

10. Computer Science (Optional Second)

PROPOSED MODEL QUESTION

Grade: 9

Time: 1 hour 30 minutes

Full Marks: 50

Group A Computer Fundamental

[22 Marks]

5x2=10

1. Answer the following questions:

- a. What is Hardware?
- b. What is language translator? List its types.
- c. What is e-governance?
- d. What are the objective of IT Policy 2057 BS?
- e. Write any four negative impacts of computer on society.

2x1=2

2. a. Convert as indicated:

- i. $(111011)_2$ into Octal
- ii. $(634)_{10}$ into Hexadecimal

2x1=2

b. Perform binary calculation:

- i. $110101 + 10101$
- ii. 11101×1001

3. Match the following pairs:

- | | |
|-----------------------|------------------------|
| a. Dot Matrix Printer | i. Input Device |
| b. Laser Printer | ii. Output Device |
| c. Light Pen | iii. Impact Printer |
| d. Speaker | iv. Non-Impact Printer |
| | v. Storage Device |

4x0.5=2

4. State whether following statements are true or false:

- a. Information technology is a technology that is used to store, communicate and process the information.
- b. Application software controls and manages all the internal operations of the computer.
- c. Thermometer and speedometer are the examples of digital devices.
- d. IC was the main devices used in third generation of computer.

4x0.5=2

5. Give the technical term of following:

- a. Software designed to perform maintenance work on the computer system.
- b. The section of CPU that perform all arithmetic and logical calculation on data.
- c. The main components of fifth generation of computer.
- d. Computer's capability to perform a variety of tasks at a time.

4x0.5=2

6. Give the full form:

ABC, ICT, CPU, ROM

4x0.5=2

Group B DOS + Windows

[5 Marks]

- | | |
|--|-------|
| 7. a. What is MS-DOS? | 1 |
| b. What is taskbar? | 1 |
| c. What is dialog box? | 1 |
| d. Write the function of the following DOS commands. | 1x2=2 |
| i. D:\>DIR*.TXT | |
| ii. C:\>CHKDSK | |

Group C
HTML

8. a. What is tag?
b. Write the basic structure of HTML.
c. Write the HTML codes to display the following.

S.N.	Name	Address
1.	Ravindra	Bhaktapur
2.	Manohar	Kathmandu

[5 Marks]
1
1
3

Group D
Programming

9. Answer the following questions:

[18 Marks]
2x1=2

- a. What is an array?
b. Write down the syntax of the following statements.
i. STR\$() ii. STRING\$()
10. Draw a flow chart to display the even numbers from 2 to 100.
11. a. Write the output of the following program:

2
2

```
CLS
X = 1
FOR I = 1 TO 10
    PRINT X
    X = X * 10 + 1
NEXT!
END
```

- b. Debug the following program:

2

```
REM to display the given number in reverse.
CLS
INPUT "ENTER A NUMBER"; N$
WHILE N <> ZERO
    R = A MODE 10
    S = S * 10 + R
    N = FIX(N / 10)
LOOP
PRINT S
END
```

12. Read the following program and answer the questions:

2

```
CLS
LET A$ = "BHAKTAPUR"
FOR I = 1 TO LEN(A$)
    B$ = MID$(A$, I, 1)
    C$ = LCASE$(B$)
    IF INSTR ("aeiou", C$) <> 0 THEN V = V + 1
NEXT I
PRINT V
END
```

- a. Make a list of built in function used in the program.
b. Make a list of variables used in this programme with their types.
3. a. Write a programme to calculate the circumference of a circle.
b. Write a programme to ask to enter a string then find out whether it is palindrom or not.
c. Write a programme to ask to enter 10 different names from the users then arrange is descending order.

2
3
3

10 Sets of Model Questions

Model Question Set 1

Time : 1:30 hrs.

Full Marks : 50

Group 'A' Computer Fundamental [22 Marks]

- 1. Answer the following questions:** 3x2=6
- What are the types of computer on the basis of work? Explain.
 - Write down the features of first generation of computer.
 - Define input device with example.
- 2. State whether the following statements are true or false:** 6x0.5=3
- BCR is an output device.
 - Contents of ROM get erased when the computer is turned off.
 - Open source software is distributed to users at free of cost.
 - A bug is an error that is due to the fault in hardware.
 - Students cannot use multimedia CDs to learn themselves.
 - Objective of IT Policy is to establish knowledge-based industries.
- 3. Match the following:** 4x0.5=2
- | Group 'A' | Group 'B' |
|-----------------------|---|
| (a) Plotter | (i) Software designed for an organization |
| (b) Graphic Digitizer | (ii) Output device |
| (c) Ports | (iii) Input device |
| (d) Utility Software | (iv) Connection point in CPU |
| (e) Tailored Software | (v) Software that takes care and maintains a computer |
| | (vi) Software that can perform specific task |
- 4. Select the correct answer:** 5x0.5=2.5
- | | | | | |
|--|---------------------|-----------------------|-----------------------|-----------------------|
| (a) The computer which measures physical quantities | (i) Analog Computer | (ii) Digital Computer | (iii) Hybrid Computer | (iv) Super Computer |
| (b) First calculating machine | (i) Calculator | (ii) Computer | (iii) Abacus | (iv) Pascaline |
| (c) The high speed memory placed between CPU and main memory | (i) Primary Memory | (ii) Secondary Memory | (iii) External Memory | (iv) Cache Memory |
| (d) Control unit of a digital computer is often called the | (i) Clock | (ii) ICs | (iii) Nerve centre | (iv) All of the above |
| (e) National Information Technology Council is under the chairmanship of | (i) Prime Minister | (ii) President | (iii) Leader | (iv) None of above |
- 5. Name technical term:** 5x0.5=2.5
- The repeatedly working capability of computer.
 - A collection of 8 bits.
 - A computer memory that is volatile in nature.
 - Operating system software that always you to interact with the computer through commands.
 - Use of information technology in all government activities.
- 6. Give full form:** 4x0.5=2
- | | | | |
|-------|------|------|-----|
| FLOPS | ASCC | POST | BCR |
|-------|------|------|-----|
- 7. (a) Perform the following binary calculation:** 2x1=2
- $111 + 101 + 110$
 - 1111×111
- (b) Perform the following number conversion:** 2x1=2
- $(246)_{10}$ into octal
 - $(CAD)_{16}$ into decimal
- Group 'B' Operating System [5 Marks]**
- 8. Answer the following:** 2x1=2
- Differentiate between internal and external DOS commands.
 - Define the terms desktop and taskbar.
- 9. Write the purpose of the following DOS commands:** 6x0.5=3
- | | | |
|--------------|---------|----------|
| (a) COPY CON | (b) MD | (c) REN |
| (d) COPY | (e) REN | (f) EDIT |

Group 'C' HTML [5 Marks]

- 10. Answer the following:** 2x1=2
 (a) Write the types of HTML tags with examples.
 (b) What is web browser? Give any two examples of web browsers.

- 11. Write the use of following HTML tags:** 6x0.5=3
 (a) (b) <A> (c) <TABLE>
 (d) <MARQUEE> (e) (f) <TITLE>

Group 'D' QBASIC PROGRMMING [18 Marks]

- 12. Answer the following:** 2x1=2
 (a) What is control structure? Mention its types.
 (b) What is meant by library function? Give example.

- 13. Rewrite the following programs after correcting bugs:** 2
 REM program to print the even numbers from 1 to 10 and display their sum

```

CLS
FOR I = 1 TO 10
  S = S + I
  I = I + 2
NEXT I
PRINT I
PRINT "THE SUM IS"; S
END
  
```

- 14. Read the following program and answer the questions followed:** 2x1=2

```

CLS
A = 1
INPUT "Enter a number"; N
FOR I = 1 to N
  A = A*I
NEXT I
PRINT A
END
  
```

- (a) List out the variables used in the program.
 (b) What will be the output if the input number is 5?

- 15. Write the program:** 3x4=12
 (a) To determine whether the input number is prime or composite.
 (b) To input height and base and to calculate the area of a triangle. [$A = 1/2(B \cdot H)$]
 (c) To print the series: 2 8 18 32 up to 10th terms.

Model Question Set 2**Group A Fundamental (20 Marks)**

- 1. Answer the following questions:** 5x2=10
 a. Define e-Government. Write the benefits of it.
 b. What is IT Policy ? Write the importance of IT Policy for Nepal.
 c. Explain the role of control unit in computer operation.
 d. Define SDLC. Mention different stages of SDLC.
 e. What is memory of a computer? Differentiate between volatile and non-volatile memory.
- 2. i) Solve the following binary calculations:** 2x1=2
 a. $(1011011) + (100100) - (11111)$ b. $(100101001) / (1001)$
- ii) Convert the following:** 2x1=2
 a. $(55)_{10} = (?)_2$ b. $(456)_8 = (?)_{16}$
- 3. Write the full form of the following:** 4x5=2
 a) ICT b) BASIC c) NITC d) ASCII
- 4. Write technical term for the following:** 4x0.5=2
 a. Non-volatile memory of computer.
 b. Device that provide output in hard copy.
 c. The process of buying and selling products over the internet is called.
 d. A block of C.P.U. that is used to do logical operations.

