



**St. Mary's School, Dwarka**

**Holiday Homework**

**Class: XI**

**Worksheet 4**

**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.

**Subject: English Core**

No. of questions: 10

M.M. 25

**SECTION A- READING (5 marks)**

**Q1. Read the passage given below.**

1. In recent years, the integration of Artificial Intelligence (AI) into educational systems has sparked both enthusiasm and concern. From personalized learning platforms to automated grading tools, AI promises to revolutionize how students learn and how teachers teach. Proponents argue that AI can address learning gaps by adapting to individual needs, offering real-time feedback, and freeing up teachers to focus on creativity and emotional support. However, critics warn of unintended consequences, including privacy risks, data bias, and overdependence on technology.
2. A case in point is the EduTech initiative in South Korea, where AI tutors have been implemented across hundreds of schools. Preliminary results suggest improved performance in subjects like mathematics and science, especially among students with learning difficulties. The AI systems analyze students' responses, detect patterns of error, and adjust content accordingly. Teachers report that with AI managing routine tasks, they can spend more time engaging with students on a human level.
3. Yet, ethical questions persist. Can machines truly understand the nuances of a student's emotional state or cultural background? There have been cases where AI tools misdiagnosed learning needs due to biased data sets that did not represent all demographics equally. Furthermore, excessive screen time and reliance on devices raise concerns about mental health and reduced interpersonal skills.

4. The question, then, is not whether AI should be used in education, but how. Thoughtful integration is crucial. Technology must remain a tool, not a replacement for the human touch. Teachers should be trained not just in using AI tools, but also in questioning their limitations. Parents, too, must remain informed participants in the digital lives of their children.
5. AI's place in education is not a matter of inevitability but of intention. It is a mirror reflecting both our ambitions and our anxieties. Whether it becomes a bridge to deeper understanding or a barrier to authentic connection depends entirely on how we choose to wield it.

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

- (i) **The EduTech case in South Korea is used to:**
  - a) show the failure of AI in schools
  - b) highlight the dangers of AI in developed countries
  - c) demonstrate a successful application of AI with measurable results
  - d) argue that AI should replace teachers entirely
- (ii) **What does the author mean by “AI’s place in education is not a matter of inevitability but of intention”?**
  - a) AI will eventually take over regardless of human input.
  - b) Only developers can decide how AI is used.
  - c) Society must consciously decide how to use AI responsibly.
  - d) AI has no meaningful role in education,
- (iii) **Which of the following is not mentioned as a concern related to AI in education?**
  - a) data privacy
  - b) financial burden on families
  - c) algorithmic bias
  - d) emotional disconnection
- (iv) **What does the author suggest should accompany AI implementation in classrooms?**
  - a) A complete replacement of teachers with AI tutors.
  - b) Increased homework using digital platforms.
  - c) Training for teachers and informed participation from parents.
  - d) Elimination of all traditional learning methods.
- (v) **The tone of the passage can best be described as:**
  - a) alarmist and hostile
  - b) cautiously optimistic and balanced
  - c) indifferent and vague
  - d) technocratic and biased

## SECTION B-WRITING & GRAMMAR

**Q2.** You are the Head Girl/Boy of your school. Prepare a speech on the topic "**24 Hours a Day — Still Not Enough? Let's Talk Time Management!**" to be delivered at the school assembly. (3)

**Q3.** Fill in the blanks with suitable words. (1/4x8=2)

If I \_\_\_\_\_ (1) the opportunity to travel abroad last summer, I \_\_\_\_\_ (2) expanded my cultural horizons significantly. It \_\_\_\_\_ (3) been an enriching experience, one that I \_\_\_\_\_ (4) look back on with immense satisfaction. Had I not been so focused \_\_\_\_\_ (5) work, I \_\_\_\_\_ (6) taken the chance to learn a new language. I suppose that is often the case with us; we fail to recognize \_\_\_\_\_ (7) valuable experiences lie in front of us. Nevertheless, I \_\_\_\_\_ (8) to plan my future trips more carefully from now on.

**Q4.** Rearrange the following parts (A), (B), (C), (D), and (E) to form a meaningful and grammatically correct sentence: (1)

- A. has gained widespread recognition
- B. in building strong interpersonal relationships
- C. the importance of emotional intelligence
- D. over the past few decades
- E. in both personal and professional spheres

- A) C – B – A – E – D
- B) B – C – A – D – E
- C) A – C – D – B – E
- D) C – A – E – B – D

## SECTION C- LITERATURE

**Q5.** Read the extract and answer the questions that follow:- (2)

"I had no time to worry about bumped heads. After finding a hammer, screws and canvas, I struggled back on deck. With the starboard side bashed open, we were taking water with each wave that broke over us. If I didn't make some repairs, we would surely sink."

- (i) What does the narrator mean by "no time to worry about bumped heads"?
- A. was injured and worried about himself
  - B. had to prioritize survival over minor injuries
  - C. was thinking about his children
  - D. had just hit his head

(ii) **What tone is reflected in the passage?**

- A. nostalgic and dreamy
- B. romantic and hopeful
- C. urgent and determined
- D. humorous and casual

**Q6. Read the extract and answer the questions that follow:-**

**(2)**

“But Wavewalker rode out the storm and by the morning of January 6, with the wind easing, I tried to get a reading on the sextant. Back inside the chartroom, I worked on wind speeds, changes of course, drift and current to calculate our position.”

