



St. Mary's School, Dwarka
Holiday Homework
Std. XI
Week 3
Worksheet 3

Subject: English

General Instructions: Attempt questions based on specific instructions for each section.

SECTION A- Reading

Q1. Read the following passage carefully.

1. The seasonal problem of water taps running dry is plaguing most of our major cities. With the bigger rivers flowing in trickles, ponds and wells have been reduced to clay -pits, village women in remote areas have to fetch every drop of water for drinking, cooking, washing and so on, across large distances. This has only worsened a perennial problem, that of widespread pollution of water, rendering it unfit for human consumption. The monsoons and the floods will not solve this problem.

2. The Delhi Government is seriously worried about the threat to civic health posed by the polluted waters of the Yamuna. Two main tanks are to be set up to treat sewage. At present, only 60 percent of the 200 million gallons of the city's sewage receives any kind of treatment before it is dumped into the river which supplies water not only to this city but to innumerable towns and villages downstream. The Ganga, the Yamuna and the Kaveri. In fact, all our important rivers serving many urban conglomerations, are fast becoming a major source of diseases.

3. A comprehensive bill introduced in the Parliament recently, envisages the setting up of central and state boards for the prevention and control of water pollution. But it will obviously take some time before legislation is passed and effectively implemented. Meanwhile, the problem continues to swell. According to a survey of eight countries conducted a couple of years ago, 90 percent of all child deaths were due to water-borne diseases. It is the same unchanged story today.

4. In a country like India, a burgeoning population continues to use the open countryside as a lavatory. This means that with every dust storm and rain, human excreta laden with germs and parasites find their way to ponds, shallow wells and even streams and rivers. Only 18 percent of the rural folk have access to potable water.

5. A new threat that has already assumed alarming proportions is industrial waste which is generally dumped untreated into the nearest river. For Instance, for every kilogram of process hide, 30-40 liters of foul-smelling, wastewater has to be disposed off. There are at least 900 licensed tanneries

in the organized sector. Putrefied paper and jute waste, metallic salts and corrosive acids all find their way to the rivers of India.

6. It is important not only to make new laws to ensure the purity of water, but also to realize the urgency of implementing them ruthlessly if we are to avoid a national health disaster cutting across the barrier between towns and the countryside.

Based on your understanding, answer the questions given below: (1x5=5)

i. What are the perennial problems plaguing our cities?

ii State the reasons mentioned in Paragraph 2 that are threatening the residents of Delhi.

1. Zero groundwater level
2. Lack of potable water
3. Lack of the treatment of sewage
4. Yamuna is over-polluted
5. Open untreated water

- A. 1,3 and 5
- B. 3 and 4
- C. 1,2 and 6
- D. 3,5 and 4

iii Supply 1 point to justify the following.

The most child deaths in India are due to lack of potable water.

iv. Evaluate the most appropriate purpose of the bill mentioned in the passage:

- A. It creates financial scope for water treatment facilities
- B. It creates Central and State boards to control water pollution.
- C. It looks into the effective implementation of legislation.
- D. It looks into the proper treatment of water bodies.

v. Select the cause NOT MENTIONED in the passage which poses new threat to the nearby rivers.

- A. Regular disposal of wastewater from the industries.
- B. Presence of licensed tanneries in the organized sector.
- C. Disposal of putrefied paper, jute waste and corrosive acids.
- D. Foul smelling untreated wastewater from homes and offices.

SECTION B--Literature

Answer the following questions in 20 to 30 words.

(2x2=4)

Q2. Why did the narrator become curious about the possessions of her mother?

Q3. What was the happiest moment of the day for the grandmother?

Answer the following questions in 60 to 80 words.

(3x2=6)

Q4. “Religion was the dominant feature of her life.” Comment on this statement with regard to Khushwant Singh’s grandmother as discussed in the lesson ‘**The Portrait of a Lady**’.

