

This question paper contains 4 printed pages!

PA-12-2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2024

(CBCS/New Pattern)

CHEMISTRY

Paper-VIII

(Organic and Inorganic Chemistry)

Monday, 8-4-2024

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—40

N.B. :— Attempt all questions.

1. Solve any three of the following : 3×5=15

- (a) What are transition elements? Explain anomalous electronic configuration of copper and chromium.
- (b) What is lanthanide contraction? Explain causes of lanthanides contraction.
- (c) Explain magnetic properties of lanthanide elements.
- (d) Explain the following properties of transition elements :
 - (i) Colour
 - (ii) Magnetic properties.
- (e) Give the physical and chemical properties of uranium.

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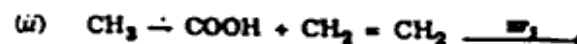
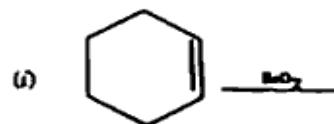
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15

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2. Solve any three of the following :

- (a) What is geometrical isomerism? Give E and Z configuration of the following :
 - (i) 2-pentene
 - (ii) 1-chloro-2-bromo-2-iodoethene.
- (b) Explain osazone formation of glucose with mechanism.
- (c) How will you prepare urea by Wohler's method? What is the action of the following on urea :
 - (i) Heat
 - (ii) SOCl_2
 - (iii) Acetyl chloride
 - (iv) Nitrous acid.
- (d) Explain the following with suitable example :
 - (i) Enantiomers
 - (ii) Diastereoisomer.
- (e) Predict the product :



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