Department of Computer Science and Engineering,
Anna University, Chennai- 600025

CS23101– COMPUTATION THINKING

Practical

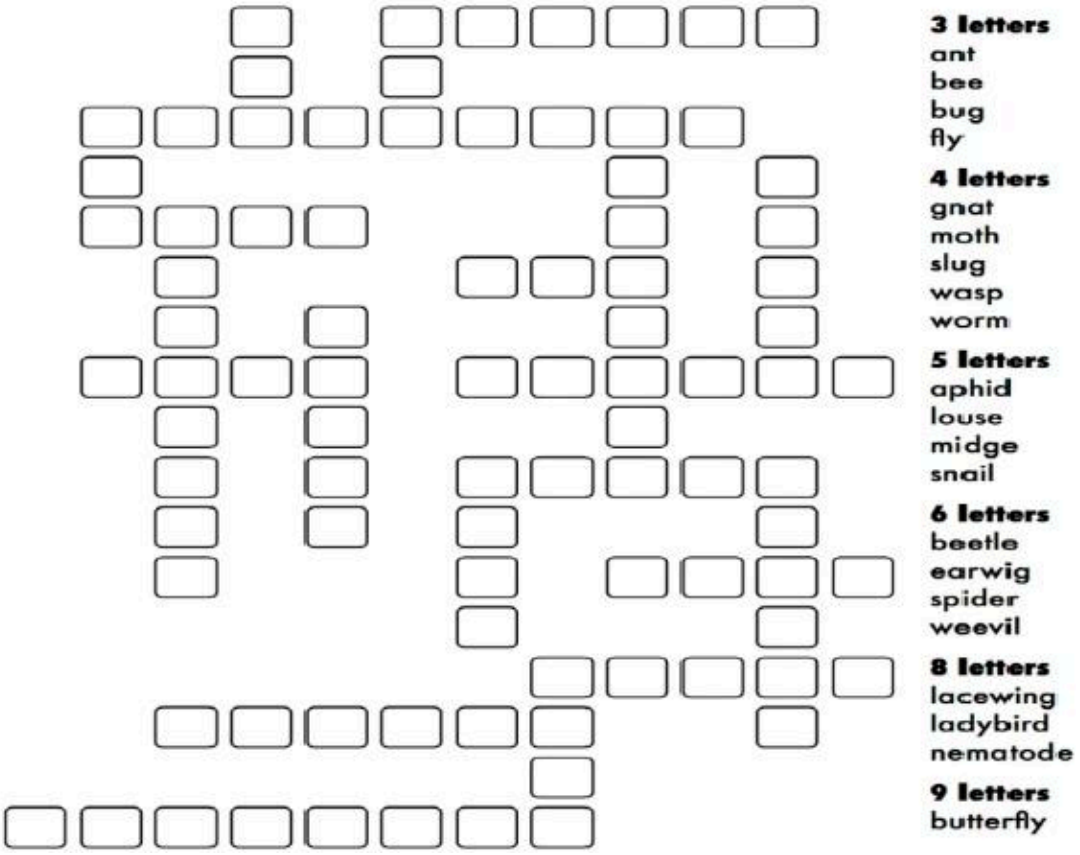
Aug-Dec 2026

Year/Sem/Batch: I/I/P

Exercise: 2	Understanding Data and Pattern Recognition	18-09-2026

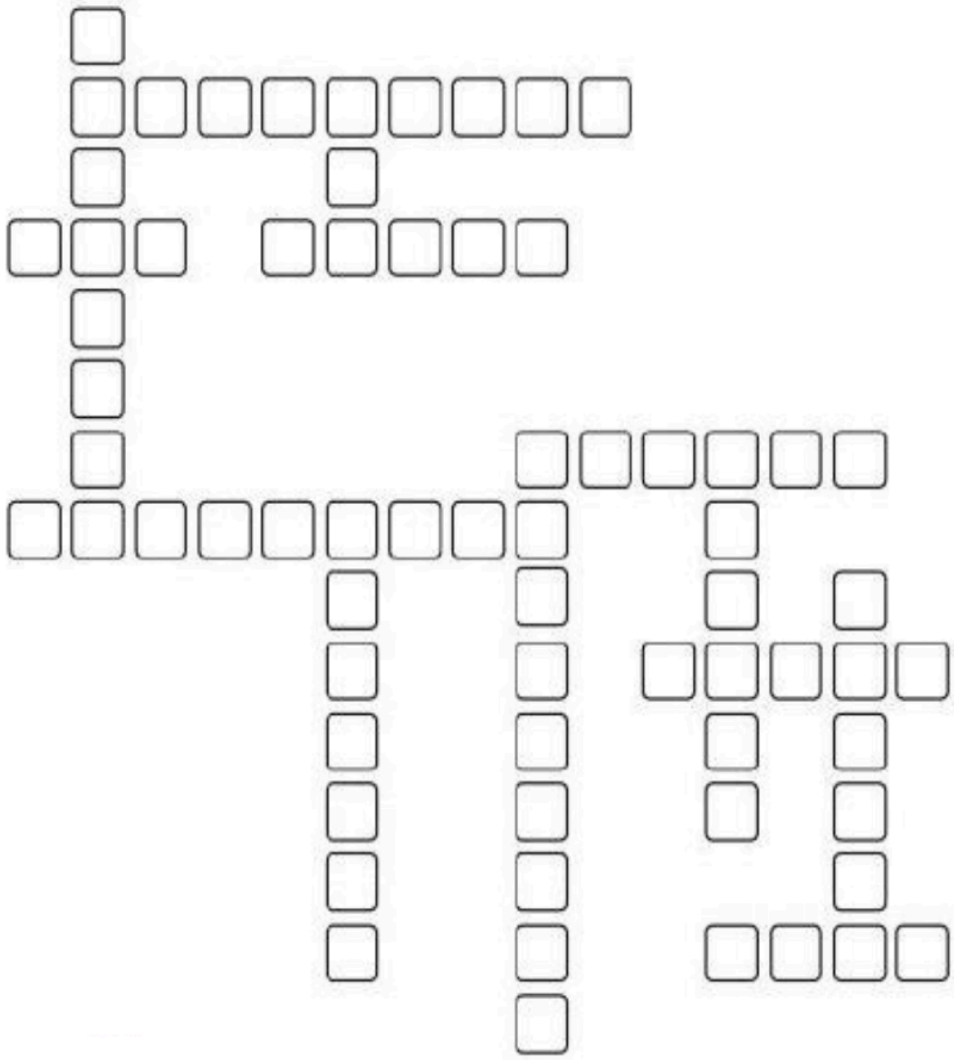
Question 1

Using the word list provided, fit each word into the grid below.



