

Creative and Critical Thinking (CCT) Practice Assessment – II

Classes VI to VIII

Time : 3 hours

Name: _____

Name of KV: _____

Class & Section: _____

Roll No. _____

GENERAL INSTRUCTIONS:

1. This paper contains **45** questions as under:
 - Reading Literacy (15 questions from page no. **1 to 7**),
 - Mathematical Literacy (15 questions from page no. **8 to 14**) and
 - Scientific Literacy (15 questions from page no. **15 to 21**)
2. All questions are compulsory.
3. All answers must be written on the question paper itself.
4. Each question is of 2 Credits. Scoring for each will be as follows:
 - i. Full Credit 02**
 - ii. Partial Credit 01**
 - iii. No Credit 00**
5. Please write the answers neatly and legibly.

Creative and Critical Thinking (CCT) Practice Assessment – II

Reading Literacy

Classes VI to VIII

Unit 1: Koala Rescued from Oz Bushfire Dies [REMEU01]

Koala rescued from Oz bushfire dies

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NEW DELHI: A koala whose dramatic rescue from a bushfire in Australia had gone viral last week has succumbed to injuries, Port Marie Koala Hospital authorities said in a Facebook post.

Ellenborough Lewis, named after one of the grandchildren of the woman who saved him, had been rushed to the hospital last Wednesday.

Hospital authorities said on Tuesday they had no choice but to put Lewis down after his condition worsened. "Today, we made the decision to put Ellenborough Lewis to sleep," they said.

In a moving video that had gone viral, his rescuer Toni Doherty is seen wrapping the badly burnt koala in her shirt and carrying him to her car. Doherty said she was driving past an active bushfire near Port Macquarie in New South Wales when she saw the koala crying out.

Marsupials in trouble

Conservationists estimate that hundreds of koalas have perished in bushfires in recent weeks

IUCN Red List status:
Vulnerable

POPULATION
Estimate:
Around **300,000**
mature individuals
Trend:
Decreasing



PHASCOLARCTOS CINEREUS

Weight

Adult males : **4-14 kg**

Adult females: **4-10 kg**

MAIN FEATURES

- Only found in Australia
- Normally perched up in branches of eucalyptus trees
- Sleep for up to 20 hours daily

Sources: IUCN/WWF/NSW Govt/AFP Photo/Torsten Blackwood

WHAT THEY EAT

- Eucalyptus leaves (about half a kg daily)
- Fussy eaters, they eat most of their food from a very few varieties of eucalypt

THREATS

- Deforestation and development
- Disease (chlamydia)
- Wildfires
- Climate crisis (droughts, heatwaves)

1. [Q01] Circle the correct option about koalas in each row:

Weight range	4-10 kgs	4-12 kgs	4-13 kgs	4-14 kgs
Region inhabited	Eastern Australia	Western Australia	Northern Australia	Southern Australia
Preferred Diet	eucalyptus oil	eucalyptus twigs and leaves	eucalyptus leaves	eucalyptus oil and leaves
Risk factor	tourism	bushfire	famine	afforestation

2. [Q02] Choose the correct sequence in which Ellenborough’s rescue operation occurred:

- (i) Koala’s injuries prove fatal
- (ii) Rescuer driving past the bush fire
- (iii) Badly burnt Koala crying for help
- (iv) Koala taken to the hospital

- a) (i)-(ii)-(iii)-(iv)
- b) (iii)-(ii)-(iv)-(i)
- c) (ii)-(iii)-(iv)-(i)
- d) (iv)-(iii)-(iv)-(i)

3. [Q03]Ellenborough’s rescue is considered to be dramatic because

.....

.....

4. [Q04]The vulnerable status of the koalas is listed in red as per the IUCN because

.....

.....

5. [Q05]A Koala is about the size of . . .

- a) a squirrel
- b) a fox
- c) a rabbit
- d) a kangaroo

Smart home of the future may have more robots than family members

20 years from now, our homes will have mirrors that'll give us style tips and robots who will help us with dinner



businessinsider.in

Robot butlers, mirrors that give you style tips, and dishwashers that automatically order more detergent. If a new report on the future of commerce is correct, all those things could be in our homes in 20 years.

By 2040, the smart home market will hit the mainstream and connected appliances will be commonplace, the market-research firm Euromonitor International says in its 'Commerce 2040' report published recently.

"Consumers are finding fewer reasons to leave their homes as consumption evolves," the report says. In the future, many more aspects of out-of-home life could be brought into the home due to digitalisation.

The report predicted that in 2040:

- Our homes will be protected with biometric authentication that will confirm our identities before letting us in the front door.
- Each family member will have a pre-configured profile that will automatically adjust the lighting, temperature, and music

choice when they walk into a room.


