

2022

## Chemical Engineering (CH)

- Q. 1. Inhaling the smoke from a burning \_\_\_\_\_ could \_\_\_\_\_ you quickly.  
 (a) tire/tier                      (b) tire/tyre  
 (c) tyre/tire                      (d) tyre/tier
- Q. 2. Rice, a versatile and inexpensive source of carbohydrate, is a critical component of diet worldwide. Climate change, causing extreme weather, poses a threat to sustained availability of rice. Scientists are working on developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably. Which one of the following is the CORRECT logical inference based on the information given in the above passage?  
 (a) GSR is an alternative to regular rice, but it grows only in an extreme weather  
 (b) GSR may be used in future in response to adverse effects of climate change  
 (c) GSR grows in an extreme weather, but the quantity of produce is lesser than regular rice  
 (d) Regular rice will continue to provide good yields even in extreme weather
- Q. 3. Given below are three statements and four conclusions drawn based on the statements.  
 Statement 1: Some engineers are writers.  
 Statement 2: No writer is an actor.  
 Statement 3: All actors are engineers.  
 Conclusion I: Some writers are engineers.  
 Conclusion II: All engineers are actors.  
 Conclusion III: No actor is a writer.  
 Conclusion IV: Some actors are writers.  
 Which one of the following options can be logically inferred?  
 (a) Only conclusion I is correct  
 (b) Only conclusion II and conclusion III are correct

- (c) Only conclusion I and conclusion III are correct  
 (d) Either conclusion III or conclusion IV is correct

## CIVIL ENGINEERING (CE) P1

- Q. 4. You should \_\_\_\_\_ when to say \_\_\_\_\_.  
 (a) no/no                      (b) no/know  
 (c) know/know              (d) know/no
- Q. 5. Healthy eating is a critical component of healthy aging. When should one start eating healthy? It turns out that it is never too early. For example, babies who start eating healthy in the first year are more likely to have better overall health as they get older. Which one of the following is the CORRECT logical inference based on the information in the above passage?  
 (a) Healthy eating is important for those with good health conditions, but not for others  
 (b) Eating healthy can be started at any age, earlier the better  
 (c) Eating healthy and better overall health are more correlated at a young age, but not older age  
 (d) Healthy eating is more important for adults than kids

## CIVIL ENGINEERING (CE) P2

- Q. 6. The movie was funny and I \_\_\_\_\_.  
 (a) could help laughing  
 (b) couldn't help laughed  
 (c) couldn't help laughing  
 (d) could helped laughed
- Q. 7. In the last few years, several new shopping malls were opened in the city. The total number of visitors in the malls is impressive. However, the total revenue generated through sales in the shops in these malls is generally low.

Which one of the following is the CORRECT logical inference based on the information in the above passage?

- (a) Fewer people are visiting the malls but spending more
- (b) More people are visiting the malls but not spending enough
- (c) More people are visiting the malls and spending more
- (d) Fewer people are visiting the malls and not spending enough

- Q. 8.** Given below are two statements and four conclusions drawn based on the statements.  
Statement 1: Some soaps are clean.  
Statement 2: All clean objects are wet.  
Conclusion I: Some clean objects are soaps.  
Conclusion II: No clean object is a soap.  
Conclusion III: Some wet objects are soaps.  
Conclusion IV: All wet objects are soaps.  
Which one of the following options can be logically inferred?
- (a) Only conclusion I is correct
  - (b) Either conclusion I or conclusion II is correct
  - (c) Either conclusion III or conclusion IV is correct
  - (d) Only conclusion I and conclusion III are correct

### COMPUTER SCIENCE (CS)

- Q. 9.** The \_\_\_\_\_ is too high for it to be considered \_\_\_\_\_.
- (a) fair/fare                      (b) faer/fair
  - (c) fare/fare                      (d) fare/fair
- Q. 10.** Given below are four statements.  
Statement 1: All students are inquisitive.  
Statement 2: Some students are inquisitive.  
Statement 3: No student is inquisitive.  
Statement 4: Some students are not inquisitive.  
From the given four statements, find the two statements that **CANNOT BE TRUE** simultaneously, assuming that there is at least one student in the class.
- (a) Statement 1 and Statement 3
  - (b) Statement 1 and Statement 2
  - (c) Statement 2 and Statement 4
  - (d) Statement 3 and Statement 4

- Q. 11.** Some people believe that “what gets measured, improves”. Some others believe that “what gets measured, gets gamed”. One possible reason for the difference in the beliefs is the work culture in organizations. In organizations with good work culture, metrics help improve outcomes. However, the same metrics are counterproductive in organizations with poor work culture.  
Which one of the following is the CORRECT logical inference based on the information in the above passage?

