THE AGA KHAN UNIVERSITY

SAMPLE TEST PAPER 2025

PhD in Health Sciences Programme

SECTION I

English

Time allowed: 1 hour

Candidates Name: _____

Application No: _____

INSTRUCTIONS:

The Aga Khan University English test is a sophisticated test of grammar and vocabulary in academic contexts. The test consists of five sub-sections, to be completed in ONE hour.

Candidates may log on to www.englishlanguagetesting.co.uk for additional practice test.

Please read the following instructions carefully.

1. Make sure that you write your name and application number in the space on the question paper and OMR answer sheet.

2. Mark ONLY ONE answers to each MCQ. No credit will be given for multiple answers.

3. There are five sub-sections in this question paper.
   a. Section A   15 questions
   b. Section B   12 questions
   c. Section C   16 questions
   d. Section D   09 questions
   e. Section E   09 questions

4. Attempt all questions.

5. Questions can be attempted in any order.

Discipline

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

SECTION 'A'
There are 15 questions in Section A.
Choose the correct answers (A, B or C) and mark them on the answer sheet.

Look at the example below. Choose the best word to complete the space:

Asking for a pen
Student A: Do you have a pen?
Student B: Yes. There _____ a pen in my bag.

A. is
B. does
C. have

SECTION 'B'
There are 12 questions in Section B.
Choose the correct answers (A, B or C) and mark them on the answer sheet.

Look at the example below. Choose the best words to complete the spaces:

The Campus
The University has _____(i)_____ very heavily in teaching and learning facilities and _____(ii)_____ to ensure that we offer modern, high-quality environment in which our students can live and study happily and effectively.

Space (i)
i.   costed
ii.   invested
iii.   spent

Space (ii)
A. accommodation
B. accommodates
C. accommodating

SECTION 'C'
There are 16 questions in Section C.
Choose the correct answers (A, B, C, D or E) and mark them on the answer sheet.

Look at the example below. Choose the word most like the one in italics, in this example the word is registered:

> **"When you arrive at the university you will be *registered* at the faculty office."**
> **Which word is closest to registered?**

> A. Functioned
> B. Participated
> C. Resigned
> **D. Recorded**
> E. Estimated

SECTION 'D'
There are 9 questions in Section D.
Choose the correct answers (A, B, C, D or E) and mark them on the answer sheet.

Look at the example below. Choose the word most often used with the one in italics, in this example lounge:

> **"Please go to the *lounge*"**
> **Which word is most often used with *lounge*?**

> A. train lounge
> B. meeting lounge
> **C. departure lounge**
> D. information lounge
> E. waiting lounge

SECTION 'E'
There are 9 questions in Section E, each with three or four parts. Decide if each is right or wrong in English and mark them on the answer sheet.

Example:
Each question has three parts ((i), (ii) and (iii)) or four parts ((i), (ii), (iii) and (iv)). Decide if each is right or wrong in English. None, some or all may be right. Look at the example below. ***In this example (i), (iii) and (iv) are RIGHT and (ii) is WRONG.***

(i)	Thank you for completing your application for the University of Newbury. Before you submit your forms, remember to **keep** a copy for your records.	**RIGHT**	WRONG
(ii)	Thank you for completing your application for the University of Newbury. Before you submit your forms, remember to **remain** a copy for your records.	WRONG	**WRONG**
(iii)	Thank you for completing your application for the University of Newbury. Before you submit your forms, remember to **save** a copy for your records.	**RIGHT**	WRONG
(iv)	Thank you for completing your application for the University of Newbury. Before you submit your forms, remember to **make** a copy for your records.	**RIGHT**	WRONG

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SECTION II

Quantitative Reasoning

Time allowed: 60 minutes

Candidates Name: _____

Application No: _____

INSTRUCTIONS:

Please read the following instructions carefully.

