

VIDYASAGAR SCHOOL, INDORE
SUMMER ASSIGNMENT-2025-26
Class- XI

English

Answer the given questions in about 120-150 words

1. *The Portrait of a Lady* – *Khushwant* *Singh*

Describe the bond shared between the narrator and his grandmother. How does the narrator depict the changes in their relationship over time? Support your answer with examples from the text.

2. *A Photograph* – *Shirley Toulson*

How does the poet use the photograph to explore the themes of time, memory, and loss? Explain with reference to the emotions conveyed in the poem.

3. *The Summer of the Beautiful White Horse* – William Saroyan*

What does the story reveal about the values and beliefs of the Armenian community, especially through the characters of Aram and Mourad? How do these values influence their actions?

Maths

Q.1 Find the mean deviation about (i) mean (ii) median of the following data: 2, 7, 9, 11, 15, 16

Q.2 Find the variance and standard deviations of the 3, 6, 11, 12, 18

Q.3 Find the mean and variance of the first n natural number.

Q.4 the mean and variance of eight observations are 9 and 9.25 respectively if 6 of the observations are 6, 7, 10, 12, 12 and 13 find the remaining two observations

Q.5 The mean and standard deviation of 20 observations are found to be 10 and 2 respectively on rechecking it was found that an observation 8 was incorrect calculate the correct mean and standard deviation in each of the following cases (i) if wrong item is omitted (ii) if it replaced by 12.

Q.6. Find the distance between the point (2, -1, 3) and (2, 4, -1).

Q.7 find the equation of the set of points which are equidistant from the point (1, 2, 3) and (3, 2, -1)

Q.8 Verify (-1, 2, 1), (1, -2, 5), (4, -7, 8) and (2, -3, 4) are vertices of parallelogram.

Q.9 Find the co-ordinate of the point on y axis which are at a distance of $5\sqrt{2}$ from the point P(3, -2, 5).

Q.10 Find the coordinates of the points which trisect the line segment joining the points P(4, 2, -6) and (10, -16, 6).

Q.11 If the origin is the centroid of triangle PQR with vertices P(2a, 2, 6), Q(-4, 3b, -10) and R(8, 14, 2c) then find the value of a, b and c.

Q.12. Sachin made the following runs in different matches:

Runs	5-15	15-25	25-35	35-45	45-55
Frequency	10	12	17	19	22

Calculate the variance by using step deviation method.

Q.13 Learn and write all formulas of Trigonometry.

Physics

Q1. If E , M , J and G respectively denote energy, mass, angular momentum and gravitational constant, Calculate the dimensions of $EJ^2 / M^5 G^2$

Q2. The frequency of vibration of stretched string depends on its length L its mass per unit length m and the tension T in the string obtain dimensionally an expression for frequency .

Q3. What is meant by significant figures .State the rules for counting the number of significant Figures in a measured quantity?

Q4. The pairs of physical quantities that have the same dimensions are:

- (a) Reynolds's number and coefficient of friction,
- (b) Curie and frequency of a light wave
- (c) Latent heat and gravitational potential
- (d) Planck's constant and torque.

Q5.Can a quantity has dimensions but still has no units?

Q 6.Justify $L + L = L$ and $L - L = L$.

Q7. Can there be a physical quantity that has no unit and no dimensions?

Q8. In the formula $X = 3YZ^2$, X and Z have dimensions of capacitance and magnetic induction Respectively, what are the dimensions of Y in MKS system?

Q9. What are the dimensions of $1 / \mu_0 \epsilon_0$, where symbols have their usual meaning

Q10.What is the dimensions of $(1 / 2) \epsilon_0 E^2$, Where E electric field and ϵ_0 permittivity of free space.
Q10)

Using dimensional analysis, derive the formula for the pressure P at a depth in a fluid. The pressure depends on the density d of the fluid, the gravitational acceleration g , and the depth h .

Q11)

The time period T of a mass-spring system depends on the mass m of the object and the spring constant k . The dimensional formula of the spring constant is $[k] = [MT^{-2}]$. Find the formula for time period T .

Q12) Verify whether the following equation is correct or not:

$$V = IR$$

Given that:

$$I = \text{current [A]}$$

$$R = [I/V]$$

$$V = \text{Charge / Energy}$$

$$\text{Charge} = [AT]$$

Q13) Given that the unit of work done is joule in the MKS system, how many joules is 1 ergs of work (in the CGS system) equivalent to?