(i) **What is a sextant used for in this context?**

- A. measuring the depth of the sea
- B. calculating the speed of the boat
- C. navigating by the stars and sun
- D. estimating the temperature

(ii) **What does the narrator's action tell us about him?**

- A. panicking
- B. methodical and focused on navigation
- C. giving up hope
- D. seeking outside help

**Q7. Read the extract and answer the questions that follow:-**

**(2)**

“We’re not afraid to die... if we can all be together.”

— Jonathan said, as we faced the worst of the storm.

(i) **What does Jonathan’s statement reflect?**

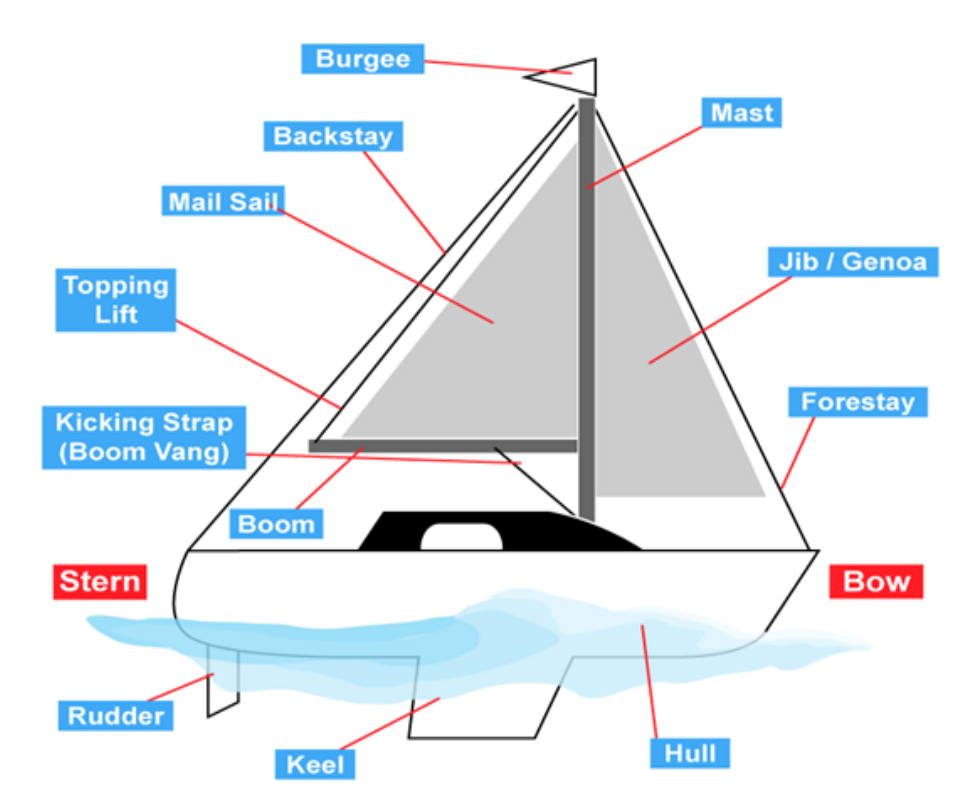
- A. is selfish and scared
- B. values money over life
- C. has a brave and family-oriented spirit
- D. wants to abandon the ship

(ii) **Why is this line significant in the story?**

- A. marks the end of the journey
- B. symbolizes the helplessness of the narrator
- C. shows the innocence and courage of children
- D. marks the end of the storm

**Q8. The diagram below shows some parts of a ship:**

**(3)**



**Write the basic function of any of the three parts in 20 to 40 words from the list given below:-**

- Rudder
- Jib
- Boom Vang
- Mast
- Keel

**Q9. Do you think the narrator's leadership was more important than technical skills during the storm?**  
Why or why not? (50 words)

**(2)**

**Activity:**

**Q10. Read a book involving adventure on a ship like :-**

**(3)**

- *Life of Pi*
- *The Old Man and the Sea*
- *Moby Dick.*

**Write a book review based on the following format.**

- 1. Title of the Book**
- 2. Author**
- 3. Main Characters**
- 4. Setting**
- 5. Plot Summary**
- 6. Themes and Messages**
- 7. Writing Style and Language**
- 8. What I Liked / Disliked**
- 9. Favourite Quote/line/dialogue**
- 10. Recommendation and Rating**

**Subject: Hindi Core**

**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 पद्यांश पर आधारित प्रश्नों के उत्तर निर्देश के अनुसार दीजिए:

(1×5=5)

सत्य की राह कठिन सही, पर चलना तुझको होगा,  
हर कदम पर काँटे होंगे, फिर भी आगे बढ़ना होगा।  
जीवन एक संग्राम बना है, हार-जीत की बात नहीं,  
जो टिक जाए तूफानों में, वही सच्चा वीर कहलाए।  
चमकते हैं जो आसमान में, वे तारे भी चुप रहते हैं,  
सिखाते हैं वे हमें मौन में भी उजाला फैलाना।  
मत थक, मत रुक, मत झुक, ये पथ तेरा अपना है,  
अधूरा सपना तेरा नहीं, बस विश्वास तेरा हथियार है।  
कभी गिरकर फिर उठ जाना, यही जीवन की रीति है,  
हर अंधियारे के बाद यहाँ, होती नई प्रीति है।

(i) कवि के अनुसार सच्चा वीर कौन होता है?

