

Q11.16.3.32

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EE22BTECH11052

State whether the statement is True or False. The probabilities that a typist will make 0, 1, 2, 3, 4, 5 or more mistakes in typing a report are, respectively, 0.12, 0.25, 0.36, 0.14, 0.08, 0.11.

Solution:

Parameter	Value	Description
X	0	0 mistake done
	1	1 mistake done
	2	2 mistake done
	3	3 mistake done
	4	4 mistake done
	5	5 or more mistake done

TABLE 1: distribution

Since

$$\sum_{i=0}^5 P_X(k) = 1 \quad (1)$$

We will use the above property to determine the validity of the statement.

$$\sum_{i=0}^5 P_X(k) = 0.12 + 0.25 + 0.36 + 0.14 + 0.08 + 0.11 \quad (2)$$

$$= 1.06 \quad (3)$$

$$> 1 \quad (4)$$

Hence the given statement is false.