

## **GOVERNMENT DEGREE COLLEGE: GODAVARIKHANI**

### **CHEMISTRY INTERNAL ASSESSMENT TEST FOR SEMESTER –I :2022-23**

Answer the following Questions.Each Question carries 5 marks . [4×5=20 Marks]

- 1) Explain Fajan's rules with examples.**
- 2) Discuss about LCAO method?**
- 3) Draw the molecular energy diagram (MOED) of N<sub>2</sub> molecules. Calculate its bond order.**
- 4) Draw the molecular energy diagram (MOED) of O<sub>2</sub> molecules. Calculate its bond order .**

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### **CHEMISTRY 2nd INTERNAL ASSESSMENT TEST FOR SEMESTER -I:2022-23**

Answer the following Questions. Each Question carries 5 marks . [4×5=20 Marks]

- 1) What is the Inductive Effect? .**
- 2) Explain the stability of carbocation?**
- 3) Define Mesomeric Effect.**
- 4) Explain the mechanism of chlorination of methane?**

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### **CHEMISTRY INTERNAL ASSESSMENT TEST-1 FOR SEMESTER –II :2022-23**

Answer the following Questions. Each Question carries 5 marks . [4X5=20 Marks]

- 1) explain the classification of oxides based on their nature with suitable examples.**
- 2) Explain the classification of oxides based on oxygen content?**
- 3) Define interhalogen compounds. Describe their classification.**
- 4) explain the structure of AX and AX<sub>3</sub> type compounds**
- 5) What are Pseudohalogens? Explain with examples.**

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### **CHEMISTRY INTERNAL ASSESSMENT TEST-2 FOR SEMESTER –II :2022-23**

Answer the following Questions. Each Question carries 5 marks . [4X5=20 Marks]

- 1) Write about the Variable oxidation states, ability to form complexes, magnetic properties.**
- 2) Describe the stereochemistry of  $S_N1$  reactions with suitable examples**
- 3) Describe the stereochemistry of  $S_N2$  reactions with suitable examples**
- 4) Explain asymmetric and dissymmetric molecules with examples**
- 5) Explain R and S configuration with examples.**

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**CHEMISTRY INTERNAL ASSESSMENT TEST-1 FOR SEMESTER –III :2022-23**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) Explain the cause and consequences of **Lanthanide contraction**.
- 2) What are **significant figures**? Write the rules for determining the significant figures.
- 3) Explain the terms **accuracy and precision** with examples?
- 4) Write a short note on types of **errors** ?What are determinate and indeterminate errors ?Explain with examples.

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**CHEMISTRY INTERNAL ASSESSMENT TEST-2 FOR SEMESTER –III :2022-23**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) Write the differences between Lanthanides and Actinides.
- 2) What are inner transition elements? Explain their oxidation states, magnetic properties
- 3) State and write various forms of 1st law of thermodynamics
- 4) What is heat capacity? Derive  $C_p - C_v = R$

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**CHEMISTRY INTERNAL ASSESSMENT TEST-1 FOR SEMESTER –IV :2022-23**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) Write the postulates of Crystal Field Theory.
- 2) Explain the d-orbital splitting in Octahedral and Tetrahedral complexes using crystal field theory.?
- 3) Explain the electronic absorption spectra of  $[\text{Ti}(\text{H}_2\text{O})_6]^{+3}$
- 4) Explain the Pearsons classification of HSAB theory.
- 5) Explain the different magnetic properties of complexes with examples?

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**CHEMISTRY INTERNAL ASSESSMENT TEST-2 FOR SEMESTER –IV :2022-23**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) Explain the biological significance of  $\text{Na}^+$  ,  $\text{K}^+$  and  $\text{Cl}^-$  ions.
- 2) Explain open chain structure of Glucose
- 3) Write the preparation of Pyrrole, Furane and thiophene using Paul-Knorr Synthesis?
- 4) Define Rate of reaction, order of reaction, rate constant and molecularity of a reaction.
- 5) Define Adsorption. Explain the Freundlich and Langmuir adsorption isotherms. Give its applications.



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**CHEMISTRY INTERNAL ASSESSMENT TEST-1 FOR SEMESTER –V :2023-24**

Write answers to four questions. Each question carries 5 marks. (4×5 = 20 Marks)

- 1) Explain about the ion exchange chromatography with suitable example.
- 2) Define chromatography. Explain classification of chromatographic methods
- 3) Write a short note on Finger print region of IR spectra
- 4) Explain different types of electronic transitions in UV spectroscopy
- 5) Define & give ex's a). Chromophore b). Auxochrome

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**CHEMISTRY INTERNAL ASSESSMENT TEST-2 FOR SEMESTER –V :2023-24**

Write answers to four questions. Each question carries 5 marks. (4×5 = 20 Marks)

- 1) What is the Solvent Extraction method? Write about different types of solvent extraction methods?
- 2) What is TLC. Write about the advantages of thin layer chromatography.
- 3) Write a detailed description of Gas-Liquid chromatography.
- 4) Write the Principle, Draw block diagram of HPLC and explain instrumentation

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**CHEMISTRY INTERNAL ASSESSMENT TEST-1 FOR SEMESTER –VI :2022-23**

**MEDICINAL CHEMISTRY**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) What is Disease? write about heredity diseases.
  
- 2) Define the following terms
  - a. Pharmacology
  - b. Pharmacophore
  - c. Pharmacodynamics
  - d. Therapeutic index(TI).
  
- 3) Write about the nomenclature of drugs? Explain the chemical, generic names and trade of drugs. Give Examples?
  
- 4) Write the classification of drugs based on structure and therapeutic activity.
  
- 5) Explain briefly about ADME of drugs

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**CHEMISTRY INTERNAL ASSESSMENT TEST-2 FOR SEMESTER –VI :2022-23**

**MEDICINAL CHEMISTRY**

Answer any **FOUR** of the following Questions. Each Question carries 5 marks . [4 \*5=20 Marks]

- 1) Write the mechanism of enzyme catalyzed reactions? Explain the factors affecting the Enzyme catalysis. Describe characteristics of Enzyme catalysis
- 2) Write a note on Enzyme inhibitors? Write about the types of Inhibitors? Explain about reversible and irreversible enzyme inhibitions
- 3) Write the synthesis of Paracetamol and Aspirin? Write the Aspirin drug action.
- 4) Discuss about Anesthetic drugs with suitable examples.
- 5) Explain the synthesis and mechanism of drug action in Salbutamol