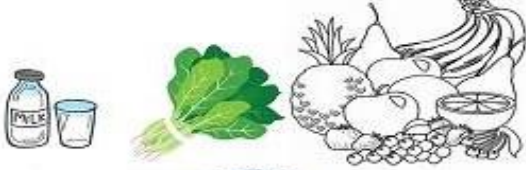




- Our refrigerators will track the food we eat and recommend healthy alternatives.
- Other kitchen appliances will automatically re-order items we run out of, like food, detergent, or paper towels.
- Our bedrooms will have connected mirrors that will act as virtual personal stylists.
- We will have robot assistants to help us with everyday tasks like picking things up off the floor and preparing dinner.

Robot assistants will help us with everyday tasks like picking things up off the floor and preparing dinner



Photo: Getty Images

6. [Q01] Match the given features of a smart home to their benefits and tick the correct option:

1.		(i)	
2.		(ii)	
3.		(iii)	

- a) 1-(ii), 2- (i), 3-(iii)
- b) 1-(i), 2-(ii), 3-(iii)
- c) 1-(iii), 2-(i), 3-(ii)
- d) 1-(i), 2-(iii), 3-(ii)

7. [Q02] What do you understand by the term 'smart home'?

.....

.....

8. [Q03] The aspect of biometric authentication that can help in keeping our homes secure in future by the recognition of:

- a) attire
- b) footwear
- c) face
- d) pace

9. [Q04] Market research can best be done through a

- (i) Survey form
 - (ii) Questionnaire public
 - (iii) Debates
 - (iv) Consultation
- a) (ii) and (iv)
 - b) (i) and (iii)
 - c) (iii) and (iv)
 - d) (i) and (ii)

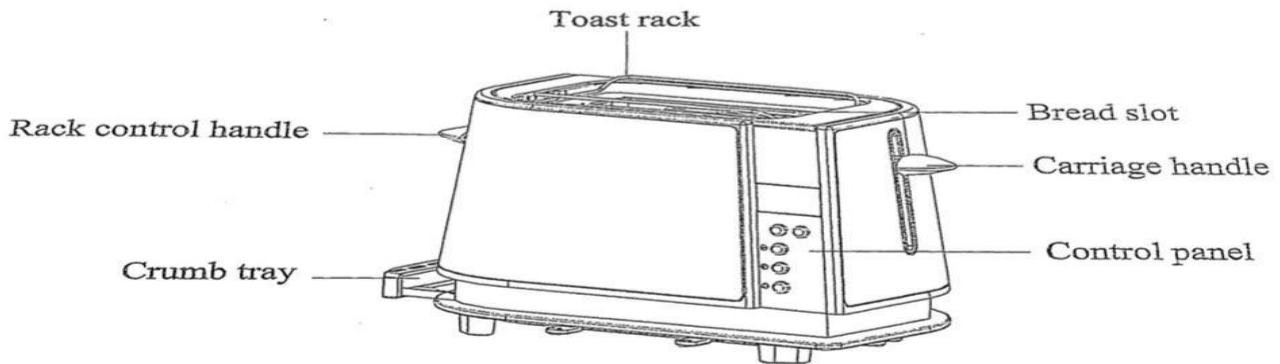
10. [Q05] What could be the possible drawback of a situation where each member of the family is surrounded by a robot helper?

.....

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Unit 3: Toasty Tales [REMEU03]

PARTS DESCRIPTION



(* This is authentic material and may not have complete grammatical or lexical accuracy.)

OPERATION INSTRUCTION

FOR THE FIRST USE

As there is manufacturing residue or oil remained in the bread slot, it may emit odor when first use. It is normal and will not occur after several times use. For the first use, it is suggested to operate by below steps without bread. Let the toaster cool down afterwards, and begin toasting the first slice.

OPERATION

1. Put bread slice into the bread slot, two slices can be inserted at most every time. Only the regular slice can be placed into the bread slot. The irregular bread can only be toasted on the toast rack and by only one piece every time. When toasting on the toast rack, press down the rack control handle to make the toast rack uplift, then put the bread on the toast rack. Lift the rack control handle to reset the toast rack after use.

Note:

- Make sure the crumb tray is completely positioned in place before use.

2. Plug in the socket, the blue indicator at the bottom will be lighted up. The LED will display as



“ ” and the “H” will flash until the carriage handle is pressed.

3. Press the LIGHTER or the DARKER button to set your desired color. The lowest is the lightest and the highest is darkest. The bread can be toasted to golden color by setting the position to the middle.

Note:

- Toasting color for toasting one slice is darker than double slices at the same level.
- If toasted continuously, toasting color for the latter bread will be darker than the anterior bread at the same level.

4. Press the carriage handle down vertically until it is positioned in place, and toast will begin at once. Once the bread is toasted to the preset color, the carriage handle will be automatically sprung up.

Note:

- The carriage handle can be hold at the bottom of the slot when the power supply is on.

