Q.1: The chi-square distribution is:
A) Two-sided, with equal tails on both sides of the mean
B) One-sided, with a single tail to the right
C) One-sided, with a single tail to the left
D) Symmetrical, like the normal distribution

Q.2: To determine the critical value for a chi-square test, which two pieces of information do you need?
A) Sample size and mean
B) Standard deviation and p-value
C)Degree of freedom and significance level (alpha)
D) Variance and test statistic

Q.3: When the chi-square test is not valid due to having expected frequencies that are too small, which alternative test should be used?
A) Z-test
B) ANOVA
C) T-test
D) Exact test (e.g., Fisher's Exact Test)

Q.4: A researcher studied the relationship between a new medication and recovery status in 120 patients. The number of patients who recovered using the new medication was 45, while 35 recovered using the standard treatment. The number of patients who did not recover was 15 for the new medication group and 25 for the standard treatment group. Calculate the chi-square statistic with continuity correction and decide if there is an association between between medication type and recovery.

Q.5: To investigate effect of tobacco chewed on oral cancer it's observed that 50 out of 100 patients were tobacco chewers, as compared to 20 tobacco chewers out of 100 control subjects. Is there an association between tobacco chewing and oral Cancer?

Q.6: In a hospital ,15 patients were placed in the ICU.8 were given treatment A and 7 were given treatment B. Among them, only one patient showed a rare symptom, and that participant was in treatment A. Is there an association between the presence of the symptoms and treatment type?

Q.7: The total population of certain city, was 20,000 individuals. There were 1200 DM and of them 200 were MI and died. A study done in 2017, collected all the DM without MI, and 2000 Health (non MI no DM)were followed up for 8 years to find out the develapment of MI. The development of MI was detected in 150 of the DM and 150 of non-DM, within the follow-up period of the study.can we conclude that DM is risk factor of MI?

Q.8: A study was done on 18 of the Asthma patients. Nine patients were treated by bronchodilator inhalers, and the other nine were treated by corticosteroid inhalers . Among the patients using the bronchodilator inhalers, 7 patients showed improvement, while 2 did not. In the patients using corticosteroid inhalers , 4 showed improvement and 5 did not. Is there any relationship between the type of inhaler and the patient's improvement?

Q.9: A researcher wants to test if there is an association between gender (male/female) and preference for a new product (like/dislike). The data collected from 100 participants show:

Males who like the product: 30
Males who dislike the product: 20
Females who like the product: 25
Females who dislike the product: 25

Use a significance level of 0.05 to decide whether to reject or accept the null hypothesis of no association.

Q.10: The association between low birth weight and maternal smoking during pregnancy have been studied by obtaining smoking histories from500 women at the time of the first prenatal visit and then subsequently assessing and assigning the low birth weight at delivery. They found that, 50 low birth weight at deliveryamong the 100 women with smoking while 75 low birth weight at delivery among those with non-smoking histories. IS there an association between smoking and low birth weight at delivery?