DAV PUBLIC SCHOOL, BERHAMPUR, ODISHA

C-38/2021-22 **SUMMER HOLIDAY HOME WORK** **Dt: 29th May 2021**

Std. XII (2021-22)

Dear Parents

Vacations can be beneficial for the overall development of every child. During the summer vacations, children usually divert their energy in outdoor activities and games. However, the lockdown in the country has forced everyone to stay at home.

The global pandemic has caused a road bump in the children's educational journey. Parents are worried about the missing school days.

Under these circumstances, when the classroom activities are also over, parents are facing gigantic problem of keeping children engaged in ways that is productive for their development.

So during the Summer Holiday for Students which is commencing from 30th May 2021 for Std. XII, we request you to motivate and encourage your wards actively to participate in the project and other activities provided by the teachers. The teachers have prepared a productive set of worksheets and projects for the students to help them to revise their concepts.

Students to revise each and every chapter of all subjects completed till 29th May 2021 and be keep themselves prepared for the Unit Test to be held after Summer Vacation.

Students to use different Note Books for different Subject.

Stay Safe, Stay Healthy

Thank you

Mrs. Dharashree Padhi
Principal

ENGLISH CORE

Answer the following questions in 30-40 words each.

1. What tempted little Franz to spend the day out door?
2. What did Franz notice that was unusual about the school that day?
3. How did Franz's feeling about the school and Hamel change?
4. How was M Hamel's class different on the day of the last lesson?
5. What was M Hamel's impression of the French language?
6. How did Franz react to the announcement made by the French teacher about the last lesson?
7. What kind of news about the war came through the bulletin board over the last two years?
8. Who did M Hamel blame for the negligence of learning of the French language? Why?
9. How did M Hamel bid farewell to the villagers and the students?
10. Who is the Tiger King? Why does he get that name?
11. Why did the Maharaja take up a massive tiger hunt programme?
12. Why did the tiger king stand in danger of losing his kingdom? How did he resolve the issue?
13. What condition did the Maharaja lay down before the Dewan for his marriage?
14. What was the prediction of the chief astrologer about the death of the Tiger King?
15. What difficulty did the Maharaja face to complete his mission of tiger hunting?
16. Why was the Maharaja so anxious to kill hundred tigers?
17. Why is it celebration time for all tigers inhabiting Pratibandapuram?
18. The manner of his death is a matter of extraordinary interest. Comment.
19. Could the Maharaja disprove the prophecy of the chief astrologer ultimately?
20. What did the poet realize? How did she feel?
21. What thought did the poet put away?
22. What do the 'sprinting trees' signify?
23. What different images does the poet use to describe her mother ageing?
24. What is the familiar ache of the poet? Why does it keep returning to her?

25. What is the theme of the poem 'My Mother at Sixty-six'?
26. How did Charley reach the third level of Grand Central station?
27. What is being inferred from Sam's letter to Charley?
28. What does stamp collecting habit of Charley show about him?
29. Give some evidences from the textbook that Charley visited the Third Level?
30. What according to Charley is the modern world filled with?
31. What did Douglas finally do to get rid of the fear he had of water?
32. How did the incident of YMCA pool affect Douglas?
33. When Douglas realised that he was sinking, how did he plan to save himself?
34. What are the physical features of the eighteen year boy who dropped Douglas into water & why?
35. What did Douglas's mother say about Yakima river?
36. Why did Douglas feel safe to learn swimming a YMCA pool?
37. Who is Saheb ? How is his name ironic?
38. Little has moved with time, it seems, in Firozabad. State any one reason why the author says this?
39. 'Garbage to them was gold'. Why does the author say about the rag pickers of Seemapuri ?
40. What are the hazards of working in a glass bangle factory?
41. How did the bangle makers of Firozabad lose their eye sight?
42. Give a short note of the character of Mukesh?
43. What is the role of law makers, sahukars others in the territory of Seemapuri?
44. What is the dream of Mukesh? Can he really materialise it?
45. How can the dreams of Slum dwellers be rationalised? How we as educated mass help them in this venture?

