



**परमाणु ऊर्जा शिक्षण संस्था**  
**Atomic Energy Education Society**  
**कार्यपत्रक / Worksheet 1 (2025-26)**

**कक्षा/Class: VIII विषय/Subject: English माह/ Month: April अंक/Marks: 40**

**दिया गया पाठ्यक्रम/Portion covered: Unit-1 (Week 1,2,3 - Bridge Course)**

**विद्यार्थी का नाम/Name of the student:** \_\_\_\_\_

**अनुक्रमांक/Roll No.\_\_\_\_\_ कक्षा/अनुभाग Class /Sec.:\_\_\_\_\_ दिनांक /Date: \_\_\_\_\_**

**I Choose the Best Answer from among the given Options: 10x1=10**

**1. Why did the white elephant live in the forest?**

- A. He was abandoned by his herd B. He preferred solitude  
C. He was rejected by his mother D. His companions were unkind to his mother

**2. What was special about the white elephant?**

- A. He had golden tusks B. He could talk  
C. He was wise and kind D. He could fly

**3. How did the white elephant help the forester?**

- A. He showed him the way to the city B. He carried him on his back  
C. He gave him food and water D. He healed his wounds

**4. Why did the forester betray the white elephant?**

- A. For revenge B. To win a reward  
C. Because he was scared of him D. To save his own life

**5. How did the king react to seeing the white elephant?**

- A. He was frightened B. He was curious  
C. He was overjoyed and wanted to capture him D. He was indifferent

**6. What did the white elephant do when it was brought to the palace?**

- A. He tried to escape B. He remained calm and quiet  
C. He roared angrily D. He attacked the guards

**7. How did the white elephant express his sorrow?**

- A. He wept silently B. He told the king his story  
C. He refused to eat D. He wrote a letter

**8. What decision did the king make after hearing the elephant's story?**

- A. He ignored it B. He punished the guards  
C. He released the elephant and honoured him D. He sent the forester away

**9. What moral does the story of the white elephant teach?**

- A. Trust everyone B. Appearances are deceptive  
C. Kindness and truth are always rewarded D. Power is more important than wisdom

**10. What character trait best describes the white elephant?**

- A. Proud B. Clever C. Loyal and compassionate D. Aggressive

**II Answer the following in about 30 words each:**

10x2=20

1. Why did the white elephant live alone in the forest?

2. What qualities made the white elephant special?

3. Who did the white elephant help in the forest?
4. What promise did the forester make to the white elephant?
5. Why did the forester betray the white elephant?
6. How did the king react when he saw the white elephant?
7. What did the white elephant do when he was taken to the palace?
8. How did the white elephant explain his situation to the king?
9. What did the king do after hearing the elephant's story?
10. What is the moral of the story "**The White Elephant**"?

**III Fill in the blanks with the correct forms of verb:**

**5x1=5**

**The white elephant \_\_\_\_\_ the forester before the soldiers arrived.**

- A. had helped   B. Helped   C. Helps   D. is helping

**2. The forester \_\_\_\_\_ the elephant's kindness when he revealed his location.**

- A. forget   B. had forgotten   C. Forgot   D. forgets

**3 By the time the king reached the forest, the elephant \_\_\_\_\_.**

- A. leave   B. Left   C. had left   D. was leaving

**4. The white elephant \_\_\_\_\_ many people before helping the forester.**

A. helps   B. had helped   C. is helping   D. will help

**5. The king was shocked because the elephant \_\_\_\_\_ a man in trouble.**

A. rescue   B. Rescues   C. had rescued   D. rescuing

**Fill in the blanks with the correct forms of question tags:**      5x1=5

**1. The white elephant helped the man, \_\_\_\_\_?**

A. didn't he   B. doesn't he   C. did he   D. isn't he

**2. The king was kind, \_\_\_\_\_?**

A. isn't he   B. wasn't he   C. was he   D. didn't he

**3. The forester broke his promise, \_\_\_\_\_?**

A. doesn't he   B. didn't he   C. hadn't he   D. did he

**4. They hadn't seen a white elephant before, \_\_\_\_\_?**

A. had they   B. did they   C. hadn't they   D. have they

**5. The elephant never hurt anyone, \_\_\_\_\_?**

A. did he   B. does he   C. didn't he   D. had he

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परमाणु ऊर्जा शिक्षण संस्था  
Atomic Energy Education Society

कार्यपत्रक / Worksheet-1- Answer Key (2025-26)

कुल मुद्रित पृष्ठों की संख्या /Total No. of printed pages: 1

कक्षा/Class: VIII विषय/ Subject: English

माह/ Month: April

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: Unit 1- Bridge Course

विद्यार्थी का नाम/Name of the student:

अनुक्रमांक/Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class/Sec.: \_\_\_\_\_ दिनांक/Date: \_\_\_\_\_

**I Choose the Best Answer from among the given Options: 10x1=10**

|   |   |    |  |
|---|---|----|--|
| 1 | D. His companions were unkind to his mother   | 6  | B. He remained calm and quiet                |
| 2 | C. He was wise and kind                       | 7  | B. He told the king his story                |
| 3 | B. He carried him on his back                 | 8  | C. He released the elephant and honoured him |
| 4 | B. To win a reward                            | 9  | C. Kindness and truth are always rewarded    |
| 5 | C. He was overjoyed and wanted to capture him | 10 | C. Loyal and compassionate                   |

**II Answer the following in about 30 words each:**

10x2=20

1. Because his herd treated his mother unkindly, he chose to live away from them in the forest.
2. He was wise, kind, compassionate, and had a majestic white appearance.
3. He helped a lost and frightened forester find his way out of the jungle.
4. He promised to keep the location of the white elephant a secret.
5. He wanted to gain a reward from the king by revealing the elephant's location.
6. He was thrilled and ordered the elephant to be brought to his palace.
7. He remained calm and did not resist, even though he was sad.
8. He told the king how he had helped the forester, who then betrayed him.
9. He was touched and ordered the elephant to be set free and honoured.
10. True kindness, honesty, and selflessness are always recognized and rewarded.

**III Fill in the blanks with the correct forms of verb:**

5x1=5

|   |   |
|---|---|
| 1 | A. had helped – (Past perfect: action completed before another past event)  |
| 2 | C. forgot – (Simple past: action done in the past)                          |
| 3 | C. had left – (Past perfect: the elephant left before the king arrived)     |
| 4 | B. had helped – (Past perfect: action completed before another past action) |
| 5 | C. had rescued – (Past perfect: the rescue happened before the king saw it) |

**IV Fill in the blanks with the correct forms of question tags:**

5x1=5

|   |              |
|---|--------------|
| 1 | A. didn't he |
| 2 | B. wasn't he |
| 3 | B. didn't he |
| 4 | A. had they  |
| 5 | A. did he    |

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परमाणु ऊर्जा शिक्षण संस्था  
**Atomic Energy Education Society**  
कार्यपत्रक / Worksheet (2025-26)

कक्षा /Class: 8 विषय /Subject: ENGLISH माह/ Month: APRIL अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: BRIDGE COURSE UNIT 2 CLOUDPLAY

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक /Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**Q1. Answer the following questions by choosing the correct option.**

**A: What is the main theme of the poem "Cloudplay"?**

- a) The power of weather
- b) The cycle of life
- c) The imagination and emotion in nature
- d) The unpredictability of clouds

**B. Which imagery is prominently used in "Cloudplay"?**

- A) Urban landscapes
- B) Forests and mountains
- C) Clouds and sky
- D) Sea and beaches

**C: Which poetic device is most prominent in the poem?**

- a) Simile
- b) Hyperbole
- c) Personification
- d) Alliteration

**D. What does the speaker compare rain to?**

- a) Music
- b) A tear from a cloud
- c) A storm's whisper
- d) A river from the sky

**E. According to the poem, how do animals react to rain?**

- a) They hide
- b) They sleep
- c) They enjoy the sounds it makes
- d) They run away

**F. What tone does the poem "Cloudplay" end with?**

- a) Mysterious
- b) Joyful
- c) Soothing and calming
- d) Melancholy

**G. Daniel Errico is an.....writer.**

- a) American
- b) Italian
- c) Iranian
- d) Canadian

**H. How does the speaker in "*Cloudplay*" feel about the clouds?**

- a) Afraid of their power
- b) Indifferent to their presence
- c) Fascinated and emotionally connected
- d) Annoyed by their disruption

**I. Which of the following best describes the tone of the poem?**

- A) Authoritative
- B) Joyful
- C) Sarcastic
- D) Anxious

**J. Who wrote the poem "*Cloudplay*"?**

- a) William Wordsworth
- b) Percy Bysshe Shelley
- c) John Keats
- d) Daniel Errico

**K. This work by Daniel Errico is written in the form of :**

- a) Couplet
- b) Septet
- c) Tercet
- d) Quatrain

**2. Identify the poetic device used in the following lines:**

- a) Light as a feather -
- b) Star starts to twinkle -
- c) A tear from a cloud is not like yours or mine-
- d) Like a man molding a clay -
- e) It wets all the grass and it splashes the lakes. -

**3. State whether the following statements are true or false.**

- a) Every night the clouds gather and float together in the sky.
- b) The clouds tears are same as human tears, falling in a straight line.
- c) The clouds drifts in south direction only, in various shapes.
- d) The clouds move slowly across the sky, sinking away as the song ends.
- e) The speaker finds the word "rain" to be magical and beautiful.
- f) The poem ends with a suggestion that it's time to wake up.
- g) Clouds are personified with human emotions in the poem.

**4. Given are some clues to palindromes. Remember the answers are all words that can be spelled the same forwards and backwards.**

- a) You see with it.....
- b) Twelve o'clock midday.....
- c) A method of tracking aeroplanes.....
- d) How you address a lady.....

**5. Answer the following questions briefly.**

- a) What do the clouds do at the end of the poem?
- b) Why do the clouds laugh at each other?
- c) Why do the trees grow up higher and higher?
- d) Who do you think is the speaker in the poem?
- e) Explain the line: A tear from a cloud is not like yours or mine.

**6. Answer the following questions in 30-40 words.**

- a) How does the poet describe the appearance and movement of the clouds?
- b) Explain how the poet personifies clouds in the poem.
- c) Why does the poet find the word "rain" too plain?
- d) What message or mood does the poem "Cloudplay" convey to the reader.
- e) Discuss how the poet uses poetic devices to make nature relatable.
- f) What can we learn about the speaker's view of nature from the poem?

