

A biology test consists of 5 true or false questions. A student who sat for the examination tried to answer each question by nearly guessing without reading each statement. The probability of the student scoring exactly 4 correct is?

Probability that he answered correctly (or wrong) on the question =  $\frac{1}{2}$  (There are only 2 possibilities for answer– True or False).

Probability that he would get 4 correct answers =  $\left(\frac{1}{2}\right)^4$

Probability that he would get 1 wrong answer =  $\left(\frac{1}{2}\right)^1$

Therefore, probability that he would get 4 correct answers and 1 wrong in certain order =  $\left(\frac{1}{2}\right)^5$ .

There are 5 possibilities to get wrong answer (on first question, second ... )

Therefore, probability that he would get 4 correct answers equals:

$$P = 5 * \left(\frac{1}{2}\right)^5 = \frac{5}{32}$$

Answer:  $\frac{5}{32}$