



CLASS-IX

ENGLISH CRITICAL THINKING WORKSHEET 2

The Relevance of Repetition

1. The painstaking memorisation of mathematical tables, historical dates, capitals of countries and even poems leave an indelible mark on every adult who has attended school. However, all educators deprecate this rote system learning by orally reciting and consigning lessons to memory as mindless and mechanical, which goes against critical thinking and creativity. But is this dichotomy between creativity and rote learning part of a lazy binary thinking?
2. We often hear about people who can repeat the entire telephone directory or memorise the entire dictionary. Indians have a history of highly developed systems of memorisation, perfected through centuries of Vedic learning. From a typically Western perspective, the permanency of the written word has been pitted against the ‘unconscious operation of memory’ of oral cultures and held to be more reliable in cultural transmission. However, refuting this thesis, Fritz Stall, an Indie scholar observes that the oral tradition in India is remarkable, “because it has led to scientific discoveries that are of enduring interest”. Of course, this mugging up can be aural (i.e., chanting aloud) or visual—mentally storing images in a visual map.
3. The advantages of rote memorisation—like it expands areas of the mind to great possibilities—are now becoming evident to the world. Various accounts from ancient India, including those from travellers like I-Tsing, point to the fool-proof system of oral memorisation and the capacity to absorb volumes of data.
4. A parallel dimension of transmission of knowledge also existed in India, with a flexible mode of oral communication through which knowledge was disseminated. One instance is the narrative-per formative tradition of recitation, which extended basic story through interpolations, conscious extensions and embedding of sub-narratives. Many Indian myths, legends, epics, and fables such as Kathasaritsagara and Jataka stories were spread through this process. While the story remains the same, the interpretation changes according to who says it, where it is said and how it is said. While communicating mathematics, philosophy and other scientific

disciplines, cryptic text forms were created, that facilitated memorisation.

5. A related question pertains to cognition—how can we transmit principles using memorisation as a creative tool rather than as a mechanical process of repetition? Bhaskara’s Lilavati, the seminal 12th century illustrates how memorisation and creativity go together.
6. The fact that Bhaskara’s methods still figure in Indian pedagogic consciousness was recently brought home in a news report on the Ramanujan School of Mathematics in Patna, which trains youngsters from poor families to clear the Indian Institute of Technology (IIT) entrance test. This year, all the 30 students of the school got through IITs. Anand Kumar, the school’s founder, called it the “sheer power of practice to break the so-called IIT code” and a student attributed the success to his teacher’s ability to teach differential calculus through a “thrilling story of a daring robber”.

A. Answer the following questions by choosing the most appropriate option.

1. **All educators condemn rote learning as.....**
 - (a) it is a feat of memory
 - (b) it is a parrot like learning
 - (c) it is mindless and mechanical
 - (d) it is against critical thinking and creativity

2. **The dichotomy between creativity and rote learning is.....**
 - (a) increased by computer literates
 - (b) initiated by western thinkers
 - (c) the clash of the cultures of west and east
 - (d) opposed by Indian scholars

3. **The oral tradition in India is called remarkable because.....**
 - (a) it has helped to preserve Vedic learning

- (b) some of the old texts are still available
- (c) it has led to scientific discoveries of enduring interest
- (d) it provides capacity to absorb volumes of data

4. **Rote learning has its own advantages as**.....

- (a) it promotes learning without understanding
- (b) it does not add pressure to the mental faculties
- (c) mugging up can be aural as well as visual
- (d) it expands areas of the mind to greater possibilities

5. **Cryptic texts were created for mathematics, philosophy, etc. because**.....

- (a) these are very simple
- (b) these are easy to remember
- (c) these are short and easy
- (d) they are easy to interpret

6. **The word 'enduring' in para 2 means**.....

