

ST. MICHAEL'S SR. SEC. SCHOOL
3, PUSA ROAD, NEW DELHI
CLASS XII ASSIGNMENT MID-TERM
(2026-27)

VALUE EDUCATION

Chapters:

1. Building Your Character
2. Healthy Relationships
3. Overcoming Loneliness
4. Dealing with Discouragement
5. Stop Worrying

Answer the following questions:

1. What is character? Explain how our habits, choices, and actions contribute to building a strong character.
2. What are the essential qualities of a healthy relationship? Explain any three.
3. How can effective communication and mutual respect strengthen relationships?
4. What are some common causes of loneliness among young people? Suggest two healthy ways to overcome it.
5. Why is it important to accept and understand our emotions when we feel lonely or discouraged?
6. What is discouragement? How can a person turn failure or disappointment into an opportunity for growth?
7. Write **True or False**:
A person with a strong character always makes responsible choices, even when no one is watching. _____
8. What is the difference between **healthy concern** and **unnecessary worry**?
9. Suggest any three practical ways to manage worry and maintain a calm and positive outlook.
10. **Situation-based question:**
You have worked hard for an important examination but did not get the result you expected. You feel disappointed and worried about your future. What would you do to overcome discouragement and deal with your worries in a healthy way?

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ECONOMICS

1. Define National Income.
2. Differentiate between Final Goods and Intermediate Goods with the help of suitable examples.
3. Mention any two precautions that should be taken while using Value Added method.
4. From the following data, calculate National Income (NNP at Factor Cost):

Particulars	Crore
Compensation of Employees	800
Rent and Interest	300
Profit	250
Mixed Income of Self-Employed	150
Net Factor Income from Abroad	50

5. Explain the steps of Income method of measurement of National Income.
6. What is Money? Explain any three functions of money.
7. Explain the meaning of Money Supply. What are the main components of money supply?
8. What is a Commercial Bank?
9. Explain the process of Credit Creation by Commercial Banks with the help of a suitable example.
10. What is a Central Bank? Explain any three functions of the Central Bank.

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ENGLISH

1. The Last Lesson & Lost Spring both texts highlight the denial of opportunities (education and childhood). How do Alphonse Daudet and Anees Jung show the consequences of neglecting these basic rights?
2. William Douglas describes his struggle against fear. How does his experience prove that courage is not the absence of fear but the ability to overcome it?
3. Selma Lagerlöf suggests that kindness can transform even the most hardened soul. How does the story illustrate redemption through compassion?
4. Kamala Das captures the fleeting nature of life through the image of her aging mother. How does the poet use imagery and contrast to convey both personal fear and universal truth about mortality?
5. Both John Keats in *A Thing of Beauty* and Pablo Neruda in *Keeping Quiet* emphasize the need for harmony in human life. Compare how Keats uses the idea of beauty as a source of solace, while Neruda advocates silence and introspection as a path to peace.
6. Both Jack Finney and Kalki use irony to highlight human flaws—Finney through Charley's escapist fantasy in *The Third Level* and Kalki through the Maharaja's obsession with fate in *The Tiger King*. Discuss how irony shapes the central message in these two stories.
7. Tishani Doshi's *Journey to the End of the World* blends personal reflection with environmental concerns. How does the Antarctic setting serve as both a literal journey and a metaphor for the urgent need to protect our planet?
8. You are Aditi/Adiya Kumar Coordinator of Bhartiya Vidya Bhawan, New Delhi. Draft a formal invitation inviting the Chief Guest Ms. Arundhati Roy, renowned Indian author to inaugurate your school's annual cultural fest 'SYMPHONY'
9. You are Naman/Namya Thakur. You came across an advertisement for the post of a fashion designer in MM Syles Pvt Ltd, 18A, Gurunanak Road, Bandra West, Mumbai, Maharashtra 400050. Write a job application for the post highlighting your qualifications and experience.
10. You are Shivam/Shivika Arora. As incharge of Health and Wellbeing Club of St. Anthony's School, New Delhi. Compose an article on the importance of mental health awareness among teenagers.

OR

You are Rohan/Rohini Verma Cultural Head of Apex Public School. Prepare a report on the successful conduct of your school's annual sports day.