5. Match the following columns:

4x0.5=2

Group "A"	Group "B"
System software	Non-volatile
RAM	Application software
MS_Access	e-government
EEPROM	Volatile
	Windows NT

Group "B" HTML (10 Marks)

6. Write the source code for the given output:

Staff Details				
S.No.	NAME	ADDRESS	PHONE	E-MAIL
1	ARUN	KOLAPUR	4567800	SWEET_YAHOO.COM
2	RUBINA	POKHARA	5676889	RUB_GMAIL.COM

- a. Apply bold tag in heading.
- b. Apply bold tag and underline tag in address.
- c. Apply italic tag in email address.

7. Answer the following questions:

3x2=6

- a. Define HTML. Write its basic tags.
- b. Differentiate between container tag and empty tag with examples.
- c. Write the purpose of the following:
 - i) <Hr>
 - ii) <A Href.>

Group "C" QBASIC Programming (20 Marks)

8. a) Define variable and constant with examples.
b) Write any four rules for writing a variable name.

2
2

9. Write the purpose of the following:

4x0.5=2

- a) MID\$() b) LEN() c) DIM d) SWAP

10. Debug the following program:

2

```

REM to calculate average
CLS
DIM A = 4
LET B = 6
LET C = 9
FOR K = 3 TO 1
    AVG = (A + B + C / N)
NEXT K
PRINT "AVERAGE OF GIVEN NUMBER IS" AVG
END
  
```

11. Read the following program and answer the given questions:

```

CLS
LET W = 34
P = W MOD 2
IF P = 0 THEN
    PRINT "THE NUMBER IS POSITIVE"
ELSE
    PRINT "THE NUMBER IS NEGATIVE"
END IF
END
  
```

- A. List out the variables used in the above program with their types.
- B. List out the operators used in the program along with their types.

2
2

12. a) Write a program to calculate simple interest
where SI = (PTR) / 100.
b) Write a program to input three different names and print the longest name.
c) Write a program to input ten different numbers then find and print the greatest number using array variable.

2
2
2

Model Question Set 3**Group 'A'**
Fundamentals [20 Marks]

1. **Answer the following questions:** $4 \times 2 = 8$
- Why is memory needed? Explain.
 - What is a modem? Where it is mostly used ?
 - What is compiler? List its two features.
 - What is micro computer? List its application area.
2. **Fill in the blanks with suitable words:** $4 \times 0.5 = 2$
- Magnetic tape is the most commonly used secondary storage medium.
 - The example of hard copy output is
 - ROM is a type of memory.
 - Bio-chips will be used in
3. **Write the full forms of the following:** $4 \times 0.5 = 2$
- | | | | |
|---------|---------|----------|---------|
| (a) VDU | (b) LED | (c) DRAM | (d) MHz |
|---------|---------|----------|---------|
4. **Match the following pairs:** $4 \times 0.5 = 2$
- | | | |
|-----------|-------|-----------------------|
| (a) CRT | (i) | Volatile |
| (b) RAM | (ii) | Output |
| (c) BASIC | (iii) | C |
| (d) HLL | (iv) | Multipurpose Language |
5. **Give the appropriate technical terms to the following:** $4 \times 0.5 = 2$
- A software used for displaying markup language.
 - Machine understandable language.
 - A device used for transmitting digital signal to analog and vice-versa.
 - A sensitive pen used as pointing device.
6. **Convert the following numbers:** 2
- | | |
|--------------------------|----------------------------|
| (i) $(4A5)_{16} = (?)_8$ | (ii) $(6507)_8 = (?)_{10}$ |
|--------------------------|----------------------------|
- (b) Perform the binary calculation: 2
- | | |
|--------------------------|--------------------------------|
| (i) $110 \div 10 + 1011$ | (ii) $(1010)_2 \times (101)_2$ |
|--------------------------|--------------------------------|

Group 'B'**Operating system [5 Marks]**

7. Why is OS considered as essential component of a computer system? Explain. 1
8. **Write down the commands to accomplish the following tasks:** $2 \times 1 = 2$
- To copy the file CONFIG . SYS from Drive C: to TEMP directory of A: drive.
 - To remove the directory PROGRAMS of A: drive without emptying it.
9. **Answer the following questions:** $2 \times 1 = 2$
- What is an active desktop?
 - Give the meaning of click and double-click.

Group 'C'
HTML [5 Marks]

10. **Answer the following questions:** $3 \times 1 = 3$
- Name the tag with attributes used for adding background image in HTML document.
 - What is hyperlink? Explain with example.
 - What do you know about URL? Explain.
11. **State true or false:** $4 \times 0.5 = 2$
- The <BG SOUND> tag can be used only in Internet Explorer.
 - HTML allows us to create different kinds of lists.
 - HTML is a markup language.
 - Every row of a table is defined by <TD> tag.

Group 'D'
Programming [20 Marks]

12. (a) What is a constant? List the different types of constant. 1
- (b) What is a logical operator? Explain. 1
- (c) Write the syntax and use of DO WHILE ... LOOP. 1
13. (a) Write an algorithm and draw a flowchart to read name, class and marks for five different subjects. Find the average. If the average is greater or equal to 40, Print "PASS", else Print "FAIL". 2

- (b) Rewrite the program using WHILE ... WEND statement.

```

CLS
FOR I = 1 TO 4
    FOR J = 1 TO 5
        PRINT (I + J) * 10
    NEXT J
NEXT I
END

```

2

14. Read the following program and answer the following questions:

```

READ U, V, W, X, Y, Z
PRINT U, V, W
PRINT
RESTORE
READ A, B, C, D, E, F
PRINT D, E, F
DATA 10, 20, 30, 40, 50, 60
END

```

4x1=4

- (a) What is the use of restore statement in the program?
- (b) What will happen if the data are insufficient?
- (c) How many variables are declared?
- (d) What will happen if the data are more than variables?

15. (a) Write a program to enter elements of any two matrices and final sum of them.
 (b) Write a program to convert IC (Indian Currency) into NC (Nepali Currency) and vice-versa.
 (c) Write a program for 5 students:
 (i) Input name of student & marks obtained out of 100 in 4 subjects &
 (ii) print student name & percentage of marks.

3

3

3

Model Question Set 4

Group 'A' (Computer Fundamentals–22 Marks)

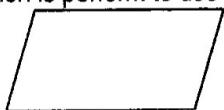
1. Answer the following questions: 5x2=10
- Hardware and software of computer co-operatively function. Justify.
 - How does use of computer improve quality of your life ? Justify.
 - List any two cyber law 2057 B.S. of Nepal.
 - What are the benefits of e-government?
 - Write the function of input and output unit.
2. a. Perform binary operations: 2x1=2
 (i) 10001×101 (ii) $101001 \div 111$
 b. Convert as instructed: 2x1=2
 (i) $(B21)_{16}$ into octal number system. (ii) $(725)_{10}$ into binary number system.
3. Fill in the blanks: 4x0.5=2
- Monitor and speakers are device.
 - memory is attached to the system board.
 - is the smallest computer of all.
 - Secondary memory stores data and instructions
4. State whether given statements are true or false: 4x0.5=2
- CPU is the main processing unit of computer.
 - Hard disk is a sequential data access medium.
 - Touch Pad is a pressure sensitive pad.
 - Computer can perform logical operations.
5. Give the full form of: 4x0.5=2
 ALU, WWW, IBM, ENIAC
6. Give the appropriate technical terms: 4x0.5=2
- Physical components of the computer.
 - A set of programs to carry out operations for a specific application.
 - A unit that manages all the computer resources.
 - An optical disk which enable pre-recorded data to be read.

Group 'B' (Operating System + Web Page Designing - 5 marks)

7. a. Write any two functions of operating system. 1
 b. Write any two functions of MS-Windows. 1
 c. Write the role of web server WWW. 1
 d. What is uploading and downloading? 1
 e. Write an example of each container and empty tag. 1

Group 'C' (Qbasic Programming - 23 marks)

8. a. Write the function of input and print statement. 1
 b. What function is perform to use given chart in the flowchart? 1



(i)



(ii)

9. Write the output of the given program: 2

```
CLS
A$="BHAKTAPUR"
FOR I = 1 to 9 step 2
PRINT MID$(A$,I,,1)
NEXT I
END
```

10. Rewrite the given program correcting the bugs: 2

```
CLS
REM to display 1st ten natural number
FOR I = 1 to 10 step 2
S = S + I
PRINT S
END
NEXT I
```

11. Read the given program and answer the given questions: 2x1=2

```
CLS
Let a = 2; b = 5
s = a + b
PRINT S
END
```

- a. If a = 0, then what is the value of output?
 b. What is the output in the given program if PRINT S is removed?

12. Write the program to ask the questions: 5x3=15

- a. to ask, length, breadth and calculate its area.
 b. to display given Fibonanci series, 1, 1, 2, 3, 5, 8.
 c. to ask a number and check whether it is even or odd.
 d. to ask few number and display in ascending order.
 e. to display the string 'NEPA' as given pattern.

```
NEPAL
EPA
P
```

Model Question Set 5
Group 'A'
Fundamentals [20 Marks]

1. Answer the following questions : 4x2=8
- (a) What are the disadvantages of computer?
 (b) Differentiate between analog and digital computer.
 (c) Why is CPU called 'brain' of computer ? Explain.
 (d) Differentiate between packaged and tailored software.
2. Fill in the blanks with suitable words : 4x0.5=2
- (a) Main memory is a device. (b) AT computer was released in
- (c) Fifth generation computer will use chips.
- (d) Microcomputers were introduced in generation of computer.