- (a) bear
- (b) transitory
- (c) lasting
- (d) indelible

B. Answer the following questions in brief:

7. Why is oral tradition in India called remarkable?

8. How is rote learning advantageous?

9. What does Bhaskara's Lilavati illustrate?

10. Why were cryptic texts created for mathematics, philosophy etc.?

11. Write the word from passage similar in meaning to these words.

(a) Separation (para 1)

(b) Ascribed (para 6)

There is one error in each of the lines. Spot the incorrect word and rewrite the correct statement.

1. I go to see him on alternative days.

2. Continuous attacks of fever have ruined my health.

3. He is ensured for a sum of five lakh rupees.

4. A sea is a vast expansion of water.

5. He has many work to do.

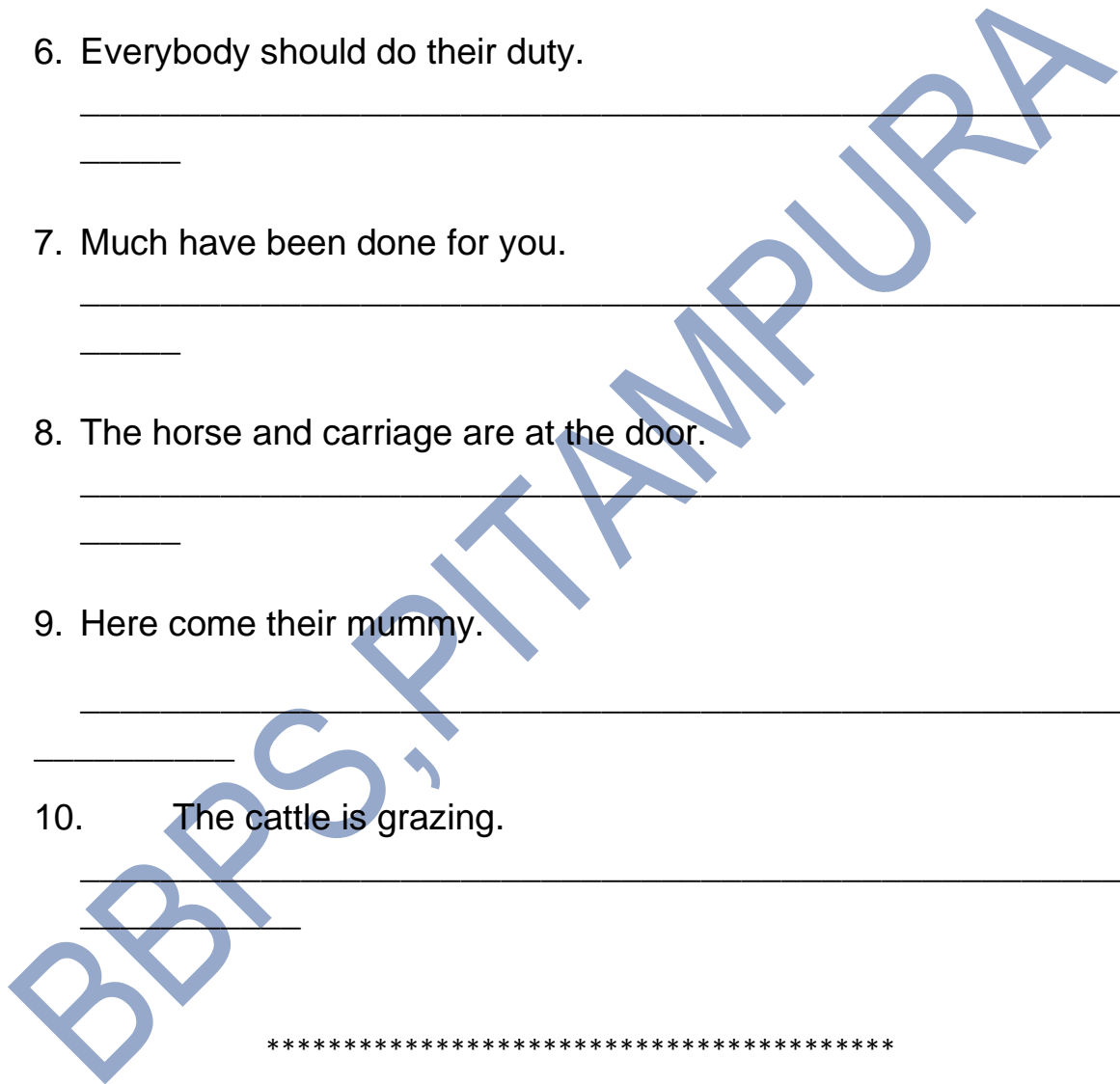
6. Everybody should do their duty.

