THE OFFICIAL LSAT—INDIA™
INTRODUCTORY GUIDE

LSAC.org

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The LSAT—India consists of five 35-minute sections of multiple-choice questions. Four of the five sections contribute to the test taker's score. These sections include one Reading Comprehension section, one Analytical Reasoning section, and two Logical Reasoning sections. The unscored section, commonly referred to as the variable section, typically is used to pretest new test questions. The placement of this section in the test will vary.

The LSAT—India is designed to measure skills considered essential for succeeding in law school: reading and comprehending complex texts with accuracy and insight, organising and managing information and drawing reasonable inferences from it, thinking critically, and analysing and evaluating the reasoning and arguments of others.

The LSAT—India provides a standard measure of acquired reading and verbal reasoning skills that law schools can use as one of several factors in assessing applicants.

SCORING

Your LSAT—India score is based on the number of questions you answer correctly (the raw score). There is no negative marking for incorrect answers, and all questions count equally. In other words, there is no penalty for guessing. The score scale for the test is 420 to 480.

All test forms of the LSAT—India reported on the same score scale are designed to measure the same abilities, but one test form may be slightly easier or more difficult than another. The scores from different test forms are made comparable through a statistical procedure known as equating. As a result of equating, a given scaled score earned on different test forms reflects the same level of ability.

THE THREE LSAT—INDIA MULTIPLE-CHOICE QUESTION TYPES

The multiple-choice questions on the LSAT—India reflect a broad range of academic disciplines and are not intended to give any advantage to candidates from particular academic backgrounds. The LSAT—India does not include questions requiring the mastery of any specific discipline or set of facts. For example, it does not test your knowledge of history, political theory, mathematics, or even general knowledge. Rather, it is a test of important critical thinking skills acquired over your educational lifetime.

The following material presents a general discussion of the nature of each question type and some strategies that can be used in answering them.

Analytical Reasoning Questions

Analytical Reasoning questions are designed to assess the ability to consider a group of facts and rules, and, given those facts and rules, determine what could or must be true. The specific scenarios associated with these questions are usually unrelated to law, since they are intended to be accessible to a wide range of test takers. However, the skills tested do parallel those involved in determining what could or must be the case given a set of regulations, the terms of a contract, or the facts of a legal case in relation to the law. In Analytical Reasoning questions, you are asked to reason deductively from a set of statements and rules or principles that describe relationships among persons, things, or events.

Analytical Reasoning questions appear in sets, with each set based on a single passage. The passage used for each set of questions describes common ordering relationships or grouping relationships, or a combination of both types of relationships. Examples include scheduling employees for work shifts, assigning instructors to class sections, ordering tasks according to priority, and distributing grants for projects.

Analytical Reasoning questions test a range of deductive reasoning skills. These include:

- Comprehending the basic structure of a set of relationships by determining a complete solution to the problem posed (for example, an acceptable seating arrangement of all six diplomats around a table)
- Reasoning with conditional 'if-then' statements and recognising logically equivalent formulations of such statements
- Inferring what could be true or must be true from given facts and rules
- Inferring what could be true or must be true from given facts and rules together with new information in the form of an additional or substitute fact or rule
- Recognising when two statements are logically equivalent in context by identifying a condition or rule that could replace one of the original conditions while still resulting in the same possible outcomes

Analytical Reasoning questions reflect the kinds of detailed analyses of relationships and sets of constraints that a law student must perform in legal problem solving. For example, an Analytical Reasoning passage might describe six diplomats being seated around a table, following certain rules of protocol as to who can sit where. You, the test taker, must answer questions about the logical implications of

given and new information. For example, you may be asked who can sit between diplomats X and Y, or who cannot sit next to X if W sits next to Y. Similarly, if you were a student in law school, you might be asked to analyse a scenario involving a set of particular circumstances and a set of governing rules in the form of constitutional provisions, statutes, administrative codes, or prior rulings that have been upheld. You might then be asked to determine the legal options in the scenario: what is required given the scenario, what is permissible given the scenario, and what is prohibited given the scenario. Or you might be asked to develop a 'theory' for the case: when faced with an incomplete set of facts about the case, you must fill in the picture based on what is implied by the facts that are known. The problem could be elaborated by the addition of new information or hypotheticals. No formal training in logic is required to answer these questions correctly.

Tips for Analytical Reasoning

Some people may prefer to answer first those questions about a passage that seem less difficult and then those that seem more difficult. In general, it is best to finish one passage before starting on another, because much time can be lost in returning to a passage and re-establishing familiarity with its relationships. However, if you are having great difficulty on one particular set of questions and are spending too much time on them, it may be to your advantage to skip that set of questions and go on to the next passage, returning to the problematic set of questions after you have finished the other questions in the section.

Do not assume that because the conditions for a set of questions look long or complicated, the questions based on those conditions will be especially difficult.

Read the passage carefully. Careful reading and analysis are necessary to determine the exact nature of the relationships involved in an Analytical Reasoning passage. Some relationships are fixed (for example, P and R must always work on the same project). Other relationships are variable (for example, Q must be assigned to either team 1 or team 3). Some relationships that are not stated explicitly in the conditions are implied by and can be deduced from those that are stated (for example, if one condition about paintings in a display specifies that Painting K must be to the left of Painting Y, and another specifies that Painting W must be to the left of Painting K, then it can be deduced that Painting W must be to the left of Painting Y).

In reading the conditions, do not introduce unwarranted assumptions. For instance, in a set of questions establishing relationships of height and weight among the members of a team, do not assume that a person who is taller than another person must weigh more than that person. As another example, suppose a set involves ordering and a question in the set asks what must be true if both X and Y must be earlier than Z; in this case, do not assume that X must be earlier than Y merely because X is mentioned before Y. All the information needed to answer each question is provided in the passage and the question itself.

The conditions are designed to be as clear as possible. Do not interpret the conditions as if they were intended to trick you. For example, if a question asks how many people could be eligible to serve on a committee, consider only those people named in the passage unless directed otherwise. When in doubt, read the conditions in their most obvious sense. Remember, however, that the language in the conditions is intended to be read for precise meaning. It is essential to pay particular attention to words that describe or limit relationships, such as 'only', 'exactly', 'never', 'always', 'must be', 'cannot be', and the like.

The result of this careful reading will be a clear picture of the structure of the relationships involved, including the kinds of relationships permitted, the participants in the relationships, and the range of possible actions or attributes for these participants.

Keep in mind question independence. Each question should be considered separately from the other questions in its set. No information, except what is given in the original conditions, should be carried over from one question to another.

In some cases, a question will simply ask for conclusions to be drawn from the conditions as originally given. Some questions may, however, add information to the original conditions or temporarily suspend or replace one of the original conditions for the purpose of that question only. For example, if Question 1 adds the supposition 'if P is sitting at table 2...', this supposition should NOT be carried over to any other question in the set.

Logical Reasoning Questions

Arguments are a fundamental part of the law, and analysing arguments is a key element of legal analysis. Training in the law builds on a foundation of basic reasoning skills. Law students must draw on the skills of analysing, evaluating, constructing, and refuting arguments. They need to be able to identify what information is relevant to an issue or argument and what impact further evidence might have. They need to be able to reconcile opposing positions and use arguments to persuade others.