Answer the following questions in 120-150 word

1. Who as the Tiger King? What was the story was the story associate with his birth?
2. The Tiger King's quest for tigers was full of challenges. How did he overcome it?
3. How did the Tiger King accomplish his mission of killing hundred tigers?
4. How does M Hamel prove to be an ideal teacher?
5. Sketch the character of little Franz.
6. Everybody during the last lesson is filled with regret. Comments.
7. What is Charley's vision of the Galesburg town?
8. Mukesh is not like the others. His dreams loom like a mirage amidst the dust of streets that fill his town Firozabad.' Justify the statement in the light of contrast in the mindset of Mukesh and the people of Firozabad.
9. Descibe the difficulties that the bangle makers of Seemapuri face in their lives.
10. In India, we believe in prayers. Whenever we are faced with a problem, we pray to God. A son of a priest at Udipi, while going to school prayed at temple for a pair of shoes. Thirty years later, we find his son well dressed in a school uniform. What has brought such change - The father's prayer or the father having gone to school or both? Give reasonable answer.
11. 'Confrontation of fear is the only way to overcome it'. Justify thistatement in reference to the lesson-'Deep Water'.
12. We live in a world of uncertainty ,doubt,suscipion and above all distrust .Is Charley an epitome of this. State your views on this statement.
13. What role does women play in Seemapuri? What are they expected to do?
14. A roof over one's head is termed as biggest achievement of Lifetime ?Which state of people did the author want to reflect here?
15. How and why is Saheb not his own master anymore? Why does children surrender to their fate at an tenderly age ?
16. Douglas defeated his own aversion to water? What did he achieve right after that as a human?
17. Describe in detail Douglas's helplessness and hopelessness being inside the water.
18. Give your impression of the lesson –'The Third Level'?

MATHEMATICS

1. Complete all Questions and Answers of Chapters -1 & 2 in the Notebook.
2. Write all questions and answer of Chapter 1 & 2 from NCERT Exemplar book.
3. Do all above in a separate long notebook. After vacation you are supposed to submit in the School.
4. Answer the following extra questions.

NOTE:

CHAPTER-1

1. Find the number of surjection from A = {1, 2, 3, 4, 5} to set B = {a, b}.
2. If n(A) = 3, n(B) =4, find the number of injective functions from A to B.
3. If f = {(1, 2), (3, 5), (4, 1)} and g = {(2, 3), (5, 1), (1, 3)}, write gof.
4. If $f(x) = (a - x^n)^{\frac{1}{n}}$, where a > 0 and n ϵ N, find the value of f(f(x)).
5. Let R be the equivalence relation in set Z defined as R = {(a, b): 2 divides a-b}, write the equivalence class of $\{0\}$.
6. If A = {1, 2, 3, …….,n} then write the number of invertible functions in set A.
7. Find the value of parameter α for which the function f(x) = 1 + αx , α≠0 is the inverse of itself
8. Consider f : [0, ∞) → [-5, ∞) given by f(x) = $9x^2$ + 6x – 5. Show that f is invertible with $f^{-1}(y) = \frac{\sqrt{y+6}-1}{3}$.
9. Show that the function f : R → (-1, 1) defined by $f(x) = \frac{x}{x+|x|}, \forall x \in R$ is one-one and onto function.
10. Show that the relation R in NxN defined by (a, b) R (c, d) iff a + d = b + c is an equivalence relation.
11. Find the value of parameter α for which the function f(x) = 1 + αx , α≠0 is the inverse of itself.
12. Let $f: N \to N$ be a function defined as $f(x) = 4x^2 + 12x + 15$. Show that $f: N \to S$ is invertible Where S is range of f. Find the inverse of f and hence find $f^{-1}(31)$and $f^{-1}(87)$.

CHAPTER-2

1. Find the value of n for which $\tan^{-1}\left(\frac{n}{\pi}\right) > \frac{\pi}{4}, \ \forall n \in N$ is valid.
2. Find the value of $\sin^{-1}\left[\cos\left(\frac{33\pi}{5}\right)\right]$.
3. If $\tan^{-1} a + \tan^{-1} b = \frac{\pi}{4}, \ \forall ab < 1$, then find the value of a + b +ab.
4. Find the value of $\tan^{-1}\sqrt{3} - \sec^{-1}(-2)$.
5. Write the value of $\cos\left[\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right]$.
6. If $\tan^{-1} x + \tan^{-1} y = \frac{\pi}{6}$, then find the value of $\cot^{-1} x + \cot^{-1} y$.
7. Prove that $\tan^{-1}x = 2\tan^{-1}[cosec(\tan^{-1}x) - \tan(\cot^{-1} x)]$.
8. Show that $\sin^{-1}\frac{12}{13} + \cos^{-1}\frac{4}{5} + \tan^{-1}\frac{63}{16} = \pi$.
9. If $\tan^{-1}\left(\frac{x-1}{x-2}\right) + \tan^{-1}\left(\frac{x+1}{x+2}\right) = \frac{\pi}{4}$, then find the value of x.
10. Prove that:-$\frac{9\pi}{8} - \frac{9}{4}\sin^{-1}\left(\frac{1}{3}\right) = \frac{9}{4}\sin^{-1}\left(\frac{2\sqrt{2}}{3}\right)$.

