

# DELHI PUBLIC SCHOOL VISAKHAPATNAM ASSIGNMENT

April – May 2025-26



Date of Submission: on or before 13.6.2025

#### Subject: ENGLISH

**Character Sketch Questions** 1. The Tiger King – Character Sketch of the Maharaja of Pratibandapuram How does the Maharaja's character evolve through the story? Discuss the elements of irony in his character and actions. In what ways is he a critique of the pomp and power of rulers? 2. Deep Water - Character Sketch of William Douglas How did William Douglas's fear of water originate and how did he overcome it? What qualities of determination and courage do you observe in him? Why can he be considered an inspiration for today's youth? 3. Lost Spring - Character Sketch of Saheb and Mukesh Compare and contrast the dreams of Saheb and Mukesh. How do their living conditions influence their life choices? What do these characters symbolise in the broader context of child labour and poverty? Long Answer Ouestions 4. The Third Level "In an age of rising stress and anxiety, the third level offers a much-needed escape." Discuss the significance of the third level in the context of present-day urban life. How does the concept of escapism apply to the modern reader? 5. Indigo How did Gandhi help the peasants of Champaran to overcome their fear and assert their rights? Discuss Gandhi's non-violent and empathetic approach to leadership in the context of the Indigo movement. What were the key turning points that led to the success of the Champaran episode? Prepare a podcast (90-120 seconds) highlighting your personal take on one of the chapters. Podcast-Reflections in Literature (title) Include: A brief overview of the story. Your perspective or emotional response. Why the story matters to you or to society today. A reflective conclusion. A few ideas for titles- may create one on your own "Fear Conquered: Deep Water and Me" "Saheb and Mukesh - Two Boys, One Broken Spring" "Tiger King: A Royal Satire on Ego and Fate" "Escaping into the Third Level: A Train to Peace" "The Indigo Awakening: Gandhi and the Power of Truth" IV. English Project Guidelines (for Internal Marking & Viva) To-Do Steps: 1. Choose a Topic: Finalise and get it approved by your teacher. Suggested topics: Representation of Women in Literature, Changing Portraval of Heroes, Power of Spoken Word Poetry, Media and Language Influence, English in the Digital Era, etc. Check CBSE website for more topics / ideas. 2. Prepare the Soft Copy with these Sections: \*Title Page \*Certificate (uniform format will be shared by teacher) \*Overview of Topic \*Description / Analysis Include examples, anecdotes, factual info \*Learning Outcomes and \*Relevance to You

\*References / Resources Used \*Pictures / Graphs / Visuals (if required) 3. Presentation Tips: Keep the content original and concise. Use headings, bullet points, and neat formatting. Make the visuals colourful, yet not too cluttered. 4. Viva in November.

### **Subject: MATHEMATICS**

1-Classify the function  $f: Z \rightarrow Z$  given by  $f(x) = x^3$  as injection, surjection or bijection

2-Let R = (a,b):  $a,b \in Z$  and (a - b) is divisible by 5 show that R is an equivalence relation on Z.

3-Evaluate:  $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right) + \cot^{-1}\left(\frac{1}{\sqrt{3}}\right) + \tan^{-1}\left(\sin\left(-\frac{\pi}{2}\right)\right)$ 4-Find the value of  $\tan^{-1}(1) + \cos^{-1}(-\frac{1}{2}) + \sin^{-1}(-\frac{1}{2})$ 5-If A =  $\begin{bmatrix} 3 & \sqrt{3} & 2 \\ 4 & 2 & 0 \end{bmatrix}$  and B =  $\begin{bmatrix} 2 & -1 & 2 \\ 1 & 2 & 4 \end{bmatrix}$  verify that (A + B) ' = A ' + B ' 6-Find the values of x and y if  $\begin{bmatrix} x+10 & y^2+2y \\ 0 & -4 \end{bmatrix} = \begin{bmatrix} 3x+4 & 3 \\ 0 & y^2-5y \end{bmatrix} \begin{bmatrix} 0 & -4 \end{bmatrix}^{-1} \begin{bmatrix} 0 & y^2 - 5y \end{bmatrix}$ 7-Find minors and cofactors of the elements of the determinant  $\begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$  and verify that a <sub>11</sub> A <sub>31</sub> + a