- (a) Metrics are useful in organizations with poor work culture
- (b) Metrics are useful in organizations with good work culture
- (c) Metrics are always counterproductive in organizations with good work culture
- (d) Metrics are never useful in organizations with good work culture

### ELECTRICAL ENGINEERING (EE)

- Q. 12.** As you grow older, an injury to your \_\_\_\_\_ may take longer to \_\_\_\_\_.
- (a) heel/heel                      (b) heal/heal
  - (c) heal/heal                      (d) heel/heal
- Q. 13.** Given below are two statements and four conclusions drawn based on the statements.  
Statement 1: Some bottles are cups.  
Statement 2: All cups are knives.  
Conclusion I: Some bottles are knives.  
Conclusion II: Some knives are cups.  
Conclusion III: All cups are bottles.  
Conclusion IV: All knives are cups.  
Which one of the following options can be logically inferred?
- (a) Only conclusion I and conclusion II are correct
  - (b) Only conclusion II and conclusion III are correct
  - (c) Only conclusion II and conclusion IV are correct
  - (d) Only conclusion III and conclusion IV are correct
- Q. 14.** Altruism is the human concern for the well being of others. Altruism has been shown to be motivated more by social bonding, familiarity, and identification of

belongingness to a group. The notion that altruism may be attributed to empathy or guilt has now been rejected.

Which one of the following is the CORRECT logical inference based on the information in the above passage?

- (a) Humans engage in altruism due to guilt but not empathy
- (b) Humans engage in altruism due to empathy but not guilt
- (c) Humans engage in altruism due to group identification but not empathy
- (d) Humans engage in altruism due to empathy but not familiarity

### ELECTRONICS AND COMMUNICATION (EC)

Q. 15. Mr. X speaks \_\_\_\_\_ Japanese \_\_\_\_\_ Chinese.

- (a) neither/or            (b) either/nor
- (c) neither/nor        (d) also/but

Q. 16 Mosquitoes pose a threat to human health. Controlling mosquitoes using chemicals may have undesired consequences. In Florida, authorities have used genetically modified mosquitoes to control the overall mosquito population. It remains to be seen if this novel approach has unforeseen consequences. Which one of the following is the correct logical inference based on the information in the above passage?

- (a) Using chemicals to kill mosquitoes is better than using genetically modified mosquitoes because genetic engineering is dangerous
- (b) Using genetically modified mosquitoes is better than using chemicals to kill mosquitoes because they do not have any side effects
- (c) Both using genetically modified mosquitoes and chemicals have undesired consequences and can be dangerous
- (d) Using chemicals to kill mosquitoes may have undesired consequences but it is not clear if using genetically modified mosquitoes has any negative consequence

Q. 17. In a class of five students P, Q, R, S and T, only one student is known to have copied in the exam. The disciplinary committee has investigated the situation and recorded the statements from the students as given below.

Statement of P: R has copied in the exam.  
Statement of Q: S has copied in the exam.  
Statement of R: P did not copy in the exam.  
Statement of S: Only one of us is telling the truth.

Statement of T: R is telling the truth.

The investigating team had authentic information that S never lies.

Based on the information given above, the person who has copied in the exam is

- (a) R                            (b) P
- (c) Q                            (d) T

### MECHANICAL ENGINEERING (ME) P1

Q. 18. After playing \_\_\_\_\_ hours of tennis, I am feeling \_\_\_\_\_ tired to walk back.

- (a) too/too                (b) too/two
- (c) two/two                (d) two/too

Q. 19. Humans are naturally compassionate and honest. In a study using strategically placed wallets that appear "lost", it was found that wallets with money are more likely to be returned than wallets without money. Similarly, wallets that had a key and money are more likely to be returned than wallets with the same amount of money alone. This suggests that the primary reason for this behaviour is compassion and empathy.

