

Department of Computer Science & Engineering
Motilal Nehru National Institute of Technology, Allahabad
Mid Sem. Examination (ODD-Semester) 2017-18

Class: MCA First Semester 2017-18

M.M. : 20 Subject: Digital Computer Organization(Code:CA3103) M. Hrs: One & Half

Note: 1.ALL Questions are compulsory.

2.Write ALL parts of a question together in one attempt NOT here & there.

3.Write to the point. Make & State necessary assumptions.

Q.No.1 (a) Both our text followed in Class detail Block diagram of Digital Computer. Compare them. (01)

(b)Define the following circuits with their one practical application:

(i) IC (ii) Decoder (iii) Encoder (iv) Multiplexer (v) Binary Counters (vi) Flip-Flop (03)

(c) What do you mean by Memory Addressing capacity of a Microprocessor? What is Memory Addressing capacity of 8085 Microprocessor? (01)

Q.No.2(a) How Status Flags in 8085 Microprocessor are set? Explain. (01)

(b) Define "Addressing Modes". Define ALL addressing modes of 8085 Microprocessor with One example in each. (03)

Q.No.3 Write down an 8085 Assembly language Program for the following with proper comments. Make & State necessary assumptions. (Write Addressing MODEs of each Instructions ALSO.)

"Addition of list of 5 One Byte Numbers & Result is also one Byte." (03)

Q.No.4 A digital Computer has a Common Bus System for 16 Registers of 32 bits each. The BUS is constructed with Multiplexers. Answer the following with JUSTIFICATION: (03)

(a) How many selection inputs are there in each Multiplexer?

(b) What size of Multiplexers are needed?

(c) How many Multiplexers are there in the BUS?

Q.No.5(a) Explain in brief Construction & Working of Hard disk Drive OR CD-ROM. (02)

(b) Differentiate CD-R(WORM) Vs CD-RW. Compare them technically. (01)

(c) Define (i) FIRM Ware (ii) POST. What is their importance? (01)

(d) What is CROSS-Assembler? Give one Example & Justify why it is CROSS-Assembler. (01)

* END *

Name:.....

Reg. No.....

Department of Computer Science & Engineering

Motilal Nehru National Institute of Technology, Allahabad

End Semester (Theory) Examination (ODD-Semester) 2017-18

Class: MCA First Semester 2017-18

Subject: Digital Computer Organization(Code:CA-3103)

M.M. : 60

Time: 3 Hrs

Note: 1. Attempt any FIVE(05) questions including Q. No. (1) which is **COMPULSORY to ALL.**

2. All parts of a question should be answered in one attempt **SEQUENTIALLY.**

3. Write to the point, exactly what is asked.

4. Make & State necessary Assumptions clearly.

Q.No. 1 (COMPULSORY to ALL)

(A) Define the following terms in brief:

(i) OS (ii) Cross Assembler (iii) Loader (iv) Linker (v) Macro processor (vi) Microprocessor (vii) Address (viii) ASCII Code (ix) I/O Controller (x) BIOS Program (xi) Mother Board (xii) Universal Gates (xiii) Lan Card (xiv) Power Card

(B) Write down the program for division of two 1-Byte numbers A & B ($A \div B : A > B$) as discussed in the Class.

(C) What is **Cache Memory**? What do you mean by **levels of cache**? Is the cache memory also Expandable as **RAM**? Justify.

(D) A CPU needs 512 X 8 RAM & 512X8 ROM with the help of available 128X8 RAM & 512X8 ROM. Trace a neat diagram for the following:

(i) Block diagram of the RAM chip (ii) Block diagram of the ROM chip

(iii) Relevant Memory Address Map for the CPU (iv) Memory connection to the CPU

(07+03+02+(1+1+2+4)=20)

Q.No. 2(A) Simplify the function $F(A,B,C,D) = \sum(0,1,2,5,8,9,10)$ using K-Map in SOP & POS forms.

(B) What is a **Multiplexer**? Trace Logic Diagram & Function Table for 4-to-1-Line Multiplexer.

