V—225—2017

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2017

(CBCS Pattern)

ANALYTICAL CHEMISTRY

Paper XIII

(Applied Analytical Chemistry—I)

(Monday, 27-11-2017)   **Time : 10.00 a.m. to 12.00 noon**

Time—Two Hours   *Maximum Marks—40*

N.B. :— (i)   Attempt *All* questions.

(ii)   *All* questions carry equal marks.

(iii)   Figures to the rights indicate full marks.

(iv)   Rewrite the MCQ one time only on page no three.

1.   Answer any *four* of the following :   4×2=8

(a)   Explain water holding capacity in soil.

(b)   How will you determine moisture in honey ?

(c)   Define industrial effluents with *two* examples.

(d)   How is determined protein in wheat flour ?

(e)   Explain sampling of air.

(f)   How will you determine particulate matter in air ?

2.   Answer any *two* of the following :   2×4=8

(a)   Explain the analysis of organic matter in soil.

(b)   Describe the analysis of '2n' in industrial effluents with its theoretical principle.

(c)   Explain analysis of carbonmonoxide in air.

P.T.O.

3. Answer any *two* of the following : 2×4=8

    (*a*)   Discuss the pH and starch analysis of wheat flour.

    (*b*)   Explain analysis of Glucose and free acid pH in honey sample.

    (*c*)   Describe analysis of fat and protein in milk sample.

4. Answer any *one* of the following : 1×8=8

    (*a*)   What are Hair dyes ? Give general composition of hair dyes. How will you determine lead and sulpher content in Hair Dyes ?

    (*b*)   Define Fish. Give general constituents of fish. How are total fat, ash and total phosphorous contents in fish determined ?

5. (A) Choose the *correct* choice and rewrite the complete sentence with underline the *correct* answer : 5×1=5

    (*i*)   The pH of normal fresh milk is usually between ....

        (*a*)   3.4 and 3.6

        (*b*)   7.5 and 7.6

        (*c*)   9.2 and 9.3

        (*d*)   6.4 and 6.6

    (*ii*)   The main constituents of fish are ....

        (*a*) H_2O, carbohydrate and fat

        (*b*) H_2O, protein and fat

        (*c*)   Vitamin A and D

        (*d*)   All of the above

    (*iii*)   Which of the following air pollutants is determined by Sattzman method ?

        (*a*)   CO

        (*b*) CO_2

        (*c*) NO_2

        (*d*)   All of the above

(*iv*) Surface water includes ....

    (*a*) ca and mg salts of carbonates

    (*b*) ca and mg salts and chlorides

    (*c*) both (*a*) and (*b*)

    (*d*) None of the above

(*v*) Which of the following is corrective cosmetics ?

    (*a*) Face powder

    (*b*) Hair propin

    (*c*) Creams

    (*d*) None of the above

(B) Write short notes on Dissolve oxygen in water. 3

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