**7. You recently read about the Telangana government's decision to clear a forested area [Kancha Gachibowli](#) to build IT park, which will result in the displacement of local flora and fauna and will also disturb the rainfall pattern in Hyderabad. Your friend, Ravi, who lives in Hyderabad, has written you a letter expressing his concern about this issue and asking for your thoughts.**

**Now, write a reply letter to Ravi, explaining:**

- The importance of forests in maintaining environmental balance
- How forests impact cloud formation and rainfall
- Your opinion on the Telangana government's decision
- Suggestions for balancing development and conservation



**Atomic Energy Education Society**  
**Session 2025-26**  
**Subject – English**  
**Unit 2 : Cloudplay**  
**Class – VIII**  
**Worksheet No-1**

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**Q1. Answer the following questions by choosing the correct option.**

**A: What is the main theme of the poem "Cloudplay"?**

- a) The power of weather
- b) The cycle of life
- c) The imagination and emotion in nature
- d) The unpredictability of clouds

**Answer: c) The imagination and emotion in nature**

**B. Which imagery is prominently used in "Cloudplay"?**

- A) Urban landscapes
- B) Forests and mountains
- C) Clouds and sky
- D) Sea and beaches

**Answer: C) Clouds and sky**

**C: Which poetic device is most prominent in the poem?**

- a) Simile
- b) Hyperbole
- c) Personification
- d) Alliteration

**Answer: c) Personification**

**D. What does the speaker compare rain to?**

- a) Music
- b) A tear from a cloud
- c) A storm's whisper
- d) A river from the sky

**Answer: b) A tear from a cloud**

**E. According to the poem, how do animals react to rain?**

- a) They hide
- b) They sleep
- c) They enjoy the sounds it makes
- d) They run away

**Answer: c) They enjoy the sounds it makes**

**F. What tone does the poem "Cloudplay" end with?**

- a) Mysterious
- b) Joyful

c) Soothing and calming

d) Melancholy

**Answer: c) Soothing and calming**

**G. Daniel Errico is an.....writer.**

a) American

b) Italian

c) Iranian

d) Canadian

**Answer: a) American**

**H. How does the speaker in "Cloudplay" feel about the clouds?**

a) Afraid of their power

b) Indifferent to their presence

c) Fascinated and emotionally connected

d) Annoyed by their disruption

**Answer c) Fascinated and emotionally connected**

**I. Which of the following best describes the tone of the poem?**

A) Authoritative

B) Joyful

C) Sarcastic

D) Anxious

**Answer: B) Joyful**

**J. Who wrote the poem "Cloudplay"?**

a) William Wordsworth

b) Percy Bysshe Shelley

c) John Keats

d) Daniel Errico

**Ans : d) Daniel Errico**

**K. This work by Daniel Errico is written in the form of :**

a) Couplet

b) Septet

c) Tercet

d) Quatrain

**Answer : a) Couplet**

**2. Identify the poetic device used in the following lines:**

a) Light as a feather - simile

b) Star starts to twinkle - Alliteration

c) A tear from a cloud is not like yours or mine: Metaphor/Personification

d) Like a man molding a clay - Simile

e) It wets all the grass and it splashes the lakes. - Imagery

**3. State whether the following statements are true or false.**

- a) Every night the clouds gather and float together in the sky.  
True
- b) The clouds tears are same as human tears , falling in a straight line.  
False
- c) The clouds drifts in south direction only, in various shapes.  
False
- d) The clouds move slowly across the sky, sinking away as the song ends.  
False
- e) The speaker finds the word "rain" to be magical and beautiful.  
False (*He actually says it's too plain.*)
- f) The poem ends with a suggestion that it's time to wake up.  
False (*It ends with "sleep tight," indicating bedtime.*)
- g) Clouds are personified with human emotions in the poem.  
True

**4. Given are some clues to palindromes. Remember the answers are all words that can be spelled the same forwards and backwards.**

- a) You see with it..... Eye
- b) Twelve o'clock midday..... Noon
- c) A method of tracking aeroplanes..... Radar
- d) How you address a lady.....Madam

**5. Answer the following questions briefly.**

- a) What do the clouds do at the end of the poem?
- b) Why do the clouds laugh at each other?
- c) Why do the trees grow up higher and higher?
- d) Who do you think is the speaker in the poem?
- e) Explain the line: A tear from a cloud is not like yours or mine.

**6. Answer the following questions in 30-40 words.**

- a) **How does the poet describe the appearance and movement of the clouds?**  
The poet describes clouds as fluffy, droopy, skinny, and fat. They move in different directions and seem to dance in the sky.
- b) **Explain how the poet personifies clouds in the poem.**  
The poet gives clouds human traits like dancing, crying, and feeling sad. This personification helps readers emotionally connect with the clouds.
- c) **Why does the poet find the word "rain" too plain?**  
Because he sees rain as something more magical and emotional, like tears from a cloud after a beautiful dance.
- d) **What message or mood does the poem "Cloudplay" convey to the reader?**  
The poem conveys a mood of wonder, imagination, and peaceful reflection. It encourages readers to see beauty and emotion in nature, especially in the movement and "tears" of clouds. It ends with a calming bedtime tone, making the poem both playful and soothing.
- e) **Discuss how the poet uses poetic devices to make nature relatable.**  
The poet uses personification to give clouds human emotions and actions, making

them relatable. Imagery helps the reader visualize the clouds dancing and crying. The soft rhyme scheme and rhythm also create a gentle, dreamy tone.

f) **What can we learn about the speaker's view of nature from the poem?**

The speaker sees nature as alive, emotional, and deeply connected to human experience. They find joy, beauty, and even sadness in clouds, showing a childlike wonder and appreciation for the natural world.

7. You recently read about the Telangana government's decision to clear a forested area **Kancha Gachibowli** to build an IT's park, which will result in the displacement of local flora and fauna and will also disturb the rainfall pattern in Hyderabad. Your friend, Ravi, who lives in Hyderabad, has written you a letter expressing his concern about this issue and asking for your thoughts.

**Now, write a reply letter to Ravi, explaining:**

- The importance of forests in maintaining environmental balance
- How forests impact cloud formation and rainfall
- Your opinion on the Telangana government's decision
- Suggestions for balancing development and conservation

Distribution of Marks

Format- 1 Mark

Content -3 Mark

Expression – 0.5 Marks

Coherence of ideas – 0.5 Marks

Accept relevant points given by students.



**परमाणुऊर्जाशिक्षणसंस्था**  
**Atomic Energy Education Society**  
**कार्यपत्रक / Worksheet (2025-26)**

कक्षा/Class: VIII

विषय/Subject: Mathematics माह/ Month: April अंक/Marks:

40

दियामयापाठ्यक्रम/Portion covered: Week 01 Activities of Bridge course

विद्यार्थीकानाम/Name of the student:

अनुक्रमांक/Roll No. \_\_\_\_\_ कक्षा/अनुभागClass /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**SECTION- A (10×1= 10 marks)**

1. In a month of 30 days how many days are prime?  
 (a) 11 (b) 10 (c) 12 (d) 15
2. Which day from Q. 18 Calendar is even prime number?  
 (a) Monday (b) Wednesday (c) Friday (d) Sunday
3. What will be the maximum sum appear on single throw of two dice?  
 (a) 10 (b) 12 (c) 15 (d) 11
4. How many unit cubes required to form a bigger cube of 2 unit?  
 (a) 16 (b) 12 (c) 8 (d) 10
5. Solve  $7 - 3 \times 9$ ?  
 (a) 36 (b) 15 (c) -20 (d) -36
6. How many diagonals Hexagon have?  
 (a) 6 (b) 7 (c) 8 (d) 9
7. Name the shape of figure which has equal length of sides and each angle 90.  
 (a) Rectangle (b) Square (c) Kite (d) Rhombus
8. Find the value of 'y' for given equation  $2 \times y + 8 = 18$   
 (a) 2 (b) 3 (c) 4 (d) 5
9. Find the next number of following sequence: 2 , -3 , -8 , .....  
 (a) 13 (b) 5 (c) -5 (d) -13
10. "Clap, Clap, Jump, Clap, Clap, Jump ....." For given sequence which is the 9<sup>th</sup> and 10<sup>th</sup> word?  
 (a) Clap, Jump (b) Clap, Clap (c) Jump, Jump (d) Jump, Clap

**SECTION- B(04×02= 08 marks)**

11. Find the sum of days for May month which are perfect square.
12. How many 2 unit dices required to form a 6 unit dice?
13. Draw a polygon having sides greater than 4 and also find the number of diagonals
14. Find the mean of first 10 natural numbers.

### SECTION – C(03×03= 09 marks)

15. Find the missing value for given sequence  
49, 72, 118,..., 394, 762, 1498 and also write the pattern in the given sequence
16. Namita has 10 unit cubes, how many unit she requires more to form a bigger cube of dimension  
(a) 2 unit                      (b) 3 unit                      (c) 4 unit
17. Draw any three alternative 2 by 2 square grids from any month of your choice, find the sum of diagonals and write any two observations

### SECTION D(01×05= 05 marks)

18. From the given calendar answer the following questions

| August 2020 |     |     |     |     |     |     |
|-------------|-----|-----|-----|-----|-----|-----|
| Sun         | Mon | Tue | Wed | Thu | Fri | Sat |
|             |     |     |     |     |     | 1   |
| 2           | 3   | 4   | 5   | 6   | 7   | 8   |
| 9           | 10  | 11  | 12  | 13  | 14  | 15  |
| 16          | 17  | 18  | 19  | 20  | 21  | 22  |
| 23          | 24  | 25  | 26  | 27  | 28  | 29  |
| 30          | 31  |     |     |     |     |     |

- (a) Write the day on which the multiples of 7 lies.  
(b) Find the mean of all Tuesday  
(c) Write all cubes number  
(d) Draw any two 3 by 3 grid from the given calendar and find the mean of all numbers and sum of diagonals

### SECTION- E(02×04= 08 marks)

19. Solve the given puzzles ( The missing values are the whole numbers between 1 and 9 and used only once)

|    |    |    |   |   |      |
|----|----|----|---|---|------|
|    | -  | +  |   | = | 10   |
| +  |    | -  |   | ÷ |      |
|    | x  |    | x |   | = 16 |
| -  |    | -  |   | + |      |
|    | x  |    | - |   | = 11 |
| =  |    | =  |   | = |      |
| 11 | -3 | 12 |   |   |      |

|   |   |    |   |   |   |    |
|---|---|----|---|---|---|----|
|   | x |    | + |   | = | 17 |
| - |   | +  |   | x |   |    |
|   | x |    | x |   | = | 70 |
| - |   | +  |   | - |   |    |
|   | x |    | ÷ |   | = | 2  |
| = |   | =  |   | = |   |    |
| 1 | 7 | 50 |   |   |   |    |

20. Encircle the words as mention in the puzzle.

- a) Algebra                      b) Coefficient  
c) Degree                      d) Zero  
e) Constant                      f) Variable  
g) Polynomial                      h) Linear  
i) Quadratic                      j) Cubic  
k) Trinomial                      l) Monomial  
m) Binomial                      n) Equation  
o) Root

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | C | A | T | E | I | A | C | A | I | A | V |
| T | F | B | F | M | U | R | O | L | O | B | A |
| R | I | Q | L | O | Q | N | E | G | E | I | R |
| I | C | U | A | N | A | O | F | E | Q | N | I |
| N | N | A | I | O | T | N | F | B | U | O | A |
| O | L | D | M | M | C | C | I | R | A | M | B |
| M | I | R | O | I | U | O | C | A | T | I | L |
| I | N | A | N | A | B | N | I | E | I | A | E |
| A | E | T | Y | L | I | S | E | Y | O | L | E |
| L | A | I | L | I | C | T | N | I | N | E | R |
| O | R | C | O | T | T | A | T | E | R | R | O |
| L | L | R | P | E | F | N | R | G | O | L | O |
| U | E | N | A | M | O | T | E | D | E | O | T |
| U | O | R | E | Z | I | D | N | I | B | Z | A |



परमाणु ऊर्जा शिक्षण संस्था  
Atomic Energy Education Society  
उत्तर कुंजी / Answer Key (2025-26)

कक्षा /Class: VIII विषय /Subject: Mathematics माह/ Month: April-June  
दिया गया पाठ्यक्रम/Portion covered: Bridge Programme (Week 1)

**ANSWER KEY**

**Section A**

| Question number | Answer         |
|-----------------|----------------|
| Q1.             | (b) 10         |
| Q2.             | (d) Sunday     |
| Q3.             | (b) 12         |
| Q4.             | (c) 8          |
| Q5.             | (c) -20        |
| Q6.             | (d) 9          |
| Q7.             | (b) square     |
| Q8.             | (d) 5          |
| Q9.             | (d) -13        |
| Q10.            | (d) jump, clap |

**Section B**

Q11.  $1+4+9+16+25 = 55$

Q12. Number of dice required =  $\frac{\text{Volume of 6 unit dice } 6 \times 6 \times 6}{\text{Volume of 2 unit dice } 2 \times 2 \times 2} = 27$

Q13. For ex:

Number of sides of polygon = 4

Number of diagonals =  $\frac{n(n-3)}{2}$

Number of diagonals =  $\frac{4(4-3)}{2} = \frac{4 \times 1}{2} = 2$ .