7. Much have been done for you.

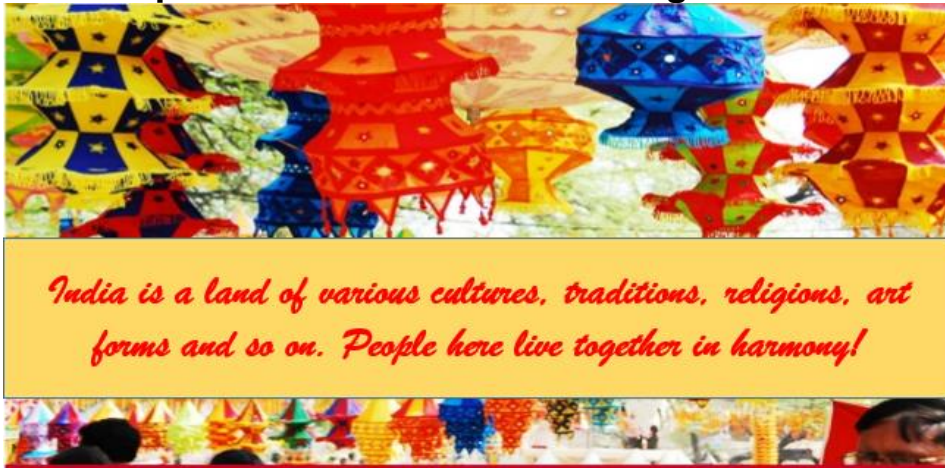
8. The horse and carriage are at the door.

9. Here come their mummy.

10. The cattle is grazing.



Q3. Observe the picture below and the message written.



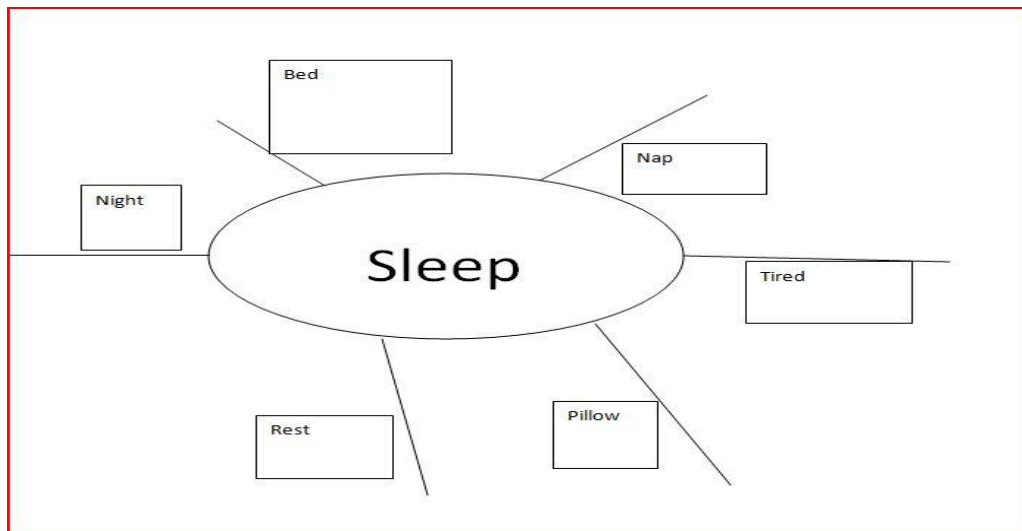
a) Find the synonyms of the words in bold in the picture:

- Cultures –
- Traditions –
- Religions –
- Art –

b) Do a **SWOT (Strengths, Weaknesses, Opportunities and Threats)** analysis of your country and share your opinion below:

Strengths	Weaknesses
Opportunities	Threats

Q5. Here is a word web on Sleep. On a similar pattern, make a word web with the following words (use as many related words as you want to in your word web):



a) Flower:

b) Land:

c) Family:

d) Travel:

e) Game:



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MENTAL AGILITY

TOPIC – MISSING CHARACTER

LEVEL – 2(ANSWER KEY)

SERIAL NO. 2

Answer 1: Option B

Explanation:

Positions of alphabets (A to Z) is (1-26) $J+E=10+5=15$;

$J+N=10+14=24$; $E+L=5+12=17$.

Value of C is 3 and value of missing letter is (29-3) is 26. Letter would be Z

Answer 2: Option 1

Explanation:

Positions of alphabets (A to Z) is (1-26) we have:

In the first column, $E-A=5-1=4=D$.

In the second column, $J-C=10-3=7=G$.

So, in the third column, missing letter = $O - B = 15 - 2 = 13 = M$

Answer 3: Option C

Explanation:

Pattern is that each number are of the form $N^3 - 1$.

$N= 3$ which gives $3^3 - 1= 26$

$N= 4$ which gives $4^3 - 1= 63$

$N= 5$ which gives $5^3 - 1= 124$

Hence answer would be $N= 6$ which gives $6^3 - 1= 215$

Answer 4: Option B

Explanation:

Putting $A=1, B=2, C=3, \dots, M=13, \dots, X=24, Y=25, Z=26$, we have :

$$JR = \frac{J+R}{2} + 2 = \frac{10+18}{2} + 2 = 16$$

$$CK = \frac{C+K}{2} + 2 = \frac{3+11}{2} + 2 = 9$$

$$TX = \frac{T+X}{2} + 2 = \frac{20+24}{2} + 2 = 24$$

$$OS = \frac{O+S}{2} + 2 = \frac{15+19}{2} + 2 = 19$$

Answer 5: Option A

Explanation:

In the first row, $72 \div (24/2) = 72 \div 12 = 6$.

In the second row, $96 \div (16/2) = 96 \div 8 = 12$.

Let the missing number in the third row be y .

Then, $108 \div (y/2) = 18$ or $y/2 = 108/18 = 6$ or $y = 12$.

Answer 6: Option A

Explanation:

Clearly, $(3\text{rd column})^2 + (2\text{nd column})^2 = (1\text{st column})^2$

In the first row, $52 + 122 = 132$.

In the second row, $82 + 152 = 172$.

Let the missing number in the third row be y .

Then $y^2 + 242 = 252$ or $y^2 + 576 = 625$ or $y^2 = 49$ or $y = 7$.

Answer 7: Option A

Explanation:

Clearly, in the first column $4 \times 7 = 28$, in the second column $3 \times 15 = 45$, hence in the third column $2 \times 5 = 10$

Squares in each row consists of the letters A, B, C.

Answer 8: Option D

Explanation:

A,C,E has a gap of one alphabet, $2+4=6$

M,O,Q has a gap of one alphabet, $5+9=14$

Similarly, G,I,K has a gap of one alphabet, $3+5=8$

Answer 9: Option A

Explanation:

Square of the numbers on the lower part of the circle are taken,

Cube of the numbers on the lower part of the circle are taken.

Answer 10: Option A

Explanation:

Using the formula, sum of horizontal numbers – sum of vertical numbers.

$(11+2)-(0+2)=11$