- 3. Write the full forms of the following :** **4×0.5=2**
(a) ALGOL (b) RPG (c) PROLOG
(d) LISP
- 4. Match the following pairs :** **4×0.5=2**
- | | | |
|---------------|-------|-------------------|
| (a) ROM | (i) | Fourth Generation |
| (b) Monitor | (ii) | Primary Memory |
| (c) VLSI | (iii) | Output device |
| (d) Photoshop | (iv) | DBMS |
| | (v) | Graphics |
- 5. Give the appropriate technical terms to the following:** **4×0.5=2**
(a) A subject in which students study about computer hardware and software.
(b) To control all the units of the computer.
(c) To supply regulated power to the computer even at the time of power-cut.
(d) To print engineering drawing.
- 6. (a) Convert the following numbers:** **2**
(i) $(6AD)_{16} = (?)_2$ (ii) $(4A7)_8 = (?)_2$
- (b) Perform the following calculation :** **2**
(i) $1010 \times 100 \div 10$ (ii) $100101 + 1001 - 110$
- Group 'B'**
Operating system [5 Marks]
- 7. What is the purpose of OS ?** **1**
8. Write the functions carried out by following DOS commands. **2×1=2**
(a) B :>ATTRIB +H ABC.DAT (b) REN C:\QBASIC*.BAS *.PRG
- 9. Answer the following questions:** **2×1=2**
(a) Name the types of window. (b) Define the term ICON.
- Group 'C'**
HTML [5 Marks]
- 10. Answer the following questions :** **3×1=3**
(a) What are the tools that you need to write HTML document ?
(b) Mention the purpose of start and end tag of HTML.
(c) List the attributes of tag.
- 11. Fill in the blanks :** **4×0.5=2**
(a) Unordered lists items are prepared by the tag.
(b) The attribute is used with tag to change the numbering style in lists.
(c) The tag is used to create links in a HTML document.
(d) The tag is used to create a table in HTML.
- Group 'D'**
Programming [20 Marks]
- 12.** (a) Define the term statement. List the different types of statement. **1**
(b) Write down the syntax and use of READ..... DATA statement. **1**
(c) What do you know about array? Explain. **1**
- 13.** (a) Draw a flowchart to check whether the entered number is prime or not. **2**
(b) Write the output of the program.
- ```
CLS
A = 2
B = 1
PRINT A;
PRINT B;
C = 3
WHILE c <= 10
 Z = A + B
 PRINT Z
 S = S + Z
 A = B
 B = Z
 C = C + 1
WEND
ENG
```

**14. Read the following program and answer the following questions:**

4x1=4

```

CLS
DIM A(10, 10), B(10, 10)
REM INPUT MATRIX A
FOR I = 1 TO 10
FOR J = 1 TO 10
INPUT A(I, J)
NEXT J : NEXT I
REM INPUT MATRIX B
FOR K = 1 TO 10
FOR L = 1 TO 10
INPUT B(K, L)
NEXT L : NEXT K
REM ADD A WITH B TO FORM MATRIX C
FOR I = 1 TO 10
FOR J = 1 TO 10
C(I, J) = A(I, J) + B(I, J)
PRINT C(I, J)
NEXT J : NEXT I
END

```

- (a) What is the purpose of the program ?
- (b) Count the number of variables used in the program.
- (c) How many loops are declared in the program?
- (d) Mention the purpose of dim a(10, 10) & B(10, 10).

**15.A. (a) Write a program to find sum of following series  $S = 1^2 + 2^2 + 3^2 + \dots + 10^2$** 

1.5

- (b) Write a program to display the following series: 2, 4, 8, 16, ..., 10<sup>th</sup> terms

1.5

**B. Write a program to find sum of digits of any number. [Example: 125 = 1 + 2 + 5 = 8]****C. Write a program to print the word given by user in reverse order.**

3

**Model Question Set 6****Group 'A'****Fundamentals [20 Marks]****1. Answer the following questions:**

4x2=8

- (a) Define system software. Explain with examples.
- (b) Explain flowchart and algorithm with examples.
- (c) What is a secondary storage media? Why it is needed?
- (d) What is a super computer? Explain.

**2. Fill in the blanks with suitable words :**

4x0.5=2

- (a) ..... were used in first generation of computer.
- (b) All the physical parts of computer is known as .....
- (c) XT computers was released in .....
- (d) A program stored in ROM as .....

**3. Write the full forms of the following :**

4x0.5=2

- (a) FORTRAN
- (b) LED

(c) VDU

(d) COBOL

**4. Match the following pairs :**

4x0.5=2

- (a) MS DOS
- (b) COBOL
- (c) magnetic Tape
- (d) ALU

- (i) Commercial Language
- (ii) OS
- (iii) Hardware
- (iv) Storage media
- (v) Component of CPU.

- 5.** Give the appropriate technical terms to the following : 4x0.5=2
- A machine that operates on data expressed in discontinuous signals.
  - To translate one statement of program at a time.
  - A peripheral device for producing text, images on paper for present & future use.
  - To perform mathematical and logical operations.
- 6.** (a) Convert the following numbers : 2
- $(6A7B)_{16} = (?)_8$
  - $(1001)_2 = (?)_8$
- (b) Perform the binary calculation : 2
- $(11101)_2 \times (101)_2$
  - $10101 + 101 - 1001$
- Group 'B'**
- Operating system [5 Marks]**
- 7.** Mention any two differences between DOS and Windows.
- 8.** Write down the commands to accomplish the following tasks : 2x1=2
- Delete all files with extension .DOC belonging to the word directory of C: drive.
  - To hide file name XYZ.DOC.
- 9.** Answer the following questions: 2x1=2
- Why do we need windows ?
  - Define shortcut.
- Group 'C'**
- HTML [5 Marks]**
- 10.** Answer the following questions : 3x1=3
- What is a Web Page? Explain.
  - Write the attributes of `<font>` tag.
  - Write any two examples of markup language.
- 11.** Fill in the blanks : 4x0.5=2
- The ..... tag is used to add image to a HTML document.
  - ..... tag is used to specify the background color for the page.
  - The commonly used browsers are ..... and .....
  - The property of tag is called .....
- Group 'D'**
- Programming [20 Marks]**
- 12.** (a) List different logical operators.  
 (b) Write down the syntax of FOR ..... NEXT statement.  
 (c) What is a function ? Explain. 1
- 13.** (a) Draw a flowchart to print sum of odd numbers up to 100.  
 (b) Rewrite the program using WHILE ... WEND statement. 2
- 14.** Read the following program and answer the following questions: 4
- ```

CLS
DIM A$(100)
READ N
FOR I = 1 TO N
READ A$(I)
NEXT I
FOR J = 1 TO N - 1
FOR K = 1 TO N - J
IF A$(K) <= A$(K + 1) THEN 160
P$ = A$(K)
A$(K) = A$(K + 1)
A$(K + 1) = P$
160 NEXT K
NEXT J
FOR M = 1 TO N
PRINT A$(M)
NEXT M
DATA 4, "RAJAN", "MALA", "ALI", "KAPIL"
END

```
- What is the purpose of the program?
 - Count the statement used in the program.
 - "The program is possible without use of array." Justify.
 - Write down the output of program.
- 15.** (a) Write a program to enter any digit of number and find the greatest digit.
 (b) Write a program to enter name, age and telephone number of 5 different students and print them in tabular form.
 (c) Write a program to ask any 10 different numbers from the user and find the greatest and smallest numbers among them. 3

Model Question Set 7**Group 'A' (QBASIC)**

- 1. Answer the following questions:** 3x2=6
- What is an operator? List types of operators used in QBASIC.
 - What is a user defined function? List any four functions used in QBASIC.
 - What is an array?
- 2. a. Convert as instructed:** 2x1=2
- (i) $(7654)_8 = (?)_{16}$ (ii) $(165)_{10} = (?)_2$
- b. Perform Binary operations:** 2x1=2
- (i) $1111 + 1110 - 1011$ (ii) Divide 11010110 by 111
- 3. Write the following programs (any three):** 3x2=6
- To accept length and breadth of a rectangle and display its area and perimeter.
 - To accept a number from a user and display whether it is perfect number or not.
 - To accept any ten numbers from a user and display the sum of odd number among them using an Array.
 - To accept a number from a user and display its factorial.
- 4. Write programs to generate the following number series (any three):** 3x2=6
- 1, 1, 2, 3, 5, 8, up to 15th terms.
 - 100, 98, 95, 91, 86, up to 15th terms
 - 1, 4, 9, 16, 25, 100
 - 5, 25, 125, up to 6th terms.
- 5. Write programs to generate the following patterns (any two):** 2x2=4
- | | | |
|--------------|------------------|-----------|
| a. 1 2 3 4 5 | b. P O K H A R A | c. 1 |
| 2 3 4 5 | O K H A R | 1 2 |
| 3 4 5 | K H A | 1 2 3 |
| 4 5 | H | 1 2 3 4 |
| 5 | | 1 2 3 4 5 |
- 6. a. What will be the output of the following program? (Show program execution table)** CLS
- ```
DATA Laxmi, Roshni, Roman, Samar
FOR A = 1 TO 5
 READ N $
 C$ = C$ + MID$(N$, A, 1)
NEXT A
PRINT "Result="; C$
END
```
- b. Rewrite the following program correcting the bugs:** 2x1=2
- ```
REM to display the reverse of the number.
CLS
INPUT "Enter any number"; N$
DO WHILE N$ <> 0
    B = 10 MOD N$
    R = B * 10 + R
    N$ = N$/10
LOOP
PRINT "Reverse number is"; R
END
```
- c. Study the following program and answer the question:** 1
- ```
CLS
OPTION BASE 1
DIM N (5) AS INTEGER
FOR P = 1 TO 5
 READ N (P)
 IF N(P) MOD 3 = 0 AND N(P) MOD 4 = 0 THEN S = S + N(P)
NEXT P
DATA 12, 30, 60, 50, 24
PRIM "Result = "; S
END
```
- What is the output of the above program ?

