THE RAJASTHAN INTERNATIONAL SCHOOL ,KOTPUTLI
SUBJECT: INFORMATICS PRACTICES
Class 12

❖ Prepare a Activity file containing 22 programmes along with their GUI
❖ Prepare a Activity file containing 30 queries of 03 mysql tables along with outputs display

The Rajasthan International, Kotputli
Holiday Homework, Session – 2018-19
(English)

Class – XII

1. Advertisements (collect 10 Ad-clippings from newspaper/s and paste in the notebook.)
2. Film Review (write Film Review on the following movies:
     i. Bahubali – 2
     ii. Hichki (Rani Mukharji Starer)
     iii. Raid
     iv. Chalk and Duster
     v. Gangajal
3. First 5 worksheets on Reading Comprehension from Evergreen worksheets.
4. 5 Debates on the following topics:
     i. Exams only measure the memory of students not their learning
     ii. Self studies vs classroom studies: which one is better way to learn?
     iii. Is competition a necessary part of the education process?
     iv. Is the boarding school system beneficial to schools?
     v. Is education the key to a successful future?
5. Define the following poetic devices and give 5 examples for each:
     i. Hyperbole
     ii. Oxymoron
     iii. Antithesis
     iv. Paradox
     v. Irony

The Rajasthan International School, Kotputli

SUMMER VACATION HOMEWORK

SUBJECT: MATHEMATICS

CLASS: XII (2018-2019)

Q1 Let A be a square matrix of order of order 3 x 3. Write the value of $|2A|$ where, $|A|$ = 4.

Q2 Let A be a square matrix of order of order 2x 2 Write the value of $|5A|$ where, $|A|$ = 6.

Q3 For what value of x, the matrix $\begin{pmatrix} x+4 & 4 \\ x+5 & 3 \end{pmatrix}$ is a singular matrix?

Q4 Write the number of all possible matrices of order 3 x 3 with each entry 0 or 5.

Q5 A is a square matrix of order of order 3 x 3. Find $|AadjA|$ where, $|A|$ = 8.

Q6 Find the minor of the element of third row and third column in the $\begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$.

Q7 A be a square matrix of order of order 3 x 3. Write the value of $|adjA|$, if $|A|$ = 5.

Q8 Write the adjA, if A = $\begin{pmatrix} -6 & 4 \\ 5 & -4 \end{pmatrix}$.

Q9 If $\begin{vmatrix} x+1 & x-1 \\ x-3 & x+2 \end{vmatrix} = \begin{vmatrix} 4 & -1 \\ 1 & 3 \end{vmatrix}$, then find the value of x.

Q10 If $A^T = \begin{bmatrix} 3 & 4 \\ -1 & 2 \end{bmatrix}$ and B = $\begin{bmatrix} -1 & 2 \\ 1 & 2 \end{bmatrix}$, then find $A^T - B^T$.

Q11 If $\begin{vmatrix} x & x \\ 1 & x \end{vmatrix} = \begin{vmatrix} 3 & 4 \\ 1 & 2 \end{vmatrix}$, write positive value of x.

Q12 If A = $\begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$ and I = $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, find k so that $A^2 = kA - 2I$.

Q13 If A $= \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$, show that $A^2 - 5A + 7\,I = O$, Hence find A^{-1}.

Q14 If A and B are symmetric matrices, prove that AB-BA is a skew symmetric matrix.

Q15 For what value of x: $\begin{bmatrix} 1 & 2 & 1 \end{bmatrix} \begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} 0 \\ 2 \\ x \end{bmatrix} = O$?

Q16 If A and B are symmetric matrices, prove that AB + BA is a symmetric matrix.

Q17 If A $= \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$, show that $A^2 - 4A + I = O$, Hence find A^{-1}.

Q18 For any square matrix, prove that $A + A^T$ is symmetric matrix and $A - A^T$ is skew symmetric matrix.

Q19 Prove that $\begin{vmatrix} b+c & q+r & y+z \\ c+a & r+p & z+x \\ a+b & p+q & x+y \end{vmatrix} = 2\begin{vmatrix} a & p & x \\ b & q & y \\ c & r & z \end{vmatrix}$

Q20 Show that if $x \neq y \neq z$ and $\begin{vmatrix} x & x^2 & 1+px^3 \\ y & y^2 & 1+py^3 \\ z & z^2 & 1+pz^3 \end{vmatrix} = 0$, then $1+pxyz = 0$.

