Dear Parents, Summer Vacation is a time for the children to enjoy and relax. These days are precious and valuable and can be made most from if judiciously used. We should always remind ourselves that children will not remember us for the gifts we shower upon them but will always cherish the time we spent with them. It's time to nurture young minds, inculcate moral values and narrate family anecdotes to keep them in touch with their roots.

## Few tips to make the vacation a fruitful time for your child.

> Its SUMMER TIME again. Time for strengthening family bond, tying threads of family tree, sharing joys and sorrows, having a good time together.
$>$ Look for interesting books and read as much as you can about the places and people. Take good care of your health and hygiene. Avoid heavy and oily food and increase intake of fresh fruits and water to keep yourself well hydrated and energetic.
> Use Holiday Homework as an opportunity to spend quality time together. The role of the parent is to be a facilitator and guide to steer the child in the right direction.
> Encourage your child to take up yoga or any other form of healthy activity during the vacation.
> Involve children in household chores.
> Enjoy walking with them in parks and appreciate nature.

## General Instructions:-

$>$ Bring holidays homework neatly decorated.
> We are not expecting a work of art completed by parents, just help your ward and encourage him/ her to do the task themselves.
> Original work by the child shall be acknowledged.
> Project / Homework will be assessed and awarded on the basis of neatness and creativity.
$>$ Follow the guidelines given by teachers to complete specific activities.
Happy Holidays


# JK PUBLIC SCHOOL, KUNJWANI HOLIDAY HOMEWORK 

## (2022-2023)

Class: XII

## ENGLISH

Q 1: Read the newspaper daily and cut samples of the following and paste it on the assignment sheets. Make a folder underlining Holidays Homework.
a) 3 Reports
b) 3 Articles (ON CORONAVIRUS)
c) 3 Posters (on fight coronavirus)
d) 5 Classified advertisements.
Q.2. Write a letter to the Editor of a national daily highlighting the neglect of our national monuments and how these are being damaged in the present day world
Q.3. Write an article on the topic-‘How Google controls the life of an average person?' 150-200 words.
Q.4. Learn and revise all the syllabus of UNIT-TEST-I.

## PROJECT WORK -ENGLISH ( LITERATURE IN ENGLISH)

## General Instructions:

1. Use Black waterproof ink.
2. Project should be written in neat handwriting.
3. Take care of paragraphing, punctuation marks and spellings. Paragraphs should be indented.
4. Use neatly covered hardboard file.
5. Page sequence should be strictly followed as : - Cover page, Acknowledgment, Index, Project content, Bibliography.
Undertake one written assignment of 1000-1500 words, which should be structured as given below:
A. The written assignment must be given a title in the form of a question to explore the drama or the chosen short stories/poems in depth.
B. The written assignment must follow the structure given below:

- Introduction: - Explanation of the question that has been framed - Reason for choosing the text Brief explanation of how you intend to interpret the chosen text and literary materials used in the process.
- Main Body - organised and well-structured treatment of the question using appropriate subheadings.
- Conclusion - comprehensive summary of the points made in the main body.


## List of suggested assignments for Project Work:

1. Analysis of a theme from any short story/poem in the prescribed texts.
2. Analysis of a character from the drama or any short story/poem in the prescribed texts.
3. Background - historical, cultural, literary context and relevance of the writer/poet chosen.
4. Summary / paraphrase of the chosen text.
5. Appreciation of literary qualities of the chosen text.
6. Identifying with a character in the chosen text and presenting his/her personal perspective.
7. Imagining an alternate outcome or ending or extension of the chosen text and its impact on the plot/setting/characters/mood and tone.
8. A script for dramatization, based on the short story/poem chosen.
9. Writing a short story based on a poem.
10. Comparing and contrasting two characters/themes from different short stories/poems of the prescribed texts.