- (क) जो हमेशा जीतता है
- (ख) जो तूफानों में टिक जाए
- (ग) जो लड़ाई कर
- (घ) जो कभी न हारे

(ii) तारे किस बात का प्रतीक हैं?

- (क) मौन में भी उजाला फैलाने का
- (ख) रात का
- (ग) दूरियों का
- (घ) गिरने का

(iii) जीवन को कवि ने किससे तुलना की है?

- (क) संगीत से
- (ख) संग्राम से
- (ग) खेल से
- (घ) पर्वत से

(iv) जीवन की रीति क्या है?

(v) कवि ने अधूरे सपनों को पूरा करने का क्या उपाय बताया गया है?

**प्रश्न 2** आप राजकीय प्रतिभा विकास विद्यालय में हिंदी के शिक्षक हैं और जवाहर लाल नेहरू विश्वविद्यालय से एम.फिल करना चाहते हैं। विभाग से एम.फिल करने की अनुमति प्राप्त करने के लिए पत्र लिखिए। (5×1=5)

**प्रश्न 3** लोकतंत्र में जनसंचार माध्यमों का प्रभाव बताइए। (2×1=2)

**प्रश्न 4** जनसंचार के दुष्प्रभाव बताइए। (2×1=2)

**प्रश्न 5** कहानी 'नमक का दरोगा' के पात्र पंडित अलोपीदीन के व्यक्तित्व की विशेषता बताइए।

(1½×1 = 1½)

**प्रश्न 6** मियाँ नसीरुद्दीन के चेहरे पर 'दबे हुए अंधड़ के आसार' से क्या तात्पर्य है?

(1½×1 = 1½)

**प्रश्न 7** 'घर की याद' के साथ-साथ कवि को और कौन याद आ रहा है?

(1½×1 = 1½)

**प्रश्न 8** "मेरे तो गिरिधर गोपाल, दूसरों न कोई..... जल सींचि सींचि, प्रेम-बलि बोयी" इन पंक्तियों का आशय स्पष्ट कीजिए।

(1½×1 = 1½)

**प्रश्न 9** शास्त्रीय संगीत और चित्रपट संगीत में अंतर स्पष्ट कीजिए।

(1×1 = 1)

**प्रश्न 10 परियोजना कार्य :** किन्हीं दो संगीत वाद्यों का निर्माण करके उन पर लता मंगेशकर द्वारा गाए गए किन्हीं दो गीतों की चार - चार पंक्तियाँ लिखिए। (4×1=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

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Q.1) i) If  $x \in \{2, 3, 4\}$  and  $y \in \{4, 6, 9, 10\}$ , form the set of all ordered pairs  $(x, y)$  such that  $x$  is a factor of  $y$ .

ii) If  $R = \{(x, |x|) : x \text{ is a real number}\}$ , find the domain and the range of the relation. (1+1)

Q.2) Prove that  $\cos \theta \cos \frac{\theta}{2} - \cos 3\theta \cos \frac{9\theta}{2} = -\sin 4\theta \sin \frac{7\theta}{2}$ . (2)

Q.3) Let  $f, g$  be two functions defined by  $f(x) = \sqrt{x+1}$  and  $g(x) = \sqrt{9-x^2}$ .

Describe the following functions with their range:

(i)  $f + g$  (ii)  $f - g$  (iii)  $\frac{f}{g}$  (2)

Q.4) Prove that  $\cos 6x = 32 \cos^6 x - 48 \cos^4 x + 18 \cos^2 x - 1$ . (2)

Q.5) If  $f(x) = x^2 + 1$ , find  $\frac{f(1.01) - f(1)}{1.01 - 1}$ . (2)

Q.6) If  $\tan x = \frac{b}{a}$ , then find the value of  $\sqrt{\frac{a+b}{a-b}} + \sqrt{\frac{a-b}{a+b}}$ . (3)

Q.7) Find the value of  $\cos 18^\circ$  and  $\sin 36^\circ$ . (3)

Q.8) i) If  $\theta = -400^\circ$ , determine the sign of  $(\sin \theta + \cos \theta)$ .

ii) Find the value of  $\tan 22^\circ 30'$ . (3)

Q.9) If  $\alpha$  and  $\beta$  are different complex numbers with  $|\beta| = 1$ , then find  $\frac{\beta - \alpha}{1 - \bar{\alpha}\beta}$ . (3)

Q.10) The function  $f$  is defined by:

$$f(x) = \begin{cases} 1-x, & x < 0 \\ 1, & x = 0 \\ x+1, & x > 0 \end{cases}$$

Draw the graph of  $f(x)$ . (3)

**Activity: Complex Box Puzzle**

**Prepare a  $4 \times 4$  grid. Write either a complex number or an operation in each box. Compute values across rows/columns using those operations.**