5. During the toasting process, you may observe the toasting color. If it is satisfying, you can press the CANCEL button to cancel the operation at any time.
6. To toast the bread taken out from refrigerator. Set color to your desired color by pressing LIGHTER or DARKER button. Press carriage handle down vertically until it is positioned in place. Press DEFROST button, and its indicator will be illuminated. The bread will be toasted to your desired color in this mode.
7. To reheat the cold toasted bread, press carriage handle down vertically until it is positioned in place. Press the REHEAT button, and its indicator will be illuminated. Toasting time is fixed in this mode. As long as the time is running over, the carriage handle will be automatically sprung up and the reheating process will be ended.

CAUTION

1. If the toaster starts to smoke, press CANCEL button to stop toasting immediately.
2. Remove all protective wrapping before using the toaster.
3. Avoid toasting the food with extremely runny ingredients such as butter.
4. Never attempt to remove bread jammed in the slots without unplugging the toaster from the electrical outlet first. Be sure not to damage the internal mechanism or heating elements when removing bread.
5. The bread slot is only applicable for toasting regular bread slice. For the irregular bread or the round bread, toast it on the toast rack.

MAINTENANCE INSTRUCTION

CLEANING AND MAINTENANCE

1. Disconnect the appliance from outlet before cleaning.
2. Wipe the outside and the toast rack with dry cloth after the toaster cools down. Never use metal polish.
3. Pull out crumb tray on the bottom of the toaster and empty it. Wipe it with dry cloth. If the toaster is used frequently, accumulated bread crumbs should be removed at least once a week. Make sure the crumb tray is completely closed before using the toaster again.
4. The power cord may be wound under the bottom of the toaster when not in use or storage.

SPECIFICATION

Model No.	TOSS13
Product name	Toaster
Rated Voltage/Frequency	220-240V~, 50/60Hz
Rated Power	700-850W
Dimension (L x W x H)	329x183x210mm

11. [Q01] Given below are the functions of parts of a toaster, as per the text of the instruction manual given.

Identify the parts

- (i) Resets the toast rack after use _____
- (ii) Sets the toasting of bread as desired _____
- (iii) Indicates toasting is done by springing up automatically _____
- (iv) Holds trapped fragments of bread/ toast _____

12. [Q02] Choose the three (3) statements that are correct as per the given operation instructions:

- (i) The letter 'H' stops flashing once the carriage handle is pressed.
 - (ii) It is advised that the user operates the toaster without slices of bread first.
 - (iii) Once toast is cold, it cannot be reheated in the toaster.
 - (iv) The middle position setting is to toast the bread golden.
 - (v) Two slices of bread can be put into the bread slot irrespective of size.
- (a) i, ii and iii
 - (b) ii, iv and v
 - (c) ii, iii and v
 - (d) i, ii and iv

13. [Q03] Give one reason for the following:

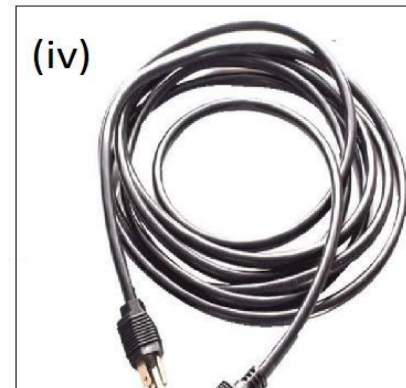
- Clear the bread crumbs at toast once a week.

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14. [Q04] Toasters are appliances that make heat when electricity flows through them. Choose a similar set of appliances from those given below.

- a) Microwave ovens, hair dryers
- b) Hair dryers, irons
- c) Microwave ovens, air-purifier
- d) Irons, air-purifier

15. [Q05] Choose the recommended way, from the images given below, in which a power cord should be kept when the toaster is not in use. Give reason for your answer.



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Creative and Critical Thinking (CCT) Practice Assessment – II

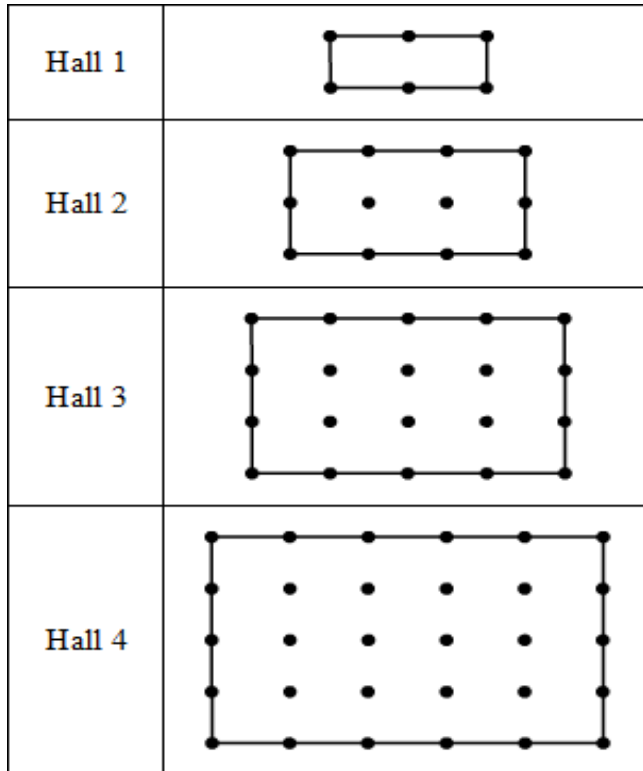
Mathematical Literacy

Classes VI to VIII

Unit 01: Banquet Hall [MAMEU01]

Here is a bird's eye view of the possible sizes of a banquet hall from Ancient Rome.

