Hurrah! Break Time……………

General Instructions:
- Do your holidays homework in a very neat and tidy manner.

English:

Instructions - *Use your summer break judiciously.

*Cultivate a hobby, pursue a passion.

*Read a book and connect with old friends.

*Make optimum use of your energy and give a vent to your creativity

*But a small reminder.

Manage your time and complete your homework.

1. Read Chapter- Discovering Tut-The Saga continues (Hornbill). Makes notes on it.

   Or

   Make a PowerPoint presentation on it. The PPT should have minimum 8 to 10 slides.
2. Prepare a writing skill file. Use coloured A4 size sheets.
   a) Content page
   b) Notice (two samples)
   c) Classified advertisements –write or cut and paste (different categories from magazine or newspaper)
   d) Invitations (different types)
   e) Letter to editor (cut and paste or write)
3. Revise the following for class test :
   Lesson 1(Hornbill)
   Poem 1 and 3
   Lesson 1 and 2(Snapshots)
   Error Editing, Omissions, Cloze
4. Draft a poster on FIGHT CORONAVIRUS.

Maths:
1. Do the given assignment and Prepare Project File.

Physics:
1. Revise Kinematics and do all numericals of it.

Chemistry:
1. Revision and practices numericals and concepts of unit "Atomic Structure" and "Classification of Elements".

Biology:
1. Project; collect any eight plant species and make a Herbarium file. Each herbarium sheet should have following information likes cientific name of the plant, common name of the plant, family of the plant, collector's name, place, time and date of collection. Plants canbe of following types
   *Medicinal
   *Ornamental
   *vegetables
2. Draw all well labeled diagrams done till no win your fair notebooks.
3. Complete notes of the topics done in class.
4. Make appt on Novel corona virus Disease (covid-19). The presentation need to cover the following content;
   *Brief history of serious out break.
   *Recent information and facts.

*Preventive measures.

Accountancy:
1. Revise Ch- Journal, Accounting Equation and Basic Accounting concept for class test.
2. Complete practical and additional questions of above chapters.

Business Studies:
1. Revise unit 1 and unit 2 full for class test.
2. Complete your note book of unit 2.
3. Prepare a Project File on any form of Business Organization.
4. Practice case studies questions from NCERT of botb units.

Economics:
1. Revise syllabus done till the date
   Micro Economics
   Chapter- 1 to 4
   Statistics
   Chapter- 1,9 & 10
2. Prepare Project File on the allotted topic.
   Topics for Project File
   a) Demand& it's Determinants
   b) Supply & it's Determinants
   c) Market Equilibrium
   d) Production Function
   e) Demoneytisation
   f) GST

Geography:
1. Revise and prepare notes:
   Book -Fundamental of Physical Geography
   Chapter 1 Geography as Discipline
   Chapter 2 The Origin and Evolution of the Earth
   Chapter 3 Interior of the Earth
   Chapter 4 Distribution of Continents and Oceans
   Book -India : Physical Environment
   Chapter 1 India – location
   Chapter 3 Drainage System
2. Prepare a project file on Covid 19 keeping the following points:
   a) How did it spread
   b) steps taken by Government to control it
   c) Effect on environment
   d) Effect on lives of common people
   e) Your view on covid 19
3. Prepare Practical File.

Political Science:
1. Read and revise the chapters taught in the class. Answer the questions sent through the worksheet in Google Classroom.
   Book-1
   Chapter 1- Constitution: Why and How?
   Chapter 2- Rights in the Indian Constitution
   Chapter 3- Election and Representation
   Book-2
   Chapter 1 Political Theory: An Introduction

In addition, prepare assignment from the chapters mentioned above with the following details:
1. 15 terms
2. 20 MCQs
3. 20 Very short answer type questions
4. 20 fill in the blanks

