

St. Mary's School, Dwarka Holiday Homework Class: XI <u>Worksheet 3</u>

Subject: English Core

General Instructions:

- 1) The work should be done neatly and systematically.
- 2) The given questions are to be done in your respective subject notebooks.
- 3) Attempt all questions.

No. of questions: 10

M.M. 25

SECTION A- READING (5 marls)

Q1. Read the passage given below.

- 1. The train stood at the edge of the platform like a sleeping beast, its metallic frame gleaming under the early morning sun. Mira clutched her bag tightly, her fingers stiff with cold—or perhaps anxiety. Around her, the station bustled with movement, but within her, there was only stillness, a suspended moment between past and future.
- 2. She had made this journey countless times before—this very train, this very route. But today was different. Today, she was not returning home from college or visiting distant relatives. Today, she was leaving something behind: a life marked by silence, by the kind of grief that never makes a sound. Her decision to leave had not come easily. It had built up slowly, layer by layer, like sediment at the bottom of a forgotten river.
- 3. As the whistle blew and the train stirred to life, Mira stepped aboard. She found her seat by the window and pressed her forehead against the glass. Outside, the world blurred into motion—trees, houses, fields dissolving into each other as the train gathered speed. She closed her eyes, trying to steady her breath. With each passing kilometer, she felt the weight of the last few years loosen its grip. There was no dramatic farewell, no confrontation, only an unspoken hope that distance might be the balm time alone could not provide.
- 4. Memories surfaced without invitation: her mother's vacant eyes after her father's death, the way the house had grown colder not from the absence of warmth but from the absence of words. Mira had tried

to fill the silence—through chores, through school, through being as unobtrusive as possible. But silence has a way of hollowing out even the strongest hearts.

5. Now, as the train hurtled toward the unknown, Mira did not feel free, not yet. But she felt the faintest hint of possibility—a whisper that healing was not a place, but a journey. And for the first time in years, she allowed herself the smallest flicker of belief that she might find something more than escape: perhaps even belonging.

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

(i) What is the symbolic function of the train in this passage?

- a) return to safety
- b) metaphor for emotional release and transition
- c) means of revenge
- d) symbol of routine and repetition

(ii) The phrase "grief that never makes a sound" implies:

- a) Mira is unaware of her emotions.
- b) Her pain has gone unnoticed and unspoken.
- c) She mourns loudly and dramatically.
- d) She talks openly about her trauma.

(iii) What can be inferred about Mira's family life?

- a) She was surrounded by supportive relatives.
- b) Her household was emotionally distant after her father's death.
- c) Her mother constantly pushed her to succeed.
- d) She lived alone for many years.

(iv) What does the passage suggest about the nature of healing?

- a) occurs instantly with distance
- b) is achieved through forgetting
- c) is a slow, uncertain journey
- d) depends on other people's validation

(v) The word "hollowing" in the phrase "silence has a way of hollowing out even the strongest hearts" most nearly means:

a) strengthening

- b) comforting
- c) emptying emotionally
- d) filling with hope

SECTION B-WRITING & GRAMMAR

Q2.You are a graduate with excellent communication skills and experience in content writing. Draft a 'Situation Wanted' advertisement in about 50 words for a reputed newspaper. Invent the necessary details. (2)

Q3.Fill in the blanks with suitable words:-

After I ______(1) the article, I realized how little I ______(2) about the political situation in that region. It had been a mistake not to familiarize myself with the historical context _______(3) the issue. Had I ______(4) more research, I ______(5) understood the complexities involved. An informed citizen must be aware of such details, especially _______(6) the current geopolitical climate. The debate around it ______(7) gained considerable momentum, and I ______(8) expected the impact it would have on global relations.

Q4. Rearrange the following parts to form a coherent sentence:

P. and has reshaped the contours of democracy and dissent across continents,

Q. the role of digital media in shaping public opinion has grown exponentially,

R. particularly in regions where traditional media is censored or controlled,

S. over the past decade

A) Q - P - R - S B) S - Q - R - P C) Q - R - S - P D) S - R - Q - P

SECTION C-LITERATURE

Q5. Read the extract and answer the question that follows:

(1)

"We were poor. We had no money. Our whole tribe was poverty-stricken. Every branch of the Garoghlanian tribe was living in the most amazing and comical poverty in the world. But we were proud first, honest next, and after that we believed in right and wrong."

What does the irony in this passage reveal about the narrator's tribe?

A) They value reputation over morality.

- B) They use poverty to justify dishonesty.
- C) Despite their poverty, they maintain a strong sense of ethics and identity.

D) They pretend to be poor to gain sympathy.