Chemistry

Solve the following questions:

1. Calculate the amount of water produced by the combustion of 32 gram of methane.
2. Define molarity and molality.
3. Calculate the volume of 34 gram of ammonia(NH_3) at STP.
4. Calculate the percentage of copper in a sample of CuCl_2 .
5. Calculate the molarity of NaOH in the solution prepared by dissolving its 4 g in enough water to form 250 ml of the solution.
6. How many moles of methane are required to produce 44 gram of CO_2 after combustion?
7. State Gay Lussac's law of gaseous volume.
8. Calculate the molecular mass of the following:
 $\text{C}_6\text{H}_{12}\text{O}_6$, CH_3COOH , CO_2 , CaCO_3 and H_2SO_4
9. How much copper can be obtained from 100 gram of copper sulphate?
10. What is limiting reagent?

Biology

Q.1 Write comments (6 comments) on following spots and draw labelled diagram:

(i) Bacteria, (ii) mushroom, (iii) yeast, (iv) one lichen. (v) Amoeba,

(These activities should be written in practical record file)

Accountancy

Q-1 ACTIVITY – Maintain record of all your monetary transactions during the month of May. Also keep maximum possible evidences of the same transactions(like bills, receipts, pay in slips etc.)

Business Studies

Q.1 Find out the 10 activities which come under both Economic and Non-Economic Activity with their explanation.

Q.2 State 3 industrial sectors which have directly or indirectly impacted by Tariff war, and how.

Q.3 Prepare a **Detailed Flow Chart** of Chapter 1.

Economics

1. Find out arithmetic mean.

30, 36, 34, 40, 42, 46, 54, 62 (42)

2. Find out mean weight, using Direct Method as well as Assumed Mean Method.

Weights (kg) 20, 28, 34, 39, 42, 50, 53, 54, 59, 64, 72, 74, 74, 78, 79

(54.67)

3. Following are Marks secured by 42 students in Economics. Find average marks.

Marks	15	20	22	23	27	35	18
No. of Students	8	4	7	3	8	7	5

(23.2)

4. Average age of the people of a country is shown in the following table:

Age(year)	10-20	20-30	30-40	40-50	50-60
People ('000)	30	32	15	12	9

(28.7)

5. Calculate arithmetic mean from the following data by Assumed Mean Method:

Class Interval	20-25	25-30	30-35	35-40	40-45	45-50	50-55
Frequency	10	12	8	20	11	4	5

(35.5)

6. Sachin made the following runs in different matches:

Runs	5-15	15-25	25-35	35-45	45-55
Frequency	10	12	17	19	22

Calculate the average mean of the runs y Step-Deviation Method.

(38.875)

7. Mean marks obtained by a student in his five subjects are 15. In English he secures 8 marks, in Economics 12, In Mathematics 18, and in Commerce 9. Find out the marks he secured in Statistics.

(28)

8. Mean value of the weekly income of 40 families is ₹265. But in the calculation, income of one family was read as ₹150 instead of ₹115. Find the “Corrected “Mean.

(264.125)

9. Average income of 50 families is ₹3,000. Of this average income of 12 families is ₹1,800. Find out the average income of the remaining families.

(3,378.95)

10. In the following frequency distribution, if the arithmetic mean is 45.6, find out missing frequency

Wages	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Workers	5	6	7	X	4	3	9

(16)

11. A student obtained 60 marks in English, 75 in Hindi, 63 in Mathematics, 59 in Economics and 55 in Statistics. Calculate weighted mean of the marks if weights are respectively 2,1,5,5, and 3.

(60.625)

12. Calculate weighted mean of the following data by using Direct and Assumed Mean Methods:

Items	81	76	74	58	70	73
Weight	2	3	6	7	3	7

(70.04)

Applied Maths

Q.1 Find the mean deviation about (i) mean (ii) median of the following data:

2,7,9,11,15,16

Q.2 The marks of 9 students in a test were 13,17,20,5,3,3,18,15 and 20 . Calculate the quartile deviation.

Q.3 The following table gives information regarding weekly income of labourers working at a dam site :

Income (in ₹)	600-700	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300
No.of labourers	40	68	86	120	90	40	26

Calculate the quartile deviation.