Q21 For what value of x: $\begin{bmatrix} x & -5 & -1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix} \begin{bmatrix} x \\ 4 \\ 1 \end{bmatrix} = O$?

Q22 If A and B are symmetric matrices of the same order, then show that AB is symmetric if and only if A and B commute, that is AB = BA.

Q23 Using properties of determinant prove that $\begin{vmatrix} 1+x & 1 & 1 \\ 1 & 1+y & 1 \\ 1 & 1 & 1+z \end{vmatrix} = xyz\left(\dfrac{1}{x} + \dfrac{1}{y} + \dfrac{1}{z} + 1\right)$.

Q24   Prove that $\begin{vmatrix} x & y & z \\ x^2 & y^2 & z^2 \\ y+z & z+x & x+y \end{vmatrix}$ = (x - y) (y - z) (z - x)(x + y + z).

Q25   A = $\begin{pmatrix} 3 & -4 & 2 \\ 2 & 3 & 5 \\ 1 & 0 & 1 \end{pmatrix}$, Find A^{-1}. Use it to solve the system of equations

3x − 4y + 2z = -1; 2x + 3y +5z = 7; x + z = 2

Q26   Using elementary row transformation, find the inverse of the matrix

A = $\begin{pmatrix} 1 & 2 & 3 \\ 2 & 5 & 7 \\ -2 & -4 & -5 \end{pmatrix}$

Q27   If A = $\begin{pmatrix} 2 & -3 & 5 \\ 3 & 2 & -4 \\ 1 & 1 & -2 \end{pmatrix}$, Find A^{-1}. Use it to solve the system of equations

2x − 3y + 5z = 11; 3x + 2y - 4z = -5; x + y - 2 z = -3

Q28   Using matrices solve the system of equation:

2x + y + z = 7; x − y − z = -4; 3x +2y + z = 10.

Q29   Using elementary row transformation, find the inverse of the matrix

A = $\begin{pmatrix} -1 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 1 \end{pmatrix}$

Q30   If A = $\begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ and B = $\begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$, find AB, use this to solve the system of equations

x − y = 3, 2x + 3y + 4z = 17, y + 2z = 7.

Class-XII

Write answers of 25 questions given from ch-8

1.Write the scientific name of the pathogens that cause the discussed eight infectious disease?

2. represent the life cycle of malarial parasite, with the help of diagram.

3. Define health. How it is affected?

4. What ate pathogens/ How do they affect the host?

5. What are various species of malarial parasite. Where do they multiply?

6. write about the pathogens , mode of infection and symptoms of typhoid.

7. What are sporozoits and haemozoin?

8. How can a good public hygien be maintained?

9. Define immunity.Describe its type.

10. how can primary and secondary immune response carry to host blood. Name PMNL cellular barrier?

11. Write a short detail of the structure of antibody?

12. What is the principal of vaccination? How does it protect from infection?

13. What is allergy what is its cause? How can it be reduced?

14. Describe the coordination and response production mechanism by lymphoid organs.

15. name the pathogens that cause AIDS. What is its special feature/Mention the mode of its infection?

16. Describe the mechanism of causing symptomps by HIV?

17. How is ELISA helpful in AIDS treatment? What is its limitations?

!8. On what principal the formation of tumors depends?

19. What are the three basic cancer diagnosis technique? How is is MRI helpful in this diagnosis?

20. Name the major groups of drugs? Where from they are obtained?

21. What is smack? how is it produced?

22. What is nicotin? Explain its adverse effect on health?

23. What may be the primary cause of drug addiction about youngsters?

24. Why are drugs used by sports person ,what are its side effects?

25. Name some common drugs generally abused?

Make project on any one topic given below-

AIDS,DNA,Drugs,sleeping habits in various age groups of people,cancer,drug addiction,cell division.