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BUSINESS STUDIES

Q1. 'Global Foods Ltd.', a multinational company in the food processing industry, has a good customer base. Recently it has expanded into new international markets. But due to increased awareness for health care, there is a shift in consumer demand for healthier food options. For this reason, the company needs to adapt to frequent technological advancements in production processes so that healthy food product options can be made available in the market. Additionally, the company is concerned about fluctuations at global level in commodity prices, exchange rates and political conditions. 'Global Foods Ltd.' is finding it increasingly difficult to predict future outcomes due to the constantly changing nature of the market. In order to effectively cope up with these significant changes, managers have to understand and examine the environment to develop suitable courses of action. By continuously monitoring the environment and adopting suitable business practices, the company will not only improve its present performance but also continue with it for a long period in achieving its objectives. Identify and explain two features and two points of importance of business environment discussed in the above para.

Q.2 'Chaman Pharmaceuticals Ltd.' is a company providing medicines all over the country. After establishing itself and making a name in the field of medicines, it decided to enter into the field of medical devices, baby care products and nutritional supplements. Each product category had a different head accountable for profits, revenues and costs. In case of poor performance of their product, the heads were held responsible. But as the heads of different product categories were different, conflict could arise among different heads with reference to allocation of funds. Also providing a separate set of similar functional heads for each product category increased expenditure.

(i) Identify and explain the type of organisation structure 'Chaman Pharmaceuticals Ltd.' had followed after entering into the field of medical devices, baby care products and nutritional supplements.

(ii) Also state any one advantage and any one disadvantage of the organizational structure discussed in the above para by quoting lines.

Q.3 What dimensions of the business environment are highlighted in the following cases?

- a) The increase in demand for new clothes during the festive season.
- b) The obsolescence of typewriters due to computers.
- c) The necessity of a stable and dynamic government for business growth.
- d) Compliance with the Bureau of Indian Standards Act, 1986, by companies producing hazardous goods.
- e) The entry of multinational corporations into the Indian market.
- f) The preference for 5 G phones over 4 G phones.

How do these examples illustrate the different dimensions of the business environment?

Q. 4 Dharamveer Kamboj, a former rickshaw puller, returned to his village after an accident. He observed women self-help groups in Rajasthan manually grating gooseberries, an excruciatingly

painful exercise. Existing processing machines were not cost-effective for these small-scale owners. This inspired him to think of making affordable, safe, and multipurpose fruit and vegetable processing machines. Despite his limited education, he persevered, overcame overheating problems in prototypes, and eventually developed a unique machine.

Which dimension of the business environment primarily prompted Dharamveer to identify the need for a new processing machine by observing the SHGs and their existing methods?

Identify one importance of understanding the business environment highlighted by Dharamveer's response to the situation.

Q.5 At 'Precision Tools Ltd.', Sarah, a production manager, is overloaded with routine tasks of overseeing daily schedules and approving minor requisitions. This leaves her with little time to focus on strategic planning for process improvement. Her subordinate, Tom, is a capable engineer. Sarah decides to assign Tom the responsibility of managing daily schedules and approving requisitions up to a certain value, granting him the necessary power to execute these tasks. Sarah, however, remains ultimately answerable to the Factory Head for the production unit's overall performance.

Identify and explain the concept being practiced by Sarah.

Identify the three essential elements involved in the concept identified in (i) above, as evident in this situation.

Q.6 Anusuya care Enterprise is a manufacturer of Hygiene products. It decided to increase profits by at least 20% in the next quarter. It has many options: 1. To increase the working hours of labour with additional payment. 2. To employ worker from the local community. 3. To sell its products outside the schools and colleges. It opted the (ii) and (iii) options to achieve the target.

1. Identify the function of management described in the above para.

2. Explain the steps of the process involved in the function of management Identified in (a) quoting the lines from the above para.

Q.7 Suhasini, a home science graduate from a reputed college, has recently done a cookery course. She wished to start her own venture with a goal to provide 'health food' at reasonable prices. She discussed her idea with her teacher (mentor) who encouraged her. After analysing various options for starting her business venture, they shortlisted the option to sell ready-made and 'ready to make' vegetable shakes and sattu milk shakes. Then, they weighed the pros and cons of both the shortlisted options. a. Name the function of management is discussed above and give any one of its characteristics. b. Also briefly discuss any three limitations of the functionality discussed in the case.

