QUEENS' COLLEGE, INDORE

SUMMER ASSIGNMENT

WING- MIDDLE

CLASS – XII

Queens' College, Indore
SESSION 2021-22
Summer Assignment
Class –XII
(MAIN SUBJECTS)

SCIENCE STREAM

ENGLISH

Read, Comprehend and summarize the following chapters using creativity in the form of PPT.

A. The Rattrap (Flamingo) B. The Enemy (Vistas)

2. Find the new words, their meaning antonym, Synonym and use them in the sentences of your own.

Happy Holidays Stay Home, Stay Safe

PHYSICS

Assignment 1: to be completed and submitted by 30th of June.

Dear students, hope you all are fine. In order to keep you in momentum and develop your creativity, you are required to take a project, based on any of the following mentioned topics and carry-on detailed study of that topic. Apart from this topic you can choose other topics too.

- File should be typed and must consist of at least 25 pages.
- Content should be in new times roman (14 size) and heading should be in times roman with 20 font size
- Things to be included in file

Prepare a project file (typed)of the topic, under the following head.

a. Front page
b. Certificate
c. Declaration
d. Aim
e. Limitation of the study
f. Introduction
g. Methodology
h. Observation
i. Analysis (evidences in support of theory)
j. Suggestive measures and conclusion
k. Bibliography

List of topics:

Experimental

1. To study various factors on which the internal resistance/EMF of a cell depends.

2. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance). (b) the distance of an incandescent lamp (of fixed power) used to 'illuminate' the LDR.

3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equi convex lens (made from a glass of a known refractive index) and an adjustable object needle.

4. To design an appropriate logic gate combination for a given truth table.

5. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.

6. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.

7. To estimate the charge induced on each one of the two identical styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb's law.

8. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.

9. To study the earth's magnetic field using a tangent galvanometer.

10. How Does Distance Affect the Intensity of Light

11. Study of the Effect of the Curvature of Space-time

12. Study and analysis of Changing the Speed of Light

13. Are there more Cosmic Radiation at Higher Altitude

14. To Study the Concept of Reflection in the Concave Mirror

15. To Study the Cosmic Ray shower Array Reconstruction

16. To Study the Refraction of Light in Rectangular Glass Slab

17. To Study and Observations of the Gas in the Infrared Spectrum

18. To Demonstrate the Phenomenon of Total Internal Reflection

19. To Find Out Optical Activity Arises When The Polarization Axis of Light Is Rotated As It Passes Through a Substance

20. Ray Optics to find Refractive Index of the material of the Prism By Total Internal Refraction

Model based

General Physics Projects Topics

1. To Study and Conduct a Portable Mobile Charger
2. To Study the Pascal's Law And Its Applications
3. To Study and Construct a Circuit of Clap Switch
4. To Study of Constituents Contains in Alloys
5. A New Perspective with a Digital Pinhole
6. To Study the Parallelogram Law of Vectors
7. To Construct a Simple Circuit for Touch Alarm
8. Study the Radioactivity and Nuclear Reaction
9. To Study the Electrochemical Cell (Primary Cell)
10. Study the Solar Cells: Physics Projects for Class 12
11. To Construct A Circuit of Two Transistor Oscillator
12. To Study the Effect of Pressure on the Water Velocity
13. Charge Induced on Two Identical Stryo Foam Balls
14. To Study the Zero Gravity Elevator Physics Experiment
15. To Study and Construct a Portable Mobile Charger
16. To Light and LED Lamp Using a Thermistor
17. To Study the Verification of the Archimedes Principle
18. To Study the Liquid Lens: Interesting physics topics
19. To Study the Effect of Height on Running Cadence
20. To Show the Unidirectional Action of the Diode
21. To Study the Voltage Regulator Using Zenor Diode
22. The Velocity of Pulse Propagated through a Slinky
23. Pressure Exerted by a Solid Iron Cuboid on the Sand
24. Determining the Types of Particle Present in Air Sample
25. To Study the Photo Resistor: project for physics class 12
26. To Study the Effect of the Pressure in Ball Bounce Height
27. To Study the Transformation Energy from the Deep
28. To Study the Effect of Pressure on Ball Bounce Height
29. To Study and Analysis of Black Hole Thermodynamics
30. To Study the Effect of Rotational Inertia on a Fastball
31. Radioactive Attenuation and the Inverse Square Law
32. Proving Universal Gravitation by Warping Spacetime
33. To Study the Effect of Tension on the Pitch of a string
34. To Study the Energy Conservation in Two Dimensions
35. Study the Laser Security System: physics project class 12
36. Refractive Index of Different Liquids Using Hollow Prism
37. To Study the Solar Power Grill from Recycled Carton Box
38. To Study the Photometric Study of Eclipsing Binary Stars
39. To Make NOR Gate With the Combination of the two Gates
40. To Study Faraday's Laws-To Find The Charge On An Electron

