

International Baccalaureate Diploma Programme ADMISSIONS EXAMINATION GUIDELINES

GENERAL KNOWLEDGE / CRITICAL THINKING SKILLS

IMPORTANT NOTICE: The sample questions below illustrate the **style of questions** that will feature in the exam and as such you can use them as examples to get you ready for the overall experience of taking the actual exam. **These questions do not fully represent the number of questions, range of content and/or the level of difficulty of the actual questions that will be on the exam.**

The questions in the admissions examination may vary in wording, length and/or level of difficulty but will fall into the categories of general knowledge, critical reasoning, logic and problem solving and can be fully answered within the timeframe provided.

Below the sample questions, there is an **answer key** and **exam guidelines** to support you in preparing for the admissions examination.

GENERAL KNOWLEDGE

General knowledge is defined as knowledge about a wide range of subjects rather than detailed knowledge of a particular subject. Therefore, you do not need to study anything in particular for this part of the examination but just use your background knowledge and reasoning skills.

GENERAL KNOWLEDGE SAMPLE QUESTIONS

1. Who is known as the father of epic poetry?
 - a. Plato
 - b. Homer
 - c. Herodotus
 - d. Socrates
2. The Scottish bacteriologist who discovered penicillin was:
 - a. Alexander Fleming
 - b. Isaac Newton
 - c. Aryabhatta
 - d. Archimedes
3. When were the first Olympic games of the Modern World held?
 - a. 1821
 - b. 1896
 - c. 1900
 - d. 2004
4. Which word is the odd one out (different from the others)?
 - a. Euro
 - b. Dollar
 - c. Yen
 - d. Kilogram
5. You want to make green paint. Which colors do you mix together?
 - a. Red and Yellow
 - b. Blue and Yellow
 - c. Orange and Purple
 - d. None of the above
6. The Headquarters of the United Nations is located in
 - a. New York City, United States of America
 - b. Tokyo, Japan
 - c. Geneva, Switzerland
 - d. Vienna, Austria
7. Tourism development has both positive and negative effects on
 - a. the environment
 - b. the society
 - c. the economy
 - d. all the above

CRITICAL THINKING SKILLS

This part of the exam includes questions that evaluate your thinking, reasoning and analytical skills, and test your ability to separate relevant from irrelevant information, draw conclusions based on valid arguments and evidence and follow logical steps to solve problems.

CRITICAL REASONING SAMPLE QUESTIONS

INSTRUCTIONS: Read the questions below and choose ONE option that applies.

TRUE = Conclusion logically follows

FALSE= Conclusion does NOT logically follow

Question #1

The British National Library has the largest collection of publicly owned books in the United Kingdom. Therefore,

Conclusion i.: The British National Library is in the United Kingdom.

- a. TRUE b. FALSE

Conclusion ii.: There might be a larger collection of books in the United Kingdom

- a. TRUE b. FALSE

Conclusion iii.: There might be a larger collection of publicly owned books in the United Kingdom.

- a. TRUE b. FALSE

Question #2

Michael is a dentist and he treats an average of ten patients a day. He is the most popular dentist in the city of Greenfield, perhaps because he is the dentist who has been around the longest. Last week he had 10 cancellations and was unable to fill up the schedule completely, but he doesn't mind the extra spare time. Next year he will retire and leave the practice to his son, who currently works in another city.

Conclusion: Some days Michael receives less than ten patients.

- a. TRUE b. FALSE

Question #3

On weekends, Mr. Sanchez spends many hours working in his vegetable and flower gardens. Mrs. Sanchez spends her free time reading and listening to classical music. Both Mr. Sanchez and Mrs. Sanchez like to cook.

Which ONE of the following statements must be true according to the given information?

- a. Mr. Sanchez enjoys planting and growing vegetables.
- b. Mr. Sanchez does not like classical music.
- c. Mrs. Sanchez cooks the vegetables that Mr. Sanchez grows.
- d. Mrs. Sanchez enjoys reading nineteenth century novels.

Question #4

Every motorist pays the same amount for road taxes, regardless of how much they use the roads: someone who covers as little as 1,000 kilometers pays the same as someone who covers 20,000 kilometers. This is unfair. Road taxes should be ruled out altogether and the money should be raised by an increase in the tax on car fuel. Making this change would ensure that those who use the roads more would pay more. This would not only be a fairer system but could also bring in more money.

Which ONE of the following statements best illustrates the SAME main idea behind the above argument?