Q.8 "A Manager is of the view that he is not responsible for the quality of work that he has delegated to his subordinate." Do you agree with his view point? Justify your answer by giving proper arguments.

Q.9 Aman Chadha started 'Bulls Eye' a company for providing cybersecurity solutions to businesses. Its objective is to prevent, detect, and respond to cyberattacks and protect critical data. He was a hardworking software engineer and a cybersecurity expert. His reputation grew rapidly as he was not only a person of integrity but also did his work with utmost honesty and sincerity. The business started growing day by day.

He was delighted when he was offered a big project by the Ministry of Defence. While working on the project, he found that the volume of work made it impractical for him to handle all the work by himself. He decided to expand the team. The company maintained a close liaison with a local engineering college. During a campus placement, Ishan and Vrinda were appointed to work for the new project.

He found the new employees capable, enthusiastic and trustworthy. Aman Chadha was thus, able to focus on objectives and with the help of Ishan and Vrinda, the project was completed on time. Not only this Aman Chadha was also able to extend his area of operations. On the other hand, Ishan and Vrinda also got opportunities to develop and exercise initiative.

(i) Identify and briefly explain the concept used by Aman Chadha in the above case which helped him in focusing on objectives.

Q.10 'Refresh Zone' was a popular coffee house chain offering premium coffee and snacks in a cozy environment. However, over time, the company began to face challenges in maintaining its market position. Customers had started complaining about lack of variety failing to cater to evolving consumer preferences. Also, the price of coffee in 'Refresh Zone' was significantly higher than its competitors. Many consumers felt that the quality of coffee was not justifying its premium pricing. Identify and explain two components of marketing mix that the management of 'Refresh Zone' needs to work on.

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ACCOUNTANCY

Q1. On 1st April, 2024, the books of a partnership firm showed total assets of ₹7,20,000, including Cash ₹40,000 and Bank Balance ₹60,000. The Partners' Capital Accounts showed a balance of ₹5,10,000 and the remaining amount represented Reserves.

If the normal rate of return is 12% and the goodwill of the firm is valued at ₹1,44,000 on the basis of 4 years' purchase of Super Profit, calculate the Average Profit of the firm.

Q2. The average profit earned by a firm during the last five years is ₹36,000. The normal rate of return in similar businesses is 10%. The goodwill of the firm is valued at ₹54,000 on the basis of 3 years' purchase of Super Profit.

Calculate the Capital Employed by the firm.

Q3. On 1st April, 2025, a partnership firm had assets amounting to ₹2,40,000, excluding stock valued at ₹40,000. The Partners' Capital Accounts showed a balance of ₹1,50,000. Current liabilities amounted to ₹20,000, while the remaining balance represented General Reserve.

The normal rate of return is 10% and the goodwill of the firm is valued at ₹80,000 based on 4 years' purchase of Super Profit.

Calculate the Average Profit of the firm.

Q4. Kavita, Neha and Pooja were partners sharing profits and losses in the ratio of 4 : 3 : 2.

With effect from 1st April, 2026, they agreed to share profits equally.

On that date, the books showed a Workmen Compensation Fund of ₹1,20,000.

It was agreed that:

Goodwill of the firm be valued at ₹90,000.

Workmen Compensation Claim amounted to ₹50,000.

Profit on Revaluation of Assets and Reassessment of Liabilities amounted to ₹54,000.

Pass necessary Journal Entries in the books of the firm.

Q5. Rohan, Mohit and Arjun were partners sharing profits and losses in the ratio of 5 : 3 : 2.

From 1st April, 2026, they decided to share profits equally.

The following adjustments were agreed upon:

Loss on Revaluation of Assets and Liabilities: ₹12,000

Goodwill of the firm: ₹1,80,000

General Reserve: ₹36,000

Pass necessary Journal Entries in the books of the firm, showing all necessary workings.

Q6. R and S were partners sharing profits and losses in the ratio of 3 : 2. They admitted T as a new partner.

T brought ₹1,50,000 as her share of goodwill premium, which was entirely credited to R's Capital Account.

On the date of admission, the goodwill of the firm was valued at ₹4,50,000.

Pass the necessary Journal Entries in the books of the firm.