## PHYSICS

Note: The Following Questions to be written on the Separate Notebook

1. Can the electric potential at a point be zero, while the electric field is non zero?Justify
2. Can the electric field at a point be zero, while the electric potential is non zero?
3. Why work done in taking a charge between any two points of an equipotential surface?
4. Show that electric field is always perpendicular to an equipotential surface.
5. The capacitance of a charged capacitor is $C$ and the energy stored in it is $U$. Write the expression for $Q$ in terms of $C$ and $U$.
6. (a) An infinitely long positively charged straight wire has a linear charge density $\lambda \mathrm{Cm}^{-1}$. An electron is revolving around the wire as its centre with a constant velocity in a circular plane perpendicular to the wire. Deduce the expression for its kinetic energy.
7. Derive the expression for the electric potential at any point along the axial line of an electric dipole.
8. A parallel plate capacitor is charged by a battery. After some time the battery is disconnected and a dielectric slab of dielectric constant $K$ is inserted between the plates. How would (i) the capacitance, (ii) the electric field between the plates and (iii) the energy stored in the
capacitor, be affected? Justify your answer.
9. What is the value of electrostatic field inside a conductor?
10. What is the direction of electrostatic field at every point on the surface of a charged conductor?
11. What is the difference in the movement of charge carriers in case of metal to that of electrolytic conductors?
12. Derive an expression to find the potential energy of an electric dipole in an external field.
13. What is the amount of net charge inside the charged conductor?
14. What can you say about the electrostatic potential throughout the volume of a charged conductor?
15. Derive the relation $E=|\sigma| \varepsilon 0$ to find the electric field at the surface of a charged conductor.
16. What is meant by electrostatic shielding? What is the advantage of it?
17. A comb run through one's dry hair attracts small bits of paper why? What happens if the hair is wet or if it is a rainy day?
18. A uniformly polarized dielectric amounts to induced surface charge density but no volume charge density. Explain.
19. What is the effect of external electric field on a polar molecule and a non-polar molecule?
20. Vehicles carrying inflammable materials usually have metallic ropes touching the ground during motion. Why?

Prepare A Mind Map on the Electromagnetic Spectrum (Chapter No. 8) using colors, pencils etc....

## . Practicals to be written on the file

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 metre bridge.
3. To verify the laws of combination (series) of resistances using a metre bridge.
4. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.
5. To find the focal length of a convex lens by plotting graphs between $u$ and $v$ or between $1 / u$ and 1/v.
6. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation
7. To determine refractive index of a glass slab using a travelling microscope
8. To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias

## CHEMISTRY

- Project work (any one)
A) Make project on food adulteration
B) Make a project on Enzymes it's action and applications
C) Make a project on amount of Casein in milk.
- NCERT questions and answers, chapter
A) Solution
B) Chemical kinetics
- Self study of chapter $10^{\text {th }}$ Bio molecule

1. Solve the given work sheet

## MATHEMATICS

- Solve the following questions.


## RELATIONS

Q1. Let $R=\left\{\left(a, a^{3}\right\}\right.$ : $a$ is a prime $\left.<5\right\}$ be a relation. Find the range of $R$.
Q2. If $R=\{(x, y): x+2 y=8\}$ is a relation on $N$, write the range of $R$.
Q3. Let $A=\{1,2, \ldots . ., 9\}$ and $r$ be the relation in $A \times A$ defined $b y(a, b) R(c, d)$ if $a+d=b+$ $c$, for $(a, b),(c, d)$ in $A \times A$. Prove that $R$ is an equivalence relation. Also obtain the equivalence class [ $(2,5)$ ]
Q4. Determine whether the relation $R$ defined on the set $R$ of all real numbers as $R=\{(a, b): a, b \in R$ an $\bar{a}-b+\sqrt{3} \in S$, where $S$ is the set of all irrational numbers\} is reflexive,symmetric and transitive.

Q5. Let $\mathbf{N}$ denote the set of natural numbers and $R$ be the relation on $N \times N$ defined by ( $a$, b) $R(c, d)$ ifad $(b+c)=b c(a+d)$. Show that $R$ is an equivalence relation.