Q5. What reason did Mrs. Dorling give to the narrator’s mother to take her belongings? How does the mother come to know about Mrs. Dorling and her address?

SECTION C—Grammar

(1x2=2)

Q6. Select the option that identifies the error and supplies the correction for the following line, from a news report:

Climate changes is one of the most contested debates.

OPTION	ERROR	CORRECTION
A	Climate	Climates
B	changes	change
C	one	a
D	most	mostly

Q7. Select the correct option to complete the dialogue between Deepak and Sunil.

Deepak: How are you?

Sunil: I’m good. What about you?

Deepak: I’m well physically but not mentally.

Deepak asked Sunil Sunil replied that he was good and continued to ask about Deepak’s well-being. Deepak said that he was physically well but not mentally fit.

- A. how he was
- B. how was he?
- C. how did he do?
- D. how does he do?

SECTION D--Writing

Q8. You are the Managing Director of Varun Enterprises, a leading garments export house. You need accountants for your Meerut office. Write an advertisement for the ‘Situation Vacant’ column of a local daily. **(2)**

Q9. Due to the globalization of the food industry and fast food culture, traditional healthy diets are increasingly being replaced by unhealthy junk food containing artificial additives and chemicals. Write an article in 150-200 words for a national daily on the need for inculcating healthy dietary habits. **(4)**

Q10. Book Trailer- Read a book by your favourite author and make a short 1-minute video to launch it. **(2)**

Subject: Mathematics

Q.1) If $(x + iy)^{1/3} = a + ib$, then find the value of $\frac{x}{a} + \frac{y}{b}$. (2)

Q.2) Two finite sets have m and n elements. The number of elements in the power set of first set is 56 more than the total number of elements in the power set of second set. Find the values of m and n.

(2)

Q.3) Evaluate $\sqrt{2 - 2\sqrt{3}i}$ (2)

Q.4) List the elements of the following sets: (2)

(i) $\{x : x \in \mathbb{Z} \text{ and } x \leq -5\} \cap \{x : x \in \mathbb{Z} \text{ and } x \geq -5\}$

(ii) $\{x : x + 2 > 3\} \cap \{x : x < 5\}$ where $x \in \mathbb{N}$.

Q.5) Find the radian measures corresponding to the following degree measures: (2)

(i) $104^\circ 36'$

(ii) 270°

Q.6) If $a^2 + b^2 = 1$, then prove that $\frac{1+b+ia}{1+b-ia} = b + ia$. (3)

Q.7) Prove that $\frac{\tan(A+B)}{\cot(A-B)} = \frac{\sin^2 A - \sin^2 B}{\cos^2 A - \cos^2 B}$ (3)

Q.8) Convert $1 + \cos x + i \sin x$ into polar form. (3)

Q.9) The combined membership of the Mathematics Association and Science Club is 122. What is the membership of Science club if 50 are known to be members of Mathematics association and 28 are members of both the organisations? (3)

Q.10) Write the following sets in the roster form: (1+2)

(i) $A = \{x : x \text{ is a positive factor of a prime number } p\}$

(ii) $Y = \{x : x \text{ is a positive factor of the number } 2^{p-1}(2^p - 1) \text{ where } 2^{p-1} \text{ is a prime number}\}$

Subject: Computer Science

- Q1 What does a cross platform language mean? 1
- Q2 Following set of commands are executed in shell, what will be the output? 1
- ```
>>>str="hello python"
>>>str *2
```
- Q3 Which of the following identifiers are invalid? Give reason for its invalidity. 1x3=3
- a) 90\_a = 1      b) a-6 = 1      c) break = 7
- Q4 Convert the following hexadecimal numbers into decimal numbers: 2
- a) ABCDEF b) BCA
- Q5 Write the purpose of id( ) and type ( ) functions in Python. 2
- Q6 Add the following binary numbers: 2
- a) 11001111 +1010110 b) 110010101+10100100
- Q7 Convert the following decimal numbers into octal numbers: 2
- a) 56 b) 782
- Q8 Convert the following octal numbers to binary numbers: 2
- a) 743 b) 612
- Q9 What is the difference between keywords and identifiers? 2
- Q10 What are the advantages and disadvantages of working in the interactive mode in Python? 2