11. If $\sin\left(\sin^{-1}\frac{1}{5}+\cos^{-1}x\right)=1$, then find the value of x.
12. Show that:-2 $\tan^{-1}\left\{\tan\frac{\alpha}{2}.\tan\left(\frac{\pi}{4}-\frac{\beta}{2}\right)\right\}=\tan^{-1}\left(\frac{\sin\alpha.\sin\beta}{\cos\alpha+\sin\beta}\right)$.
13. Prove that $\tan^{-1}\left\{\frac{\sqrt{1+cosx}+\sqrt{1-cosx}}{\sqrt{1+cosx}-\sqrt{1-cosx}}\right\}=\frac{\pi}{4}-\frac{x}{2}$, if $\pi<x<\frac{3\pi}{2}$.
14. If $\cos^{-1}x+\cos^{-1}y+\cos^{-1}z=\pi$, prove that $x^2+y^2+z^2+2xyz=1$.
15. If $\sin^{-1}x+\sin^{-1}y+\sin^{-1}z=\pi$, then prove that : $x\sqrt{1-x^2}+y\sqrt{1-y^2}+z\sqrt{1-z^2}=2xyz$.

PHYSICS

1. Answer the following Case Based Question

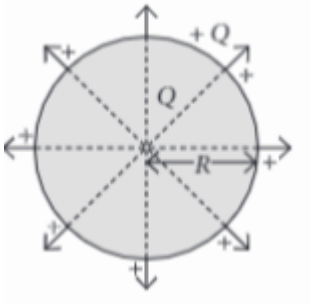
FARADAY CAGE

A Faraday cage is an enclosure made of a conducting material. The fields within a conductor cancel out with any external fields, so the electric field within the enclosure is zero. These Faraday cages act as big hollow conductors you can put things in to shield them from electrical fields. Any electrical shocks the cage receives, pass harmlessly around the outside of the cage.

1. Which of the following material can be used to make a Faraday Cage?
   (a) Plastic (b) Glass (c) Copper (d) Wood
2. Example of a real world Fraday cage is
   (a) Car (b) Plastic Box (c) Lightning Rod (d) Metal Rod
3. What is the electrical force inside a Faraday cage when it is struck by lightning?
   (a) The same as lightning (b) Half that of the lightning (c) zero (d) a quarter of the lightning
4. An isolated point charge +q is placed inside the Faraday cage. Its surface must have charge equal to
   (a) 0 (b)+q (c) –q (d) +2q
5. A point charge of 2C is placed at centre of Faraday Cage in the shape of cube with surface of 9cm edge. The number of electric field lines passing through the cube normally will be
   (a) 1.9105 Nm^2/C entering the surface (c) 1.9105 Nm^2/C leaving the surface
   (b) 2.0105Nm^2/C leaving the surface (d) 2.0105 Nm^2/C leaving the surface

SPHERICAL CAPACITOR

The electrical capacitance of a conductor is the measure of its ability to hold charge. An isolated spherical conductor with a uniform distribution of charge Q on its entire surface can be considered as if the total charge is concentrated at its centre. The potential at any point on the surface of the spherical conductor is given by V = $\frac{Q}{4\pi\epsilon_0 R}$



Capacitance of the spherical capacitor in vacuum is C = $\frac{Q}{V}=\frac{Q}{\frac{Q}{4\pi\epsilon_0 R}}=4\pi\epsilon_0 R$

Clearly the capacitance of spherical capacitor is directly proportional to its radius.