Q6. Show that the relation $R$ defined by $(a, b) R(c, d) \Rightarrow a+d=b+c$ on $A \times A$, where $A=\{1$, $2,3, \ldots ., 10\}$ is an equivalence relation. Hence write the equivalence class. [(3, 4)] ; $a, b, c$, $d \in A$.

Q7. If R1 and R2 are equivalence relations on a set $A$, show that R1 U R2 is reflexive, symmetric but nottransitive (i.e., R1 U R2 is not an equivalence relation).
Q8. If R1 and R2 are equivalence relations on a set $A$, show that $R 1 \cap R 2$ is also an equivalence relation.

Q9. For real numbers $x$ and $y$, defined $x$ Ry if and only if $x-y+\sqrt{2}$ is an irrational number. Determinewhether the relation $R$ is reflexive, symmetric and transitive.

Q10. Let $R$ be the relation on $\mathbf{N} \times \mathbf{N}$, defined by

$$
(\mathrm{a}, \mathrm{~b}) \mathrm{R}(\mathrm{c}, \mathrm{~d}) \Leftrightarrow \mathrm{ad}(\mathrm{~b}+\mathrm{c})=\mathrm{bc}(\mathrm{a}+\mathrm{d}) .
$$

Check whether $R$ is an equivalence relation on $\mathbf{N} \times \mathbf{N}$.
Q11. Let $A$ be the set of all positive integers and $R$ be a relation on $A \times$ $A$, defined by $(a, b) R(c, d) \Leftrightarrow a d=b c$, for all $(a, b),(c, d), \in A$ $\times \mathrm{A}$.
Show that R is an equivalence relation on $\mathrm{A} \times A$.
Q12. Show that the relation $R$ defined by

$$
(a, b) R(c, d) \Rightarrow a+d=b+c
$$

on $A \times A$, where $A=\{1,2,3, \ldots ., 10\}$ is an equivalence relation. Hence write the equivalence class[(3, 4)]; a, b, c, d $\in A$.
Q13. Show that the relation $R$ in the set $A=\{1,2,3,4,5\}$, given $b y=\{(a, b):|a-b|$ is divisible by 2$\}$, is an equivalence relation. Show that all the elements of $\{1,3,5\}$ are related to each other and all theelements of $\{2,4\}$ are related to each other, but no element of $\{1,3,5\}$ is related to any element of $\{2,4\}$
Q14.Test whether the relation $R$ on $Z$ defined by $R=\{(a, b)$ : $|a-b| \leq 5\}$ is reflexive, symmetric andtransitive.
Q15. Let $R$ be the relation on $R$, defined by $R,=\left\{(a, b): a^{2}+b^{2}=1\right\}$. Show that $R$ is symmetric but neitherreflexive nor transitive.
Q16. Check whether the relation $R$ on $R$, defined as $R=\left\{(a, b)\right.$ : $\left.a \leq b^{3}\right\}$, is reflexive, symmetric ortransitive.
Q17. Show that the relation R on R , defined as $\mathrm{R}=\left\{(a, b): a \leq b^{2}\right\}$, is neither reflexive nor symmetricnor transitive.
Q18. Determine whether the relation $R$ defined on $Z$ as, $R=\{(x, y): x-y$ is an integer $\}$, is reflexive,symmetric and transitive.
Q19. Let $Z$ be the set of integers. Show that the relation, $R=\{(a, b): a+b$ is even $\}$, is an equivalencerelation on $Z$.

Q20. Prove that the relation $R$ on $Z$, defined by $(a, b) \in R \Leftrightarrow a-b$ is divisible by 5 , is an equivalencerelation on $Z$.