(C) Define a **"BUS"**. Construct a BUS System using 4X1 MUX for 4 Registers, each with Size of 4 bits.

(D) Convert $(9AFC)_{16}$ to binary & find its 2^{nd} Complement.

(03+03+03+01=10)

Q.No. 3 (A) Construct the following:

(i) **4-bit Adder – Subtractor** using Full Adder.

(ii) 4-bit Binary Incrementer using Half Adder.

(B) A digital Computer has a Common BUS System for 16 Registers of 32 bits each. The BUS is constructed with **Multiplexer**. Answer the followings:

(i) How many selection inputs are there in each **Multiplexer**?

(ii) What size of **Multiplexer** are needed?

(iii) How many multiplexers are there in the BUS.

(C) What is **"Negative Logic"**?

((03+03)+03+1=10)

(....Continued on Page No. 02)

Q.No. 4 (A) Classify 8085 Instructions according to following (with one example in each):

(i) Functions performed by the Instructions.

(ii) Size of Instructions

(B) Write down an Assembly Language program with proper comments for the followings:

(i) Sum of a Series of 8-Bit Numbers; SUM is also 8-Bit.

(ii) Product of two 8-Bit Numbers; Product is 8-Bit.

(04+(03+03)=10)

Duration

Att

Q.No. 5(A) What do you understand by "Addressing Modes" ? Discuss various Addressing Mode of INTEL 8085 Microprocessor with Example.

(B) Trace a Logic for setting the bits of **Status Register** of a CPU.

(C) What is an **Instruction Cycle**? Explain properly.

(D) What is **Interrupt & PSW** ? Explain.

(03 + 02 +03 +02=10)

Q

a.

Q.No. 6(A) Define the Followings in reference to **Control Memory**:

(i) Control Word (ii) Microinstruction (iii) microprogram (iv) Control Memory (v) Control Address Register (vi) Sequencer (vii) Pipe line Register (viii) Hard wired Control

(B) Explain properly the **Selection of Addresses for Control Memory**.

(C) Is it possible to design a Microprocessor without a microprogram? Are all microprogrammed Computers also Microprocessors.

(04+04+02 = 10)

Q.No. 7(A) What is **Associative Memory**? Explain its organization using Block diagram. What is rol of **Argument, Key & Match Registers**? Explain with a simple example.

(B) Explain in brief **Match Logic** for one word of **Associative Memory** with relevant associated derivations.

(C) How **write operation** is performed in **Associative Memory**?

(04+04+02=10)

Q.No. 8(A) What exactly we mean by "**Mapping Process**" in Cache Memory?

Explain **any TWO** of the following "Mapping Process" in brief:

(i) Associative Mapping (ii) Direct Mapping (iii) Set-Associative Mapping

(B) Explain in brief : "Writing into Cache".

((03+03)+04=10)

Q.No.9 Write Short Notes on any **FIVE** of the followings:

(A) Computer Generations (B) Flip-Flops (C) Stack Organized CPU

(D) Decoders (E) Counters (F) Booting steps of an IBM PC

(G) Hard Disk (H) Optical Disks (I) Pen Drive

(2 X 5 =10)

* END *

Motilal Nehru National Institute of Technology, Allahabad
Department of Computer Science & Engineering
MCA First Semester

End Semester Examination 2017-18
Subject Code/Name: CA3104/Foundation of Logic

Max. Marks: 60

Duration: 3 hours

Attempt all the questions.