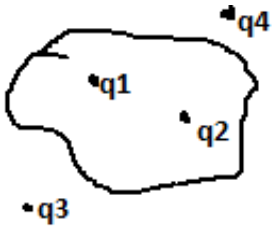
1. If an isolated sphere has a capacitance of 50pF. Then its radius is
   (a) 90cm (b) 45cm (c) 90m (d) 45m

2. How much charge should be placed on a capacitance of 25pF to raise its potential to 10^5V?
   (a) 1μC (b) 1.5 μC (c) 2 μC (d) 2.5 μC
3. Dimensions of capacitance is
   (a) [$ML^{-2}T^4A^{-2}$] (b) [$M^{-1}L^{-1}T^3A^1$] (c) [$M^{-1}L^{-2}T^4A^2$] (d) [$ML^{-2}T^4A^1$]
4. Metallic sphere of radius R is charged to potential V. Then charge q is proportional to
   (a) V (b) R (c) both V & R (d) none of these
5. If 64 identical spheres of charge q &capacitance C are combined to form a large sphere. The charge and capacitance of the large sphere is
   (a) 64q, C (b) 16q, 4C (c) 64q, 4C (d) 16q, 64C

2. In all Assertion Reasoning Questions: Two statements are given – one labelled Assertion (A) and the other labeled Reason(R). Select the correct answer to these questions from the codes (a), (b), (c)and (d)as given below.

(a) Both A & R are true and R is the correct explanation of A.
(b) Both A & R are true but R is NOT the correct explanation of A.
(c) A is true but R is false.
(d) A is false and R is also false.
(e)

1. **Assertion (A):** On disturbing an electric dipole in stable equilibrium in an electric field , it returns back to its stable equilibrium orientation.
   Reason (R): A restoring torque acts on the dipole onbeing disturbed from its stable equilibrium.
2. **Assertion (A): Four** point charges q_1,q_2,q_3& q_4 are given as shown in the figure. The flux over the shown Gaussian surface depends only on charges q_1& q_2.
   Reason(R): Electric field at all points on Gaussian surface depends only on charges q_1& q_2.



3. **Assertion (A):** On going away from a point charge or a small electric field decreases at the same electric dipole , electric field decreases at the same rate in both the cases.
   Reason(R): Electric field is inversely proportional to square of distance from the charge or an electric dipole.
4. **Assertion (A):** The electric flux of the electric field $\oint E.ds$ is zero. The electric field is zero everywhere on the surface.
   Reason(R): The charge inside the surface is zero.
5. **Assertion (A)**: The dielectric constant for metals is infinity
   Reasoning(R): When a charged capacitor is filled completely with a metallic slab, its capacity becomes very large.
6. **Assertion (A)**: Two adjacent conductors carrying the same positive charge have no potential difference between them.
   Reasoning(R): The potential of a conductor does not depend upon the charge given to it.
7. **Assertion (A)**: When a dielectric medium is filled between the plates of the capacitor, its capacitance increases.
   Reasoning(R): The dielectric medium reduces the potential difference between the plates of the condenser.
8. **Assertion (A)**: A capacitor is connected to a battery. If we move its plate further apart, work will be done against the electrostatic attraction between the plates & the energy of the capacitor gets decreased.
   Reasoning(R): The energy stored in capacitor is dissipated in the form of heat energy.
9. **Assertion (A)**: Circuits containing capacitors should be handled cautiously even when there is no current.
   Reasoning(R): The capacitors are very delicate so they quickly breakdown.

LIST OF IMPORTANT DERIVATIONS

CHAPTER 1: ELECTRIC CHARGES & FIELDS

Q1. State & prove the Principle of superposition of electric forces.
Q2. Derive the expression of electric field due to a point charge.
Q3. Obtain the expression of electric field due to an electric dipole(point/small) at an
(i) axial point (ii) equatorial point.
Q4. Derive the expression of torque acting on a dipole placed in a uniform electric field.
Q5. State Gauss's law and derive coulomb's law using it.
Q6. State Gauss's law and derive the following
(a) Electric field due to line charge distribution
(b) Electric field due to plane sheet of charge
(c) Electric field due to thin spherical shell

CHAPTER 2: ELECTROSTATIC POTENTIAL & CAPACITANCE

Q1. Derive the expression for capacitance of an isolated spherical capacitor.
Q2. Derive an expression for capacitance of a parallel plate capacitor.
Q3. Derive an expression for electric potential at axial, equatorial & at any point of the electric dipole.
Q4. Deduce the relation between electric field & potential & write two important conclusions concerning the relation between the electric field & potential.
Q5. Derive equivalent capacitance of three capacitors C_1, C_2, C3 connected in series &in parallel.
Q6. Deduce an expression for potential energy of a dipole in a uniform electric field & state the conditions for stable & unstable equilibrium.

