ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

Solutions of Worksheet-28

SUBJECT – MATHEMATICS

2nd-term

Chapter: Probability **Class: XII**

Topic : Probability **Date: 23.11.2020**

Choose the correct option (1 X 15= 15)

Question 1.

If the event A and B are independent, then P(A∩B) is equal to

(a) P(a) + P(b)

(b) P(a) – P(b)

(c) P(a). P(b)

(d) P(a) | P(b)

Question 2.

If P(a) = $\frac{4}{5}$ and P(A∩B) = $\frac{7}{10}$, then P(B/A) is equal

(a) $\frac{1}{10}$

(b) $\frac{1}{8}$

(c) $\frac{7}{8}$

(d) $\frac{17}{20}$

Question 3.

If P(A∩B) = $\frac{7}{10}$ and P(b) = $\frac{17}{20}$, then P(A|B) equals

(a) $\frac{14}{17}$

(b) $\frac{17}{20}$

(c) $\frac{7}{8}$

(d) $\frac{1}{8}$

Question 4.

If P(a) = $\frac{7}{10}$ P(b) = $\frac{7}{10}$ and P(A∪B) = $\frac{7}{10}$ then P (B|A) + P(A|B) equals

(a) $\frac{1}{4}$

(b) $\frac{1}{3}$

(c) $\frac{5}{12}$

(d) $\frac{7}{12}$

Question 5.

If P(a) = $\frac{2}{5}$, P(b) = $\frac{3}{10}$ and P (A∩B) = $\frac{1}{5}$, then P (A'|B'). P(B'|A') is equal to

(a) $\frac{5}{6}$

(b) $\frac{5}{7}$

(c) $\frac{25}{42}$

(d) 1

Question 6.

If P(a) = 0,4, P(b) = 0.8 and P(B|A) = 0.6 then P(A∪B) is equal to

(a) 0.24

(b) 0.3

(c) 0.48

(d) 0.96

Question 7.

A and B are events such that P(a) = 0.4, P(b) = 0.3 and P(A∪B) = 0.5. Then P(B∩A) equals

(a) $\frac{2}{3}$

(b) $\frac{1}{2}$

(c) $\frac{3}{10}$

(d) $\frac{1}{5}$

Question 8.

You are given that A and B are two events such that P(b) = $\frac{3}{5}$, P(A|B) = $\frac{1}{2}$ and P (A∪B) = $\frac{4}{5}$, then P(a) equals

(a) $\frac{3}{10}$

(b) $\frac{1}{5}$

(c) $\frac{1}{2}$

(d) $\frac{3}{5}$

Question 9.

If P(b) = $\frac{1}{5}$, P(A|B) = $\frac{1}{2}$ and P(A∪B) = $\frac{4}{5}$ then P (A∪B)′ + P (A′∪B) =

(a) $\frac{1}{5}$
(b) $\frac{4}{5}$
(c) $\frac{1}{2}$
(d) $\frac{3}{5}$

Question 10.

If A and B are two independent events with P(a) = $\frac{3}{5}$ and P (b) = $\frac{4}{9}$, then P (A′∩B′) equals

(a) $\frac{4}{15}$
(b) $\frac{8}{15}$
(c) $\frac{1}{3}$
(d) $\frac{2}{9}$

Question 11.

Let A and B two event such that P(a) = $\frac{3}{8}$, P(b) = $\frac{5}{8}$ and P(A∪B) = $\frac{3}{4}$. Then P(A|B).P(A′|B) is equal to

(a) $\frac{2}{5}$
(b) $\frac{3}{8}$
(c) $\frac{3}{20}$
(d) $\frac{6}{25}$

Question 12.

If P(a) = $\frac{3}{8}$, P(b) = $\frac{5}{8}$, P(A∪B) = $\frac{3}{4}$ then p($\frac{B}{A}$) is

(a) $\frac{3}{47}$
(b) $\frac{5}{49}$
(c) $\frac{2}{3}$
(d) $\frac{1}{4}$

Question 13.

Let P (a) = $\frac{7}{13}$, P(b) = $\frac{9}{13}$ and P (A∪B) = $\frac{9}{13}$, Then P(A′|B) is equal to

(a) $\frac{6}{13}$
(b) $\frac{4}{13}$
(c) $\frac{4}{9}$
(d) $\frac{5}{9}$

Question 14.

The probability that A speaks truth is $\frac{4}{5}$ while this probability for B is $\frac{3}{4}$. The probability that they contradict each others when asked to speak ana fact is

(a) $\frac{7}{20}$
(b) $\frac{1}{5}$
(c) $\frac{3}{20}$
(d) $\frac{4}{5}$

Question 15.

A pair of dice are rolled. The probability of obtaining an even prime number on each dice is

(a) $\frac{1}{36}$
(b) $\frac{1}{12}$
(c) $\frac{1}{6}$
(d) 0

1.c , 2.d , 3.a , 4.d, 5.c , 6.d , 7.d , 8.c , 9.d , 10.d , 11.d , 12.c , 13.d , 14.d , 15.a

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