2. Political Science Project- Prepare a project according to CBSE guidelines.
   Some suggested topics are:
   1. The importance of elections in a democratic country with special reference to India.
   2. The recent Lok Sabha Elections 2019 - submit a project report on the parties involved. Their campaigns and the results.
   3. Detailed Structure and Functioning of any one organ of the government ie Legislative, Judiciary or Executive.
   4. Decentralization- a review of 73rd and 74th amendment.
   5. Take up any one concept/value such as Equality, Liberty, Social Justice Etc. Find out a case study where violation of these rights has been seen. Analyse the case and prepare a report.
   Some suggested topics in the International Order:
   Some suggested topics are listed below:
   1. Syrian Crisis.
   2. India's strengthened Foreign Relations in 2018.
   3. The Fall of Omar Hassan Al-Bashir- Sudan.
   4. Relation between North-South Korea.
   5. Somalia- Al Shabaab insurgency.
   6. Venezuela's Economic Crisis.
   7. The Cold War.
   8. US Unilateralism: Operation Iraqi freedom.
   9. Britain's Exit from European Union.
   Any other topic based on the syllabus.
   General Instructions for Project Work:
   1. It should be a handwritten project on a A4 size sheet.
   2. Project should be summed up in 12-15 pages.
   3. It should be well researched and pictorial.
   4. The project must have a table of contents.
   5. Title/ Cover page,acknowledgement, Bibliography, headings and sub-headings are a must.
   6. It must include relevant news clippings, facts and figures.
3. Read the newspaper daily especially the editorial page.

Painting:
1. Best out of waste.

Hindi:
1. अभी तक पूर्ण हुए पाठ्यक्रम (गद्य-खंड नमक का दारोगा, मियो नसीरुद्दीन का खड़ कबीर, मीरा, सुमित्रानंदन पत) तथा गायिकाओं में बेजोड़ लता मंगेशकर पाठ के प्रश्न उत्तर दोहराए व उत्तर पुस्तिका पूर्ण करें।

2. रचनात्मक लेखन में अनुच्छेद कार्यालय पत्र (औपचारिक तथा अनौपचारिक) लिखिए।

3. फीवर तथा आलेख लेखन (मासिक विषयों पर) A-3 शीट पर लिखिए।

4. हिंदी भाषा से संबंधित शब्दकोश को बढ़ाने हेतु हिंदी समाचारपत्र और पत्रिकाएं पढ़िए।

Music: Prepare Project File.

Topics are -

1. **जीवनी- फैयाज खान, अब्दुल करीम खान, बड़े गुलाम अली खान, पंडित कृष्णराव शंकर**

2. **राग- राग भैरव, राग बागेश्री**

3. **ताल- झप ताल , रूपक ताल**

4. **तानपुरा with picture and label that.**

   Use A3 sheets only. You need 14 pages.(2 extra). All the written work should be on right hand side and picture is to be pasted on left hand side. Don't forget to write an aknowledgement and certificate.

5. **Learn definations- अलंकार, मींड, गमक, ग्राम, मूर्च्छना, कण, मुर्की खटका, मार्गी संगीत व देशी संगीत**

Physical Education:

1. **Complete your Project File with pictures**
   Topic - Olympic Games And Yoga (Do any one)
2. **Learn questions answers of chapter 1,2,3,5,7**

Psychology:

1. Watch **at least two** of the following movies based on psychological themes and *write reviews based on psychological themes* :
   - Character sketch of the protagonist (main character).
   - What are the various problems encountered by the protagonist and how were they resolved.
   - Reflecton the relationships the protagonist shared with other characters.
   - Your learnings from the movie
   - Discuss your favourite part of the movie giving reasons.
   - Your criticism/ opinion/ comments suggestions/ feedback about the movie (negative or positive).