The hall is made of pillars and wall sections. The pillars are represented as dots and the wall sections are represented using line segments.



Question 1 [Q01]: Complete the following table:

Hall Number	Number of pillars (dots)	Number of wall sections (lines)
1	6	6
2	12	10
3		
4		
5		

Question 2 [Q02]:

Two of the courtiers Zieus and Julius deduced a formula to calculate the number of pillars for the banquet hall mentioned above where 'n' is the Hall number

- (a) Zieus's formula is $n(n + 1)$
- (b) Julius's formula is $(n+1)(n+2)$

Who deduced the correct formula?

Unit 02: Racing Against Time [MAMEU02]

Pranav and his friends are excited about watching the Wimbledon finals the next day. Pranav lives in Tokyo. His phone shows the local times of four different cities at the same moment:

CHENNAI 17:10	TOKYO 20:40	SEATTLE 4:40	LONDON 12:40
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Question 3 [Q01]:

What time should he ask his friend Raj from Seattle to set his reminder for if the match is scheduled to begin at 22:00 (local time) in Tokyo?

Question 4 [Q02]:

Pranav's friend Swati catches a flight from Chennai to London. She leaves at 6 AM local time and lands in London after a 14-hour long flight. (Use the information from **Question 3**.)

What will be the local time at London airport when her flight will land?

- a) 12: 30
- b) 15:30
- c) 3: 30
- d) 22:00

Question 5 [Q03]:

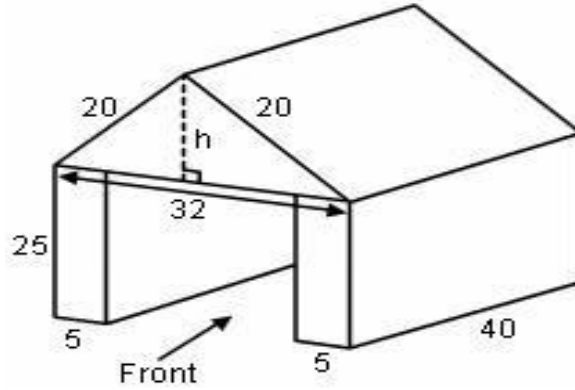
Is Swati on time to watch the match from the start?

- a) Yes
- b) No

Unit 03: Geometry in Action [MAMEU03]

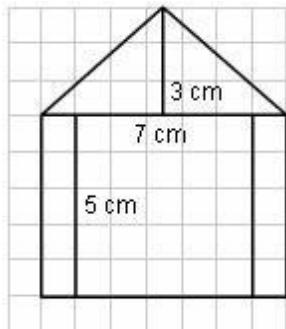
Praveen has a shed to park his vehicle.

The model of a shed is made up of a solid triangular prism balanced on top of 2 identical cuboids as shown. (All measurements are given in centimeters.)

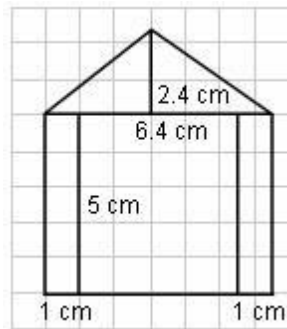


Question 6 [Q01]:

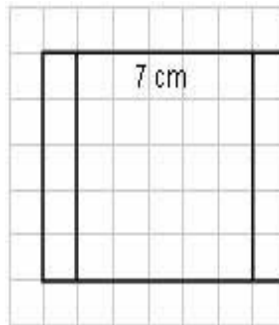
Using a scale of 1: 5, identify the front view of the model.



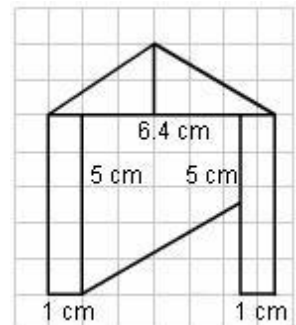
A.



B.



C.



D.