(5*4=20)

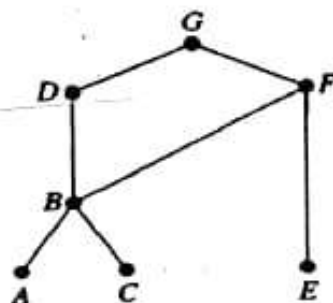
Question-1

- a. i. Prove that the inverse of product of two elements of a group G is the product of the inverse taken in the reverse order, that is, $(ab)^{-1} = b^{-1}a^{-1}$
 ii. State and prove Lagrange's theorem.
- b. Prove that the necessary and sufficient condition for a non-empty subset H of a group $(G, *)$ to be a subgroup is $a \in H, b \in H \rightarrow a * b^{-1} \in H$, where b^{-1} is the inverse of b in G .
- c. Prove that the fourth roots of unity $\{1, -1, i, -i\}$ forms a cyclic abelian multiplicative group. Find all the generators of this cyclic group.
- d. If R is a Ring such that $a^2 = a, \forall a \in R$. Prove that
 - i. $a + a = 0, \forall a \in R$, that is, each element of R is its own multiplicative inverse.
 - ii. $a + b = 0 \Rightarrow a = b$
 - iii. R is a commutative ring.
- e. Use Resolution principal to show that the hypotheses "It is not raining or Alice has her umbrella," "Alice does not have her umbrella or she does not get wet," and "it is raining or Alice does not get wet" imply the conclusion "Alice does not get wet."

(4*5=20)

Question-2

- a. Define distributive and complemented lattice. Determine whether the following lattices are distributive or not:
 - i. $((1, 2, 3, 5, 30), |)$
 - ii. $((1, 2, 4, 9, 18), |)$
- b. A development project at a computer company requires the completion of seven tasks. Some of these tasks can be started only after other tasks are finished. A partial ordering on tasks is setup by considering task $X <$ task Y , i.e., task Y cannot be started until task X has been completed. The Hasse Diagram for the seven tasks with respect to the partial ordering is shown in the figure below. Find an order in which these tasks can be carried out to complete the project.



- c. Determine whether these posets are lattices or not:
- $(\{1, 3, 6, 9, 12\}, |)$
 - $(\{1, 2, 3, 4, 5\}, |)$
 - $(P(S), \subseteq)$ where $P(S)$ is the power set of S and $S = \{a, b, c\}$.
- d. i. Find the zero-one matrix of the transitive closure of the relation R where

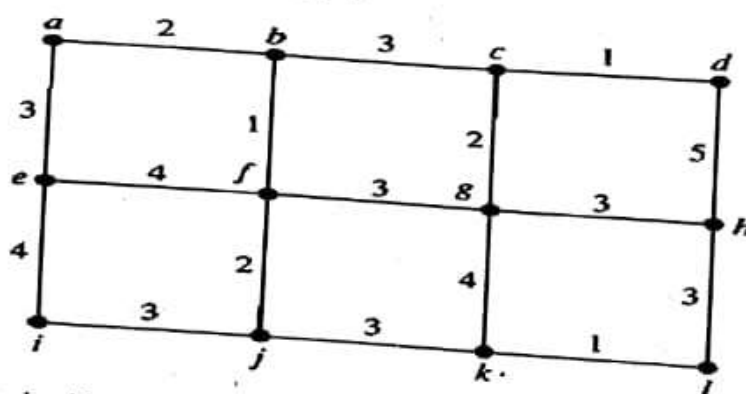
$$M_R = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 1 & 0 \end{bmatrix}$$

- What is the reflexive closure of the relation $R = \{(a, b) | a < b\}$ on the set of integers?
- What is the symmetric closure of the relation $R = \{(a, b) | a > b\}$ on the set of positive integer?

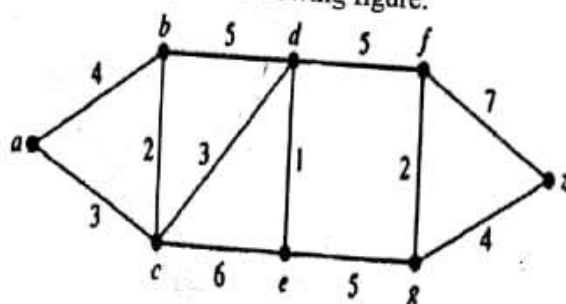
Question-3

(5*4=20)

- a. Find the post-order traversal of a binary tree whose pre-order and in-order traversal are given below:
- Pre-order: a b e j k n o p f c d g l m h i
In-order: j e n k o p b f a c l g m d h i
- b. Use Huffman encoding to encode the following symbols with the frequencies listed: A: 0.08, B: 0.10, C: 0.12, D: 0.15, E: 0.20, F: 0.35
What is the average number of bits used to encode a character?
- c. Use Prim's Algorithm to design a minimum cost-communication network connecting all the computers represented by the following graph.



