

ST. LAWRENCE HIGH SCHOOL A JESUIT CHRISTIAN MINORITY INSTITUTION



WORKSHEET-31 <u>SUBJECT – MATHEMATICS</u> <u>Final - Term</u>

Chapter: LPP

Topic: Miscellaneous

Class: XII

Date: 25.01.2021

Choose the correct option

<u>(1 x 15=15)</u>

- 1. The objective function of an LPP is ?
 - a) Irrational function of decision variables
 - b) Linear function of decision variables
 - c) Trigonometric function of decision variables
 - d) Exponential function of decision variables
- 2. The number of feasible solutions (if exists) is ?

a) One , b) Finite , c) Infinite , d) None of these.

- 3. Any solution to an LPP which satisfy the non-negative restrictions , is called
 - a) Optimal solution
 - b) Basic solution
 - c) Feasible solution
 - d) None of these.

- 4. If the value of the objective function of an LPP can be increased or decreased indefinitely, then the LPP is said to have
 - a) A bounded solution
 - b) An unbounded solution
 - c) An infinite solution
 - d) No solution.
- 5. Given LPP is as follows –

Maximize = x + y;

Subject to the constraints : $x + 2y \le 4$; $x + 2y \ge 6$; $x \ge 0$; $y \ge 0$

The given LPP has -

- a) Unique feasible solution
- b) Infinite number of feasible solutions
- c) No feasible solution
- d) None of these.
- 6. An unbiased coin is tossed 3 times in succession, then the probability of getting exactly one head is ?
 - a) $\frac{3}{8}$, b) $\frac{1}{8}$, c) $\frac{5}{8}$, d) $\frac{1}{2}$
- 7. The probability of getting 11 when an ordinary die is thrown twice is ?
 - a) $\frac{1}{8}$, b) $\frac{1}{12}$, c) $\frac{5}{36}$, d) $\frac{1}{18}$
- 8. Two events A and B are mutually exclusive ; if $P(A) = \frac{1}{2}$, $P(A \cup B) = \frac{2}{3}$ then the value of P(B) is ? a) $\frac{1}{3}$, b) $\frac{1}{5}$, c) $\frac{1}{4}$, d) $\frac{1}{6}$

9. Two events A and B are stochastically independent ; if $P(A) = \frac{3}{5}$,

$$P(A \cap B) = \frac{4}{9}$$
 then the value of $P(B)$ is ?
a) $\frac{5}{9}$, b) $\frac{8}{9}$, c) $\frac{4}{27}$, d) None of these.

10.
$$P(A) = \frac{3}{7}$$
, $P(B) = \frac{4}{7}$ and $P(A \cap B) = \frac{2}{9}$. Then the value of $P(A/B)$
is ?
a) $\frac{7}{18}$, b) $\frac{5}{18}$, c) $\frac{14}{27}$, d) $\frac{4}{9}$

11.
$$P(A \cap B) = \frac{5}{13}$$
, then the value of $P(A^c \cup B^c) = ?$
a) $\frac{4}{13}$, b) $\frac{9}{13}$, c) $\frac{8}{13}$ d) None of these.

12. If the odds in favour of an event are 9:4, then its probability of occurrence is ?

a)
$$\frac{4}{13}$$
 , b) $\frac{9}{13}$, c) $\frac{8}{13}$ d) None of these.

- 13. If the odds against an event are 4: 5, then its probability of occurrence is ?
 a) ⁴/₉, b) ⁵/₉, c) ⁸/₉ d) None of these.
- 14. P(A or B) = 0.85, P(B) = 0.35 and P(A and B) = 0.15Find P(A)? a) 0.56, b) 0.65, c) 0.75, d) None of these.

15. If $\vec{a} = 3\hat{\imath} - 2\hat{\jmath} + m\hat{k}$ and $\vec{b} = -2\hat{\imath} + \hat{\jmath} + 4\hat{k}$ are perpendicular to each other, then the value of m is –

a) 0 , b) 3 , c) 4 , d) 2

Prepared by :-

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