

ST. THOMAS SCHOOL
HOLIDAY HOMEWORK
CLASS: X

English Literature Project

- 1) Write the summary of the Chapters, 'The Little Match Girl' and 'I Know Why the Caged Bird Sings'.
- 2) Write the summary of the 'Trial' scene of the play, The Merchant of Venice. (Prepare a proper file, well covered and consisting of proper index, acknowledgement, and conclusion. Paste or draw pictures where necessary.)

English Language Project

- 1) Write an original story on the topic, 'The Portal to Heaven'. Open up your imagination to write a classic story of your own. Draw pictures to support your story.
- 2) Write a poem on the topic- 'The Illusions of Life'.

Hindi

- 1) गद्य- बड़े घर की बेटी कहानी (नाट्य रूपांतरण)
- 2) पद्य- तुलसीदास एवं उनकी कविता (विनय के पद)
- 3) भाषा- आई.पी.एल. 2023 एक आलेख
(तीनों एक ही फाइल में बनेंगे)

Physics

A. MAKE A PROJECT FILE ON THE FOLLOWING TOPICS

- 1) AC GENERATOR
- 2) DC MOTOR

B. COMPLETE THE NUMERICALS OF THE EXERCISE BASED ON REFRACTION OF LIGHT AND LENS FORMULA IN YOUR FAIR NOTEBOOK.

Chemistry Project:

(Use A4 Sheets and Staple Them)

- 1) Topic: Colour, Odor, Nature, Test for All the Major Gases.

While making Project mention the following points:

- a) You Have to Write All the Necessary Reactions
- b) Highlight The Colour of Various Compounds.

Note: See Topic 13.1 Chapter 13 For Reference

Biology homework

- 1) Write Review Questions of chapters 5 and 6 in biology class work copy

Maths

Project and Holiday Homework

- 1) Make five Histogram and find mode.
- 2) Do Shares and dividends full chapter.

Geography

Project 1

- 1) Make your project on Rainwater harvesting.

Project 2

- 2) Make your project on Waste management.

OR

Transport.

History Project

- 1) Union Parliament & its procedures
- 2) Role of Hitler in World War II
- 3) United Nations Organization

Any one of these in 10 to 15 pages

COMPUTER

PROJECT

Note : Solve and execute the following programs and write the solved programs in comment sheets and compile them in a file as a project during summer vacation.

Question 1.

Write a program to computerize the billing operation of a telephone of a telephone company. The bill has to be generated based on the following conditions:

Number of calls	Amount per call
First 50 calls	free
Next 100 calls	50 Paisa per call
Next 200 calls	80 Paisa per call
Rest of the calls	Rs 1.20 per call

A rent of Rs 120 is charged from every customer. A tax of 15% is charged on the sum of charges and rent. The total amount is tax added to the sum of charges and rent .Print the bill for a customer.

Question 2.

An insurance company has declared the bonus on yearly basis on the two types of policies or plans on the basis of premium amount on yearly basis paid one time as per the given criteria:

Premium Amount (Rs.)	Child Plan	Normal Plan
Minimum 5000	3%	1.5%
5001-20,000	5%	3.5%
20,001-45,000	7%	6.0%
45,001 and above	10%	8.5%

Write a program based on the above criteria to input name of person, address, premium amount(one time), number of years the policy/plan opted for and the type of plan(C for child and N for normal). Calculate the bonus amount for one year and also for total number of years the policy opted for. Calculate the maturity amount as follows:

Bonus in a year= (Rate percent * 100)*-premium

Bonus for number of years=bonus in one year*number of years

Maturity amount=premium amount + bonus depending upon the years.

Print name of the person, address, premium amount, number of years the policy opted for, name of plan, total bonus and maturity amount.

Question 3.

A hotel has following special rates for stay depending upon number of days:

Number of days	Rate
1 to 3	Rs. 350.00 per day
4 to 6	Rs. 300.00 per day
7 to 10	Rs. 275.00 per day
Beyond 10 days	Rs. 225.00 per day

Write a program to input a name of customer, number of days stayed. Calculate bill amount. Print bill in following format:

ABC INTERNATIONAL HOTEL

Name : ****

Number of Days : ****

Amount to be paid: ****

Question 4.

A bank accepts deposits for one or more year and the bank adopts for paying the interest as follows:

☑ If a deposit is less than Rs. 2000 and it is for 2 years or more, the interest rate is 5% compound annually.

☑ If a deposit is Rs. 2000 or more but less than Rs. 6000 and it is for 2 years or more, the interest rate is 7% compound annually.

☑ If a deposit is more than Rs. 6000 and it is for 1 year or more, the interest rate is 8% compound annually.

☑ On all deposits for 5 years or above, interest is 9.75% compound annually.

On all other deposits not under the above conditions.

Write a program to input amount to deposit and number of years. Calculate the interest and total balance amount after the given number of years. Print amount deposited, number of years, interest gained and total amount paid after the given years.

Question 5.

A private courier firm charges for the transportation of any parcel within a zone as follows:

Upto 100 grams : Rs.30

For each additional 50 grams or part thereof : Rs. 10

Write a program to calculate the charge of a parcel taking weight of the parcel in kilograms as input.

Sample Input : Weight of the parcel = 180gms

Charge : for 100 grams = Rs. 30

for next 50grams =Rs. 10

for remaining 30 grams =Rs. 10

Sample Output : Total Charge: Rs 50

Question 6.