**Subject: Physics**

No. of questions: 10

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- Q1 (i) Can an x-t graph be a straight line parallel to the time axis? 1
- Q2. Can an x-t graph be a straight line parallel to the position axis? Justify. 1
- Q3 (i) Under what condition will the distance and displacement of a moving object have the same magnitude? (ii) Can a body have a constant velocity but a varying speed? 2
- Q4. Two balls of different masses (one lighter and the other heavier) are thrown vertically upwards with the same initial speed. Which one will rise to a greater height? Explain 2
- Q5(i) Can a body have a constant speed but varying velocity? (ii) A ball is thrown straight up. What is its velocity and acceleration at the top? 2
- Q6. A car starts from rest and accelerates uniformly for 10 s to a velocity of 8 m/s. It then runs at a constant velocity and is finally brought to rest in 64 m with a constant retardation. The total distance covered by the car is 584 m. find the value of acceleration, retardation and the total time taken. 3
- Q7(i) Can a body have zero velocity and finite acceleration? Justify your answer with an example.
- (ii) A body is projected horizontally from the top of the building, 39.2 m high. How long will it take to hit the ground? (1+2=3)
- Q8. A bus starts at Station A from rest with uniform acceleration  $2\text{m/sec}^2$ . The bus moves along a straight line. (i) Find the distance moved by the bus in 10 seconds. (ii) At what time, its velocity become  $20\text{m/sec}$ ? (iii) How much time will it take to cover a distance of  $1.6\text{km}$ ? 3
- Q9. An object is moving along a straight line. The motion of that object is described by  $x=at+bt^2+ct^3$  where a,b,c are constants and x is in meters and t is in seconds. (i) Find the displacement at  $t=1$  sec. (ii) Find the velocity at  $t=0$  and  $t=1$  sec (iii) Find the acceleration at  $t=0$  and  $t=1$  sec 3
- Q10. An object is thrown vertically upward with an initial velocity of  $40\text{m/s}$ . Two seconds later, another object is thrown upward with the same velocity. Find out the following: (i) At what height do they meet? (ii) What is the time when they meet? (iii) What are the velocities of each object when they meet? (1.5+1.5+2=5)

**Subject: Chemistry**

No. of questions: 10

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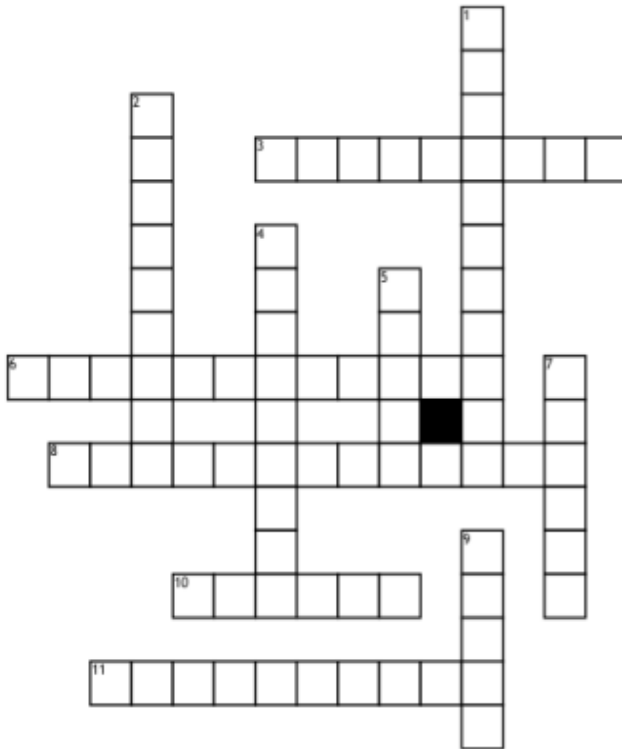
1. Explain the terms "intensive properties" and "extensive properties". Give one example of each. (3)
2. State Dalton's Atomic Theory. (Any two postulates) (2)
3. What is the difference between a molecule and an ion? Give one example of each. (2)
4. Perform the following subtraction and express the result with the appropriate number of decimal places:  
15.789 - 3.2 (2)
5. Convert the following: (2)
  - a. 0.5 kg to grams
  - b. 37 °C to Fahrenheit ( $F=59C+32$ )
6. Calculate the number of molecules in 8.8 g of carbon dioxide ( $\text{CO}_2$ ). (Molar mass of  $\text{CO}_2 = 44 \text{ g/mol}$ ,  $N_A = 6.022 \times 10^{23} \text{ mol}^{-1}$ ) (3)
7. An organic compound has the empirical formula  $\text{CH}_2\text{O}$ . Its vapor density is 30. Determine its molecular formula. (Molar mass = 2 x Vapor density) (3)
8. If 10 g of methane ( $\text{CH}_4$ ) reacts with 40 g of oxygen ( $\text{O}_2$ ), what mass of carbon dioxide ( $\text{CO}_2$ ) will be formed? (Molar mass of  $\text{CH}_4 = 16 \text{ g/mol}$ , Molar mass of  $\text{O}_2 = 32 \text{ g/mol}$ , Molar mass of  $\text{CO}_2 = 44 \text{ g/mol}$ )
9. Define stoichiometry. What are stoichiometric coefficients? (2)
10. Balance the following equations by ion-electron method.  $\text{MnO}_4^- + \text{I}^- \rightarrow \text{MnO}_2 + \text{I}_2$  (Basic medium) (3)