Which one of the following is the CORRECT logical inference based on the information in the above passage?

- (a) Wallets with a key are more likely to be returned because people do not care about money
- (b) Wallets with a key are more likely to be returned because people relate to suffering of others
- (c) Wallets used in experiments are more likely to be returned than wallets that are really lost
- (d) Money is always more important than keys

Q. 20. Given below are three conclusions drawn based on the following three statements.

Statement 1: All teachers are professors.

Statement 2: No professor is a male.

Statement 3: Some males are engineers.

Conclusion I: No engineer is a professor.

Conclusion II: Some engineers are professors.

Conclusion III: No male is a teacher.

Which one of the following options can be logically inferred?

- (a) Only conclusion III is correct
- (b) Only conclusion I and conclusion II are correct
- (c) Only conclusion II and conclusion III are correct
- (d) Only conclusion I and conclusion III are correct

### MECHANICAL ENGINEERING (ME) P2

**Q. 21** Writing too many things on the \_\_\_\_\_ while teaching could make the students get \_\_\_\_\_.

- (a) bored/board      (b) board/bored
- (c) board/board      (d) bored/bored

**Q. 22.** Fish belonging to species S in the deep sea have skins that are extremely black (ultra-black skin). This helps them not only to avoid

predators but also sneakily attack their prey. However, having this extra layer of black pigment results in lower collagen on their skin, making their skin more fragile.

Which one of the following is the CORRECT logical inference based on the information in the above passage?

- (a) Having ultra-black skin is only advantageous to species S
- (b) Species S with lower collagen in their skin are at an advantage because it helps them avoid predators
- (c) Having ultra-black skin has both advantages and disadvantages to species S
- (d) Having ultra-black skin is only disadvantageous to species S but advantageous only to their predators

## Answer Key

Q. No.	Answer	Topic Name	Chapter Name
1	(c)	Homophones	Basic English Grammar
2	(b)	Logical Inference	Verbal Logic
3	(c)	Statement and Conclusion	Verbal Logic
4	(d)	Homophones	Basic English Grammar
5	(b)	Logical Inference	Verbal Logic
6	(c)	Tenses	Basic English Grammar
7	(b)	Logical Inference	Verbal Logic
8	(d)	Statement and Conclusion	Verbal Logic
9	(d)	Homophones	Basic English Grammar
10	(a)	Statement and Conclusion	Verbal Logic
11	(b)	Logical Inference	Verbal Logic
12	(d)	Homophones	Basic English Grammar
13	(a)	Statement and Conclusion	Verbal Logic
14	(c)	Logical Inference	Verbal Logic
15	(c)	Correlative Conjunctions	Basic English Grammar
16	(d)	Logical Inference	Verbal Logic
17	(b)	Statement and Inference	Verbal Logic
18	(d)	Homophones	Basic English Grammar
19	(b)	Logical Inference	Verbal Logic
20	(a)	Statement and Conclusion	Verbal Logic
21	(b)	Homophones	Basic English Grammar
22	(c)	Logical Inference	Verbal Logic

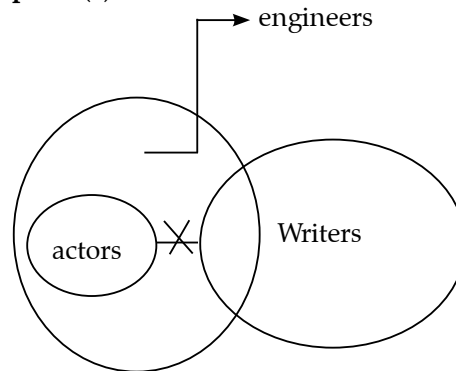
**Verbal Aptitude**      **GATE General Aptitude**      **Solved Papers 2022**

**ANSWERS WITH EXPLANATIONS**

**2022**

1. **Option (c) is correct.**  
 The question is based on the concept of homophones. Homophones are similar sounding words, but they differ in spellings and meanings - tyre and tire are homophones. While 'tyre' is the rubber covering, typically inflated or surrounding an inflated inner tube, placed round a wheel to form a soft contact with the road, tire is related with exhaustion. Here, the sentence implies that burning a rubber tyre can tire (exhaust/stress) you quickly.
2. **Option (b) is correct.**  
 The gist of the paragraph states that rice is a critical component of diet worldwide, but adversities of climate change pose a threat to its sustained availability. Hence, scientists are looking for alternatives like developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably.  
**(A)** inappropriately states that GSR grows only in an extreme weather, which is not stated in the passage.  
**(B)** is the correct choice, as it asserts that GSR is an alternative to regular rice because it can withstand bad weather conditions.  
**(C)** is incorrect because it is stated that the yields are high with GSR, under extreme weather conditions.  
**(D)** is incorrect because it states the opposite of what has been established in the paragraph – regular rice cannot withstand extreme weather.

