



St. Mary's School, Dwarka
Holiday Homework
Std. XI
Week 4
Worksheet 4

Subject: English

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

SECTION A- Reading

Q1. Read the following passage carefully.

1. E-learning is the process of acquiring knowledge through electronic technologies and resources. A rise in the number of internet users has increased the market demand for sophisticated online learning courses. According to the Office for National Statistics, nearly all adults in the age group of 10 to 44 years in the UK were recent internet users (99%) in 2019. The availability of enhanced network connectivity coupled with the convenience offered by on-demand courses, will drive the market size.



2. According to the World Economic Forum, around 1.2 billion children are out of classrooms with schools shut down globally due to the Covid-19 pandemic. Electronic Learning Management Systems such as Google Classrooms are helping classes to connect distantly, communicate efficiently and stay organized. Large-scale national efforts to leverage technology to the market players in support of distance education, remote, and online learning during the Covid-19 pandemic are emerging and evolving rapidly.

The virtual classroom technology in the e-learning market is expected to grow at a CAGR (Compound Annual Growth Rate) of 11% during the forecast timespan. A virtual classroom is a digital environment that enables live interaction between a tutor and a learner. Video conferencing and online whiteboards for real-time collaboration are the most common tools used in a digital teaching space. Collaborative virtual classes allow the active participation of students, creating an environment similar to a physical classroom. The technique is gaining traction with an increasing number of corporate and academic

sectors deploying it for enhanced training sessions. Multilateral organizations and world bodies, such as WHO and G20, are also deploying e-learning modes to teach healthcare professionals.

The content providers segment accounted for around 60% e-learning market share in 2019. E-learning providers share content on a varied range of topics by collaborating with domain experts that help them to develop the learning content. They focus on offering specific and customized content as per the end-user requirements.

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

- i) Infer one reason for the increase in the market demand for online learning resources.
- ii) Pick the CORRECT option that shows the new technologies that will drive the market growth.
 - (1) Video conferencing
 - (2) Cloud computing
 - (3) Online whiteboard
 - (4) AI coupled with internet
- (A) 2 and 3
 - (B) 1 and 4
 - (C) 2 and 4
 - (D) 1 and 4
- iii) Complete the following analogy correctly with a word/phrase from paragraph 3.
God: disciple: : learner
- iv) Select the option that lists the INCORRECT statement from the ones given below:
 - (1) E-learning is the process of acquiring knowledge through electronic technologies and resources.
 - (2) All adults in the age group of 16 to 14 years in the UK were recent internet users (99%) in 2019.
 - (3) A rise in the number of internet users has increased the market share for physical classrooms.
 - (4) Content providers segment accounted for around 60% e-learning share in 2019.
- (A) 3
 - (B) 4 and 2
 - (C) 2 and 1
 - (D) 1
- v) The study of virtual classroom technology in the e-learning market showed 11% (CAGR)growth during the forecast timespan.
 - A. expected
 - B. consistent
 - C. inconsistent
 - D. questionable

SECTION B--Literature

Q2. Read the extract given below and answer the questions that follow:-

(2)

All three stood still to smile through their hair

At the uncle with the camera. A sweet face,

My mother's, that was before I was born.

And the sea, which appears to have changed less,
Washed their terribly transient feet.

- (i) What/Who does 'three' refer to?
- (ii) Bring out the comparison between the sea and the 'feet'.

Answer the following question in 20 to 30 words.

(2)

Q3. How did the birds mourn the grandmother's death?

Answer the following questions in 60 to 80 words.

(3x2=6)

Q4 Why did the narrator wait for so long to visit Mrs. Dorling? Why did she become curious about the possessions of her mother?

Q5. Compare and contrast the characters of Mourad and Aram.

SECTION C--Grammar

Q6. Fill in the blank by choosing the correct option to complete it.

(1)

Mathematics my favourite subject.

- A. is
- B. are
- C. was
- D. had

Q7. Select the correct option to fill in the blank for the given line. Ram keep his word.

- A. might
- B. should
- C. will
- D. ought to

SECTION D--Writing

Q8. National Book Trust of India is organizing a Summer Camp 'Fiesta 2023' for students aged 5 to 16 years from 17th June to 22nd June 2023 in Jawahar Lal Nehru Stadium. Design an attractive poster with catchy slogans highlighting the special attractions.

