

# STEPHENS

INTERNATIONAL PUBLIC SCHOOL



**Holidays' Homework**

Session – 2021-22

**Class : 12<sup>th</sup> -C**

## Subject : English

### Task – 1

- (A) On the eve of World Environment Day, your school has decided to have a face painting competition. Draft a notice in not more than 50 words for your school notice board giving necessary information. You are Nimita/Naresh the Head Boy/ Girl J M K International School Jharkhand.
- (B) Students leave their prestigious seats in IIT, IIM etc. and pursue high level courses abroad. Government spends a lot of money on these students and all this money goes waste when students opt for courses in foreign countries. Write an article on Brain Drain Among Youth in about 150 -200 words.

### Task – 2

- (A) Design a digital poster inviting the general public to an E-learning fair.
- (B) Your company organise My Trip C-45 Damini Road Delhi claims to offer the cheapest air tickets for any destination by an airline besides offering free tour guide facilities. Draft a digital advertisement in not more than 50 words giving all relevant details.
- (C) You have recently started an Institute for ABACUS for school children. Draft a digital advertisement for a national daily giving all the relevant details.

### Task 3

- (A) You want to do a short term on line course on etiquette development during the summer holidays. Write a letter to the Director of Personal Care Hyderabad enquiring about the course details. Sign as Kumud of 148 Raja Garden, Jammu.



(B) You are Sudhir Jain, the Head Boy of APS Nagrota. An excursion has been scheduled from your school to Jodhpur. Write a letter to the Secretary of Youth Hostel, Koti Jodhpur requesting him to provide accommodation for 25 boys and 35 girls for five days. (120-150 words)

#### Task – 4

Read any short story book or novel and summarize it in the form of Power Point Presentation (slides). The slides must be in the following order:

- General information about the book.
- Author's description.
- Character's description.
- Summary of the story.
- Moral/ what you get from the story.

**Note –** You can include different pictures related to the text in the slides. Presentation in the form of a paragraph will not be accepted. It must be in points. The slides must not be more than 15.



# Subject : Accountancy

## PROJECT WORK:

### COMPREHENSIVE PROJECT: CHOOSE ANY ONE FROM THE FOLLOWING:

1. Collection of source documents, recording accounting transactions using vouchers as well as preparation vouchers.
2. A comprehensive project taking any sole proprietorship business and this project must state the following:
  - (i) Journal Entries
  - (ii) Ledgers
  - (iii) Preparation of Trial Balance
  - (iv) Trading Account
  - (v) Profit and Loss Account
  - (vi) Balance Sheet
  - (vii) Use pie chart or Bar diagram to show incomes, profit and loss and Assets and liabilities.
3. Prepare a bank reconciliation statement using a given cashbook as well as the passbook which must have 20 to 25 transactions

### SPECIFIC PROJECT: CHOOSE ANY ONE FROM THE FOLLOWING:

1. Ratio analysis
2. Cash flow statement
  - Choose one company and prepare profit and loss account and balance sheet and calculate different ratios
  - Choose one company and prepare his cash flow statement

## GENERAL QUESTIONS

### Solve 10-10 questions of following topics:

- Profit and loss appropriation account
- Past adjustments
- Guarantee of profit to a partner
- Interest of drawings

## Subject : Business Studies

- Solve 5–5 case studies of following chapters:-
  1. Nature and significance of management
  2. Nature and principles of management
  3. Business environment
  4. Planning

### PROJECT WORK:

#### CHOOSE ANY ONE FROM THE FOLLOWING:

#### 1. Project work on Marketing

You are required to collect the information on any topic out of the following for the project work on marketing. The topics are as follows:

- Toothpaste
- Noodles
- Shampoo
- Bathing soap
- Pen
- Mobile
- Hair oil
- Salt
- Jams
- Any other product of your choice

#### 2. Project on element of business environment:

- (a) Changes witnessed over the last few years on mode packaging and its economic impact.
- (b) Changing role of women in the last 25 years relating to joint families.
- (c) The trend in the changing interest rates and their effect on savings.
- (d) A study on child labour laws, its implementation and consequences.

#### 3. Principles of management:

You are required to visit any one of the following:

- (i) A Departmental store
- (ii) An industrial unit
- (iii) A Fast food outlet
- (iv) Any other organization

You are required to observe the applications of the General principles of management advocated by Fayol or enquire about the application of Scientific management techniques by F.W Taylor in the unit visited.

## Subject : Economics

### A. GENERAL QUESTIONS:

- Q1. How does the central bank of a country control the supply of money in an economy?
- Q2. Explain the problem of double counting. Also state one of the ways of avoiding this problem.
- Q3. Explain the difference between Microeconomics and Macroeconomics. Give suitable examples.
- Q4. Distinguish between average propensity to consume and marginal propensity to consume using a numerical example
- Q5. Do you agree that MPS cannot be negative, but APS can be?

