

# BRAC UNIVERSITY

## Sample Question for Undergraduate Programs

### Admission Test

Read the admission instruction to identify the sections relevant to you. The sample questions indicate the pattern not the difficulty level of the questions that will appear in the admission test.

The test consists of **SIX SECTIONS**. **Section A, Section C, Section D, and Section E** contain **MCQs**. **Section B** contains a question on **English composition** and **Section F** contains questions on **Drawing and Paragraph Writing**.

SECTIONS	QUESTION TYPE	NO. OF QUESTIONS	TOTAL MARKS
A. ENGLISH LANGUAGE	MCQ	25	25
B. ENGLISH COMPOSITION	WRITTEN	1	40
C. MATHEMATICS	MCQ	15	30
D. HIGHER MATHEMATICS & PHYSICS	MCQ	10	20
E. BIOLOGY & CHEMISTRY	MCQ	10	20
F. DRAWING	DRAWING,WRITTEN	2	60

NAME OF PROGRAMS	SECTIONS	DURATION
ANTHROPOLOGY, ENGLISH, LLB	A, B	1.00 hr
BBA, ECONOMICS, BIOTECHNOLOGY, MICROBIOLOGY	A, B, C	1.30 hrs
CS, CSE, ECE, EEE, APE, MATHS, PHYSICS	A, B, C, D	1.50 hrs
PHARMACY	A, B, C, E	1.50 hrs
CS, CSE, ECE, EEE, APE, MATHS, PHYSICS, PHARMACY	A, B, C, D, E	2.10 hrs
ARCHITECTURE	A, B, C, F	2.10 hrs

For SECTIONS A, C, D, and E give all your answers on the Answer Script by filling in the circles on the answer letter of your choice, using a black ballpoint pen or **2B** pencil. **Filling more than one circle will be considered as a wrong answer.**

Example: If the correct answer for a question is A, your answer booklet should be marked as shown below:

Sample answer:



For SECTION B and F write your answer in the space provided in the Test Booklet, using a ballpoint or fountain pen.

**Note that section C, D, E and F will be available in both versions: English and Bangla.**

**SAMPLE QUESTIONS:**

**SECTION-A: ENGLISH LANGUAGE**

**Complete the sentences using the options given below. Select the best option**

1. Work should be a meaningful and \_\_\_\_\_ part of one’s life.  
 (A) interested                      (B) productive                      (C) exported                      (D) sufficient
2. The concert was \_\_\_\_\_ by an hour.  
 (A) cancelled                      (B) delayed                      (C) postponed                      (D) presented

**Read the following text and fill in the blanks with the most suitable answer from the box below:**

**Tsunami**

When an earthquake under the sea is very strong, it can generate a (1)..... wall of water called a *tsunami*. The powerful movements send enormous (2)..... of energy up through the ocean, moving (3)..... amounts of water. The water advances (4)..... the shore in giant waves that can rise to the height of a 10 story building. In December 2004, people around the Indian Ocean (5)..... by helplessly as the world’s deadliest ever tsunami arrived on land. (6)..... people within the area had any warning. The tsunami (7)..... cities and took thousands of lives.

1	A	terrifying	B	fearing	C	fright	D	thoughtful
2	A	numbers	B	many	C	amounts	D	times
3	A	few	B	huge	C	high	D	long
4	A	between	B	for	C	forward	D	toward
5	A	stand	B	stood	C	wait	D	shout
6	A	So	B	Much	C	Little	D	Few
7	A	destroyed	B	destruct	C	damage	D	broken

**Reading Comprehension**

There are two groups of the people who have difficulty in writing – those who cannot write at all, and those who have to, often for a living. In between there is a huge middle-ground that forms the core of the audience for “Write On”. This group can be broken down into two sections. The first comprises those who can write a bit but feel they have nothing to say and therefore rarely write anything. The other group has lots to say but has no clear idea about how to write it down and so does not bother either.

So, how does a television program encourage first-time writers? One of the best methods of getting people to write anything down is to encourage them to talk about themselves. When they talk about their own experiences the words come rushing out. The talker is freed from the worries of correct spelling and grammar – that can come later.

Many people have reacted enthusiastically to the possibility of a television series designed to encourage and improve writing skills. They include students who attend classes and teachers and volunteer tutors who hold them. And there has been enthusiasm too from those who would like to improve those writing tasks that they are often required to do in their daily lives. This television series is intended for all these groups; the students who want guidance and encouragement, the tutors who would like more ideas to help the students, the rest of us who just want to be better at writing.

**Some people do not write because**

- (A) they are not sure how to      (B) they never say anything      (C) they can only write a little  
(D) they talk too much

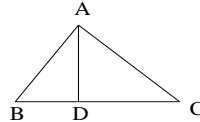
**SECTION- B: ENGLISH COMPOSITION**

Write a composition, not exceeding 200 words, expressing your opinion about the topic below.

Students in the secondary level of Bangladesh must learn two more languages (such as Arabic, Chinese, French, etc..) other than Bengali and English, to get high level jobs in overseas countries. Give your opinions regarding this.

**SECTION- C: MATHEMATICS**

1. In the following figure  $BD=4\text{cm}$ ,  $DC=25\text{ cm}$ . The line  $AD$  is perpendicular to  $BC$  and  $AD=10\text{ cm}$ . Find  $\angle BAC$ . (নীচের চিত্রে  $BD= 8\text{ সেমি}$ ,  $CD= ২৫\text{ সেমি}$ ।  $AD$  সরলরেখা  $BC$  সরলরেখার ওপর লম্ব এবং  $AD= ১০\text{ সেমি}$ । কোণ  $\angle BAC$  এর মান কত?)