 $_{12}$  A  $_{32}$  + a  $_{13}$  A  $_{33}$  = 0. 8-Solve the system of equations by matrix method: 3x + 4y + 2z = 82y - 3z = 3x - 2y + 6z = -2

#### Subject: ACCOUNTANCY

Read the following hypothetical situation and answer question no. 1-3

Sudha, Naresh and Geeta were partners in a firm sharing profits in the ratio of 5:3:2. Their fixed capitals were ₹6,00,000; ₹4,00,000 and ₹2,00,000 respectively. Besides her capital Geeta had given a loan of ₹75,000 to the firm. Their partnership deed provided for the following: (i) Interest on capital @ 9% p.a. (ii) Interest on partner's drawings @12%. (iii) Salary to Sudha ₹30,000 per month and to Naresh ₹40,000 per quarter. (iv) Interest on Geeta's loan @9% p.a. During the year Sudha withdrew ₹50,000 at the end of each quarter; Naresh withdrew ₹50,000 in the beginning of each half year; Geeta withdrew ₹70,000 at the end of each half year. The profit of the firm for the year ending 31-3-2025 before allowing interest on Geeta's loan was ₹7,06,750.

1. How much amount of net profit will be transferred to Profit and Loss Appropriation A/c?

(a)₹7,06,750 (b) ₹7,02,250 (c) ₹7,00,000 (d) ₹7,13,000

2. What will the amount of interest on drawings made by the partners?

(a)Sudha ₹2,250, Naresh ₹4,500 and Geeta ₹2,100

(b)Sudha ₹9,000, Naresh ₹9,000 and Geeta ₹4,200

(c) Sudha ₹4,500, Naresh ₹4,500 and Geeta ₹2,100

(d)Sudha ₹24,000, Naresh ₹12,000 and Geeta ₹16,800

3. What will be the share of divisible profit of each partner?

(a)Sudha ₹47,100, Naresh ₹28,260 and Geeta ₹18,840

(b)Sudha ₹3,61,100, Naresh ₹2,16,660 and Geeta ₹1,44,440

(c) Sudha ₹36,000, Naresh ₹21,600 and Geeta ₹14,400

(d)None of the above.

4. On 31st March, 2025 after the close of books of accounts, the capital of Nusrat, Himesh and K.K. showed balance of 24,000; 18,000 and 12,000 respectively. Their profit sharing ratio is 3:2:1. K.K is given a minimum guarantee of ₹6,000 profit by Nusrat personally. The profit for the year 36,000

distributed in 3:2:1 without providing for the interest on capital @10% p.a.Partner's drawings during the year had been 3,600; 4,500 and 2,700 respectively.

Pass necessary adjustment entry. Show your working notes clearly.

5. Jatin, Keshav and Lalit were partners in a firm with fixed capitals of 1,20,000, 1,00,000 and 80,000 respectively. As per the partnership deed, there was a provision for allowing interest on capitals @ 10% p.a., but entries for the same had not been made for the last two years.

The profit sharing ratio during the last two years was as follows:

Year	Jatin	Keshav	Lalit
2023-24	5	3	2
2024-25	1	1	1

6. Menon and Thomas are partners in a firm. They share profits equally. Their monthly drawings are ₹2,000 each. Interest on drawings is to be charged @10% p.a. Calculate interest on Menon's drawings for the year 2024-25, assuming that money is withdrawn:

(i) In the beginning of every month,

- (ii)In the middle of every month, and
- (iii) At the end of every month.
- 7. On 1<sup>st</sup> April, 2024, Sameer and Yasmin commenced a business in partnership with their fixed capitals of 15,00,000 and 10,00,000 respectively. They agree to share profits in the ratio of 3:2. The books are closed on March 31, every year. Interest on capitals, salary and commission for partners are allowed even if it involves the firm to incur a loss. Interest on capital is provided @5% p.a. and Interest on drawings is charged @12% p.a.