Logical Reasoning questions evaluate the ability to analyse, critically evaluate, and complete arguments as they occur in ordinary language. The questions are based on short arguments drawn from a wide variety of sources, including newspapers, general interest magazines, scholarly publications, advertisements, and informal discourse. These arguments mirror legal reasoning in the types of arguments presented and in their complexity, although few of the arguments actually have law as a subject matter.

Each Logical Reasoning question requires you to read and comprehend a short passage, then answer one question (or, rarely, two questions) about it. The questions are designed to assess a wide range of skills involved in thinking critically, with an emphasis on skills that are central to legal reasoning.

These skills include:

- Recognising the parts of an argument and their relationships
- Recognising similarities and differences between patterns of reasoning
- Drawing well-supported conclusions
- Reasoning by analogy
- Recognising misunderstandings or points of disagreement
- Determining how additional evidence affects an argument
- Detecting assumptions made by particular arguments
- Identifying and applying principles or rules
- Identifying flaws in arguments
- Identifying explanations

The questions do not presuppose specialised knowledge of logical terminology. For example, you will not be expected to know the meaning of specialised terms such as 'ad hominem' or 'syllogism'. On the other hand, you will be expected to understand and critique the reasoning contained in arguments. This requires that you possess an understanding of widely used concepts such as argument, premise, assumption, and conclusion.

Tips for Logical Reasoning

Read each question carefully. Make sure that you understand the meaning of each part of the question. Make sure that you understand the meaning of each answer choice and the ways in which it may or may not relate to the question posed.

Do not pick a response simply because it is a true statement. Although true, it may not answer the question posed.

Answer each question on the basis of the information that is given, even if you do not agree with it. Work within the context provided by the passage. LSAT—India questions do not involve any tricks or hidden meanings.

Reading Comprehension Questions

Both law school and the practise of law involve extensive reading of highly varied, dense, argumentative, and expository texts (for example, cases, codes, contracts, briefs, decisions, and evidence). This reading must be exacting, distinguishing precisely what is said from what is not said. It involves comparison, analysis, synthesis, and application (for example, of principles and rules). It involves drawing appropriate inferences and applying ideas and arguments to new contexts. Law school reading also requires the ability to grasp unfamiliar subject matter and the ability to penetrate difficult and challenging material.

The purpose of LSAT—India Reading Comprehension questions is to measure the ability to read, with understanding and insight, examples of lengthy and complex materials similar to those commonly encountered in law school. The Reading Comprehension section contains four sets of reading questions, each set consisting of a selection of reading material followed by five to eight questions. The reading selection in three of the four sets consists of a single reading passage; the other set generally contains two related shorter passages. Sets with two passages are a variant of Reading Comprehension called Comparative Reading.

Comparative Reading questions concern the relationships between the two passages, such as those of generalisation/instance, principle/application, or point/counterpoint. Law school work often requires reading two or more texts in conjunction with each other and understanding their relationships. For example, a law student may read a trial court decision together with an appellate court decision that overturns it, or identify the fact pattern from a hypothetical suit together with the potentially controlling case law.

Reading selections for Reading Comprehension questions are drawn from a wide range of subjects in the humanities, social sciences, biological and physical sciences fields, and areas related to the law. Generally, the selections are densely written, use high-level vocabulary, and contain sophisticated argument or complex rhetorical structure (for example, multiple points of view). Reading Comprehension questions require you to read carefully and accurately, to determine the relationships among the various parts of the reading selection, and to draw reasonable inferences from the material in the selection. The questions may ask about the following characteristics of a passage or pair of passages:

- The main idea or primary purpose
- Information that is explicitly stated
- Information or ideas that can be inferred
- The meaning or purpose of words or phrases as used in context
- The organisation or structure
- The application of information in the selection to a new context
- Principles that function in the selection
- Analogies to claims or arguments in the selection
- An author's attitude as revealed in the tone of a passage or the language used
- The impact of new information on claims or arguments in the selection

Tips for Reading Comprehension

Since reading selections are drawn from many different disciplines and sources, you should not be discouraged if you encounter material with which you are not familiar. It is important to remember that questions are to be answered exclusively on the basis of the information provided in the selection. There is no particular knowledge that you are expected to bring to the test, and you should not make inferences based on any prior knowledge of a subject that you may have. You may, however, wish to defer working on a set of questions that seems particularly difficult or unfamiliar until after you have dealt with sets you find easier.

One question that often arises in connection with Reading Comprehension has to do with the most effective and efficient order in which to read the selections and questions. Possible approaches include:

- reading the selection very closely and then answering the questions;
- reading the questions first, reading the selection closely, and then returning to the questions; or
- skimming the selection and questions very quickly, then rereading the selection closely and answering the questions.

Test takers are different, and the best strategy for one might not be the best strategy for another. In preparing for the test, therefore, you might want to experiment with the different strategies and decide what works most effectively for you.

Remember that your strategy must be effective under timed conditions. For this reason, the first strategy—reading the selection very closely and then answering the questions—may be the most effective for you. Nonetheless, if you believe that one of the other strategies might be more effective for you, you should try it out and assess your performance using it.

Reading the selection. Whatever strategy you choose, you should give the passage or pair of passages at least one careful reading before answering the questions. Try to distinguish main ideas from supporting ideas, and opinions or attitudes from factual, objective information. Note transitions from one idea to the next and identify the relationships among the different ideas or parts of a passage, or between the two passages in Comparative Reading sets. Consider how and why an author makes points and draws conclusions. Be sensitive to implications of what the passages say.

You may find it helpful to mark key parts of passages. For example, you might underline main ideas or important arguments, and you might note transitional words—'although', 'nevertheless', 'correspondingly', and the like—that will help you map the structure of a passage. Also, you might note descriptive words that will help you identify an author's attitude towards a particular idea or person.

Answering the Questions

- Always read all the answer choices before selecting the best answer. The best answer choice is the one that most accurately and completely answers the question being posed.
- Respond to the specific question being asked. Do not pick an answer choice simply because it is a true statement. For example, picking a true statement might yield an incorrect answer to a question in which you are asked to identify an author's position on an issue, since you are not being asked to evaluate the truth of the author's position but only to correctly identify what that position is.
- Answer the questions only on the basis of the information provided in the selection. Your own views, interpretations, or opinions, and those you have heard from others, may sometimes conflict with those expressed in a reading selection; however, you are expected to work within the context provided by the reading selection. You should not expect to agree with everything you encounter in Reading Comprehension passages.

PRACTISING THE LSAT—INDIA

One important way to prepare for the LSAT—India is to simulate the day of the test by taking practise tests under actual time constraints. Taking practise tests under timed conditions helps you to estimate the amount of time you can afford to spend on each question in a section and to determine the question types on which you may need additional practise.

During the test, you may work only on the section designated by the invigilator. You cannot devote extra time to a difficult section and make up that time on a section you find easier. In pacing yourself, and checking your answers, you should think of each section of the test as a separate minitest.