(¹/₄x8=2)

(1)

Q Read the extract and answer the question that follows:	(1)
"It wasn't easy, but it was not impossible, and we did it. And the horse, who was as gentle as walked quietly behind me, as though he knew what was happening."	s a lamb,
Q. What does the horse's behavior symbolically reflect in this context?	
A) shows the boys' skill in training animals.	
B) represents the harmony between innocence and rebellion.	
C) reflects the cruelty of stealing.	
D) suggests the horse was frightened and gave in.	
Q6 . How does the story reflect the theme of childhood innocence and moral conflict?	(2)
Q7. Why is the title "The Summer of the Beautiful White Horse" significant?	(2)
Q8. How did John Byro react when he saw his horse with Aram and Mourad? What does his	reaction tell
us about his character and his trust in the Garoghlanian family?	(2)

Q9.Imagine you are Aram years after the events of the story. You come across a white horse and it reminds you of the summer with Mourad. Write a short diary entry reflecting on what that horse taught you about family, honesty, and childhood dreams. (4)

Activity:

Q10. You are the news correspondent of a famous newspaper and are in charge of the special section 'Adopt a Tribe'. You have to publish a newsletter, making the people aware of the tribes of India. Choose any one tribe depicting its location, language, population, customs, festivals and arts and crafts, etc. Make the page visually appealing. (3)

Subject: Hindi Core

No. of Questions – 10

M.M-25

निर्देश — 1 दिए गए सभी प्रश्नों के उत्तर हिन्दी की उत्तर पुस्तिका में लिखिए।

2 कार्य स्वच्छ शुद्ध एवं स्पष्ट लेख में कीजिए।

प्रश्न 1 निम्नलिखित गद्यांश पर आधारित प्रश्नों के उत्तर निर्देश के अनुसार दीजिए प्रकृति मनुष्य की सबसे बड़ी गुरू है।वह हमें न केवल जीवन जीने की कला सिखाती है, बल्कि धैर्य, संतुलन और सहनशीलता का पाठ भी पढ़ाती है।सूर्य नियमित रूप से उदय और अस्त होता है, नदियाँ बहती हैं, पेड़-पौधे चुपचाप फल और छाया प्रदान करते हैं।न वे शिकायत करते हैं, न अपेक्षा करते हैं।यही प्रकृति का मौन संदेश है कि कर्म करते जाओ, फल की चिंता मत करो।मनुष्य जब प्रकृति के साथ सामंजस्य बनाकर चलता है, तो वह न केवल बाहय रूप से समृद्ध होता है, बल्कि उसकी आत्मा भी शांत और संतुलित रहती है।लेकिन जब वह अपने स्वार्थ में प्रकृति का दोहन करने लगता है, तब संकट उत्पन्न होते हैं-जलवायु परिवर्तन, बाढ़, सूखा, प्रदूषण आदि।आज के वैज्ञानिक युग में मनुष्य चाँद और मंगल तक पहुँच गया है, लेकिन यदि वह पृथ्वी पर अपने पर्यावरण की रक्षा नहीं कर पाया, तो सारी उन्नति व्यर्थ हो जाएगी।प्रकृति की रक्षा करना केवल सरकारों का काम नहीं,यह हर नागरिक का नैतिक कर्तव्य है।छोटे-छोटे प्रयास जैसे पेड़ लगाना, पानी की बचत करना, प्लास्टिक का प्रयोग कम करना, पर्यावरण के प्रति जागरूकता फैलाना – ये सभी कदम भविष्य को सुरक्षित बना सकते है।प्रकृति हमारी माँ के समान है, और माँ का सम्मान करना हमारा धर्म है। यदि हम प्रकृति की सेवा करें, तो वह भी हमें भरपूर आशीर्वाद देगी।

प्रश्न 1 निम्नलिखित गद्यांश पर आधारित प्रश्नों के उत्तर निर्देश के अनुसार दीजिएः (1×5=5)

- (i) प्रकृति हमें क्या सिखाती है?
 - (क) केवल फल और छाया देना
 - (ख) जीवन जीने की कला, धैर्य और संतुलन
 - (ग) दूसरों पर निर्भर रहना
 - (घ) शिकायत करना और अपेक्षा रखना

(ii) जब मनुष्य प्रकृति का दोहन करता है, तो क्या होता है?

- (क) उसे पुरस्कार मिलता है
- (ख) मौसम सुहावना हो जाता है
- (ग) संकट उत्पन्न होते हैं जैसे बाढ़, सूखा
- (घ) प्रकृति और सुंदर हो जाती है

(iii) निम्नलिखित कथन(A) तथा कारण(R) को ध्यानपूर्वक पढिए तथा दिए गए विकर्ल्पो में से कोई एक सही विकल्प चुनकर लिखिए |