- d. Use Dijkstra's algorithm to find the length of the shortest path between the vertices 'a' and 'z' in the weighted graph displayed by the following figure:



Motilal Nehru National Institute of Technology Allahabad

Department of Computer Science & Engineering

MCA First Semester

Mid Semester Examination 2017-18

Subject Code/Name: CA3104/Foundation of Logic

Duration: 90 Minutes

Max. Marks: 20

NOTE:

- All questions are compulsory.
- Attempt the questions in sequential order.
- Answers should be justified & to the point.

- 1) a) Are these system specifications consistent? "If the file system is not locked, then new messages will be queued. If the file system is not locked then the system is functioning normally, and conversely. If new messages are not queued, then they will be sent to the message buffer. If the file system is not locked, then new messages will be sent to the message buffer. New messages will not be sent to the message buffer." (2)
- b) Use mathematical induction to prove that $2^n < n!$ for every positive integer n , with $n \geq 4$. (2)
- c) Determine whether the given compound propositions is satisfiable using Truth Table. (1)
 $(p \vee q \vee \neg r) \wedge (p \vee \neg q \vee \neg s) \wedge (p \vee \neg r \vee \neg s) \wedge (\neg p \vee \neg q \vee \neg s) \wedge (p \vee q \vee \neg s)$
- 2) a) Prove the following without using truth table: (2)
- i) $((p \rightarrow q) \wedge (q \rightarrow r)) \rightarrow (p \rightarrow r)$. Is a tautology?
- ii) $[(p \wedge q) \vee (p \wedge \neg q) \vee (\neg p \wedge q)] \leftrightarrow (p \vee q)$
- b) Define equivalence relation. Let N denote the set of all natural numbers and let R be the relation on $N \times N$ defined by
$$(a, b)R(c, d) \leftrightarrow ad(b + c) = bc(a + d)$$

Check Whether R is an equivalence relation on $N \times N$. (2)
- c) Let A and B be the subsets of a universal set U . Show that $A \subseteq B$ if and only if $\bar{B} \subseteq \bar{A}$? (1)
- 3) a) Let $S(x)$ be the predicate of "x is a student" $F(x)$ be the predicate of "x is a faculty member" and $A(x, y)$ be the predicate "x has asked y a question" where the domain consist of all people associated with your school. Use Quantifier to express each of these statements. (3)
- i) Some student has asked every faculty member a question.
- ii) There is a faculty member who has asked every faculty member a question.
- iii) Some student has never been asked a question by a faculty member.

(1)

b) Translate the statement

$$\forall x \exists y ((F(x) \wedge P(x)) \rightarrow M(x, y))$$

into English where $F(x)$ is “x is a female”, $P(x)$ denotes “x is a parent” and $M(x, y)$ denotes “x is the mother of y” and the domain for both x and y consists of all people.

c) How many reflexive and symmetric relations possible on a set of n elements. (1)

4) a) Check the validity of the following argument using inference rule:

Linda, a student in this class owns a red convertible. Everyone who owns a red convertible has gotten at least one speeding ticket. Therefore, someone in this class has gotten a speeding ticket. (2)

b) Use rules of inference to show that the hypothesis “If it does not rain or of it is not foggy then the sailing race will be held and the lifesaving demonstration will go on,” “if the sailing race is held, then the trophy will be awarded,” and “the trophy was not awarded.” imply the conclusion “it rained.” (2)

c) Use a direct proof to show that every odd integer is the difference of two squares. (1)

Motilal Nehru National Institute of Technology, Allahabad

School of Management Studies

M.C.A. Ist Semester, Odd Semester Examination, 2017-18

CA3102: Principle of IT Industry Management

Time: 3 hours

Max. Marks: 60

Note: Attempt all the questions.

