MAR IVANIOS COLLEGE (AUTONOMOUS) THIRUVANANTHAPURAM

Reg. No. :..................... Name :.......................

Second Semester B.Sc. Degree Examination, June 2015

First Degree Programme under CBCSS

Foundation Course – II: (for Chemistry)

AUCH221: Methodology and Perspectives of Sciences and General Informatics

Time: **3** Hours Max. Marks: **80**

SECTION – A

*Answer **ALL** the following in a word or one or two sentences.*

1. Define a scientific law.
2. What is a postulate ?
3. Define a Candela.
4. Give examples of primary data.
5. What are the basic approaches towards research ?
6. What is Green Chemistry ?
7. Name the methods of teaching.
8. Name the different kinds of memory in computer.
9. How many bytes are in a Gigabyte ?
10. Write the SLN of Methane.

(10 x 1 = 10 Marks)

SECTION – B

*Answer any **EIGHT** questions, not exceeding a paragraph.*

11. What are the different forms of hypothesis ?
12. What are the differences between primary and secondary data ?
13. What is Nanotechnology ? Mention any two applications.
14. Write any two major contributions of Michael Faraday to Chemistry.

P.T.O.

15. What is Inductive method in research ?
16. What is Biochemistry ?
17. What are the different types of softwares ?
18. What is Rutherford's model of atom ?
19. Write down the SMILES of Acetic acid , Ethyl alcohol, Benzene and Furan.
20. What do you mean by PDB ?
21. Comment on LAN and WAN.
22. What is ALU ?

(8 x 2 = 16 Marks)

SECTION – C

*Short essay type : Answer any **SIX** questions.*

23. Distinguish between accuracy and precision.
24. What are research methods and methodology ?
25. Explain the common operating systems.
26. What is IPR ?
27. What are the basic rules of ROSDAL ?
28. What are Chemical File Formats ? Give Examples.
29. What are the important features of spreadsheet ?
30. Explain Bohr's Model of atom.
31. What are the applications of Cheminformatics ?

(6 x 4 = 24 Marks)

SECTION – D

*Long essay type : Answer any **TWO** questions.*

32. What are the steps involved in the design and documentation of experiments ?
33. Discuss the methods of knowledge transfer process.
    i). Lecture method   ii). Heuristic method
    iii). Assignment method   iv). Project method
34. i). What are the functions of INFLIBNET ?
    ii). What are the features of computational chemistry ?
35. Discuss the main structure drawing softwares in chemistry.

(2 x 15 = 30 Marks)

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