Q21. Let $A$ be the set of all human beings in a town at a particular time. Determine whether the relation $R=\{(x, y): x$ is exactly 7 cm taller than $y: x, y \in A\}$ is reflexive, symmetric and transitive.
Q22. Consider the non-empty set consisting of children in a family and a relation $R$ defined as a Rb if a isbrother of b . Determine whether R is reflexive, symmetric and transitive.
Q23. Let $A$ be the set of all rectangular drawn in a plane. Prove that the relation 'have equal perimeter' onA is an equivalence relation.
Q24. Let $T$ be the set of all triangles in a plane with $R$ a relation in
$T$, given by $R=\{(T 1, T 2): T 1$ is congruent to $T 2\}$
Show that $R$ is an equivalence relation.
Q25. Let $L$ be the set of all lines in a plane and $R$ be the relation in $L$, defined as $R=\{(L 1, L 2): L 1$ is perpendicular to $L 2\}$.
Show that $R$ is symmetric but neither reflexive nor transitive.
Q26. Let $L$ be the set of all lines in the xy-plane and $R$ be relation on $L$ defined as $R=\left\{\left(L_{1}, L_{2}\right): L_{1}\right.$ is parallel to $\left.L_{2}\right\}$
Show that $R$ is an equivalence relation. Find the set of all lines related to the line $y=2 x+$ 4(i.e., find the equivalence class of the line $y=2 x+4$ ).
Q27. Let $R$ be a relation defined on the set $N$ as $R=\{(x, y): x+y=10 ; x, y \in N\}$. Determine whether $R$ isreflexive, symmetric and transitive.
Q28. Check whether the relation $R$ defined on the set $A=\{1,2,3,4,5,6\}$ as $R=\{a, b\}: b=a+1\}$ is reflexive, symmetric or transitive.
Q29. Let $R$ be a relation defined on the set $N$ as $R=\{(x, y): 2 x+y=41 ; x, y \in N\}$. Find the domain and range of the relation $R$. Also verify whether $R$ is reflexive, symmetric and transitive.

Q30. Let $R$ be a relation defined on the set $N$ as $R=\{(x, y): x+4 y=10 ; x, y \in N\}$. Determine whether $R$ isreflexive, symmetric and transitive.
Q31. State reason for the relation $R$ in the set $\{1,2,3\}$,given by $R=\{(1,2),(2,1)\}$, not to be transitive.
Q32. Let $A=\{1,2,3\}$. Find the number of relations on $A$ containing $(2,1)$ and $(2,3)$ which are reflexiveand symmetric but not transitive.
Q33. Show that the number of equivalence relations on $\{1,2,3\}$ containing $(1,2)$ and $(2,1)$ is two.
Q34. Determine whether the relation $R$ on $N$ defined by, $R=\{(x, y): y=x+5, x<4\}$, is reflexivesymmetric and transitive.

- Solve previous year CBSE questions based on ITF, MATRICES \& DETERMINANTS in a separate register.


## BIOLOGY

## 1. Project work:

a) To study DNA fingerprinting, principles, methods and applicationsRoll no's- 1,8,15,22,29,36,43
b) To study the impact of drugs and alcohol abuse on the human bodyRoll no's-2,9,16,23,30,37,44
c) To study the Mendelian disorders-Roll nos-3,10,17,24,31,38,45
d) Cancer biology/Oncology-Roll no's-4,11,18,25,32,39,46
e) AIDS-Roll no's.-5,12,19, 26,33,40,47
f) Recombinant DNA technology in today's medicine- Roll no's--6,13,20,27,34,41
g) Immunity and principles of vaccination- Roll no's--7,14,21,28,35,42.
2. Write the following practicals on your practical file:
i) Prepare a temporary mount to observe pollen germination.
ii)Flowers adapted to pollination by different agencies (wind, insects, birds)
iii)Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary
through permanent slides (from grasshopper/mice)
iv) T.S. of blastula through permanent slides (Mammalian)
v) Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause.
3. Revision of chapters done in the class.

## ACCOUNTANCY

1. Solve all the illustrations and problems given in scanner in a separate register (Ch: 2-4)
2. Collect the balance sheet and income statement of leading companies for the purpose of project work.

## BUSINESS STUDIES

1. Prepare at least 10 MCQs and 10 one mark questions of all 4 chapters and share it with your classmates. It should be based on NCERT and not copy paste.
2. Solve at least 5 case studies of each chapter
(work to be done in a separate register.)
3. Collect information on changes in business environment in past 2 years and make a collage of the same.

