COMPUTER APPLICATION
CLASS 6
BASIC PROGRAMS
MID TERM

1. Write a program to accept the marks of a student in Math, Science and Computers, and find the total and average marks. Display the result.

Ans:

```
10 INPUT "Enter marks in Math";M
20 INPUT "Enter marks in Science";S
30 INPUT "Enter marks in Computers";C
40 LET T=M+S+C
50 LET AVG=T/3
60 PRINT "Total marks: ";T
70 PRINT "Average marks: ";AVG
80 END
```

2. Write a program to accept the length and breadth of a rectangular field and calculate and display its area and perimeter.
Area = L X B Perimeter = 2(L + B)

Ans:

```
10 INPUT "Enter the length";L
20 INPUT "Enter the breadth";B
30 LET A = L * B
40 LET P = 2*(L + B)
50 PRINT "Area is ";A
60 PRINT "Perimeter is ";P
70 END
```

3. Write a program to accept the radius of a circular field, and calculate its area and circumference. Display the result.
PI = 22/7
Area = PI x R^2
Circumference = 2 x PI x R

Ans:

```
10 INPUT “Enter the radius”;R
20 LET PI=22/7
30 LET A = PI * R^2
40 LET C = 2 * PI * R
50 PRINT “Area is “;A
60 PRINT “Circumference is “;C
70 END
```

4. Write a program to input the distance travelled in km by a train and time taken by it in hr. Calculate and display the average speed of that train.
Average Speed = Distance / Time

Ans:

```
10 INPUT “Distance travelled”;D
20 INPUT “Time taken”;T
30 LET S=D/T
40 PRINT “Average Speed: “;S
50 END
```

5. Write a program to input the amount of money in rupees and convert and display it in US- Dollars, and also in British Pound.
1 US Dollar = Rs. 62.78
1 British Pound = Rs. 94.41
Ans:

```
10 INPUT “Enter the amount in rupees”;R
20 LET USD=R/62.78
30 PRINT “$”;USD
40 LET BP=R/94.41
50 PRINT BP;” pounds”
60 END
```

6. **A man goes to a shop and buys 7 packets of pencils, 23 notebooks, 55 erasers, and 62 sharpeners. Write a program in BASIC to find and display the total bill if one packet pencil costs Rs. 80, one notebook costs Rs. 35, one eraser costs Rs. 5 and one sharpener costs Rs. 4.**

Ans:

```
10 LET PP = 7 * 80
20 LET NP = 23 * 35
30 LET EP = 5 * 55
40 LET SP = 62 * 4
50 LET TP = PP + NP + EP + SP
60 PRINT “Total price is Rs.”;TP
70 END
```

7. A man buys a laptop worth Rs. 46,499 and later sold it for Rs. 21,390. Write a program to calculate and display the loss percentage.
Loss % = Loss/CP X 100

Ans:

```
10 LET CP=46499
20 LET SP=21390
30 LET LOSS=CP-SP
40 LET LP=LOSS/CP*100
50 PRINT “Loss Percentage=”;LP
60 END
```

8. Write a program to accept the values of U, A, and T, and calculate and display the value of S, when S=UT+ ½ AT^2

Ans:

```
10 INPUT “Value of U”;U
20 INPUT “Value of A”;A
30 INPUT “Value of T”;T
40 LET S = U*T+1/2*A*T^2
50 PRINT “Value of S = “;S
60 END
```

9. Write a program to accept the Principal, Rate and Time, and calculate the Simple Interest and the Amount.

Ans:

```
10 INPUT “Principal”;P
20 INPUT “Rate”;R
30 INPUT “Time”;T
40 LET SI=P*R*T/100
50 LET A=SI+P
60 PRINT “Simple Interest=Rs.”;SI
70 PRINT “Amount=Rs.”;A
80 END
```

10. Write a program to input the height, width and length of a cubical room and calculate and display its volume.
Volume = Length X Width X Height

Ans:

```
10 INPUT “Length”;L
20 INPUT “Width”;W
30 INPUT “Height”;H
40 LET V=L*W*H
50 PRINT “Volume=”;V
60 END
```

11. A person earns Rs.55000 monthly. He spends 10% of his salary on House Rent, 12% on Food, and 5% on Entertainment. Write a program to calculate and display his/her savings.

