

Information Technology University, Lahore.
ENTRANCE SAMPLE TEST
Program: BSCS

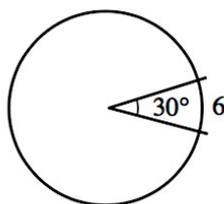
Mark the correct choice in the provided answer sheet.

PHYSICS

1. An ideal gas is heated in a closed container at constant volume. Which of the following properties of the gas increases as the gas is heated?
 - A. The atomic mass of the atoms in the molecules
 - B. The number of molecules
 - C. The density of the gas
 - D. The pressure exerted by the molecules on the walls of the container
2. When water freezes, its molecules take on a more structured order. Why it does not contradict the Second Law of Thermodynamics?
 - A. Because the surroundings are gaining entropy
 - B. Because the water is gaining entropy as it goes from liquid to solid state
 - C. Because the water's internal energy is decreasing
 - D. Because the surroundings are losing entropy

MATH

3. If a central angle of measure 30° is subtended by a circular arc of length 6 meters, as is illustrated below, how many meters in length is the radius of the circle?



- A. $\pi/36$
 - B. $1/5$
 - C. π
 - D. $36/\pi$
4. A rectangular box with a base 2 inches by 6 inches is 10 inches tall and holds 12 ounces of breakfast cereal. The manufacturer wants to use a new box with a base 3 inches by 5 inches. How many inches tall should the new box be in order to hold exactly the same volume as the original box? (Note: The volume of a rectangular box may be calculated by multiplying the area of the base by the height of the box.)
 - A. 8
 - B. 9
 - C. 10
 - D. 12

5. If Sarah is twice as old as Ali, and the sum of their ages is 42 years, how old is Ali?
- A. 28 years
 - B. 15 years
 - C. 14 years
 - D. None of these

ENGLISH

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are four lettered words or sets of words. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

6. There is a general ____ in the United States that our ethics are declining and that our moral standards are ____.
- A. feeling - normalizing
 - B. idea - futile
 - C. optimism - improving
 - D. complaint - deteriorating

Each question below consists of a related pair of words or phrases, followed by four lettered pairs of words or phrases. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

7. BIRD : FEATHERS

- A. mammal : spine
- B. hand : fingers
- C. branch : fruit
- D. fish : scales

ANALYTICAL

8. Which number comes next in the given series 2 7 12 17 22 ?
- A. 26
 - B. 28
 - C. 23
 - D. 27

9. Cars are safer than planes. Fifty percent of plane accidents result in death, while only one percent of car accidents result in death. Which of the following, if true, would most seriously weaken the argument above?

- A. Planes are inspected more often than cars.
- B. The number of car accidents is several hundred thousand times higher than the number of plane accidents.
- C. Pilots never fly under the influence of alcohol, while car drivers often do.
- D. Plane accidents are usually the fault of air traffic controllers, not pilots.