## ECONOMICS

Q1. Classify the following into stock and flow variables:
(i) Interest on capital
(ii) Distance between Delhi and Mumbai
(iii) Expenditure of money
(iv) National income
(v) Capital formation
(vi) Money supply in a country
(vii) Leakage of water from the overhead tank
(viii) Production of cement
(ix) Import of machinery
(x) Capital stock

Q2. Which of the following are examples of normal residents of India?
(i) Foreign workers working in WHO in India.
(ii) The German working as Director in IMF office located in India.
(iii) US ambassador in India from rest of the world.
(iv) Ambassador of India in rest of the world.

Q3. Which of the following factor incomes are included in domestic income of India? Give reasons.
(i) Compensation of employees to the residents of Japan working in Indian embassy in Japan.
(ii) Rent received by an Indian resident from Russian embassy in India.
(iii) Profits earned by Tata Motors in England.

Q4. How are following items treated in domestic income?
(I) Old age pensions
(II) Net factor income from abroad.
(III) Income from sale of shares.

Q5. Which of the following factor incomes are included in national income of India? Give reasons.
(i) Profits earned by an Indian bank from its branches abroad.
(ii) Payment of interest on a loan taken by an employee from the employer.
(iii) Payment of interest by a government firm.
(iv) Scholarship given to Indian students studying in India by a foreign company.

Q6. How will the following items be treated while estimating national income of India? Give reasons.
(i) GST imposed by the government.
(ii) Capital gains to Indian residents from sale of shares of a foreign company.
(iii) Remittances from NRIs to their families in India.
(iv) Imputed rent of self-occupied house.
(v) Payment of electricity bill by a school.
(vi) Interest received on loan given to a foreign company in India.
(vii) Financial help received by flood victims.

Q7. Giving reasons, classify the following into intermediate goods and final goods:
(i) Ceiling fan purchased by a restaurant.
(ii) Chalks, dusters, etc., purchased by a school.
(iii) Curtain cloth purchased by a household.
(iv) Car purchased by car dealer for resale.

Q8. Calculate GDP deflator if real GDP is Rs 5000 crore and nominal GDP is Rs 7500 crore.
Q9. Calculate real GNP if nominal GNP is $\$ 4400 \mathrm{cr}$ and price index is 110 .
Q10. Calculate nominal GNP if real GNP is $\$ 200 \mathrm{cr}$ and price index is 120 .

Q11. From the following data calculate NDP ${ }_{\mathrm{FC}}$ by (a) income method and (b) expenditure method.
ITEMS (Rs in crore)
(i) Net domestic capital formation 500
(ii) Compensation of employees 1850
(iii) Consumption of fixed capital 100
(iv) Government final consumption expenditure 1100
(v) Private final consumption expenditure 2600
(vi) Rent 41420
(vii) Dividend 200
(viii) Interest 500
(ix) Net exports (-)100
(x) Profit 1100
(xi) Net factor income from abroad (-) 50

| (xii) Net indirect tax | 250 |
| :--- | :--- |

Q12. Calculate GVAfc.
ITEMS Rs in crore
(i) domestic sales 3,000
(ii) change in stock (-)100
(iii) depreciation 300
(iv) intermediate consumption 2000
(v) exports 500
(vi) indirect taxes -250
(vii) net factor income from abroad
(-) 50
Q13. Calculate NNP ${ }_{\text {Fc }}$ by (a) expenditure method and (b) Value Added method:
ITEMS $\quad$ Rs (in crores)
(i) Net Domestic capital formation 250
(ii) Net Exports 50
(iii) Private final consumption expenditure ..... 900(iv) Value of output
(a) primary sector ..... 900
(b) secondary sector ..... 800
(c) tertiary sector ..... 400
(v) Value of intermediate consumption
(a) primary sector ..... 400
(b) secondary sector ..... 300
(c) tertiary sector ..... 100
(vi) consumption of fixed capital ..... 80
(vii) Indirect tax ..... 100
(viii) Government final consumption expenditure ..... 100
(ix) subsidy ..... 10
(x) Net factor income from abroad ..... (-) 20
Q14. Find NDPFC:
ITEMS ..... (Rs in lakh)
(i) Rent ..... 200
(ii) Net current transfers to abroad ..... 10
(iii) National debt interest ..... 60
(iv) Corporate tax ..... 100
(v) Compensation of employees ..... 900
(vi) Current transfers by government ..... 150
(vii) Interest ..... 400
(viii) Undistributed profits ..... 50
(ix) Dividend ..... 250
(x) Net factor income to abroad ..... (-) 10
(xi) Income accruing to government ..... 120