**Subject: Computer Science**

No. of questions: 10	M.M. 25
Q1 Differentiate between $(555/222) ** 2$ and $(555.0/222) ** 2$ .	2
Q2 a) The variable definition of X is creating problem X = 0281.Why. b) What would the following code do: 1 X= Y= 7?	1+1
Q3 Is Indentation Required in Python? Justify.	2
Q4 What is a dynamically typed language?	2
Q5 What is docstring in Python?	2
Q6 Write a python code to get the list of all Python keywords.	2
Q7 a) Write a short note on complex numbers in python.	2
Q8 List out python tokens.	2
Q9 a) Explain the Boolean operators:	1
b) 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	
Q10 Convert the following:	1x5=5
i) $(565)_{10} = ( )_2$	
ii) $(11110001010)_2 = ( )_8$	
iii) $(FACE)_{16} = ( )_{10}$	
iv) $(754)_8 = ( )_{16}$	
v) $(8764)_{10} = ( )_{16}$	

**Activity: Fill the following crossword.**

# Python Vocabulary



## Across

- 3. The meaning of a program.
- 6. An error that does not occur until the program has started to execute but that prevents the program from continuing.
- 8. An error in a program that makes it do something other than what the programmer intended.
- 10. The structure of a program.
- 11. A program in a high-level language before being compiled.

## Down

- 1. An error in a program that makes it impossible to parse – and therefore impossible to interpret.
- 2. A set of specific steps for solving a category of problems.
- 4. Another name for a runtime error.
- 5. To examine a program and analyze the syntactic structure.
- 7. A program stored in a file (usually one that will be interpreted)
- 9. One of the basic elements of the syntactic structure of a program, analogous to a word in a natural language.

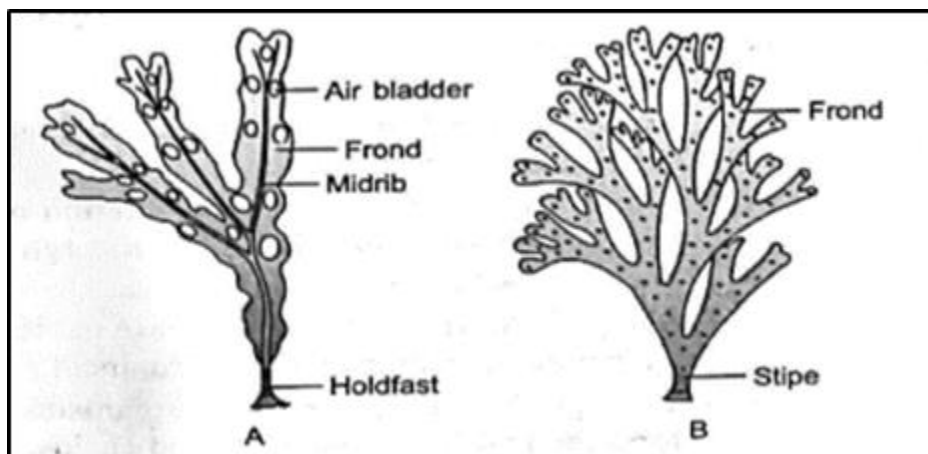
**Subject: Biology**

No. of questions: 10

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- Q1. Archaeobacteria can survive in extreme conditions because of the \_\_\_\_\_ (1)
- a) complex metabolic reactions in their body
  - b) fact that they are the oldest life forms on the earth
  - c) rigid cell wall they have
  - d) double membrane nucleus
- Q2. Which among the following is incorrect about Cyanobacteria? (1)
- a) The word cyano means greenish-blue because of which cyanobacteria is also called as blue- green algae
  - b) The colour of cyanobacteria is due to presence of chlorophyll
  - c) Cyanobacteria are chemosynthetic autotrophs
  - d) Cyanobacteria help in enriching oxygen levels in the atmosphere
- 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 below.**
- 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
- Q3. **Assertion:** Deuteromycetes are commonly known as imperfect fungi. (1)
- Reason:** Their asexual and sexual mode of reproduction closely resemble that of ascomycetes.
- Q4. Euglena is both an autotroph and a heterotroph. Justify (2)
- Q5. Where does reduction division takes place in the life cycle of (2)
- a) Moss
  - b) fern
- Q6. a) Why do members of phaeophyceae vary in colour from olive green to various shades of brown. (1+2=3)
- b) Name any four members of phaeophyceaea.
- Q7. Describe the three common steps in the sexual reproduction in fungi. (3)
- Q8. Write the following for house fly: (3)
- a) Phylum
  - b) Class
  - c) Order
  - d) Family
  - e) Genus
  - f) Kingdom

- Q9. Two members of class of algae are shown below. Observe the figures and answer the questions that follow: (1+1+2=4)



- a) Identify the two algae A and B
- b) Mention the forms of their stored food.
- c) Name
  - i) The class, which both of them belong to
  - ii) The pigment that gives them the characteristics colour.

Q10. a) Bacteria as a group show the most extensive metabolic diversity. Substantiate the statement with reference to nutrition.