Be sure that you answer every question on the test. When you do not know the correct answer to a question, first eliminate the responses that you know are incorrect, then make your best guess among the remaining choices. Do not be afraid to guess, as there is no penalty for incorrect answers.

When you take a practise test, abide by all the requirements specified in the directions and keep strictly within the specified time limits. Work without a rest period.

When taken under conditions as much like actual testing conditions as possible, a practise test provides very useful preparation for taking the LSAT—India.

Sample Questions with Explanations

The remainder of this Guide contains a few examples of each question type along with complete explanations for every correct and incorrect answer. Study these examples and explanations to get an idea about the nature of the different types of questions on the LSAT—India.

SAMPLE QUESTIONS AND EXPLANATIONS

- Analytical Reasoning. 6
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Exactly eight boats—Jewel, Kashmir, Neptune, Ojibwa, Pacific, Spain, Tornado, and Valhalla—arrived at a dock. No boat arrived at the same time as any other boat. The boats arrived in an order consistent with the following conditions:

Tornado arrived before Spain but after Jewel.
Neptune arrived before Tornado.
Kashmir arrived after Jewel but before Spain.
Spain arrived before Ojibwa.

1. If Neptune arrived after Kashmir, which one of the following must be false?

   (A) Jewel was the second of the boats to arrive.
   (B) Kashmir was the fifth of the boats to arrive.
   (C) Neptune was the third of the boats to arrive.
   (D) Ojibwa was the sixth of the boats to arrive.
   (E) Spain was the seventh of the boats to arrive.

2. Which one of the following must be true?

   (A) At least two of the boats arrived before Neptune.
   (B) At least five of the boats arrived before Pacific.
   (C) At least four of the boats arrived before Spain.
   (D) At least three of the boats arrived before Tornado.
   (E) At least two of the boats arrived before Valhalla.

3. Of the eight boats, what is the maximum number that could have arrived before Jewel?

   (A) none
   (B) one
   (C) two
   (D) three
   (E) four

4. Of the eight boats, if Valhalla was the second to arrive, then which one of the following CANNOT be true?

   (A) Jewel was the third to arrive.
   (B) Jewel was the first to arrive.
   (C) Kashmir was the third to arrive.
   (D) Pacific was the third to arrive.
   (E) Tornado was the third to arrive.

5. If Valhalla arrived before Neptune but after Pacific, which one of the following could be true?

   (A) Tornado arrived before Valhalla.
   (B) Kashmir arrived before Pacific.
   (C) Ojibwa was not the last of the boats to arrive.
   (D) Spain arrived before Valhalla.
   (E) Spain was not the seventh of the boats to arrive.

6. Of the boats, what are, respectively, the minimum number and the maximum number that could have arrived before Kashmir?

   (A) one, five
   (B) two, five
   (C) three, five
   (D) one, six
   (E) two, six

ANALYTICAL REASONING EXPLANATIONS

Questions 1–6

What the setup tells you: This group of questions concerns the order in which eight boats arrived, one at a time, at a dock. The conditions tell you when certain boats arrived relative to other boats. Putting the conditions together, you get the following arrangement:

Neptune...Jewel...Tornado...Spain...Ojibwa...Kashmir

One of the most important things to note is that two of the boats—Pacific and Valhalla—are completely unrestricted by the conditions. That means that they could have arrived anywhere in the sequence.

Question 1

Overview: This question asks you to find the one answer choice that **cannot** be true if Neptune arrived after Kashmir. So the incorrect answer choices will all be things that can be true under those conditions. From the setup, you know that Neptune had to arrive before Tornado, and Kashmir had to arrive after Jewel. So if Neptune arrived after Kashmir, the relative order in which six of the boats had to arrive is

Jewel...Kashmir...Neptune...Tornado...Spain...Ojibwa

Setting aside Pacific and Valhalla for the moment, the boats would have the positions shown above.

What effect would taking account of Pacific and Valhalla have? Suppose they both arrived after Ojibwa. The positions of the other six boats would remain exactly the same. Now, if Pacific and Valhalla both arrived before Jewel—which would put them in positions 1 and 2—the other six boats would be shifted down exactly two places (Jewel would be in position 3, Kashmir in position 4, and so on). And in fact, no matter where either Pacific or Valhalla is in the sequence, none of the other six boats will shift more than two places down. For example, Jewel could have arrived either first, second, or third; Neptune could have arrived either third, fourth, or fifth; and so on.

With this in mind, you can turn to the individual answer choices and directly determine which ones can and cannot be true.

The Correct Answer:

B As discussed above, Kashmir could have arrived second, third, or fourth. Since (B) has Kashmir arriving fifth, you know that (B) can't be true.

The Incorrect Answer Choices:

A As discussed above, Jewel could have arrived first, second, or third. So (A) can be true.

C As discussed above, Neptune could have arrived third, fourth, or fifth. So (C) can be true.

D As discussed above, Ojibwa could have arrived sixth, seventh, or eighth. So (D) can be true.

E As discussed above, Spain could have arrived fifth, sixth, or seventh. So (E) can be true.

Question 2

Overview: In this question, you're asked what must be true on the basis of the setup alone. You know from 'What the setup tells you' that Pacific and Valhalla could have arrived anywhere in the sequence. Thus, there is nothing that must be true of either one. So you can immediately rule out (B) and (E). That leaves only three answer choices to check. Since you know that Spain must have arrived relatively late in the sequence, (C) is a good answer choice to check first.

The Correct Answer:

C From what the setup conditions tell you, you know that Jewel, Neptune, Kashmir, and Tornado all arrived before Spain did. So whether or not Pacific or Valhalla also arrived before Spain, you know that there are at least four boats that must have arrived before Spain. You are now done. There's no need to check the other answer choices.

The Incorrect Answer Choices:

A, D The following outcome violates none of the setup conditions and shows that neither (A) nor (D) has to be true:

Neptune, Jewel, Tornado, Kashmir, Spain, Ojibwa, Pacific, Valhalla

In this sequence, there are no boats arriving before Neptune and there are only two boats arriving before Tornado.

B, E (B) describes a restriction involving Pacific, and (E) describes a restriction involving Valhalla. However, these boats are not restricted by the conditions. So given just the setup conditions alone, there is nothing that must be true of either Pacific or Valhalla. Both boats can appear anywhere in the sequence.

Question 3

Overview: Essentially what this question is asking is the following: If as many boats as possible arrived before Jewel, how many boats would that be?

The Correct Answer:

D Neptune could have arrived before Jewel, and Pacific and Valhalla could have arrived anywhere in the sequence, so you know that at least those three boats could have arrived before Jewel. The remaining boats—Kashmir, Tornado, Spain, and Ojibwa—all arrived after Jewel, so a maximum of just three boats could have arrived before Jewel.

The Incorrect Answer Choices:

A, B, C None of these answer choices is correct, because each is smaller than the maximum of 'three'.

E This answer choice is incorrect because it is larger than the maximum of 'three'.