3. **Option (c) is correct.**



- The above venn diagram fulfills the condition that some engineers are writers, no writer is an actor and all actors are engineers. Given these situations it can be inferred that if some engineers are writers, some writers are engineers (I). If all actors are engineers, then all engineers are not actors, but some engineers are actors. Thus, (II) is incorrect. Given the statement that no writer is an actor, it can be inferred that no actor is a writer. (III) is correct. If no writer is an actor, then definitely some actors cannot be writers. Therefore, (IV) is incorrect.
4. **Option (d) is correct.**  
 The question is based on the homophones – know and no. While 'know' means to be aware of something through observation, enquiry, or information, 'no' means to give a negative response. The given sentence suggests that one should be aware of the exact time or situation when he/ she should say no.

5. **Option (b) is correct.**

The paragraph argues that healthy eating does not have any age, the earlier it is started, the better it is. This is exemplified in the case of babies who start eating healthy in the first year, and therefore are more likely to have better overall health as they get older.

(A) is incorrect as it goes outside the ambit of the passage in stating that healthy eating is important for those with good health conditions only, but not for others.

(B) is the perfect gist of the passage, which has been best elucidated with the example of babies who start eating healthy food early in their life.

(C) is unjustified to conclude that eating healthy and having an overall better health are more associated to young age, and not older age. But the message is that eating healthy is better when started early but it does not imply that older people, if they eat healthy, will not receive any health benefits.

(D) is an absurd and illogical argument.

6. **Option (c) is correct.**

'Couldn't help laughing' means that something so ridiculous happened that you couldn't prevent yourself from a burst of laughter. More specifically, it means that, at a certain point, someone wanted to control his/her laughter but was not able to do so. In the sentence it is given that the movie was so funny that the person could not control his laughter. Other options are grammatically wrong.

7. **Option (b) is correct.**

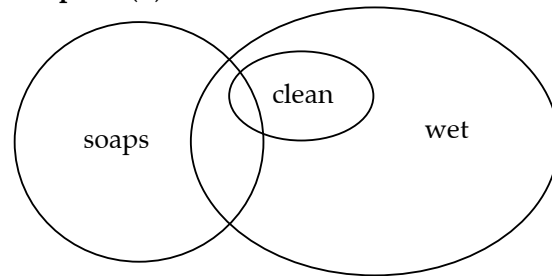
The paragraph states that despite the city witnessing an increase in the number of new shopping malls and a spike in the total number of visitors in the malls, the total revenue generated through sales in the shops in these malls is generally low. This reinforces the fact that though more people are visiting the malls they are not spending enough.

(A) is contradicting the content of the paragraph.

(B) reiterates the gist of the paragraph.

(C) is incorrect, because had it been true, the malls would have witnessed more revenue through sales.

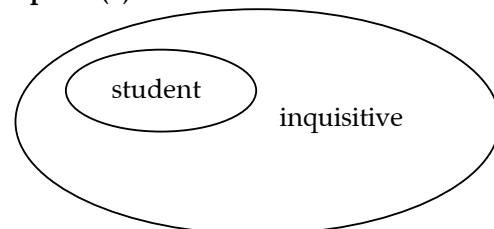
(D) one part is true that people are not spending enough, but it is untrue that fewer people are visiting the malls.

8. **Option (d) is correct.**

From the given diagram, it is apparent that some soaps are clean, and all clean objects are wet. Then it can be inferred that if some soaps are clean, alternatively some clean objects are soaps. (I) is correct. When some soaps are clean, it cannot be implied that no clean object is a soap. (II) is incorrect. If all clean objects are wet and some clean objects are soaps, then it is logically correct that some wet objects are soaps. (III) is correct. Just because some wet objects are soaps, all wet objects cannot be soaps. (IV) is incorrect.

