

**Ph. D. IN PSYCHOLOGY  
(PHDPC)**

**Term-End Examination  
December, 2025**

**RPC-102 : ADVANCED STATISTICS IN  
PSYCHOLOGY**

*Time : 3 Hours*

*Maximum Marks : 100*

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**Note :** (i) *Answer any **five** questions in about  
400 words each.*

(ii) *Answer at least **two** questions from  
each Section.*

(iii) *All questions carry equal marks.*

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**Section—A**

1. Explain stepwise regression. When would a researcher prefer it over standard multiple regression. 20
2. Discuss the assumption of MANOVA. Why is the assumption of homogeneity of covariance matrices (Box's M test) critical in multivariate research ? 20

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3. Explain step by step the procedure followed in SPSS to analyse data related to regression analysis. 20
4. Write short notes on the following in about **200** words each : 10+10
  - (a) Multiple correlation
  - (b) Meta analysis

**Section—B**

5. Explain principal component analysis and discuss, step by step the entire process with example. 20
6. Discuss discriminant analysis with its application in psychological research. 20
7. Explain MANCOVA and discuss its role in controlling covariates in experimental psychological studies. 20
8. Write short notes on the following in about **300** words each : 10+10
  - (a) Multidimensional scaling
  - (b) Cluster analysis

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