# THE RAJASTHAN INTERNATIONAL SCHOOL, KOTPUTLI

CLASS: XII (Physics)

(Holiday Homework)

ONE MARKS QESTIONS

1. Why can one ignore quantization of charge when dealing with macroscopic charges?
2. Name the physical quantity whose SI unit is JC^{-1}. Is it a scalar or a vector quantity?
3. The distance of the field point on the axis of a small electric dipole is doubled. By what factor will the electric field due to the dipole change?
4. The electrostatic force between two charges is calculated by coulomb's law. Is this law is valid in all situations?
5. Two plane sheets of charge densities $+\sigma$ and $-\sigma$ are kept in air as shown in figure. What are the electric field intensities at point A and B.

B $+\sigma$

A $-\sigma$
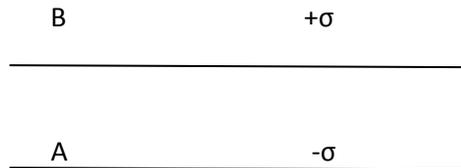
6. A Gaussian surface encloses an electric dipole within it. What is the total flux across sphere?
7. The given graph (x) shows that the variation of charge versus potential difference V for the two capacitors C_1 & C_2. The two capacitors have same plate separation but the plate area of C_2 is doubled than that of C_1. Which of the line in the graph corresponds to C_1 & C_2 and why?
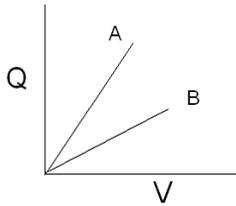

(x)   (y)

8. A point charge q is placed at O as shown in the figure Y. Is (V_P-V_Q) Positive or Negative when
b) q>0, (ii) q<0?
9. A large hollow metallic sphere A is charged positively to a potential of 100V and a small sphere B to a potential of 50V. Now B is placed inside A and they are connected by a conducting wire. In which direction will the charge flow?
10. Define the physical quantity potential gradient. What do the sign indicate as involved?
11. What is the number of electric field lines radiate outwards from one coulomb's of charge placed in vacuum?
11 What is the force between two small charged spheres having charges of $2\times10^{-7}C$ and $3\times10^{-7}C$ placed 30cm apart in air?
12. Figure shows the five charged lumps of plastic and a Cross section of Gaussian surface S. W hat is the net flux through the surface if;
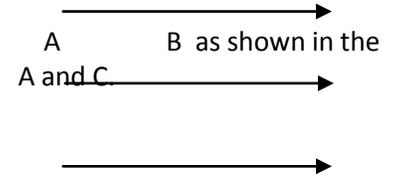
$Q_1=Q_4$= +3 n C
$Q_2=Q_5$= -5.9 n C
Q_3= -3.1 n C
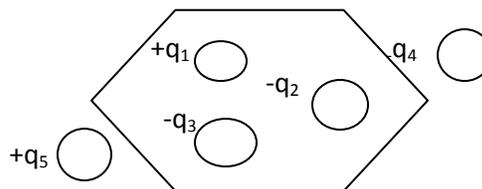
13. State any two basic properties of electric charge?

14.   What are equipotential surfaces? Draw the two equipotential surfaces for uniform electric field?

15. Three point s A, B and C lays in a uniform electric field (**E**) of 5×10^3N/C   A   B as shown in the
    figure. Find the potential difference between the points   A and C
                      C

16.   Two charges each 2×10^{-7} C but opposite in sign forms a system. These charges are located at points A (0,0, -10) cm and B(0,0, +10) cm respectively. What is the total charge and electric dipole moment of the system?

17.   A cylindrical Gaussian surface for an infinitely long straight wire of uniform linear charge density is shown in the following figure; Answer the following.   **E**

a)   For which surface is the electric flux zero?
b)   Over which surface is **E** constant?
c)   Over which surface **E** zero
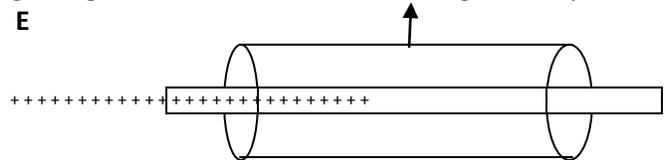
18.   Four charges each having charge 'q' are along x-axis at x=1 cm, x=2 cm, x=4 cm, x=8 cm .Find the electric field at x=0 due to these charges.

19.   Derive an expression for the energy stored in a parallel plate capacitor of capacitance C, charged to a potential difference V?

