

Aga Khan University
PhD in Health Sciences

ADMISSION TEST - SAMPLE PAPER

Information for Applicants

Admission Test Centre

- Date and venue of the test centres are indicated on the Admit Card. Applicants should indicate one centre of their choice in the space provided in the Application Form.
- In case the Admit Card does not reach the applicant on time, he/she is advised to attend the test at a convenient Centre with a photocopy of the application form for identification.

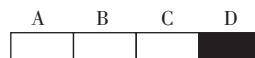
Structure of the Test

- The total duration of the admission test would be 2 hours and 5 minutes in addition to 20 minutes of instruction time.
- The test paper is divided into various sections comprising multiple choice questions.
The University has not authorised any publications or preparatory classes for this Test.
- All questions carry equal marks, there is no negative marking.
- Distribution of the questions in various components is as follows:

Test Components	# of Qs	Allotted Time (min.)
Biological Sciences	20	30
Mathematics	20	30
Logical Reasoning	10	15
English-written test	15	20
-Essay		30
Total	65	125

Answering MCQs

- The candidates are expected to attempt all questions, selecting the correct answer by darkening the corresponding box in the given answer sheet, e.g. if D is the correct answer for a question, your answer should be marked as under:



- Please Note:**
- Use a dark pencil to make dark marks
 - To change an answer, erase completely

Discipline

The University expects honesty from applicants. Dishonest behaviour during the Test or violation of instructions given by the examiner will result in irrevocable disqualification of the applicant from entering the selection process.

Biological Sciences

• Example 1

Questions:

Decrease in the rate of diffusion of a substance across the plasma membrane will occur due to increase in

- A. its concentration gradient
- B. surface area of membrane
- C. membrane thickness
- D. temperature

A	B	C	D

• Example 2

Repolarisation of a nerve action potential is due to

- A. Na^+/K^+ ATPase pump
- B. increased permeability to Na^+
- C. increased efflux of K^+
- D. opening of Ca^{++} -channels

A	B	C	D

• Example 3

The synthesis of a protein chain from an RNA molecule occurs through the process of:

- A. cell cycle
- B. replication
- C. translation
- D. semi-conservative replication

A	B	C	D

• Example 4

Based on the amount of genetic material that they contain, sex cells are said to be:

- A. diploid
- B. autosomal
- C. haploid
- D. X-linked

A	B	C	D

Mathematics

• Example 1

If $x^2 + y^2 = 18$ and $xy = 4$ then $(x+y)^2 =$

- A. 28
- B. 26
- C. 24
- D. 22

A	B	C	D

• Example 2

Seema is 15 years older than Kiran. In 10 years, Seema will be twice as old as Kiran. How old is Seema now?

- A. 5
- B. 20
- C. 25
- D. 30

A	B	C	D

• Example 3

If y is not 0 or 1, what is the reciprocal of $1/(y-1/y)$

- A. y/y^2+1
- B. y/y^2-1
- C. y^2-1
- D. y^2-1/y

A	B	C	D

Logical Reasoning

• Example 1

Direction: Each passage in the section is followed by question based on its content. After reading a passage, choose the best answer to each question. Answer all questions following a passage on the basis of what is stated implied in that passage.

Student at the College of Natural Science must complete a total of twelve courses selected from three different general area - humanities, natural science, and social science-in order to graduate. The student must meet the following course distribution requirement:

- I). Atleast six of the required twelve courses must be from natural sciences
- II). Atleast five of the required twelve courses must be from humanities and social science, with at least one, but no more than three, selected from humanities.

Questions:

If students have completed six natural science courses, all the following are possible groups of courses that fulfill the course distribution requirement **EXCEPT**:

- A. three humanities courses and three social science courses
- B. two humanities courses and four social science courses
- C. one humanities course, one natural science course, and four social science courses
- D. one humanities course, two natural science courses, and three social sciences courses

A	B	C	D

The minimum number of social science courses required in order to fulfill the courses distribution requirement is:

- A. 1
- B. 2
- C. 3
- D. 4

A	B	C	D

English

• Example 1

Direction: Read the following passage and answer the questions below:

Reducing cholesterol has become the mantra of doctors and patients alike. Over the last decade, clinical trials have shown that a drop in cholesterol levels slow the growth of arterial blockages and reduces heart attacks among patients with a high risk of heart diseases. But orchestrating the drop with drugs has been controversial; several studies suggest that such drugs increase the risk of death from cancer and suicide, even as they lower the death rate from heart attacks.

Questions:

Why has the use of drugs to control cholesterol level been controversial?

- A. The drugs are linked to increase risk of death from other factors.
- B. The growth of arterial blockage slows down as these drugs reduce cholesterol level.
- C. Patients face a high risk of heart disease as a side effect of these drugs
- D. The death rate from heart attacks remains unchanged

A	B	C	D

• Example 2

Direction: Choose synonyms of the underlined words:

The handler effectively managed the dog which has been such a threat to others.

- A. controlled
- B. exploited
- C. distracted
- D. connected

A	B	C	D

• Example 3

Direction: Choose the answer which best explains the meaning of the words in bold type:

He is very **consistent** player and rarely has a bad game.

- A. maintaining the same standard
- B. experienced and skillful
- C. determined and aggressive
- D. courageous and ready to tackle obstacles

A	B	C	D

Note: Students will have 30 minutes to write about 250 words on a given topic.