- a. People should receive free medical treatment only if they cannot afford to pay for it.
- b. People who travel to work every day by train should pay a lower fare than those who travel only occasionally.
- c. Telephone charges should be higher for business customers than for the rest of the customers because they are using the system only to make money.
- d. Television channels should be paid by subscription so that only those people who watch them should have to pay.

Question #5

Vegetarian food can be healthier than a traditional diet. Research has shown that vegetarians are less likely to suffer from heart disease and obesity (being overweight) than meat eaters. Concern has been expressed that vegetarians do not get enough protein in their diet, but it has been demonstrated that, by selecting foods carefully, vegetarians are able to meet their needs in this respect.

Which ONE of the following statements best expresses the MAIN conclusion of the above argument?

- a. A vegetarian diet can be better for health than a traditional diet.
- b. Adequate protein is available from a vegetarian diet.
- c. A traditional diet is very high in protein.
- d. A balanced diet is more important for health than any particular food.

LOGIC and PROBLEM-SOLVING SAMPLE QUESTIONS

For the problem-solving questions, you will need to perform some simple mathematical operations in everyday contexts, and you should be able to extract information from tables and graphs.

Question #1

Use the clues to find the missing values.

a $\frac{1}{4}$	a+c $\frac{7}{12}$	a+d
b	b+c $\frac{5}{6}$	b+d $1\frac{1}{6}$
	c	d

b= _____

c = _____

d = _____

a + d = _____

Question #2

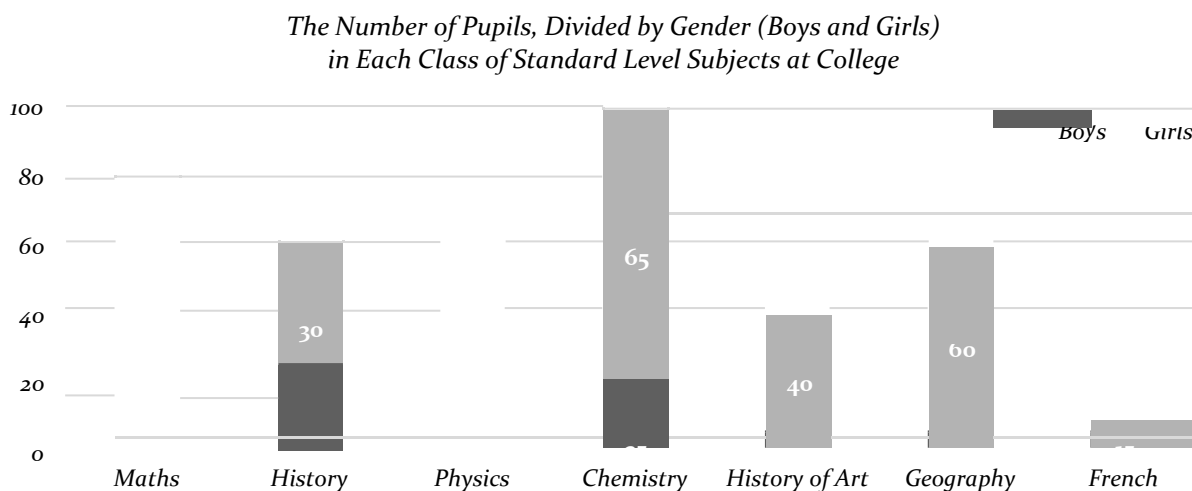
Look at this series: F2,_____, D8, C16, B32.

Which option should fill in the blank?

- a. A16 b. G4 c. E4 d. E3

Question #3

The following graph shows the number of pupils, divided by gender (boys and girls), each class for Standard level subjects at a college.



- i. How many more boys study Chemistry than girls study Maths?
 - a. 23 b. 25 c. 30 d. 35
- ii. What percentage of History of Arts students are girls?
 - a. 50% b. 60% c. 70% d. 80%
- iii. Half of Economics students are boys, and there are 10 more girls studying Economics than French. What is the total number of Economics students?
 - a. 50 b. 70 c. 90 d. 110

Question #4

One hour after Maria started walking from X to Y, a distance of 45 kilometers (km), John started walking along the same road from Y to X. If Maria's walking rate were 3 km per hour and John's was 4 km per hour, how many kilometers had John walked when they met?

- a. 24 b. 23 c. 22 d. 21

Question #5



There are seven (7) buckets containing one or more apples. In total, in all the buckets, there are 140 apples. Suppose that in the row of buckets, each successive bucket contained two more apples than the previous one. The bucket with the largest number of apples in it would contain

- a. 23 apples b. 26 apples c. 27 apples d. 34 apples

Question #6

In the grid below, different LETTERS (Q, L, Z, K) represent different WHOLE NUMBERS LESS THAN 20 (<20). The numbers to the RIGHT and BELOW the grid are ROW and COLUMN TOTALS.

