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B—18—2019

FACULTY OF SCIENCE

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

MARCH/APRIL, 2019

(CBCS Pattern)

CHEMISTRY

Paper-XIV—A_2 (Elective)

(Organic and Inorganic Chemistry)

(Saturday, 16-3-2019) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—40

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

(*ii*) Figures to the right indicate full marks.

Section A

(Organic Chemistry)

1. Answer any *five* of the following : 5×2=10

   (*a*) Explain the synthesis and uses of Indole-3-acetic acid.

   (*b*) What are agrochemicals ?

   (*c*) Explain in brief rectified spirit.

   (*d*) What is white sugar ?

   (*e*) Give any *two* byproducts of sugar industry. Explain in brief.

   (*f*) Give the objects of sizing.

   (*g*) What is bleaching.

2. Answer any *two* of the following : 2×5=10

   (*a*) Give advantages of potassic fertilizers.

   (*b*) What are fibres ? How are they classified ?

   (*c*) Give Friedel-Craft alkylation and acylation reaction using different zeolites.

3. Answer any *one* of the following : 7

   (*a*) Describe the manufacturing of ethyl alcohol from molasses.

   (*b*) Give any *seven* principles of green chemistry.

P.T.O.

Section B

(Inorganic Chemistry)

4. Solve any *three* of the following : 3×3=9

   (*a*) What is degree of polymerisation ? Explain with suitable example.

   (*b*) Classify the polymers on the basis of :

      (*i*) Origin

      (*ii*) Composition.

   (*c*) What are fluorocarbons ? Give applications of fluorocarbon.

   (*d*) What are carbon nanotubes ? Discuss the main types of carbon nanotubes.

   (*e*) Discuss properties and applications of metallic nanorods.

5. Solve any *two* of the following : 2×2=4

   (*a*) Explain the structure of silicones.

   (*b*) Give general characteristics of inorganic polymers.

   (*c*) Give the method of preparation of phosphonitritic compound.

   (*d*) What are the *two* ways of nanofabrication ?