- (A)  $90^\circ$       (B)  $60^\circ$       (C)  $100^\circ$       (D)  $115^\circ$       (E)  
 $30^\circ$

2. In 1985 the population of town A and town B were the same. From 1985 to 1995 the population of town A increased by 60% while the population of town B decreased by 60. What percentage of the population of town A was the population of town B in 1995? (১৯৮৫ সালে শহর A এবং শহর B এর লোকসংখ্যা সমান ছিল। ১৯৮৫-৯৫ এই সময়ের মধ্যে শহর A এর লোকসংখ্যা বৃদ্ধি পায় ৬০ % এবং শহর B এর লোকসংখ্যা হ্রাস পায় ৬০ %। ১৯৯৫ সালে শহর A এর লোকসংখ্যা B এর শতকরা কত ভাগ?)

- (A) 60      (B) 75      (C) 25      (D) 45      (E) 30

## SECTION- D: HIGHER MATHEMATICS AND PHYSICS

1. A cube four cm on each side is painted blue and cut into 64 one cm cubes. How many one-cm cubes are painted blue on exactly two faces? (৪ সেমি দৈর্ঘ্যের ধারবিশিষ্ট একটি ঘনকের চারপাশে নীল রং দিয়ে সেটিকে কতন করে সমান ৬৪ টি ছোট ঘনকে ভাগ করা হল। ১ সেমি দৈর্ঘ্যের ধারবিশিষ্ট ছোট ঘনকের কতগুলোর শুধুমাত্র দুটি তল নীল রংবিশিষ্ট হবে?)

- (A) 8 (B) 12 (C) 16 (D) 24 (E) 32

2. What is the probability of getting 80% or more of the questions correct on a 10-question true-false exam merely by guessing? (একটি পরীক্ষায় ১০ টি বাক্য আছে। কোন বাক্য সত্য হলে 'সত্য' এবং মিথ্যা হলে 'মিথ্যা' লিখতে হয়। শুধুমাত্র আন্দাজ করে ৮০% বা তার চেয়ে বেশি সঠিক উত্তর দেবার সম্ভাব্যতা কত?)

- (A)  $\frac{1}{16}$  (B)  $\frac{5}{32}$  (C)  $\frac{3}{16}$  (D)  $\frac{7}{32}$  (E)  $\frac{7}{128}$

3. Express in radians the period of the graph of the equation  $y = \frac{1}{3}(\cos^2 x - \sin^2 x)$ . ( $y = \frac{1}{3}(\cos^2 x - \sin^2 x)$  সমীকরণটির লেখচিত্র থেকে পর্যায় নির্ণয় করে রেডিয়ান এককে রূপান্তরিত কর।)

- (A)  $\frac{\pi}{2}$  (B)  $\pi$  (C)  $\frac{3\pi}{2}$  (D)  $2\pi$  (E)  $3\pi$

4. If  $x = 1 - e^t$  and  $y = 1 + e^{-t}$ , find  $y$  in terms of  $x$ . (যদি  $x = 1 - e^t$  এবং  $y = 1 + e^{-t}$  হয়, তবে  $y$  কে  $x$  দ্বারা প্রকাশ কর।)

- (A)  $y = x$  (B)  $y = 1 - x$  (C)  $y = \frac{x-1}{x}$  (D)  $y = \frac{x}{x+1}$  (E)  $y = \frac{2-x}{1-x}$

## SECTION- E: BIOLOGY & CHEMISTRY

### Multiple Choice Question

1. A hydrocarbon contains, by mass, 82.7% carbon and 17.3% hydrogen. The molecular formula of the hydrocarbon is \_\_\_\_\_. (একটি হাইড্রোকার্বনে ৮২.৭% কার্বন এবং ১৭.৩% হাইড্রোজেন আছে। হাইড্রোকার্বনটির আণবিক সংকেত হচ্ছে \_\_\_\_\_।)

- A. CH<sub>3</sub>  
B. C<sub>2</sub>H<sub>6</sub>  
C. C<sub>2</sub>H<sub>5</sub>  
D. C<sub>4</sub>H<sub>10</sub>

2. In a DNA double helix, the two strands are held together by \_\_\_\_\_. (ডি.এন.এ ডবল হেলিক্সে ২টি সূত্রক সংযুক্ত হওয়ার কারণ হচ্ছে \_\_\_\_\_।)

- A. covalent bonds between bases (২টি বেস এর মধ্যে অবস্থিত সমযোজী বন্ধন)  
B. covalent bonds between sugar molecules (২টি শর্করা অণুর মধ্যে অবস্থিত সমযোজী বন্ধন)  
C. hydrogen bonds between bases (২টি বেস এর মধ্যে অবস্থিত হাইড্রোজেন বন্ধন)  
D. hydrogen bonds between sugar molecules (২টি শর্করা অণুর মধ্যে অবস্থিত হাইড্রোজেন বন্ধন)

## SECTION- F: DRAWING

### **Question 1.**

**Drawing** to access imagination, free hand sketching ability, proportioning etc. The question will not directly ask the candidate to draw something i.e. a human figure at work or a table lamp but a sentence or two will be written and the candidate asked to interpret its meaning through a drawing in the space provided.

Examples:      *There is festivity in the air*  
                    *A storm is gathering*

**Marks: 40**

### **Question 2.**

**Paragraph Writing.** Candidates will be asked to write a small paragraph in English or Bangla. The question will be directed towards a description of or comments about a particular situation.

Examples: A brief narration about a      *Village market*  
  *Activities at a traffic intersection*

**Marks: 20**

**Candidates will have to pass each section (F) separately to qualify; Pass mark is 50% of total mark.**