For example, $Q + L + Z + Z = 46$.

Q	L	Z	Z	46
K	K	K	K	28
K	K	Q	Q	32
K	Z	L	Q	40
30	38	X	Y	

i. The value of **Q** is:

- a. 7 b. 9 c. 11 d. 13

iv. The value of **X** is:

- a. 40 b. 42 c. 44 d. 46

v. The value of **Y** is:

- a. 36 b. 38 c. 40 d. 46

Question #7

The table below shows the consumer price inflation and unemployment rate for 5 countries:

<i>Consumer price inflation rate %</i>	<i>March</i>	<i>February</i>
United States	+0.4	+0.3
Japan	+0.2	+0.5
Germany	+0.1	+0.1
France	+0.3	0.0
UK	+0.2	+0.5
<i>Unemployment rate %</i>	<i>March</i>	<i>February</i>
United States	5.9	6.1
Japan	3.0	3.0
Germany	9.2	9.3
France	12.6	12.6
UK	9.1	9.2

A newspaper comparing March to February reported that: 'Unemployment has fallen but there has been a rise in the inflation rate'.

Which ONE country is the statement referring to?

- a. France b. United Kingdom c. Germany d. United States

Question #8

Logic Puzzle

Six athletes - Vince, Alicia, Doug, Shelly, Marcus, and Patricia - were testing their max bench press in a fitness test. Use the clues below to determine each athlete's power in the bench press.

Weight lifted: 810 N, 640 N, 710 N, 760 N, 690 N, 675 N

Distance arms extended: 0.8 m, 1.0 m, 0.7 m, 0.9 m, 1.1 m, 1.2 m

Time to extend arms fully: 0.35 s, 0.40 s, 0.50 s, 0.25 s, 0.27 s, 0.45 s

- Shelly did 710 J of work.
- Vince lifted more weight than Patricia.
- Shelly had 100 watts less power than Alicia.
- Patricia's arm extension was greater than both Alicia's and Doug's.
- Doug's arm extension was longer than Alicia's but less than Shelly's.
- Vince lifted more weight than Alicia but took 0.05 seconds longer to do so.
- Doug lifted less weight than Shelly but completed his lift 0.05 s faster than Shelly.
- Marcus took more time than Patricia to complete his lift.
- Doug did less work than both Patricia and Shelly.
- Vince's arm extension was 0.2 m greater than Patricia's, but less than Marcus'.
- Patricia lifted 50 N less than Doug and 35 N less than Marcus.
- Alicia lifted more weight than both Shelly and Marcus.
- Vince completed his lift 0.1 seconds faster than Shelly.
- Marcus did 100 J more work than Shelly even though he lifted 35 N less.

	weight (force)						distance						time					
Vince																		
Alicia																		
Doug																		
Shelly																		
Marcus																		
Patricia																		

Power:

Vince:

Shelly:

Alicia:

Marcus:

Doug:

Patricia:

ANSWER KEY

GENERAL KNOWLEDGE SAMPLE QUESTIONS

- Question #1: **b (Homer)**
- Question #2: **a (Alexander Fleming)**
- Question #3: **b (1896)**
- Question #4: **d (Kilogram)**
- Question #5: **b (Blue and Yellow)**
- Question #6: **a (New York City, United States of America)**
- Question #7: **d (All the above)**

CRITICAL THINKING SAMPLE QUESTIONS

- Question #1: Conclusion i: **a (TRUE)**
- Conclusion ii: **a (TRUE)**
- Conclusion iii: **b (FALSE)**
- Question #2: **a (TRUE)**
- Question #3: **a (Mr. Sanchez enjoys planting and growing vegetables)**
- Question #4: **d (Television channels should be paid by subscription so that only those people who watch them should have to pay.)**
- Question #5: **a (A vegetarian diet can be better for health than a traditional diet)**

Explanation: This argument seems to be trying to persuade us that vegetarian food can be healthier than a traditional diet, so we should underline the first sentence. Then we need to see whether the rest of the passage gives us reason to believe this.

Two reasons are given:

1. Vegetarians are less likely to suffer from heart disease and obesity than meat eaters.
2. A vegetarian diet can contain sufficient protein.

We may not know whether these reasons are true, but if they were true, they would indicate that vegetarian food is healthier in one respect than a traditional diet which includes meat, and that a vegetarian diet does not necessarily have the disadvantage to health (providing insufficient protein) which we may have thought.