Question 2

Using the word list provided, fit each word into the grid below.



3 letters	4 letters	5 letters	6 letters	7 letters	8 letters	9 letters
bit	byte	debug	output	program	variable	decompose
run		input	repeat			algorithm
			search			selection

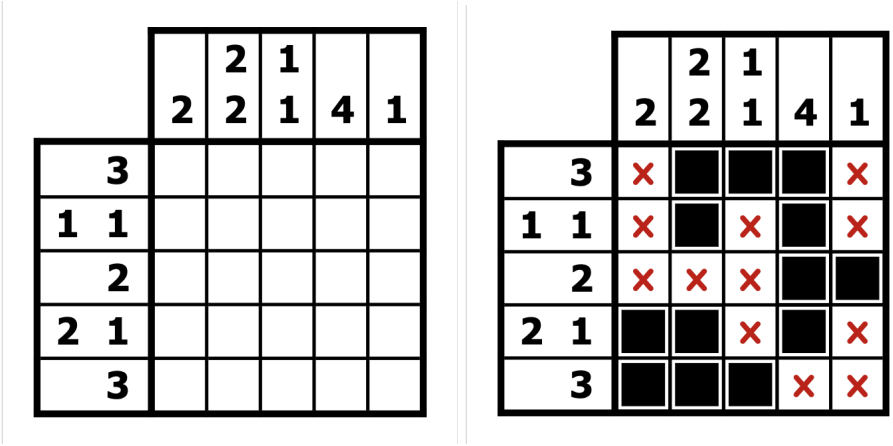
Nonograms

Nonograms is a logic puzzle with simple rules and challenging solutions.

