

## Sample BSCS Entry Test

1. Alfred, a tour operator wanted to increase his fleet of cars. For that, he wanted to know the preference of car types among his customers. A survey revealed that 40% of the customers preferred sedans while the remaining preferred SUVs. Among the 40% who preferred sedans, 45% went for Volkswagen while 55% went for Honda. What percentage of the cars should Alfred keep as Honda sedans so that it is commensurate with the findings of the survey?
  - A. 18%
  - B. 22%
  - C. 40%
  - D. 55%
  - E. 10%
  
2. A total of 14000 votes were cast for two opposite candidates: Adnan and Kamran. Adnan won by the ration of 4 to 3. How many votes are cast to Kamran?
  - A. 5000
  - B. 7000
  - C. 6000
  - D. 8000
  - E. 3000
  
3. What is the answer to  $\int 1/x \, dx$ ?
  - A.  $\text{Loge}(x)$
  - B. Undefined because you cannot divide with zero
  - C.  $\ln(x)+c$
  - D.  $\ln(x)$
  - E. None of the above

4. If  $f(x) = 3x^3 - 2x^2 + 2x + 2$ , what is the value of  $f(-2)$ ?
- A. -34
  - B. -14
  - C. 14
  - D. 25
  - E. 0
5. A fair coin is tossed four times. What is the probability of getting at least one 'Tail'?
- A.  $1/16$
  - B.  $1/4$
  - C.  $3/4$
  - D.  $15/16$
  - E. None of the above
6. A company decided to launch a promotional campaign using a hot air balloon. The balloon was tied to a point on the ground using a rope 30 meter long. One day, because of a strong wind, the rope made an angle of  $60^\circ$  with the ground. How high (in meters) was the balloon above the ground level that day?
- A.  $\frac{15}{\sqrt{3}}$
  - B.  $\frac{30}{\sqrt{3}}$
  - C. 15
  - D.  $15\sqrt{3}$
  - E. None of the above