1. What is scientific management? Discuss F.W. Taylor's contribution to scientific management (10)
2. Briefly explain various steps involved in selection process. (10)

or

Define Human Resource Planning (HRP). Outline the steps involved in HRP process.

3. (a) Discuss the role of Information technology in supply chain management. (5)
(b) What is quality control? Discuss advantages and disadvantages of statistical sampling (5)
4. Discuss the issue of environmental pollution. List out various regulations passed by the Indian government for the protection of the environment and briefly discuss any one regulation. (10)
5. Write a short note on any four of the following: (2.5×4 = 10)
 - (a) Douglas McGregor's Theory X and Theory Y
 - (b) Hawthorne experiments
 - (c) Control Chart
 - (d) Responsibility assignment matrix
 - (e) Bullwhip Effect
6. Read the following case carefully and answer the questions given at the end of the case. (10)

Uptron Electronic Limited, is a pioneering and internationally reputed firm in the electronic industry. It is one of the largest firm in the country. It attracted employees from internationally reputed institutes and industries by offering high salaries, perks etc. It has advertised for the position of an Electronics Engineer recently. Nearly 150 candidates applied for the job. Mr. Shashidhar, an Electronics Engineer Graduated from Indian Institute of Technology with 5 years working experience in a medium sized electronics firm, was selected from among the 130 candidates who took tests

IT

and interview. The interview board recommended an enhancement in his salary by Rs. 5000 more than his present salary at his request. Mr. Shashidhar was very happy to achieve this and he was congratulated by a number of people including his previous employer for his brilliant interview performance, and wished him good luck.

Mr. Shashidhar joined Uptron Electronics Ltd., on 21st January, 2002, with great enthusiasm. He also found his job to be quite comfortable and a challenging one and he felt it was highly prestigious to work with this company during the formative years of his career. He found his supervisors as well as subordinates to be friendly and cooperative. But this climate did not live long. After one year of his service, he slowly learnt about a number of unpleasant stories about company, management, the supervisor-subordinate relations, employee turnover especially at higher level. But he decided to stay on as he had promised several things to the management in the interview. He wanted to please and change the attitude of the management through his diligent performance, firm commitment and dedication. He started maximizing his contribution and the management got the impression that Mr. Shashidhar had settled down and will remain with the company.

After sometimes, superiors started riding rough-shod over Mr. Shashidhar. He was over-loaded with the multifarious jobs. His freedom in deciding and executing was cut down. He was ill-treated on number of occasions before his subordinates. His colleagues also started assigning their responsibility to Mr. Shashidhar. Consequently there were imbalances in his family, social life and organizational life. But he seemed to be calm and contented. Management felt that Mr. Shashidhar had the potential to bear with many more organisational responsibilities.

So the General manager was quite surprised to see the resignations letter of Mr. Shashidhar along with a cheque equivalent to a month's salary one fine morning on 18th January, 2004. The General Manager failed to convince Mr. Shashidhar to withdraw his resignation. The General manager relieved him on 25th January, 2004. The General Manager wanted to appoint a committee to go into the matter immediately, but dropped the idea later.

Questions

1. What prevented the General Manager from appointing the committee? (3)
2. What is wrong with the recruitment policy of the company? (4)
3. Why did Mr. Shashidhar's resignation surprised General Manager? (3)

Motilal Nehru National Institute of Technology
School of Management Studies
M.C.A. 1st Semester, Mid Term Examination 2017-18 (Odd Semester)
CA3102: IT Industry Management

Time: 1 hour 30 minutes

M.M.: 20

Note: Attempt any four (4x5=20)

1. Differentiate between intermittent and continuous production system with suitable examples.
2. Discuss the relevance of Max Weber's Bureaucratic Management in contemporary business world.
3. Briefly discuss any two modern management theories.
4. Discuss Elton Mayo's contribution in development of human relation approach.
5. Briefly discuss Herzberg's motivation-hygiene theory and also explain its similarities and differences from Maslow's need hierarchy theory.