Q14. Mean =  $\frac{\text{sum of observations}}{\text{number of observations}} = \frac{1+2+3+4+5+6+7+8+9+10}{10} = 5.5$

**Section C**

Q15.  $72-49 = 23$

$118-72 = 46 (23 \times 2)$

Missing value –  $118 = 92 (46 \times 2)$

Missing number =  $92+118 = 210$

Q16. (a) She only required 8 cubes out of 10.

(b) She required 17 more-unit cubes.

(c) She required 54 more-unit cubes.

Q17.

| August 2020 |     |     |     |     |     |     |
|-------------|-----|-----|-----|-----|-----|-----|
| Sun         | Mon | Tue | Wed | Thu | Fri | Sat |
|             |     |     |     |     |     | 1   |
| 2           | 3   | 4   | 5   | 6   | 7   | 8   |
| 9           | 10  | 11  | 12  | 13  | 14  | 15  |
| 16          | 17  | 18  | 19  | 20  | 21  | 22  |
| 23          | 24  | 25  | 26  | 27  | 28  | 29  |
| 30          | 31  |     |     |     |     |     |

|   |    |    |    |
|---|----|----|----|
| 2 | 3  | 3  | 4  |
| 9 | 10 | 10 | 11 |

After choosing grids , and

Sum of diagonal entries =

**For grid 1**

$$2+10 = 12 \text{ and}$$

$$9+3 = 12$$

**For grid 2**

$$3+11 = 14$$

$$10+4 = 14$$

**For grid 3**

$$4+12 = 16$$

$$11+5 = 16$$

Observations:

1. Sum of corresponding diagonal entries for every grid is same.
2. Sum of diagonal entries of a 2 by 2 grid is an even number always.

### Section D

Q18.

(a) Friday

(b) Mean =  $\frac{4+11+18+25}{4} = \frac{58}{4} = 4.5$

(c) 1, 8, 27

(d) Let the grids are:

|    |    |    |
|----|----|----|
| 3  | 4  | 5  |
| 10 | 11 | 12 |
| 17 | 18 | 19 |

and

|    |    |    |
|----|----|----|
| 6  | 7  | 8  |
| 13 | 14 | 15 |
| 20 | 21 | 22 |

$$\text{Mean of all the number of grid 1} = \frac{3+4+5+10+11+12+17+18+19}{9} = \frac{99}{9} = 11$$

$$\text{Mean of all the number of grid 2} = \frac{6+7+8+12+14+15+20+21+22}{9} = \frac{126}{9} = 14$$

$$\text{Sum of diagonal entries of grid 1 : } 3+11+19 = 33 \text{ and } 5+11+17 = 33$$

$$\text{Sum of diagonal entries of grid 2 : } 6+14+22 = 42 \text{ and } 8+14+20 = 42$$



Q19.

|    |    |   |   |    |   |    |
|----|----|---|---|----|---|----|
| 7  | -  | 3 | + | 6  | = | 10 |
| +  |    | - |   | ÷  |   |    |
| 8  | x  | 1 | x | 2  | = | 16 |
| -  |    | - |   | +  |   |    |
| 4  | x  | 5 | - | 9  | = | 11 |
| =  |    | = |   | =  |   |    |
| 11 | -3 |   |   | 12 |   |    |

|   |   |   |   |    |   |    |
|---|---|---|---|----|---|----|
| 9 | x | 1 | + | 8  | = | 17 |
| - |   | + |   | x  |   |    |
| 5 | x | 2 | x | 7  | = | 70 |
| - |   | + |   | -  |   |    |
| 3 | x | 4 | ÷ | 6  | = | 2  |
| = |   | = |   | =  |   |    |
| 1 |   | 7 |   | 50 |   |    |

Q20.

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | C | A | T | E | I | A | C | A | I | A | V |
| T | F | B | F | M | U | R | O | L | O | B | A |
| R | I | Q | L | O | Q | N | E | G | E | I | R |
| I | C | U | A | N | A | O | F | E | Q | N | I |
| N | N | A | I | O | T | N | F | B | U | O | A |
| O | L | D | M | M | C | C | I | R | A | M | B |
| M | I | R | O | I | U | O | C | A | T | I | L |
| I | N | A | N | A | B | N | I | E | I | A | E |
| A | E | T | Y | L | I | S | E | Y | O | L | E |
| L | A | I | L | I | C | T | N | I | N | E | R |
| O | R | C | O | T | T | A | T | E | R | R | O |
| L | L | R | P | E | F | N | R | G | O | L | O |
| U | E | N | A | M | O | T | E | D | E | O | T |
| U | O | R | E | Z | I | D | N | I | B | Z | A |



**परमाणु ऊर्जा शिक्षण संस्था**  
**Atomic Energy Education Society**  
**कार्यपत्रक / Worksheet (2025-26)**

कक्षा /Class:VIII विषय /Subject: Mathematics माह/ Month: April-June अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: **Bridge Programme (Week 2)**

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक /Roll No.\_\_\_\_\_ कक्षा/अनुभाग Class /Sec.:\_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

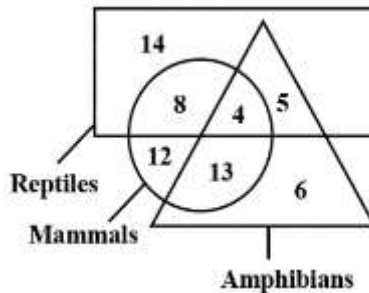
**SECTION A ( MCQs)**

1.Observe the pattern given below and find the missing number-

- a) 8                      b) 9                      c) 7                      d) 2

|   |   |   |
|---|---|---|
| 8 | 3 | 4 |
| 1 | 5 | ? |
| 6 | 7 | 2 |

2.In the given picture, how many Reptiles are neither Mammals nor Amphibians?



- a)14                      b) 13                      c)12                      d)9

3.If a, b, c, d are distinct prime numbers with as smallest primes then  $a \times b \times c \times d$  is –

- a) odd number                      b) even number                      c) prime number                      d) none of these.

4.Sum of all the factors of 93 will be –

- a) 128                      b) 35                      c) 94                      d) 120

5.Each side of a regular polygon is 2.5 cm in length . If its perimeter is 12.5 cm , then how many sides does the polygon have ?

- a) 4                      b) 5                      c) 6                      d) 7

6.A square is a \_\_\_\_\_ with equal sides.

- a) rectangle                      b) kite                      c) hexagon                      d) trapezium

7.How many non perfect square numbers exist in between  $5^2$  and  $6^2$  -

- a) 10                      b) 11                      c) 12                      d) 9

8.Read the word given below and answer the questions-

RACHITA

- a) A-  $\frac{3}{7}$ , B-  $\frac{4}{7}$       b) A-  $\frac{3}{7}$ , B-  $\frac{5}{7}$       c) A-  $\frac{2}{7}$ , B-  $\frac{5}{7}$       d) A-  $\frac{4}{7}$ , B-  $\frac{3}{7}$

a) 24                      b) 20                      c) 21                      d) 19

a) 6                      b) 7                      c) 9                      d) 8

11. If  $1=1$ ,  $1+3=4$ ,  $1+3+5=9$ ,  $1+3+5+7=16$ , then  
 $1+3+5+7+9+11+13+15+17+19+21+23+25+27+29 = ?$

13. Find three different fractional units that add up to 1.

|     |  |    |
|-----|--|----|
| -10 |  |    |
|     |  | -5 |
| 9   |  |    |

|   |  |    |
|---|--|----|
| 7 |  |    |
|   |  | -5 |
|   |  |    |

Border sum is -4

15. I am a two digit number , my digits add up to 9 . If you reverse my digits , the new number is 27 more than the original . What number am I ?

16. The diagonals of a rhombus are 10cm and 24cm long. What is the perimeter of the rhombus?

- My hundreds digit is three times my ones digit.
- The sum of all my digits is 18
- My tens digit is the average of the hundreds and ones digits.

18. If  $\boxed{x} = x^2 + 2$ , when  $x$  is odd  
 $\boxed{x} = x^2 + 3$ , when  $x$  is even



$$= x+3, \text{ when } x \text{ is odd}$$
$$= x+1, \text{ when } x \text{ is even}$$

i) 

ii)  $\bigcirc_{13} + \square_3 \times \square_2$

19. I am a two digit number. My tens digit is twice my ones digit . The sum of my digits is 12 . What number am I ?

20. A tank is filled with water.  $\frac{1}{3}$  of the water is used for cleaning.  $\frac{1}{4}$  of the remaining water is used for gardening.  $\frac{2}{5}$  of what's left after that is used for washing the car. If 60 litres of water is still left in the tank , how much water was there in the tank at first ?

### **SECTION-D ( Assertion –Reason based )**

21. **Assertion (A):** Every prime number greater than 2 is odd.

**Reason (R):** Prime numbers have exactly two distinct positive divisors.

**Options:** 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.

22. **Assertion (A):** A number ending in 2, 3, 7, or 8 can never be a perfect square.

**Reason (R):** The square of any whole number ends only in 0, 1, 4, 5, 6, or 9.

**Options:**

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.

### **SECTION – E ( Case-Based Questions )**

Riya's school is creating a beautiful **garden** in the shape of a **polygon**. The school has asked students to help choose the shape of the garden's boundary. Riya is given three options:

1. A **triangle-shaped** garden (3 sides)
2. A **pentagon-shaped** garden (5 sides)
3. A **hexagon-shaped** garden (6 sides)

Each side of the polygon will be made using fencing. The school has **60 meters of fencing material** available.

23. If Riya chooses a **regular polygon**,

What will be the length of each side for each shape?