Particulars	Sameer (₹)	Yasmin (₹)
Additional capital contributed on July1, 2024	3,00,000	2,00,000
Drawings (during 2024-25)	30,000	20,000
Salary	20,000	
Commission	10,000	7,000
Share in loss for the year 2024-25	60,000	40,000

- 8. Vihaan and Mann are partners sharing profits and losses in the ratio of 3:2. The firm maintains fluctuating capital accounts and the balance of the same as on 31<sup>st</sup> March 2025 is ₹4,00,000 and ₹4,65,000 for Vihaan and Mann respectively. Drawings during the year were ₹65,000 each. As per the partnership Deed, Interest on capital @10% p.a. on Opening Capital has been allowed to them.
- Calculate the interest on capitals of Vihaan and Mann given that the divisible profits during the year 2024-25 was ₹2,25,000.
- 9. Krishna, Sandeep and Karim are partners sharing profits in the ratio of 3:2:1. Their fixed capitals are: Krishna 1,20,000, Sandeep 90,000 and Karim 60,000. For the year 2024-25, interest was credited to them @6% p.a. instead of 5% p.a. Record adjustment entry. Show your workings clearly.
- 10. On 01.07.2024, Ravi, Kavi and Avi started a partnership firm with fixed capitals of ₹6,00,000, ₹6,00,000 and ₹3,00,000 respectively. They decided to share profits and losses in the ratio of their capitals. The partnership deed provided for the following: (i) Interest on capital @10% p.a., Interest on drawings @12% p.a. (ii) A monthly of ₹10,000 to Avi. (iii) Ravi was guaranteed a minimum profit of ₹50,000 p.a. On 1.10.2024 Kavi was in need of funds due to his daughter's marriage, so he took a loan of ₹50,000 form the firm at an agreed rate of interest being 10% p.a. The net profit of the firm for the year ending on 31.03.2025 was ₹3,05,500 before charging interest on loan to Kavi. Interest on partner's drawings was Ravi ₹4,800, Kavi ₹4,200 and Avi ₹3,000. Profit and Loss Appropriation Account of Ravi, Kavi and Avi for the year ending on 31.03.2025.
- 11. Do complete the project which is already assigned in the class. Choose your topic as soon as possible.