C 01
CSED, MNNIT Allahabad, Allahabad, India
PhD & MCA I Semester, End Semester Examination, November 2017
Programming and Problem Solving (CA3101)

Time: Three Hours

Total Marks: 60

Note: Paper is printed on both sides. Questions carry equal weight. Read questions carefully. Understand a question before you start writing. Feel free to assume any missing data but categorically mention it under the heading 'Assumptions for this question'.

1. Answer the following parts. Marks of individual parts are given in the end.

a) Identify two syntax errors and one semantic error in the function `foo()` below, which tries to print an integer, along with its square and cube. Clearly identify which errors are syntax errors, and which one is the semantic error, and show the corrections that should be made. (02)

```
int foo(int n) { int n2, int n3; /* This function is busted
n2 = n * n; n3 = n2 * n2; printf("n=%d, n^2 = %d, n^3 = %d\n", n, n2, n3);
return 0; }
```

b) What does `mystery(6)` print to the stdout? Further, give a short, high-level description of what the `mystery()` function does. (01)

```
void mystery(int i) { if (i) { mystery(i/2); putchar('0' + (i % 2)); } }
```

c) What output does this fragment of code produce? (01)

```
#define FORMAT "%s is a string"
```

```
printf(FORMAT, FORMAT);
```

d) What does the following code print to stdout? (01)

```
printf("%d\n", ((~3) ^ (~1)) + (4 >> 1));
```

e) Suppose that you call `scanf("%f%d%f", &x, &i, &y)` where `x` and `y` are float variables and `i` is an int. If the user enters 12.3 45.6 789, what will be the values of `x`, `i`, and `y` after the call? (01)

2. Answer the following with reason(s) for the answer given, presume necessary header files.

a) Let `i`, `j` be integer variables. What is the value printed after the following loop?

```
for (i=j=0; i<10; ++i) { j = i + j; ++i; } printf("%d\n", j);
```

b) Let `i`, `j`, `s` be integer variables. What is the value of `s` printed after the following outer loop?

```
s = i = 0; while (i < 10) { j = 0;
while (j < 5) { if (i != j) ++s; ++j; }
++i; }
printf("%d\n", s);
```

c) Let the function `f` be defined as follows:

```
int f ( int n ) { int t; t = 100000 * (n % 10) + (n / 10); return t / n; }
```

What is the value returned by the call `f(142857)`?

d) Let the function `g` be defined as follows:

```
int g ( int n ) { if (n < 2) return n; return g(n/2); }
```

What is the value returned by the call `g(142857)`?

e) What is the value printed by the following program?

```
int h ( int a , int b ) { a = b - a; return b - a; }
```

```
int main ()
```

```
{ int a = 9, b = 2; a = h(a,b); b = h(a,b); printf("%d\n", a); }
```

f) What is the output of the following program?

```
int n = 10; void fgh ( int r ) { printf("%d,%d\n",n,r); }
```

```
int main () {int n = 20; fgh(n); }
```

3(a). Write a program which prints the whole numbers between `A` and `B` where values for `A` and `B` are read in from command line (command prompt).

3(b). Write a program which prints the perimeter of a rectangle. The sides should be composed of asterisks (*). Its length should contain 35 and its width 20 asterisks.

4. Do any **two** of the following using C++ programming language syntax

a) Write a program to discover how many terms of the following series have to be added together for the sum to exceed a total as provided by the user:
 $1 + 4 + 9 + 16 + 25 + 36 + \dots$

b) Goods in a warehouse are marked with a code number and a price. If the code number is 200 or less, then GST is not charged on the article; otherwise a charge of 10% is added.

Write a program to print out the total cost of a number of goods purchased and the GST charged.