24. Find the sum of the interior angles for each shape.

25. Which shape would give the largest interior space? Why?

26. If Riya wants the garden to look more rounded, which polygon should she choose?



**परमाणु ऊर्जा शिक्षण संस्था**  
**Atomic Energy Education Society**  
**उत्तर कुंजी / Answer Key (2025-26)**

**कक्षा /Class: VIII**  
**अंक/Marks: 40**

**विषय /Subject: Mathematics**      **माह/ Month: April – June 2025**  
**दिया गया पाठ्यक्रम/Portion covered: Bridge Programme (Week 2)**

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1. B) 9
2. A) 14
3. B) as  $a = 2$ , so we will get even numbers only.
4. A) 128
5. B) 5
6. A) Rectangle
7. A) 10
8. A)  $A-3/7$ ,  $B-4/7$
9. B) 20
10. B) 7
11. Sum will be the square of the numbers appeared in the expression . So,  $15^2 = 225$
12. Prime factorisation of 1955 =  $5 \times 17 \times 23$
13.  $1/2 + 1/3 + 1/6 = 1$
14. Various possible answers depend on choice of numbers.
15. Let the tens digit  $x$  and ones digit  $y$  then  
 $10x + y$  will be the number and  $x + y = 9$ .....(i)  
Now ,  $(10y + x) - (10x + y) = 27$   
 $y - x = 3$ .....(ii)  
from (i) and (ii) we have ,  $x=3$ ,  $y=6$

Hence original number =36

16. In rhombus diagonals divide it in 4 right angle triangle and diagonals bisect at 90 degree

So in right angle triangle ,  $(\text{side of rhombus})^2 = 12^2 + 5^2 = 169$

Side = 13 , perimeter =  $13 \times 4 = 52$

17. Let the hundreds digit  $x$  , tens digit  $y$  and ones digit  $z$

So,  $x=3z$ ,  $x+y+z=18$ ,  $y=x+z/2$

Solving above equations we have  $x = 9$ ,  $y = 6$ ,  $z = 3$

So , number =  $9 \times 100 + 6 \times 10 + 3 = 963$

18.(i)  $(5^2 + 2) \div (8+1) \times (7+3) = 27 \div 9 \times 10 = 30$

(ii) 92

19. Let ones digit be  $x$  then tens digit will be  $2x$

Number will be  $10 \times 2x + x = 21x$

And sum of digits =  $2x+x = 3x = 12$

$x = 4$  , hence the number will be 84

20. Let the amount of water initially be  $x$  litres

Water used in cleaning =  $x/3$  litres

Remaining water =  $x - x/3 = 2x/3$

Water used in gardening =  $1/4 \times 2x/3 = x/6$

Remaining water now =  $2x/3 - x/6 = x/2$

Water used in washing of car =  $2/5 \times x/2 = x/5$

Remaining water in last =  $x/2 - x/5 = 3x/10$

Now,  $3x/10 = 60$  litres

So, amount of water initially = 200 litres

21. B. Both A and R are true, but R is not the correct explanation of A.

22. A. Both A and R are true, and R is the correct explanation of A.

23. For triangle shaped regular polygon sides will be 20cm

For pentagon shaped, side = 12cm, for hexagon shaped, side = 10cm

24. Sum of interior angles of regular polygon =  $(n-2) \times 180$  degree, where  $n$  is number of sides.

25. Hexagon shape as on increasing the number of sides of regular polygon the shapes will be turned to very close to circle, and for same perimeter circle kind shape has maximum space.

26. Hexagon shape.



# परमाणु ऊर्जा शिक्षण संस्था

## Atomic Energy Education Society

### कार्यपत्रक / Worksheet (2025-26)

**कक्षा/Class: VIII विषय/Subject: Mathematics माह/ Month: April अंक/Marks: 40**

**दिया गया पाठ्यक्रम/Portion covered: Bridge Programme – Week 03**

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक/Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

### SECTION A ( MCQs)

- 1 The number that comes next in the following series: 1  
1, 3, 5, 7, 9, 11, \_\_, \_\_, \_\_  
  
(A) 13, 15, 17 (B) 12, 13, 14 (C) 13, 14, 15 (D) 7, 9, 13
- 2 A box has 24 chocolates. If Rani eats  $\frac{1}{3}$  of them, how many does she eat? 1  
A) 6 B) 8 C) 12 D) 18
- 3 3. The sum of two rational numbers is always: 1  
A) Rational B) Irrational C) Sometimes rational D) Always an integer
- 4 What is the standard form of the rational number  $-\frac{18}{24}$ ? 1  
A)  $-\frac{9}{12}$  B)  $-\frac{3}{4}$  C)  $-\frac{6}{8}$  D)  $-\frac{2}{3}$
- 5 The surface area of a cube with side 5 cm is: 1  
A)  $150 \text{ cm}^2$  B)  $125 \text{ cm}^2$  C)  $100 \text{ cm}^2$  D)  $75 \text{ cm}^2$
- 6 What is the unit of volume? 1  
A) cm B)  $\text{cm}^2$  C)  $\text{cm}^3$  D) m
- 7 A cuboid has length 4 cm, breadth 3 cm and height 2 cm. What is its volume? 1  
A)  $24 \text{ cm}^3$  B)  $18 \text{ cm}^3$  C)  $20 \text{ cm}^3$  D)  $30 \text{ cm}^3$
- 8 How many faces does a cube have? 1  
A) 4 B) 6 C) 8 D) 12
- 9 Which of the following is used to measure the surface area? 1  
A)  $\text{cm}^3$  B) litres C)  $\text{cm}^2$  D)  $\text{m}^3$
- 10 What is  $\frac{1}{4}$  of 20? 1  
A) 10 B) 4 C) 5 D) 2
- 11 A water tank is filled up to  $\frac{3}{4}$  of its capacity. If the tank's full capacity is 80 liters, how much water is in it now? 2

### SECTION-B ( Very Short Questions )

- 12 I am a number. 2

When you take  $\frac{1}{2}$  of me, you get 10.

What number am I ?

13 There are 40 students in a class. 2

$\frac{1}{5}$  of them went on a trip.

How many went on the trip?

14 I am a solid shape with all equal edges. 2

I have 6 square faces and my volume is  $a \times a \times a$ .

What shape am I?

15 I have a length, breadth, and height. 2

I look like a box and my volume is found by  $l \times b \times h$ .

What am I?

16 I think of a number. 2

If I double it and subtract 4, I get 10.

What is the number?

17 I add 8 to a number and get the same result as when I subtract 2 from twice that number. 3

What is the number?

18 Figures 1,2, and 3 are scaled copies of each other. 3

Each small square has a side length of 1 unit and an area of 1 square unit.

- i. Describe any patterns you see.
- ii. find the diagonal length of 1 square unit.
- iii. How many units are required to make a perfect square in each figure?

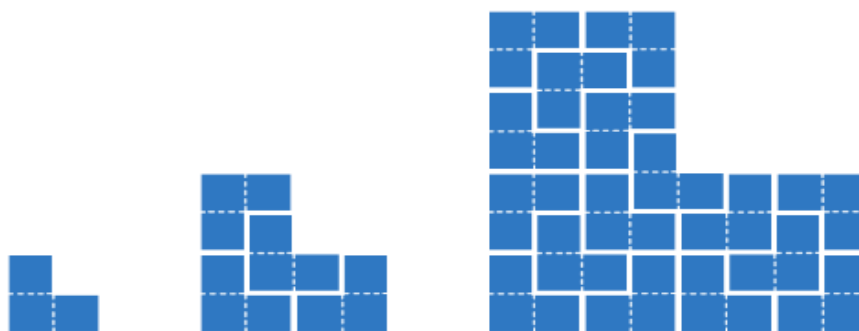
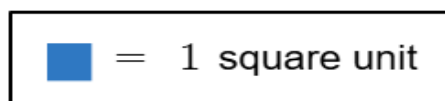


Figure 1

Figure 2

Figure 3

### **SECTION-C ( Short Answers Questions)**

19 Five more than half a number is 17. 3

What is the number?

20 Here, you are given two representations, where symbols have been used. Each symbol represents a 3



numeric value. Find the value of each symbol.

$$\begin{array}{lcl}
 \blacksquare + \blacksquare + \blacksquare & = & 15 \\
 \blacktriangle + \blacktriangle + \blacksquare & = & 13 \\
 \blacktriangle + \blacksquare + \bigcirc & = & 15 \\
 \bigcirc + \bigcirc + \blacksquare & = & \\
 \bigcirc + \blacktriangle + \blacktriangle & = & 
 \end{array}
 \qquad
 \begin{array}{lcl}
 \star + \blacksquare & = & 12
 \end{array}
 \qquad
 \begin{array}{lcl}
 \star & = & \\
 \bigcirc & = & \\
 \blacksquare & = & \\
 \blacktriangle & = & 
 \end{array}$$

21

1

### **SECTION-D ( Assertion –Reason based )**

Assertion (A) –The area of a rectangle of length a and breadth b is ab

Reasons (R) –The area of a rectangle (A) is the product of its length ‘a’ and width or breadth ‘b’.

- 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

22 Assertion (A) –The total surface area of a cylinder of base radius r and height h is  $2\pi r (r + h)$

1

Reasons (R) –The surface area formula is a mathematical solution to find the total area of any three-dimensional object occupied by all of its surfaces

- 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

23

4

### **SECTION – E ( Case Based Questions )**

A playground is in the shape of a square. The area of the square PQRS is  $256 \text{ m}^2$  with each side  $(x + 2)$  m. One day, Suraj along with his two friends Ajay and Aman, went to play there with bicycle. Someone stole Suraj’s bicycle, but Ajay and Aman helped him by contributing ₹(4a + 60) and ₹(6a + 10) respectively, to buy a new bicycle. The cost of the bicycle was ₹4200.

On the basis of the information given in the passage, answer the following questions -






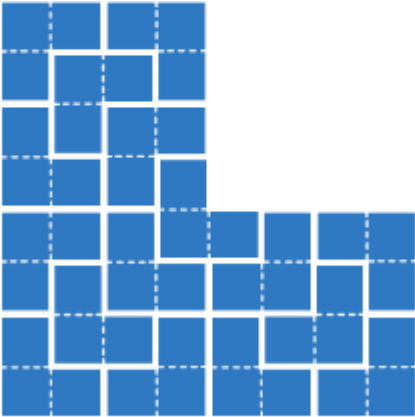





















- i. Find the value of  $x$ .
- ii. Find the side of the square-shaped ground?
- iii. What is the value of  $a$ ?
- iv. Find the total boundary length of this garden



परमाणु ऊर्जा शिक्षण संस्था  
Atomic Energy Education Society  
उत्तर कुंजी / Answer Key (2025-26)

कक्षा /Class: VIII विषय /Subject: Mathematics माह/ Month: April-June  
दिया गया पाठ्यक्रम/Portion covered: Bridge Programme (Week 3)

|    |  |   |
|----|--|---|
| 1  | A)13, 15, 17   | 1 |
| 2  | B) 8   | 1 |
| 3  | A) Rational  | 1 |
| 4  | B) $-3/4$  | 1 |
| 5  | A) $150 \text{ cm}^2$  | 1 |
| 6  | C) $\text{cm}^3$   | 1 |
| 7  | A) $24 \text{ cm}^3$   | 1 |
| 8  | B) 6   | 1 |
| 9  | C) $\text{cm}^2$   | 1 |
| 10 | C) 5   | 1 |
| 11 | 60 liters  | 2 |
| 12 | 20   | 2 |
| 13 | 8  | 2 |
| 14 | Cube   | 2 |
| 15 | Cuboid   | 2 |
| 16 | Equation: $2x - 4 = 10$<br>$x = 7$                                 | 2 |
| 17 | Equation: $x + 8 = 2x - 2$<br>$x = 10$                             | 3 |
| 18 | <p>i. 3,12,48,48*4,.....</p> <p>ii. Root 2</p> <p>iii. 1,4,16.</p> | 3 |

|    |  |   |
|----|--|---|
|    | <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">  = 1 square unit         </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p>Figure 1</p> </div> <div style="text-align: center;">  <p>Figure 2</p> </div> <div style="text-align: center;">  <p>Figure 3</p> </div> </div>   |   |
| 19 | Equation: $(1/2)x + 5 = 17$<br>Answer: $x = 24$  | 3 |
| 20 | <p>Here, you are given two representations, where symbols have been used. Each symbol represents a numeric value. Find the value of each symbol.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"> <div style="width: 45%;"> <p> +  +  = 15</p> <p> +  +  = 13</p> <p> +  +  = 15</p> <p> +  +  =</p> <p> +  +  =</p> </div> <div style="width: 45%; text-align: center;"> <p> +  = 12</p> </div> <div style="width: 10%; text-align: center;"> <p> =</p> <p> =</p> <p> =</p> <p> =</p> </div> </div> | 3 |
| 21 | A.   | 1 |
| 22 | A  | 1 |
| 23 | i. $X = 14\text{ m}$<br>ii. Side = $16\text{ m}$<br>iii. $a = 413$<br>iv. $64\text{ m}$  | 4 |