Q.4 Find the mean deviation about the median for the following data.

x_i	5	7	9	10	12	15
f_i	8	6	2	2	2	6

Q.5 Find the mean deviation about the mean for the following data :

Income per day	0-100	100-200	200-300	300-400	400-500	500-600	600-700	700-800
Number of persons	4	8	9	10	7	5	4	3

Q.6 Find the variance and standard deviation for the following data:

3,6,11,12,18

Q.7 Find the mean and standard deviation for the following data:

x_i	6	10	14	18	24	25	30
f_i	2	4	7	12	8	4	3

Q.8 Calculate the mean ,variance and standard deviation for the following frequency distribution by using step deviation method :

classes	30-40	40-50	50-60	60-70	70-80	80-90	90-100
frequency	3	7	12	15	8	3	2

Q.9 Find the percentile rank of score 5 in the given data :

3,2,5,11,3,9,7

Q.10 Calculate the covariance for the following data :

X	1	2	3	4	6	7	8	9
Y	16	9	4	1	1	4	9	16

Q.11 The mean and variance of 5 observations are 4.4 and 8.24 respectively. If the three observations are 1,2 and 6 . find the other two observations.

Q.12 For the following frequency distribution , compute the percentile rank corresponding to the score 66.

Class interval	53-57	58-62	63-67	68-72	73-77	78-82	83-87	88-92	93-97
frequency	5	10	7	6	3	8	5	7	4

Q.13 The following data relate to the number of vehicles owned and road deaths for the population of 9 countries :

Vehicles per 100 population	30	31	32	30	46	30	19	35	40
Road deaths per 100,000 population	30	14	30	23	32	26	20	21	23

Calculate Spearman's rank correlation coefficient

Q.14 Spearman's coefficient of rank correlation of the marks obtained by 10 students in History and Mathematics was found to be 0.2 . Later , it was discovered that the difference in ranks in the two subjects obtained by one of the students was wrongly taken as 9 instead of 7 . find the correct value of the correlation coefficient.

Q.15 If in a sample of n observation , we have $\sum d^2=30$ and Spearman's rank correlation $r=\frac{9}{11}$, find the value of n .

EP

(i) Describe entrepreneurial functions of an entrepreneur?

(ii) What is the need of entrepreneurship in an economy?

(iii) Mehak wants to start a textile unit near Gurgaon. Discuss the commercial functions which she will require to plan and perform for the same.

(iv) Explain any four managerial functions of an entrepreneur?

(v) Explain any four promotional functions of an entrepreneur?

(vi) Describe the process of entrepreneurship?

(vii) "Innovation is the hallmark of Entrepreneurship". Why is "innovation" referred as the basic function of an entrepreneur?

History

Project Work:

TOPIC: Students can select any of the one Theme given in their NCERT BOOK among Theme 1 to 7.

Few Suggestive Topics:

1. Facets of the Industrialization in sixteenth- eighteenth centuries.
2. Crusades: causes; rationale; events; outcomes; Holy Alliance
3. Ancient History in depth: Mesopotamia
4. Greek Philosophy and City States
5. Contributions of Roman Civilization
6. The spirit of Renaissance: Manifestation in art; Literature; Sculpture; Influence on Trading Community; Social Fabric; Philosophy; Political Values; Rational Thinking; Existentialism
7. Aspects of Development -South American States /Central American States
8. Different schools of thoughts- Realism: Humanism: Romanticism
9. Piecing together the past of Genghis Khan
10. Myriad Realms of Slavery in ancient, medieval, and modern world
11. History of Aborigines – America /Australia
12. Facets of Modernization – China /Japan/Korea

Steps involved in the conduct of the project: Students may work upon the following lines as suggested:

1. Choose a Title/Topic
2. Need of the Study, Objective of the Study
3. Hypothesis
4. Content -Timeline, Maps, Mind maps, Pictures, etc. (Organization of Material/Data Present Material/Data)
5. Analysing the Material/Data for Conclusion
6. Draw the Relevant Conclusion
7. Bibliography
8. Art integrated Activities, experiments, models, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. The Project work can culminate in the form of Power Point Presentation/ Exhibition/ Skit/albums/files/song and d a n c e or c u l t u r e show /story telling/debate/panel discussion, paper presentation.