- b) Describe four different shapes of cell found in bacteria. (3+2=5)

**Activity: Visit any botanical garden and prepare the list of five different types of leave with different variations.**

**Subject: Informatics Practices**

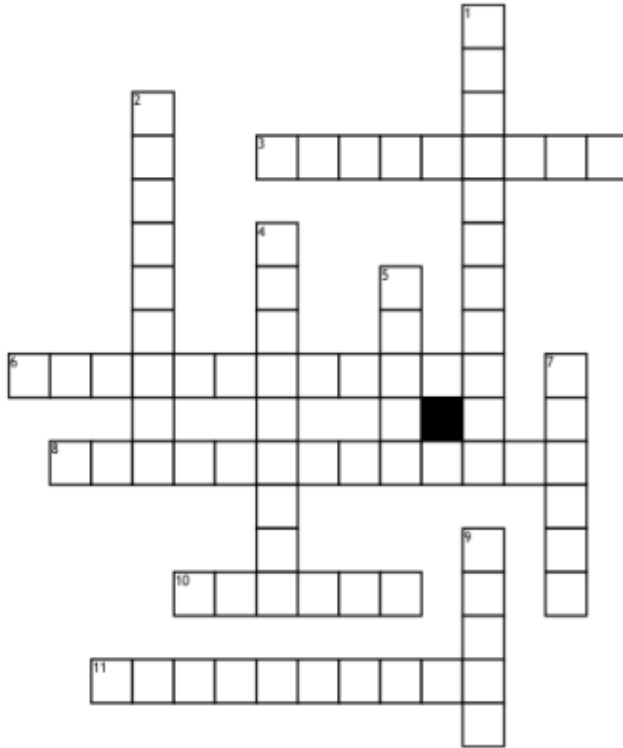
No. of questions: 10

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- |        |  |     |
|--------|--|-----|
| Q1     | Differentiate between (555/222) ** 2 and (555.0/222) **2.  | 2   |
| Q2     | a) The variable definition of X is creating problem X = 0281.Why.<br>b) What would the following code do: 1 X= Y= 7?                               | 1+1 |
| Q3     | Is Indentation Required in Python? Justify.  | 2   |
| Q4     | What is a dynamically typed language?  | 2   |
| Q5     | What is docstring in Python?   | 2   |
| Q6     | Write a python code to get the list of all Python keywords.  | 2   |
| Q7     | Write a short note on complex numbers in python.   | 2   |
| Q8     | List out python tokens.  | 2   |
| Q9     | a) Explain the Boolean operators:  | 1   |
|        | b) 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   |     |
| Q10 i) | What will be the output of the following Python code? Explain the data types of each variable.   | 3   |
|        | <pre> a = 5 b = 3.2 c = "7" d = True e = a + b f = str(a) + c print(type(a)) print(type(b)) print(type(c)) print(type(d)) print(e) print(f) </pre> |     |
| ii)    | What will happen when you add an integer and a float and when you add strings together?  | 2   |



# Python Vocabulary



## Across

- 3. The meaning of a program.
- 6. An error that does not occur until the program has started to execute but that prevents the program from continuing.
- 8. An error in a program that makes it do something other than what the programmer intended.
- 10. The structure of a program.
- 11. A program in a high-level language before being compiled.

## Down

- 1. An error in a program that makes it impossible to parse — and therefore impossible to interpret.
- 2. A set of specific steps for solving a category of problems.
- 4. Another name for a runtime error.
- 5. To examine a program and analyze the syntactic structure.
- 7. A program stored in a file (usually one that will be interpreted)
- 9. One of the basic elements of the syntactic structure of a program, analogous to a word in a natural language.

**Subject: Business Studies**

**General Instructions:**

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

No. of questions: 10

M.M. 25

- Q.1 Sita is a practicing Chartered Accountant. She has her C.A. Firm at Ranchi. She deals in providing Income Tax and GST related services to her clients against very reasonable consultancy fees. She has her own professional coaching classes for C.A. Enrolled Students. Identify the types of Economic activities performed by Sita as referred in the above case. 1
- a) Business b) Profession  
c) Employment d) None of the above
- Q.2 **Assertion (A):** Insurance is an auxiliary to trade that helps in overcoming the hindrance of exchange.  
**Reason (R):** Insurance protects businesses from potential financial losses due to unforeseen events, thus facilitating smoother trade activities. 1
- 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
- Q.3 **Assertion (A):** Banking is considered an auxiliary to trade because it facilitates the transfer of goods from producers to consumers.  
**Reason (R):** Banking provides financial assistance for business activities, thus removing the hindrance of finance in trade. 1
- Choose the correct option:**
- (a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true and R is not the correct explanation of A.  
(c) A is true but R is false.  
(d) A is false but R is true.
- Q.4 **Assertion (A):** When starting a new business, assessing the availability of skilled labor is a crucial factor to consider.  
**Reason (R):** The success of a business heavily depends on the efficiency and productivity of its workforce. 1
- Choose the correct option:**
- (a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true and R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true

- Q.5 Name the business activity which is concerned with conversion of resources into useful products. 1
- Q.6 Ganga Ltd. is a popular company manufacturing water coolers. Its product is very much liked by people in the market. The traders are in a race to become the company's distributors. The company had been earning huge profits for many years. However, in the year 2020, the company's half yearly report shows a great decline in the company's profit. The top management is worried about this. A team of specialists from outside is appointed to solve this serious problem. After a thorough examination, the specialists presented the following reasons for the decline in the profits of the company. (I) Increase in competition and change in taste of the consumers. (II) Theft of cash and goods by the employees. Identify and explain the two causes of decline in profits. 3
- Q.7 A book shop owner wants to expand his business and he wants to open another branch. He can appoint a manager to run the branch or take a partner. What are the basis which will help him decide to choose between a manager or a partner? 3
- Q.8 Gurleen has just completed her M.Sc in agricultural science and have started applying for jobs in her field. She came to know about an organisation in Banaras where they rear silkworms for manufacturing the famous Banarasi Silk sarees and decided to join the same. What is the process of rearing silkworms for silk called and name and state the type of industry which she has joined. 4
- Q.9 Manjeet Pvt. Ltd. is a reputed company manufacturing computers. The company is earning a considerable profit. Both the proprietors and the employees are putting their best efforts to make good quality products available to the customers at a low price, paying its shareholders a good amount of dividends and the employees a reasonable remuneration. This contributes to the successful operations of the business.  
With increased profits over time, the company's foundation becomes strong, and it earns a good reputation in the society. It utilises its profits to finance its growth and expansion requirements. Explain the role of profit in business of Manjeet Pvt. Ltd. 4
- Q.10 "The objectives of a business extend beyond just earning profit." Elaborate on this statement, explaining at least three other significant objectives that a modern business should strive to achieve. 6

