

M.A. PHILOSOPHY (MAPY)

Term-End Examination

June, 2015

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**MPYE-009 : PHILOSOPHY OF SCIENCE AND
COSMOLOGY**

Time : 3 hours

Maximum Marks : 100

- Note :** (i) *Answer all the questions.*
(ii) *All questions carry equal marks.*
(iii) *Answers to question no.1 and 2 should be in about
500 words each.*

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1. Analyse the nature of inductive reasoning and also controversies surrounding its association with scientific method. **20**
- OR**
- Distinguish between history and historicism. Analyse historicist's attack on logical positivism. **20**
2. Define simultaneity. Examine its role in the formulation of relativistic concepts of space and time. **20**
- OR**
- Contrast scientific open minded approach with close minded approach of religion. **20**
3. Answer any two of the following in about 250 words each :
- (a) What do you mean by science criticism ? **10**
How does it project the relation between science and society ?

- (b) Examine attempts of historical realism to synthesize absolutism and relativism of science. 10
- (c) Explain how quantum tunnelling succeeded in correcting the explanation of particle motion by classical mechanics ? 10
- (d) Examine Kantian theory of space and time. 10
4. Answer **any four** of the following in about **150** words each :
- (a) Write a short note on Bayes' theory of probability. 5
- (b) Describe the meaning of curvature of space. 5
- (c) Can induction survive the rejection of probability ? 5
- (d) Contrast Newtonian and Einsteinean conceptions of gravity. 5
- (e) What is the nature of false vacuum ? 5
- (f) Show how vacuum energy distinguishes Bubble Universe from Multiverse. 5
5. Write short notes on **any five** of the following in about **100** words each :
- (a) Instrumentalism 4
- (b) Dark Energy 4
- (c) Verification theory 4
- (d) Limits of classical empiricism 4
- (e) Decoherence 4
- (f) Big Freeze 4
- (g) Steady State Universe 4
- (h) Taoism 4
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