7. Write the following programs (any three): 3x3=9
- To accept a word from a user and count the total number of vowels present in it.
  - To accept a word from a user and check whether it is palindrome word or not.
  - To accept any ten numbers from a user and display them in ascending order using an Array.
  - To accept any ten numbers from a user and display the greatest number among them using a Array.
- Group B (Database)**
8. Answer the following questions: 3x2=6
- What is database? List any four examples of database.
  - Write any four advantages of DBMS.
  - What is Query? List any two uses of Query.
9. Choose the correct answer: 4x0.5=2
- A row in a table is known as
 

|           |             |              |                |
|-----------|-------------|--------------|----------------|
| (i) field | (ii) record | (iii) column | (iv) attribute |
|-----------|-------------|--------------|----------------|
  - Field size of Yes/No data type is ..... in Access.
 

|           |             |               |              |
|-----------|-------------|---------------|--------------|
| (i) 1 bit | (ii) 1 byte | (iii) 8 bytes | (iv) 16 bits |
|-----------|-------------|---------------|--------------|
  - Which component of MS-Access is used to prepare ready to print document?
 

|           |           |              |           |
|-----------|-----------|--------------|-----------|
| (i) Query | (ii) form | (iii) report | (iv) none |
|-----------|-----------|--------------|-----------|
  - What is the extension of MS-Access database file ?
 

|          |           |            |           |
|----------|-----------|------------|-----------|
| (i) .MBD | (ii) .MDB | (iii) .DBF | (iv) .ADB |
|----------|-----------|------------|-----------|
10. Match the following parts: 4x0.5=2
- | <b>Group A</b> | <b>Group B</b>                                 |
|----------------|------------------------------------------------|
| Memo           | - to stop duplication of the record in a table |
| Primary key    | - field property                               |
| Default value  | - can hold up to 65536 characters              |
| Oracle         | - can hold up to 2048 characters               |
|                | - DBMS software                                |

### Model Question Set 8

#### Group 'A'

#### Fundamentals [20 Marks]

1. Answer the following questions: 4x2=8
- Write down the functions of system software.
  - Define software with any four examples of it.
  - Write any two advantages of flowchart.
  - What do you know about monitor? Explain.
2. State true or false: 4x0.5=2
- ROM is permanent memory.
  - Hard disk is also used as backup memory.
  - Pen drive is used as secondary storage.
  - QBASIC is a low-level language.
3. Write the full forms of the following: 4x0.5=2
- IBM PC
  - IKBS
  - CMOS
  - OCR
4. Match the following pairs: 4x0.5=2
- |                                                   |                                                                                                                             |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| (a) HTML<br>(b) Hard disk<br>(c) ALL<br>(d) Modem | (i) Direct storage access<br>(ii) Low level language<br>(iii) Markup language<br>(iv) High level language<br>(v) Peripheral |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
5. Give the appropriate technical terms to the following: 4x0.5=2
- Electronically store printed data.
  - A peripheral device which does mathematical as well as logical operations.
  - A type of program known by user.
  - A device loses the stored information in a very short time if power supply is on.
6. (a) Convert the following numbers: 2
- $(7410)_{10} = (?)_{16}$
  - $(7406)_8 = (?)_{10}$
- (b) Perform binary calculation: 2
- $111001 - 1010$
  - $(10100)_2 \times (1010)_2$

**Group 'B'****Operating system [5 Marks]**

7. Mention any two reasons why window is more popular than DOS. 1
8. Write the functions carried out by following DOS commands: 2x1=2
- (a) C :> X COPY \TEMP\ \* .. \S D:\ .. (b) C :> COPY C :\MYFILES\ \* .. .DOC A:\DATA
9. Answer the following questions: 2x1=2
- (a) List the uses of wizard. (b) Give the meaning of 'Drag'.

**Group 'C'****HTML [5 Marks]**

10. Answer the following questions: 3x1=3
- (a) For what purpose is text tag used ? (b) How can links be created? Explain.
- (c) What is meant by email? Explain?
11. State true or false: 4x0.5=2
- (a) Pictures in HTML documents cannot be used as links. (b) Font color cannot be used with <font> tag.
- (c) HTML is basic for markup language. (d) The collection of Web Page is called Web Site.

**Group 'D'****Programming [20 Marks]**

12. (a) Give any two features of QBasic. 1  
 (b) Define the term array with examples. 1  
 (c) What is operator? Explain with example. 1
13. (a) Write the disadvantages of flowchart. List its symbol. 2  
 (b) Write the output of the program. 2

```
FOR I = 1 TO 3
```

```
LET J = 1
```

```
WHILE J <= 4
```

```
LET B = I * J
```

```
PRINT B;
```

```
LET J = J + 1
```

```
WEND
```

```
PRINT
```

```
NEXT I
```

```
END
```

14. Read the following program and answer the following questions: 4x1=4

```
CLS
N = 36
FOR I = 1 TO N - 1
 IF N MOD I = 0 THEN
 IF I = 1 OR I = 2 OR I = 3 THEN
 PRINT I;
 END IF
 IF I >= 4 THEN
 FOR J = 2 TO I - 1
 IF I MOD J = 9 THEN
 GOTO X
 END IF
 NEXT J
 PRINT I;
 END IF
 END IF
NEXT I
```

X:

NEXT I

END

- |            |                                                                                                                                         |     |                                          |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------|
| (a)        | Write the output of the program.                                                                                                        | (b) | Count the variables used in the program. |
| (c)        | What will be output of the program if the value of N = 10.                                                                              |     |                                          |
| (d)        | What is the function of MOD which is used in the program.                                                                               |     |                                          |
| <b>15.</b> | (a) Write a program to enter any sentence and count total number of vowels, consonants and spaces.                                      |     | 3                                        |
|            | (b) Write a program to display fibonacci series up to $n^{\text{th}}$ terms by using DIM statement.                                     |     | 3                                        |
|            | (c) Write a program to enter any two numbers and find addition, subtraction, multiplication and division by sing SELECT CASE statement. |     | 3                                        |

### **Model Question Set 9**

#### Group 'A' - [Fundamentals - 18 marks]

- |                                        |                                                              |                                     |
|----------------------------------------|--------------------------------------------------------------|-------------------------------------|
| <b>1.</b>                              | <b>Answer the following questions:</b>                       | <b>5x2=10</b>                       |
| a)                                     | List the main component used in each generation of computer. |                                     |
| b)                                     | Mention the features of the second generation computers.     |                                     |
| c)                                     | Differentiate between primary memory and secondary memory.   |                                     |
| d)                                     | Define input and output devices with suitable examples.      |                                     |
| e)                                     | What are the limitations of computer?                        |                                     |
| <b>2.</b>                              | <b>(a) Convert as indicated:</b>                             | <b>4x1=4</b>                        |
| i)                                     | $(178)_{10}$ into Octal                                      | ii) $(1045)_8$ into Binary          |
| iii)                                   | $(1AB)_{16}$ into Decimal                                    | iv) $(10010100)_2$ into Hexadecimal |
| <b>(b) Perform binary calculation:</b> |                                                              | <b>4x1=4</b>                        |
| i)                                     | $11011001 + 101010$                                          | ii) $11011 \times 110$              |
| iii)                                   | $101101101 - 1011111$                                        | iv) $101011010 \div 111$            |

#### Group 'B' - [Programming - 25 Marks]

- |                                                                                                                                                                                                                             |                                                             |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------|
| <b>3.</b>                                                                                                                                                                                                                   | <b>Answer the following questions:</b>                      |          |
| (a)                                                                                                                                                                                                                         | Differentiate between LEFT\$ and RIGHT\$ functions.         | 1        |
| (b)                                                                                                                                                                                                                         | Differentiate between SUB procedure and FUNCTION procedure. | 1        |
| (c)                                                                                                                                                                                                                         | Write down the use of following statements.                 | 1        |
|                                                                                                                                                                                                                             | i) INPUT      ii) PRINT                                     |          |
| <b>4.</b>                                                                                                                                                                                                                   | <b>Re-write the given programming correcting the bugs:</b>  | <b>2</b> |
| DECLARE SUB Series ()<br>CLS<br>EXECUTE Series<br>END<br>SUB Series ()<br>REM program to generate 3 6 9 12..... up to 20 <sup>th</sup> terms.<br>A=3<br>FOR ctr=10 To 1<br>DISPLAY A;<br>A=A+3<br>NEXT ctr<br>END series () |                                                             |          |
| <b>5.</b>                                                                                                                                                                                                                   | <b>Write down the output of the following program:</b>      | <b>2</b> |

```
DECLARE FUNCTION AREA (A, B)
CLS
LET A=30
LET B=40
LET D=AREA (A, B)
PRINT D
END
FUNCTION AREA (A, B)
PRINT A, B
AREA=A*B
END FUNCTION
```

