1: WAP to print series of even number up to 100:

```
CLS
FOR I = 2 TO 100 STEP 2
PRINT I;
NEXT I
END
```

2: WAP to print series of even number from 100 to 1:

```
CLS
FOR I = 100 TO 2 STEP -2
PRINT I;
NEXT I
END
```

3: WAP to print series of odd number up to 100.

```
CLS
FOR I = 1 TO 100 STEP 2
PRINT I;
NEXT I
END
```

4: WAP to display first 10 natural no. and find their sum:

```
CLS
FOR I =1 TO 10
PRINT I;
S = S + I
NEXT I
PRINT "sum of first 10 natural no is"; S
END
```

5: WAP to display first N natural number:

```
CLS
INPUT "Enter any number."; N
FOR I = 1 TO N
PRINT I;
NEXT I
END
```

6: WAP to input a word and display it 5 times:

```
CLS
INPUT "Enter any word"; N$
FOR I = 1 TO 5
PRINT N$
NEXT I
END
```

7: WAP to display following series: 1, 4, 9, 16.....100:

```
CLS
FOR I = 1 TO 10
S = I ^ 2
PRINT S; ",";
NEXT I
END
```

8: WAP to print following series: 100, 95, 90, 85....50:

```
CLS
FOR I = 100 TO 50 STEP -5
PRINT I; ",";
NEXT I
END
```

9: WAP to display following series: 1, 3, 5, 7....25:

```
CLS
FOR I = 1 TO 25 STEP 2
PRINT I; ",";
NEXT I
END
```

10: WAP to display following series: 1, 2, 4, 7...10th term

```
CLS
X = 1
FOR I = 1 TO 10
PRINT X; ",";
```

```
X = X + 2
NEXT I
END
```

11: WAP to print following series: 3,33,333,3333,33333:

```
CLS
X = 3
FOR I = 1 TO 5
PRINT X; ",";
X = (X*10) + X
NEXT I
END
```

12: WAP to print following series: 5, 25, 125, 625, 3125:

```
CLS
X = 5
FOR I = 1 TO 5
PRINT X; ",";
X = X *5
NEXT I
END
```

13: WAP to print following series: 1, 8, 27...1000:

```
CLS
FOR I = 1 TO 10
PRINT I ^ 3; ",";
NEXT I
END
```

14: WAP to print following series: 525, 500, 475....15th term:

```
CLS
X = 525
FOR I = 1 TO 15
PRINT X; ",";
X = X-25
```

```
NEXT I
END
```

15: WAP to print following series: 1, 9, 25...up to 10th term:

```
CLS
X = 1
FOR I = 1 TO 10
PRINT X ^ 2; ",";
X = X+2
NEXT I
END
```

16: WAP to print following series: 11111, 1111, 111, 11, 1

```
CLS
X = 11111
FOR I = 1 TO 5
PRINT X: ",";
X = (X-1) / 10
NEXT I
END
```

17: WAP to print following series: 4, 16, 36, 64, 100:

```
CLS
X = 2
FOR I = 1 TO 5
S = I ^ 2
A = I * S
PRINT A; ",";
NEXT I
END
```

8: WAP to print following series: 2, 8, 18, 32... up to 12th term:

```
CLS
FOR I = 1 TO 12
```

```
PRINT (I ^ 2) * 2; ","
NEXT I
END
```

19: WAP to print following series: 5, 9, 13... up to 10th term

```
CLS
X = 5
FOR I = 1 TO 10
PRINT X; ","
X = X + 4
NEXT I
END
```

20: WAP to print following series: 1, 6, 11....101

```
CLS
FOR I = 1 TO 101 STEP 5
PRINT I; ","
NEXT I
END
```

21: wap to print following series: 3, 12, 27...10th terms

```
CLS
A = 3
FOR I = 1 TO 10
PRINT A * I; "."
A = A+ 3
NEXT I
END
```

22: WAP to print following series: 9, 7, 5, 3, 1

```
CLS
FOR I = 9 TO 1 STEP 2
PRINT I; ","
NEXT I
END
```

23: WAP to print following series: 2, 4, 8, 14, 22, 32....up to 15th term:

```
CLS
A = 2
B = 2
FOR I = 1 TO 15
PRINT A; ","
A = A + B
B = B + 2
NEXT I
END
```

24: WAP to print following series: 5, 50, 500, 5000, 50000

```
CLS
X = 5
FOR I = 1 TO 5
PRINT X; ","
X = X * 10
NEXT I
END
```