Q7. Derive an expression for capacitance of a parallel plate capacitor in the presence of conducting & non conducting slabs inserted between its plates.
Q8. Derive an expression for electric potential at a distance r from it for Q>0 & Q<0.
Q10. Show that the work done to move a charge from one point to another point in an electric field by an electrostatic force is independent of the path followed.

PHYSICS PROJECT WORK

1. **Logic Gates** (ROLL NO. 01-06)
2. **Half- wave rectifier** (ROLL NO. 07-12)
3. **Full -wave rectifier** (ROLL NO. 13-18)
4. **Hollow Prism (To find out the refractive indices of various liquids using Hollow prism)** (ROLL NO.19-24)
5. **Refractive index of liquid (by using a convex lens and plane mirror)** (ROLL NO. 25-30)
6. **LDR (Light dependent resistor)** (ROLL NO.-31-36)
7. **Zener Diode** (ROLL NO.-37-42)
8. **Transformer(Step-up or step-down)** (ROLL NO.-43-48-SEC-A), (ROLL NO.-43-46-SEC-B) (ROLL NO.-43-47-SEC-C)

The above are the name of your project works and the distribution is given by according to the roll numbers. Along with the matter of project work, the followings need to be attached.

a) Front page carrying the name of the school and project work, details of the student and name of the guides.
b) Certificate
c) Acknowledgement
d) Index
e) Objective
f) Apparatus Required
g) Theory
h) Diagram
i) Observation
j) Tabulation
k) Inference
l) Precautions
m) Sources of error
n) Bibilography
o) Working model

Front and Back Pages should be of glossy paper. Page number and margin should be given in each page. If there is anything required to be discussed then you can contact the Physics Teachers.

CHEMISTRY

Unit – 1. SOLID STATE
Intext Questions: 1.4, 1.5, 1.8, 1.15, 1.16, 1.18, 1.23 and 1.24
Exercise Questions: 1.5, 1.7, 1.10, 1.11, 1.15, 1.20, 1.23, 1.24 and 1.26

Unit – 10. HALOALKANES AND HALOARENES
Intext Questions: 10.1, 10.2, 10.5, 10.6, 10.7 and 10.9
Exercise Questions: 10.2, 10.3, 10.6, 10.9, 10.12, 10.20 and 10.22

Project Work:
XII A: To study the quantity of casein present in different samples of milk.
XII B: Preparation of soyabean milk and its comparison with the natural milk with respect to cord formation, effect of temperature and taste.
XII C: To detect the presence of adulterants in sugar, Chilli powder and turmeric powder.

BIOLOGY

ACTIVITY:

- Prepare Revision Maps / Mind Map / Concept Map / Diagrammatic Map of Chapters -2, 3 and 4.

OR

- Make Rangoli / Painting / slogans with effective diagram / Warli art / Clay Model on any of the following topics.
    - Amnioscentesis (Female Foeticide)
    - Female reproductive structure.
    - Embryogenesis
    - Watson and crick model of DNA
    - Packaging of DNA
    - Dihybrid cross
    - Population control
    - Pollination (any type)
    - Megasporogenesis
    - Out breeding devices

NOTE BOOK WORK:

- Complete the Very Short Answer types and Short Answer Type questions of **NCERT EXEMPLAR** Book of Chapters- 2, 3 and 4.
- Complete Exercise Questions of Chapter 01, 02, 03 and 04 from NCERT book (If not yet completed).
- Write down all the Scientific Names and their use from all 16 Chapters of your NCERT Biology Book.

For Eg: CH 01- *Strobilanthuskunthiana*- flowers once in 12 years.
Bryophyllum- reproduces asexually by adventitious leaf buds.

RECORD WORK

- Spotting experiments:

a. Adaptation of flowers for pollination: wind pollinated flower, insect pollinated flowers.
b. Gametogenesis: T.S of testis and T.S of Ovary.
c. V.S of blastula.

d. Prepared pedigree charts of the genetic traits such as rolling of tongue, widow's peak and colour blindness.
e. Controlled pollination – emasculation, bagging and tagging.
f. Common disease causing organisms like: *Ascaris, Entamoeba, and Plasmodium* through permanent slides and specimen. Comment on symptoms of diseases that they cause.
g. Study the morphological adaptations of the given plant (*Opuntia, Zizyphus, Calotropis*) and animal (Kangaroo rat, Camel) found in xeric conditions.
h. Study the morphological adaptations of the given plant (Water hyacinth) and animal (Bony fish) found in aquatic conditions.