Ans:

```
10 LET SAL=55000
20 LET HR=10/100*SAL
30 LET FOOD=12/100*SAL
40 LET ENT=5/100*SAL
50 LET TOTAL=HR+FOOD+ENT
60 LET SAVING=SAL-TOTAL
70 PRINT "Savings=";SAVING
80 END
```

12. WAP to accept the altitude and base of a right angled triangle, and calculate and display its area using the formula:
Area= A X B/2.

Ans:

```
10 INPUT "Enter the altitude";A
20 INPUT "Enter the base";B
30 LET AREA=A*B/2
40 PRINT "Area of the right-angled triangle=";AREA
50 END
```

13. Write a program to display the following using TAB, starting with the 12th column:

B
O
O
K

Ans:

```
10 CLS
20 PRINT TAB(12);"B"
30 PRINT TAB(13);"O"
40 PRINT TAB(14);"O"
50 PRINT TAB(15);"K"
60 END
```

14. **Accept the name, address and hobby of the user, and print it in the center of the screen.**

Ans:

```
10 INPUT "Name";N$
20 INPUT "Hobby";H$
30 INPUT "Address";A$
40 CLS
50 LOCATE 12, 40:PRINT "Name:";N$
60 LOCATE 13, 40:PRINT "Hobby:";H$
70 LOCATE 14, 40:PRINT "Address:";A$
80 END
```

15. Write a program to accept a number from the user and print its double, triple, square and cube in different screen zones.

Ans:

```
10 INPUT “Number”;N
20 LET D = N * 2
30 LET T = N * 3
40 LET S = N ^ 2
50 LET C = N ^ 3
60 PRINT D, T, S, C
70 END
```

16. **Write a program to display $ sign on the four corners of the screen.**

Ans:

```
10 CLS
20 LOCATE 1,1 : PRINT “$”
30 LOCATE 1, 79 : PRINT “$”
40 LOCATE 24, 1 : PRINT “$”
50 LOCATE 24, 79 : PRINT “$”
60 END
```

17. Write a program to display the following pattern using TAB, starting with the 5th column:

```
*
  *
    *
      *
    *
  *
*
```

Ans:

```
10 CLS
20 PRINT TAB(5);”*”
30 PRINT TAB(6);”*”
40 PRINT TAB(7);”*”
50 PRINT TAB(8);”*”
70 PRINT TAB(7);”*”
80 PRINT TAB(6);”*”
90 PRINT TAB(5);”*”
100 END
```

18. Write a program to assign/store the title, author, and price of any book, and display them in the following position on the screen:
Title (2nd row and 7th column)
Author (4th row and 3rd column)
Price (6th row and 4th column)

Ans:

```
10 CLS
10 LET T$=”Illustrating BASIC”
20 LET A$=”Donald Alcock”
30 LET P=134
40 LOCATE 2, 7:PRINT T$
50 LOCATE 4, 3:PRINT A$
60 LOCATE 6, 4:PRINT P
70 END
```

19. WAP in BASIC to display the following pattern using PRINT TAB, starting from 10th row and 10th column:

```
          * (START – 10th column)
         **
        ***
       ****
      *****
     ******
    *******
```

Ans:

```
10 CLS
20 PRINT TAB(10);”*”
30 PRINT TAB(9);”**”
40 PRINT TAB(8);”***”
50 PRINT TAB(7);”****”
60 PRINT TAB(6);”*****”
70 PRINT TAB(5);”******”
80 PRINT TAB(4);”*******”
90 END
```

20. Write a program to accept the names of five colors and display them in different zones of the BASIC screen.

Ans:

```
10 INPUT “Enter five colors”;C1$, C2$, C3$, C4$, C5$
20 PRINT C1$, C2$, C3$, C4$, C5$
30 END
```