25: WAP to print following series: 7, 22, 11, 34, 17, 52, 26,13,10 ,40, 20

```
CLS
X = 7
FOR I = 1 TO 10
PRINT X; "."
IF X MOD 2 = 0 THEN
X = X/2
ELSE
X = X * 3 + 1
END IF
NEXT I
END
```

26: WAP to print following series: 1, 3, 6, 10....10th terms

```
CLS
X = 1
Y = 2
FOR I = 1 TO 10
PRINT X; ","
X = X + Y
Y = Y + 1
NEXT I
END
```

27: WAP to print following series: 1, 121, 12321....5th terms

```
CLS
X = 1
FOR I = 1 TO 5
 PRINT X ^ 2
X = X * 10 + 1
NEXT I
END
```

28: WAP to print following series: 5, 6, 9, 14, 21, 30

```
CLS
X = 5
Y = 1
FOR I = 1 TO 6
PRINT X; ","
X = X + Y
Y = Y + 1
NEXT I
END
```

29: WAP to print following series: 5, 17, 37, 65

```
CLS
A = 5
B = 5
FOR I = 1 TO 4
PRINT A; ","
A = A + B
B = B + 8
NEXT I
END
```

30: WAP to display following series: 5, 9, 15, 21, 27...15th terms

```
CLS
A = 3
B = B
FOR I = 1 TO 13
PRINT A* B; ","
B =  B + 2
NEXT I
END
```

31: WAP to print following series: -20, -15, -10....10th terms

```
CLS
A = -20
FOR I = 1 TO 10
PRINT A; ","
A = A+ 5
NEXT I
END
```

32: WAP to generate following series: 1, 4, 7, 10, 13....12th terms

```
CLS
A = 1
FOR I = 1 TO 12
PRINT A;
A = A+ 3
NEXT I
END
```

33: WAP to display following series:1/2, 2/3, ¾ ...10th terms:

```
CLS
A = 1
B = 2
FOR I = 1 TO 10
PRINT A "/" B
A = A + 1
B = B +1
NEXT I
END
```

34: WAP to display following series: 1, 1, 2, 3, 5, 8...15th terms

```
CLS
X = 0
Y = 1
Z = 1
FOR I = 1 TO 15
PRINT Z; ","
Z = X + Y
X = Y
Y = Z
NEXT I
END
```

35: WAP to generate following series: 2, 2, 4, 6...up to 16th terms

```
CLS
X = 0
Y = 2
Z = 2
FOR I = 1 TO 12
PRINT Z; ","
Z = X + Y
X = Y
Y = Z
NEXT I
END
```

36: wap to generate following series: 1, 4, 5, 9, 14....15th terms

```
CLS
X = 3
Y = 1
Z = 1
FOR I = 1 TO 15
PRINT Z; ","
Z = X + Y
X = Y
Y = Z
NEXT I
END
```

37: WAP to generate following series: 1, 3, 4, 7...13th term

```
CLS
X = 2
Y = 1
Z = 1
```

```
FOR I = 1 TO 13
PRINT Z; ","
Z = X + Y
X = Y
Y = Z
NEXT I
END
```
38: WAP to generate following series: 2, 3, 5, 8…12th term
```
CLS
X = 1
Y = 2
Z = 2
FOR I = 1 TO 12th TERM
PRINT Z; ","
Z = X + Y
X = Y
Y = Z
NEXT I
END
```
39: WAP to print following pattern:
```
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5
CLS
FOR I = 1 TO 5
FOR J = I TO 5
PRINT J;
NEXT J
PRINT
NEXT I
```
```
END
```
40: WAP to print following pattern.
```
5
4 5
3 4 5
2 3 4 5
1 2 3 4 5
CLS
FOR I = 5 TO 1 STEP -1
FOR J = I TO 5
PRINT J;
NEXT J
PRINT
NEXT I
END
```
41: WAP to print following series
```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
CLS
FOR I = 5 TO 1 STEP -1
FOR J = I TO 5
PRINT J;
NEXT J
PRINT
NEXT I
END
```
42: WAP to enter a no and display whether it Armstrong or not:
```
CLS
```

```
INPUT "ENTER A NO", A
S = A
WHILE A >=0
T = A MOD 10
R = R + T ^ 3
A = A / 10
WEND
IF S = R THEN
PRINT "THE NO. IS ARMSTRONG"
ELSE
PRINT "THE NUMBER IS NOT ARMSTRONG"
END IF
END
```