परमाणु ऊर्जा शिक्षण संस्था  
**Atomic Energy Education Society**  
 कार्यपत्रक / Worksheet (2025-26)

कक्षा /Class: VIII

विषय /Subject: Mathematics

माह/ Month: April

अंक/Marks: 40

दिया गया पाठक्रम/Portion covered: Week 04 Activities of Bridge course

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक /Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**SECTION- A (10×1= 10 marks)**

- 1.** In which directions can the path move in the zigzag puzzle grid? (based on activity W4.1)
  - (a) Only horizontal    (b) Only vertical    (c) Horizontal, vertical, or diagonal    (d) Only diagonal
- 2.** How many times can each number be visited in the zigzag puzzle grid? (based on activity W4.1)
  - (a) Multiple times    (b) Exactly once    (c) At least twice    (d) Not specified
- 3.** What is the sum of the first 10 consecutive odd numbers?
  - (a) 50                      (b) 100                      (c) 150                      (d) 200
- 4.** What is the formula to find the sum of  $n$  consecutive odd numbers?
  - (a)  $n^2$                       (b)  $n(n+1)$                       (c)  $n(n-1)$                       (d)  $2n$
- 5.** What is the pattern in the number of small triangles in each case? (based on activity W4.6)
  - (a) Arithmetic sequence with common difference 1
  - (b) Arithmetic sequence with common difference 2
  - (c) Sequence of triangular numbers (1, 3, 6, 10, ...)
  - (d) Geometric sequence with common ratio 2
- 6.** What happens to each line segment in the Koch Snowflake sequence? (based on activity W4.3)
  - (a) It is replaced by a smaller line segment
  - (b) It is replaced by a 'speedbump' shape
  - (c) It remains the same
  - (d) It is removed
- 7.** What type of graph is best suited to show trends over time?
  - (a) Bar graph                      (c) Line graph
  - (b) Pictograph                      (d) All of the above
- 8.** What is the primary purpose of using tally marks in data collection?

- (a) To draw a graph (b) To calculate the mean  
(c) To count and record data (d) To find the median

**9.** What 3D shape is formed when stacking blocks for  $2^3$ ?

- (a) Cuboid (b) Cube (c) Cylinder (d) Sphere

**10.** What shape is formed when building the Sierpinski Triangle?

- (a) Square (b) Rectangle (c) Triangle (d) Circle

**SECTION- B (04×02= 08 marks)**

**11.** What happens to the middle triangle in the second step of building a Sierpinski Triangle?

**12.** What is the difference between a bar graph and a pictograph?

**13.** How many total line segments are there in the second shape of the Koch Snowflake sequence?

**14.** Calculate the sum of the first 10 odd numbers without writing and adding them?

**SECTION- C (03×03= 09 marks)**

**15.** Represent the following data in a bar graph: favorite games of students

(cricket: 20, football:15 basketball: 10).

**16.** (a) In which directions can the path move in the zigzag puzzle? (based on activity W4.1)

(b) What is the constraint on the path in the zigzag puzzle?

**17.** (a) What is a fractal?

(c) Describe a key characteristic of fractals?

**SECTION- D (01×05= 05 marks)**

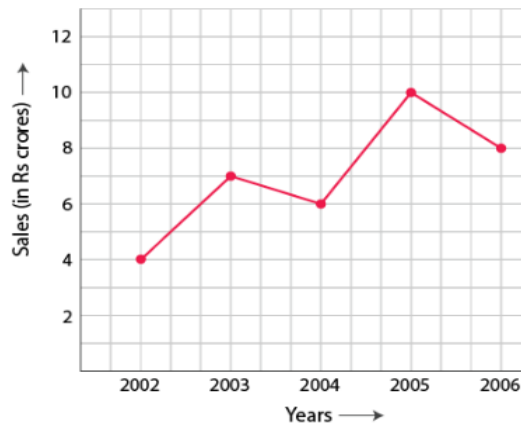
**18.** The following line graph shows the yearly sales figures for a manufacturing company.

(a) What were the sales in (i) 2002 (ii) 2006?

(b) What were the sales in (i) 2003 (ii) 2005?

(c) Compute the difference between sales in 2002 and 2006.

(d) In which year was there the greatest difference between the sales as compared to its previous year?



## SECTION- E (02×04= 08

marks)

### 19. Case Study: The

Curious Leaf Pattern.  
Riya was walking in a garden when she picked up a beautiful fern leaf. She noticed that each small leaflet looked like a smaller version of the whole leaf. Curious, she showed it to her teacher the next day. Her teacher smiled and said, "This is a great example of a fractal in nature!"

Fractals are patterns that repeat at different scales. Whether you zoom in or zoom out, the shape looks similar. They are found in nature (like snowflakes, trees, and mountains) and are used in computer graphics, medicine, and even weather prediction!

The teacher also showed her a computer-generated fractal called the **\*\*Sierpinski Triangle\*\***, where each triangle contains smaller triangles inside it, repeating again and again.

1. What is a fractal? Explain in your own words with one example from nature.
2. How does the fern leaf show the characteristics of a fractal?
3. Draw or describe another object from nature that looks like a fractal.

### 20. Case Study: The Mystery of the Number Machine

Ravi's school got a new "Number Machine" that follows a hidden rule. She notices that when certain numbers are input, the machine gives different outputs:

| Input (X) | Output (Y) |
|-----------|------------|
| 1         | 3          |
| 2         | 6          |
| 3         | 11         |
| 4         | 18         |
| 5         | 27         |

Ravi is curious and wants to decode the rule the machine uses to convert the input into output.

1. Observe the pattern and write the relationship (rule) between the input (X) and the output (Y).
2. Predict the output when the input is 6.
3. If the output is 43, what was the input?







परमाणु ऊर्जा शिक्षण संस्था

Atomic Energy Education Society  
उत्तर कुंजी / Answer Key (2025-26)

कक्षा /Class: VIII

विषय /Subject: Mathematics

माह/ Month:

April-June

दिया गया पाठ्यक्रम/Portion covered: Bridge Programme (Week 4)

**ANSWER KEY**

**Section A**

| Question number | Answer   |
|-----------------|--|
| Q1.             | (c) Horizontal, vertical, or diagonal                    |
| Q2.             | (b) Exactly once   |
| Q3.             | (b) 100  |
| Q4.             | (a) $n^2$  |
| Q5.             | (c) Sequence of triangular numbers<br>(1, 3, 6, 10, ...) |
| Q6.             | (b) It is replaced by a 'speedbump' shape                |
| Q7.             | (c) Line graph   |
| Q8.             | (c) To count and record data                             |
| Q9.             | (b) Cube   |
| Q10.            | (c) Triangle   |

**Section B**

**Q11.** The middle triangle is removed after joining the midpoints of each side.

**Q12.** A bar graph uses bars to represent data, while a pictograph uses symbols or images to represent data.

**Q13.** Depends on the starting number of segments, if starting with 3 segments for an equilateral triangle. For the first iteration (or the second shape if we count the initial triangle as the first shape), each side gets replaced by 4 segments, so  $3 \times 4 = 12$  segments.

**Q14.** 100 (since  $10^2 = 100$ ).

**Section C**

**Q15.** Draw horizontal line for name of the games and vertical line for number of students and draw the bar on horizontal line. Bar graph with correct labels and scales, and bars representing the data.

**Q16.** (a) Horizontal, vertical, or diagonal directions

(b) The path cannot cross itself. .

**Q17.** (a) A shape or pattern that repeats itself no matter how much you zoom into it.

(b) Fractals exhibit self-similarity, meaning they appear the same at different scales.

#### **Section D**

**Q18.**

(a) The sales in

(i) 2002 was Rs. 4 crores and (ii) 2006 was Rs. 8 crores

(b) The sales in

(i) 2003 was Rs. 7 crores and (ii) 2005 was Rs. 10 crores.

(c) The difference of sales in 2002 and 2006 = Rs. 8 crores – Rs. 4 crores = Rs. 4 crores

(d) In the year 2005, there was the greatest difference between the sales, and compared to its previous year, which is (Rs. 10 crores – Rs. 6 crores) = Rs. 4 crores

#### **Section E**

**Q19.** (1) A fractal is a pattern that repeats itself at different scales, showing self-similarity. An example from nature is a Romanesco broccoli, where its florets resemble the whole head.

(2) The fern leaf shows fractal characteristics because each small leaflet resembles a smaller version of the whole leaf, repeating the pattern at different scales.

(3) Another example is a snowflake. Snowflakes have intricate patterns that repeat themselves at different scales, showing self-similarity and fractal properties.

**Q20.** (1) The formula  $Y = x^2 + 2$  seems to fit.

(2) Using the formula  $Y = x^2 + 2$ , for  $X = 6$ :

$$Y = 6^2 + 2 = 36 + 2 = 38$$

(3) Given  $Y = x^2 + 2$ , and  $Y = 43$ :

$$43 = x^2 + 2$$

$$x^2 = 41$$

$$X = \sqrt{41} \approx 6.4$$



**परमाणु ऊर्जा शिक्षण संस्था**  
**Atomic Energy Education Society**  
**कार्यपत्रक / Worksheet (2025-26)**

कक्षा /Class:VIII विषय /Subject: Mathematics माह/ Month: April-June अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: **Bridge Programme (Week 5)**

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक /Roll No.\_\_\_\_\_ कक्षा/अनुभाग Class /Sec.:\_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**General instruction:**

- 1.) All questions are compulsory.
- 2.) Section A contains 10 multiple choice questions carry 1 marks each.
- 3.) Section B contains 4 very short answer type questions carry 2 marks each.
- 4.) Section C contains 3 short answer type questions carry 3 marks each.
- 5.) Section D contains 1 long answer type question carry 5 marks.
- 6.) Section E contains 2 case based type questions carry 4 marks each.

**Section A [ 1 × 10 = 10 marks ]**

**Multiple choice questions.**

1. Which of the following is a key feature of a fractal?

- |  |   |
|--|---|
| (A) It has a well-defined smooth boundary. | (B) It has self-similarity across scales.               |
| (C) It is always a 2-dimensional object.   | (D) It can be described by a single polynomial equation |

2. In the context of fractals, what does the term “self-similarity” mean?

- (A) A fractal is composed of a single distinct pattern.  
 (B) The structure of the fractal is identical at different scales.  
 (C) The fractal can only be described at the macroscopic level.  
 (D) The fractal has no repeating structures

3. What does the term “fractal” mean in geometry?

- (A) A geometric shape that can be subdivided into parts, each of which is a reduced-scale copy of the whole.  
 (B) A geometric shape that does not repeat in any form.  
 (C) A simple shape that can be represented by a single equation.  
 (D) A geometric shape that is always smooth.

