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Y—18—2019

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

CHEMISTRY

Paper-XIV-A2 (Elective)

(Organic and Inorganic Chemistry)

(Thursday, 14-11-2019) **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 in brief about absolute alcohol.

(*b*) Give any two by-products of alcohol industry. Explain them in brief.

(*c*) Explain the preparation of fermentation medium.

(*d*) Explain in brief about synthetic adhesives.

(*e*) Give general properties of starch.

(*f*) Explain reaction and dispersed dyes.

(*g*) Give the synthesis and uses of monochrotophas.

(*h*) Give the synthesis and uses of Indole-3-acetic acid.

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

(*a*) Give objects of sizing, sizing ingredients and their function.

(*b*) Give advantages of phosphatic fertilizers.

(*c*) Using zeolite how will you convert :

(*i*) Benzene to phenol

(*ii*) Benzene to benzoquinone

(*iii*) Benzoquinone to hydroquinone.

P.T.O.

3. Answer any *one* of the following : 1×7=7

(*a*) Explain in detail by-products of sugar industry.

(*b*) What are fertilizers ? Explain the advantages of Nitrogenous fertilizers.

Section B

(Inorganic Chemistry)

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

(*a*) Explain the different types of copolymers.

(*b*) Describe the polymers with Ti-O backbone.

(*c*) Give any *three* preparations of fluorocarbon.

(*d*) What is nanocluster ? How can metal nanoclusters be produced ?

(*e*) Discuss properties and applications of nanowires.

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

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

(*b*) Write a short note on silicone resins.

(*c*) Give one preparation of polyphosphonitrilic chlorides and describe the properties of phosphonitrilic chloride.

(*d*) Discuss the properties of single-walled carbon nanotubes.