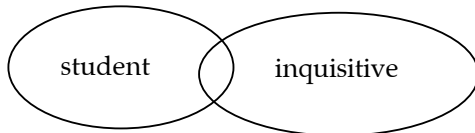
9. **Option (d) is correct.**

The question is based on the homophones-fare and fair. 'Fare' refers to the money paid for a journey on public transport. 'Fair' means consonant with merit or importance. The sentence implies that the charge (fare) for a service is too high to be considered just or according to the merit of the service provided.

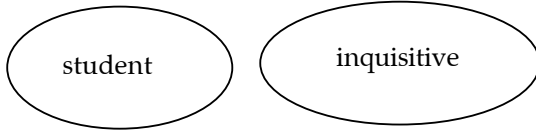
10. **Option (a) is correct.**

If we consider option (A), we see that all students are inquisitive, then considering that no student is inquisitive, is nullified. Hence option (A) is not logically correct.

If we consider statement (1) and (2), it is noticed that if students are inquisitive, then definitely some students are inquisitive (assuming that there is at least one student in the class). Hence option (B) is logically derived.



From the above diagram, it is apparent that if some students are inquisitive, then automatically some students are not inquisitive. Hence, option (C) is logically derived.



From the above diagram, it is evident that no student is inquisitive, therefore some students are not inquisitive. Hence, option (D) is logically derived.

**11. Option (b) is correct.**

The paragraph states that according to some people, "what gets measured, improves". This is particularly true for organizations with good work culture, where it is believed that metrics help improve outcomes. While some others believe that "what gets measured, gets gamed", which is reinforced in organizations with poor work culture, where the same metrics are counterproductive.

(A) is contradicting the gist of the paragraph.

(B) logically reinforces the idea discussed in the paragraph.

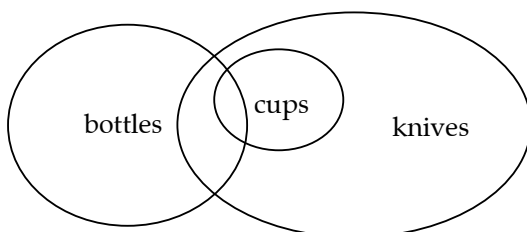
(C) is opposite to the idea discussed in the paragraph.

(D) is contrary to the idea discussed in the paragraph.

**12. Option (d) is correct.**

The question is based on the homophones – heel and heal. 'Heel' refers to the back part of the human foot below the ankle. 'Heal' means to cause (a wound, injury, or person) to become sound or healthy again. The sentence implies that an injury on the heel can take longer to get better as one grows older.

**13. Option (a) is correct.**



If the statements assert that some bottles are cups and all cups are knives, then the given diagram corroborates that some bottles are knives. Hence (I) is correct.

Since, all cups are knives, it is implicit that some knives are cups. Hence (II) is correct.

If some bottles are cups, then it is not possible that all cups are bottles. Hence (III) is inappropriate.

If it is represented that all cups are knives, it is impossible to conclude that all knives are cups. Hence (IV) is correct.

**14. Option (c) is correct.**

The paragraph asserts that altruism is motivated more by social bonding, familiarity and identification of belongingness to a group. This negates the earlier concept that altruism may be attributed to empathy or guilt.

(A) is incorrect in attributing altruism to guilt, which has been negated in the last line of the paragraph.

(B) is incorrect in attributing altruism to empathy, which has been negated in the last line of the paragraph.

(C) correctly establishes that humans engage in altruism due to group identification, thus ruling out the influence of empathy.

(D) is contradicting the main idea of the paragraph.

**15. Option (c) is correct.**

Neither –nor and either –or are fixed pairs in the English language. These are used during comparisons of two things, but the difference is: either/or is used when making a positive decision between two or more things and neither/nor is used when the choice is negative or the person wants to say that more than one thing is not true. All the options other than option (C) have incorrect pairs. The given sentence implies that Mr. X does not know Japanese and Chinese.

**16. Option (d) is correct.**

The paragraph entails that since mosquitoes pose a threat to human health, controlling them is a necessity. But controlling their population by using chemicals have undesired consequences. The case of Florida using genetically modified mosquitoes to control the overall mosquito population is a novel

approach, but its consequences are yet to be ascertained.

