

Five Year Integrated M.Sc. Examination 2017
Semester-IV
Course: PHS-2-4-1
[Philosophy & History of Science (Western, Contemporary)]

Time: Three Hours

Full Marks: 60

Questions are of equal value.

Answer *any four* questions.

1. a) What is Lawlike Sentence? How does it differ from a Scientific Law?
b) Discuss after Hempel 'Basic Pattern of Scientific Explanation'? What are the 'conditions of empirical adequacy' of scientific explanation? Does the explanation in non-physical sciences meet the requirement?
 2. How according to Hempel, probability can be assigned to sentences of a scientific theory. Discuss how the predictive power of a theory can be generalized using logical probability.
 3. What is verifiability theory? Discuss in this connection Popper's arguments against verifiability theory.
 4. What is 'falsifiability' according to Popper? Discuss with example, why 'falsifiability' instead of 'verifiability' should be taken as the criterion for demarcation of science.
 5. What are Kuhn's arguments to show that neither verifiability nor falsifiability can be regarded as the hallmark of science? What according to Kuhn decides theory choice in a revolutionary situation? Discuss with examples.
 6. Write notes on *any two* of the following:
 - a) Normal Science
 - b) Systematic Power of a Theory
 - c) Simplicity as criterion of Theory Choice
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