Question 7 [Q02]:

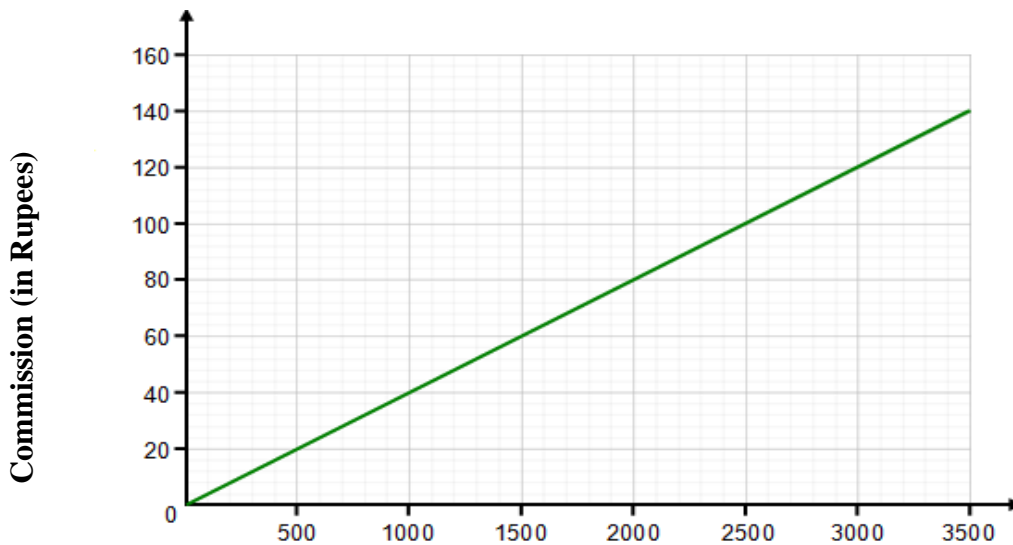
He paints the outer walls of the model shed at the rate of 20 paisa per cm^2 . Then the cost of painting will be

- a) Rs.400
- b) Rs.450
- c) Rs.500
- d) Rs.610

Unit 04: Sales Commission [MAMEU04]

John works forty hours a week at a furniture store. He receives a fixed salary per week plus a commission that is calculated as a certain percentage on sales, when the sales are over Rs.5000 in a particular week.

The graph below represents the commission he would receive per week for sales over Rs.5000.



Sales over Rs.5000

Question 8 [Q01]:

What is the commission percentage?

Question 9 [Q02]:

Write a formula to calculate the commission he would get for sales of x rupees where x is greater than 5000 Rupees.

Question 10 [Q03]:

John's total sales (in Rupees) if he got a commission of 110 rupees that week was

- a) 2750
- b) 7500
- c) 7750
- d) 2850

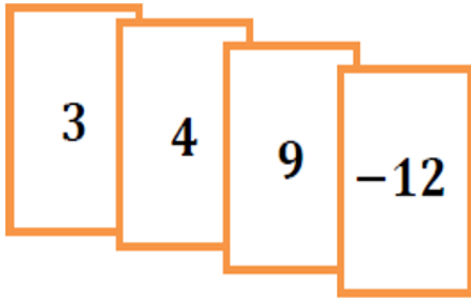
Unit 05: Card Game [MAMEU05]

Context : Integer

Aman and Raman are playing the Integer Card Game. The cards in their hands are shown below.

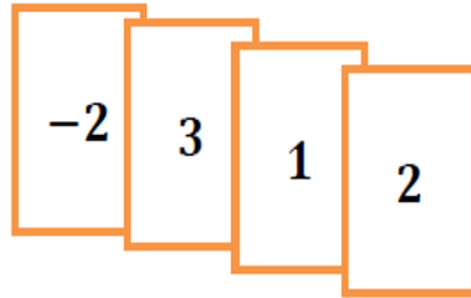
Aman's Hand

3, 4, 9, -12



Raman's Hand

-2, 3, 1, 2



Question 11 [Q01]:

What are the scores in each of their hands?

Aman's score _____

Raman's score _____

Question 12 [Q02]:

- Suman says that if Aman and Raman both take away their 3's, Aman's score will be higher than Raman's.
- Naseem argues and says that Aman's and Raman's will be equal.
- Who is right in their saying? (Put a tick mark for correct option)

Suman _____ Naseem _____

Question 13 [Q03]:

Aman picks up another set of cards that is exactly like each card in his hand.

Which of the following would make Raman's score equal to Aman's?

- Double every card in his hand
- Pick up a -4
- Pick up a 7 and -3
- Take away his 3 and 1
- Take away his 2 and -2.

Tick the correct options

- i, ii
- i, iii, iv
- i, iii
- i, iii, v

Unit 06: Image Edits [MAMEU06]

Vijay is a photographer for a newspaper and was editing an image for an article.

- He cropped out a square image from a photo he had taken.



- He tripled the width of the image but kept it a square.



- He then cut off two rectangles from both sides of the image. The width of the image was now $\frac{2}{3}$ of the width before this edit.



- He then reduced the dimensions of the image by half.



The area of the image was now 2166 cm^2 .

Question 14 [Q01]: What was the area of the initial cropped image?

Question 15 [Q02]: By how many times the area of final image has increased with respect to the area of the initial cropped image?