- 6. Code the program for the following problems:** 6x3=18
- Write a program in QBASIC to find the area of four walls of a room using FUNCTION...END FUNCTION.  
[Hint A=2h (l + b)]
  - Write a program in QBASIC to display the following series : 5 55 555.....up to 6<sup>th</sup> terms using a sub procedure.
  - Write a program that asks any two numbers and displays the greater one.
  - Write a program that asks your name and displays its reverse.
  - Write a program to display the first 100 natural numbers.
  - Write a program that asks any number and checks whether it is odd or even.
- Group 'C' - [HTML - 7 Marks]**
- 7. Write down the use of following HTML tags with an example:** 3
- <BR>
  - <OL>
  - <IMG>
- 8. Create a web page using HTML. (Write down the HTML tags and their possible output).** 4

### Model Question Set 10

#### Group 'A'

##### Fundamentals [20 Marks]

- 1. Answer the following questions:** 4x2=8
- Why is computer called diligence machine? Explain.
  - Define hybrid computer. List its uses.
  - Differentiate between RAM and ROM.
  - List the advantages of non-impact printers over impact printers.
- 2. Fill in the blanks with suitable words:** 4x0.5=2
- IC was patented by ..... in .....
  - First electronic computer was .....
  - CU is the component of .....
  - ..... is a packaged software.
- 3. Write the full forms of the following:** 4x0.5=2
- CPU
  - MDA
  - ENIAC
  - LCD
- 4. Match the following pairs:** 4x0.5=2
- |                |                      |
|----------------|----------------------|
| (a) 64 KB      | (i) Soft copy output |
| (b) Monitor    | (ii) A – D. 1620     |
| (c) Slide Rule | (iii) 65,536 Bytes   |
| (d) BIT        | (iv) bmp             |
|                | (v) Binary Digit     |
- 5. Give the appropriate technical terms to the following:** 4x0.5=2
- Any type of mistake caused by missing comma, mismatching semicolon, etc.
  - A device which uses thermal conductivity, electrostatic, laser beam for producing text or images.
  - Removing the bug.
  - A specific software
- 6. (a) Convert the following numbers:** 2
- $(10101)_2 = (?)_{10}$
  - $(10110)_2 = (?)_{16}$
- (b) Perform the following binary calculation:** 2
- $1010 + 10 - 101$
  - $(10101)_2 \times (101)_2$

#### Group 'B'

##### Operating system [5 Marks]

- 7. List examples of any four OS.** 1
- 8. Write down the functions carried out by the following DOS commands:** 2x1=2
- C :\MYDOCS>VOL D:
  - C :\>DIR A:\BACKUP\ \* .BAS
- 9. Answer the following questions:** 2x1=2
- What is the purpose of Recycle Bin?
  - What is a system message?

**Group 'C'**

**HTML [5 Marks]**

**Answer the following questions:**

**3x1=3**

- List the name of any four commercial websites name.
- What are comments? How can you add comments to your HTML code?
- Write the attributes of <P> tag.

**11. State true or false:**

**4x0.5=2**

- An HTML document once written cannot be modified.
- The <br> tag is used to create a line break.
- HTML documents can contain text, images and links to other documents.
- HTML is a markup language.

**Group 'D'**

**Programming [20 Marks]**

**12. (a) Define one-dimensional array with example.**

**1**

**(b) What is a data type?**

**1**

**(c) Write down the syntax and use of TAB command.**

**1**

**13. (a) Draw a flowchart to print the series 1, 1, 2, 3, 5, ..... up to 10<sup>th</sup> term.**

**2**

**(b) Rewrite the following program using WHILE ... WEND.**

**2**

**CLS**

**DIM A (3, 4)**

**FOR I = 1 TO 3**

**FOR J = 1 TO 4**

**READ A (I, J)**

**PRINT A (I, J);**

**NEXT I**

**PRINT T**

**NEXT I**

**DATA 5 10 15 20**

**DATA 10 15 20 25**

**DATA 15 20 25 30**

**END**

**14. Read the following program and answer the following questions:**

**4x1=4**

**CLS**

**PRINT "Input any number";**

**INPUT N\$**

**L = LEN (N\$)**

**R\$ = "**

**FOR X = L TO 1 STEP -1**

**R\$ = R\$ + MID \$ (N\$, X, 1)**

**NEXT X**

**PRINT "The reverse order is"; R\$**

**END**

**(a) What is the purpose of the program?**

**(b) Mention the function of LEN, MID function.**

**(c) In this program, the value of N\$ is used as number or string. List it.**

**(d) Count the number of variable declared in the program.**

**15. (a) Write a program to input user defined number and find sum of even and odd numbers.**

**3**

**(b) Write a program to sort numbers in ascending order.**

**3**

**(c) Write a program to find the average within user defined number by using array.**

**3**

# Final Examination, 2074

## 1. Occidental Public School (2074)

Time: 1 hour 30 minutes

Ful Marks: 50

### Group A (Fundamental – 20 Marks)

1. Answer the following questions: 5x2=10
  - a) What are the major characteristics of modern computer? Explain any two of them.
  - b) What is e-government? What are its services?
  - c) "Computer technology has changed in communication". Justify this statement.
  - d) List out any four objectives of IT policy of Nepal.
  - e) Differentiate between Impact printer and Non-impact Printer.
2. a. Convert the following as directed: 2x1=2
  - (i)  $(45)_{10}$  into Binary
  - (ii)  $(101101)_2$  into Decimal
- b. Perform the following binary calculations: 2x1=2
  - (i) Divide  $(1010101)$  by  $(110)$
  - (ii)  $101010 - 11011$
3. Write full forms of the following: 4x0.5=2

VSAT, GPS, CBT, NITC
4. State True/False for the following: 4x0.5=2
  - a) A device that converts analog signal to digital and vice versa.
  - b) The area of ICT is limited to our society.
  - c) Computer technology is used just for information processing.
  - d) Compiler processes Binary language.
5. Write the technical terms for the following: 4x0.5=2
  - a) Program that reads a statement of the source program and translates into machine codes.
  - b) The set of instructions.
  - c) Codes before the compilation of process of a program.
  - d) Network of networks.

### Group B (OS+HTML– 12 Marks)

6. Answer these questions: 3x2=6
  - a) Define Multi User OS. Give any two examples.
  - b) What is GUI?
  - c) What is Website? Name some popular websites.
7. Write the attribute for the following tags: 4x1=4
  - (iii) `<marquee>`
  - (iv) `<p>`
8. Write HTML codes to display the given paragraph. 2  

A computer network often simply referred to as a network, is a collection of hardware components and computers interconnected by communication channels that allows sharing of resources and information.

### Group C (Programming- 18 Marks)

9. Answer these questions: 1
  - a. What do you mean by explicit declaration?
  - b. Write the purpose of the following statements. 2x1=2
    - (i) `LCASE$()`
    - (ii) `LEN()`
10. Draw flowchart for finding whether input number is PRIME or COMPOSITE. 2
11. Find the output:  
  - CLS
  - S\$="Information"
  - FOR K = LEN(S\$) TO 1 STEP-1
  - W\$ = MID\$(S\$, K, 1)
  - X\$ = W\$ + X\$
  - NEXT
  - PRINT X\$
  - END2

- 12. Rewrite the program after debugging it:** 2  
 REM to generate series; 1,1,2,3,5,.....upto 10<sup>th</sup> term.  
 CLS  
 X=1  
 Y=0  
 FOR K = 5 TO 1  
     PRINT X; Y;  
     X=X+X  
     Y=Y+Y  
 NEXT  
 END
- 13.** a. Write a program to input a number then check and print whether it is PALINDROME or not? 3  
 b. Write a program to input a number and print the PRODUCT of digits of it. (e.g 124=8) 3  
 c. Construct a QBASIC program to accept a sentence and count total number of WORDS characters in it. 3  
 (e.g. My Nepal My Pride = 4)

## 2. Joint Examination Committee (2074)

### Group 'A' (Computer Fundamental)

[20 marks]

- 1. Answer the following questions:**  $4 \times 2 = 8$   
 a) Write down the names of switching device of all the generation of computer.  
 b) List any two advantages of hard disk over floppy disk.  
 c) Differentiate between impact and non-impact printer.  
 d) What is CPU? What are the sections of CPU?
- 2. Write down the full form for the following:**  $4 \times 0.5 = 2$   
 a) BIOS      b) CRT      c) BASIC      d) BCR
- 3. State whether the following statements are true or false:**  $4 \times 0.5 = 2$   
 a) Mark I was invented by Howard Aiken.  
 b) The secondary memory is long term memory used to store program and data for the future reference.  
 c) A typical 3.5 inch floppy disk holds 1.2 MB of data.  
 d) John Napier invented Napier's bone in 1690.
- 4. Match the following:**  $4 \times 0.5 = 2$   
 a) ROM                  fourth generation  
 b) Digital camera      primary memory  
 c) VLSI                 DBMS  
 d) Photoshop            input device  
                           graphics
- 5. Write the technical term for each of the following statements:**  $4 \times 0.5 = 2$   
 a) A specialized computer display that projects an enlarged image on a movie screen.  
 b) An input device which converts text or images into digital form.  
 c) A computer that features the best characteristics of analog and digital computer.  
 d) A device used to play computer games and control the cursor.
- 6. Convert the following as indicated:** 2  
 a) i) 1011011<sub>2</sub> into decimal  
     ii) (123)<sub>8</sub> into decimal  
 b) perform the following binary calculation:  $2 \times 1 = 2$   
     i) (11101)<sub>2</sub> + (11010)<sub>2</sub>  
     ii) (11101)<sub>2</sub> + (110)<sub>2</sub>