## **Subject: Economics**

- Q1. Explain the factors affecting elasticity of demand. (2)
- Q2. Write three exceptions of law of demand. (2)
- Q3. What do you mean by consumer's equilibrium? Explain. (2)
- Q4. A consumer has Rs 40 and both goods X and Y are priced at Rs 20 and are available in integer units, (a) Give the bundles that this consumer can afford (b) give the bundles that cost exactly Rs 40. (2)
- Q5. Give reasons for the following statements: (2)
- 1) If the income of a consumer changes and prices of the two goods remain unchanged, a new budget line will be formed which will be parallel to the original line.
  - 2) If the income of the consumer remains unchanged and if the price of goods X rises, intercept of the budget line of Y-axis will remain the same, but on the X-axis it will shift to the left.
- Q6. Giving reasons, comment on the following statements: (3)
- a) A consumer's equilibrium is always formed at a point on the given budget line.
  - b) A consumer's equilibrium will shift to a higher indifference curve with an increase in consumer's income.
- Q7. Giving reasons, state why the following two conditions must be satisfied when a consumer is in equilibrium. (3)
- a) A budget line must be tangent to an indifference curve.
  - b) Marginal rate of substitution must be diminishing.
- Q8. Explain market rate of exchange. (3)
- Q9. Derive the law of demand from the two commodity equilibrium condition "Marginal Utility = price ratio through utility approach". (3)
- Q10. Describe the assumption which is made to determine the consumer's equilibrium position. (3)

### **Project Work**

a) Make a project on OPEC. Follow the instructions given below

Guidelines for Project Work in Economics (Class XI ) The objectives of the project work are to enable learners to: • probe deeper into theoretical concepts learnt in classes XI • analyse and evaluate real world economic scenarios using theoretical constructs and arguments • demonstrate the learning of economic theory • follow up aspects of economics in which learners have interest • develop the communication skills to argue logically

The expectations of the project work are that: • learners will complete Two projects • project should be of 3,500-4,000 words (excluding diagrams & graphs), preferably hand-written • it will be an independent, self-directed piece of study.

Scope of the project: Learners may work upon the following lines as a suggested flow chart:  
Choose a title/topic Collection of the research material/data Organization of material/data  
Present material/data Analysing the material/data for conclusion Draw the relevant conclusion  
Presentation of the Project Work 11

Expected Checklist: • Introduction of topic/title • Identifying the causes, consequences and/or remedies • Various stakeholders and effect on each of them • Advantages and disadvantages of situations or issues identified • Short-term and long-term implications of economic strategies suggested in the course of research • Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file • Presentation and writing that is succinct and coherent in project file • Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

### **Subject: History**

- |                                                                                                                   |   |
|-------------------------------------------------------------------------------------------------------------------|---|
| 1. What does the term "Mesopotamia" mean, and where is it located?                                                | 1 |
| 2. What were the major civilizations that emerged in Mesopotamia?                                                 | 1 |
| 3. What were the contributions of the Sumerians to Mesopotamian civilization?                                     | 2 |
| 4. Who was Hammurabi, and what is he known for?                                                                   | 2 |
| 5. What was the Assyrian Empire known for?                                                                        | 2 |
| 6. What were the key achievements of the Babylonian civilization?                                                 | 3 |
| 7. What impact did Mesopotamian civilizations have on subsequent cultures and civilizations?                      | 3 |
| 8. How did the geography of Mesopotamia shape its history and civilization?                                       | 3 |
| 9. "Rivers play crucial role in the emergence of civilization". Justify this statement in context to Mesopotamia. | 3 |
| 10. Who was Ashurbanipal, and what were his notable achievements?                                                 | 5 |