- a) One and a half times.
- b) Twice.
- c) Thrice.
- d) No change.

Creative and Critical Thinking (CCT) Practice Assessment – II

Scientific Literacy

Classes VI to VIII

Unit 1: Noise Pollution [SCMEU01]

Noise pollution is unwanted sound, dumped into the atmosphere without regard to the adverse effects it may have. One can define noise pollution as those sounds which are undesired causing discomfort in hearing. The pollution can be measured by the sound intensity. The unit of sound intensity is decibel [dB]. Very high sound intensity beyond the threshold of hearing can be the threshold of pain which may cause damage to ear leading to hearing impairment. The following table shows permissible noise levels in the case of industrial, commercial and residential areas and silence zone.

Area code	Category of area/zone	Limits in dB(A)	
		Day time	Night time
I	Industrial area	75	70
C	Commercial area	65	55
R	Residential area	55	45
S	Silence zone	50	40

Sources of Noise Pollution: There are two main sources of noise pollution:

- (a) **Industrial Sources:** These may include noise from various factories, workshops and warehouses with heavy machinery, producing sound with higher intensity.
- (b) **Non-industrial Sources:** These include the following sources of noise pollution:
- *Loudspeakers and Fire Crackers* during festivities and ceremonies.
 - *Domestic Appliances* used in large scale.
 - *Means of Transport* in urban and rural areas for personal, public and agricultural uses.

Question 1 [Q01]

The city counsellor proposes the construction of a hospital near a huge industrial plot where operations continue round the clock. Is this decision appropriate? Justify your answer.

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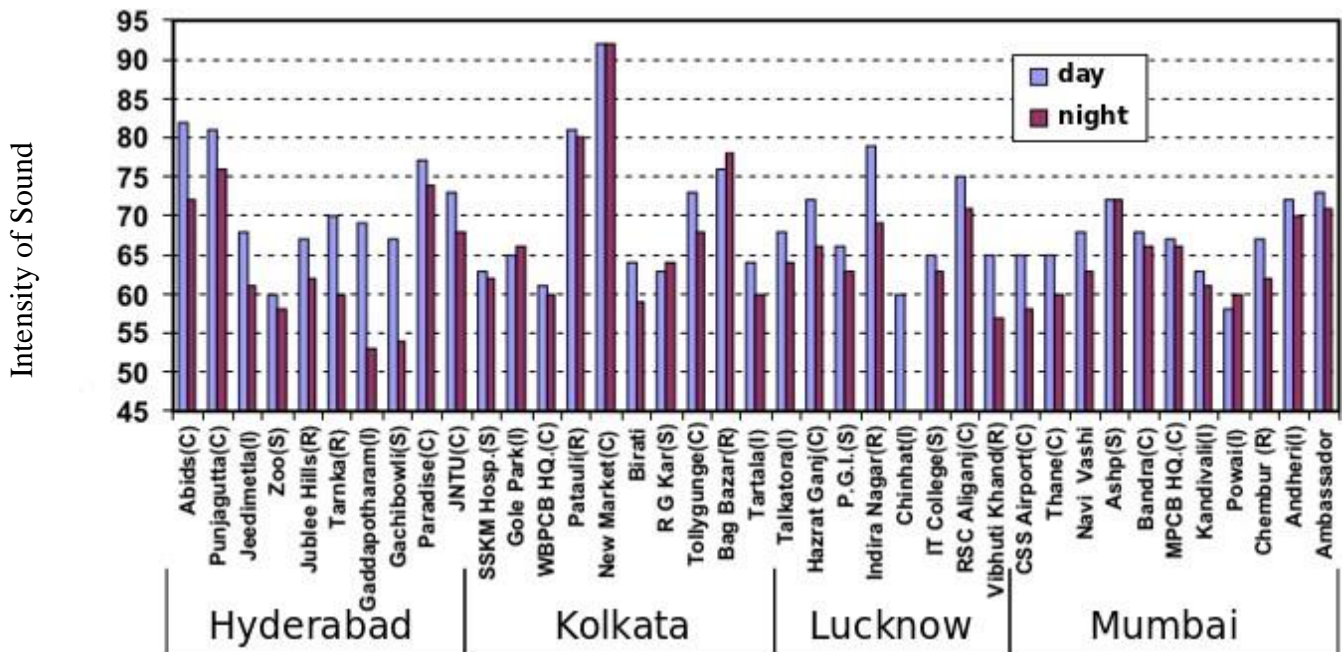
Question 2 [Q02]

‘Air pollution is more in those areas where there is high noise pollution and vice versa.’
Is the above assumption correct/incorrect? Justify your answer.

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.....

In India, Diwali is a traditional festival of lights. But since a long time use of firecrackers has been an integral part of this festival. Research studies have shown that along with severe air-pollution, the rampant use of fire-crackers cause severe sound pollution as well. Following data shows the extent of such sound pollution. The figure shows the level of sound intensity in different locations of four major cities during the day and night on Diwali.