(2)

Q9. Advertisements play a pivotal role in shaping the ideas of the youth. Write an article in about 150 words about the impact advertisements have on young children in schools and colleges.

(4)

Q10. Watch the movies listed below:-

- **Schindler's List**
- **Life of Pi**
- **Everything Everywhere All at Once**
- **Gravity**
- **Interstellar**

Write the synopsis of any one of them in about 120 to 150 words.

(2)

Subject: Mathematics

- Q.1) Find the number of non-zero integral solutions of the equation $|1 - i|^x = 2^x$ (2)
- Q.2) Prove that $\sin x + \sin 3x + \sin 5x + \sin 7x = 4 \cos x \cos 2x \sin 4x$. (2)
- Q.3) Find $\sin \frac{x}{2}$, $\cos \frac{x}{2}$ and $\tan \frac{x}{2}$ if $\sin x = \frac{1}{4}$ and x lies in quadrant II. (2)
- Q.4) Draw appropriate venn diagram for each of the following: (2)
- (i) $A^c \cup B^c$ (ii) $(A \cup B)^c$
- Q.5) Find sets A, B and C such that $A \cap B$, $B \cap C$ and $A \cap C$ are non-empty and $A \cap B \cap C = \varnothing$. (2)
- Q.6) Prove that: $\cos 2x \cos \frac{x}{2} - \cos 3x \cos \frac{9x}{2} = \sin 5x \sin \frac{5x}{2}$. (3)
- Q.7) Show that $\tan 3x \tan 2x \tan x = \tan 3x - \tan 2x - \tan x$ (3)
- Q.8) Find the value of : (i) $\tan 15^\circ$ (ii) $\tan \frac{13\pi}{12}$. (3)
- Q.9) If $\cos(\alpha + \beta) = 4/5$ and $\sin(\alpha - \beta) = 5/13$ where α lies between 0 and $\pi/4$, find the value of $\tan 2\alpha$. (3)
- [Hint : Write $\tan 2\alpha$ as $\tan(\alpha + \beta + \alpha - \beta)$
- Q.10) Find the general solution of the trigonometric equation:
 $\tan x + \tan 2x + \sqrt{3} \tan x \tan 2x = \sqrt{3}$. (3)

Subject: Economics

Q1. What does the problem for whom to produce refer to?	2
Q2. What is the opportunity cost? Explain with the help of a numerical example.	2
Q3. Why is a Production Possibility Curve (PPC) concave? Explain.	2
Q4. What is the production possibility frontier?	2
Q5. Draw a production possibility curve and mark the following situations.	2
a. Underutilization of resources	
b. Full employment of resources	
c. Growth of resources	
Q6. Explain the central problem of the choice of products to be produced.	3
Q7. What is the difference between the planned economy and market economy?	3
Q8. Does massive unemployment shift the PPC to the left?	3
Q9. Define Normative Economics with a suitable example.	3
Q10. Write a short note on marginal rate of transformation.	3

Subject: History

1. What is feudalism?	1
2. What were the key roles in feudal society?	1
3. How did feudalism shape the distribution of power?	2
4. What were the main obligations in the feudal system?	2
5. How did feudalism impact the economy?	2
6. Why did knights become a distinct group and when did they decline?	3
7. Did feudalism exist outside of Europe?	3
8. What was the function of medieval monasteries?	3
9. Compare the conditions of life for a French serf and a Roman slave.	3
10. Why do you think the people of new towns were considered of fourth order? Explain.	5

PROJECT WORK

20M

OBJECTIVES

- ☐ To develop skill to gather data from a variety of sources, investigate diverse viewpoints and arrive at logical deductions.
- ☐ To develop skill to comprehend, analyse, interpret, evaluate historical evidence, and understand the limitation of historical evidence.
- ☐ To develop 21st century managerial skills of co-ordination, self-direction, and time management.
- ☐ To learn to work on diverse cultures, races, religions, and lifestyles.
- ☐ To learn through constructivism-a theory based on observation and scientific study.
- ☐ To inculcate a spirit of inquiry and research.
- ☐ To communicate data in the most appropriate form using a variety of techniques.
- ☐ To provide greater opportunity for interaction and exploration.
- ☐ To understand contemporary issues in context to our past.
- ☐ To develop a global perspective and an international outlook.
- ☐ To grow into caring, sensitive individuals capable of making informed, intelligent, and independent choices.
- ☐ To develop lasting interest in history discipline.