41. To Determine the Refractive Indices of Water and Turpentine Oil
42. Force Required to move a Wooden Block on a Horizontal Table
43. To Study How a Transistor Amplifier Work PNP Amplifier Transistor
44. To Construct a Circuit of Electronic Eye: topics for physics project for class 12
45. To Study and perform Simple Harmonic Motion of a Spring Experiment
46. To Study the Effect of Temperature on the Elasticity of a Rubber Band
47. To Study the Frequency Relationship of Notes in Musical Harmony
48. To Study the Effectiveness of Recycled Materials as Thermal Insulation
49. To See That Water Conducts Electricity Better When Impurities are Added It
50. The Effect of Temperature on Disposable and Non-Disposable Batteries
51. To Study a Positive Feedback Circuit of an Audio Oscillator (LC Oscillator)
52. To Study the Effect of Temperature On Disposable and Non-Disposable Batteries
53. To Find Out the Thermal Coefficient of Resistance for a Divan Set of Wires and Thus Suggest the Wire In Which Energy Loss Due To Heat Generation Is Minimum: physics project of class 12
54. To Study, the Effect Of The Diameter and The Number of Turns of The Spring On Its Strength has been Investigation In this Study

Assignment 2: submission by 5th of June

The student needs to write the following practical (12 practical, 6 from each sections) and activities (6 activities) in a practical file and leave a blank observation table, calculation and results. You all will get details of this practical's in following link:

http://www.olabs.edu.in/?pg=topMenu&id=40

List of experiments.

SECTION–A

1. To determine resistivity of two / three wires by plotting a graph for potential difference versus current.
2. To find resistance of a given wire / standard resistor using a metre bridge.
3. To compare the EMF of two given primary cells using a potentiometer.
4. To determine the internal resistance of a given primary cell using a potentiometer.
5. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.
6. To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same.

SECTION-B Experiments

1. To find the value of v for different values of u in case of a concave mirror and to find the focal length.
2. To find the focal length of a convex mirror, using a convex lens.
3. To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v.
4. To find the focal length of a concave lens, using a convex lens.
5. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
6. To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias.

List of Activities to write in the activity file.

1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2. To assemble the components of a given electrical circuit.
3. To study the variation in potential drop with length of a wire for a steady current.
4. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
5. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
6. To observe polarization of light using two Polaroids.

CHEMISTRY

(Submission : 28/05/2021)

Assignment 1

Worksheet 1 - Assertion and Reason

Chapter 1 Solid State

Note : In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

(a) Assertion and reason both are correct statements and reason is correct explanation for assertion.
(b) Assertion and reason both are correct statements but reason is not correct explanation for assertion.
(c) Assertion is correct statement but reason is wrong statement.
(d) Assertion is wrong statement but reason is correct statement.

1. Assertion : KCl crystals appear violet in colour.
Reason : The violet colour is due to electrons trapped in anion vacancies.
2. Assertion : Silicon forms ionic crystal.
Reason: The lattice of silicon consists of its atoms bonded together by covalent bonds in a three dimensional network.
3. Assertion : In any ionic solid (MX) with Schottky defects, the number of positive and negative ions are same.
Reason : Equal number of cation and anion vacancies are present.
4. Assertion : Electrical conductivity of semiconductors increases with increasing temperature.
Reason : With increase in temperature, large number of electrons from the valence band can jump to the conduction band.
5. Assertion : The presence of a large number of Schottky defects in NaCl lowers its density.
Reason : In NaCl, there are approximately 10^6 Schottky pairs per cm^3 at room temperature
6. Assertion : Diamond is a precious stone.
Reason : Carbon atoms are tetrahedrally arranged in diamond.
7. Assertion : The total number of atoms present in a simple unit cell is one.