Question 3 [Q03]

Identify from the graph the place(s) where people used firecrackers with the same intensity throughout the day as well as night.

Question 4 [Q04]

The unit of measuring sound is

- A. Joules
- B. Decibel
- C. Pascal
- D. Lux

Question 5 [Q05]

Based on the data given in the graph, select the statement which is incorrect.

- A. In none of the reported areas in Hyderabad, has the intensity of sound due to the use of firecrackers at Diwali night has been higher the night of Diwali than the day of using fire crackers.
- B. The approximate difference of using fire crackers on the day and night of Diwali has been same in Thane and JNTU.
- C. In none of the reported areas did the sound intensity increase above the day time limit for industrial zones.
- D. Chinhat is an area where the sound intensity for residential area for night was not breached.

Unit 2: Heat Transfer [SCMEU02]

Heat is always moving! If you have two objects or substances that are at different temperatures, heat will always move OUT of the warmer object or substance, and INTO the cooler object or substance. This heat transfer will continue until both the objects are the same temperature. This is called heat transfer. Heat can transfer (or move) in 3 ways: conduction, convection, and radiation.

Conduction is how heat transfers through direct contact with objects that are touching. Any time that two objects or substances touch, the hotter object passes heat to the cooler object.

Convection is how heat passes through fluids. A fluid is anything that has loosely moving molecules that can move easily from one place to another. Liquids and gases are fluids. In fluids the molecules spread out and move apart when they get hot. The hot fluid becomes less dense and rises up. Cooler fluids are more dense and so it sinks down. This up-and-down motion creates what are called convection currents.

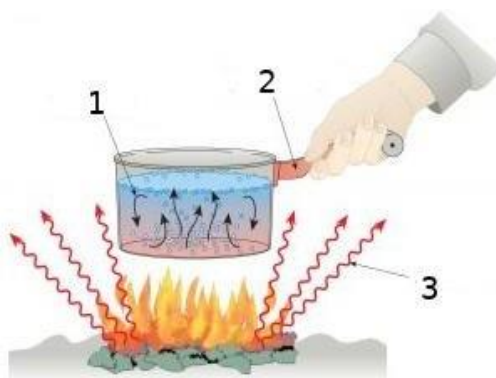
Radiation is how heat moves through places where there are no molecules or particles. Radiation is actually a form of electromagnetic energy. Radiation is heat moving in waves. Radiation does not need molecules or any particles to pass the energy along.

Question 6 [Q01]

Write down the process of heat transfer in the following cases.

- (i) The heat you feel on your chair when you stand up was transferred from your skin. _____
- (ii) A room warms up in time when more and more people fill it up. _____

Question 7 [Q02]



Identify the processes (1, 2, and 3) of heat transfer in the above figure and pick the correct option which indicates them.

- | | | | |
|---|------------|------------|------------|
| A | Conduction | Convection | Radiation |
| B | Convection | Conduction | Radiation |
| C | Radiation | Convection | Conduction |
| D | Convection | Radiation | Conduction |

Question 8: [Q03]

What method of heat transfer can occur in a vacuum? Give reason to support your answer.

- A. Conduction only
 - B. Convection only
 - C. Radiation only
 - D. Conduction and Convection
-
-

Unit 3: Natural Adaptation [SCMEU03]

Body Form and Size as Adaptations to Temperature Stress

The eco-geographical rule formulated by Joel Asaph Allen in 1877 states that animals that are adapted to colder climates tend to have shorter limbs and body appendages in comparison to animals that are adapted to more warm climates. It predicts that the body surface area-to-volume ratio of animals and birds tends to vary with the average temperature in which they occur. This results in lower ratios in colder climates and higher ratios in hotter climates.

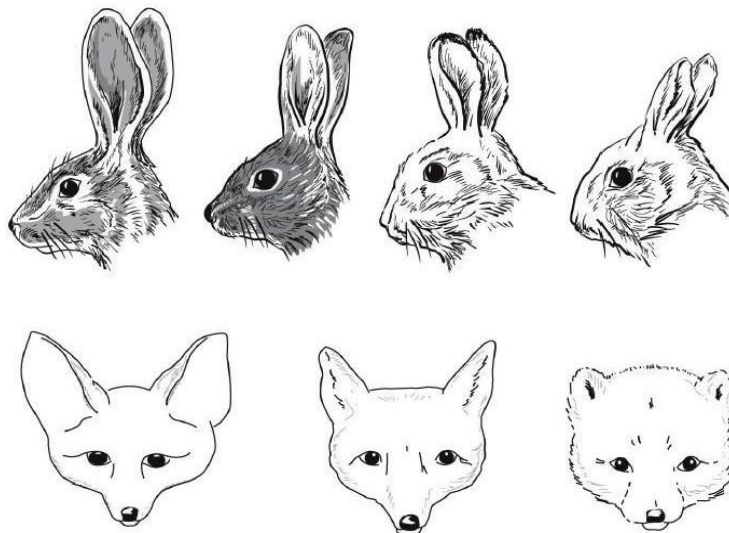
Allen's Rule: Body form or shape is linear in warm climates and more rounded and compact in cold climates. Round forms have a smaller surface area to volume ratios.