20.   An electric dipole is held in a uniform electric field. Using suitable diagram;
a)   show that it doesn't undergo any 9translator motion
b)   Derive an expression for torque acting on it and specify its direction.

21. In a meter bridge, the null point is found at a distance of 60.0 cm from A. If now a resistance of 5 Ω is connected in series with S, the null point occurs at 50 cm. Determine the values of R and S.
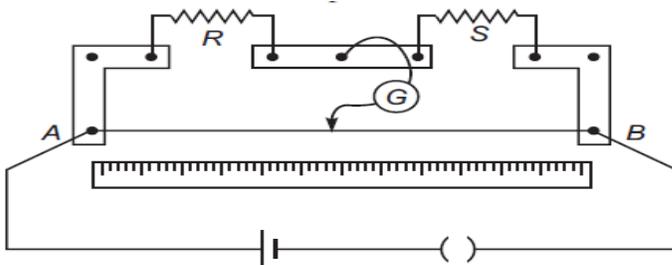
The Rajasthan International School, Kotputli

Class: 12-C

Subject: Accountancy

Ch-1 Numerical questions : 4,5,9,11(a), 12,15,18,19,24,32,40,45(a),46,56(a), 65,68,70,80.

Ch-2 Numerical questions: 4,8,9,20,24,25,33

Project work: - comprehensive problem.

THE RAJASTHAN INTERNATIONAL SCHOOL ,KOTPUTLI

SUMMER HOLIDAY HOMEWORK

SESSION- 2018-2019

SUBJECT: BUSINESS STUDIES

CLASS: XII COMMERCE

❖ **Do the case studies of Chapter-1,2,3 in Fair copy.**

❖ **Each chapter should have 20 case studies.**

THE RAJASTHAN INTERNATIONAL SCHOOL, KOTPUTLI

SUMMER VACATION HOME WORK 2018-19

CLASS-XII

SUB- GEOGRAPHY

1. Conduct a survey of latest changes in agricultural sector around your area . Points to be considered; economic status of the farmer of suicides have taken place their reasons , pattern of crops , one crop or many crops , means of irrigation, traditional knowledge of agriculture and modern scientific.
2. Can you think of any solutions to solve the problem of pollution in your village / city or reduce its levels
3. Construct an age-sex pyramid of your district / state .
4. Look around and make a list of the global brands their logos and products .
5. Describe the physical factors affecting the distribution of population in the world .
6. Explain the patterns of distribution of population in the world >
7. Analyse the factors responsible for inequality in sex-age and occupational structure in different parts of the world ?
8. Write an essay on the history of measurement of human index ?
9. Show the following in the map of the world
   1. High density regions.
   2. Countries of Europe and Africa with negative growth of population
   3. Countries of Africa where annual growth rate of population is more than 3 %.
   4. Three countries of the world which will take 100 years to increase its population to double .

THE RAJASTHAN INTERNATIONAL SCHOOL, KOTPUTLI

HOLIDAY HOMEWORK

CLASS-XII

SUBJECT-POL. SCIENCE

1. Explain any four characteristics of non-alignment movement.
2. What was cold war? Mention the impact of the end of the cold war.
3. Write the full form of the followings.
    a. a.UNTCAD
    b. b.WMD
4. What is NAM? Explain any two of its criticism. Explain any two of its value points.
5. Why India did not join any of the two super powers camps during the cold war?
6. Why did the super powers have military alliances with the small countries? State any four reasons for it.
7. What is SRC? When was it constituted? What were its important suggestions?
8. What were the princely states? How many princely states were there in India during independence?
9. Why did Soviet Union disintegrate? Highlight any four arguments in favors of your answer.
10. Evaluate any six consequences of the disintegration of Soviet Union.
11. What is shock therapy? What were its consequences on the post communist regime?
12. What is green revolution? Mention it's any two positive and two negative consequences?

13. In the first general election, how many seats did the congress win? How many seats did the next largest party, CPI, win?
14. In an outline map of India, locate and label different princely states and the provinces directly under the British rule.
15. In an outline map of world, locate and label the countries of eastern and western allies during the cold war.

THE RAJASTHAN INTERNATIONAL SCHOOL

Creative Work For Summer Vacation - 2018

Subject – Fine Art

Class XII

1. 30 sketches bases on human, animal and nature.
2. Make one creative composition. (Paper size – 15'x20')