A company provides motorbike on rent to its members only. A class bike is created with the following data members:

int nkno(bike number), int phno(phone number), int idno (id number of members), int days(number of days the bike is taken on rent) as per the given criteria:

Number of days	Rent per day
First 5 days	Rs. 500 per day
Next 5 days	Rs 400 per day
Rest of the days	Rs 200 per day

Print the output in following format:

Bike Number	Phone	Member ID No.	No. of Days	Rent to be paid
xxxxx	xxxx	xxxxxxxx	xxxx	xxxx

Question 7.

The production (P) of crude oil of a country in millions of barrels may estimate by the following set of equations, where t represents the time in years:

$$P = 5 + 3t, \quad 0 < t < 5$$

$$P = 14 + (t - 5/2)^3 \quad t \geq 5$$

Write a program to find the production for every year from t= 1 to n where n is input by user.

Question 8.

Write a program that outputs the results of the following evaluations based on the number entered by the user.

1. Natural logarithm of the number
2. Absolute value of the number
3. Square root of the number
4. Random numbers between 0 and 1.

HOMEWORK

Note : Solve the following questions in class work copy.

Question 1: Rewrite the following if statement by using ternary operator.

```
if(a+b>c)
System.out.println("Ramesh");
else
System.out.println("Binita");
```

Question 2: Convert the following code into switch case:

```
if ( s1 == '1' )
a = 1;
else if ( s1 == '2' )
a = 2;
else if ( s1 == '3' )
a = 3;
```

Question 3: Write the following using ternary operator:

```
if(a>b)
{
    if(a>c)
        g=a;
    else
        g=c;
}
else
{
    if(b>c)
        g=b;
    else
        g=c;
}
```

Question 4: State the output of the following code

```
int i = j = 10;
if(a<100)
if(b>50)
++i;
else
++j;
System.out.print (" i " + i + "j " + j)
```

Where the input given is a=30 and b=30

Question 5:

Give the output

```
x=10,y=20;
if(x<y || (x==5)>10)
System.out.println(x);
else
System.out.println(y);
```

Question 6: Convert into switch case:

```
if(c=='R')
System.out.println("Red");
else if(c=='B')
System.out.println("Blue");
else if(c=='G')
System.out.println("Green");
else
System.out.println("Undefined");
```

Question 7: Write the output of the following code snippet

```
int a=94,c=6;
double x=3,b=9.0;
String s="Enjoy Working Hard";
if(((a+x)<105) && (++a - c*x<=45))
{
System.out.println(Math.pow(c,x));
System.out.println(a*c+b);
}
else if(++a*2)>(x+a*3)){
System.out.println((4*c++)%6);
System.out.println((char)(a+c));}
System.out.println("a : "+a+" and position is "+s.lastIndexOf('o'));
```

Question 8: Write the output of following code:

```
int a=5,b=2,c;
if(a>b || a!=b)
c = ++a + --b;
System.out.println(c+" "+a+" "+b);
```

Question 9: A number is called prime if it has two factors, composite if has more than two factors or neither prime nor composite if it has less than factor. Following program is given to input a number in a variable n and check whether it is a prime ,campsite or neither prime nor composite. Read the program carefully and give a suitable fill for blank spaces as given by label? 1?, ?2?, ?3? and?4?.

```
class prime
{
int ?1? = 0;
public void input(int n)
{
for(int i=1; ?2? ; i++)
{
if(?3? = =0)
c++;
}
If (c==2)
System.out.println( n +" is a prime number");
else if( ?4? )
```

```

        System.out.println( n + " is a composite number");
    else
        System.out.println( n + " is neither prime nor composite no.");
}

```

Question 10: A number is called Buzz Number if it is completely divisible by 7 and its last is 7. Following program is given to input two numbers and print all the Buzz Number from first number to second number. Read the program carefully and give a suitable fill for blank spaces as given by label? 1?, 2?, 3? and 4?.

```

class buzz
{
    int 1?;
    public void showBuzz(int a, int b)
    {
        for(int i=a; 2? ; i++)
        {
            k = i;
            if((3? = 0 && k%4?==0)
            System.out.println( i + " is a Buzz number");
        }
    }
}

```

Question 11: State the output with reason:

```

int i=1;
for( ; i<=5; i+=2);
System.out.println(i);

```

Question 12: What will be the output of the following code?

```

int m=2;
int n=15;
for(int i=1;i<5;i++)
m++;
--n;
System.out.println("m="+m);
System.out.println("n="+n);

```

Question 13: State the output of the following code fragment:

```

(i) int choice,x=0, y=0, z=0;
    for(choice=1;choice<=3;choice++)
    {
        switch(choice++)
        {
            case 2: x++; y--; z++; break;
            case 3: x+=2; y+=3; z-=3;
            default: ++x; ++y; ++z;
        }
        System.out.println("x="+x+"y="+y+"z="+z);
    }

```

Question 14: Write the output of following program:

```

int choice =1, x=0, y=0, z=0;
switch(++choice)

```

```
{  
    case 2: x++;y--; z++;  
    case 3: x+=2; y+=3; z-=3;  
    default: ++x; ++y; ++z;  
} System.out.println("x="+x+"y="+y+"z="+z):
```