4. What is the smallest number when increased by 7 is divisible by 9, 11 and 36?

- a) 493                                      b) 394                                      c) 484                                      d) 389

5. Common multiples of 8 and 12 is \_\_\_\_.

- a) 24                                      b) 16                                      c) 12                                      d) 36

6. A graph that displays data that changes continuously over periods of time is called:

- A. Bar-graph                      B. Pie-chart                      C. Histogram                      D. Line Graph

7. Which point lies only on y-axis?

A. (-2,0)

B. (2,0)

C. (0,-2)

D. (2,-2)

8. The point (4,0) lies on which of the following?

A. x-axis

B. y-axis

C. origin

D. None of the above

9. The point (0,0) lies at:

A. x-axis

B. y-axis

C. origin

D. None of the above

10. What is the power of  $4^5$ ?

a) 64

b) 16

c) 1024

d) 729

### **Section B [ $2 \times 4 = 8$ marks ]**

#### **Very short answer type question**

11. Find the sum and product of the place value and face value of 6 in the number 86245.

12. What number will replace A, if 3313A is divisible by 33?

13 Check whether the following numbers are perfect numbers or not.

(i) 282

(ii) 8128

14. Fill in the blanks:

(i)  $20600 + \underline{\hspace{1cm}} + 30 + 5 = 28635$ .

(ii)  $\underline{\hspace{1cm}} + \underline{\hspace{1cm}} + 86 = 4586$ .

(iii)  $4000 + 3 + 400 + \underline{\hspace{1cm}} = 4443$ .

(iv)  $34589 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$ .

### **Section C [ $3 \times 3 = 9$ marks ]**

15. Think of a 3- digit number in which the first and the last digits differ by at least 1. Reverse its digit and subtract the smaller number from the larger of the two. Add the resulting number and its reverse. What do you find?

16. Draw a line graph between powers of 2 and powers of 3?

|            | Exponent of 0 | Exponent of 1 | Exponent of 2 | Exponent of 3 | Exponent of 4 | Exponent of 5 |
|------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Power of 2 | 1             | 2             | 4             | 8             | 16            | 32            |
| Power of 3 | 1             | 3             | 9             | 27            | 81            | 243           |

17. Check whether 1440 is divisible by 15.

### **Section-D [ $\frac{1}{2} \times 10 = 5$ marks]**

18. Answer the following question from below given table.

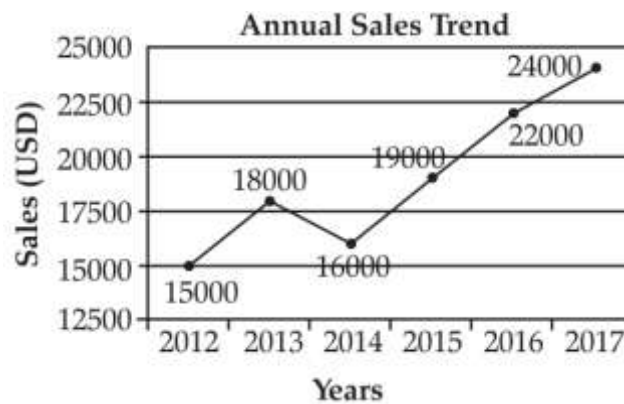
|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 0  | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |

- a) The number is greater than 9.
- b) The number is not a multiple of 10.
- c) The number is a multiple of 8.
- d) The number is even.
- e) The number is not a multiple of 11.
- f) The number is less than 175.
- g) Its ones digit is larger than its tens digit.
- h) Its tens digit is odd
- i) A smallest even prime number.
- j) A number that is neither prime number nor composite number.

### **Section-E [ $2 \times 4 = 8$ marks]**

19. Read the text carefully and answer the questions:

The given line graph shows the annual sales of car for past six years. on basis of given information in graph answer the following questions:



On the basis of above information answer the following questions:

- i) What was the sale of car in year 2015?

(a) 15000(b) 16000(c) 18000(d) 19000

ii) How many cars are sold between 2013 and 2012?

(a) 3000

(b) 5000

(c) 6000

(d) 8000

iii) In which year sale is maximum?

(a) 2014

(b) 2017

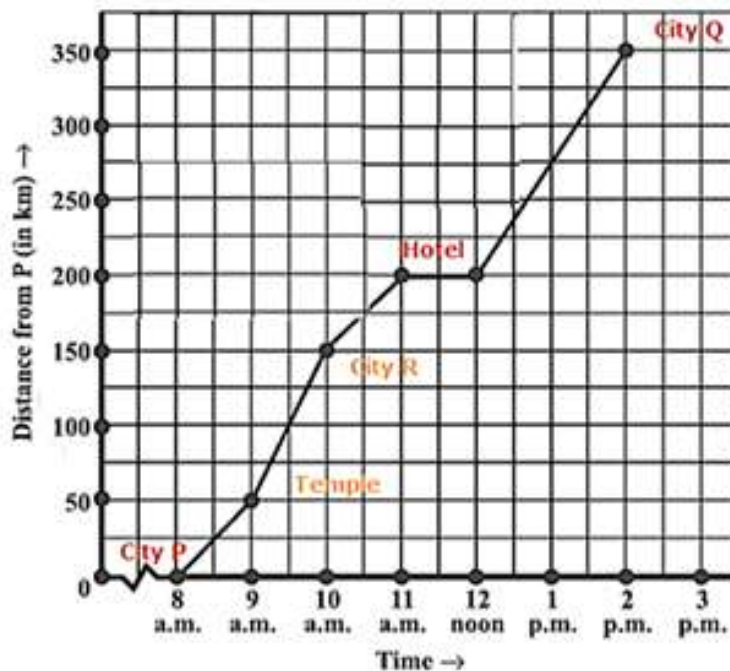
(c) 2015

(d) 2016

iv) In which year the sales of car depreciated and by how much?

20. Read the text carefully and answer the questions:

Deepak travelled by car from his city P to other city Q. His journey has been plotted in the following graph. Deepak started at 8 am from P. At 9 am he crossed through a temple but he did not stop there. At 10 AM. He reached at another city R. Now he felt tired and hungry so his eyes were looking for a hotel. After driving for 1 hr he saw a hotel at road side. He decided to stop at hotel for lunch and relaxing .Total time spent at hotel was 1 hr. At 12 pm Deepak again started for city Q. Finally he reached city Q at 2 PM



i) How far did the car go during the 2nd hour?

a) 75 km

b) 100 km

c) 150 km

(d) 50 km

ii) For which period Deepak stopped at hotel?

a) 10 am to 11 am b) 12 pm to 1 pm c) 11 am to 12 pm d) 9 am to 10 am

iii) What was the speed of car from Hotel to city Q?

a) 40 km/hr b) 75 km/hr c) 50 km/hr d) 100 km/hr

iv) Fill in the blanks:

The average speed from city P to Q was \_\_\_\_\_ km/hr

\*\*\*\*\*



**परमाणु ऊर्जा शिक्षण संस्था**  
**Atomic Energy Education Society**  
**कार्यपत्रक / Worksheet (2025-26)**

**कक्षा /Class:VIII विषय /Subject: Mathematics माह/ Month: April-June**  
**दिया गया पाठ्यक्रम/Portion covered: Bridge Programme (Week 5)**

**ANSWER KEY**

**Section A [  $1 \times 10 = 10$  marks ]**

1. B
2. B
3. A
4. D
5. A
6. D
7. C
8. A
9. C
10. C

**Section B [  $2 \times 4 = 8$  marks ]**

11. Place value of 6 = 6000

Face value of 6 = 6

Then,

$$6000 + 6 = 6006$$

$$6000 \times 6 = 36000$$

12. For a number to be divisible by 33, it should be divisible by 3 and 11.

For a number to be divisible by 3, the sum of the digits should be divisible by 3 i.e.,  $3+3+1+3+A=10+A$  should be divisible by 3.

Therefore, A can take 2, 5 or 8.

We know that, for a number to be divisible by 11, the difference between the sum of digits in odd places and the sum of digits in even places should be either 0 or a number divisible by 11.

$$(3+1+A) - (3+3) = A-2.$$

Therefore,  $A=2$ .

13. (i) Factors of 282 are 1, 2, 3, 6, 47, 94, 141, 282.

The proper divisors of 282 are 1, 2, 3, 6, 47, 94, 141.

Now,

$$1 + 2 + 3 + 6 + 47 + 94 + 141 = 294 \neq 282.$$

Thus, 282 is not a perfect number.

(ii) Factors of 8128 are 1, 2, 4, 8, 16, 32, 64, 127, 254, 508, 1016, 2032, 4064 and 8128

Proper divisors of 282 = 1, 2, 4, 8, 16, 32, 64, 127, 254, 508, 1016, 2032, 4064

Now,

$$1 + 2 + 4 + 8 + 16 + 32 + 64 + 127 + 254 + 508 + 1016 + 2032 + 4064 = 8128$$

Thus, 8128 is a perfect number.

14. i)  $20600 + 8000 + 30 + 5 = 28635$ .

(ii)  $4000 + 500 + 86 = 4586$ .

(iii)  $4000 + 3 + 400 + 40 = 4443$ .

(iv)  $34589 = 30,000 + 4000 + 500 + 80 + 9$ .

### **Section C [3 × 3 = 9 marks]**

15. Marks should be given according to answer

16. Marks should be given according to answer

17. Given number = 1440.

Now, we need to check whether the number 1440 is divisible by 15.

According to the divisibility rule of 15, a numeral is divisible by 15 if it is divisible by both 3 and 5.

Since the unit digit of 1440 is 0, it is divisible by 5.

Also, the sum of digits of 1440 =  $1 + 4 + 4 + 0 = 9$

Hence, the sum of digits is 9, it is divisible by 3.

Since 1440 is divisible by both 3 and 5, 1440 is divisible by 15

### **Section -D [ $\frac{1}{2} \times 10 = 5$ marks]**

18. a) 10, 11, 12, 13, 14, ...

b) 11, 12, 13, 14, 21, 22, many more.

c) 16, 24, 32, 40, 48,

d) 2, 4, 6, 8, 10, 12, 14, 16, many more

e) 25, 35, 85, 42, 74, many more

f) All the numbers from 0 to 99



g) 58, 49, 26, 18, many more

h) 56, 39, 78, many more

i) Two

j) One

**Section-E [2 ×4 = 8 marks]**

19. i) Ans. Option (d) is correct.

Explanation: Sale of car in year 2015 as shown in graph is 19000.

ii) . Option (a) is correct

iii)Option (b) is correct

iv) . Sale of car in 2013 = 18000

Sale of car in 2014 = 16000

So it is clear that sale of car depreciated in year 2014

Amount of depreciation =  $18000 - 16000 = 2000$

20. (i) (b) 100 km

Explanation: 100 km

(ii) (c) 11 am to 12 pm

Explanation: 11 am to 12 pm

(iii) (b) 75 km/hr

Explanation: 75 km/hr

(iv) 1. 70

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परमाणु उर्जा शिक्षण संस्थान

ATOMIC ENERGY EDUCATION SOCIETY

कार्यपत्रक / WORKSHEET (2025-26)

कक्षा/Class: VIII

विषय/Subject: Mathematics

अंक/Marks: 40

माह/Month: \_\_\_\_\_

दिया गया पाठ्यक्रम/Portion covered: WEEK 6

विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

अनुक्रमांक/Roll No.: \_\_\_\_\_

कक्षा/अनुभाग/Class/Section: VIII/\_\_\_\_\_

दिनांक/Date: \_\_\_\_\_

**General Instructions:**

1. This paper contains four sections: **Section A, B, C and D.**
2. Marks of each question is given in front of it.
3. Attempting all the questions is compulsory.