2. **The list of movies:**
   a) Life of a Pie
   b) English Vinglish
   c) Theory of Everything
   d) Pursuit of Happiness
   e) A Beautiful Mind
   f) A Few Good Men
   g) Bend it Like Beckham
   h) Queen
   i) Highway
   j) I Am Kalam

Art & Craft :

1. **Theory** – Read Unit I, II.
2. **Practical** – Draw and colour three 'Still life'.
   Draw and colour three 'Land Scape'.
   Draw and colour three 'Composition'. (use only poster colour)

Name: _____   Roll No.:_____   Topic : ___SETS___

Q1.   If A = {1, 2, 3, 4, 5}, B = {4, 5, 6, 7, 8}, C = {7, 8, 9, 10, 11} and D = {10, 11, 12, 13, 14}. Find (i) A U B
(ii)B U C   (iii)   A ∏ C   (iv)   A ∏ D   (v)   A ∏ B
Verify the following
(i)   A U (B ∏ C) = (A U B) ∏ (A U C)
(ii) A ∏ (B U C) = (A ∏ B) U (A ∏ C)
(iii) A ∏ (B - C) = (A ∏ B) - (A ∏ C)

Q2.   Let U = { 1, 2, 3, 4, 5, 6, 7, 8, 9}. A = {2, 4, 6, 8} and B = {2, 3, 5, 7, 8}. Find (i) A′ (ii) (A′)′ (iii) (A U B) ′
(iv) (A ∏ B) ′
Verify the following
(i)   (A U B) ′ = A′ ∏ B′   (ii)   (A ∏ B) ′ = A′ U B′   (III)   B – A = B ∏ A′

Q3.   Let A and B be two sets such that n(A) = 24, n(A U B) = 46 and n (A ∏ B) = 8. Find (i) n(B) (ii) n (A – B)
(iii)   n (B – A)

Q4.   What is the number of subsets and proper sub sets of a set containing n-elements.

Q5.   In a survey of 800 students in a school 200 were listed as taking apple juice, 250 taking orange juice and 125 were taking both apple as well as orange juice. Find how many students were taking neither apple juice nor orange juice.

Q6.   There 40 students in a chemistry class and 60 students in physics class. Find the number of students which are either in Physics class or Chemistry class in the cases.
(i)   the two classes meet at the same hour.
(ii) the two classes meet at different hours and 20 students are enrolled in both the subjects.

Q7.   In a class of 35 students, 17 have taken mathematics 10 have taken mathematics but not economics. Find the number of students who have taken both mathematics and economics and the number of students who have taken economics but not mathematics, if it is given that each student has taken either mathematics or economics or both.

Q8.   If A {x : x = 2n + 1, n ≤ 4, n ∈ N} and B = { y : 2 < y < 7, y ∈ N}, find (i) A ∏ B (ii) A U B

Q9.   Using laws of algebra of sets, show that (i) (A U B) ∏ (A U B') = A (ii) AU (B – A) = A U B

Q10.   Of the members of three athletic teams in a certain school, 21 are in the basket ball team, 26 in hockey team and 29 in the football team. 14 play hockey and basket ball, 15 play hockey and football, 12 play football and basket ball and 8 play all the three games. How many members are there in all?

Q11.   If A {a, b, c}. write subsets of set A. Also mention the proper subsets of A.

Q12.　Describe the following sets in set builder form :-

(i) $\{ 1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ _ _ _ $\}$　　　　(ii)　　$\{3, 6, 9, - - -\}$

Q13.　Write the following intervals in set-builder form :-

(i)　　(-6, 0)　(ii)　　(2, 5]　(iii)　　[-20, 3)　　　　(iv)　　[5, 10]

Q14.　Draw venu diagram of (i) (A U B) $'$ ∏ C

(ii)　　(A – B) $'$ ∏ (B – A) $'$　　　　(iii)　　A – (A U B)

Q15.　How many element has P(A), if A = { }

Q16.　If A is a subset of { }. Prove that A = { }.

Q17.　Find the smallest set A such that
　　　A U {3, 5} = {1, 2, 3, 5, 4}

John Wesley Convent, Rohtak

(A New Generation International Sr. Sec. School, Affiliated to C.B.S.E.)

Summer Vacation Assignments-Maths / Class..11. Section.........