Reason : Simple cubic unit cell has atoms at its corners, each of which is shared between eight adjacent unit cells.
8. Assertion : Ionic solids are characterized by high melting and boiling point.
Reason : Ionic solids have coulombic forces of attraction between their ions.
9. Assertion : Molecular solids are are characterized by low melting point.
Reason : Molecular solids are made up of covalent molecules.
10. Assertion : Crystalline solids are anisotropic.
Reasacked as amorphous solids.

Assignment 2

on : Crystalline solids are not as closely pAssertion and Reason and MCQ'S

Chapter 2 Solution

Note : In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

(a) Assertion and reason both are correct statements and reason is correct explanation for assertion.
(b) Assertion and reason both are correct statements but reason is not correct explanation for assertion.
(c) Assertion is correct statement but reason is wrong statement.
(d) Assertion is wrong statement but reason is correct statement.
1. Assertion : When NaCl is added to water a depression in freezing point is observed.
Reason : The lowering of the vapour pressure of a solution causes depression in the freezing point.
2. Assertion : Molarity of a solution in liquid state changes with temperature.
Reason : The volume of a solution changes with a change in temperature.
3. Assertion : The boiling point of 0.1 M urea solution is less than that of 0.1 M KCl solution.
Reason : Elevation in boiling point is directly proportional to the number of species present in the solution.
4. Assertion : Lowering in vapour pressure is directly proportional to osmotic pressure of the solution.
Reason : Osmotic pressure a colligative property.

5. Assertion : The vapour pressure of a liquid decreases if is some non volatile is dissolved in it.

Reason : The relative lowering in vapour pressure of a solution containing a non volatile solute is equal to the mole fraction of the solute in the solution.

1. Which of the following aqueous solutions should have the highest boiling point?
(i) 1.0 M NaOH
(ii) 1.0 M Na_2SO_4
(iii) 1.0 M NH_4NO_3
(iv) 1.0 M KNO_3
2.At equilibrium the rate of dissolution of a solid solute in a volatile liquid solvent is _____.

(i) less than the rate of crystallisation

(ii) greater than the rate of crystallisation

(iii) equal to the rate of crystallisation

(iv) zero

3.Colligative properties depend on .

(i) the nature of the solute particles dissolved in solution.

(ii) the number of solute particles in solution.

(iii) the physical properties of the solute particles dissolved in solution.

(iv) the nature of solvent particles.

4.The unit of ebulioscopic constant is _____.

(i) K kg mol^{-1} or K $(molality)^{-1}$
(ii) mol kg K^{-1} or K^{-1}(molality)
(iii) kg mol^{-1} K^{-1} or $K^{-1}(molality)^{-1}$
(iv) K mol kg^{-1} or K (molality)

5. In comparison to a 0.01 M solution of glucose, the depression in freezing point of a 0.01 M $MgCl_2$ solution is _____.
(i) the same
(ii) about twice
(iii) about three times
(iv) about six times

6. Considering the formation, breaking and strength of hydrogen bond, predict which of the following mixtures will show a positive deviation from Raoult's law?

(i) Methanol and acetone.

(ii) Chloroform and acetone.

(iii) Nitric acid and water.

(iv) Phenol and aniline.

7. The values of Van't Hoff factors for KCl, NaCl and K_2SO_4, respectively, are_____.
(i) 2, 2 and 2
(ii) 2, 2 and 3
(iii) 1, 1 and 2
(iv) 1, 1 and 1

8.An unripe mango placed in a concentrated salt solution to prepare pickle, shrivels because .

(i) it gains water due to osmosis.

(ii) it loses water due to reverse osmosis.

(iii) it gains water due to reverse osmosis.

(iv) it loses water due to osmosis.

9.Value of Henry's constant K_H_____ .

(i) increases with increase in temperature.

(ii) decreases with increase in temperature.

(iii) remains constant.

(iv) first increases then decreases.

