

REV-01
MSB/75/80

2023/12

M.Sc. BOTANY
THIRD SEMESTER
RESEARCH METHODOLOGY
MSB-302

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

(Objective)

Marks: 10

Choose the correct answer from the following:

1×10=10

- During the motion, if the centre of gravity of the molecules changes, the molecule possesses.....
 - Rotational energy
 - Electronic energy
 - Vibrational energy
 - Translational energy
- Tick correct technique while writing Literature Review.
 - Kumar (2023)
 - Kumar 2023
 - R, Kumar, 2023
 - Kumar R (2023)
- Which of the following measure is used to measure the consistency of data?
 - Variance
 - Coefficient of variation
 - Standard error
 - Standard deviation
- What is a microtome?
 - A type of microscope
 - A tool used to prepare thin tissue sections
 - A method for staining tissue samples
 - A thin slice of tissue
- t-test is applied when:
 - Sample size is large and the population standard deviation is given
 - Sample size is large and the population standard deviation is not given
 - Sample size is small and the population standard deviation is not given
 - Sample size is small and the population standard deviation is given
- One to one interview is a type of:
 - Qualitative Research
 - Quantitative Research
 - Descriptive Research
 - Correlational Research
- Samples characteristics are called.....
 - Parameters
 - Statistics
 - Hypothetical values
 - None of the above
- Tissue culture technique was first practised by.....
 - White
 - Haberlandt
 - Halperin
 - Skoog

9.is considered to be the average in research.
- a. Mean
 - b. Median
 - c. Mode
 - d. Median
10. Specific procedures and steps to obtain information is:
- a. Research methodology
 - b. Research method
 - c. Research technique
 - d. Research tools

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(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. Describe the principle of *any one*: 5
 - a) UV Spectroscopy
 - b) SDS-PAGE
2. Describe the art of scientific writing and its presentation and mention about few ethical and legal issues of Research. 8+2=10
3. Explain sampling distribution of a statistic. If a sample of size 25 is drawn from a population of standard deviation 6, find the standard error of the sampling distribution of the sample means. 5+5=10
4. Describe briefly the principle, procedure and application of PCR. 10
5. Two samples of 6 and 5 item respectively, gave the following information: 10

	Sample 1	Sample2
Mean	40	50
Standard deviation	8	10

Is the difference of means significant at 5% level of significance?
[Given, the critical values of t for 9 degrees of freedom, at 5%, is 2.26]

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