कथन (A) प्रकृति मनुष्य की सबसे बड़ी गुरू है। कारण (R) वह हमें न केवल जीवन जीने की कला सिखाती है, बल्कि धैर्य, संतुलन और सहनशीलता का पाठ भी पढाती है। 1 कथन(A) तथा कारण(R) दोनों गलत हैं। 2 कथन(A) गलत है परन्तु कारण(R) सही है। 3 कथन(A) सही है परन्तु कारण(R) गलत व्याख्या करता है। 4 कथन(A) सही है और कारण(R) कथन की सही व्याख्या करता है। (iv) प्रकृति की रक्षा कैसे संभव है ? (v) प्रकृति का मौन संदेश क्या है ? प्रश्न 2 स्वास्थ्य मंत्रालय, दिल्ली के निदेशक को कंप्युटर टाइपिस्ट के लिए आवेदन-पत्र लिखिए। $(5 \times 1 = 5)$ पश्न 3 शोर से क्या तात्पर्य है? $(2 \times 1 = 2)$ पश्न 4 संचार के पकार बताइए | $(2 \times 1 = 2)$ प्रश्न 5 लोग नमक विभाग में नौकरी क्यों करना चाहते थे? $(1\frac{1}{2} \times 1 = 1\frac{1}{2})$ प्रश्न 6 स्वयं को खानदानी तथा श्रेष्ठ नानबाई साबित करने के लिए मियाँ नसीरुद्दीन ने कौन-सा किस्सा सुनाया? $(1\frac{1}{2} \times 1 = 1\frac{1}{2})$ प्रश्न 7 परमात्मा को यदि पाना है तो कबीर जी के अनुसार किन दोषों से दूर रहना चाहिए? $(1\frac{1}{2} \times 1 = 1\frac{1}{2})$ प्रश्चन 8 मीरा कृष्ण की उपासना किस रूप में करती हैं?वह रूप कैसा है? $(1\frac{1}{2} \times 1 = 1\frac{1}{2})$ प्रश्न 9 पहले और आज के संगीत में मुख्य अंतर क्या है? $(1 \times 1 = 1)$ प्रश्न 10 परियोजना कार्य : कबीरदास जी के कोई दो दोहे लिखकर एक मोबाइल कवर बनाइए। $(4 \times 1 = 4)$

Subject: Mathematics

General Instructions:

- 1) Do all holidays homework in a separate notebook.
- 2) Revise all syllabus done till date.

No. of questions: 10

i)

Q.1) Prove that
$$\frac{\cos x}{1-\sin x} = \tan\left(\frac{\pi}{4} + \frac{x}{2}\right).$$
 (2)

Q.2) If
$$f: R \longrightarrow R$$
 is defined by $f(x) = \frac{a}{a^x + \sqrt{a}}$. $a > 0$, then prove that $f(x) + f(1 - x) = 1$. (2)

Q.3) Prove that
$$\tan x \tan (x + 3) + \tan (x + 3) \tan (x - 3) + \tan (x - 3) \tan x = -3.$$
 (2)
$$\frac{x+5}{4x-40}$$

Q.4) Let T = {x :
$$x-7-5 = 13-x$$
 }. Is T an empty set? Justify your answer. (2)
 $\sqrt{3}$

Q.5) Prove that
$$\sin 10^{\circ} \sin 50^{\circ} \sin 60^{\circ} \sin 70^{\circ} = \frac{\sqrt{3}}{16}$$
. (2)
Q.6) Express the following numbers in the form $a \pm ib$. Also find the conjugate and modulus of each number:

Q.6) Express the following numbers in the form a + ib. Also find the conjugate and modulus of each number: (3)

ii)

$$\frac{3+\sqrt{-1}}{2-\sqrt{-1}} \frac{2+i}{(1+i)(1-2i)}$$

Q.7) Prove that:
$$\sin 12^{\circ} \sin 48^{\circ} \sin 54^{\circ} = 1/8$$
. (3)

Q.8) Find the real values of x and y if :

i)
$$(3x - 2iy) (2 + i)^2 = 10 (1 + i)$$

ii)
$$\frac{(1+i)x-2i}{3+i} + \frac{(2-3i)y+i}{3-i} = i$$

Q.9) Find the domain and the range of the following functions:

i)
$$f(x) = \frac{3}{2-x^2}$$

Q.10) Reduce $(\frac{1}{1-4i} - \frac{2}{1+i})(\frac{3-4i}{5+i})$ to the standard form. (3)

Activity: To create a portfolio showcasing formulas for the sum and differences of two acute angles in trigonometric functions.

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(3)

(3)

Subject: Physics

No. of questions: 10	M.M. 25

Q1 You drive a car at a speed of 70 km/h on a straight road for 8.4 km, and then the car runs out of petrol. You walk for 30 minutes to reach a petrol pump at a distance of 2 km. The average velocity from the beginning of your drive till you reach the petrol pump is 1
(a) 16.8 km/h (b) 35 km/h (c) 64 km/h (d) 18.6 km/h

Q2. A graph is drawn showing the force along the Y-axis and time along the X-axis. The area under the graph represents

(i) momentum (ii) couple (iii) moment of the force (iv) impulse of the force

1

2

Q3. A train started from rest from a station and accelerated at $2 ms^{-2}$ for 10 s. Then, it ran at constant speed for 30 s and thereafter it decelerated at $4 ms^{-2}$ until it stopped at the next station. Find the distance between two stations.

Q4. A ball is dropped from a high-rise platform at t = 0, starting from rest. After 6 s, another ball is thrown downwards from the same platform with a speed v. The two balls meet at t = 18 s. What is the value of v? (Take $g = 10 \text{ ms}^{-2}$)

Q5. The water drop falls at regular intervals from a tap 5 m above the ground. The third drop is leaving the tap as the first drop touches the ground. How far above the ground is the second drop at that instant?

