

**International Institute of Health Management Research (IIHMR), New Delhi.**  
**Plot 3, Sector 18A Dwarka New Delhi 110075**  
**Batch- 2020-22**

Postgraduate Diploma in Management  
(Hospital and Health) (November 2021)

**Term Exam**

**Time – 3 Hrs**

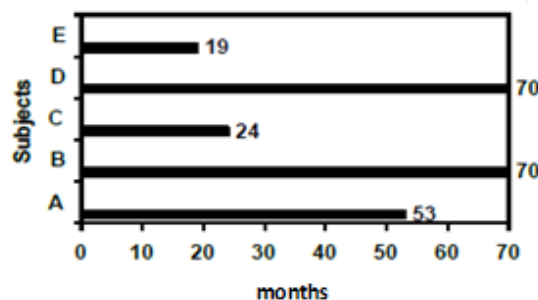
**Total marks: 70**

**HEM 702: Applied Epidemiology**

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**I. Answer the following questions, listing the steps.**

1. A research team was investigating the exposure to industrial chemicals and skin cancer in a group of individuals. They were followed up a period of 6 years. Please see the graph below for 5 of those individuals. If Subject 2 and Subject 4 had developed skin cancer, calculate incidence using all possible denominators ? Which would you choose to present your findings? Why ? (15 marks)



2. In a study, 90 individuals who were hospitalized with severe COVID-19 infection were asked about their smoking status prior to the infection. 140 patients who had mild COVID-19 who did not have to be hospitalized were also asked about their smoking status. If the number of smokers in each group was 50, calculate OR and interpret. (10 marks)
3. A developer launches a diagnostic test for Disease X in a test population of 1000. The test is applied to the entire population in which the prevalence of Disease X is 30%. If the sensitivity of the test is 90% and specificity 80%, what is the probability that an individual with a negative test has Disease X ? Display all the steps in the answer including the 2 x 2 table. (15 marks)

**II. Answer any 3 of the following briefly ( 10 marks each)**

1. International Health Regulations 2005 vs IHR 1969
2. Public Health Emergency of International Concern
3. Confounding factors
4. Attributable risk