Q7. Ananya and Bhavya were partners sharing profits and losses in the ratio of 3 : 2. They admitted Charu into the partnership for 1/5th share in the profits of the firm, which she acquired equally from Ananya and Bhavya.

Charu brought ₹6,00,000 as her capital and ₹1,20,000 as premium for goodwill.

It was agreed that one-half of the goodwill premium would be withdrawn by the old partners.

Pass the necessary Journal Entries in the books of the firm.

Q8. Aryan and Dev were partners sharing profits in the ratio of 5 : 3. Ishita was admitted into the firm for 1/4th share of profits.

Ishita brought ₹80,000 as her capital.

After all adjustments relating to goodwill, revaluation of assets and liabilities, etc., the capitals of Aryan and Dev stood at ₹1,20,000 and ₹72,000, respectively.

It was agreed that the capitals of all partners should be in proportion to their new profit-sharing ratio. Calculate the amount of actual cash to be brought in or withdrawn by the old partners and pass the necessary Journal Entries.

Q9. Rahul and Karan were partners sharing profits and losses in the ratio of 3 : 2.

Their Balance Sheet as on 31st March, 2026 was as follows:

Balance Sheet of Rahul and Karan as at 31st March, 2026

Liabilities	₹	Assets	₹
Creditors	60,000	Plant & Machinery	90,000
General Reserve	40,000	Building	80,000
Outstanding Expenses	20,000	Investments	50,000
Capital A/cs:		Stock	70,000
Rahul	1,20,000	Debtors	65,000
Karan	80,000	Less: Provision for Doubtful Debts	(5,000)
		Cash at Bank	50,000
Total	3,20,000	Total	3,20,000

They admitted Nikhil into the partnership on 1st April, 2026 for 1/5th share in future profits on the following terms:

Nikhil will bring proportionate capital and ₹6,000 as his share of goodwill premium in cash.

Investments are to be revalued at ₹58,000.

Plant and Machinery is to be depreciated by 10%.

Prepare Revaluation Account & partners' Capital Accounts.

Q10. P and Q were partners in a firm sharing profits and losses in the ratio of 4 : 3.

They admitted R as a new partner for 1/6th share in the profits of the firm.

R brought ₹30,000 as capital and ₹6,000 as premium for goodwill.

Pass the necessary Journal Entries:

(i) When the goodwill premium is retained in the business.

(ii) When the entire goodwill premium is withdrawn by the old partners.

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MATHEMATICS

- Q1. Show that the function given by $f(x) = (\log x)/x$ has maximum at $x = e$.
- Q2. The two equal sides of an isosceles triangle with fixed base b are decreasing at the rate of 3 cm per second. How fast is the area decreasing when the two equal sides are equal to the base?
- Q3. Find the intervals in which the function $f(x) = (4 \sin x - 2x - x \cos x)/(2 + \cos x)$ is (i) increasing (ii) decreasing.
- Q4. Find the intervals in which the function $f(x) = x^3 + 1/x^3$, $x \neq 0$ is (i) increasing (ii) decreasing.
- Q5. Find the maximum area of an isosceles triangle inscribed in the ellipse $x^2/a^2 + y^2/b^2 = 1$, with its vertex at one end of the major axis.
- Q6. A tank with rectangular base and rectangular sides, open at the top, is to be constructed so that its depth is 2 m and volume is 8 m^3 . If building the tank costs Rs 70 per sq. metre for the base and Rs 45 per sq. metre for the sides, what is the cost of the least expensive tank?
- Q7. The sum of the perimeter of a circle and square is k . Prove that the sum of their areas is least when the side of the square is double the radius of the circle.
- Q8. A window is in the form of a rectangle surmounted by a semicircular opening. The total perimeter is 10 m. Find the dimensions for maximum area.
- Q9. A point on the hypotenuse of a triangle is at distances a and b from the sides. Show that the minimum length of the hypotenuse is $(a^{2/3} + b^{2/3})^{3/2}$.
- Q10. Find the points at which $f(x) = (x-2)^4(x+1)^3$ has (i) local maxima (ii) local minima (iii) point of inflexion.
- Q11. Find the absolute maximum and minimum values of $f(x) = \cos^2 x + \sin x$, $x \in [0, \pi]$.
- Q12. Show that the altitude of the right circular cone of maximum volume inscribed in a sphere of radius r is $4r/3$.
- Q13. Let f be defined on $[a, b]$ such that $f'(x) > 0$ for all $x \in (a, b)$. Prove that f is increasing on (a, b) .
- Q14. Show that the height of the cylinder of maximum volume inscribed in a sphere of radius R is $2R/\sqrt{3}$. Also find the maximum volume.
- Q15. Show that the height of the cylinder of greatest volume inscribed in a right circular cone of height h and semi-vertical angle α is $h/3$ and the greatest volume is $(4/27)\pi h^3 \tan^2 \alpha$.