Q6. From the v - t graph shown below, find the ratio of distance to displacement in 25 s of motion



(ii) Draw position-time graphs of two objects with unequal velocities in same direction and show the time of their meeting. (2+1=3)

Q7.. The velocity of a particle is given by the equation, $v = 4t^2 + 5t+6$ cm/s. Find (i) the change in velocity of the particle during the time interval between $t_1 = 2s$ and $t_2 = 4s$ (ii) the average acceleration during the same interval, and (iii) the instantaneous acceleration at $t_2 = 4s$. 3

Q8. (i)The velocity of a particle is given by the equation $v = 4+2(C_1+C_2t)$ where C₁ and C₂ are constants. Find the initial velocity and acceleration of the particle. (ii) At t = 0, a particle is at rest at the origin. Its acceleration is $2m/s^2$ for the first 3s and $-2m/s^2$ for the next 3s Plot the acceleration versus time and velocity versus time graph. (1.5+1.5=3)

Q9. (i) Draw a position-time graph for (a) Negative velocity and (b) Positive velocity.(ii) A train 500m long crosses a bridge of 1000m in 10s. Find the average speed of the train when it just crosses the bridge.

(1.5+1.5=3)

Q10.State the parallelogram law of vector addition. Prove it mathematically and draw a labelled diagram as well. Derive an expression for the angle of the resultant. (1+3+1=5)

Subject: Chemistry

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No. of	Equestions: 10	M.M. 25
1.	Differentiate between precision and accuracy. Explain with an example.	(2)
2.	State Avogadro's Law. What is the molar volume of a gas at STP?	(2)
3.	What are the different types of pure substances? Give one example of each.	(2)
4.	Round off the following numbers to three significant figures:	(2)
	o 12.678	
	· 0.003456	
5.	Convert the following:	(2)
	\circ 100 cm ³ to liters	
	\circ -10 °C to Kelvin	
6.	Calculate the mass of 0.2 moles of water (H ₂ O). (Molar mass of $H_2O = 18$ g/mol)	(3)
7.	A compound contains 4.07% hydrogen, 24.27% carbon, and 71.65% chlorine. Its molar	mass is
	98.96 g/mol. What is its empirical and molecular formula? (Atomic masses: H =1u, C =	12u, Cl
	=35.5u)	(3)
8.	In the reaction $N_2(g)+3H_2(g) \rightarrow 2NH_3(g)$, if 14 g of nitrogen reacts with 6 g of hydrogen,	identify
	the limiting reactant. (Molar mass of $N_2 = 28$ g/mol, Molar mass of $H_2 = 2$ g/mol)	(3)
9.	Define molality. Write its formula.	(3)
10	. Balance the following equation by the ion-electron method. $Cr_2O_7^{2-} + SO_2 a Cr^{3+} + SO_4^{-2}$	²⁻ (acidic
	medium)	(3)

Subject: Computer Science

Answer the following questions:

Given a string s = "12345". Can you write an expression that gives sum of all the digits shown inside 0.1 the string s i.e., the program should be able to produce the result as 15(1+2+3+4+5). [Hint. Use indexes and convert to integer] 2 2 Q.2 Predict the output if e is given input as 'True': a = True b = 0 < 5print (a == b) print (a is b) c = str(a)d = str(b)print (c == d) print (c is d) e = input ("Enter :") print (c == e) print (c is e) **Q.3(a)** Find the errors(s) 2x3=6name = "HariT" print (name) name[2] = 'R'print (name) (**b**) Find the errors(s) a = bool(0)b = bool(1)print (a == false) print (b == true) (c) Find the errors(s) pi = 3.14 print (type (pi)) print (type ("3.14")) print (type (float ("3.14"))) print (type (float("three point fourteen"))) Q4 a) What will be the output produced? 2x4 = 8x, y, z = True, False, Falsea = x or (y and z)b = (x or y) and zprint(a, b)

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b) What will be the output produced?
       x, y = 5', 2
       z = x + y
       print(z)
       c) What will be the output produced?
       s = 'Investigate'
       s1 = s + '2'
       s2 = s * 2
       print(s1)
       print(s2)
       d)
       What will be the output produced?
       w, x, y, z = True, 4, -6, 2
       result = -(x + z) < y or x ** z < 10
       print(result)
Q5
       Program is giving a weird result of "0.50.50.50.50.50.50....". Correct it so that it produces
       the correct result which is the probability value (input as 0.5) times 150.
                                                                                                   2
       probability = input("Type a number between 0 and 1: ")
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print("Out of 150 tries, the odds are that only", (probability * 150), "will succeed.")

Q6 Prepare your practical file with the following programs in Python. 2x10=20

- 1. Write a program that accepts radius of a circle and prints its area.
- 2. Write a program that accepts base and height and calculate the area of a triangle.
- 3. Write a program that inputs a student's marks in three subjects (out of 100) and prints the percentage marks.
- 4. Write a program to compute the area of square and triangle.
- 5. Write a program to calculate simple interest.
- 6. Write a program that accepts weight in Kg and height in meters and calculate the BMI.
- 7. Python Program to make a simple calculator
- 8. Python Program to Convert Kilometers to Miles
- 9. Python Program to Convert Celsius To Fahrenheit
- 10. Solve the quadratic equation $ax^{**}2 + bx + c = 0$

