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RVE–005

Ph. D. IN VOCATIONAL EDUCATION AND TRAINING (PHDVE)

Term-End Examination

June, 2026

RVE-005 : RESEARCH METHODOLOGY–II

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Attempt any **five** questions.*

(ii) All questions carry equal marks.

(iii) Simple calculator will be allowed to the students.

1. (a) Define 'Hypothesis'. Why do we formulate Hypothesis ? Explain its importance with the help of an example. 10

(b) Describe the steps involved in testing of hypothesis. 10

2. (a) Calculate combined mean marks from the mean marks of the Research Scholars from three different schools given below :

Schools	School-I	School-II	School-III
Mean marks Obtained	50	60	70
Number of Students	100	60	40

Give the probable reason for the obtained result. 10

(b) Calculate the standard deviation of the scores of 6 Research Scholars and interpret the obtained result. 10

X 50 55 65 60 45 75

3. Briefly explain any **two** of the following with suitable examples : 2×10=20

(i) Parametric tests

(ii) ANOVA

(iii) Skewness

4. Eight workers were investigated for civil engineering skills acquired after undergoing training at an international workshop. Assuming Normal distribution, formulate and test the hypothesis to determine the impact of training as per the scores awarded.

(Note : Table value of test statistic at 5% level of significance and 7 df is 1.895) 20

Workers	1	2	3	4	5	6	7	8
Score (Before Training)	4	4	3	5	6	5	6	7
Score (After Training)	6	8	10	5	4	2	6	7

5. Distinguish between the following : 8+6+6

(i) Descriptive and Inferential Statistics

(ii) Dependent and Independent Variables

(iii) Paired and Un-paired t-test

6. For the data given below calculate Karl Pearson's Co-efficient of correlation and interpret the results. 20

X	10	6	9	10	12	13	11	9
Y	9	4	6	9	11	13	8	4

7. (a) List the types of diagrams used for graphical presentation of data. Describe any *two* with the help of suitable examples and pictorial presentation. 10

(b) A study was done on students attending vocational training camp within and outside their village. Test whether the location of the camp was associated with the attendance of the trainees.

(Given : $\chi^2_{(1),\ 0.05} = 3.841$) 10

Location	Students Attending	Not-attending
Inside Village	50	30
Outside Village	30	45

× × × × ×