Question 4

Overview: Keep in mind that this question asks you what **cannot** be true if Valhalla was the second of the eight boats to arrive.

The Correct Answer:

E According to the question, Valhalla arrived second. Both Neptune and Jewel had to arrive before Tornado. That means that at least three boats—Neptune, Jewel, and Valhalla—all arrived before Tornado. Thus, Tornado cannot have been the third to arrive.

The Incorrect Answer Choices:

A Jewel could have arrived third, as the following outcome shows:

Neptune, Valhalla, Jewel, Kashmir, Tornado, Spain, Ojibwa, Pacific

B, C Both (B) and (C) are possible, as the following outcome shows:

Jewel, Valhalla, Kashmir, Neptune, Tornado, Spain, Ojibwa, Pacific

D Pacific can go anywhere in the sequence, and here only the second position is specifically taken. So Pacific could have arrived third.

Question 5

Overview: If Valhalla arrived before Neptune and after Pacific, then the positions of six of the boats relative to one another are fixed:

...Pacific...Valhalla...Neptune...Tornado...Spain...Ojibwa

Now check the answer choices. You can immediately rule out (A) and (D): both Tornado and Spain must have arrived **after** Valhalla.

You don't know exactly where Jewel and Kashmir fit into the sequence. But you do know that both of them arrived before Spain. Thus, Spain must have been the seventh to arrive, and Ojibwa must have been the eighth (last). Checking the remaining answer choices, you can now eliminate (C) and (E) because both must be false. You are done. You know that (B) is the correct answer.

The Correct Answer:

B The following outcome, which satisfies the conditions and the specific requirement of the question itself, demonstrates that (B) can be true:

Jewel, Kashmir, Pacific, Valhalla, Neptune, Tornado, Spain, Ojibwa

In this sequence, Kashmir arrived before Pacific.

The Incorrect Answer Choices:

A, D The information provided by the setup conditions and the question itself determines the relative positions of six of the boats, as follows:

...Pacific...Valhalla...Neptune...Tornado...Spain...Ojibwa

Neither (A) nor (D) is satisfied here, and so neither could be true of the final outcome either.

C, E If the sequence above were completed by adding Jewel and Kashmir, both would have to be placed somewhere before Spain. This means that Spain must have been seventh and Ojibwa must have been last. Thus, neither (C) nor (E) could be true.

Question 6

Overview: In this question, you're asked to determine both the minimum and the maximum number of boats that could have arrived before Kashmir. Any answer choice that gets one of these numbers wrong can be eliminated. Since only Jewel had to arrive before Kashmir (the third condition says that Jewel arrived before Kashmir), the minimum number is one.

Turning to the answer choices with this in mind, you can immediately rule out (B), (C), and (E), since none of them lists 'one' as the first number.

This means that the choice is between (A) and (D). Since (A) has 'five' whereas (D) has 'six', you know that at least five boats could have arrived before Kashmir. So the question reduces to the following: Could there have been six boats arriving before Kashmir? If so, then the correct answer is (D). If not, then the correct answer is (A).

For six boats to come before Kashmir in the sequence, Kashmir would have to be seventh. But Kashmir has to be before Spain, and Spain has to be before Ojibwa. So there are at least two boats that must **follow** Kashmir. Since there are only eight boats in all, that leaves just five boats that could possibly be before Kashmir. Thus, (D) can be eliminated, and you know that (A) is the correct answer.

The Correct Answer:

A Jewel is the only boat that necessarily arrived before Kashmir (as specified by the third condition). Thus, the minimum number of boats that could have arrived before Kashmir is one. What is the maximum number of boats that could have arrived before Kashmir? Both Neptune and Tornado could have arrived before Kashmir. In addition to Jewel, that makes three. Pacific and Valhalla could have arrived anywhere in the sequence and so could have arrived before Kashmir, making five. The remaining boats—Spain and Ojibwa—must have arrived after Kashmir. Thus, there are a maximum of five boats that could have arrived before Kashmir.

The Incorrect Answer Choices:

B (B) is incorrect because it lists 'two' as the minimum rather than 'one'.

C (C) is incorrect because it lists 'three' as the minimum rather than 'one'.

D (D) is incorrect because it lists 'six' as the maximum rather than 'five'.

E (E) is incorrect because it lists 'two' as the minimum rather than 'one', and it lists 'six' as the maximum rather than 'five'.

1. Space programmes have recently suffered several setbacks with respect to their large projects, and much money has been lost. Consequently, these grand projects should be abandoned in favour of several small ones.

   Which one of the following, if true, provides the most support for the reasoning above?

   (A) The cost of starting a space project increases every year.
   (B) It is just as easy to revise, and even scrap, small projects as it is large ones.
   (C) Large projects are intrinsically more likely to fail and so are more financially risky than small projects.
   (D) Project managers prefer to work on small projects rather than large ones.
   (E) Large space projects can explore a few places thoroughly, while small projects can investigate more regions, though less thoroughly.

2. In an experiment testing whether hyperactivity is due to a brain abnormality, the brain activity of 25 hyperactive adults was compared to the brain activity of 25 adults who were not hyperactive. The tests revealed that the hyperactive adults had much less brain activity in the premotor cortex, a region of the brain believed to control action, than did the nonhyperactive adults. The experimenters concluded that diminished activity in the premotor cortex is one cause of hyperactivity.

   Which one of the following, if true, most undermines the conclusion drawn by the experimenters?

   (A) Some of the nonhyperactive adults in the study had children who suffer from hyperactivity.
   (B) The hyperactive adults who participated in the experiment varied in the severity of their symptoms.
   (C) The neuropsychologists who designed the experiment were not present when the tests were performed.
   (D) All of the hyperactive adults in the study had been treated for hyperactivity with a medication that is known to depress activity in some regions of the brain, while none of the nonhyperactive adults had been so treated.
   (E) The test was performed only on adults because even though the method by which the test measured brain activity is harmless to adults, it does require the use of radiation, which could be harmful to children.

3. Large discount chains can make a profit even while offering low prices, because they buy goods in large quantities at favourable cost. This creates a problem for small retailers. If they try to retain their customers by lowering prices to match those of large discount chains, the result is a lower profit margin. But small retailers can retain their customer base without lowering prices if they offer exceptional service. Hence, small retailers that are forced to compete with large discount chains must offer exceptional service in order to retain their level of profitability.

   The reasoning is flawed because it fails to take into account the possibility that

   (A) not all large discount chains do in fact make a profit

   (B) some large discount chains have lower profit margins than do some small retailers

   (C) small retailers are often motivated by things other than the desire for profit

   (D) not all small retailers are forced to compete with large discount chains

   (E) exceptional service is not the only reason customers prefer small retail stores

4. We should do what will make others more virtuous and not do what will make others less virtuous. It is an irony of human existence that praise makes those who are less virtuous more virtuous, while it makes those who are more virtuous less virtuous. And, of course, none except the more virtuous deserve praise.

   From the statements above, if true, which one of the following can be properly inferred?

   (A) We should withhold praise from those who deserve it least.

   (B) We should not fail to praise those who deserve it most.