[Prepare project on A4 Size sheet, total number of pages 40, must be hand written]

Assignment:

Write Short Notes on given Topics:

The Significance of Urbanism

Movement of Goods into Cities

The Development of Writing

The System of Writing

Literacy

The Uses of Writing

Urbanisation in Southern Mesopotamia: Temples and Kings

Life in the City

A Trading Town in a Pastoral Zone

The Legacy of Writing

Timeline

SOCIOLOGY

Students will work on the selected project topics.

Collect the required primary data.

Prepare the objectives of the project topic.

Prepare your research methodology.

Assignment

- 1) Write notes on industrialisation.
- 2) The growth of Sociology in India.
- 3) Difference between class and caste.
- 4) Write in detail about different types of groups.

POL.SCIENCE

PROJECT WORK- Students will select any one topic from NCERT book for project work, under the following steps -

TOPIC- (Selection of the topic from NCERT book or from the given topics)

Objectives of the project

Theoretical information

Collection of primary sources

Collection of data and it's interpretation

Preparation for PPT and other supporting materials like songs, storytelling, Role play, Skit, Model and Field survey.

Collection of newspaper cutting, pictures related to topic

ASSIGNMENT -

Students will write Preamble of the Indian Constitution and will write it's features in note book
Explain the thoughts and ideas of any one political thinker and discuss his/her contribution for political science

PSYCHOLOGY

1. Ask 5 students about what they think Psychology is? Draw a comparison between what they say and what the text book tells you. What conclusion can you draw?
2. Go to a library or serve the internet and obtain names of some books which have reference to applications of psychology. Prepare report giving a brief synopsis.
3. Describe some of the areas of everyday life where understanding of psychology can be put to practice.

IP

Please prepare a brief report on the following topics in reference to the class XII Project- it is compulsory for all IP students.

- Inventory management -
- Students Information System
- Public Healthcare system
- Library Management System

CS

Chapter 1 : Computer system overview:

- Draw, write & learn all the components of Computer system.
- Draw, write & learn all the components and functions of Mobile systems organization

Chapter 2: Data Representation:

- Conversation from decimal to binary, octal & hexadecima number system.

PE

Q1.What is concept of Physical education? Write any two definition of physical education.

Q2.Explain about any Eight objectives of physical education.

Q3.Explain any ten Importance of physical education.

Q4.Discuss development of physical education in India (pre-independence)

Q5.Give details about (i) "NETAJI SUBHAS NATIONAL INSTITUTE OF SPORTS"(NSNIS) . And (ii) SPORTS AUTHORITY OF INDIA (SAI) . Write their objectives.

Q6.Explain any ten career options in physical education with their qualification and working field.

Q7.Discuss about "Khelo-india programme" and objectives of khelo-india programme?

Q8.Write short note on Fit-India programme with their objectives.

Note: Dear students please write above theory work in your PE Notebook.

Q9.PROJECT WORK:-Write History, rules & regulations, terminology, Equipments, Personalities, skills of your opted game (any one Badminton, Taekwondo and Table-Tennis). Draw a labeled diagram of your opted game play field area.

Note: Dear students please write above project work in your PE Practical file.

NCC

Project is to be selected one each from group A and group B

Assignment/Project- 07 Marks

Distribution of Marks

- i) Introduction-01 Mark
- ii) training Aid-01 marks
- iii) Aim- 01 Mark
- iv) Explanation-03 Marks
- v) Precautions -01 Marks

Suggested Topics for Assignments/Projects

Group A

- 1.National Integration
- 2.Contribution of Youth in Nation Building
3. NGOs -Role and Contribution
4. Fire Service And Fire Fighting
5. Dowry
6. Time Management
7. Personality
8. Communication skills
9. Drug Abuse and Trafficking
10. Adventure Training -Parasailing

Group B

- 1.Squad Drill
- 2.Guard Mounting
3. Trigger Operation
4. Theory of Grouping and Snap
5. Fire Fighting
6. Natural Disasters
7. Hygiene and Sanitation
8. Basics of First Aid
9. Rain Water Harvesting
10. Pollution

PAINTING

Complete a Folk Art (Madhubani painting) on the drawing sheet of size 22×15 inches