### B. PROJECT WORK

- Micro and Small scale industries
- Food supply channel in India
- Contemporary Employment in India
- Disinvestment policy of the government
- Goods and services tax Act and its Impact on GDP
- Health Expenditure(of any state)
- Human development Index
- Inclusive Growth strategy
- Self-help group
- Trends in credit availability in India
- Monetary policy committee and its functions
- Role of RBI in control of credit
- Government budget and its components
- Trends in budgetary condition of India
- Exchange Rate determination-Methods and Techniques
- Currency war reasons and repercussions
- Livestock Backbone of rural India
- Alternate fuel types and importance
- Minimum support prices
- Relation between Stock Price Index and Economic Health of Nation
- Waste Management in India – Need of the hour
- Minimum Wage Rate – approach and Application
- Digital India- Step towards the future
- Rain Water Harvesting – a solution to water crises Vertical Farming – an alternate way
- Silk Route- Revival of the past
- Make in India – The way ahead
- Bumper Production- Boon or Bane for the farmer
- Rise of Concrete Jungle – Trend Analysis – Organic Farming – Back to the Nature
- Any other newspaper article and its evaluation on basis of Economic principles

### Note:-

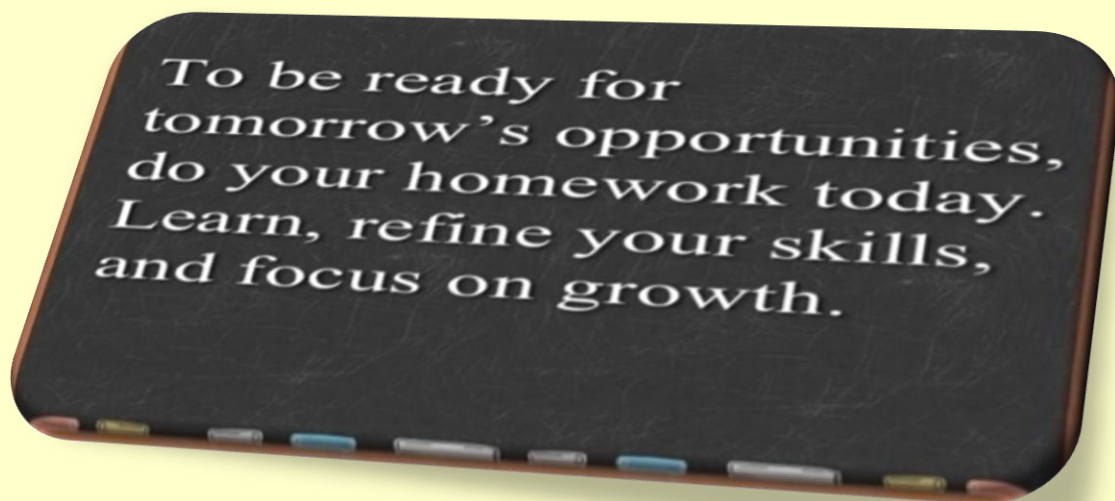
*Each student has to choose any one from the above topic for project.*

*Project topic must be done in project sheets.*

*There must be 20-25 sheets for a given project.*

*Relevant pictures must be pasted in blank page of sheets.*

## Subject : Mathematics



### CHAPTER – MATERICS

- Q1. If a matrix has 12 elements, what are the possible orders it can have?
- Q2. If  $\begin{bmatrix} x-y & z \\ 2x-y & w \end{bmatrix} = \begin{bmatrix} -1 & 4 \\ 0 & 5 \end{bmatrix}$ , find the value of  $x + y$ .
- Q3. For a  $2 \times 2$  matrix,  $A = [a_{ij}]$  whose elements are given by  $[a_{ij}] = \frac{i}{j}$ , write the value of  $a_{12}$ .
- Q4. If  $A = \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$ , then for what value of  $\alpha$  is A an identity matrix?
- Q5. If  $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 3 & 1 \\ 2 & 5 \end{bmatrix} = \begin{bmatrix} 7 & 11 \\ K & 23 \end{bmatrix}$ , then write value of K.
- Q6. Write  $A^{-1}$  for  $A = \begin{bmatrix} 2 & 5 \\ 1 & 3 \end{bmatrix}$  using elementary transformations.
- Q7. Express the matrix  $A = \begin{bmatrix} 3 & 2 & 5 \\ 4 & 1 & 3 \\ 0 & 6 & 7 \end{bmatrix}$  as the sum of a symmetric and a skew symmetric matrix.
- Q8. Find the matrix A such that  $\begin{bmatrix} 2 & -1 \\ 1 & 0 \\ -3 & 4 \end{bmatrix} A = \begin{bmatrix} -1 & -8 \\ 1 & -2 \\ 9 & 22 \end{bmatrix}$