### Group 'B' (Operating System)

[5 marks]

- 7. Define operating system.** 1
- 8. Write down the function carried out by the following DOS commands:** 2  
 i) D:\>TYPE KRISHNA.TXT  
 ii) C:\>COPY C:\HARI\\*.TXT E:\
- 9. Write down MS-DOS commands to do following tasks:** 2  
 i) to display the contents of drive C:  
 ii) delete all the files with extension .DOC belonging to the DInesh directory of drive C.

|  |                                                                                                                                                                                                                                                                                             |                               |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|  | <b>Group 'C' (HTML)</b>                                                                                                                                                                                                                                                                     | [5 marks]<br>$3 \times 1 = 3$ |
|  | <b>10. Answer the following questions:</b>                                                                                                                                                                                                                                                  |                               |
|  | a) Name any two browsers.<br>b) What is the function of <IMG SRC> code in HTML?<br>c) What is the use of BEHAVIOUR attribute in HTML?                                                                                                                                                       |                               |
|  | <b>11. Fill in the blanks with suitable word:</b>                                                                                                                                                                                                                                           | $4 \times 0.5 = 2$            |
|  | a) The largest heading size of HTML tag is .....<br>b) ..... is the native protocol of the internet and required for internet connectivity.<br>c) ..... is an easy to use markup language used to develop web pages.<br>d) ..... attribute displays a solid black line that has no shading. |                               |
|  | <b>Group 'C' (Programming)</b>                                                                                                                                                                                                                                                              | [20 marks]                    |
|  | <b>12. a) What is variable? List the various types of variable.</b>                                                                                                                                                                                                                         | 1                             |
|  | <b>b) Mention any two features of QBASIC.</b>                                                                                                                                                                                                                                               | 1                             |
|  | <b>c) What do you mean by array?</b>                                                                                                                                                                                                                                                        | 1                             |
|  | <b>13. a) Draw a flowchart to find out the greatest number among three different numbers.</b>                                                                                                                                                                                               | 2                             |
|  | b) Write down the output of the following program:<br><pre>CLS<br/>N=1<br/>FOR J=1 TO 5<br/>PRINT N<br/>N = 10*N+1<br/>NEXT J<br/>END</pre>                                                                                                                                                 | 2                             |
|  | <b>14. a) Read the following program and answer the given questions:</b>                                                                                                                                                                                                                    | 2                             |
|  | <pre>CLS<br/>X=5<br/>FOR K=1 TO X<br/>S=S + K<br/>NEXT K<br/>END</pre>                                                                                                                                                                                                                      |                               |
|  | i) What will be the output of the above program?<br>ii) Find the result if the line S=S+K is replaced with S=S+K^2.                                                                                                                                                                         |                               |
|  | <b>b) Rewrite the following program after correcting bugs:</b>                                                                                                                                                                                                                              | 2                             |
|  | <pre>CLS<br/>REM to find the product of 10 natural numbers<br/>FOR I=1 TO 10<br/>P=P*X<br/>REPEAT I<br/>PRINT Product = p<br/>END</pre>                                                                                                                                                     |                               |
|  | <b>15. a) Write a program to find the smallest number among three numbers.</b>                                                                                                                                                                                                              | 3                             |
|  | <b>b) Write a program to check whether a letter is vowel or consonant.</b>                                                                                                                                                                                                                  | 3                             |
|  | <b>c) Write a program to generate the multiplication table of 7.</b>                                                                                                                                                                                                                        | 3                             |

**3. PABSON (Morang) (2074)**

|  |                                                                                                                                                                                                                                                                                                                                    |                                |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|  | <b>Group 'A' (Fundamental of Computer)</b>                                                                                                                                                                                                                                                                                         | [20 marks]<br>$4 \times 2 = 8$ |
|  | <b>1. Answer the following questions:</b>                                                                                                                                                                                                                                                                                          |                                |
|  | (a) What is a computer system? Enlist two output devices of a computer system.<br>(b) Define generation of computer. List any two features of the first generation of computers.<br>(c) What is e-Government? Mention advantages of e-Government.<br>(d) Define software. Name the different types of system software.             |                                |
|  | <b>2. Mention true or false for or against the following statements:</b>                                                                                                                                                                                                                                                           | $4 \times 0.5 = 2$             |
|  | (a) The secondary memory is the long-term memory used to store programs and data for future reference.<br>(b) 1 MB (mega byte) is a unit of computer memory equals to 1,024 kb.<br>(c) All digital computers are special purpose computer.<br>(d) E-commerce allows people to buy and sell different products and services online. |                                |

|                                                                         |                                                                                      |                   |                        |                        |                      |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------|------------------------|------------------------|----------------------|
| <b>3.</b>                                                               | <b>Mention the full-forms of the following abbreviations:</b>                        | <b>4×0.5=2</b>    |                        |                        |                      |
| (a)                                                                     | ATM                                                                                  | (b) PDA           | (c) GIGO               | (d) TB                 |                      |
| <b>4.</b>                                                               | <b>Choose the correct answer from the given option:</b>                              | <b>4×0.5=2</b>    |                        |                        |                      |
| (a)                                                                     | The first integrated circuit was developed by:                                       | i. Jack Kilby     | ii. Dr. Marcian Edward | iii. Balise Pascal     | iv. William Shockley |
| (b)                                                                     | Which of the following is volatile memory?                                           | i. ROM            | ii. RAM                | iii. DVD               | iv. Pen-drive        |
| (c)                                                                     | The speed of CPU is measured in:                                                     | i. Megahertz      | ii. Bits               | iii. MBPS              | iv. All of the above |
| (d)                                                                     | Programming language that uses mnemonics:                                            | i. 4GL            | ii. Machine language   | iii. Assembly language | iv. Interpreter      |
| <b>5.</b>                                                               | <b>Mention the technical term for the following definition:</b>                      | <b>4×0.5=2</b>    |                        |                        |                      |
| (a)                                                                     | The main circuit board of the computer where different components are installed.     |                   |                        |                        |                      |
| (b)                                                                     | The main information processor in digital computer capable of executing a program.   |                   |                        |                        |                      |
| (c)                                                                     | A pointing device which is just like an inverted mouse.                              |                   |                        |                        |                      |
| (d)                                                                     | The founder of IBM.                                                                  |                   |                        |                        |                      |
| <b>6.</b>                                                               | <b>a. Perform the following binary calculations:</b>                                 | <b>2×1=2</b>      |                        |                        |                      |
| i.                                                                      | $(1011101)_2 + (1110111)_2$                                                          | ii.               | $(11101)_2 * (111)_2$  |                        |                      |
| <b>b.</b>                                                               | <b>Convert the following as indicated:</b>                                           | <b>2×1=2</b>      |                        |                        |                      |
| i.                                                                      | $(CAD)_{16}$ into Octal                                                              | ii.               | $(564)_8$ into Decimal |                        |                      |
|                                                                         | <b>Group 'B' (Operating System)</b>                                                  | <b>[5 marks]</b>  |                        |                        |                      |
| <b>7.</b>                                                               | <b>Name any two system files required for booting a computer.</b>                    | <b>1</b>          |                        |                        |                      |
| <b>8.</b>                                                               | <b>Mention the function of the following commands:</b>                               | <b>2×1=2</b>      |                        |                        |                      |
| (a)                                                                     | C:\>DATE 11-11-2018                                                                  |                   |                        |                        |                      |
| (b)                                                                     | D:\COPY CON REKO.TXT                                                                 |                   |                        |                        |                      |
| <b>9.</b>                                                               | <b>Answer the following questions:</b>                                               | <b>2×1=2</b>      |                        |                        |                      |
| (a)                                                                     | Define recycle bin.                                                                  |                   |                        |                        |                      |
| (b)                                                                     | What is desktop?                                                                     |                   |                        |                        |                      |
|                                                                         | <b>Group 'C' (HTML)</b>                                                              | <b>[5 marks]</b>  |                        |                        |                      |
| <b>10.</b>                                                              | <b>Answer the following questions:</b>                                               | <b>3×1=3</b>      |                        |                        |                      |
| (a)                                                                     | Why is <BR> tag used?                                                                |                   |                        |                        |                      |
| (b)                                                                     | Which attribute of BODY tag is used to change the text color?                        |                   |                        |                        |                      |
| (c)                                                                     | Mention any two tags for formatting text.                                            |                   |                        |                        |                      |
| <b>11.</b>                                                              | <b>State true or false for or against the following statements:</b>                  | <b>4×0.5=2</b>    |                        |                        |                      |
| (a)                                                                     | <HR> tag is used for drawing vertical line.                                          |                   |                        |                        |                      |
| (b)                                                                     | <P> tag is an empty element.                                                         |                   |                        |                        |                      |
| (c)                                                                     | <Table> tag is used for creating table in HTML.                                      |                   |                        |                        |                      |
| (d)                                                                     | <H1> is the smallest heading level.                                                  |                   |                        |                        |                      |
|                                                                         | <b>Group 'D' (Programming)</b>                                                       | <b>[20 marks]</b> |                        |                        |                      |
| <b>12.</b>                                                              | <b>Answer the following questions:</b>                                               | <b>3×1=3</b>      |                        |                        |                      |
| (a)                                                                     | What is keyword?                                                                     |                   |                        |                        |                      |
| (b)                                                                     | Define nested loop.                                                                  |                   |                        |                        |                      |
| (c)                                                                     | List any two naming conventions of a variable.                                       |                   |                        |                        |                      |
| <b>13.</b>                                                              | <b>(a) Draw a flowchart to enter an integer and check whether it is even or odd.</b> | <b>2</b>          |                        |                        |                      |
| <b>(b) Mention the function of the following functions with syntax.</b> |                                                                                      | <b>2</b>          |                        |                        |                      |
| i.                                                                      | LEFT\$( )                                                                            | ii.               | SIN( )                 |                        |                      |
| <b>14. (a)</b>                                                          | <b>Mention the output of the given program.</b>                                      | <b>2</b>          |                        |                        |                      |
|                                                                         | CLS                                                                                  |                   |                        |                        |                      |
|                                                                         | FOR I = 12 To 7 STEP - 2                                                             |                   |                        |                        |                      |
|                                                                         | PRINT (I^2) + 2                                                                      |                   |                        |                        |                      |
|                                                                         | NEXT I                                                                               |                   |                        |                        |                      |
|                                                                         | END                                                                                  |                   |                        |                        |                      |