1. Make sure that you write your name and application number in the space above and on the OMR answer sheet.

2. Mark ONLY ONE answers to each MCQ. No credit will be given for multiple answers.

3. If you change an answer, be sure that you completely erase the old answer before marking your new answer.

4. There will be 40 questions in this section.

5. Attempt all questions.

6. Questions can be attempted in any order.

Discipline

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TABLE OF SPECIFICATION

i. Arithmetic (30%)

ii. Information Handling – Graphs & Tables (40%)

iii. Logical Reasoning – Application of Algebra / Geometry (30%)

1. Which of the following quantities is the largest?

   A.   45%
   B.   0.5%
   C.   ¾
   D.   0.6666

A	B	C	D
		■	

2. $\frac{1}{4} + \left[\frac{4}{3} \times \frac{3}{5}\right] - \left[\frac{1}{4} \div \frac{4}{5}\right]$ is equal to

   A. $\frac{59}{80}$

   B. $\frac{17}{82}$

   C. $\frac{16}{15}$

   D. $\frac{6}{7}$

A	B	C	D
■			

3. The cost of a book increased from Rs. 600 to Rs. 624. The increase in cost is

   A.   4%
   B.   24%
   C.   104%
   D.   124%

A	B	C	D
■			

4.   A toy helicopter normally costs Rs. 600. Bilal bought the toy helicopter when the price was reduced by 30%. How much did Bilal save?

A.   Rs. 420
B.   Rs. 300
C.   Rs. 240
D.   Rs. 180

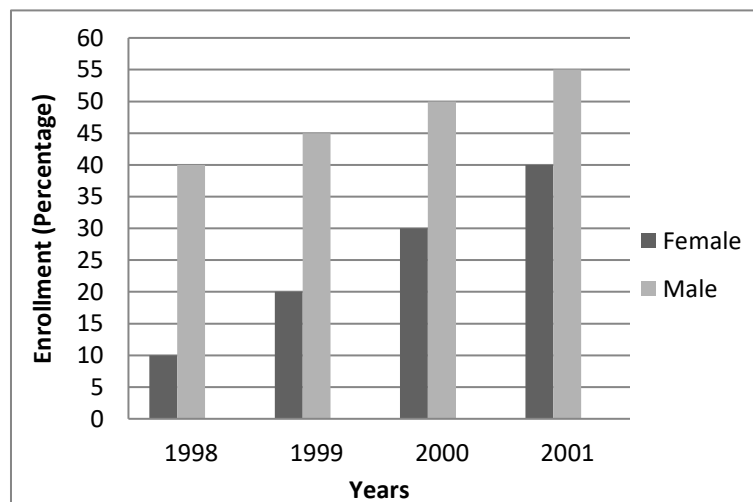| A	B	C	D
			■

5.   Three bells A, B & C ring simultaneously at 6:00 am. Now Bell A will ring after every 15 minutes, Bell B after every 20 minutes and Bell C after 30 minutes. At what time will all the three bells ring together again?

A.   6:15 am
B.   6:20 am
C.   6:30 am
D.   7:00 am

A	B	C	D
			■

6.   The graph below shows percentage of female and male students' enrollment in engineering college over four years. If the trends of female and male enrollment in engineering colleges continue for the next 10 years, determine the year in which the enrollment of female students will be same as the male students?

A.   2003
B.   2004
C.   2005
D.   2006

A	B	C	D
	■		

THE AGA KHAN UNIVERSITY

SAMPLE TEST PAPER 2025

PhD in Health Sciences Programme

SECTION III

Specialty Specific Paper

Time allowed: 1 hour and 45 minutes

Candidates Name: _____

Application No: _____

INSTRUCTIONS:

Please read the following instructions carefully.

1. Make sure that you write your name and application number in the space above and on the OMR answer sheet.

2. Mark ONLY ONE answer to each MCQ. No credit will be given for multiple answers.

3. If you change an answer, be sure that you completely erase the old answer before marking your new answer.

4. There will be 40 MCQ's and 3 SEQ's in this section

5. Attempt all questions.

6. Questions can be attempted in any order.

Discipline

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Section III
Specialty Specific Questions

BIOLOGICAL SCIENCES

Q1.   Decrease in the ration 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

Q2.   Repolarisation of a nerve action potential is due to

    A. Na+/K+ ATPase pump
    B. increased permeability to Na+
    C. increased afflux of K+
    D. opening of Ca++-channels

Q3.   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
    E. Europe

Q4.   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

Example: Short Essay Question (SEQ)

Q5.   'Biological systems do not have uni-directional switches that lead to uncontrolled cell growth and proliferation. Instead, cellular activity is tightly regulated so that cells can response to specific situations.
    Please use examples to indicate whether the statement is valid or invalid.