10. The value of Henry's constant K_H is _____.

(i) greater for gases with higher solubility.
(ii) greater for gases with lower solubility.
(iii) constant for all gases.
(iv) not related to the solubility of gases.

Assignment 3

Links for Chemistry Practicals (O - Lab Links)

After watching these videos - Learn and understand.

https://www.youtube.com/watch?v=kXI_Om-2XYk&t=458s – Titration KMnO4 and Oxalic Acid / Mohrs salt

https://www.youtube.com/watch?v=n4esSHxz_J8 – Functional Group present in the organic compounds

https://www.youtube.com/watch?v=QacQmS3aaTI - Test for Carbohydrates, Proteins and Fats

http://www.amrita.edu/create For All kind of experiments

https://www.youtube.com/watch?v=OOc3zDLsr-I – Acid radicals (non animated) not satisfactory

Salt Analysis (Amrita) :

https://www.youtube.com/watch?v=uKy424Vf_44 - Ca^{2+}

https://www.youtube.com/watch?v=v7_glUDP_sk – Zn^{2+}

https://www.youtube.com/watch?v=0HPi7X2yhbw – Al^{3+}

https://www.youtube.com/watch?v=PPG9XIp0HhY – Fe^{3+}

https://www.youtube.com/watch?v=M8YqOhM2J54 –Sr^{2+}

https://www.youtube.com/watch?v=j8a7ItqTowc – Mg^{2+}

https://www.youtube.com/watch?v=gaamIjai20o – Ba^{2+}

https://www.youtube.com/watch?v=GTZBs3iZgg0 – NH_4^+

https://www.youtube.com/watch?v=RBVKBlwyeT4 – Pb^{2+} (grp I)

https://www.youtube.com/watch?v=f7PfeaA8kow –Pb2+ (grp II)

Assignment 4.

A work sheet uploaded on GSUITE

MATHS

1. Worksheet based on Matrices and Determinants
2. Lab Manual Activity to be written in lab manual.
3. Project Title has to be finalised so as to start searching in that direction.

BIOLOGY

I. Complete your project file as discussed in the class. This is an investigatory project which has to have introduction, content , field investigation, analysis, suggestion and conclusion.

II. Complete the following experiments in the biology lab record.

1. Prepare a temporary mount to observe pollen germination.
2. Flowers adapted to pollination by different agencies (wind, insects, birds).
3. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).
4. Meiosis in onion bud cell or grasshopper testis through permanent slides.
5. T.S. of blastula through permanent slides (Mammalian).
6. Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations.

7. Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.

COMMERCE

ACCOUNTS

Students will be solving work sheet based on the Chapter 1&2, including case studies that are already solved in class.

BUSINESS STUDIES

Students will be solving worksheets based on case studies of the two chapters already covered in the class.

ECONOMICS

Students will be solving the worksheets based on the 1 unit that has been completed in all the sections commerce as well as humanities. Worksheets are objective based, so as to give students a directional practice.

HUMANITIES

GEOGRAPHY

I ART INTEGRATION

Create a Toursim Brochure:

I A comparative analysis of any one of the following between your state and Nagaland OR Manipur.

- Physical Landscape.
- Culture and Tradition.
- Dance and Music.
- Food.
- Architectural style of Monuments and Palaces.

Ruberics:

i)Research and Analysis : 2 marks.

ii) Creativity and Presentation : 2 marks.

iii) Timely Submission : 1 mark.

Some suggestions:

- Best out of waste.
- Any other innovative medium
- Pictorial representation.
- Timeline Calender
- With flyers and templates.

II Geography Practical File work:

Students to complete the writing work of the first chapter : Data - Its sSources and Compilation.

Date of Submission

June, 25, 2021.

HISTORY

In keeping with your CBSE Project, prepare a route map based on research work related to your topic as explained in the classes. Compile information based on graphics, pictures, videos, textual material.

Create one input based on Art Integration individually.

Visit the following virtually and record your observations in a format of your choice.

