwards	1,000	Loan	20,000
Wages	11,000	Bills payable	2,500
Carriage on purchase	2,500	Capital	40,000
Printing and stationery	2,000	Discount received	1,000
Salaries	2,800		
Insurance expenses	3,000		
Plant & Machinery	120,000		
Debtors	10,500		
Cash at bank	11,600		
Rent expenses	6,600		
Drawings	3,000		
Furniture	22,000		
	<b>2,85,000</b>		<b>2,85,000</b>

Additional information:

- Closing stock is valued at Rs. 25,000.
- Depreciation on plant & machinery @ 15% & on furniture @ 10%
- Outstanding wages Rs. 4,000.
- Prepaid insurance Rs. 500.

**Prepare: a. Trading Account b. Profit & Loss Account  
c. Balance Sheet as on 31<sup>st</sup> December 2017**

20. Define company. Differentiate between private and public company.

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**Course Title: English II**  
**Code No: CAEN 153**  
**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. The world of science fiction is a world that .....  
a) could never be      b) could be      c) seems improbable      d) seems fantastic
26. Which of the following words is an argument indicator word?  
a) although      b) therefore      c) despite      d) moreover
27. Which of the following categories is not used in a business letter?  
b) enquiry      b) reply      c) confirmation      d) collection of data
28. One should not use ..... in a fax message,  
a) salutation      b) fax letter head      c) fax number      d) copy to
29. The introductory part of a memo explains .....  
c) Facts and figures      b) reasons for writing      c) action to be taken      d) deadline
30. A special report is written .....  
c) regarding a change of policy      b) regarding a progress  
c) regarding an accident      d) regarding sales visit
31. Main heading of minutes includes .....  
c) apologies for absence      b) minutes of last meeting  
c) matters discussed      d) place, day, date, and the time of the meeting held
32. An impromptu presentation is .....  
c) prepared in advance.  
d) given on the spot without prior preparation.  
e) given looking at the prepared text.  
f) given only by bosses in front of new employees.
33. In the story "the Land Ironclads", the young lieutenant lay beside the .....  
c) war until      b) war correspondent  
c) the defender general      d) young engineers
34. An argument can have .....  
f) only one reason supporting a conclusion  
g) two or more reasons, each of which independently supporting the conclusion  
h) only the stated assumptions  
i) only the unstated assumption

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

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**Group B**

**Attempt any SIX questions.**

**[6×5 = 30]**

35. How do you distinguish a science fiction from other kinds of fiction? Explain basing on the stories given in your textbook
36. 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.
25. 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.
26. What are the guidelines to be followed while designing leaflets? Explain basing on the text prescribed in your course.
27. What do you mean by brainstorming a topic? Explain with an appropriate example.
28. 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.
29. 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]**

30. Of late, major cities, especially the capital city, of Nepal have become notorious because 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.
31. 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.
32. 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.

**Best of Luck!**

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**2018**

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

37. For all rational values of n,  $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$  is equal to  
c.  $na^{n-1}$                       b)  $\frac{a^{n+1}}{n+1}$                       c)  $na^{n+1}$                       d)  $na^{n+2}$
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  
c)  $\frac{1}{\sqrt{-x^2}}$                       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,  
d)  $e^x$                       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  
d) 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  
d)  $f(a) > f(b)$                       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)  $\frac{h}{3}[(y_0 + y_n) + 3(y_1 + y_2 + \dots + y_{n-1})]$



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**Code No: CAMT 154**  
**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]**

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:

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

33. 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.

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

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

36. 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**

**[2×10=20]**

37. Define Homogeneous equation and solve the following system of equations using Inverse Matrix Method.

$$-2x + 2y + z = -4$$

$$-8x + 7y - 4z = -47$$

$$9x - 8y + 5z = 55$$

38. 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.



c) MISD

d) MIMD

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**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**

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

**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.

**Best of Luck!**