- (b) **Debug the given program.** 2  
 REM TO DISPLAY SUM OF NUMBERS FROM 1 TO 100  
 CLS  
 LET S=0  
 ??? J=1 TO 100  
 ???? =S + J  
 NEXT I  
 DISPLAY S  
 END
15. **Analyse the program and answer the following questions:** 3x1=3  
 CLS  
 INPUT "ENTER A NUMBER";N  
 IF N<0 THEN  
 PRINT "NEGATIVE NUMBER"  
 ELSEIF N>0 THEN  
 PRINT "POSITIVE NUMBER"  
 ELSE  
 PRINT "ZERO NUMBER"  
 END IF  
 END
- (a) What would be the output, if the user's input is - 8?  
 (b) How many variables are used in the program?  
 (c) How many operators are used in the program?
16. (a) **W.A.P. to display the Fibobacci series:** 3  
 0,1,1,2,3,5,8,13,.....up to 10<sup>th</sup> terms.  
 (b) **W.A.P. to input three different names and display the longest name.** 3

**4. SOS (Bhaktapur) (2074)****Group 'A'**

[Fundamentals - 20 Marks]

1. **Answer the following questions:** 4x2=8
- a) Write a neat block diagram of computer system.  
 b) Differentiate between third and fifth generation of computer.  
 c) What type of computer is called analog computer? Write any four applications of hybrid computer.  
 d) What is e-government? Mention the different delivery models of e-government.
2. (a) **Convert as indicated:** 2x1=2  
 i)  $(177)_{10}$  into Hexadecimal      ii)  $(106)_8$  into Binary
- (b) **Perform binary calculation:** 2x1=2  
 i)  $101101001 + 10101110$       ii)  $1101 \times 101$
4. (a) **What is booting? Write down its types.** 2  
 (b) **Write down the function of following DOS commands:** 2x0.5 = 1  
 i) C:\> copy con d:\class9.txt  
 ii) C:\>type class9.txt
- (c) **Write down the DOS commands to perform the following task:** 2x0.5 = 1  
 i) To make a new subdirectory named "SOS" on D: drive.  
 ii) To change the system date to 20<sup>th</sup> March, 2018.
5. **Write down the HTML tags to create a simple web page on the topics "Historical Places of Nepal" and write down its output also.** 6

**Group 'B'**

[Programming - 29 Marks]

4. **Answer the following questions:**
- (a) Define built in function. Write any two string functions. 1  
 (b) What is the function of OUTPUT and APPEND mode in file handling? 1  
 (c) Write down the use and syntax of following commands. 2
- |               |             |              |              |
|---------------|-------------|--------------|--------------|
| i) INPUT MODE | ii) INPUT # | iii) WRITE # | iv) MID\$( ) |
|---------------|-------------|--------------|--------------|

**5. Re-write the given programming correcting the bugs:**

REM TO REVERSE A STRING VALUE

CLS

INPUT "Type any string ";s\$

FOR I = 1 TO LEN\$(s\$)step -1

b\$=MID\$(s\$,I,1)

x\$=b\$+x\$

NEXT J

PRINT "Reversed = ";b\$

END

**6. Write down the output of the following program:**

A = 10

WHILE A <= 45

S = A MOD 3 + 5

IF S MOD 3 <> 0 THEN GOTO AA

PRINT S;

AA:

A = A + 9

WEND

END

**7. Code the program for the following problems:**

7x3=21

- Write a program in QBASIC that ask any three numbers from user and display the greatest number among them using function procedure.
- Write a program that asks your name and count total number of vowels present in the supplied name using sub procedures.
- WAP that ask diameter of a circle and calculate its area using function procedure.
- Write a program to generate the below series: 1 2 3 5 8.....upto 20<sup>th</sup> terms using sub procedure.
- WAP that ask any multi digit number and check whether it is Armstrong number or not.
- WAP that create "STUD.TXT" that store students name, address, class, roll number, section, gender and marks in 3 subjects into that file and the program terminates according to the user's wish.
- WAP that read "TEACHER.TXT" that read name, address, salary and post of 100 teachers. The program display those records of teachers whose salary is greater than 30, 000 and having address "Kathmandu".

**5. St. Mary Higher Secondary School (2074)**

(Group A) FUNDAMENTALS

**1. Answer the following questions:**

5x2 = 10

- What is computer? Write any four basic characteristics of a modern computer.
- Write any four features of 1<sup>st</sup> generation computer.
- Draw a Tree structure of the classification of computer. Explain Micro computer.
- Define output device. Write any two differences between CRT and LCD.
- Why is ROM called non-volatile memory? Name its types.

**2. Convert the following as instructed below:**

5x1=5

$$(a) (931)_{10} = (?)_{16} \quad (b) (101010)_2 = (?)_{10} \quad (c) (5B7)_{16} = (?)_{10} \quad (d) (641)_8 = (?)_{16}$$

$$(e) (17)_{10} = (?)_2$$

**3. Perform the following binary calculations:**

2x1=2

$$a) \text{Divide: } 101010 \text{ by } 111 \quad b) (10 \times 11) + (110 - 101)$$

**4. Write the full forms of:**

4x0.5=2

$$(a) SRAM \quad (b) EDVAC \quad (c) POST \quad (d) VLSIC$$

**5. Fill in the blanks:**

4x0.5=2

- The first microprocessor was INTEL.....
- ..... and..... are the two sections of an Abacus.
- Slide Rule was developed by.....
- Printer is an example of.....output device.

**6. Supply an appropriate technical terms:**

4x0.5=2

- The basic program stored in ROM chip.
- A part of computer where all the processing tasks are done.
- Collection of eight bits.
- The physical components of a computer.

- 7. Match the following:** 4×0.5=2
- | <b>Group 'A'</b> | <b>Group 'B'</b>                            |
|------------------|---------------------------------------------|
| Data             | error due to the wrong input                |
| Information      | error due to the fault in device or program |
| GIGO             | raw facts                                   |
| Bug              | processed data                              |
|                  | capability of doing variety of tasks        |
- (Group B) PROGRAMMING** (25 Marks)
- 8. Answer the following questions:** 4×1=4
- Define string concatenation with suitable example.
  - Write the function and syntax of SWAP statement.
  - Define operators. Name its types.
  - Define Flowchart.
- 9. Predict the output of :** 2
- ```

CLS
A$ = "FLUORESCENT"
FOR J = 1 TO 5
READ N
PRINT MID$ (A$, N,1);
NEXT J
DATA 10, 6, 3, 5, 4
END

```
- 10. Re-write the following program after correcting the bugs:** 2
- ```

REM Program to find the sum of each digits
CLS
INPUT "Enter Multi-digits number"; N
DO WHILE N ≠ 0
P = N MODE 10
S = S + P
N = N / 10
WEND
PRINT "The sum is":S
END

```
- 11. Re-write by SELECT CASE statement:** 2
- ```

CLS
INPUT "Enter any string"; M$
FOR K = 1 TO LEN (M$)
G$ = UCASE$ (MID$(M$, K,1))
IF G$ = "A" THEN X = X + 1
IF G$ = "E" THEN Y = Y + 1
IF G$ = "I" THEN Z = Z + 1
IF G$ = "O" THEN P = P + 1
IF G$ = "U" THEN Q = Q + 1
NEXT K
PRINT X, Y, Z, P, Q
END

```
- 12. WAP for the following:** 5×3=15
- WAP to calculate volume of cylinder.
 - WAP to input three different words and find the longest word.
 - WAP to input any number and check whether the supplied number is Prime or Composite.
 - WAP to input any word to remove all the vowels and make a new words with consonants only. Suppose input word is NEPAL output should be NPL.
 - WAP to generate 20, 10, 5, 16, 8 upto 10th terms.

Final Examination, 2073

1. PABSON (Morang) (2073)

Time: 1 hours 3 minutes

Full marks: 50

Candidates are required to give their answer according to the given instructions.