**SECTION A**

**1. MULTIPLE CHOICE QUESTIONS:**

**(10 × 1 M = 10 M)**

- 1) What comes next: 568, 591, 614, 637, \_\_\_\_?  
(a) 650 (b) 640 (c) 660 (d) 680
- 2) Arrange the numbers in decreasing order: 452, 425, 245, 524, 254, 542:  
(a) 524, 542, 425, 452, 254, 245 (c) 542, 524, 425, 452, 245, 254  
(b) 542, 524, 452, 425, 254, 245 (d) 524, 542, 452, 425, 245, 254
- 3) The supercell in the following series is: **48 81 70 63 50 45 16**  
(a) 81 (b) 70 (c) 48 (d) 50
- 4) The number whose sum of the digits is 18 is:  
(a) 195 (b) 168 (c) 150 (d) 189
- 5) The number having palindromic pattern is:  
(a) 14541 (b) 14661 (c) 15415 (d) 16646
- 6) The object that is less than a thousand in number in your house is:  
(a) Salt Crystals (c) Sugar Crystals  
(b) Flour Crystals (d) Furniture
- 7) Which of the following date does not follow a certain pattern?  
(a) 11/02/2011 (b) 20/12/2012 (c) 29/09/1999 (d) 13/02/2031

- 8) The palindrome of 56 is:

(a) 121 (b) 131 (c) 141 (d) 151

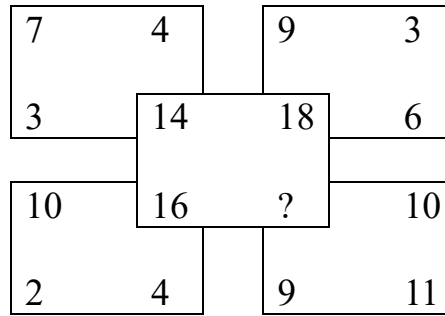
- 9) What comes next: 1234, 2345, 3456, 4567, \_\_\_\_\_?  
 (a) 6789 (b) 7890 (c) 5678 (d) 8901
- 10) What comes next: ACE, BDF, GIK, \_\_\_\_\_, \_\_\_\_\_?  
 (a) JKL, GHI (b) LNP, MOQ (c) PQR, STU (d) HJL, MOQ

## SECTION B

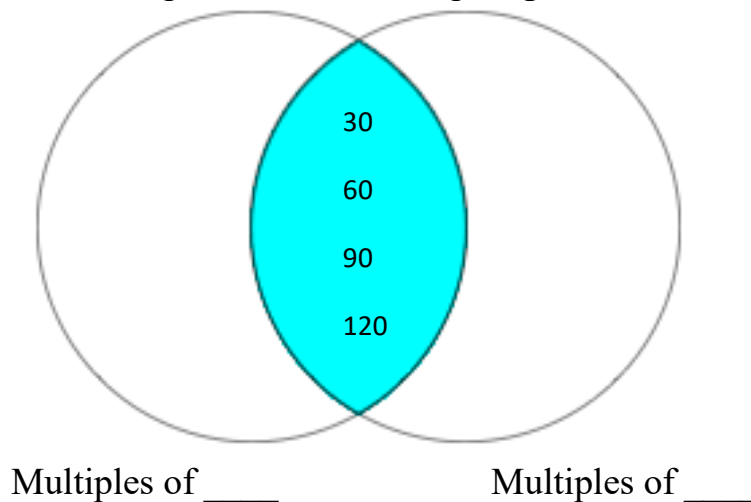
### 2. VERY SHORT ANSWER TYPE QUESTIONS:

(4 × 2 M = 8 M)

- 1) By using any 3-digit number, reach the Kaprekar constant 495.  
 2) What comes in the question mark (?)?



- 3) Write Idli-Vada game for numbers 3 and 4 up to 20.  
 4) Fill the bubbles with the help of common multiples given in the intersection of the bubbles:



## SECTION C

### 3. SHORT ANSWER TYPE QUESTIONS:

(3 × 3 M = 9 M)

- 1) Make the palindrome of the following numbers:  
 (a) 59 (b) 78 (c) 93
- 2) Calculate the digit sums of **any six** 4-digit numbers whose digits are consecutive.
- 3) Use your birth year and reach the Kaprekar constant 6174.

### 4. LONG ANSWER TYPE QUESTION:

(1 × 5 M = 5 M)

Fill the grid with prime numbers only, so that the product of each row is the number to the right of the row and the product of each column is the number below the column. Also, find the value of  $x$ .

|     |    |     |     |
|-----|----|-----|-----|
|     |    |     | 70  |
|     |    |     | 165 |
|     |    |     | $x$ |
| 175 | 42 | 154 |     |

### SECTION E

#### 5. CASE STUDY BASED QUESTIONS:

(2 × 4 M = 8 M)

- 1) Today's biggest invention is Smart watch. The main use of smart watch now-a-days is counting the number of steps for a healthy lifestyle. Gargi noticed the number of steps she walked on the smart watch in the evening and found it to be 23,328.

Based on the above information, answer the following questions:

- (a) Is the given number a perfect cube? (1 M)
- (b) If not, what is the smallest number to be multiplied to make it a perfect cube? (1 M)
- (c) What is the **unit** digit of the cube of the number 99999? (1 M)
- (d) What is the cube root of 1728? (1 M)

- 2) A society has a park in the centre of the society. The park is in the shape of rectangle of area  $200 \text{ m}^2$  and length of this park is 25m.

Based on the above information, answer the following questions:

- (a) Find the width of the park. (1 M)
- (b) What is the perimeter of the park? (1 M)
- (c) If a path of 1 m is constructed inside the boundary of the park, then find the area of grassy portion. (2 M)

# ATOMIC ENERGY EDUCATION SOCIETY

## / ANSWER KEY OF WORKSHEET (2025-26)

/Class: VIII

/Subject: Mathematics

/Marks: 40

/Month: \_\_\_\_\_

/Portion covered: WEEK 6

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### SECTION A

#### 1. MULTIPLE CHOICE QUESTIONS:

- 1) (c)      2) (b)      3) (a)      4) (d)      5) (a)      6) (d)      7) (c)  
8) (a)      9) (c)      10) (d)

1 mark is awarded to each correct option.

### SECTION B

#### 2. VERY SHORT ANSWER TYPE QUESTIONS:

- 1) Students can use any 3-digit number to reach the Kaprekar constant. 1/2 mark is awarded to each step.
- 2) Sum of all the numbers in a box is equivalent to the number given at the corner of the central box. So,  $9 + 10 + 11 = 30$ .
- 3) 1, 2, Idli, Vada, 5, Idli, 7, Vada, Idli, 10, 11, Idli-Vada, 13, 14, Idli, Vada, 17, Idli, 19, Vada.
- 4) Multiples of 5 and Multiples of 6. Students will write the multiples of 5 and 6 in the given respective portions.

### SECTION C

#### 3. SHORT ANSWER TYPE QUESTIONS:

- 1) (a) Palindrome of 59 is 1111 {Sol:  $59 + 95 = 154$ ,  $154 + 451 = 605$ ,  $605 + 506 = 1111$ }  
(b) Similarly, palindrome of 78 = 4884      (c) Palindrome of 93 = 363  
1 mark is awarded to each correct answer.
- 2) Students can choose any six 4-digit numbers whose digits are consecutive, and find the sum of their digits.  
1/2 mark is awarded for the sum of each 4-digit number chosen.
- 3) Students will use their birth year to find the Kaprekar constant 6174.  
1/2 mark is awarded for each correct step.

## SECTION D

### 4. LONG ANSWER TYPE QUESTION:

|            |           |            |            |
|------------|-----------|------------|------------|
| 5          | 2         | 7          | <b>70</b>  |
| 5          | 3         | 11         | <b>165</b> |
| 7          | 7         | 2          | <b>x</b>   |
| <b>175</b> | <b>42</b> | <b>154</b> |            |

The value of  $x = 98$ .

1 mark is awarded for each correct answer.

## SECTION E

### 5. CASE STUDY BASED QUESTIONS:

- 1) (a) No, the number is not a perfect cube.  
(b) The smallest number multiplied to make the number is 2.  
(c) The unit digit of cube of 99999 is 9.  
(d) Cube root of 1728 = 12.
- 2) (a) Width of park = 8 m  
(b) Perimeter of park = 66 m  
(c) Length of grassy portion = 23 m, Breadth of Grassy portion = 6 m  
So, Area of the grassy portion =  $23 \text{ m} \times 6 \text{ m} = 138 \text{ m}^2$



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अनुक्रमांक /Roll No. \_\_\_\_\_ कक्षा/अनुभाग Class /Sec.: \_\_\_\_\_ दिनांक /Date: \_\_\_\_\_

**भाग 1: बहुविकल्पीय प्रश्नों के उत्तर**

1. (b)
2. (b)
3. (b)
4. (c)
5. (c)
6. (b)
7. (b)
8. (b)
9. (a)
10. (c)
11. (c)
12. (c)
13. (c)
14. (a)
15. (b)
16. (b)
17. (a)

- 18. (d)
- 19. (b)
- 20. (d)

## भाग 2: एक पंक्ति उत्तर

- 21. बच्चे और युवा
- 22. एल (L) आकार
- 23. विपक्षी खिलाड़ी
- 24. होली
- 25. गेंद को मारने के लिए
- 26. यह नियमों के विरुद्ध है
- 27. दो डाँडियाँ
- 28. जब गेंद डाँडी से टकरा जाती है
- 29. चूना
- 30. शारीरिक व्यायाम और ऊर्जा

## भाग 3: स्तंभ मिलान

- 31. डाँडी → L आकार की लकड़ी
- 32. चूना → मैदान की सीमा
- 33. गेंद → दुईत
- 34. होली → खेल का दिन
- 35. गोथा. → डंडा



#### भाग 4: रिक्त स्थान भरें

36. ग्रामीण

37. गोथा

38. L

39. नहीं

40. चूना



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विद्यार्थी का नाम/Name of the student: \_\_\_\_\_

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**A. वस्तुनिष्ठ प्रश्न (Objective Questions - 20)**

- कविता "आओ बच्चों..." किसने लिखी है?  
a) हरिवंश राय बच्चन b) रामधारी सिंह दिनकर c) कवि प्रदीप d) मैथिलीशरण गुप्त
- कविता में किसकी झाँकी दिखाने की बात की गई है?  
a) भारत माता की b) वीर जवानों की c) हिंदुस्तान की d) स्वतंत्रता सेनानियों की
- "उत्तर में हिमालय पर्वत..." से क्या दर्शाया गया है?  
a) सुरक्षा b) सुंदरता c) ठंडक d) तीर्थस्थान
- "दक्षिण में चरणों को धोता सागर" किस भावना को दर्शाता है?  
a) पवित्रता b) नम्रता c) सम्मान d) शक्ति
- "हर पत्थर एक गोला था" - यहाँ किसकी वीरता की बात हो रही है?  
a) सैनिकों की b) स्वतंत्रता सेनानियों की c) बच्चों की d) आम लोगों की
- "शेर शिवाजी" किस राज्य से संबंधित हैं?  
a) पंजाब b) महाराष्ट्र c) गुजरात d) राजस्थान
- जलियाँवाला बाग किससे जुड़ा है?  
a) त्योहार से b) शहीदों से c) नदियों से d) स्वतंत्रता दिवस से