Class 11 Worksheet 3	
Subject: Biology	
No. of questions: 10	M.M. 25
 Q1. A binomial nomenclature consists of and a) Generic name and Phyla b) Class and Phyla c) Generic name and specific epithet d) Phyla and Kingdom 	(1)
Q2. Which among the following is an incorrect statement?	(1)
a) Chlamydomanas is an example of unicellular algae	
b) Chlamydomanas have flagella to promote their movement	
c) Ulothrea is a unicellular autotrophic algal	
d) Spirogyra attains its name because of spiral like arrangement of chloroplasts	
Two statements are given: one labelled Assertion (A) and the other labelled Reason (R).	_
Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given be	elow.
a) Both A and R are true and R is the correct explanation of A.	
b) Both A and R are true but R is not the correct explanation of A.	
c) A is true but R is false.	
d) A is false but R is true $(1 + 1)$	(1)
Q3. Assertion: Red Algae can flourish at great depths in the ocean.	(1)
Reason: Red Algae have the pigments r-Phycoerythrin and r- phycocyanin.	(2)
Q4. why are plendophyles called Vascular cryplogams?	(2)
Q5. Pointied water bodies contain plants like Nostoc and Oscillitoria. Give reasons	(2)
Q0. How far does Setagmenta one of the few fiving members of fycopodiales (pteridophytes)	(2)
O7 Comptoneyte is a dominant phase in the life cycle of a bryoneyte	(3)
Q ⁷ . Gametophyte is a dominant phase in the fife cycle of a bryophyte.	(3)
Q8. Elements usually ched as an example of symbols in plans where an algar and a lungar	
fungal partners are separated from each other?	
a Both will survive and grow normally and independent from each other	
h Both will die	
c Algal component will survive while the fungal component will die	
d Fungal component will survive while algal partner will die	
Based on your answer how do you justify this association as symbiosis .	(3)
Dasse on your another new do you justify and association as symptotists.	(\mathbf{J})

Q9. Observe the diagrams and answer the questions that follows:



- a) Identify the plant given above and name the division, it belongs to.
- b) Label the parts A, B, C and D marked on it.
- c) Give a brief description of C.

(1+2+1=4)

(1+4=5)

Q10. a) Name the first group of terrestrial plants to possess vascular tissues.

b) Name the classes, the group is divided into and give an example of each.

Activity: Take one edible fungi and mention their parts

Subject: Informatics Practices

Answer the following questions:

1 1115 11 0	t the following questions.	
Q.1	Given a string $s = "12345"$. Can you write an expression that gives sum of all the digits s	hown inside
	the string s i.e., the program should be able to produce the result as $15(1+2+3+4+5)$.	
	[Hint. Use indexes and convert to integer]	2
Q.2	Predict the output if e is given input as 'True':	2
	a = True	
	b = 0 < 5	
	print (a == b)	
	print (a is b)	
	c = str(a)	
	d = str(b)	
	print (c == d)	
	print (c is d)	
	e = input ("Enter :")	
	print (c == e)	
	print (c is e)	
Q.3(a)	Find the errors(s)	2x3=6
	name = "HariT"	
	print (name)	
	name[2] = 'R'	
	print (name)	
(b)	Find the errors(s)	
	a = bool(0)	
	b = bool(1)	
	print (a == false)	
	print (b == true)	
(c)	Find the errors(s)	
	pi = 3.14	
	print (type (pi))	
	print (type ("3.14"))	
	print (type (float ("3.14")))	
	print (type (float("three point fourteen")))	
Q4	a) What will be the output produced?	2x4=8
	x, y, $z = True$, False, False	
	a = x or (y and z)	
	b = (x or y) and z	
	print(a, b)	

```
b) What will be the output produced?
       x, y = '5', 2
       z = x + y
       print(z)
       c) What will be the output produced?
       s = 'Investigate'
       s1 = s + '2'
       s2 = s * 2
       print(s1)
       print(s2)
       d)
       What will be the output produced?
       w, x, y, z = True, 4, -6, 2
       result = -(x + z) < y or x ** z < 10
       print(result)
       Program is giving a weird result of "0.50.50.50.50.50.50.50....". Correct it so that it produces
Q5
                                                                                                    2
       the correct result which is the probability value (input as 0.5) times 150.
       probability = input("Type a number between 0 and 1: ")
```

print("Out of 150 tries, the odds are that only", (probability * 150), "will succeed.")

Prepare your practical file with the following programs in Python2x10=20

- 1. Write a program that accepts the radius of a circle and prints its area.
- 2. Write a program that accepts base and height and calculate the area of a triangle.
- 3. Write a program that inputs a student's marks in three subjects (out of 100) and prints the percentage marks.
- 4. Write a program to compute the area of square and triangle.
- 5. Write a program to calculate simple interest.
- 6. Write a program that accepts weight in Kg and height in meters and calculate the BMI.
- 7. Python Program to make a simple calculator
- 8. Python Program to Convert Kilometers to Miles
- 9. Python Program to Convert Celsius To Fahrenheit
- 10. Solve the quadratic equation $ax^{**2} + bx + c = 0$

Subject: Business Studies

General Instructions:

- \succ The given assignments are to be done in the fair notebook only.
- \succ The work should be done neatly and in a systematic manner.