43: WAP to input a no and find out its factorial no.

```
CLS
A = 1
INPUT " ENTER A NO."; N
FOR I = 1 TO N
A = A * I
NEXT I
PRINT " FACTORIAL IS"; A
END
```

43: WAP to input even number from 1 to 100.

```
CLS
FOR I = 1 TO 100
IF I MOD 2 = 0 THEN
E = E + 1
ELSE
O = O + I
END IF
NEXT I
PRINT "SUM OF EVEN NO IS "; E
PRINT "SUM OF ODD NO. IS "; O
END
```

45: WAP to print following pattern

```
CLS
A$ = "DIRECTORY"
FOR I = 1 TO LEN(A$)
PRINT LEFT $(A$,I)
NEXT I
END
```

46: WAP to input any string and print whether it is palindrome or not:

```
CLS
INPUT "ENTER A WORD";A$
FOR I = LEN(A$0 TO 1 STEP -1
M$ = M$ + MID$(W$,I,1)
NEXT I
IF A$ = M$ THEN
PRINT "PALINDROME"
ELSE
PRINT " NOT PALINDROME"
END IF
END
```

- **IMPORTANT POINTS TO REMEMBER**

- CHAPTER: 1 <u>COMPUTER NETWORKING AND TELECOMMUNICATION</u>

- The word communication is derived from the Latin word "Communicare" which means to share
- The communication is the process of sharing a message from one point to another point
- The basic components of typical communication process are: sender, medium and receiver
- Telecommunication is the transmission of messages, over significant distances for the purpose of communication
- Data transmission is the transmission of the electronic data and information between two points, either via an analogue or binary signal
- The four basic elements of data communication are: Sender, Medium, Receiver and Protocols
- In simplex mode, data is transmitted in only one direction on the data communication medium
- In half duplex mode, data can be transmitted in both direction but only in one direction at a time
- Analogue and Digital signals are used to transmit information, usually through electric signals
- Analogue signals are signals with continuous values whereas Digital signals are represented by "0" or "1"
- Modem stands for modulator and demodulator. It is an electronic device, which allows the computer to send and receive data through phone lines by converting analogue signals into digital signals and vice versa.
- Bandwidth is the amount of data that can be transmitted along a channel during a specified period of time
- Communication media refers to the means of delivering and receiving data or information
- The different type of wires such as twisted pair cable, co-axial cable etc are wired or guided media
- Microwave system, radio wave system etc are commonly used wireless communication network
- Computer network is the inter connection of several computers so that they can communicate, share resource and transfer data and information
- Clients are network computers on which users run application whereas servers are the service providers in the computer network
- The devices which are used to connect computers in the network are called network connecting device.
- Some of the commonly used network connecting devices are NIC, hub, switch, router, gateway and bridge
- A special type of software used to control and manage all the resource in computer network is called network software.
- A protocol is a set of rules and regulation that governs data communication among different computers in network
- Generally, computer network can be categorized into three types: Local Area Network, Metropolitan Area Network and Wide Area Network

- CHAPTER 2: <u>INTERNET AND ITS SERVICES</u>
- The internet is the largest computer network in the world, connecting millions of people
- The internet is formed by joining thousands of smaller networks such as LAN, MAN and WAN throughout the world
- The cables, telephone links, satellites and many other technologies are used to connect millions of computer throughout the world
- In 1969, the Advanced Research Project Agency created a network called ARPANET that was the first computer network in the world.
- The Network Control Protocol was the first network protocol used in communication
- Internet Service Provider is a company that provides internet service to the user
- WWW is a system for finding document on the internet in which millions of computer are linked to each other using HYPERTEXT links
- A web page is a document that is connected to the World Wide Web
- A website is a collection of Web pages that are related to each other by certain topic
- The URL is the unique address of each website on the internet
- The process of receiving and storing electronic information from the website to users computer is called downloading
- The process of transferring data file, programs from users computer to WWW is called uploading

- The search engine program is developed to make searching the data and website easily and quickly on the internet
- A special type of software is needed to access resource on the internet is called web browser
- Some of the most common services that we can get through the internet are: E-mail, chatting etc.
- E-mail is an electronic mail, which can be sent from one computer to another computer through internet
- Some popular websites provide free E-mail services such as: Yahoo.com
- Electronic fax(E-fax) is the generic term, which allows for transferring of fax information to and from E-mail
- Video conference is an internet service for conducting a conference between two or more participants at different sites by using computer network to transmit audio and video data
- Telnet is a network protocol that allows a user to connect to remote computers over TCP/IP network
- E-commerce is an internet service which allows doing business through online.