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INFORMATIC PRACTICES

1. Write a Python program to create the given dataframe and sort the data in ascending order of age.

Name	Age	Designation
Seema	36	Manager
Nikshav	40	Clerk
Rajni	39	Accountant

2. Create a dataframe of [23,25],[34],[43,44,45,46] and do the following:
- Display the dataframe. Notice that the missing value is represented by NaN.
 - Replace the missing value with 0.
 - Replace the missing value with -1, -2, -3, -4 for columns 0, 1, 2, 3.
 - Replace the missing value by copying the value from the above cell.
3. Observe the given STORE table and answer the following questions.

ICode	Name	Qty	Price
10	Gel Pen	1150	25
11	Sharpener	1500	10
12	Ball Pen	1600	12
13	Eraser	1600	5
14	Pencil	800	20

- In the above table, can Qty be the primary key? Justify.
 - What is the degree and cardinality of the table.
4. Consider a series object 'study', created using the following statements:
`study = pd.Series([11,23,31,61,87,93], index=['a','b','c','d','e','f'])`
 Based on the series object, write statements to do the following:
- Retrieve the third element and print it.
 - Retrieve and print the first three elements.
 - Retrieve and print the last two elements.
 - Retrieve and print alternate elements, starting from index 'b'.
 - Retrieve and print all elements where value is even.
5. Write a Python program to plot a bar chart to depict the changing weekly onion prices for four weeks. Give appropriate axes labels.
`week=[1,2,3,4]`
`price=[40,50,100,70]`
6. Plot a line graph for: $y^2=4*x$
7. Write SQL commands for (a) to (e) on the basis of PRODUCTS relation given below:

PCODE	PNAME	COMPANY	PRICE	STOCK	MANUFACTURE	WARRANTY
P001	TV	BPL	10000	200	2018-01-12	3
P002	TV	SONY	12000	150	2017-03-23	4
P003	PC	LENOVO	39000	100	2018-04-09	2
P004	PC	COMPAQ	38000	120	2019-06-20	2
P005	HANDYCAM	SONY	18000	250	2017-03-23	3

- To show details of all the products with stock more than 110.

- b) To list the company which gives a warranty of more than 2 years.
 - c) To find the stock value of BPL company where stock value is the sum of the price and stock of the products.
 - d) To show products from PRODUCTS table.
 - e) To display the details of those products whose company name either ends with 'y' or 'o'.
8. Create a series with 5 elements, then find square of each even element and find cube of each odd element.
 9. Given the following set of data:
Weight measurements for 14 values of muffins (in grams)
78,72,69,81,63,67,65
79,74,71,83,71,79,80
 - a) Create a simple histogram from the above data.
 - b) Create a horizontal histogram from the above data.
 - c) Create a step type of histogram from the above data.
 - d) Create a cumulative histogram from the above data.
 10. Write SQL commands for (a) to (d) and write the output for (e) on the basis of the following FURNITURE table:

SNO	ITEM	TYPE	DATEOFSTOCK	PRICE	DISCOUNT
1	WhiteLotus	DoubleBed	2002-02-23	3000	25
2	PinkFeathers	BabyCot	2002-01-29	7000	20
3	Dolphin	BabyCot	2002-02-19	9500	20
4	Decent	OfficeTable	2002-02-01	25000	30
5	Comfortzone	DoubleBed	2002-02-12	25000	30
6	Donald	BabyCot	2002-02-24	6500	15

- a) To list details of the furniture whose price is more than 10000.
- b) To list the item name and price of furniture whose discount ranges from 10 to 20.
- c) To delete the record of all items where discount is 30.
- d) To display the price of 'BabyCot'.
- e) Select Distinct Type from FURNITURE;