No. of questions: 10

M.M. 25

1

1

- A factory that converts raw cotton into yarn belongs to which type of industry? Q.1 a) Primary industry. b) Secondary industry. c) Tertiary industry. d) Extractive industry.
- Q.2 AgriTech Solutions is a company that develops and manufactures drone-based systems for precision agriculture. These drones help farmers monitor their fields, optimize irrigation, and apply fertilizers more efficiently. The company invests heavily in research and development and relies on a network of dealers to reach farmers across the country. They also provide training and after-sales service for their products. The network of dealers used by AgriTech Solutions to distribute its products and the provision of training and after-sales service are examples of: 1
 - a) Manufacturing processes within the secondary sector.
 - b) Activities directly involved in the extraction of raw materials.
 - c) Auxiliaries to trade that facilitate the exchange of goods.
 - d) Primary objectives focused on profit maximization.
- Q.3 Assertion (A): Business risk is solely caused by natural calamities like floods and earthquakes **Reason** (**R**): Factors such as changes in consumer tastes and employee strikes can also lead to potential losses in business.

Choose the correct option:

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)
- (c) Assertion (A) is true, but Reason (R) is false
- (d) Assertion (A) is false, but Reason (R) is true
- ABC is one of the largest transportation industry in India provides services for different projects 0.4 including residential, commercial office, retail, industrial, logistics, hospitality and other areas too.It's a familiar name among the business houses in the country because of the large dependency factor. Which type of Industry discussed in the above case? 1
 - a) Genetic Industry b) Tertiary Industry c) Processing Industry
 - d) Assembly Industry

Q.5 Assertion (A): Analyzing the competitive landscape is an important step before starting a business.Reason (R): Understanding the strengths and weaknesses of existing players helps in formulating effective business strategies.

Choose the correct option:

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
(b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)

1

4

(c) Assertion (A) is true, but Reason (R) is false

(d) Assertion (A) is false, but Reason (R) is true

- Q.6 "Business risks take place due to carelessness of people only." Do you agree? Give reasons. 3
- Q.7 Rohan wants to start a small online business selling handcrafted items. What are the two most critical factors he should consider before launching his venture to minimize potential risks?3

Q.8 Rajagopalan is running a take away fast food joint in Assam under the name 'Taste of Assam'. Recently, when his cousin Devidayal organised a party at his place he had placed an order for food at 'Taste of Assam' worth ` 7,500. However, Rajagopalan decided not to take the money from Devidayal because of his love and affection for him.
(i) Will this activity related to the supply of food from Rajagopalan's restaurant to Devidayal be

classified as a business activity? Why or why not?

(ii) State the feature of business reflected above.

- Q.9 After completing their graduation, Salman and Ram decided to set up a flour mill to earn income. Their main job is to purchase wheat from the market and have ground it into flour. Their flour is available in the packets of 5 kg, 10 kg and 20 kg. They sell these under the brand name 'Desh ka Atta', and earn a reasonable profit of 10% of cost. They worked very hard to flourish the business of a regular basis, and hence in no time their brand became very popular in the market. The main reasons for the success of their business are superior quality and low price. Their business was running very well but one day, the flour mill caught fire, and as a result they had to suffer a heavy loss. However, Salman and Ram did not lose their heart, and worked even harder. Gradually, their business was back to normal Now, they are fully satisfied with their business. Quoting the lines from the above paragraph, identify any four characteristics of business.
- Q.10 Sarah is planning to start a restaurant in a busy commercial area. Identify and elaborate on at least three critical factors she must thoroughly analyze before investing in this venture to ensure its potential success.

Activity: Draw or craft a tree where the trunk is labelled "Business".

- * Each branch represents one type of business risk.
- * On each leaf, write a real-life example of that risk.

Subject: Accountancy

General Instructions:

 \succ The given assignments are to be done in the fair notebook only.

 \succ The work should be done neatly and in a systematic manner.

Q.1 As we know that the benefit of expenses is enjoy only for one accounting period where as benefit of expenditure is enjoyable for long period. Which of the following is not an example of such Expenditure:

a) Building	b) Machinery
c) Office equipment	d) Salary

Q.2 The profit or loss is ascertained from accounting records under which basis?			
a) Cash basis	b) Accrual basis		
c) Either cash or accrual basis	d) Neither cash nor accrual basis		

Q.3 Assertion(A): Accrual basis of accounting is recognized by the companies Act-2013 to maintained all accounts by every company.

Reasons (**R**): Accrual basis of accounting does not give a true and fair view of profit or loss of the business for recording cash as well as credit transactions.

1

Choose which of the following is correct:

a) (A) is true, but (R) is false

b) (A) is false, but (R) is true

c) Both (A) and (R) are true and (R) is the correct explanation of (A)

d) Both (A) and (R) are true and (R) is not the correct explanation of (A)

Q.4 deals with the provision of necessary accounting information to people within the organisation to enable them in decision-making, planning and controlling business operations. 1

Q.5 Akbar started a automobile hardware shop on 1st April, 2020. During the year ended 31st March, 2021 Akbar has been taking 33,500 every month from the business to meet the expenses for his family. In July Akbar had also taken 10,000 more to pay for fees of his daughter and he bought a laptop for is daughter for 40,000 by the cash taken from the business. He has also taken some hardware items worth 6,000 from the business for repair of his personal car and scooty of his wife. What is the drawings made by Akbar during the year ending on 31st March, 2021?