The rules are:

- You have a grid of squares, which must be either filled in black or marked with X.
- Beside each row of the grid are listed the lengths of the runs of black squares on that row.
- Above each column are listed the lengths of the runs of black squares in that column.
- Your aim is to find all black squares.

Example:



Question 3

Solve the puzzle through nonograms.

	1	3	2 1	2 1	2 1
4					
4					
1					
1					
3					

Question 4

Solve the puzzle through nonograms.

	1 3	4 1	1 1	1 4 2	4 2	4	3 1	3 2	3 3	7
2										
1 1										
2										
2 7										
1 7										
9										
3 1										
2										
2 3										
3 4										

Question 5

Word Relations: Each question has a word followed by four answer choices. You will choose the answer choice that represents something the word could not exist without.

A good way to approach this type of question is to say the following sentence: "A _____ could not exist without _____." Put the word in the first blank. Try each of the answer choices in the second blank to see which choice is most logical.

i. Book

a. fiction b. pages c. pictures d. learning

ii. Language

a. tongue b. slang c. writing d. words

iii. Knowledge

a. school b. teacher c. textbook d. learning

iv. Culture

a. civility b. education c. agriculture d. customs

Question 6

Analogies: There are many different types of analogy relationships - use or function, part-to-whole, classification, proportion or degree, cause and effect, similarity or difference.

In each of these verbal analogies, you will be given a set of two related words, followed by a third word and four answer choices. Of the four choices, you must identify the one that would best complete the second set so that it expresses the same relationship as the first set.

Example: Cup is to coffee as bowl is to

a. dish b. soup c. spoon **d. Food**

i. Exercise is to gym as eating is to

a. food b. dieting c. fitness d. restaurant

ii. Optimist is to cheerful as pessimist is to

a. gloomy b. mean c. petty d. helpful

iii. Embarrassed is to humiliated as frightened is to

a. terrified b. agitated c. courageous d. reckless

iv. Guide is to direct as reduce is to

a. decrease b. maintain c. increase d. preserve

Question 7

Match definitions to particular situations: For each question, you will be given a definition and four possible answer choices.

Read each definition and all four choices carefully, and find the answer that provides the best example of the given definition.

i. Violating an Apartment Lease occurs when a tenant does something prohibited by the legally binding document that he or she has signed with a landlord. Which situation below is the best example of Violating an Apartment Lease?

a. Tim has decided to move to another city, so he calls his landlord to tell him that he is not interested in renewing his lease when it expires next month.

b. Valerie recently lost her job and, for the last three months, has neglected to pay her landlord the monthly rent they agreed upon in writing when she moved into her apartment eight months ago.

c. Mark writes a letter to his landlord that lists numerous complaints about the apartment he has agreed to rent for two years.

d. Leslie thinks that her landlord is neglecting the building in which she rents an apartment. She calls her attorney to ask for advice.

ii. A Guarantee is a promise or assurance that attests to the quality of a product that is either (1) given in writing by the manufacturer or (2) given verbally by the person selling the product. Which situation below is the best example of a Guarantee?

a. Melissa purchases a DVD player with the highest consumer ratings in its category.
b. The salesperson advises Curt to be sure that he buys an air conditioner with a guarantee.
c. The local auto body shop specializes in refurbishing and selling used cars.
d. Lori buys a used digital camera from her coworker who says that she will refund Lori's money if the camera's performance is not of the highest quality.

Question 8

Short Logic Problems: Each problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

i. All the offices on the 9th floor have wall-to-wall carpeting. No wall-to-wall carpeting is pink. None of the offices on the 9th floor has pink wall-to-wall carpeting.

If the first two statements are true, the third statement is:

a. true b. false c. uncertain

ii. All the trees in the park are flowering trees. Some of the trees in the park are dogwoods. All dogwoods are flowering trees.

If the first two statements are true, the third statement is:

a. true b. false c. uncertain

iii. A fruit basket contains more apples than lemons. There are more lemons in the basket than there are oranges. The basket contains more apples than oranges.

If the first two statements are true, the third statement is:

a. true b. false c. uncertain

iv. Taking the train across town is quicker than taking the bus. Taking the bus across town is slower than driving a car. Taking the train across town is quicker than driving a car.