The data provided by the user consists of pairs of numbers, the first representing the code number of the article and the second its cost. Data input is terminated by two negative numbers.

c) Write a program to print the first N rows of the following table of values:

1 4 7 10 13

2 5 8 11 14

3 6 9 12 15

The value of N is to be provided as command line argument

5. Write functions for any **two** of the following:

a) Return the cube of an integer x (x multiplied by itself three times).

b) Convert lower case letters to capitals.

c) Return a boolean value which states that a given day number, month number and year number form a valid date.

Write programs to test the **two** functions chosen by you.

6. Explain the working of any two sorting algorithms along with corresponding C code.

7. Write C program which holds data for the students crediting the subject Programming and Problem Solving (CA3101). The student information includes name, registration number and date of birth. Demonstrate management of this data either in an array based stack or in a linked list.

8. Compare and contrast ease of programming and problem solving using either C or C++. The narration should involve a minimum of 12 aspects for comparison

9. Write names of **12 Linux** commands and provide a brief of 25 words for each of these.

10. Write any **24 keywords**, common to both C and C++ programming languages, along with a two sentence explanation for each of these 24 keywords.

Declaration

I am here to learn. I value Examination Ethics and practice it.

Signature

Name and Registration No.

Time: 1 Hour & 30 Minutes

Note: paper is printed on both sides. Questions carry equal weight. Feel free to assume any missing data but categorically mention it under the heading 'Assumptions for this question'. Use space of answer sheet judiciously.

1. Write the output of the following program.

```
#include <stdio.h>
void main() {
    int x, y, z, t;
    x=25; y=35; z=45;
    printf("x=%d, y=%d, z=%d\n", x, y, z);
    if (x < y) {t=y; y=x; x=t;}
    printf("x=%d, y=%d, z=%d\n", x, y, z);
    if (x < z) {t=z; z=x; x=t;}
    printf("x=%d, y=%d, z=%d\n", x, y, z);
    if (y > z) {t=z; z=y; y=t;}
    else if (x < z) {t=z; z=x; x=t;}
    printf("x=%d, y=%d, z=%d\n", x, y, z);
}
```

Further, Write the output of the program if the line `x=25;y=35; z=45;` is replaced by `x=45; y=35; z=40;`

2. Write C programs for the following problems.

(a) A special disaster fund contribution is calculated as 10% of the total salary subject to a minimum of Rs.1000.00 and a maximum of Rs.10000.00. Read the total salary of a person as a positive integer and print the special disaster fund contribution as computed.

Note : While reading the salary you may assume that input will be correctly given as a positive integer. There is no need to check and repeat for correct input.

(b) Read in a positive integer n . Then read in n (> 0) positive integers. Print the largest odd number among the positive numbers you have read. If there is no odd number in the list print that such a number has not been found. DO NOT USE ARRAYS.

Note : While reading the numbers you may assume that inputs will be correctly given as positive integers. There is no need to check and repeat for correct input.

3. Write the values of the int variables when the following program ends.

```
#include <stdio.h>
void main() {
    int a[] = {0, 1, 4, 9, 16};
    int *p, *q;
    int i, j, k, l, m, n;
    q = &a[4];
    p = q - 4;
    i = *q;
    j = *p++;
    k = *--q;
    l = p[1];
    m = *(q-2);
    n = q - p;
}
```

4. Consider the following program:

```
#include <stdio.h>
unsigned int h(unsigned int n) {
    if (0 == n)
        return 0;
    else
        return h(n/2) + n % 2;
}
int main() {
    unsigned int nMax = 16, sum = 0, n = 0;
    for(; n < nMax; ++n) {
        sum += h(n);
    }
    printf("Sum = %u\n", sum);
    return 0;
}
```

- (a) Compute $h(n)$ for $n = 2, 5,$ and 7 to get an idea for what the function $h(n)$ does. Describe $h(n)$ in words for a given n .
- (b) What will be the output of the above program?

5. Write any 20 keywords of C programming language along with a sentence or two sentences to explain the said keyword for each of these 20 keywords.