## APPLIED MATHEMATICS

Solve all the problems with examples of unit 1, 2 \& 3 (ML Aggarwal)

## PSYCHOLOGY

- Psychology Holiday Homework
- Prepare a case study.
- Revise Ch-1-Variations in psychological attributes \& Ch-2- Self \& Personality.


## SOCIOLOGY

1) Revise Ch 1, Ch 2 \& Ch 3 with proper note making of these three chapters.
2) AIL Activity : Make a project file and a PPT on the following topics given below. (Do any one from the following topics as assigned in the class)
a) Gender Inequality
b) Social Inequality and Exclusion
c) Farmer's Suicide
d) Religious Intolerance
e) National development Vs Tribal development

## HISTORY

- Prepare your project files as guided.
- Practice all the related source based questions and maps present in the books done till date.
- Go through all the chapters and worksheets completed in the class.


## POLITICAL SCIENCE

- Prepare your project files as guided.
- Practice all the related diagram based questions and maps present in the books done till date.
- Go through all the chapters and worksheets completed in the class.


## GEOGRAPHY

- Prepare your practical files as guided.
- Practice all the related diagrams and maps present in the books done till date.
- Go through all the chapters and worksheets completed in the class.


## PHYSICAL EDUCATION

1. UNIT 1 : Management of spots events. (Read and revise)
2. UNIT 2: Children and women in sports, (Read and revise)
3. UNIT3: Yoga as Preventive measure for Lifestyle Disease. Explain with diagrams.
(Read \&Write)
4. Make a project file of any one Game of your own choice out of the list given below. (Groups are already made for these games)
(Basketball, Football, Kabaddi, Kho-Kho, Cricket, Volleyball)

## NOTE: COMPLETE YOUR PENDING WORK AND MAKE A PROJECT FILE VERY CAREFULLY IN A

## 4 COLOURED SHEET / DESIGNED SHEETS

## COMPUTER SCIENCE

- Write the following practicals on your practical file:
(i) WAP in Python to enter 3 numbers. Check and print the largest number.
(ii) Write a Python program to search an element in a list and display the frequency of element present in the list and their location using linear search by using userdefined function.
(iii) Write a Python script to enter a number and check if it is an Armstrong number or not.
(iv) Write a Python program to search an element in a list and display the frequency of elements present in list and their location using binary search by using user-defined function.
(v) Write a user-defined function that receives a 4-digit number and calculates the sum of squares of first 2 digits and last 2 digits numbers.

Example : If 1234 is passed as an argument then function should calculate $(12)^{2}+(34)^{2}$
(vi) Write a Python program to pass list to a function and double the odd values and half even values of a list and display list elements after modification.
(vii) WAP to implement Bubble sort on a list of numbers entered through the keyboard.
(viii) Write a Python program to input $n$ numbers in tuple and pass it to function to count how many even and odd numbers are entered.
(ix) Write a Python program to pass a string to a function and count how many vowels present in the string.
(x) Write a Python program to generate random number between 1 and 6 (Stimulate a Dice) using user-defined function.
(xi) Write a Python program to implement Python string functions.
(xii) Write a Python program to read and display file's content line by line with each word separated by \#.
(xiii) WAP to write those lines which have the character ' $p$ ' from one text file to another text file.
(xiv) Write a Python program to create a binary file with name and roll number. Search for a given roll number and display name, if not found display appropriate message.

- Learn \& revise UT-1 syllabus
- Make proper notes of the chapter : Computer Network