Q.6 Saloni runs a boutique. She bought some fabric pieces for 15,000 for making dresses and also bought buttons, laces, threads etc for 12,500. She paid 3,500 to her tailor and 2,500 to her office boy. She sold a table and chair set which she did not need any more. This table and chair set had cost her 7,000 and she sold it for 7,500. She also sold some dresses which had cost her in total 12,000 for 16,000.

You are required to answer the following questions.

(a) Did Saloni made any profit, and if she made how much profit did she make?

(b) What is amount of gain if any for Saloni?

Q.7 Rahul , the proprietor of M/S. R.K. & CO. purchased an air-conditioner and installed it in his residence. The payment was made by issuing a cheque from the account of M/S. R.K. & CO. The accountant debited the Drawings Account with the amount whereas Rahul is of the view that it should be debited to the Fixed assets account. In your view , who is correct and why? 3

3

4

4

Q.8 What is Accounting? Explain its disadvantages.

Q.9 Determine if the following are assets, liabilities, revenue or expense :				
(a) Machinery	(b) outstanding rent	(c) creditor		
(d) salary paid to worker	(e) interest received	(f) sales		
(g) prepaid expense	(h) depreciation			

Q.10 A customer has filed a suit against a trader who has supplied poor quality goods to him. It is known that the court judgment will be in favour of the customer and the trader will be required to pay the damages. However, the amount of legal damages is not known with certainty. The accounting year has already been ended and the books are now finalised to ascertain true profit or loss. The accountant of the trader has advised him not to consider the expected loss on account of payment of legal damages because the amount is not certain and the final judgment of the court is not yet out. Do you think the accountant is right in his approach.

Activity: Write a short story (around 100-150 words) where the Accounting Equation (Assets = Liabilities + Equity) is the central theme. The story should involve at least three transactions and show how the equation remains balanced.

Subject: Economics

No. of questions: 10	M.M. 25
Q1. Explain the factors affecting elasticity of demand.	(2)
Q2. Write three exceptions of the 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 the	ı 1at
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 line will be formed which will be parallel to the original line.	new budget
2) If the income of the consumer remains unchanged and if the price of goods X rises, int	ercept 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 o income.	consumer's
Q7. Giving reasons, state why the following two conditions must be satisfied when a const	sumer 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)
O9. 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)

Activity:Demand Analysis Case Study – You need to make a case study about a product that
experienced a surge or drop in demand (e.g., hand sanitizers during the pandemic).
Evaluate the reasons behind the demand shift using economic principles.

Subject: History

Subject. History	
No. of questions: 10	M.M. 25
Q1. Assertion (A): The Mongols respected local religious practices in conquered territories.	
Reason (R): Genghis Khan was indifferent to religion and focused only on military conquests.	1
A. Both A and R are true and R is the correct explanation of A.	
B. Both A and R are true but R is not the correct explanation of A.	
C. A is true but R is false.	
D. A is false but R is true.	
Q2. Assertion (A): Genghis Khan's empire collapsed shortly after his death.	
Reason (R): There was no clear system of succession in the Mongol Empire.	
A. Both A and R are true and R is the correct explanation of A.	
B. Both A and R are true but R is not the correct explanation of A.	
C. A is true but R is false.	
D. A is false but R is true.	1
Q3. Who was the founder of the Mongol Empire?	1
Q4. What was the name of the Mongol assembly of chiefs?	1
Q5 Why did the Mongols rely heavily on cavalry?	2
Q6. How was the Mongol postal system (yam) useful to the empire?	2
Q7. What was the significance of the title "Genghis Khan"?	3
Q8. Describe any three military strategies used by Genghis Khan in his conquests.	3
Q9. Explain the impact of the Mongol Empire on trade and communication across Eurasia.	3
Q10. Discuss the major features of Mongol administration under Genghis Khan. How did he ma	anage
to control such a vast empire?	8

Activity: Design a creative poster titled "The Yassa of Genghis Khan".

- Include 5–10 imaginary or historically inspired laws based on fairness, discipline, or warfare.
- Add symbols, Mongol script designs, and a short explanation of what Yassa was

Subject: Political Science

No. of	questio	ons: 10	M.M. 25	
Q.1	Write the definition of 'Political Theory'.			
Q.2	How i	s the study of political theory useful?	1	
Q.3	Write	two main features of negative liberty.	1	
Q.4	What	are the legal and social constraints on Freedom?	2	
Q.5	What	What is the relation between Economic and Political Liberty?		
Q.6	What is meant by:			
	a) Natural Inequalities			
	b)	Social Inequalities	2	
	Q.7	How can social and law inequality be overcome?	2	
	Q.8	What is the importance of equality?	4	
Q.9	Desci	ibe and compare the theories of Free Market and State Intervention.	4	
Q.10	Descri	ibe John Stuart Mill's views in the defense of freedom of expression including		
	freedom of thought and discussion.			

