
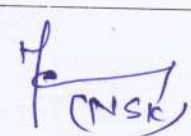







## VACATION HOME WORK

Class & Section: 11 AB

Subject	Vacation Task Assigned	Signature Of The Teacher
English	CBSE QPs of 4 chapters to be updated in Notebook.	
11A Maths	Complete the activity Book	
Physics	1. Mid Term QP solving, 2. 10 Numericals from each chapter taught	
11B Maths	① 10 practicals in manual book ② 50 MCQ's with solutions from previous year exams on covered mid term syllabus.	
Chemistry	Intext and Exercise questions of Classification of Elements	
Bio	CELL CYCLE and CELL DIVISION - TEXT BOOK BACK QUESTIONS	
Comp.Sc.	Sheet will be enclosed (Questions)	

Note : Term - 1 Maths paper to be answered by all. A test will be conducted on the same immediately after arrival from vacation.

## Computer Science Questions for Vacation Homework

1. Briefly describe all the data types of Python.
2. What do you understand by operator precedence in Python?
3. Write a program to print the following patterns using nested loop:

(a)

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

(b)

```
  1
 212
32123
4321234
543212345
```

(c)

```
1 2 3 4 5
 1 2 3 4
   1 2 3
    1 2
     1
```

(d)

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

4. What is abbreviated operator? What will be the output of z in the following expression :  
 $z = 150$  if  $(y - x > 500)$  else 50

if the output is:

(i)  $x, y = 300, 700$

(ii)  $x, y = 700, 800$

5. Three natural numbers a, b and c are said to form a Pythagorean Triplet if  $c^2 = a^2 + b^2$ . Write a program to find the Pythagorean triplets for integers from 1 to 20.
6. Write a program to input a number and print whether the number is special number or not . (Note: A number is said to be a special number, if the sum of the factorial of the digits of the number is same as the original number, e.g., 145 is a special number, because  $1! + 4! + 5! = 1 + 24 + 125 = 145$ ).
7. Computech company has 15 employees who have been divided into four grades as per their basic pay as follows:

GRADE I	Basic	:	Rs. 45000 p.m or more
	D.A	:	40 % of Basic
	H.R.A	:	30 % of Basic
GRADE II	Basic	:	Rs. 30000 p.m or more but less than Rs. 45000
	D.A	:	40 % of Basic
	H.R.A	:	25 % of Basic
GRADE III	Basic	:	Less than Rs. 30000 p.m but more than Rs. 15000
	D.A	:	30% of Basic
	H.R.A	:	20% of Basic
GRADE IV	Basic	:	Rs. 15000 p.m or less
	D.A	:	30 % of Basic
	H.R.A	:	15 % of Basic

If the salary, which is the total of Basic, D.A (Dearness Allowance) and H.R.A (House Rent Allowance), is above Rs.100000 per annum, then Income Tax at the rate of 30% of the annual salary exceeding Rs. 100000 is deducted on monthly basis at source. Taking names of the employees and the basic (Monthly) pay as inputs, a pay slip for each employee is to be printed. Write a program to perform this job.