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

Subject: Geography

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|---|---|
| Q1. Briefly discuss the formation of three types of rocks. Draw a neat diagram of rock cycle. | 5 |
| Q2. What is Diastrophism? Discuss different types of diastrophism. | 5 |
| Q3. Explain the direct and indirect sources to know about the interior of the earth | 5 |
| Q4. Explain the movement of the Indian plate. | 5 |
| Q5. Explain the concept of ocean sea floor spreading. | 5 |

Subject: Psychology

Q1. Case studies are fruitful in investigating unusual assumption or unusual individuals.	1
Q2. _____ and _____ are two types of tests based on language.	1
Q3. Distinguish between the speed test and power test.	2
Q4. Give the steps of scientific methods.	2
Q5. What are the two distinctive methods of an experimental research.	2
Q6. Give any four goals of psychological enquiry.	2
Q7. Give difference between quasi experiment and field experiment.	3
Q8. Explain the main feature of interview method.	4
Q9. Describe limitations of psychological enquiry.	4
Q10 What is correlation method?	4

Subject: Political Science

Q.1	Do you think studying Political Theory is like studying mathematics? Give reasons for your answer.	1
Q.2	What do you understand by Civil Liberty?	1
Q.3	Define Social Equality.	1
Q.4	Is Political Science an Art? Comment.	2
Q.5	What do you understand by equal opportunities for all?	2
Q.6	Explain the Marxist View of Equality.	2
Q.7	What is meant by social constraints? Are constraints of any kind necessary for enjoying freedom?	2
Q.8	Discuss the kinds of Liberty.	4
Q.9	Describe the main safeguards for the maintenance of Liberty.	4
Q.10	Describe John Rawls's Theory of justice.	6

Subject: Physical Education

- Q. 1. What kind of professions are available in the field of Physical Education, sports and coaching? 1
(a) Player (b) Coaches
(c) Officials (d) All of the above
- Q. 2. The Ancient Olympic Games started in..... 1
(a) 776 BC (b) 394 AD
(c) 1896 (d) 1986
- Q. 3. The idea of reviving the Olympic Games came from..... 1
(a) Eunice Kennedy Shriver (b) Baron Pierre de Coubertin
(c) Dion Nash (d) Ludwig Guttmann
- Q. 4. What is the main objective of Olympic games? 1
(a) To create a peaceful and healthy universe
(b) No discrimination on the basis of caste and colour
(c) Drawing the attention of all countries towards Physical Education and Sports Competition
(d) All of the above
- Q. 5. List the range of disabilities of athletes for Paralympic Games. 5
- Q. 6. Differentiate between Paralympic and Special Olympic Games. 5
- Q. 7. Write down the eligibility criteria of a competitor in Ancient Olympics. 5
- Q. 8. Can a Physical Education graduate justify the job of sports administrator? Explain with suitable 5
- Q. 9. Write a short note on Fit India Program. 5
- Q. 10. Write any these objectives of Olympics Games. 5

Subject: Computer Science

- Q1. The variable definition of X is creating problem X = 0281.Why. 2
- Q2. Two objects (say a and b) when compared using ==, return True. But Python gives False when compared using is operator. Why (i.e, a == b is True but why is a is b False?) 2
- Q3. Write the expression in Python for the following: 2+2
- a) $a^2 + b^2 = c^2$ b) $x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$
- Q4 Explain the following Python software libraries: 2x3=6
- a) NumPy b) SciPy c) Panda Library
- Q5 What are core data types in Python? Explain. 3
- Q6 What are the ways to write comments in Python? 2
- Q7 Predict the output: 3
- a,b,c=2,3,4
- a,b,c=a*a,b*b,c*c
- a,b,c=a//2,b//3,c//4
- a,b,c=a%2,b%2,c%2
- print(a,b,c)
- print(a,b,c)
- print(a,b,c)
- Q8 Given three Boolean variables a, b, c as : a= False , b = True , c = False. Evaluate the following Boolean expressions: 3
- (a) b and c (b) b or c (c) not a and b (d) (a and b)or not c (e) not b and not (a or c)
- (f) not ((not b or not a)and c)or a
- Q9 Write Python programs to do the following: 2x3=6
- a) to do arithmetical operations
- b) to find area of a circle
- c) to display your name a number of times.
- Q10 Draw a flowchart to check if a number is a positive or negative number. 2