



K15U 0479

Reg. No. :

Name :

I Semester B.Sc. Degree (CCSS – Supple./Improv.) Examination, Nov. 2015
(Core Course in Physics)
1 B 01 PHY : METHODOLOGY OF SCIENCE
(2012-13 Admn.)

Time : 3 Hours

Max. Weightage : 30

PART – A

(Choose the **correct** answer. **Each** bunch of question carries a weightage of **1**)

1. i) Which of the following are not considered as scientific pursuits ?
a) Ethics b) Art c) Religion d) All of the above
- ii) Who said "Science is a process of human intellect" ?
a) Fitzpatrick b) Schlesinger
c) Newton d) Einstein
- iii) _____ allows scientist to learn about nature under artificial conditions.
- iv) Large Hadron Collider experiment is used to study about
a) Nuclear reaction b) Fusion
c) Big-Bang theory d) Fission
2. i) Rutherford experiment consist of bombarding α particle on _____ foil.
a) copper b) iron c) silver d) gold
- ii) Who said "Everything should be made as simple, but not simpler" ?
a) Fitzpatrick b) Schlesinger
c) Newton d) Einstein
- iii) John Kepler belongs to
a) England b) Poland c) Denmark d) Germany
- iv) Which of the following is not an essential part of a scientific paper ?
a) Introduction b) Result c) Abstract d) Reference

(2×1=2)

P.T.O.



PART – B

Answer **any six** questions, **each** carries a weightage of **1**.

3. Discuss about the modern scientific outlook in India.
4. What is a Paradigm shift in Physical sciences ?
5. List any two properties of X-rays.
6. What is the importance of selecting the topic for research ?
7. How basic science helps to study advanced physics ?
8. Explain the role of models in the study of space science.
9. What are hypothesis ?
10. How graph can be used to explain the result of an experiment ?

(6×1=6)

PART – C

Answer **any nine** questions, **each** carries a weightage of **2**.

11. Give a brief idea of history of science.
12. Distinguish between positivism and falsification.
13. Discuss the contributions made by Newton in physics.
14. Observe a natural phenomena and interpret using scientific methods.
15. Give a short account of science and the industrial revolution.
16. Discuss the significance of corroboration and falsification in a hypothesis.
17. What is H-R-diagram in astronomy ?
18. Explain why revision of scientific laws and theories are necessary in the developments of science.



19. Elaborate the importance of models in scientific methods.
20. List the precautions to be taken before writing science.
21. Discuss the recent development of Philosophy of science.
22. Explain what do you mean by Quantum Surprise.

(9×2=18)

PART – D

Answer **any one** question, **each** carries weightage of **4**.

23. Discuss the role of Bruno and Copernicus in the study of space science.
24. Discuss in detail the various steps to be covered in the methodology of science.

(1×4=4)