## CHAPTER – DETERMINENT

- Q1. If  $|A| = 6$  and  $O(A) = 3$  then  $|2A|$ .
- Q2. If order of a matrix  $A$  is  $3 \times 3$  and  $|A| = 3$ ; then  $|A(\text{adj } A)|$
- Q3. Find  $x$  if  $\begin{bmatrix} 5 & 3x \\ 2y & z \end{bmatrix} = \begin{bmatrix} 5 & 12 \\ 6 & 4 \end{bmatrix}$
- Q4. Without expanding prove that  $\begin{vmatrix} 2 & 7 & 65 \\ 3 & 8 & 75 \\ 5 & 9 & 86 \end{vmatrix} = 0$
- Q5. Solve the equation  $\begin{bmatrix} a + ax \\ xx + ax \\ xxx + a \end{bmatrix} = 0, a \neq 0.$
- Q6. Solve the system of linear equations:-  
 $8x + 4y + 3z = 18, 2x + y + z = 5$  and  $x + 2y + z = 5$
- Q7. A school wants to award its students for the values of honesty, regularity, and hard work with a total cash award of Rs. 6000, three times the award money for hard work added to that given for honesty amounts to Rs. 11000. The award money given for honesty and hard work together is double the one given for regularity. Represent the above situation algebraically and find the award money for each value, using matrix method.

## CHAPTER – CONTINUITY AND DIFFERENTIABILITY

- Q1. If  $x = \sin^{-1}(3t - 4t^3)$  and  $y = \cos^{-1} \sqrt{1-t^2}$  then find  $\frac{dy}{dx}$ .
- Q2. Find  $\frac{dy}{dx}$ , if  $x = a \{ \cos t + \log(\tan t/2) \}$ ,  $y = a \{ \sin t \}$ .
- Q3. Verify the Rolle's theorem for the function  $f(x) = x^2 - 2x + 1$  in the interval  $[-1, 2]$
- Q4. If find  $y = a(\sin \theta - \cos \theta)$  and  $x = a(\cos \theta + \sin \theta)$ , find  $\frac{d^2y}{dx^2}$ .
- Q5. Find the unknown constant if the functions are continuous
- $$f(x) = \begin{cases} kx+1, & x \leq \pi \\ \cos x, & x > \pi \end{cases}$$
- Q6. The function  $f(x)$  is defined as follows:  $f(x) = \begin{cases} x^2 + ax + b, & 0 \leq x < 2 \\ 3x + 2, & 2 \leq x \leq 4 \\ 2ax + 5b, & 4 < x \leq 8 \end{cases}$   
if  $f$  is continuous on  $[0, 8]$ , find the values of  $a$  and  $b$ .



## APPLICATION OF DERIVATIVES

- Q1. Find the slope of tangent to the curve  $y = x^2 - 1$  at the point whose abscissa is 3.
- Q2. Show that  $f(x) = 3x + 7$  is strictly increasing on  $\mathbb{R}$ .
- Q3. Find the rate of change of the area of a circle with respect to its radius  $r$  when  $r = 4$  cm.
- Q4. Find the point on the curve  $y = x^2 - 2x + 3$  where tangent is parallel to  $x$ -axis.
- Q5. Find slope of normal to the curve  $y = 2x^2 - 3x$  at  $x = -1$ .
- Q6. Find slope of tangent to the curve  $x = t^2 + 3t - 8$ ,  $y = 2t^2 - 2t - 5$  at  $t = 2$ .
- Q7. Prove that curve  $x = y^2$  and  $xy = k$  cut at right angles if  $8k^2 = 1$ .
- Q8. Determine the interval where  $f(x) = \sin x - \cos x$ ;  $0 \leq x \leq 2\pi$  is strictly increasing or decreasing.

## Subject : Physical and Health Education

### A. Prepare the project file on any one of the following games:-

Basketball, Football, Kabaddi, Kho-Kho, Volleyball, Handball, Hockey, Cricket, Bocce and Unified Basketball

#### • Project has to be written on the basis of following guidelines:-

1. History of the game.
2. Draw the diagram of court/field of related game Specifications of playfield and sports equipments.
3. Latest general rules of the game.
4. Fundamental skills of the game.
5. Terminology.
6. Important tournaments of the game.

### B. Make a video of performing any 5 yoga asanas and explain its steps and benefits.

### C. Write about the Sports Awards. (on same project file)

- (a) Arjun Award
- (b) Dronacharya Award
- (c) Rajiv Gandhi Khel Ratan Award

## Subject : Applied Arts

1. Make a poster on community and nature development on A3 size sheet (portfolio) using acrylic colours. (3 sheets)
2. Make an advertisement of commercial product on A3 size sheet (portfolio) using acrylic colours. (3 sheets)

## Subject : Hindustani Music

### PROJECT WORK

- Q1. Discuss in detail Raag Malkouns and write in Notation the Compositions of Raag Malkouns.
- It's Aroha, Avroha
  - It's Thaata
  - It's Jati
  - It's Timing
  - It's Vadi, Samvadi Swar.
- Q2. Write in Tala Notation, Thah (Single) and Dugun (Double) of Jhap Tala and Rupak Tala.
- Q3. Describe the various parts of the Tanpura along with its tuning.