1. Sanchi
2. Jhansi fort
3. Jaivilas palace Gwalior

4. Lal Bagh palace Indore
5. Maheshwar fort
6. Red Fort
7. Taj Mahal
8. Hampi- Karnataka
9. Mahabalipuram
10. Sabarmati Ashram
11. Gateway of India
12. Shantiniketan

RUBRICS-

1. Creativity in form of expression
2. Source of information
3. Observations compiled

DATE OF SUBMISSION-
25th JUNE 2021

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Queens' College, Indore
SESSION 2021-22
Summer Assignment
Class –XII

OPTIONAL SUBJECTS

PHYSICAL EDUCATION

Completion of practical file with four practical

PRACTICAL 1 : Fitness test administration for all items

PRACTICAL 2 : Procedure, benefit and contradiction of any two asana

PRACTICAL 3 : Senior citizens fitness test all six items

PRACTICAL 4 : volleyball with its history, terminology, rules , skills and labelled diagram of Field and equipment.

COMPUTER SCIENCE

- Complete the Practical file by doing the Practicals of given questions in Python . (Submission date :25.05.21)

1. Write a recursive code to find the factorial of a natural number.
2. Write a recursive code to find the sum of all elements of a list.
3. Write a recursive code to compute the nth Fibonacci number.
4. Program to search any word in given string/sentence
5. Read a text file line by line and display each word separated by a #.
6. Read a text file and display the number of vowels/ consonants/uppercase/ lowercase characters in the file.
7. Read a text file remove all the lines that contain the character `a' in a file and write it to another file.
8. Read a text file and count number of lines starting with "I".

- Make a Mind Map and PPT on the topics:
    1. Functions in Python
    2. Text File Handling

INFORMATICS PRACTICES

Students are supposed to write programs with output in program file.

Q.1 Write a program to generate a series using n Dimensional array.
Q.2 Write a program to display mathematical operations in series .
Q.3 Write a program to generate a series with mutable index.
Q.4 Write a program to generate a series of the first 10 numbers.
Q.5 Write a program to display head and tail function in python series.
Q. 6 Write a program to display non contagious elements of series using ranges in index position
Q.7 Write a program to generate a series of float numbers from 21.0 to 30.0 with an increment of 1.5 each.
Q.8 Write a program to generate a series using a dictionary to represent month number and month names.
Q.9 Write a program to print arithmetic functions on series
Q.10 Write a program to generate a series of 5 elements of multiples of 7 starting with 35 with index multiply by 3.
Q.11 Write a program to generate a series of marks of 10 students. Give grace marks up to 5 of those who are having <33 marks and print the new list of the marks.
Q.12 Write a program to print the elements of series using loc and iloc functions
Q.13 Write a program to create a dataframe of name,marks and age of students using series and display its contents in sorted order of age.

Q.14 Plot following data on line chart:Write a title for the chart "The Weekly Income Report".

Day	Monday	Tuesday	Wednesday	Friday	Saturday
Income	510	350	475	580	600

- Write the appropriate titles of both the axes.
- Write code to Display legends.
- Display red color for the line.
- Use the line style – dashed
- Display diamond style inmarkers on data points

Q.15 Shivalik restaurant has recorded the following data into their register for their income by Drinks and Food. Plot them on the line chart.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Drinks	450	560	400	605	580
Food	490	600	425	610	625

Apply following customization to the line chart.

- Write a title for the chart "The Weekly Restaurant Orders".
- Write the appropriate titles of both the axes.
- Write code to Display legends.
- Display your choice of colors for both the lines drinks and food.

- Use the line style – dotted for drinks and dashdot for food.
- Display plus markers on drinks and x markers of food.

Q.16 Observe the given data for monthly views of one of the youtube channels for 6 months. Plot them on the line chart.

Month	January	February	March	April	May	June
Views	2500	2100	1700	3500	3000	3800

Q.17 Write a program to create a data frame using series and display all statistical function on it.

Q.18 Create a dataFrame using Dictionary of list for students with marks of various subjects and show use of iterrows function / display without column headings

Q.19 Write a program to create Dataframe using dictionary of series and update values of any column in dataframe, add new columns, calculate values of columns

Q.20 Write a program to merge two dataframes

Q.21 Write a program to calculate mean of dataframes.

Q.22 Write a program to sort a dataframe on two fields

Q.23 Write a program returns the minimum value from a column of a data frame/series

Q.24 Write a program to rename columns heading and index values.