### **Subject: Geography**

- |                                                                                          |   |
|------------------------------------------------------------------------------------------|---|
| 1. What is the Moho, and what does it represent?                                         | 2 |
| 2. What is the composition of the interior of the Earth?                                 | 2 |
| 3. Explain the different types of earthquakes.                                           | 3 |
| 4. Explain the sources to know about the interior of the Earth.                          | 3 |
| 5. How do seismic waves help in determining the structure of the Earth's interior?       | 3 |
| 6. What are the differences between continental and oceanic crust?                       | 3 |
| 7. How do volcanoes and earthquakes relate to the structure of the Earth's interior?     | 3 |
| 8. What is the significance of the Earth's magnetic field in understanding its interior? | 3 |
| 9. How does the Earth's interior affect its surface features?                            | 3 |

### **Subject: Psychology**

|                                                                                               |   |
|-----------------------------------------------------------------------------------------------|---|
| Q1. Define the term 'objectivity'.                                                            | 1 |
| Q2. _____ pioneered both the development of statistic and the study of individual difference. | 1 |
| Q3. What is validity?                                                                         | 2 |
| Q4. What are norms?                                                                           | 2 |
| Q5. What is data?                                                                             | 2 |
| Q6. What do you mean by standardization test?                                                 | 2 |
| Q7. Describe the quantitative method of analyzing data.                                       | 3 |
| Q8. What is variable? Discuss different types of variables.                                   | 4 |
| Q9. What is the different type of observation?                                                | 4 |
| Q10. What are the various techniques to control relevant or extraneous variable?              | 4 |

### **Subject: Political Science**

|      |                                                                                                                                |   |
|------|--------------------------------------------------------------------------------------------------------------------------------|---|
| Q.1  | What are the main functions of the Constitution?                                                                               | 1 |
| Q.2  | Why right to freedom of Religion is important right?                                                                           | 1 |
| Q.3  | What are the forms of Violence against Children? Mention a few rights that the Convention on the Rights of the Child provides. | 2 |
| Q.4  | What are the legal and social constraints on Freedom?                                                                          | 2 |
| Q.5  | What is known as Freedom for the Individual and Freedom for the Nation?                                                        | 2 |
| Q.6  | What is meant by:<br>a) Natural Inequalities<br>b) Social Inequalities                                                         | 2 |
| Q.7  | What is J.S.Mill's criteria of harmful constraints on Freedom? Give a few examples of unreasonable restrictions on Freedom.    | 2 |
| Q.8  | What is the importance of equality?                                                                                            | 4 |
| Q.9  | Describe and compare the theories of Free Market and State Intervention.                                                       | 4 |
| Q.10 | Discuss the scope of Political Theory.                                                                                         | 5 |

**Subject: Physical Education**

- Q. 1. .... rackets are used in which of the following games. 1  
(a) Tennis (b) Table Tennis  
(c) Badminton (d) All of these
- Q. 2. Which technology is being used in cricket? 1  
(a) Hawkeye Technology (b) Hifi Technology  
(c) Hockey Technology (d) None of these
- Q. 3. What is the full form of RFID chips? 1  
(a) Radio Frequency Issuance (b) Radio Frequency Identification  
(c) Radio Frequency Indication (d) None of these
- Q. 4. Which course of Physical Education is not recognized by NCTE? 1  
(a) D.P.Ed. (b) B.P.Ed  
(c) M.P.Ed. (d) B.P.E.S
- Q. 5. Explain the various performance-related careers. 5
- Q. 6. Elaborate various careers available in Physical Education. 5
- Q. 7. What are the various levels where Physical Education teachers can teach? 5
- Q. 8. What are the aims of Khelo-India Programme? 5
- Q. 9. How did the Modern Olympic games originate? 5
- Q. 10. What are the objectives of Special Olympics? 5