8. "यहाँ की बगाओं ने भी बाज़ी अपनी जान की" - इसमें किसका उल्लेख है?  
a) सैनिकों का b) क्रांतिकारियों का c) नारियों का d) बच्चों का
9. बंगाल का कौन सा गुण कविता में उल्लेखित है?  
a) वीरता b) क्रांति c) हरियाली d) सुंदरता
10. "यहाँ का बच्चा-बच्चा अपने देश पे मरनेवाला है" - यह पंक्ति क्या दर्शाती है?  
a) भय b) प्रेम c) देशभक्ति d) क्रोध
11. "कण-कण में बसी हुई राजस्थान की..." में राजस्थान की क्या विशेषता दर्शाई गई है?  
a) वीरता b) सुंदरता c) संस्कृति d) संगीत
12. "ये मिट्टी से तिलक करो" का क्या अर्थ है?  
a) पूजा करना b) गर्व करना c) देश के लिए सम्मान दिखाना d) उत्सव मनाना
13. "किसने तलवारों पे बोला था?"  
a) अकबर b) शिवाजी c) महात्मा गांधी d) चंद्रशेखर आज़ाद
14. "हर पर्वत था आग उगलता" - यह किसका प्रतीक है?  
a) क्रोध का b) ज्वालामुखी का c) देशभक्ति का d) प्राकृतिक आपदा का
15. "एक तरफ़ बंदूकें , एक तरफ़ थी गोलियाँ..." - यह किस घटना से जुड़ा है?  
a) जलियाँवाला बाग b) असहयोग आंदोलन c) भारत छोड़ो आंदोलन d) दांडी यात्रा
16. "इन आँखों ने देखा है बलिदान की" - किसकी आँखों का उल्लेख है?  
a) कवि की b) भारत माता की c) स्वतंत्रता सेनानी की d) बच्चों की
17. "यहाँ का बच्चा-बच्चा बोलता है" - यह किसका प्रतीक है?  
a) शक्ति का b) समझ का c) आत्मबल का d) देशभक्ति का
18. "ये धरती है बलिदान की" - ये किसकी विशेषता है?  
a) भारत की b) यूरोप की c) अमेरिका की d) अफ्रीका की
19. "वन्दे मातरम्" का अर्थ है -  
a) जय हिंद b) भारत माता की जय c) माता को नमन d) नमस्ते
20. कविता का मुख्य उद्देश्य क्या है?

- a) प्राकृतिक सुंदरता दिखाना b) देश का परिचय देना c) भारत की वीरता व बलिदान की भावना दिखाना  
d) शौर्यगाथा सुनाना

B. रिक्त स्थान भरिए (Fill in the Blanks - 5)

1. आओ बच्चों, तुम्हें दिखाएँ \_\_\_\_\_ हिंदुस्तान की।
2. उत्तर में \_\_\_\_\_ पर्वत वीर है।
3. यहाँ की बहनों ने भी \_\_\_\_\_ अपनी जान की।
4. शेर \_\_\_\_\_ ने रखी थी लाज हमारी शान की।
5. जलियाँवाला बाग में देखो, सजी थी \_\_\_\_\_।

C. एक पंक्ति उत्तर दीजिए (One-liner Questions - 5)

1. कविता के अनुसार दक्षिण दिशा में क्या स्थित है?
2. 'कण-कण में बसी हुई राजस्थान की' - इसका क्या अर्थ है?
3. जलियाँवाला बाग में क्या हुआ था?
4. बंगाल की कौन सी विशेषता कविता में दर्शाई गई है?
5. 'वन्दे मातरम्' का भावार्थ क्या है?

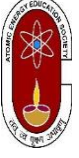
D. मिलान कीजिए (Match the Following - 5)

स्तंभ A स्तंभ B

- |                   |                    |
|-------------------|--------------------|
| 1. हिमालय         | क. वीरता का प्रतीक |
| 2. शिवाजी         | ख. शान की रक्षा    |
| 3. जलियाँवाला बाग | ग. बलिदान की धरती  |
| 4. राजस्थान       | घ. बलिदान का स्थल  |
| 5. हिंदुस्तान.    | ङ. उत्तर दिशा में  |

E. पंक्ति पूर्ण कीजिए (Complete the Line - 5)

1. आओ बच्चों, तुम्हें दिखाएँ \_\_\_\_\_।
2. ये धरती है बलिदान की \_\_\_\_\_।
3. शेर शिवाजी ने रखी थी \_\_\_\_\_।
4. यहाँ का बच्चा-बच्चा अपने \_\_\_\_\_।
5. बोलती हर-हर महादेव की \_\_\_\_\_।



परमाणु ऊर्जा शिक्षण संस्था  
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( i ) बहुविकल्पीय प्रश्न

1- एक दौड़ ऐसी भी इस पाठ में कितने मीटर की दौड़-हुई?

क) पचास मीटर (ख) दस मीटर (ग) हजार मीटर (घ) सौ मीटर

2- कितने प्रतिभागी आरंभिक रेखा पर तैयार खड़े थे ?

(क) चार (ख) दस (ग) नौ (घ) आठ

3- छोटा लड़का कैसे गिरा ?

(क) लड़खड़ाकर (ख) कूदकर (ग) उछलकर (घ) भागकर

4 अन्य लड़को ने उस गिरे हुए लड़के को उठाया क्योंकि-

(क) वे चालाक थे (ख) वे सच्चे मित्र थे (ग) वे स्वार्थी थे (घ) वे हराना चाहते थे।

5- उस दौड़ के सभी प्रतिभागियों को क्या परेशानी थी?

(क) बीमारी (ख) घबराहट (ग) पेट दर्द (घ) शारीरिक विकलांगता

( ii ) वाक्य बनाओ

1- कहानी

2- शारीरिक विकलांगता

3- प्रतिभागी

4- दर्शक

5- स्वर्ण पदक

( iii ) मिलान करो

छोटा

दृश्य

दौड़

पदक

ओलंपिक

लड़का

स्वर्ण

विशेष

अनोखा

खेल

#### **(IV) वचन बदलो**

कहानी -----

बच्चा -----

निर्णायक -----

ताली -----

अंग -----

#### **(V) संज्ञा ढूंढो**

1- लड़का दौड़ने लगा।

२- बच्चों ने एक-दूसरे को पकड़ा।

#### **(vi) सर्वनाम ढूंढो**

1- एक-एक करके वे सब बच्चे की सहायता के लिए गए।

२. उन सभी को कोई-न-कोई शारिरिक विकलांगता थी।

#### **(vii) विशेषण और विशेष्य ढूंढो**

1- सभी को स्वर्ण पदक दिये गए।

२. अनोखी मित्रता देखने को मिली।

#### **(VIII) खेलों के नाम**

चार खेलों के नाम लिखो जो ट्रैक पर खेले जाते हैं।

#### **(ix) समानार्थी शब्द लिखो**

राक्षस -----

पैसा -----

चाँदी -----

मृत्यु -----

बेटी -----

#### **(X) बिंदु और चंद्रबिंदु लगाओ**

1- दूढ़

२- अतिम

3- आस

4- मत्रमुग्ध

5- ओलपिक



परमाणु ऊर्जा शिक्षण संस्था

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**भाग 1: बहुविकल्पीय प्रश्न (20 प्रश्न)**

1. 'डाँडी' शब्द का अर्थ क्या होता है?

- (a) गेंद
- (b) डंडा
- (c) घर
- (d) पत्थर

2. 'गोथा' किस आकार में होता है?

- (a) T
- (b) L
- (c) U
- (d) I

3. खेल में कितनी डाँडियाँ होती हैं?

- (a) एक
- (b) दो
- (c) तीन
- (d) चार

4. 'गोथा' शब्द का उपयोग किसके लिए होता है?

- (a) बोलने
- (b) गेंद
- (c) रस्सी से जुड़ी गेंद
- (d) डंडा

5. यह खेल मुख्यतः किस दिन खेला जाता है?

- (a) दिवाली
- (b) दशहरा
- (c) होली
- (d) ईद

6. गोथा किस वस्तु से बनाया जाता है?

- (a) धागा
- (b) रस्सी
- (c) लकड़ी
- (d) पानी

7. खेल में डाँडी से क्या किया जाता है?

- (a) गेंद को रोका जाता है
- (b) गेंद को मारा जाता है
- (c) रखा जाता है
- (d) छु पाया जाता है

8. गेंद को रोकने वाला कौन होता है?

- (a) दर्शक
- (b) विपक्षी खिलाड़ी
- (c) कोच

9. खिलाड़ी कब आउट होता है?

- (a) जब गेंद डाँडी से टकराती है
- (b) जब डाँडी गिरती है
- (c) जब कोई बोलता है
- (d) जब समय समाप्त होता है

10. यह खेल किस प्रकार का है?

- (a) इनडोर



- (b) डिजिटल
- (c) पारंपरिक
- (d) विदेशी

11. मैदान को सीमांकित करने के लिए क्या प्रयोग होता है?

- (a) पानी
- (b) कोयला
- (c) चूना
- (d) तेल

12. खेल की शुरुआत कै से होती है?

- (a) ताली
- (b) झंडा
- (c) टॉस
- (d) सीटी

13. गेंद को शरीर से छू ना क्या कहलाता है?

- (a) विजय
- (b) अपराध
- (c) नियम उल्लंघन
- (d) आनंद

14. खेल में कितने खिलाड़ी भाग ले सकते हैं?

- (a) दो
- (b) तीन
- (c) जितने चाहें
- (d) केवल एक

15. गेंद डाँडी से नहीं टकराती तो क्या होता है?

- (a) आउट
- (b) फिर से मौका
- (c) खेल समाप्त
- (d) डाँडी टूटती है

16. 'डाँडी' किससे बनती है?

- (a) लोहा
- (b) लकड़ी

(c) प्लास्टिक

(d) काँच

17. यदि गेंद खिलाड़ी को छू ले तो क्या होगा?

(a) खिलाड़ी आउट

(b) गेंद फेंकी जाएगी

(c) खेल दोबारा

(d) अंपायर रोके गा

18. खेल के लिए मैदान कै सा होता है?

(a) इनडोर

(b) छोटा(c) बंद

(d) खुला

19. खेल में कितनी टीमों होती हैं?

(a) एक

(b) दो

(c) तीन

(d) चार

20. डाँडी या गोथा किसके लिए लाभकारी है?

(a) मनोरंजन

(b) स्वास्थ्य

(c) नींद

(d) दोनों 1 और 2

## **भाग 2: एक पंक्ति उत्तर प्रश्न (10 प्रश्न)**

21. डाँडी और गोथा खेल का संबंध किस आयु वर्ग से है?

22. गोथा किस आकार में बनाया जाता है?

23. गेंद को रोकने के लिए कौन प्रयास करता है?

24. यह खेल किस अवसर पर विशेष रूप से खेला जाता है?

25. डाँडी का उपयोग किस कार्य के लिए किया जाता है?

26. गेंद से शरीर के किसी भाग को छू ना क्यों वर्जित है?

27. खेल में कितनी डाँडियाँ प्रयोग होती हैं?

28. खिलाड़ी कब आउट माना जाता है?

29. मैदान को सीमांकित करने के लिए क्या किया जाता है?

30. इस खेल से शरीर को क्या लाभ होता है? **भाग 3: मिलान कीजिए (5 प्रश्न)**

31. स्तंभ A और स्तंभ B का मिलान कीजिए:

डाँडी → L आकार की लकड़ी

गोथा → दुईत

चूना → डंडा

गेंद → मैदान की सीमा.

होली → खेल का दिन

**भाग 4: रिक्त स्थान भरें (5 प्रश्न)**

36. डाँडी या गोथा एक पारंपरिक \_\_\_\_ खेल है।

37. खेल में डाँडी और \_\_\_\_ का उपयोग होता है।

38. गोथा का आकार अंग्रेज़ी अक्षर \_\_\_\_ जैसा होता है।

39. खिलाड़ी गेंद से शरीर का कोई भाग \_\_\_\_ नहीं कर सकता।

40. मैदान को सीमित करने के लिए \_\_\_\_ लगाया जाता है।