If the first two statements are true, the third statement is:

a. true b. false c. uncertain

v. Cloudy days tend to be more windy than sunny days. Foggy days tend to be less windy than cloudy days. Sunny days tend to be less windy than foggy days.

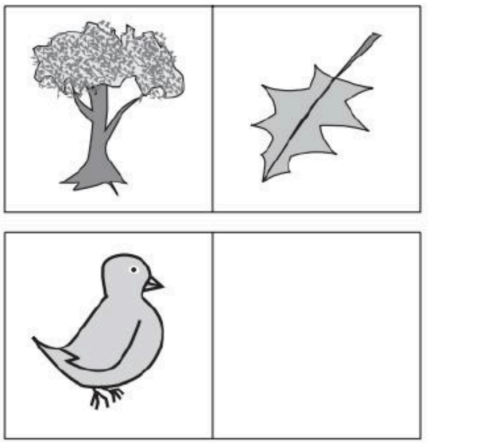
If the first two statements are true, the third statement is:

a. true b. false c. uncertain

Question 9

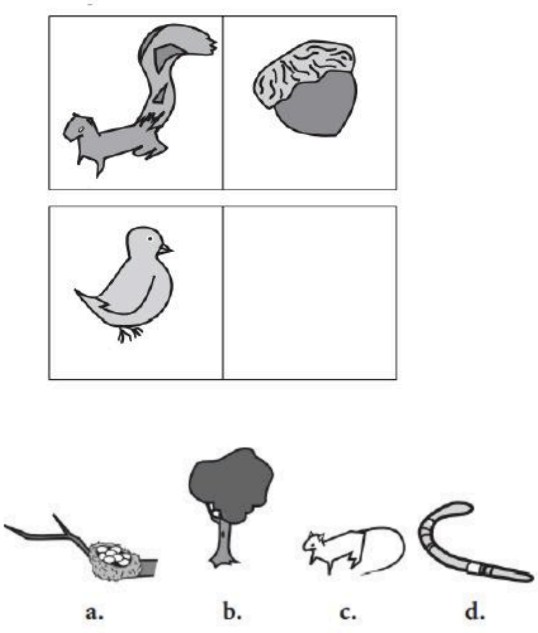
Visual Analogies: Work the relationship between the first pair of pictures and apply it to the second.

i.



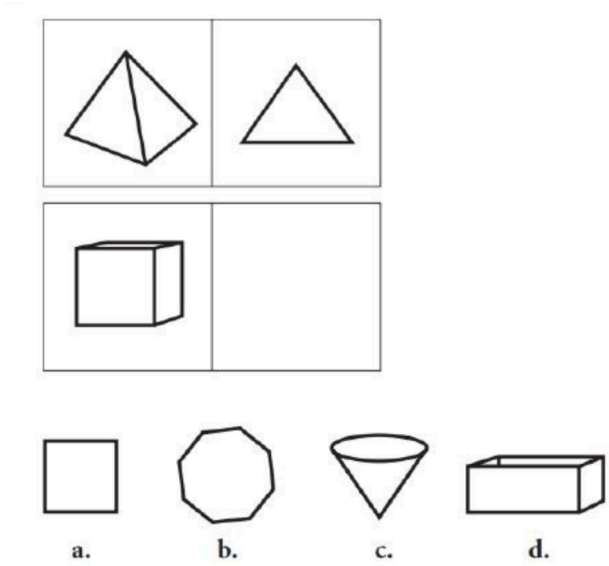
a. b. c. d.

ii.

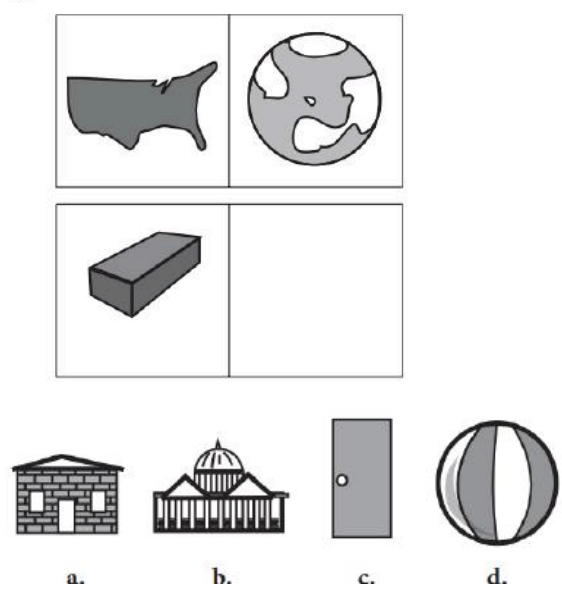


a. b. c. d.

iii.



iv.