Group A (Fundamentals):

22 Marks

5x2=10

1. Answer the following questions:-

- a. Draw a block diagram (internal architecture) of computer system.
- b. Differentiate between RAM & ROM.
- c. Define GIGO.
- d. Mention any four positive impacts of computer.
- e. Define E-Governance.

2. A. Perform as indicated:-

2x1=2

- (i) $(450)_8$ into binary
- (ii) $(10111)_2$ into binary

B. Perform the following binary calculations:-

2x1=2

- (i) $(111+11) \times 11$
- (ii) Divide 10101 by 11

3. Write the full forms of the following abbreviations:-

4x0.5=2

- a. URL
- b. ICT
- c. BIT
- d. HDD

4. Replace the following definitions with technical term.

4x0.5=2

- a. A string of 8 bits.
- b. A program that translates single statement at a time.
- c. A device used for transmitting digital signal to analog and vice-versa.
- d. The software which prevents from computer virus.

5. State whether the given statements are true or false:-

4x0.5=2

- a. E-Commerce is the buying and selling of goods and services on the internet.
- b. Content of RAM gets deleted when the computer is turned off.
- c. Laser printer is an example of non-impact printer.
- d. The second generation computers are based on vacuum tubes technology.

6. Match the following:-

4x0.5=2

Group-'A'

Group-'B'

- a. GUI
- b. Pen drive
- c. Plotter
- d. Light pen

- USB Port
- Output device
- Windows-based OS
- Electro optical pointing device
- Input device

Group 'B' (Operating system)

5 Marks

3x1=3

7. Answer the following:-

- a. Define the term booting.
- b. Mention the three important files of MSDOS.
- c. What is Recycle Bin?

8. Write the purpose of given DOS Commands:-

4x0.5=2

- a. RD
- b. DEL
- c. TYPE
- d. DIR

Group 'C' (HTML)

5 Marks

3x1=3

9. Answer the given questions:-

- a. Define website.
- b. What is container tag?
- c. Write the tag used for inserting image?

10. Write the function of given tags:-

4x0.5=2

- a.

- b. <marquee>
- c. <a>
- d. <sup>

Group 'D' (Programming)	18 marks 4x4=16
<p>11. Answer the given questions:-</p> <ul style="list-style-type: none"> a. Define variable. b. What is looping? c. Define reserved words. d. Write function of:- i. mod () ii. Right\$ () <p>12. Write output of given program:-</p> <pre> CLS A=3 FOR p=1 TO 3 PRINT A; A = A* 10+3 </pre>	2

2. Joint Examiantion Committe (Lalitpur) (2073)**Group A
(Fundamentals - 32 Marks)**

1. Answer the following questions:	6x2=12
<ul style="list-style-type: none"> (a) What are the improvement of second generation computer over first generation computer? (b) Write any two differences between analog and digital computer. (c) Explain, why a computer must need a primary memory? (d) What is the role of system software in computer? (e) What do you mean by language processor? Write the types of its. (f) Differentiate between RAM and ROM. 	
2. Write the full form of the following:	4x1=4
<ul style="list-style-type: none"> (a) Bit (b) VGA (c) DRAM (d) CMOS 	
3. Give suitable technical word.	4x1=4
<ul style="list-style-type: none"> (a) A memory that loses data and instructions as soon as power goes off. (b) The tiny blinking material on screen. (c) A device that gives hard copy output. (d) A program stored in ROM which checks memory and devices of computer. 	
4. Match the followings:	4x1=4
<ul style="list-style-type: none"> (a) UNIX 8086 microprocessor (b) XT computer operating system (c) Magnetic tape first computer brought in Nepal (d) IBM 1404 slow access <p style="text-align: center;">Herman Hollerith</p>	
5. Choose the right answer:	4x1=4
<ul style="list-style-type: none"> (a) Nanosecond (i) 10^{-6} second (ii) 10^{-8} second (iii) 10^{-7} second (iv) 10^{-9} second (b) MARK I was developed by (i) Clifford Berry (ii) W. Mauchly (iii) Howard Aiken (iv) J.P. Eckert (c) 1 GB equal (i) 1024 KB (ii) 1024 bytes (iii) 1024 TB (iv) 1024 MB (d) Program written in High level language (i) compiler (ii) source code (iii) COBOL (iv) machine code 	
6. State whether followings are True or False:	4x1=4
<ul style="list-style-type: none"> (a) The storage capacity of today's computer is smaller than older computer. (b) ENIAC was a first programmable computer. (c) Third generation computer used BIO chips as a main component. (d) Tailored software is a general purpose package. 	
Group B (HTML & Web Design - 10 Marks)	
7. Answer the following questions:	3x2=6
<ul style="list-style-type: none"> (a) What is a hypertext? How it differs from ordinary text? (b) What do you understand about HTTP? (c) What is Browser? 	

8. Write the meaning and use of following tags: 4x1=4
(a) <HEAD> (b) <HR> (c) <CENTER> (d)
- Group C**
(DOS/Windows - 10 Marks)
9. Answer the following questions: 3x2=6
(a) What are internal commands of DOS? Give two examples.
(b) What is Recycle Bin? Write its benefit.
(c) Write any two features of OS.
10. Write the function of followings: 2x1=2
(a) C:\> XOPY ABC.txt D"\>Book
(b) C:\>ROSE.REN TEST EXAM
11. Write the commands for following actions: 2x1=2
(a) To delete all the files from WINDOWS directory of C: drive having .tmp extension.
(b) To copy students.doc file from C: drive to school directory of D: drive.
- Group D**
(Qbasic Programming - 23 Marks)
12. Answer the following questions: 2x2=4
(a) What is computer programming?
(b) What is a keyword?
13. Write the function of following: 2
(a) STR\$() (b) SGN
(c) MOD (d) UCASE\$
14. Write a flow chart to calculate simple interest. 2
15. Rewrite debugging the given program:
CLS
INPUT "Enter a name";N
PRINT LEFT\$(N\$,1)
FOR I = 1 TO LEN\$(N\$)
IF MID\$(N\$,I,1)=" " THEN PRINT MID\$(N\$, I, 1)
NEXT
END
16. Write the output of given program: 3
CLS
FOR I = 1 TO 5
FOR X = 5 TO I STEP - 1
PRINT X;
NEXT X
PRINT ,
NEXT I
END
17. Study the given program then answer the questions: 2
N\$ = "NEPAL"
B = LEN(N\$)
C = 1
WHILE C < B
M\$ MID\$(N\$,C,1)
PRINT M\$
C = C + 2
WEND
END
(a) List the string and numerical variable.
(b) How many time does the print statement repeat?
18. WAP to check whether supplied number is prime or not. 3
19. WAP to print multiplication table of user supplied number. 3

3. Joint Examiantion Committe (Bhaktapur) (2073)

Group 'A' (Fundamental of Computer)				[20 marks]
1. Answer the following questions:				4x2=8
(a) What is computer? What are the characteristics of computer? (b) Why CPU is known as brain of computer?				
(c) Differentiate between input and output device. (d) Computers are used on entertainment. Justify your answer.				
2. Fill in the blanks:				4x0.5=2
(a) The storage capacity of computer is measured in (b) Three section of CPU are ALU, CU and				
(c) has high speed memory located between main memory and CPU. (d) One zip 250mb disk can store times of floppy disk.				
3. Write the full forms of the following:				4x0.5=2
(a) ICT (b) MIPS (c) LED (d) IBM				
4. Match the following:				4x0.5=2
Third generation computer	physical part of computer			
Slide rule	control all parts			
CPU	integrated circuit			
Analytical engine	William Oughtred			
	Charles Babbage			
5. Write the technical term:				4x0.5=2
(a) A computer program that allows other program to interact with the computer hardware. (b) To perform mathematical and logical operation.				
(c) Physical component of computer. (d) Non-volatile memory of computer.				
6. A. Convert the following as indicated:				2x1=2
(i) $(54A)_{16}$ to decimal (ii) $(56)_8$ to decimal				
B. Perform the following binary operation:				2x1=2
(i) $10111 + 1001 - 1001$ (ii) 111×1				
Group 'B' (Operating System)				[5 marks]
7. Define Single User operating system.				1
8. Write a function of following:				2x1=2
(i) C:/>COPY kabita D:/>manjila (ii) C:/>DIR/P				
9. Answer the following questions:				2x1=2
(a) What is meant by desktop? (b) What is meant by shutdown?				
Group 'C' (HTML)				[5 marks]
10. Answer the following questions:				2x1.5=3
(a) What is meant by HTML? What is extension of HTML? (b) What is used of <p> tag?				
11. Fill in the blanks.				4x0.5=2
(a) The extension of HTML is (b) The largest size of heading tag is				
(c) Full for of HTML is..... . (d) HTML is software.				
Group 'D' (QBASIC Program)				[20 marks]
12. Answer the following questions.				2x2=4
(a) What is meant by reserved word of computer? (b) Define algorithm and flowchart.				
13. Perform the following :				2x3=6
(a) Draw a flowchart to find area of circle. (b) Write an algorithm to find average of any three number.				
14. Write a output of following:				1
Cls A=5 B=6 and = A+B PRINT "sum of two nos is"; add END				
15. (a) Write a program to find perimeter of rectangle.				3x3=9
(b) Write a program to print following output: 1, 2, 3, 4, , 10th				
(c) Write a program to print following output.				
N NE NEP NEPA NEPAL				