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C – 4173

Reg. No. : ....

Name : ....

Second Semester B.Sc. Degree Examination, July 2017
(First Degree Programme Under CBCSS)
CHEMISTRY
Foundation Course
CH 1221 : Methodology and Perspectives of Sciences and General Informatics
(2013 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. Answer in **one** word to maximum of **two** sentences. **Each** question carries **one** mark.

1. Define Science.

2. What is hypothesis ?

3. Give any one process skill of science.

4. What was the main aim of Alchemist ?

5. Who introduced the Law of conservation of mass ?

6. Define data.

7. What does NICNET stand for ?

8. What do you mean by Plagiarism ?

9. What is a citation in writing ?

10. Represent the SMILES notation of methane.

(10×1=10 Marks)

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SECTION – B
Short answer type (Not to exceed one paragraph)

Answer **any 8** questions from the following. **Each** question carries **two** marks.

11. Differentiate between Scientific Law and theory.

12. Explain Accuracy and precision with suitable examples.

13. What are the basic components of the product of science ?

14. What is the importance of chemistry in biology ?

15. What are the contributions of John Dalton in science ?

16. What are softwares ? Give any two examples.

17. Explain basic concepts of IPR.

18. For a given set of data 3,4,6,7,7,8,9,9,10 find median, mode and mean.

19. Explain standard deviation.

20. Explain enquiry vs discovery approach.

21. Name any two file formats and their file extensions used in cheminformatics.

22. What is a chemical database ?   **(8×2=16 Marks)**

SECTION – C
Short Essay (Not to exceed 120 words)

Answer **any 6** questions from the following. **Each** question carries **four** marks.

23. What are the modes of hypothesis generation ?

24. What are different branches of chemistry ?

25. Explain documentation of experiments.

26. Explain copy right and patents.

27. Explain the term scientific observation and its role in science.

28. What are the features of modern personal computers ?

29. Write a note on contribution of Bohr in science.

30. How internet helpful for chemistry research ?

31. What are the various measures of toxicity of chemicals ?   **(6×4=24 Marks)**

SECTION – D
(Long Essay)

Answer **any two** questions from the following. **Each** question carries **fifteen** marks.

32. Explain the different components essential for preparing a research article in chemistry.

33. Write briefly on :
    i) Role of chemistry in everyday life.
    ii) Highlights the contributions of (A) Dmitri Mendeleev and (B) Michael Faraday in science.

34. i) How data, information and knowledge differ ? Explain.
    ii) What are educational softwares ? Write on any three such softwares.

35. Explain primary, secondary and digital sources.   **(2×15=30 Marks)**

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