21. Write a program to input and print your name, class, section and school name with suitable message in the given format:
Name: ……
Class: …… Section: ……
School: ……

Ans:
```
10 INPUT "Your name";N$
20 INPUT "Class";C
30 INPUT "Section";SN$
40 INPUT "School";SC$
50 PRINT "Name: ";N$
60 PRINT "Class: ";C;
70 PRINT " Section: ";SN$
80 PRINT "School: ";SC$
90 END
```

22. **WAP to print the following using TAB(), starting with the 8th column:**

INDIA
NDIA
DIA
IA
A

Ans:
```
10 PRINT TAB(8);"INDIA"
20 PRINT TAB(9);"NDIA"
30 PRINT TAB(10);"DIA"
40 PRINT TAB(11);"IA"
50 PRINT TAB(12);"A"
60 END
```

23. **Write a program to accept a number and print whether it is negative or positive or zero.**

Ans:
```
10 INPUT "Enter integer:";N
20 IF N < 0 THEN PRINT "Negative"
30 IF N > 0 THEN PRINT "Positive"
40 IF N = 0 THEN PRINT "Zero"
50 END
```

24. **Write a program to accept the day of the week in numeral and print it in words.**

Ans:
```
10 INPUT "Day of the week in numeral";D
20 IF D=1 THEN PRINT "Monday"
30 IF D=2 THEN PRINT "Tuesday"
40 IF D=3 THEN PRINT "Wednesday"
50 IF D=4 THEN PRINT "Thursday"
60 IF D=5 THEN PRINT "Friday"
```

```
70 IF D=6 THEN PRINT "Saturday"
80 IF D=7 THEN PRINT "Sunday"
90 END
```

25. Write a program to accept the temperature in Fahrenheit and convert it into Celsius. If the converted value is below 25ºC, then display "Cold" otherwise display "Not Cold".

$C = \frac{5}{9}(F - 32)$

Ans:

```
10 INPUT "Temperature in F";F
20 LET C = 5 / 9 * (F – 32)
30 IF C < 25 THEN PRINT "Cold" ELSE PRINT "Not Cold"
40 END
```

26. **Write a program to accept the measure of two angles and check if they are supplementary.**

Ans:

```
10 INPUT "First angle";A
20 INPUT "Second angle";B
30 LET SUM=A+B
40 IF SUM=180 THEN PRINT "Supplementary" ELSE PRINT "Not Supplementary"
50 END
```

27. Write a program to accept the measure of two angles and check if they are complementary.

Ans:

```
10 INPUT "First angle";A
20 INPUT "Second angle";B
30 LET SUM=A+B
40 IF SUM=90 THEN PRINT "Complementary" ELSE PRINT "Not complementary"
50 END
```

28. Write a program to accept the bill for a customer and offer 5% discount if the bill exceeds Rs. 1000. Display the bill to be paid by the customer.

Ans:

```
10 INPUT "Enter the bill amount";B
20 IF B>1000 THEN D=B*5/100 ELSE D=0
30 LET AMT = B - D
40 PRINT "Amount Payable: ";AMT
50 END
```

29. Write a program to accept the three angles and check if a triangle can be formed with those angles. Give a suitable message.

Ans:

```
10 INPUT “First angle”;A
20 INPUT “Second angle”;B
30 INPUT “Third angle”;C
40 LET SUM=A+B+C
50 IF A=180 THEN PRINT “Possible” ELSE PRINT “Not possible”
60 END
```

30. Write a program to input two numbers and calculate and display their sum, difference, product and quotient. Note: Quotient to be found only if the second number is not zero.

Ans:

```
10 INPUT “First number”;N1
20 INPUT “Second number”;N2
30 LET S=N1+N2
40 LET D=N1-N2
50 LET P=N1*N2
60 PRINT “Sum=”;S
70 PRINT “Difference=”;D
80 PRINT “Product=”;P
90 IF N2<>0 THEN PRINT “Quotient=”;N1/N2
100 END
```