K5(10)



School of Biomedical Science

B.Tech Biotechnology Semester End Examination - Jun 2024

Duration: 180 Minutes Max Marks: 100

10)

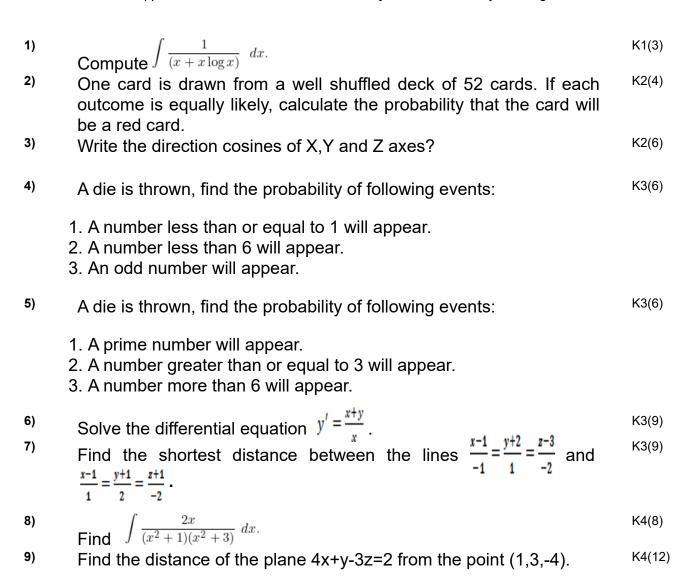
Sem II - C1UC223B - Elementary Maths-II

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator



In a bank, principal increases continuously at the rate of 5% per

year. In how many years Rs 1000 double itself?

Find the value of λ , so that the lines $\frac{x-1}{-3} = \frac{y-2}{2\lambda} = \frac{z-3}{2}$ and $\frac{x-1}{3\lambda} = \frac{y-1}{2} = \frac{z-6}{-5}$ K5(15) are at right angles. Also, find whether the lines are intersecting or not.

Find the value of λ , so that the lines $\frac{x-1}{-3} = \frac{7y-14}{\lambda} = \frac{z-3}{2}$ and $\frac{7x-7}{-3\lambda} = \frac{y-5}{1} = \frac{z-6}{-5}$ K5(15) are at right angles. Also, find whether the lines are intersecting or not.

- A and B are two events such that P(A) = 0.54, P(B) = 0.69 and $P(A \cap B) = 0.35$. Find
 - 1. P(A ∪ B)
 - 2. P(A′ ∩ B′)
 - 3. P(À ∩ B′)
 - 4. P(B ∩ A′)

OR

In a class of 60 students, 30 opted for NCC, 32 opted for NSS and 24 opted for both NCC and NSS. If one of these students is selected at random, find the probability that:

- 1. The student opted for NCC or NSS.
- 2. The student has opted neither NCC nor NSS.
- 3. The student has opted NSS but not NCC.