Q.25 For the given Dataframe df in the form of table write single line statements for each of the following parts (a) to (d), which use Pandas method :

a. To display the 'Names' and 'Marks' columns from the DataFrame.

b. To change the 'Marks' in the 4th row (i.e. for index 3) to 91.5

c. To display the rows where number of 'Trials' in the examination is less than 2 & 'Marks' is greater than 95

d. To sort the DataFrame in descending order of 'Marks'

Q.26 Write a program to group data city wise and find out maximum temperature according to the city. (group by function)

Q.27 Write a program to sort the data frame based on index in ascending orde

Q.28 Program to concatenate two dataframes without taking row levels.

Q.29 Program to print the quartile

Q.30 Write a program to fill Nan values and replace it with zero while displaying data frame.

Q.31 Program to print the quartile and variance

Q.32 Program to perform select operation in DataFrame

Q.33 Program to print line chart with attributes

Q.34 Program to print line graph using Marker type, size and color attributes

Q.35 Program to print the given graph.

PSYCHOLOGY

Students have to prepare a Case Profile of a subject taking up topics like Anxiety, Stress, Separation Anxiety disorder, mood disorder, obsessive compulsive disorders and etc. The data will be collected via , online Google meet, Google form or if possible face to face interaction. They will present a Synopsis for the same.

Also students have been given few names of the movies related to different kind of disorders to watch anyone and discuss the case of the person in class.

Compiled this list of Mental Health related movies.

You guys May want to watch.

But in summer break□

1.Udta Punjab (hindi) -Substance Abuse

2. Judgemental Hai Kya - PTSD

3.15 Park Avenue - Schizophrenia

4. Kartik Calling Kartik - Schizophrenia

5.Matchstick men (eng) - OCD

6.Silverlining playbook(eng) -BPD

7.Welcome to me -BPD

8.Inside out (animation) -about emotions Personally my favorite

9.Gone girl- Personality Disorder

10.North 24 kaatham (malayalam) -OCD

11.Genius (tamil) -Schizophrenia / psychological breakdown due to stress

12.Barfi(hindi)-Autism

13.Tarre zameen par (hindi) -LD

14.Tannu Weds Mannu Returns - Anxiety & Bipolar Disorder

15. Darr - Obsessive Behivour

16. Beautiful mind - about schizophrenia

17. Forest gump - Mental retardation

18. Kick (hindi movie) - Hypomania

19. Dear Zindagi - Anxiety & Counseling

20. Gandhi - Personality Analysis ♻

21. 404 Error ✕

22. Phobia - Phobia

23. Bhool Bhulaiya- Dissociative Identity Disorder

24. Joker - PBA.. Pseudobulbar affects

25. Black Swan - Anxiety Disorder and Shizophrenia

26. Me, Myself and Irene - Dissociative Disorder

27. Split- Dissociative Identity Disorder

28. Shutter Island- Schizophrenia

29. Cybil- Dissociative Identity Disorder

TV Shows:

1. Lie to me (on micro expressions)

2. Mindhunter (on Criminology)

3. Black mirror (related to the psychological and other implications of technology)
4. Upload (possible issues of Cyber Psychology)

FMM

Students will be selecting 5 companies of different sectors and will be observing and recording share price with respect to opening price closing price Last traded price, day highest and day lowest price. Further with the help of this data portfolio will be created and securities' risk and return profile will be analyzed.

ENTREPRENEURSHIP

Conduct a simple market research with the objective of estimating demand for an existing product in the market. Also give an innovative suggestion to the product.
Test the feasibility of this innovation via market analysis, using an objective questionnaire.

LEGAL STUDIES

Students have been provided with important case study and landmark judgement selected on the basis of the curriculum for research and analysis. Also to study about the society pattern of states of Manipur and Nagaland.

APPLIED MATHS

Worksheet based on Determinants and Matrices will be given. Also project guidelines will be given to work upon and to send in pdf format.

OPTIONAL MATHS

1. Worksheet based on Matrices and Determinants
2. Lab Manual Activity to be written in lab manual.
3. Project Title has to be finalized so as to start searching in that direction.

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