- CHAPTER 7: <u>NUMBER SYSTEM</u>
- A number system is a set of symbols used to express quantities as the basis for counting, and representing valu<u>e</u>
- The number system are classified on the basis of symbols used them
- The most common number systems are: Decimal, Binary, Octal and Hexadecimal

- Decimal number system uses ten digits: 1, 2, 3.....0, so its base value is also 10
- The binary number system uses only two digits, 0 and 1so its value is 2
- The octal number system uses eight digits:1,2,3,4,5,6,7 and 0 so its base value is 8
- The hexadecimal number system uses sixteen digits: 0,1,2,3,4,5,6,7,8,9,A,B,C,D,Eand F so its base value is 16
- A computer stores data and information in the form of 0 or 1 is called binary digit or BIT.
- Bit is the smallest unit of measurement in the computer
- The computer memory is divided into numbers of smaller parts called cell and each cell can store one bit(0 or 1) data
- The data measurement units used in computer are : Bit, Nibble, Byte and computer word
- The combination of four bits is called one Nibble
- The combination of eight bits is called one Byte
- One byte represents only one character
- KB, MB, GB and TB etc are the units that are used to measure large amount of data stored in the computer
- The number of bits which can process and transfer by computer processor at a time called computer word.
- ASCII is an internationally accepted for representing characters in computer
- Each character in the ASCII character set is associated with a unique number.(from 0 to 127)

- CHAPTER 8: DATABASE MANAGEMENT SYSTEM

- Data are the raw facts that people gather based on their observation and experiences
- The process of converting raw data into meaningful information with the help of any software is called data processing
- The systematic collection of related data and information is called database
- A database management system is a software that allows user to create, edit and update data in database files
- Some examples of DBMS are: MS Access, Oracle and so on
- RDBMS is a type of DBMS which organizes data in from of tables
- The advantages of a DBMS are: improved availability, minimized redundancy etc
- The database objects used in MS Access are: Tables, Queries, Forms And Reports
- The row of table represents the record and the column of the table represents the field or attribute of a record
- Queries and instruction that extract specific information from one or more tables
- Forms are a group of objects which are used for data entry
- Reports are screen outputs of data arranged in various formats as required by user
- A primary key is a field that provides Access with a unique identifier for each record

- The types of queries available in Access are: Filter/sort query, select query, action query and crosstab query

- CHAPTER 9: REVIEW OF CONTROL STAEMENTS AND LIBRARY FUNCTION IN QBASIC
- The statements that can alter the flow of a sequence of instructions in the program are called as control statements
- QBASIC provides mainly three type of control statements: Jumping statements, Selection or Conditional statements and Looping statements
- The jumping statement is used to do unconditionally transfer the control point in the program to another
- The selection statements allow a selected block of a program to be executed only when certain condition are met
- Some commonly used selection statements in QBASIC are: IF...THEN, IF...THEN...ELSE, IF...THEN.....ELSEIF....ELSE and SELECT CASE
- The looping statements execute a statement or a block of statements several times in the program based on the condition
- The commonly used looping statements in QBASIC are: FOR...NEXT, WHILE...WEND and DO...WHILE
- The FOR...NEXT statement is used to execute a set of statements repeatedly for a given no. of times

- The WHILE statements continually execute a block of statements while a particular statements is true,
- Loop inside a loop then the looping structure is called nested loop
- The functions are predefined formula or program code to perform specific task
- The functions provide by the QBASIC are called Library function and the function created by the user are called user defined functions
- CHAPTER 10: MODULAR PROGRAMMING IN QBASIC
- A large program can be broken down into many small programs which is called module
- A module is a set of program statements that performs specific task in the program
- Modular programming is technique of preparing computer program in which a large program is divide into separate independent units
- A procedure is a mini program also called sub program inside a complete program
- BASIC uses two types of procedures: Sub-procedures and Function procedure
- A sub procedure is a block of statements that performs specific task in the program
- A function procedures is a block of statements that performs a specific task and returns a value whenever it is needed
- QBASIC provides a way to share arguments called passing arguments
- Local variable is declared in main program or sub program or functions but is valid only within the procedures in which it was declare.