Total No. of Questions : 4] **SEAT No. :**

P1371 **[Total No. of Pages : 3**

[5123] -61
M.Sc -II (Semester - IV)
CH -481 ANALYTICAL CHEMISTRY
Bioanalytical and Forensic Science
(2008 Pattern)

Time : 3 Hours] ***[Maximum Marks : 80***

Instructions to the candidates:

1) ***All questions are compulsory and carry equal marks.***
2) ***Answer to the two sections should be written in seperate answer books.***
3) ***Use of logarithmic table/non-programmable calculator is allowed.***

SECTION -I

Q1) Attempt any four of the following. **[20]**

a) Define the terms:

i) Poppy straw

ii) Opium derivatives

iii) Psychotropic substances

iv) Charas

b) Discuss the principle for isolation and determination of amphetamine and metamphetamine from urine sample.

c) Write a note on. "Offences and penalties in Psychotropic substances Act".

d) Out-line the procedure for wearhousing of alcoholic preparations.

e) In the sample containg caffine in reference standard is 30.12 μg/ml. peak height of caffine sample is 16 min and peak height of reference standard is 17min. calculate content of caffine in given sample.

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Q2) Attempt any four of the following. **[20]**

a) Describe the method for estimation of vitamin A.

b) State and explain the principle for esitimation of phosphatase. Give the procedure for the estimation of same.

c) Write a note on "Preparation of laboratory food samples."

d) Define sapvalue of oil. discuss the method used for the determination of the saponification value of oil.

e) A 35.65 gram food sample containing sulphite as preservative was subjected to Tanner method and titre value obtained with 0.01N NaoH was 9.0ml. calculate the ammout of so_2 in the sample.

SECTION -II

Q3) Attempt any four of the following. **[20]**

a) What is UTH? Give suitable method for lactic acid determination from milk.

b) Explain a method for estimation of tannin from tea sample using lowenthal permanganate oxidation procedure.

c) Define vitamines. Explain Wald's visual cycle and deficiency symptoms of Naicin.

d) Give the method for determination of adultration of honey.

e) A sample of ascorbic acid ($C_6H_8o_6$) weighting 1.4 gm was dissolved in water and diluted to 100ml. An aliqot of 10ml of sample solution was titrated against 0.1N Iodine solution. It required 9.4 ml of Iodine calculate the percentage of ascorbic acid in sample.

Q4) Attempt any four of the following. **[20]**

a) Explain the method for estimation of caffire.

b) What are carbohydrates? Give a method for it's estimation.

c) Write a short note on preparation of laboratory food samples.

d) Define acid value. Discuss the method used for the determination of acid value of oil.

e) A 4.2829 tea sample was analysed for tannin context. After treatment when tea sample solution titrated with 0.2 N Km_n0_4 gave titre value 10.5ml. Calculate the percentage of tannin in given sample .

[Given: Mol-ut, of tannin = 208]

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