   (C) We should praise those who do not deserve it and withhold praise from those who deserve it.

   (D) We should praise everyone, regardless of whether or not they deserve it.

   (E) We should withhold praise from everyone, regardless of whether or not they deserve it.

5. Generic drugs contain exactly the same active ingredients as their brand-name counterparts, but usually cost much less to develop, produce, and market. So, generic drugs are just as effective as their brand-name counterparts, but cost considerably less.

   Which one of the following, if true, most strengthens the argument?

   (A) The ingredients used in the manufacture of brand-name drugs cost no more than the ingredients used to produce their generic counterparts.

   (B) Generic drugs are no more likely than brand-name drugs to suffer from defects in composition.

   (C) Generic drugs are just as likely as brand-name drugs to be readily available in pharmacies.

   (D) The higher costs of brand-name drugs underwrite drug companies' heavy investment in research.

   (E) Because of advertising, doctors frequently prescribe brand-name drugs by their brand name, rather than by their chemical name.

6. Economist: In the interaction between producers and consumers, the only obligation that all parties have is to act in the best interests of their own side. And distribution of information about product defects is in the best interests of the consumer. So consumers are always obligated to report product defects they discover, while producers are never obligated to reveal them.

   Which one of the following is an assumption required by the economist's argument?

   (A) It is never in the best interests of producers for a producer to reveal a product defect.

   (B) No one expects producers to act in a manner counter to their own best interests.

   (C) Any product defect is likely to be discovered by consumers.

   (D) A product defect is more likely to be discovered by a consumer than by a producer.

   (E) The best interests of consumers never coincide with the best interests of producers.

LOGICAL REASONING EXPLANATIONS

Question 1

Overview: The conclusion of the argument is a recommendation: large space-programme projects should be abandoned in favour of several smaller projects. The only reason given for this recommendation is that large projects have recently suffered setbacks resulting in the loss of much money.

As it stands, this is a very weak argument. It is true that less money is at risk with an individual small project compared to a large project. But notice that there actually isn't any evidence offered that less money would be lost overall if several small projects were funded instead of one large one. Nor does the argument give any reason to think that the recent setbacks suffered by large projects are a good indication of how large projects typically fare.

The Correct Answer:

C (C) addresses both of the argument's shortcomings mentioned above. It states that large projects are intrinsically more likely to fail than small ones, which provides evidence that the recent setbacks suffered by large projects are not anomalous. Also, it states that large projects are financially riskier than small ones, supporting the claim that less money would be lost overall if several small projects were funded rather than one large one. So (C) strengthens the argument.

The Incorrect Answer Choices:

A (A) tells us that the amount of money at risk in space projects is increasing. But it says nothing to suggest that this is less of a problem with small projects than with large ones. So (A) does nothing to strengthen the argument.

B (B) says that small projects and large projects are about equal in terms of how easy it is to revise or scrap them. Since (B) talks only about one respect in which small projects are the same as large ones, it provides no support for the argument's conclusion that small projects should be favoured over large ones.

D Project managers might prefer to work on small projects rather than large ones for reasons that have nothing to do with their likelihood of success. Without knowing the reason for the project managers' preference, the mere fact that they have such a preference does not strengthen the argument.

E The argument says nothing about whether it is better for space programmes to explore a few places thoroughly or to explore more places less thoroughly. Therefore, the information provided in (E) does not tell us whether small or large projects better serve the objectives of the space programme.

Question 2

Overview: This passage recounts an experiment and the conclusion drawn by the experimenters. The experiment showed that, compared to nonhyperactive adults, hyperactive adults had much less brain activity in a region of the brain believed to control action. The experimenters concluded that this abnormality in the brains of hyperactive adults is one cause of hyperactivity.

The question asks what would undermine this conclusion. The only thing the experiment firmly establishes is a correlation between hyperactivity and diminished activity in a certain region of the brain. The experimenters' conclusion is one possible explanation for that correlation. So anything that points to an alternative explanation of the observed correlation would undermine the experimenters' conclusion.

The Correct Answer:

D (D) tells us that the differences in brain activity found in the experiment could well have been caused by the medication taken by the hyperactive adults but not by the nonhyperactive adults. So (D) points to an explanation of the experimental results that gives us a clear alternative to the conclusion that the experimenters reached.

The Incorrect Answer Choices:

A The experimenters' conclusion was based on tests performed on hyperactive and nonhyperactive adults. Information about the children of any of these adults has no bearing on what can be concluded from those tests.

B Variation in the severity of symptoms of hyperactivity would be expected in any random sample of hyperactive people. (B) gives us no reason to think that the experimenters had any difficulty in clearly distinguishing between adults who were hyperactive and those who were not. So (B) does nothing to challenge the experiment and thus does nothing to undermine the conclusion based on it.

C As long as an experiment was competently carried out, it makes no difference to the outcome whether the people who actually designed the experiment were present or not. (C) provides no reason to think that the experiment was not competently carried out. Thus (C) does nothing to undermine the conclusion based on the outcome of that experiment.

E (E) explains why the experimental subjects were all adults. It does not call into question the reliability of the results obtained by the experiment, nor does it challenge the conclusion based on those results.

Question 3

Overview: The argument concludes that small retailers competing with large discount chains cannot retain their level of profitability unless they offer exceptional service. This conclusion is based on two considerations: first, that lowering prices in order to retain customers will result in lower profits; and second, that customers can be retained without lowering prices if exceptional service is offered.

The question requires you to identify the possibility that the argument fails to take into account.

The Correct Answer:

E The argument tells us about a strategy for dealing with competition from large discount chains—offering exceptional service—that will enable small retailers to retain both customers and profitability. From this the argument concludes that unless exceptional service is offered, profitability will not be retained. But to legitimately draw this conclusion, the argument would have had to establish that there is no other strategy that would enable retailers to retain both customers and profitability. Since the argument fails to do this, as (E) points out, the argument's reasoning is flawed.

The Incorrect Answer Choices:

A Large discount chains that do not make a profit will presumably not continue in business indefinitely. But that has no bearing on the difficulty faced by small retailers who are competing with such discount chains while those chains are in business. So, overlooking (A) is not a flaw in the argument.

B According to the argument, the problem that large discount chains pose for small retailers is that the large chains can offer low prices. In proposing a strategy for dealing with this problem, the argument need not concern itself with how the profits of large discount chains compare with those of small retailers. So, not taking the possibility of (B) into account is not a flaw in the reasoning.

C The argument is concerned only with what small retailers must do in order to retain their level of profitability. Whether or not there are small retailers who are not, or not solely, motivated by the desire for profit is irrelevant to the argument. So the argument is

not flawed because it overlooks the possibility that (C) is true.

D The argument is concerned only with small retailers who are forced to compete with large discount chains. Thus, the possibility of (D) is not something that the argument needs to take into account.

Question 4

Overview: Here you are presented with a number of statements and asked what can be properly inferred from them. The first statement is a general moral principle, namely that we should do whatever makes others more virtuous and we should not do anything that makes others less virtuous. Then you are told of the effects that praise has on people: it makes people who are not so virtuous more virtuous, and it makes highly virtuous people less virtuous. The passage finally presents another statement that amounts to saying that the highly virtuous deserve praise and the not-so-virtuous do not.