**Activity:** \* Draw a comic strip (4–6 panels) about a business that fulfills both economic and social objectives.

\* Use characters and dialogues to show how the business earns profit while helping society.

\* Label each panel with the type of objective being shown.

**Subject: Accountancy**

No. of questions: 10

M.M. 25

Q.1 “Cash withdrawn by proprietor for personal use Rs.12,000”

Choose correct option for the above transaction:

1

- a) Increase of capital and increase of liabilities
- b) Decrease of capital and increase of assets
- c) Increase of capital and decrease of liabilities
- d) Decrease of capital and decrease of assets

Q.2 Match the following:

1

- |   |                               |
|---|-------------------------------|
| 1) Judgement about profitability and financial position - | (A) Summarising               |
| 2) Ledger   | (B) Analysis & Interpretation |
| 3) Journal  | (C) Classifying               |
| 4) Preparation of financial statements.                   | (D) Recording                 |

Q.3 Book-keeping is mainly concerned with:

1

- a) Recording of financial data
- b) Designing the systems of summarizing the recorded data
- c) Interpreting the data for internal and external users
- d) Preparation of financial statements of the business enterprise

Q.4 JKL Company paid Rs.2,000 in rent for the month. How would this transaction be recorded in the accounting books?

1

Q.5 A company issues shares worth Rs.50,000 in exchange for cash. How does this transaction affect the accounting equation?

1

Q.6 From the following information calculate net profit as per accrual basis of accounting of Samrat traders for the year ending 31st. March 2025:

Cash sales Rs.12,00,000

Credit sales Rs.18,00,000

Expenses (out of which Rs. 20,000 unpaid) Rs.5,00,000

3

Q.7 “Only financial transactions are recorded in Accounting.” Explain.

3

Q.8 Explain the different branches of Accounting.

4

Q.9 i) Why cash discount is given?

ii) Identify the value involved in classifying the assets into current and non - current?

4

Q.10 Differentiate between cash basis and accrual basis of accounting.

6

**Activity:** Find out, collect and paste the different types of bills used by business enterprise.

**Subject: Economics**

No. of questions: 10

M.M. 25

Q1. Is the demand for the following elastic, moderate elastic, inelastic? Give reason. (2)

- a) Demand for petrol
- b) Demand for textbooks
- c) Demand for cars
- d) Demand for milk

Q2. Describe the assumption which is made to determine the consumer's equilibrium position. (2)

Q3. Write two features of PPC. (2)

Q4. Price elasticity of demand for flour is equal to unity and a household demands 40 kg of flour when the price is Rs. 1 per kg. At what price will the household demand 36 kg of flour? (2)

Q5. The quantity demanded of a good at a price of Rs. 10 per unit is 40 units. Its price elasticity of demand is -2. Its price falls by Rs, 2/- per unit. Calculate its quantity demanded at the new price. (2)

Q6. What happens to the budget set if both the prices as well as the income double? (3)

Q7. Suppose a consumer can afford to buy 6 units of good 1 and 8 units of good 2 if she spends her entire income. The prices of the two goods are Rs 6 and Rs 8 respectively. How much is the consumer's income? (3)

Q8. How many chocolates will a consumer have, if they are available free of cost? (3)

Q9. State with reasons if the following statements are true or false: (3)

- 1) At a grand family get-together party you go on eating and eating since you have not to pay.
- 2) As we consume more units of a commodity, our total utility from its consumption keeps falling.

Q10. Explain three determinants of demand for a commodity. (3)

**Activity: Consumer Diary – You need to keep a diary for a week, noting your purchasing decisions and the factors influencing you—advertisements, peer recommendations, brand loyalty, or seasonal trends. You can present your insights on how businesses attract consumers.**

**Subject: History**

No. of questions: 10

M.M. 25

- |   |   |
|---|---|
| Q1. Why was Genghis Khan renamed as Temujin and when?                         | 1 |
| Q2. Define the term 'Barbarian'.  | 1 |
| Q3. When and by whom the most valuable research work on the Mongols was done? | 1 |
| Q4. In which languages are the most reliable sources of Mongols available?    | 1 |
| Q5. "The affluent Mongol families used to have several followers." Why?       | 2 |
| Q6. Which types of clothes were worn by nomadic people?                       | 2 |
| Q7. What do you know about the Mongol? Discuss their occupations in brief.    | 3 |
| Q8. How did the Mongol carry out their trade?                                 | 3 |
| Q9. Discuss the role of civil administration in Mongol administration'        | 3 |
| Q10. Discuss the rules and regulations of the Yasa as evolved by Genghis      | 8 |

Activity: Make a "Nomad Kit" Poster

Imagine they are a 13th-century Mongol soldier. What would they carry?