Question 10

Word pair analogy: Every one of the following questions consists of a related pair of words, followed by five pairs of words labeled a through e. Choose the pair that best represents a similar relationship to the one expressed in the original pair of words.

i. PETAL : FLOWER

a. salt : pepper

b. tire : bicycle

c. base : ball

d. sandals : shoes

e. puppy : dog

ii. DEPRESSED : SAD

a. neat : considerate

b. towering : cringing

c. rapid : plodding

d. progressive : regressive

e. exhausted : tired

iii. ODOMETER : DISTANCE

a. scale : weight

b. length : width

c. inch : foot

d. mileage : speed

e. area : size

iv. RAIN : DRIZZLE

a. swim : dive

b. hop : shuffle

c. juggle : bounce

d. walk : run

e. run : jog

v. CONDUCTOR : ORCHESTRA

a. jockey : mount

b. thrasher : hay

c. driver : tractor

d. skipper : crew

e. painter : house

vi. COBBLER : SHOE

a. jockey : horse

b. contractor : building

c. mason : stone

d. cowboy : boot

e. potter : paint

Question 11

Artificial Language Translation: First, you will be given a list of three "nonsense" words and their English word meanings. The question(s) that follow will ask you to reverse the process and translate an English word into the artificial language.

For example, if you know that linsmerk means oak tree and linsdennel means oak table, then you know that lins means oak. And, if lins means oak, merk must mean tree, and dennel must mean table. When you discover what a word element means in English, write it down.

Then, look for the word elements that appear both on the list and in the answer choices.

i. Here are some words translated from an artificial language.
moolokarn means blue sky
wilkospadi means bicycle race
moolowilko means blue bicycle
Which word could mean “racecar”?

a. wilkozwet b. spadiwilko c. moolobreil d. spadivolo

ii. Here are some words translated from an artificial language.
dionot means oak tree
blyonot means oak leaf
blycrin means maple leaf
Which word could mean “maple syrup”?

a. blymuth b. hupponot c. patricrin d. crinweel

iii. Here are some words translated from an artificial language.
hapllesh means cloudburst
srenchoch means pinball
resbosrench means ninepin
Which word could mean “cloud nine”?

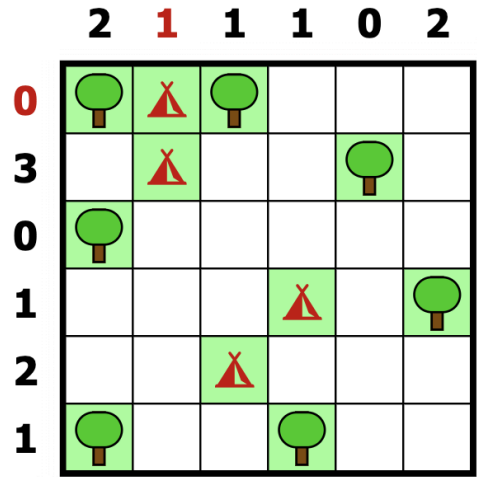
a. leshsrench b. ochhapl c. haploch d. haplresbo

iv. Here are some words translated from an artificial language.
briftamint means militant
uftonel means occupied
uftonalene means occupation
Which word could mean “occupant”?