#### Subject: BUSSINESS STUDIES

- 1. Smita Rai is the director of Namchi Designer Candles, which has 100 percent women as employees. They also produce varieties of candles. During Diwali, they produce customized candles meant for the occasion. Smita plans her Diwali collection in the monthj of June itself. She has to then ensure that there is an adequate workforce and continuously monitors whether production is proceeding according to plans. Her marketing department also has to be briefed in time to prepare their promotional and advertising campaigns.
- At Namchi Designer Candles, the production and sales department coordinate their work, so that production takes place according to the demand in the market.
- The purchase, production and sales departmental efforts have to be coordinated by Smita for achieving organizational objectives harmoniously. The purchase department is responsible for procuring fabric. This then becomes the basis for the activities of the production department and finally sales can take place. If fabric purchased is of an inferior quality or is not according to the specifications of the production department, further sales will also decline. Identify and explain by quoting lines from the above the three characteristics of coordination.
- 2. Pallavi started a wedding planner company 'Dreams Unlimited' in 2016 and her target was to be amongst the top 10 companies in the field within the next three years. For this she employed people having different skills. She worked hard and united the efforts of different people to achieve this goal. The requirements of the customers in this industry changed very fast and the company adapted to keep pace with the changing environment. As planned, the company achieved its target within three years. All the employees of the organization were happy and satisfied and the effect of management was noticeable in the organization. The way Pallavi was managing her business highlights some of the features of management. By quoting lines from the above paragraph, explain any two such features.
- 3. Captcha Ltd. is a construction company in which all the employees learn various ways of dealing with diverse situations from their seniors. Company provides financial as well as non-financial incentives. This helps the employees to grow and develop their abilities. The organization behaves as a responsible constituent of society and always creates good quality products. It has a positive image in the market. The training modules are excellent and the employees always try to find unique ways of [providing solutions in the context of rapidly changing business environment. This has helped the organization to adjust smoothly.
- Identify and state three points of importance of management being highlighted here.
- 4. Rajat joined as a CEO of Bharat Ltd, a firm manufacturing Computer hardware. On the first day he addressed the employees. He said that he believed that a good company should have an employee suggestion system and he wished to minimize employee turnover to maintain organizational efficiency. He informed all employees that he would ensure that all agreements were clear, fair and there was a judicious application of penalties. However, he said that he believed that lazy personnel should be dealt with sternly to send the message that everyone was equal in the eyes of management. Also, that he would want to promote team spirit of unity and harmony among employees, which would give rise to a spirit of mutual trust and belongingness among team members and eventually minimize a need for using penalties. He told all present that the interests of the organization should take priority over the interests of any one individual employee.
- Identify and briefly explain the principles of management given by Fayol, which Rajat highlighted in his address to the employees.
- 5. Sanchit, after completing his entrepreneurship course from Sweden returned to India and started a coffee shop 'Aroma Coffee Can' in a famous mall in New Delhi. The specialty of the coffee shop was the special aroma of coffee and a wide variety of flavours to choose from. Somehow, the business was neither profitable nor popular. Sanchit was keen to find out the reason. He appointed Sandhya, an MBA from a reputed college, as a manager to find out the causes of the same. Sandhya took feedback from the clients and found out that though they loved the special unique aroma of coffee, they were not happy with the long waiting time being taken to process the order. She analysed and found out that there were many unnecessary obstructions in between which could be eliminated. She fixed a standard time for processing the order.
- She also realized that there were some flavours whose demand was not enough. So, she also decided to stop the sale of such flavours. As a result within a short period Sandhya was able to attract the customers.
- Identify and explain any two techniques of scientific management used by Sandhya to solve the problem.

- 6. 'VBR Cinema', an Indian multiplex cinema hall was the first to recognize the change in consumption habits of people. It changed its food menu from burgers, pizza, soft drinks, etc. and switched over to healthier options like salads and smoothies, soups and anjeer-based sweets. Within a month, the revenue of the multiplex from sale of food items doubled. 'VBR Cinema', by continuously monitoring the environment and adopting suitable business practices, was able to improve its revenues and profits and was hopeful that it will continue to succeed in the market in the long run too.
- Identify and explain one dimension of business environment and one point of importance of understanding the business environment highlighted in the above case.
- 7. Identify and state the importance of business environment from the following:
- (a) Many studies reveal that the future of an enterprise is closely bound up with what is happening in the environment. It really makes a difference to the performance of an enterprise.
- (b) Entry of new players into the market, which means more competition may make an enterprise think afresh about how to deal with the situation.
- (c) Today's business environment is getting increasingly dynamic where changes are taking place at a fast pace. Information technology and intense global competition are just a few of the images used to describe today's business environment. All sizes and all types of enterprises are facing increasingly dynamic environment. Therefore, managers must understand and examine the environment and develop suitable courses of action.
- 8. Do complete your project as assigned in the class. Choose your own topic for the project as soon as possible.

