Beetle's International School

Summer Holiday Homework (2024-25)

Dear Parents

As the upcoming summer holiday approaches, we would like to share with you an amazing opportunity for your child to take part in engaging and meaningful activities.

Enclosed with this message is; a summer break Assignment designed to encourage creativity, exploration, and lifelong learning. With these fun and educational summer activities, we are certain your child will have a fabulous time learning and exploring.

We encourage you to go along with your child on this journey of exploration. Together, let's make this summer break one filled with accomplishments, joy, and priceless memories.

Kindly be informed that Holiday Assignment will be assessed and evaluated and marks scored will be included in the forthcoming Exam.

Last date for submission of Holiday Assignment is Monday 24th June, 2024.

School reopens after Summer Vacation on Wednesday 19th June at 8.00 am. (Summer Schedule follows)

I wish everyone a wonderful and refreshing break!

PRINCIPAL

Class XII (Science)

Subject : English

Do entire work in a file.

Q. 1 Prepare a project file that includes a write up about "Positive Attitude in life" or "Dream big and achieve it". (Word limit 500 words) You can paste relevant pictures and also decorate it accordingly.

Q. 2 Read any novel of Charles Dickens/ Vikram Seth / Chetan Bhagat or any author of your choice write a book review on it describing all the main characters including flow chart and synopsis.

Q. 3 Prepare a news letter, covering all the activities done in the school during April and May. It must contain four pages alongwith message from Principal, vice Principal, Class teacher and some articles. You can visit school Website for reference but please do not copy paste.

Q. 4 Read chapters of your course book and prepare a flow chart of any two chapters from each book. (Vistas/Flamingo/Poetry)

Q. 5 Learn all notes and chapters done in class.

Q. 6 Write any story on "Meeting with the celebrity. Paste or draw pictures accordingly. Decorate it wonderfully. Also prepare yourself to narrate with proper modulation and intonation. Give it a catchy title also.

Subject : Physical Education

Write in following practical in Lab Manual with pictures.

Q. 1 Practical 1 : Fitness Tests Khelo India Test (SAI)

Practical 2 : Procedure for Asanas, benefits and contraindication for any two Asanas for each lifestyle diseases.

Practical 3 : Anyone IOA recognized sports game of choice. Labelled diagram of field and equipment. Also, mention its rules, terminologies and skills.

Subject : Informatics Practices

Q. 1 Write python program and their output.

i) Write a program to calculate the length of a string.

ii) Write a program to create and display a one – dimensional array like object containing an array of data.

iii) Write a program to add, subtract, multiply and divide two pandas series.

Sample series [2, 4, 6, 8, 10], [1, 3, 5, 7, 9]

iv) Write a program to compare the elements of the two series.

Sample series [2, 4, 6, 8, 10], [1, 3, 5, 7, 9]

v) Define data frame in Pandas.

vi) What is Pandas numpy array?

vii) Write a numpy program to extract all odd numbers from a 1 dimensional array input.

array = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

viii) Find the output of the following program:

```
Import numpy as np
a = np.array )[30, 60, 70, 30, 10, 86, 45])
print (a [2 : 5 : 2])
```

Q. 2 Make a 3D model of star topology and tree topology.

Q. 3 Make a working model of AI Based Rader signal processing.

Subject : Maths (Core)

1 Redo exercises of integration, continuity & differentiability, matrices.

2 A working or non-working model: Roll No. 1 to 10 model on area under the curve.

3 Roll No. 11 to 20 : model on application of differentiation.

Subject : Physics

1 Make 3-D working model ,Chart on thermocol and PPT (in CD) for presentation in class for the TOPICS listed below, any new and dynamic topic by your own choice (prior informing and allotment) can also be made in group of 5 students.

Also explain their importance in real life scenario in atleast 3 slides.

SUGGESTED TOPICS ARE :

Kaleidoscope or refracting telescope, Rube Goldberg machine, concave mirror solar cooker, AC generator, Young's Double slit experiment, D.C Electric Motor, Diffraction etc.

These are just ideas of project , any other creative working model will be considered with prior information and allotment.

(Usage of Arduino or Raspberry pi board is considered best.)

2 Make formula Sheets on A-4 pages with atmost creativity and facts of all chapters of NCERT PHYSICS and learn them for testing in class just after summer holidays.

(Any other type of Creative presentation of these formula will be appreciated)

Subject : Chemistry

1. To prepare working models OR visual model, OR charts for exhibition Galvanic cell, electrolytic cell, electrolysis, RO (reverse osmosis)
2. To write Chemistry experiments according to the curriculum in practical file. The format to be followed: AIM, material required, Procedure, Diagram, observation, Conclusion and Precautions.
3. Prepare a file and PPT on any of the following topic

   ideal and non-ideal solution

   positive and negative deviation from roults law

   colligative properties

   osmosis and reverse osmosis

Subject : Biology

1. To prepare projects on working models OR visual model, OR charts for exhibition.
2. To write Biology experiments according to the curriculum in practical file. The format to be followed: AIM, Material required, Procedure, Diagram, Observation, Conclusion and Precautions.
3. Start you investigative project and start writing in A4 size. It should include: Paper, Certificate * Introduction * Details about the project * Annexure * Bibliography
4. Prepare any one topic from first two chapters for presentation in class and write it in a separate copy.
5. Write one page on human communicable diseases and your views on today's plight of students.
6. Write three 5 marks questions without diagrams from lessons 1 and 2.
7. Draw any five diagrams labelled and self-explanatory from lessons 1 and 2.