SPECIAL INSTRUCTIONS

- **Do not mention experiment number and date neither in the index page nor in the experiment page.**
- Do not draw any diagram on the backside white page of last page of each experiment.
- Draw well labelled diagrams, labelling should be on right hand side only.
- Submit the completed record and notebook soon after the school re-opens (on the day you have practical class).

COMPUTER SCIENCE

PROJECT WORK

PROJECT GUIDELINES

The aim of the class project is to create something that is tangible and useful using Python / Python and SQL connectivity. This should be done by ***one student*** or in *groups of* ***two to three students***. The aim here is to find a real-world problem that is worth solving. Students you can collect information about local businesses and ask them about the problems that they are facing.

For example, if a business is finding it hard to create invoices for filing GST claims, then students can work on a Project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications suchas:

1. Games
2. QUIZ
3. School MonitoringSoftware
4. BankingManagement
5. Railway ReservationSystem
6. LIC PolicyManagement
7. Automobile Shop
8. Fee AccountingSoftware
9. Payroll or SalaryManagement
10. EmployeeManagement
11. Pharmacy ManagementSystem
12. Movie TicketManagement
13. Airlines ReservationSystem
14. Cafeteria Order Management System
15. LibraryManagement
16. ATM Bankingsystem

Some more Computer Science Project ideas can be browsed at:
https://www.upgrad.com/blog/computer-science-project-ideas-topics-beginners/

Each student must prepare and submit the following:

1. Menus and Submenus on the basis of topic selected by him/her and get it approved by sharingit As MS Worddocument.
2. Project has to be made using File handling – Binary File Handling, CSV File Handling , Mysql and Python Connectivity(Python -Front end, MySQL-Backend)
3. Basic CURD operations must be incorporated in each project-CRUD is an acronym that comes from the world of computer programming and refers to the four functions that are considered necessary to implement a persistent storage application: create, read, update anddelete.
4. Each project has to be designed using Python programmingLanguage.
5. Initially share Menus, submenus and algorithm for eachoption.
6. You will start coding in Python only after approval of Topic and itsoptions.

Practical File Assignment #1

1. Write a Python program to do thefollowing:
   a. Create a list of Nnumbers
   b. Input the position of the element to be deleted from the list and delete the element at thedesired position in thelist.
   c. Input the element and the position where it is to be inserted in thelist.
   d. Display thelist
2. Write a program to read a list of n integers (positive as well as negative). Create two new lists, one having all positive numbers and the other having all negative numbers from the given list. Print all the threelists.
3. Write a program in Python to enter the list of N numbers and do thefollowing:
   a. Display thelist.
   b. Display the largest and smallest number in thelist.
   c. Display the third largest number in thelist.
   d. Input another list of five numbers and add it with the original list. Display thelist.
4. Write a program to read a list of N numbers and display the list in reverse order without using any function.
5. Write a program to read a list of N numbers and replace odd position element with even position element. Display the finallist.
6. Write a program to read a list of N numbers and replace the even values with number divided by2 and odd values with number multiply with 5. Display the finallist.
7. Write a program to input your friend's names and their phone numbers and store them in the dictionary as the key-value pair. Perform the following operations on thedictionary:
   a. Display the name and phone number for all yourfriends.
   b. Enter the name whose phone number you want to modify. Display the modifieddictionary.

8. Write a program to input roll number and marks obtained in five subjects of N number ofstudents. Store the data in a dictionary as the key-value pair. Perform the following operations on the dictionary:
   a. Display the roll number and marks obtained in fivesubjects.
   b. Calculate the sum of five subjects and display the roll number and sum of all the fivesubjects.
9. Write a program to count the number of times a character appears in a givenstring.
10. Write a program to convert a number entered by the user into its corresponding number in words. For example, if the number is 876, then the output should be 'Eight SevenSix'
11. Write a program in Python to input a number and display whether it is a prime number ornot.
12. Write a program in Python to input a string and display whether it is a palindrome ornot.
13. Write a program in python to input two numbers and display the greatest commondivisor.
14. Write a program in Python to input two numbers and display the least commonmultiple.
15. Write a program in Python to input a number and display whether it is an Armstrong number or not. An Armstrong number is where number is equal to the sum of cube of thedigits.
16. Write a program in Python that input a number - how many times random number is generated, and generates random numbers between 1 and6.

17. **NOTE:** All the above programs are to be programmed using **Python Language**. Paste Question, its python code followed by its output in Ms-Word Document and email to your Computer Science Teacher govindrao27@rediffmail.com

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