(A) is an unjustified inference because it is nowhere implied that genetic engineering is dangerous, as the consequences are yet to be established.

(B) is an unwarranted assertion because the paragraph concludes that even though genetically modified mosquitoes are being preferred over chemicals to kill mosquitoes, but the results are awaited.

(C) is incorrect because it cannot be inferred that using genetically modified mosquitoes and chemicals have undesired consequences and can be dangerous.

(D) is correct in claiming that using chemicals to kill mosquitoes may have undesired consequences and that using genetically modified mosquitoes has any negative consequence is still to be proved.

**17. Option (b) is correct.**

In the given question, one needs to weigh the statement recorded by the 5 students. It is equally notable that as per the investigating team, S never lies. Therefore, the statement made by S that 'only one of us is telling the truth' is authentic. This makes him the only person adhering to truth, while making others resort to lies. Henceforth, it is to be interpreted as:

Statement of P: R has NOT copied in the exam.

Statement of Q: S has NOT copied in the exam.

Statement of R: P copied in the exam.

Statement of T: R is NOT telling the truth.

Hence, as per the correct order, P has copied in the exam. Hence (b) is correct.

**18. Option (d) is correct.**

'Two' is a number. It will go in the first blank as it denotes the time for which tennis was played. The second part of the sentence uses the pair 'too and to'. When this pair is used in a sentence, it contains a negative meaning. It means 'more than is necessary or desirable'. Here, the writer is saying that he was tired to such an extent that he could not even walk.

**19. Option (b) is correct.**

The paragraph establishes, with the help of two experiments, that humans have the tendency

to return 'lost' wallets with money than wallets without money. Similarly, wallets that had a key and money are more likely to be returned than wallets with the same amount of money alone. This evinces that humans are compassionate and full of empathy.

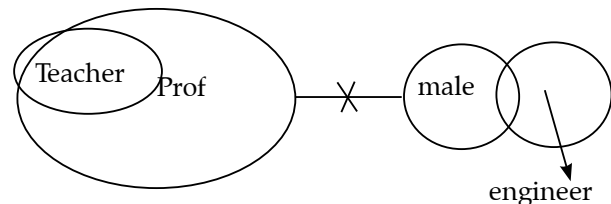
(A) is extreme as it cannot be concluded that the reason behind people returning wallets with a key is that people do not care about money.

(B) is the correct choice because it reinforces the main idea- it is empathy and compassion in humans that make them return wallets with a key.

(C) is incorrect as the inference is based on the results of the experiment and a generalisation cannot be made from this.

(D) is absurd and cannot be rationalized.

**20. Option (a) is correct.**



From the statement 'No professor is a male' and 'Some males are engineers', it cannot be ascertained that no engineer is a professor. But some engineers being a professor is a possibility. Therefore, conclusion (I) is incorrect. It cannot be corroborated that some engineers are definitely professors. But there is a possibility. Hence (II) cannot be logically correct. The conclusion that no male is a teacher is implicit because all teachers are professors and no professor is a male. Therefore, statement (III) is correct. Hence option (A) is correct.

**21. Option (b) is correct.**

'Board' refers to a long, thin, flat piece of wood or other hard material used for writing or other purposes while the word 'bored' means feeling weary and impatient because one is unoccupied or lacks interest in one's current activity. 'Board' is suitable for the first blank and 'bored' is suitable for the second blank in the context. The sentence means that too many things written on board by a teacher can confuse the students.



**22. Option (c) is correct.**

The paragraph lays down the argument that fish belonging to species S in the deep sea have skins that are extremely black, which comes to their rescue in not only avoiding predators but also in sneakily attacking their prey. This also has another side to it, as this ultra-black skin make their skin more fragile.

**(A)** is far-fetched and cannot be inferred from the paragraph that having ultra-black skin is only advantageous to species S, as no other species have been mentioned in the paragraph.

**(B)** is not correct because it is evident from the paragraph that species S has more fragile skin due to the low level of collagen.

**(C)** is correct because both the positive and negative side to having ultra-black skin have been emphasized in the paragraph.

**(D)** is absurd and cannot be corroborated from the paragraph that having ultra-black skin turns out to be advantageous only to the predators of fish of species S.