# Unit 05: Role of Statistics in Data Science

1. The smaller the p-value, the more likely you are to …… the null hypothesis.

| | | | |
|---|---|---|---|
| Accept | Reject | Can't say | None of the above |

2. If we are comparing just two things, then which test is more applicable?

| | | | |
|---|---|---|---|
| T-test | ANOVA | P-Test | None of the above |

3. Which test compares the size of any discrepancies between the expected results and the actual results?

| | | | |
|---|---|---|---|
| Chi-square test | T-test | ANOVA | None of the above |

4. Asking somebody their favorite color would produce a …… variable.

| | | | |
|---|---|---|---|
| Nominal | Ordinal | Can't say | None of the above |

5. Which of the following leads to false positive conclusion?

| | | | |
|---|---|---|---|
| Type I error | Type II error | Type III error | None of the above |

6. Which of the following leads to false negative conclusion?

| | | | |
|---|---|---|---|
| Type I error | Type II error | Type III error | None of the above |

7. The result says that "You have a fever, but actually you don't have". Then this is

| | | | |
|---|---|---|---|
| Type I error | Type II error | Type III error | None of the above |

8. The probability of making Type I error is

| | | | |
|---|---|---|---|
| Alpha | Beta | Gamma | Lamda |

9. The probability of making Type II error is

| | | | |
|---|---|---|---|
| Alpha | Beta | Gamma | Lamda |

10. The "one-way" or "two-way" ANOVA refers to

| | | | |
|---|---|---|---|
| Number of dependent variables | Number of independent variables | Number of total variables | None of the above |

11. What is nonparametric alternative of ANOVA?

| | | | |
|---|---|---|---|
| PERMANOVA | NONPERMANOVA | ANOVANONPERM | None of the above |

12. "You have a group of individuals randomly split into smaller groups and completing different tasks". You have this situation, in this case what will be applied?

One way ANOVA | Two-way ANOVA | Three-way ANOVA | None of the above

13. Which of the following usually represents the equality between the population parameters?

Null hypothesis | Alternate hypothesis

14. Can alternate hypothesis and null hypothesis be same at one time?

Yes | No

15. Which of the classes of models are used in analysis of variance?

Fixed effects models | Random effects models | Mixed effects models | All of the above