Bergmann's Rule: Body size is large in cold climates and small in warm climates. Large bodies have a smaller surface area to volume ratios.

Both of these rules cause systematic changes in the surface area to volume ratios.

- In cold climates where you need to retain heat, bodies are larger and more compact.
- In warm climates where you need to expel heat, bodies are smaller and more linear.

Following figure shows the correlation between ear length and air temperature for hares (genus *Lepus*) and foxes.



Based on the paragraph given and the data in the above table, answer the following questions.

Question 9 [Q01]

(i) Using Allen’s rule to pick the statement is correct and give justifications for them.

- A. From right to left the climate tends to be increasingly colder.
- B. From right to left the climate tends to be increasingly warmer.

(ii) Justification:

.....

.....

Question 10 [Q02]

What will be the appropriate living environment for the O3 and O4?

- (i) O3-small animals:
- (ii) O4-larger animals:

Features	Small Animals	Large Animals
Surface Area	Large	Small
Volume	Small	Large
Surface Area to Volume Ratio	High	Low
Living Environment	O3 =?	O4 =?

Question 11 [Q03]

Using your knowledge of surface area to volume ratios, suggest why the hippo spends most of the day partly submerged in lakes and rivers, coming out at night to feed on vegetation.

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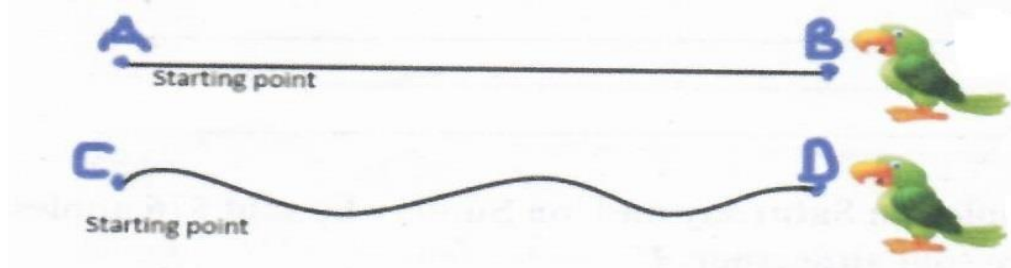
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Unit 4: Measurement [SCMEU04]

The questions in this unit are based on Measurement of length.

Question 12 [Q01]

The path followed by two parrots is shown in the diagram as AB and CD. Look at the diagram carefully and answer the question.

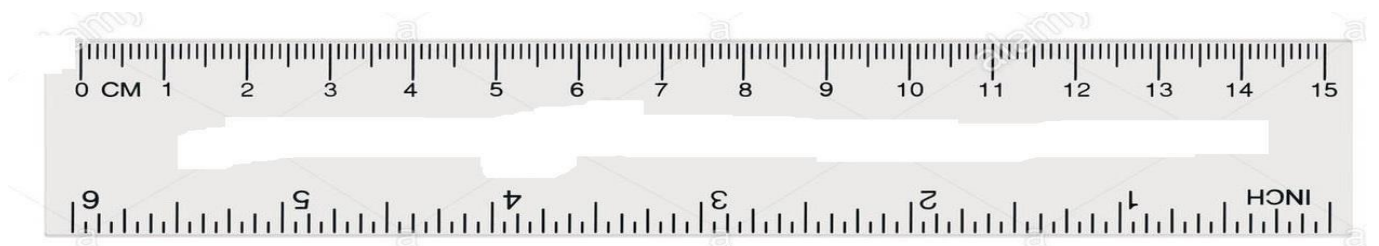


How will you measure the path from A to B and the path from C to D.?

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Question 13 [Q02]

The figure below shows a measuring scale which of the following distance cannot be measured with the scale by using it only once?



- A. 0.1 m
- B. 0.15 m
- C. 0.2 m
- D. 0.05 m

Question 14 [Q03]

The Circumference of a circular carpet in a room is measured using a ribbon. This ribbon folded five times is placed along a 30 cm long measuring scale as shown below.



The circumference of the carpet is

- A. 1.15m-1.25m
- B. 1.25 m-1.35m
- C. 1.50m-1.60m
- D. 1.60m-1.70m

Question 15[Q04]

You want to measure the length and width of your classroom to calculate the area of your classroom. Which of the following units of measurement would be maximum appropriate for this purpose.

- (i) Foot
 - (ii) Centimetre
 - (iii) Meter
 - (iv) Kilometre
-
- A. (i) only
 - B. (iii) only
 - C. Both (i) and (ii)
 - D. Both iii & (iv)