- Create a poster or collage titled "What's in My Nomad Kit".
- Include drawings of items like saddle, bow, dried meat, water bag, small idol, map, etc.
- Add short notes describing each item's use.

**Subject: Political Science**

No. of questions: 10

M.M. 25

- |      |  |   |
|------|--|---|
| Q.1  | Write the main two characteristics of the traditional political theory.  | 1 |
| Q.2  | What do you understand by social liberty?  | 1 |
| Q.3  | Explain two types of inequality.   | 1 |
| Q.4  | What is the Marxist view of justice.   | 2 |
| Q.5  | What is the meaning of human rights?   | 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 | Discuss briefly some of the new rights claims which are being put forward in our country today – for example the rights of tribal peoples to protect their habitat and way of life, or the rights of children against bonded labour. | 6 |

**Subject: Geography**

No. of questions: 10

M.M. 25

- |  |   |
|--|---|
| Q1. What is continental drift theory? Who proposed it and what is its key evidence?          | 2 |
| Q2. Differentiate between oceanic and continental crust.                                     | 1 |
| Q3. Explain the theory of plate tectonics and how it improved upon continental drift theory. | 2 |
| Q4. What are the major tectonic plates of the Earth? Name any five.                          | 2 |
| Q5. Write a short note on seafloor spreading and its role in shaping ocean basins.           | 2 |
| Q6. Describe the distribution of major continents and oceans on Earth's surface.             | 2 |
| Q7. What is Pangaea? Explain the process of its breakup.                                     | 3 |
| Q8. Define mid-oceanic ridges and explain their geographical importance.                     | 3 |
| Q9. How do convergent and divergent boundaries affect the Earth's crust?                     | 3 |
| Q10. Mention two major pieces of evidence for plate movements from ocean floor mapping.      | 5 |

**Activity: The Geomorphic Detective**

**Objective: Understand geomorphic processes (erosion, weathering, deposition) and landforms created by agents like rivers, glaciers, wind, and sea waves.**

**Instructions:**

- **1. Pick one geomorphic agent: River, Glacier, Wind, or Sea Waves.**
- **2. Investigate how your agent shapes the Earth's surface.**
- **3. Use images, models, or digital tools to identify and present landforms.**
- **4. Answer the questions below as a group.**
- **5. Prepare a presentation with visuals to explain your findings.**

**Worksheet Questions:**

1. Which geomorphic agent are you studying?
2. What are the main processes involved (e.g., erosion, deposition)?
3. What landforms are created by this agent? Provide at least three.
4. Describe how one landform is formed step-by-step.
5. Identify at least two real-world examples of these landforms.
6. How do these landforms change over time?
7. How have human activities affected these landforms?



**Comparison Chart:**

**Complete this table during the Gallery Walk.**

Agent	Processes	Landforms Created	Example Locations	Human Impact
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**Subject: Psychology**

No. of questions: 10

M.M. 25

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

**Activity:** Identify the most appropriate method of enquiry for the following research problem.

- i. Does noise influence the problem-solving ability of people?
- ii. Should there be a dress code for college students?
- iii. Studying the behaviour of a student in the playground and a classroom.
- iv. Tracing the major life events of your favourite leader.

**Subject: Physical Education**

No. of questions: 10

M.M. 25

- |   |   |
|---|---|
| Q.1. What do you mean by the term 'Yoga'? Explain any two benefits of Yoga. | 2 |
| Q. 2. What is the role of Yoga in reducing stress?                          | 2 |
| Q. 3. Give any two definitions of Yoga.                                     | 2 |
| Q.4. Explain the importance of Yoga in life.                                | 2 |
| Q.5. Describe the yogic kriyas along with benefits.                         | 2 |
| Q. 6. Differentiate between Dhyana and Samadhi                              | 2 |
| Q. 7. Explain the concept of Pranayama.                                     | 2 |
| Q. 8. What is Yama?   | 3 |
| Q. 9. What is Niyama?   | 3 |
| Q. 10. List the components of Ashtang Yoga.                                 | 5 |

**Subject: Home Science**

**No. of questions: 10**

**M.M.- 25**

- Q1. What is the difference between self-esteem and self-confidence? (1)
- Q2. Define the term "self-concept." Mention two factors that influence the development of self. (2)
- Q3. Give one example each of positive and negative self-talk. Name any two characteristics of emotional maturity. (2)
- Q4. How does peer pressure influence self-identity in adolescents? (2)
- Q5. Explain the importance of self-awareness in personal development. (2)
- Q6. Describe two ways in which family plays a role in shaping one's personality. (2)
- Q7. Describe the physical, emotional, and social changes that occur during adolescence and how they influence the understanding of self. (3)
- Q8. Discuss the role of culture and media in developing self-image among teenagers. (3)
- Q9. What strategies can an individual use to improve self-confidence and deal with self-doubt? (3)
- Q10. **Prepare a "Self-Awareness Journal" for one week.** Each day, write: (5)
- One emotion you felt strongly (positive or negative)
  - The situation that caused it
  - How you reacted
  - What you learned about yourself from the experience
  - One goal to improve your behaviour or thinking

**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**

**MM:25**

Q1. Draw and paint a village picture composition with at least 2 figures

Q2. What kind of similarities & differences do you find between present day terracotta and the Indus valley terracotta.