The Correct Answer:

C The moral principle and the statement about the effects of praise imply that we should praise the not-so-virtuous and should not praise those who are highly virtuous. When we combine this with the statement about who deserves praise, we can draw the surprising conclusion that we should not praise those who actually deserve praise but should instead praise those who don't deserve praise. So (C) can be properly inferred from the statements in the passage.

The Incorrect Answer Choices:

A The passage implies that those who don't deserve praise should be praised. Thus, (A) runs counter to what can be inferred from the passage.

B The passage implies that those who deserve praise should not be praised. Thus, (B) runs counter to what can be inferred from the passage.

D, E (D) and (E) both say that we should extend praise equally to those who deserve praise and those who do not deserve praise. This is in sharp contrast to what can be inferred from the passage.

Question 5

Overview: The conclusion of this argument has two parts: (1) generic drugs are just as effective as their brand-name counterparts, and (2) generic drugs cost less than their brand-name counterparts. Separate evidence is provided for each part of the conclusion. The evidence for (1) is that generic drugs contain exactly the same active ingredients as their brand-name counterparts. The evidence for (2) is that generic drugs are less expensive to develop, produce, and market. So any additional information that strengthens either side of this two-pronged argument would strengthen the argument as a whole.

The Correct Answer:

B The evidence for part (1) of the conclusion is that generic drugs contain exactly the same active ingredients as their brand-name counterparts. But the effectiveness of a drug depends not only on its having certain active ingredients but also on its being correctly manufactured so that it has the right composition. (B) tells us that generic drugs are no more likely to be defective in their composition than brand-name drugs are, thereby strengthening the argument for part (1) of the conclusion.

The Incorrect Answer Choices:

A We already know that generic drugs contain the same active ingredients as their brand-name counterparts. So the fact that the ingredients used in the manufacture of brand-name drugs are no more expensive than those used in the manufacture of generic drugs provides no additional evidence concerning the effectiveness of generic drugs. And (A) clearly does not add support for the conclusion that generic drugs cost less than their brand-name counterparts.

C (C) establishes that generic drugs are as easy to obtain in pharmacies as brand-name drugs are. Although this ready availability might make generics more convenient for consumers to obtain, it provides no additional support for either the effectiveness or the lower cost of generic drugs as compared to their brand-name counterparts.

D Part of the evidence the argument gives for the higher cost of brand-name drugs is that they cost much more to develop. (D) just provides details about this greater development cost. So (D) provides no additional support for the conclusion that brand-name drugs are more expensive.

E If (E) is true, it indicates one way in which advertising helps brand-name drugs compete against generic drugs. But it doesn't address the issues of effectiveness or cost, so (E) does not provide any additional support for the argument's conclusion.

Question 6

Overview: The conclusion of the economist's argument is that consumers are always obligated to reveal product defects and producers are never obligated to reveal product defects. The grounds on which this conclusion is based are twofold. The first is a general principle according to which producers' and consumers' only obligation is to act in the best interests of their own side. The second is the claim that distribution of information about product defects is in the best interests of consumers. Strictly speaking, this last point supports only the part of the conclusion that deals with the obligation of consumers to distribute information about product defects.

The Correct Answer:

A Suppose that (A) were false, and that it is sometimes in the best interests of a producer to reveal a product defect. Then, according to the general principle cited by the economist, producers would have an obligation to reveal that product defect. So if (A) were false, part of the economist's conclusion would be false. This shows that (A) is an assumption required by the argument.

The Incorrect Answer Choices:

B The economist's argument is based on a principle about what producers are obligated to do, not about what people expect or don't expect producers to do. So (B) is not an assumption required by the argument.

C, D The conclusion drawn is not about who is likely to discover a defect or whether most defects are even likely to be discovered. It is about consumers' and producers' obligations **when** they discover a product defect. So either (C) or (D) could be false without affecting the argument.

E The economist's argument focuses on the issues of what is in the best interests of producers and consumers regarding the reporting of product defects. So if (E) is false only because the best interests of consumers and producers do coincide with respect to some other issue—for example, lowering sales taxes—the economist's argument would not be affected. So (E) is not an assumption required by the argument.

Until recently, many biologists believed that invertebrate 'schools' were actually transient assemblages, brought together by wind, currents, waves, or common food sources. Jellyfish groupings, for example, cannot be described as schools—cohesive social units whose members are evenly spaced and face the same way. However, recent research has found numerous cases in which crustaceans and other invertebrates form schools as fish do. Schooling crustaceans such as krill regularly collect in such massive numbers that they provide abundant food for fish, seabirds, and whales.

Like schooling fish, invertebrates with sufficient mobility to school will swim in positions that are consistent relative to fellow school members, and are neither directly above nor directly below a neighbour. The internal structure of such a school changes little with external physical disruption but dramatically with the advent of a predator.

Since schooling is an active behaviour, researchers assume that it must bring important benefits. True, schooling would appear to make animals more visible and attractive to predators. However, schooling leaves vast tracts of empty water, thereby reducing a predator's chances of picking up the school's trail. A large group maintains surveillance better than an individual can, and may discourage predation by appearing to be one massive animal. And although an attacking predator may eat some of the invertebrates, any individual school member has a good probability of escaping.

In addition to conferring passive advantages, schooling permits the use of more active defence mechanisms. When a predator is sighted, the school compacts, so that a predator's senses may be unable to resolve individuals, or so that the school can execute escape manoeuvres, such as freezing to foil predators that hunt by detecting turbulence. If the predator attacks, the school may split, or may employ 'flash expansion'—an explosive acceleration of animals away from the school's centre. When large predators threaten the entire school, the school may attempt to avoid detection altogether or to reduce the density of the school at the point of attack; when small predators threaten the margins, school members may put on dazzling and confusing displays of synchronised swimming.

Schooling may also enable invertebrates to locate food—when one group member finds food, other members observe its behaviour and flock to the food source. On the other hand, competition within the school for food may be intense: some mysids circle around to the back of the school in order to eat food particles surreptitiously. Schooling can facilitate the search for mates, but as a school's numbers rise, food may become locally scarce and females may produce smaller clutches of eggs, or adults may start to feed on the young. Thus, circumstances apparently dictate the optimal size of a school; if that size is exceeded, some of the animals will join another school.

1. Which one of the following best expresses the main idea of the passage?

   (A) The optimal size of a school of invertebrates is determined by many different circumstances, but primarily by issues of competition.

   (B) The internal structure of a group of invertebrates determines what defensive manoeuvres that group can perform.

   (C) Although in many respects invertebrate schools behave in the same way that fish schools do, in some respects the two types of schools differ.

   (D) Certain invertebrates have been discovered to engage in schooling, a behaviour that confers a number of benefits.

   (E) Invertebrate schooling is more directed towards avoiding or reducing predation than towards finding food sources.

2. According to the passage, each of the following is characteristic of an invertebrate school EXCEPT:

   (A) The number of members in a school is influenced by external circumstances.

