

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

B.Tech-6 Semester (CSE/IT/ECE/CE)

COURSE CODE(CREDITS): 23B1WHS632

MAX. MARKS: 25

COURSE NAME: History and Philosophy of Science and Technology

COURSE INSTRUCTORS: Dr. Ranjith Kallyani

MAX. TIME: 1 Hour 30 Minutes

*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

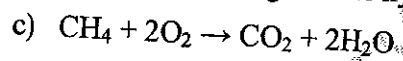
*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

1) "Scientific theories change over time". Justify this statement by explaining the historical changes in the accepted explanation of planetary motion. (Hint: General Relativity, Universal Gravitation and Aristotelian Natural Philosophy) (5 marks) CO1

2) See the propositions given below and classify them as analytic and synthetic. Explain the generic reasoning behind your classification. (5 marks) CO1

a)  $a(b + c) = ab + ac$

b) The sum of the squares of the lengths of the sides of a triangle is equal to the square of the length of its hypotenuse:  $a^2 + b^2 = c^2$ .



d) Paris is the capital of France.

e) All bachelors are unmarried.

f) All swans are white.

g)  $112 - 14 = 98$

h) In combustion, methane combines with oxygen to form carbon dioxide and water

3) "The empirical sciences cannot be absolutely certain". Substantiate this statement.

(5 marks) CO4

4) Explain generalism and particularism. Describe four reasons behind the acceptance of particularism over generalism among scientists, philosophers and historians now a days.

(5 marks) CO5

5) "The new accepted theories cause employed methods to change". Explain this with the example from the history of drug trial testing.

(5 marks) CO5