a. elbrifta b. uftonamint c. elamint d. briftalene

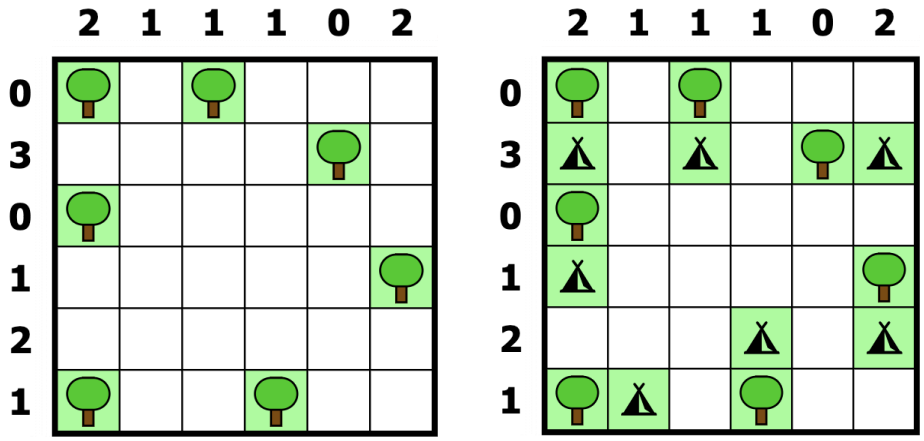
Tents:

- Pair each tree with a tent adjacent horizontally or vertically. This should be a 1 to 1 relation.
- Tents never touch each other even diagonally



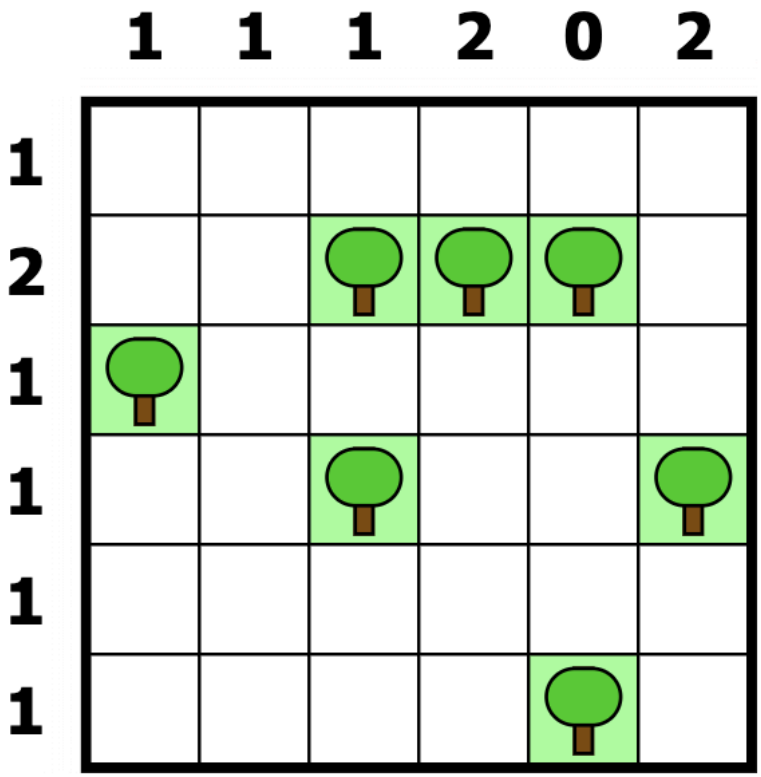
- The clues outside the grid indicate the number of tents on that row/column.

Example:



Question 12

Solve the puzzle by following the rules of tents.



Question 13

Seating Arrangement: Eight persons – A, B, C, D, E, F, G and H are sitting in a straight line facing North. Each got different marks in a test – 13, 16, 22, 31, 36, 45, 48 and 62, not necessarily in the same order.

- A is sitting second to left of the one who got 36 marks.
- Two people are sitting between G and the one who got 36 marks.
- The one who got 13 marks and G are sitting together.
- A did not get 13 marks.
- B is sitting third to right of A.
- There is only 1 neighbor of the one who got 13 marks.
- Number of people sitting between F and who got 13 marks is same as number of people sitting between F and who got 48 marks.
- There is a difference of 3 marks between B and C.
- D is sitting second to right of the one who got 62 marks.
- E and the one who got 22 marks are sitting together.
- F got more marks than D.

a. Who got the highest marks?
b. How many people are sitting between G and the one who got 36 marks?
c. Who is sitting between D and the one who got 48 marks?
d. How many marks did H get?
e. Who among the following pairs has marks difference of 9 marks?