   (B) A school's members are arranged directly above and below one another.

   (C) A school's members arrange themselves so that they all face in the same direction.

   (D) The individual members of a school maintain regular spacing from member to member.

   (E) Population increase in a school can diminish reproduction by individual school members.

3. If substituted for the word 'resolve' in the second sentence of the fourth paragraph, which one of the following words would convey the same meaning in the context of the passage?

   (A) control

   (B) answer

   (C) reconcile

   (D) distinguish

   (E) pacify

4. Which one of the following best describes the final paragraph of the passage?

   (A) Arguments for opposing points of view are presented and then reconciled.

   (B) The disadvantages of certain types of choices are outlined and alternative choices are proposed.

   (C) Two different interpretations of a phenomenon are evaluated and one is endorsed as the more plausible.

   (D) The disadvantages of an action are enumerated and the validity of that action is called into question.

   (E) Advantages and disadvantages of a behaviour are discussed and some actions for avoiding the adverse consequences are mentioned.

5. According to the passage, jellyfish are an example of invertebrates that

   (A) do not engage in schooling behaviour

   (B) form groups with evenly spaced members

   (C) assemble together only to feed

   (D) form schools only when circumstances are advantageous

   (E) collect in such large numbers as to provide abundant food

6. It can be inferred from the passage that if cannibalism were occurring in a large school of crustaceans, an individual crustacean encountering the school would

   (A) try to stay at the edge of the school in order to obtain food

   (B) be more likely to be eaten if it were fully grown

   (C) be unlikely to join that particular school

   (D) try to follow at the back of the school in order to escape predators

   (E) try to confuse school members by executing complex swimming manoeuvres

7. Which one of the following, if true, would most clearly undermine the assumption about schooling mentioned in the first sentence of the third paragraph?

   (A) Observation reveals that many groups of invertebrates are unable to execute any defensive manoeuvres.

   (B) Biologists find that some predators can always tell the difference between a school and a single large animal.

   (C) Research demonstrates that the less an invertebrate associates with others of its species, the better its chances of survival.

   (D) Biologists confirm that predators are more likely to notice a nearby school of invertebrates than to notice a single invertebrate.

   (E) Researchers determine that the optimal school sizes for numerous species have each declined in previous years.

READING COMPREHENSION EXPLANATIONS

Synopsis: The passage begins by making the point that an earlier view held by biologists—the view that no invertebrates form schools—has been abandoned in the face of evidence that there are numerous cases of invertebrates that do form schools. Evidence that these truly are cases of schooling is presented in the second paragraph. The first sentence of the third paragraph presents the central thesis of the passage, namely, that schooling brings benefits. The rest of the third paragraph focuses mainly on benefits that are enjoyed passively by the school, such as giving the appearance of a single large creature and thereby discouraging predation, while the fourth is concerned with the advantages enjoyed by a school in actively defending itself against predators. The final paragraph turns to potential survival advantages of schooling that are related to feeding and breeding, but it also discusses what may happen when a school gets too large for the available food supply.

Question 1

The Correct Answer:

D As you can see from the synopsis, the passage begins by making the point that there are invertebrates that form schools. Most of the rest of the passage presents benefits that schooling invertebrates may derive from their schooling behaviour. Choice (D) accurately captures both of these aspects of the main point.

The Incorrect Answer Choices:

A The passage strongly suggests that the optimal size of a school of invertebrates is determined by how much food is available. But the passage is not primarily concerned with analysing what determines the optimal size of a school. The passage mentions the issue of optimal size only as part of its discussion of the survival benefits of schooling in the areas of feeding and breeding. So (A) is not correct.

B The passage discusses defensive manoeuvres only as part of its account of one of the benefits of schooling. Thus, how defensive manoeuvres work provides evidence for one of the main ideas of the passage, but it is not itself the main focus of the passage. Moreover, (B) does not correctly describe what the passage says about defensive manoeuvres. The passage does not relate specific defensive manoeuvres to aspects of the internal structure of the school.

C The passage compares schooling invertebrates to schooling fish only to make the point that their schools have highly similar internal structures. The passage does not mention any dissimilarities between schools of fish and schools of invertebrates. So (C) is not correct.

E The passage mentions both protection from predation and finding food as benefits that schooling provides for invertebrates, but it does not discuss the issue of the relative importance of these two benefits. So (E) does not describe an idea that can be found in the passage.

Question 2

Keep in mind that what we are looking for here is something that is not presented by the passage as a characteristic of an invertebrate school. So if something is presented in the passage as a characteristic of an invertebrate school, it cannot be the correct answer to this question.

The Correct Answer:

B The passage does not say that members of an invertebrate school are arranged directly above or below one another. (In fact, it says just the opposite in the first sentence of the second paragraph.) So (B) is not a characteristic of invertebrate schools, according to the passage.

The Incorrect Answer Choices:

A The passage explains in the final paragraph how a local scarcity of food can keep the size of an invertebrate school down. Since scarcity of food is an external circumstance, (A) is characteristic of invertebrate schools, according to the passage.

C, D In the second sentence, the passage defines schools as 'cohesive social units whose members are evenly spaced and face the same way'. Hence, it implies that any school, including any invertebrate school, must have these characteristics. It follows that, according to the passage, both (C) and (D) are characteristic of invertebrate schools.

E The passage says, in the third sentence of the final paragraph, 'Schooling can facilitate the search for mates, but **as a school's numbers rise**, food may become locally scarce and **females may produce smaller clutches of eggs**…' [emphasis added]. (E) captures accurately what the emphasised clauses taken together say. So according to the passage, (E) is characteristic of invertebrate schools.

Question 3

Since this question asks which word could replace the word 'resolve' in the second sentence of the fourth paragraph without a change in meaning, it is essential to understand how the word 'resolve' actually functions in that sentence. The sentence in which 'resolve' occurs says, 'When a predator is sighted, the school compacts, so that a predator's senses may be unable to resolve individuals…' (second sentence of the fourth paragraph). So what the predator may be unable to do, as the school contracts to one big blob, is pick out any one individual from the rest of the school. This is a fairly common use of 'resolve' in connection with sensory perception. When people speak of the 'resolution' of an image, it is this sense of 'resolve' that they have in mind.

The Correct Answer:

D As indicated above, we are looking for a word that means something like 'pick out' or 'tell apart', and of the available answer choices, only (D)—'distinguish'—fits this description. When it is substituted for 'resolve' in the second sentence of the fourth paragraph, the meaning of the original text is preserved.

The Incorrect Answer Choices:

A The word 'resolve' has a variety of different meanings, but none of them is even close to any meaning of 'control'. In fact, if you substitute 'control' for 'resolve', as the question directs you to do, the result you get is '…a predator's senses may be unable to control individuals'. With this substitution, the sentence appears to be more or less nonsense. In any case, it is clear that (A) doesn't mean the same thing as the original sentence with 'resolve' left in place.

B Again, the intended sense of 'resolve' is not close to any of the usual senses of 'answer'. Moreover, the sentence that results from actually making the substitution offered by (B) is more or less nonsense.