Subject: Geography

No. of questions: 10

Q1 Read them carefully and answer the questions

The earth's crust is dynamic. You are well aware that it has moved and moved vertically and horizontally. Of course, it moved a bit faster in the past than the rate at which it is moving now. The differences in the internal forces operating from within the earth which built up the crust have been responsible for the variations in the outer surface of the crust. The earth's surface is continuously subjected to external forces induced by energy (sunlight). Of course, the internal forces are still active though with different intensities. That means the earth's surface is being subjected to external forces originating within the earth's atmosphere and by internal forces from within the earth. The external forces are known as exogenic forces and the internal forces are known as endogenic forces. The actions of exogenic forces result in wearing down (degradation) of relief/elevations and filling up (aggradation) of basins/ depressions, on the earth's surface. The phenomenon of wearing down of relief variations of the surface of the earth erosion is known as gradation. The endogenic. forces continuously elevate or build up parts of the earth's surface and the exogenic processes fail to even out the relief variations of the surface of the earth. So, variations remain as long as the opposing actions of exogenic and endogenic forces continue.

Answer the following questions

Q 1 What are the external forces responsible for shaping the earth's surface?

a) Erosion and degradation b) Endogenic forces

c) Exogenic forces d) Gradation and aggradation

Q2 Which term is used to describe the process of wearing down relief variations on the earth's surface through erosion?

a) Endogenic forces b) Gradation c) Aggradation d) Exogenic forces

Q 3 Why do variations in the relief of the earth's surface persist over time?

a). Exogenic forces are stronger than endogenic forces.

b) The earth's crust is no longer dynamic.

c) Endogenic forces continuously elevate parts of the earth's surface, countering exogenic processes.

d). External forces, such as sunlight, have a greater impact on the relief of the earth's surface.

- Q4. What kind of changes are brought by internal forces?
- (a) It gives birth to new landforms (b) It promotes moisture
- (c) Both a and b

(d) None of the above

M.M. 25

1x6=6

1

1

Q.5. All earth materials have a sloping surface and tend to move matter in a					
downsl	ope direction. I	It is called:			1
(a) Soil	erosion	(b) Landslides	(c) Volcanism	(d) Slump	
Q6. Wh	Q6. Which of the following is a form of weathering?				1
(a) Phy	sical	(b) Chemical	(c) Biological	(d) All of the above	
Q7 What is the importance of weathering?					4
Q8 Without gravity and gradient will there be no erosion? justify.				ify.	5
Q9	Q9 Describe the evolution of the atmosphere and hydrosphere (oceans).			(oceans).	5
Q10	Q10 Explain in brief [i] Nebula hypothesis and [ii] Binary hypothesis				5

Subject: Psychology

No. of questions: 10	M.M. 25
Q1. Define the term 'objectivity'.	1
Q2 pioneered both the development of statistics and the study of individual diff	ferences.
	1
Q3. What is validity?	2
Q4. What are norms?	2
Q5. What is data?	2
Q6. What do you mean by standardisation test?	2
Q7. Describe the quantitative method of analysing data.	3
Q8. What is a variable? Discuss different types of variables.	4
Q9. What are the different types of observation?	4
Q10. What are the various techniques to control relevant or extraneous variables?	4

Activity: Identify the independent and dependent variables from the given hypothesis.

- i. Teachers' classroom behaviour affects students' performance.
- ii. A healthy parent-child relationship facilitates children's emotional adjustment.
- iii. An increase in the level of peer pressure increases the level of anxiety.
- iv. Enriching the environment of young children with special books and puzzle enhances their performance.

Subject: Physical Education

No. of questions: 10		M.M. 25
Q.1	Explain the three values of Olympism.	2
Q.2	Write a short note on 'The Olympic Movement	2
Q.3	Write a note on the principle of Olympism.	2
Q.4	Discuss the components of Olympic Movement.	2
Q.5	Write a short note on the importance of Olympism.	2
Q.6	Explain "Balance Between Body, Will and Mind" as Olympic Educational Value.	2
Q.7	Illustrate the concept of fair play with sports examples.	2
Q.8	Explain the values of the Olympic Games.	3
Q.9	What is the motto of the Olympic Games? What does it mean?	3
Q.10	Write a short note on the Olympic flag.	5

Subject: Home Science

No. of questions: 10	M.M 25
Q1. How can Home Science knowledge help in managing household resources?	(2)
Q2. Give two examples of how Home Science helps in improving family relationships.	(2)
Q3. Write any two functions of a Home Science expert in a school.	(2)
Q4. How can a knowledge of textiles help a consumer?	(2)
Q5. Describe one real-life situation where Home Science skills are essential.	(2)
Q6. Explain the importance of food and nutrition in Home Science.	(3)
 Q7. Fill in the blanks: a) The study of helps in understanding child psychology. b) deals with meal planning and balanced diets. c) involves the wise use of time, money, and energy. 	(3)
Q8. What role does Home Science play in environmental conservation?	(3)
Q9. What is the role of communication in Home Science extension services?	(3)
Q10. Activity-based: Interview any homemaker and note down three ways in which they	apply Home

(3)

Science knowledge in daily life.

Subject: Painting

General Instructions: Please do practical work on A-3 sheet with 2 cm borders. It is for 20 marks. Theory needs to be done in the notebook. It is for 5 marks

M.M. 25

- Q1. Draw and paint your favourite festival
- Q2. Discuss the various forms of art and craft practiced by the people of the Indus Valley civilisation. What do these artefacts reveal about their society and culture?