



Capital University of Science and Technology
Islamabad

Sample Admission Test for BS Mathematics Degree Program

Mathematics (MCQs)

1. $\int_{-1}^0 x^2(x^3 + 1)^3 dx = ?$

- A) $-\frac{4}{3}$ B) -1 C) 1 D) $\frac{4}{3}$ E) $\frac{1}{12}$

2. $\frac{d}{dx} (e^{\sin 2x}) = ?$

- A) $2e^{\sin 2x} \cos 2x$ B) $e^{\cos 2x}$ C) $e^{\cos 2x} \sin 2x$ D) $e^{\sin 2x}$ E) $2xe^{\sin 2x}$

English

1. Choose the correct passive voice sentence for the following:

They have completed their task.

- a. Their task have been completed by them.
- b. The task had been completed by them.
- c. Their task has been completed by them.**
- d. Their task will have completed by them.
- e. Their task had been completed by them.

2. According to the terms of the agreement, if Arsalan defaulted on his loan, he would have to with his property.

- a. paid
- b. payment
- c. will pay
- d. be paid
- e. pay**

3. Jamal was tired of his roommate's jokes about his personal life, so he moved out.

- a. Pity
- b. Piety
- c. Petty**
- d. Paity
- e. Pitty

4. So long as the rain, I stayed at home.

- a. has been continuing
- b. continue
- c. continues
- d. will continue
- e. continued**

Physics

1. How far will a brick starting from rest fall freely in 3.0 seconds?

- a. 7 km.
- b. 57 miles
- c. 44 m
- d. 36 m.

Correct answer: c.

2. If the resistances of 2 ohm and 4 ohm are connected in parallel, the equivalent resistance will be:

- a. 2 ohm
- b. 0.75 ohm
- c. 6 ohm
- d. 1.33 ohm

Correct answer: d.

3. Time rate of change of momentum is also known as?

- a. Force
- b. Pressure
- c. Acceleration
- d. Impulse

Correct answer: a.