C The word 'reconcile' may be a tempting candidate for a substitution because there are contexts in which its meaning comes close to the meaning of 'resolve'. For example, there is a rough equivalence between speaking of 'resolving a dispute' and speaking of 'reconciling the two sides in a dispute with each other'. But notice that in the sense in which 'reconcile' comes close to a meaning of 'resolve', it is about making differences disappear or at least seem less important. The sense of 'resolve' to be matched, however, goes in exactly the opposite direction: it is a matter of discerning differences, of telling where one individual leaves off and another one begins. Thus, in the specific context of the second sentence of the fourth paragraph, 'reconcile' is not a good substitute for 'resolve', and therefore (C) is incorrect.

E This is another case like (A) and (B) above. The intended sense of 'resolve' is not close to any sense of 'pacify'. And the result of actually making the substitution offered by (E) is more or less nonsense.

Question 4

The Correct Answer:

E The final paragraph mentions two advantages of invertebrate schooling behaviour, namely, that it enables invertebrates to find food and that it facilitates the search for mates. These advantages can lead to an increase in the size of the school. The downside is that the school can get too large for the local food supply, so that it faces starvation. The paragraph ends by pointing out reactions on the part of the school that have the effect of reducing its size, thereby eliminating the imbalance between population size and food supply. Thus, (E) is the correct answer, since it mentions all three salient points: advantages of schooling, disadvantages of schooling, and responses by the school to avoid adverse consequences.

The Incorrect Answer Choices:

A The final paragraph is written from only one point of view, that of someone trying to explain that invertebrate schooling behaviour is, on balance, of benefit to invertebrates. There is no mention in this paragraph, or anywhere else in the passage, of any opposing point of view on this matter. Therefore (A) is incorrect.

B The final paragraph describes a variety of behaviours on the part of schooling invertebrates. All of these behaviours are best described purely as reactions determined by environmental circumstances, and not as involving any element of choice. But even if one does, metaphorically, call these behaviours 'choices', it is not accurate to say that the last paragraph proposes alternative choices, and so (B) is the wrong choice.

C It is not clear what it would mean to 'interpret' a phenomenon like invertebrate schooling. But, in any case, no alternative interpretation is discussed or evaluated. So (C) fails to be correct for reasons similar to those for which (A) fails.

D While the final paragraph does suggest that schooling can have the disadvantageous result of making a population too large for the available food supply, it does not question the claim that, overall, schooling is beneficial. For this reason, (D) is incorrect.

Question 5

The Correct Answer:

A The passage says in the second sentence that jellyfish groupings—and this is the only mention of jellyfish in the passage—'cannot be described as schools'. Thus, jellyfish are an example of invertebrates that do not engage in schooling behaviour.

The Incorrect Answer Choices:

B The passage denies in the second sentence that jellyfish groupings are schools and immediately goes on to characterise schools as 'cohesive social units whose members are evenly spaced'. So, the passage presents jellyfish as examples of invertebrates that do **not** form groups with evenly spaced members. (B) states the opposite and therefore is incorrect.

C The passage does not say that jellyfish are brought together in groups **only** by the availability of a common food source. The passage also explicitly mentions wind, currents, and waves as giving rise to such groups. (C) fails for these reasons.

D As mentioned in the discussion of choice (A), the passage explicitly denies that jellyfish groupings are schools. Thus, since jellyfish do not form schools

at all, they are **not** examples, as presented in (D), of invertebrates that form schools only when circumstances are advantageous.

E The passage does describe krill as collecting in such massive numbers that they provide abundant food, but it does not describe jellyfish this way. The passage comments neither on the size of jellyfish groupings nor on whether such groupings are a rich food source for predators.

Question 6

The Correct Answer:

C The passage makes it clear that the kind of cannibalism that can occur in a school of crustaceans—adults feeding on the young (next-to-last sentence of the passage)—is triggered by scarcity of food. A school that suffers from a shortage of food is not an attractive school for an unattached individual crustacean to join. In fact, such schools are so unattractive that some of their members leave and join other schools (last sentence of the passage). Thus, the passage provides support for (C).

The Incorrect Answer Choices:

A According to the passage, cannibalism tends to occur in schools that suffer from a shortage of food. It is unlikely that there would be much food available at the edge of such a school. So it would be highly unlikely that an individual crustacean encountering such a school would attach itself to the edge of that school specifically in order to obtain food, as presented in (A).

B Cannibalism in schools of crustaceans is specifically described as a matter of adults feeding on the young. So it would be reasonable to infer the opposite of (B), that is, that an individual crustacean would be **less** likely to be eaten if it were fully grown.

D As the discussion of the correct answer suggests, the most likely reaction on the part of an individual crustacean encountering a school that does not have enough to eat is to avoid that school. As shown by the fact that some members leave a school whose food supply is inadequate, the protection from predation that a school provides is less important than having enough to eat. Thus (D) is incorrect.

E While the passage does mention complex swimming manoeuvres executed by members of invertebrate schools, these manoeuvres are **not** presented as a means of confusing members of the school but rather as a means of baffling small predators. So the passage provides no grounds for inferring (E).

Question 7

The Correct Answer:

C The assumption mentioned in the first sentence of the third paragraph is that schooling, since it is an active behaviour, must bring important benefits. The rest of the passage makes it clear that the important benefits provided by schooling are those that promote survival. But (C) implies that schooling diminishes an invertebrate's chances of survival. Hence (C), if true, undermines the stated assumption.

The Incorrect Answer Choices:

A If (A) said that many groups of schooling invertebrates are unable to execute any defensive manoeuvres, then, if true, it would negate one of the benefits claimed for schooling by the passage and thus undermine the assumption to some degree, though perhaps not to the same degree, as (C). But in fact (A) only says that many groups of invertebrates are unable to execute such manoeuvres; this does not undermine the assumption at all, since the invertebrates in question may all be of nonschooling varieties. (It is implicit in the first sentence of the second paragraph that some invertebrates lack sufficient mobility to school and hence, presumably, to execute defensive manoeuvres.)

B One important benefit discussed in the passage is the benefit of protection from predation. One of the ways in which schools discourage predation is by appearing to be one massive animal. (B) says that there are some predators that would not be fooled in this way. But even if (B) is true, this mechanism might still discourage a majority of predators. Moreover, this is only one of the ways in which schooling provides protection against predators, and nothing in the passage suggests that it is necessarily even the most important one. So even if (B) is true, schooling would still bring the important benefit of helping to foil predators.

D The passage essentially acknowledges that (D) is true (second sentence of the third paragraph). However, it suggests that this drawback of schooling is outweighed by the fact that schooling reduces the chances of an encounter between the invertebrates in a school and a predator (third sentence of the third paragraph).

E The last paragraph indicates that the optimal size of a school depends mainly on the availability of food. So what (E) suggests most strongly is that in general there has been a decline in the richness of sources of food. But this does not mean that schools are not an efficient way of exploiting such sources of food as there are, or that they do not confer the other benefits claimed for them, such as protection from predators.