1. Atomic Structure

1. Particle/Wave
2. Heisenberg uncertainty
3. Significance of negative electronic energy
4. Bond order
5. Helium is not formed
6. Hybridisation
7. Orbital

2. Periodic Classification

1. Electron affinity
2. I.E of Be and B
3. I.E of Beryllium is greater than lithium
4. E.A of fluorine is less than chlorine
5. I.E of Neon is higher than fluorine
6. Pauling and Mulliken scale.
7. E.A of Be and N are Zero

3. P-block

1. Inert pair effect
2. Potash alum
3. Plumbo solvency
4. H₃PO₃ is diprotic
5. P₂O₅ is a powerful dehydrating agent
6. H₃PO₄ is a tribasic
7. H₃PO₃ and H₃PO₄ dot formula (and) PCl₃ and PCl₅ (and) H₄P₂O₇
8. H₃PO₄ react with AgNO₃
9. Interhalogen compound
10. HF is not stored in wax bottle
11. Action of heat
12. Uses of neon

4. D-block

1. D-block element exhibit variable oxidation states
2. Why do transistion element form complexes
3. Chrome platting
4. Spitting of silver
5. Chromyl chloride
6. actions of heat on copper sulphate crystals
7. $K_2Cr_2O_7$
8. action of aquaregia on gold
9. why do transition elements form alloys
10. Percentage of nichrome

5. Nuclear Chemistry
1. Radioactivity
2. uses of radiocarbon dating
3. Chemical / Nuclear reactions.
4. Q Value
5. Hydrogen bomb

6. Solid State
1. Bragg’s law
2. Molecular crystals
3. Frenkel defects
4. Superconductors
5. uses of superconductors
6. glasses formed
7. Vitreous state
8. Sketch the S.C, BCC and FCC

7. Thermodynamics
1. Kelvin planck statement
2. Clausius statement
3. Entropy

8. Chemical Equilibrium
1. Quotient (Q)
2. Le-Chartelier’s Principle.

9. Chemical Kinetics
1. Order of reaction
2. Half life period
3. Rate constant
4. Arrhenius equation
5. First order reaction
6. Pseudo first order reaction
7. Threshold energy
8. Activation energy
9. Simple / complex reactions
10. Opposing reaction
11. Consecutive reactions.
12. Parallel reaction

10. Surface chemistry
1. Physical / chemical adsorption
2. General characteristic of a catalyst
3. Homogenous and heterogeneous catalyst
4. Active centers
5. Promoters
6. Colloidal system of gas in gas does not exist
7. Tyndall effect
8. Peptisatinon
9. Brownian movement
10. Cataphoresis (or) electrophoresis
11. Catalyst

11. Electro chemistry(I)
1. Faraday’s first law
2. Faraday’s second law
3. Common ion effect
4. Buffer solution
5. Kohlrausch’s law.
6. Ostwald dilution law

12. Isomerism
1. Enantiomers and diasteromers
2. Racemic mixture
3. Racemic / meso form
4. Meso isomer / meso tartaric acid
5. Structure of ‘Z’ and ‘E’
6. Structure of S-cis and S-trans

13. Hydroxy derivatives
1. Breath analysis test
2. Alcohol cannot be used as solvent for gignard reagent
3. Methanol is miscible with water
4. Glycol more viscous than ethanol
5. Terylene
6. glycol → dioxan
7. dow process
8. dehydrtion reaction of glycerol
9. saponification reaction
10. coupling reaction
11. three test for phenol
12. Phthalein fusion reaction

14. Carbonyl compounds
1. urotropine
2. popott rule
3. perkin’s reaction
4. friedel craft acetylation reaction
5. benzophenon prepared by freidel craft reaction
6. three test for aldehydes.

15. Carboylic acids
1. HVZ reaction
2. formic acid from other acid
3. tests of carboxylic acids
4. lactyl chloride
5. uses of oxalic acid
6. trans esterification
7. uses of formic acid
8. uses of salicylic acid

16. Nitrogen compound
1. gabriel phthalimide synthesis
2. mustrad oil reaction
3. diazotisation reaction
4. hoffman reaction

17. Chemistry in action
1. anesthethetics
2. antipyretics
3. what way antacids are important
4. food preservative
5. antiseptic
6. antioxidants
7. characteristic of dye
8. chromophores
9. Buna-N and S
10. nylon-66

Total = 129

Above questions you may attend minimum 12 and maximum 15 3-marks.

**************ALL THE BEST**************