Q1.   A 45-year-old male presents to the clinic with a 3-day history of perianal swelling and pain after passing hard stool. A few drops of fresh blood also dripped after this episode. Examination reveals a fissure at 7 o'clock position.

The most appropriate management at this stage is:

A. anal dilatation
B. analgesic and stool softener
C. drainage under local anesthesia
D. pudendal nerve block

Q2.   A 30-year-old lady is brought to the emergency room with a history of severe headache, neck stiffness and right sided weakness over a period of 1 hour. On examination BP is 180/110, HR 60.min, GCS 10-11/15 and pupils are equal and reactive.

The most likely cause of the clinical condition is:

A. bacterial meningitis
B. ischemic stroke
C. migraine
D. ruptured aneurysm
E. viral encephalitis

Q3.   A 78-year-old man with hypertension and hyperlipidemia presented to the emergency room with crushing chest pain in the left substernal area for 6 hours. He has no prior episode of similar symptoms. Current medical include aspirin, hydrochlorothiazide and atorvastatin. On examination, BP is 100/70 mm Hg, Pulse is 100/min and Respiratory rate is 16/min. There is no jugular venous distention. Auscultation reveals no cardiac murmurs or rubs.

The most likely diagnosis is:

A. Myocardial ischemia
B. Myocarditis
C. Peptic ulcer
D. Pleuritis
E. Reflux esophagitis

Example: Short Essay Question (SEQ)

Q4.   A 4-year-old boy is brought by parents to the emergency room. Father says the Child stumbled and fell in the drawing room and has not moved the right arm since then. On examinations the child appears afraid, has swelling over the right arm. X-ray reveals a spiral fracture of the humerus shaft.

    A. What is the most likely diagnosis?
    B. What will you examine in the child to confirm the diagnosis?
    C. If a chest X-ray is done, what is it likely to show?

Q1.   A client is admitted to the hospital with a diagnosis of cholecystitis from Cholelithiasis. The client is complaining of severe abdominal pain and extreme nausea and has vomited several times. Based on this data, which nursing diagnosis would have the highest priority for the intervention at this time?

   A. Anxiety related to severe abdominal discomfort
   B. Deficient fluid volume related to vomiting
   C. Pain related to gallbladder inflammation
   D. Imbalanced nutrition related to vomiting

Q2.   A 28-year-old client, weighing 80 kg, underwent an appendectomy yesterday. He was given morphine sulfate 15 mg IM, 45 minutes ago. He states that his pain is still severe. Which action by the nurse is most appropriate?

   A. Administer another dose of Morphine
   B. Explain that medication has not reached its full effect
   C. Record in the file that the analgesic was not effective
   D. Use complementary measures, such as relaxation techniques

Example: Short Essay Question (SEQ)

Q3.   There are several misconceptions about Evidence-based nursing (EBN). In your view, which one of the following is not a misconception; explain the rational for your selected answer.

   A. EBN considers patient preferences and values
   B. EBN is atheoretical
   C. EBN is only about quantitative research
   D. EBN requires only randomized controlled trials

POPULATION AND PUBLIC HEALTH

Q1. Exclusive breast feeding is recommended by the World Health Organisation up to 6 months of age. What proportion of infants are exclusively breast fed up with the age of 6 months in Pakistan?

A. 30%
B. 85%
C. 75%
D. 80%
E. 65%

Q2. In hypothesis testing, β is the probability of committing Type II error, so, the power of the test $(1 - \beta)$ can be defined as:

A. **the probability of rejecting H_0 when H_A is true**
B. the probability of failing to reject H_0 when H_A is true
C. the probability of failing to reject H_0 when H_0 is true
D. the probability of rejecting to reject H_0 when H_0 is true
E. the probability of failing to reject H_0

Q3. Environmental factors contribute to approximately 25% of the total global burden of diseases. However, its share of burden varies in different regions of the world. The highest contributor to environmental burden of diseases **pre person** is:

E. North America
F. South Asia
G. Africa
H. Australia
I. Europe

Example: Short Essay Question (SEQ)

Q4. National Aids control programme of Pakistan has established a sentinel surveillance of HIV through ante-natal clinics in some of the government run hospitals in the four provinces of Pakistan. Can you generalize its results to Pakistani women. Explain.