Name: _____   Roll No.:_____   Topic : RELATIONS & FUNCTIONS

Q1.   If A = {2, 3}, B = {4, 5}, C = {5, 6} Find (i) A x B (ii) A x (B U C) (iii) A x (B U C)
Find (i) A x (B U C) = (A x B) U (A x C)
(ii) A x (B – C) = (A x B) – (A x C)

Q2.   If the ordered pairs (x, -1) and (5, y) belong to the set {(a, b) : b = 2a – 3}, find the values of x and y.

Q3.   If A and B are two sets having 3 elements in common. If n(A) = 5, n(B) = 4, find n (A x B) and n (A x B) Π (

Q4.   Determine the domain and range of the following relations:-

(i) $R_1 = \left[\left[x, \dfrac{1}{x}\right] : 0 < x < 6, x \in N \right]$ (ii) $R_2 = \left[\left[x, x^3\right] : x \text{ is a prime number less than a 10} \right]$

Q5.   Write all possible relation from A= {1, 2} to B = {0}.

Q6.   How many relations are possible from a set A of n elements to another set B of n elements ?

Q7.   Find the domain for which the functions $f(x) = 3x^2 – 1$ and $g(x) = 3 + x$ are equal.

Q8.   Express the following functions as set of ordered pairs and determine their ranges.
(a) $f : A \to R$, $f(x) = x^2 + 1$, where A = {-1, 0, 2, 4}
(b) $g : A \to N$, $g(x) = 2x$, where A – {x : x $\in$ N, x $\le$ 10}

Q9.   Let a function f be defined by $f(x) = \dfrac{x}{x^2 + 1}$, x $\in$ R

Find (i) $f\left(\dfrac{1}{x}\right)$ x $\ne$ 0 (ii) f (2x) (iii) f (x – 1)

Q10.   If $f(x) = \dfrac{x-1}{x+1}$, x $\ne$ -1, then show that $f(f(x)) = \dfrac{-1}{x}$, provided that x $\ne$ 0

Q11.   Let $f(x) = x^2$ and g(x) = 2x + 1 be two real functions find (i) (f + g) (x) (ii) (f – g) (x) (iii) (f g) (x) (iv) $\left[\dfrac{f}{g}\right]$

Q12.   If a real function f is defined by f(x) = (│x│ - x) / 2x, find its range.

Q13.   Find the domain of each of the following real valued functions :-

(i) $f(x) = \dfrac{1}{x+2}$,

(ii) $f(x) = \dfrac{x-1}{x-3}$,

(iii) $f(x) = \dfrac{2x-3}{x^2-3x+2}$,

(iv) $f(x) = \dfrac{x^2+3x+5}{x^2-5x+4}$,

(v) $f(x) = \sqrt{x-2}$,

(vi) $f(x) = \dfrac{1}{\sqrt{1-x}}$,

(vii) $f(x) = \sqrt{4-x^2}$,

Q14.   Find the domain and range of the real function f(x) given by

(i) $f(x) = \dfrac{x-2}{3-x}$ Ans. D = R – {3} Range = R – {-1}

(ii) $f(x) = \dfrac{1}{\sqrt{x-5}}$ Ans. D = (5, ∞) Range = (0, ∞)

(iii) $f(x) = \sqrt{16-x^2}$ Ans. D = [-4, 4] Range = [0, 4]

(iv) $f(x) = \dfrac{x}{1+x^2}$ Ans. D = (R) Range = [-½, ½] – {0}

(v) $f(x) = \dfrac{3}{2-x^2}$ Ans. D = R – { -$\sqrt{2}$, $\sqrt{2}$ } Range = (∞, 0) U [3/2, ∞]

(vi) $f(x) = \dfrac{x^2-9}{x-3}$ Ans. D = R – { 3}   R = R – {6}

Q15.   If R = {(x, y): x, y $\in$ I, $4x^2 + 8y^2 = 36$}, then represent R by arrow diagram.

Q16.   Give A ={-2, -1, 0, 1, 2} and B = {-3, -1, 1, 5}. List all elements of f {(x, y) : y = $2x^2 - 3$, x $\in$ A, Y $\in$ B}. Is f a function ?