#### Subject: ECONOMICS

- 1. Distinguish between:
- a. Factor cost and Market Price b. Capital goods and Consumer goods c. Depreciation and Capital loss d. Fixed investment and Inventory investment e. Domestic investment and National income
- f. Factor income and Transfer payment g. Value addition and Final value output h. Macro and Micro economics
- 2. Distinguish between NFIA and Export. When does NFIA show negative value?
- 3. Define the problem of double counting in the computation of National Income. State any two approaches to correct the problem of double counting.
- 4. Which of the following goods are intermediate goods or final goods? Give reasons.
- a. Wheat purchased by household.
- b. Furniture purchased by the School.
- c. Machines purchased by a dealer of machine
- d. Paper purchased by a publisher.
- e. Chalks, duster, etc. purchased by a school.
- 5. Explain, the circular flow of income with an appropriate diagram.
- 6. Giving valid reasons, classify the following into stock and flow variable.
- a. Population of India as on 31st March, 2025
- b. Production of wheat during the year 2024-25
- c. Distance between Hyderabad and Visakhapatnam
- 7. State, giving reasons, whether the following are the normal residents of India.
- a. Indian working in the office of the United Nation in America.
- b. Americans working in Indian Embassy.
- c. Indians going abroad for medical treatment
- d. Foreign tourists visit for recreation
- 8. State, giving reasons, whether the following are included in the domestic territory of India.
- a. Branch of bank of Britain in India
- b. Chinese embassy in India
- c. Aircraft operated by Air India between USA and Germany
- 9. "During the colonial period, India's foreign trade was characterized by a large export surplus. However, this didn't result in any flow of gold/silver into India." Justify.
- 10. During British period Indian agriculture was stagnant. Give reasons.
- 11. Highlight the salient features of India's pre-Independence occupational structure.
- 12. Discuss the two-fold motive behind the systematic de-industrialisation implemented by the British.
- 13.Discuss briefly the rationale behind choosing 'Modernisation' and 'Self- reliance as planning objective for the Indian economy.

14. Choose the topic and complete the Project for final Board examination. (15 -20 pages). It should have Cover page, Certificate page, Acknowledgement page, Index page, Contents, Relevant pictures,

Conclusion page and Bibliography. Must be a well-defined project with proper presentations.

Note: Discuss with the Subject teacher after selecting the topic of the project.

To be submitted after the Summer Vacation.

## Subject: ARTIFICIAL INTELIGENCE

- 1. What is a DataFrame in Pandas? How do you create a Pandas Series from a dictionary?
- 2. Name two strategies to handle missing values in a DataFrame.
- 3. Describe the steps to import and export data using Pandas.
- 4. Explain the concept of handling missing values in a DataFrame with examples.
- 5. What is Linear Regression, and how is it implemented in Python?

Case study based questions:

- 6. A dataset of student marks contains missing values for some subjects. Write Python code to handle these missing values by replacing them with the mean of the respective columns.
- 7. Write Python code to load the file into a Pandas DataFrame, calculate the total sales for each product, and save the results into a new CSV file.Click in the link below to access sales.csv dataset.

https://drive.google.com/drive/folders/1tLbVXWkKzcp60\_-FAvn9usEWuUOF3{Tp3?usp=sharing

- 8. In a marketing dataset, analyze the performance of campaigns using Pandas. Describe steps to group data by campaign type and calculate average sales and engagement metrics.
- 9. A company has collected data on employee performance. Some values are missing, and certain columns are irrelevant. Explain how to clean and preprocess this data for analysis using Pandas.

## Subject: PHYSICAL EDUCATION

1. What are the functions of sports management ?

2.Explain the formation of committees and its responsibilities in pre, during and post competitions or sports events?

- 3. What is a tournament? list out various types of tournaments.
- 4. What are combination type of tournaments?
- 5. What are the advantages and disadvantages of a knockout tournament?
- 6. what are the merits and demerits of League tournaments?
- 7. Draw a knockout fixture for 25 teams and mention all the calculations
- 8. what is seeding? explain by giving suitable example, the method of giving special seeding?
- 9. What is fixture? make a knockout cum League fixtures of 23 teams.

10. what is a league tournament? Draw a fixture for 9 teams using cyclic method. Explain the British method to declare a winner.

- 11. What is bye? What is the method of fixing byes?
- 12. Highlight the importance of intramural and extramural competitions.
- 13.List down various communities sports programs and explain any two in detail.
- 14. Write about the deformities of spinal curvature.
- 15.Write in brief about exercises guidelines of W.H.O for different age group.