So, it seems clear that the first sentence of the passage is being offered as a conclusion.

A is the statement which best expresses this conclusion.

B is not the main conclusion, but it is one of the reasons for the main conclusion.

C is not the main conclusion, because it is not even stated in the passage. It is taken for granted that a traditional diet provides enough protein, but even this is not explicitly stated.

D is not the main conclusion, as it is not stated in the passage. No attempt is made to define a balanced diet. The passage simply makes a comparison between a traditional diet and a vegetarian diet.

Useful tips how to prepare for these types of questions:

The first important step is to read the passage carefully and pick out the sentence, which is the conclusion. Remember that the conclusion can appear anywhere within an argument - not necessarily at the end, and that what you are looking for is the statement, which follows from, or is supported by, the rest of the passage.

It may be helpful to ask yourself:

- "What is the main message which this passage is trying to get me to accept?"
- When you think you have answered this question, look to see if the rest of the passage gives you reasons for believing this.
- Sometimes a passage may have an intermediate conclusion which is just one of the steps in the reasoning towards the main conclusion.
- Do not worry about whether the reasons are true. Just ask yourself: "If these reasons were true, would they give me good reason to accept the sentence I have underlined?"

LOGIC AND PROBLEM SOLVING SAMPLE QUESTIONS

Question #1: $b = \frac{1}{2}$ $c = \frac{1}{3}$ $d = \frac{2}{3}$ $a+d = \frac{11}{12}$

Question #2: **c (E4)**

Question # 3: i. = **b (25)** ii. = **d (80%)** iii. = **a (50)**

Question #4: **a (24)**

Question #5: **b (26 apples)**

Question #6: i. = **b (9)** ii. = **a (40)** iii. = **b (38)**

Question #7: **d (United States)**

Question #8: **Tip:** although there are many "right" ways to go about solving a critical thinking puzzle, the most common one is by using the process of elimination.

	force	distance	time	power
Vince	810 N	1.1 m	0.40 s	2227.5 watts
Alicia	760 N	0.7 m	0.35 s	1520 watts
Doug	690 N	0.8 m	0.45 s	1226.7 watts
Shelly	710 N	1.0 m	0.50 s	1420 watts
Marcus	675 N	1.2 m	0.27	3000 watts
Patricia	640 N	0.9 m	0.25 s	2304 watts

GENERAL TIPS HOW TO PREPARE FOR THE EXAM

Before you Begin

1. Preview the test before you start answering. This will get you thinking about the material and will give you some ideas on budgeting your time. Quickly calculate how much time you should allow for each section according to the point value. (You don't want to spend 30 minutes on any question that counts only 5 points.)

Taking the exam

1. Read the instructions carefully.
2. Answer the easy questions first. This will give you the confidence and momentum to get through the rest of the exam.
2. Try not to spend too much time on one question that you run out of time before answering the others.
3. Circle key words in difficult questions. This will force you to focus on the main idea /central point.
4. Express difficult questions in your own words. Rephrasing can make it clear to you, but be sure you don't change the meaning of the question.
5. Answer all questions (you are not penalized for wrong answers).
6. Use all of the time allotted for the exam. If you have extra time, cover up your answers and actually rework the question.

Multiple Choice questions

1. Anticipate the answer before you look at the choices. Physically cover the answers to see if you can answer the question first.
2. Read over all of your options.
3. Eliminate highly implausible answers.
4. Answer all questions in order without skipping or jumping around. Identify doubtful answers by marking in the margin and recheck these as time permits after all questions have been answered.
5. Do not linger too long on any one question. Mark your best guess and move on, returning later if you have sufficient time.
6. Reread all questions containing negative wording such as "not" or "least." Be especially alert for the use of double or even triple negatives within a sentence, as these must be read very carefully to assure full understanding.
- Check for qualifying words such as "all-most-some-none," "always-usually-seldom-never," "best-worst," or "smallest-largest." When you see one of these qualifiers, test for truth by substituting the other members of the series.
- Watch for modifying or limiting phrases such as names, dates, places, or other details to make a statement inaccurate.

True & False questions

1. The basic idea behind a true-false question is simple: It consists of a single statement; your job is to decide whether it's true. What makes the choice more difficult is that to be true, a statement must be 100 percent true!
2. Watch for those little words that can turn an otherwise true statement into one that is false, or vice versa.
3. If any part of the statement is false, the whole statement is false.
4. In true-false tests, your first hunch is usually correct. Don't change an answer unless you are very sure of the change
5. If you don't know an answer, always guess using the process of elimination and your critical thinking skills.