



SE-8307

B. E. III (Sem. V) (TP) Examination

May / June - 2011

Analytical Textile chemistry - I

(New Course)

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशावेक निशानीवाणी विगतो उतरवडी पर अवश्य लपवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
B. E. 3 (Sem. 5) (TP)

Name of the Subject :
Analytical Textile Chemistry - 1 (New)

Subject Code No. : 8 3 0 7 Section No. (1, 2,.....): Nil

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks.

- 1 (a) Answer the following objective questions : 10
- Ground water is less harder than surface water, true or false ?
 - Colourimetric determinations are carried out at λ_{max} , true or false ?
 - Colour of water is measured in ppm, true or false?
 - What is function of sequestering agents ?
 - Softened waters generally have alkaline pH, true of false ?
 - BOD is always greater than COD, true of false ?
 - Silver nitrate is used for _____ content of water.
 - Boiling removes _____ hardness of water.
 - The unit NTU is used for measuring _____ of water.
 - _____ reagent used for iron content of water.
- (b) What is "hardness " in water ? Discuss various 10
types of hardness in water. Describe the method for measuring total hardness in water.

2 Define calorific value, with units. With the neat sketch, describe the method for determination of calorific value of coal by bomb calorimeter. 15

OR

2 Define the term "COD" and "BOD". Give the methods for measuring COD and BOD of an effluent. 15

3 Write short notes : (any three) 15

- (a) Silica content in water and its effect.
- (b) Acidity and alkalinity in water.
- (c) Evaluation of sodium carbonate and its textile applications.
- (d) Evaluation of HCL and its textile applications.

4 (a) Answer the following objective questions : 10

- (i) Ash content indicates _____ .
- (ii) Iodine value indicates _____ present in oil.
- (iii) Nitrogen content is measured by _____ method.
- (iv) What is meant by bomb washings ?
- (v) Define acid number.
- (vi) Differentiate flash point and fire point.
- (vii) Spectrophotometry follows _____ and _____ laws.
- (viii) Which technique is used for isolation of pure compound.
- (ix) Penetration test is used for _____ .
- (x) The full form of GLC is _____ .

(b) Describe in detail the ultimate analysis of coal.

5 Discuss conductometric and potentiometric titrations, with their applications in textile field. 15

OR

5 Give the test methods for determination of consistency value, saponification number, aniline point, pour point, flash point and fire point for an oil. 15

6 Write short notes :

- (a) Thin layer chromatography.
- (b) Determination of % purity of H_2O_2 and textile applications of H_2O_2 .
- (c) pH meter.
- (d) Brooke field viscometer.