

MODEL QUESTION PAPER

Master of Science (M.Sc.) – Skill Assessment

(Branch-Specific | For Reference)

This Model Question Paper is provided to help candidates understand the assessment structure, format, and branches covered under the HRVIEW Master of Science (M.Sc.) Skill Assessment.

It is intended only for reference and does not represent the actual examination paper.

Assessment Snapshot

- **Assessment Type:** Model Question Paper
- **Assessment Mode:** Online
- **Question Format:** Objective Type (MCQs)
- **Total Number of Questions:** 20
- **Pass Criteria:** 75%

Degree	Specialization
Master of Arts (M.A.)	Political Science
Master of Science (M.Sc.)	Biotechnology
Master of Science (M.Sc.)	Microbiology
Master of Science (M.Sc.)	Computer Science
Master of Science (M.Sc.)	Mathematics
Master of Science (M.Sc.)	Biology
Master of Science (M.Sc.)	Chemistry
Master of Science (M.Sc.)	Physics

Note for Candidates

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MODEL QUESTION PAPER

M.A. Political Science

MCQs | 20 Questions

1. Political Science at the postgraduate level mainly focuses on:

- A. Basic political facts
- B. Advanced political theory and analysis
- C. Only current affairs
- D. Administrative procedures

 **Answer: B**

2. Who defined Political Science as the study of “who gets what, when, and how”?

- A. Aristotle
- B. Harold D. Lasswell
- C. Plato
- D. Max Weber

 **Answer: B**

3. The concept of sovereignty was systematically explained by:

- A. Rousseau
- B. Jean Bodin
- C. Hobbes
- D. Locke

 **Answer: B**

4. Which thinker supported the theory of social contract?

- A. Machiavelli
- B. Hobbes
- C. Marx
- D. Aristotle

 **Answer: B**

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5. Which book was written by Thomas Hobbes?

- A. Politics
- B. The Republic
- C. Leviathan
- D. Two Treatises of Government

 **Answer: C**

6. Which theory explains politics through class struggle?

- A. Liberal theory
- B. Systems theory
- C. Marxist theory
- D. Elite theory

 **Answer: C**

7. Behaviouralism in Political Science emphasizes:

- A. Legal institutions
- B. Empirical and scientific methods
- C. Moral philosophy
- D. Historical analysis only

 **Answer: B**

8. Which thinker is associated with the concept of “General Will”?

- A. Locke
- B. Rousseau
- C. Hobbes
- D. Bentham

 **Answer: B**

9. The doctrine of separation of powers was proposed by:

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- A. Locke
- B. Montesquieu
- C. Rousseau
- D. Kant

 **Answer:** B

10. Federalism refers to:

- A. Centralized power system
- B. Division of powers between levels of government
- C. Military governance
- D. Parliamentary supremacy

 **Answer:** B

11. Which political ideology supports individual liberty and free market?

- A. Socialism
- B. Communism
- C. Liberalism
- D. Fascism

 **Answer:** C

12. The concept of welfare state is closely related to:

- A. Laissez-faire
- B. Minimal state
- C. Social democracy
- D. Authoritarianism

 **Answer:** C

13. Which body conducts elections in India?

- A. Parliament
- B. Supreme Court
- C. Election Commission of India
- D. Union Cabinet

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 **Answer: C**

14. Judicial review in India is exercised by:

- A. Parliament only
- B. Executive
- C. Judiciary
- D. President

 **Answer: C**

15. Which amendment lowered the voting age in India to 18 years?

- A. 42nd Amendment
- B. 44th Amendment
- C. 61st Amendment
- D. 73rd Amendment

 **Answer: C**

16. Which UN organ is responsible for maintaining international peace?

- A. General Assembly
- B. Security Council
- C. Economic and Social Council
- D. International Court of Justice

 **Answer: B**

17. Realism in international relations emphasizes:

- A. Morality
- B. Power and national interest
- C. International law
- D. Cooperation only

 **Answer: B**

18. Which treaty led to the formation of the European Union?

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- A. Treaty of Rome
- B. Treaty of Versailles
- C. Treaty of Paris
- D. Treaty of Lisbon

 **Answer:** A

19. Public opinion plays an important role in:

- A. Authoritarian regimes
- B. Democratic systems
- C. Military rule
- D. Monarchy only

 **Answer:** B

20. M.A. Political Science mainly aims to:

- A. Prepare civil servants only
- B. Develop advanced analytical and research skills in politics
- C. Teach law
- D. Focus only on elections

 **Answer:** B

MODEL QUESTION PAPER

M.Sc. Biotechnology

MCQs | 20 Questions

1. Biotechnology at the postgraduate level mainly focuses on:

- A. Basic biology concepts
- B. Application of molecular biology in research and industry
- C. Only agriculture
- D. Medical practice

 **Answer:** B

2. Recombinant DNA technology involves:

- A. Protein sequencing
- B. Joining DNA from different sources
- C. RNA transcription only
- D. Cell division

 **Answer:** B

3. Which enzyme cuts DNA at specific sites?

- A. DNA ligase
- B. Restriction endonuclease
- C. RNA polymerase
- D. Reverse transcriptase

 **Answer:** B

4. PCR is mainly used for:

- A. Protein synthesis
- B. DNA amplification
- C. RNA degradation
- D. Cell culture

 **Answer:** B

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5. Which vector is commonly used in cloning?

- A. Chromosome
- B. Plasmid
- C. Ribosome
- D. Mitochondria

 **Answer:** B

6. Which technique separates DNA fragments by size?

- A. Chromatography
- B. Centrifugation
- C. Gel electrophoresis
- D. Spectrophotometry

 **Answer:** C

7. Which organism is widely used as a host in genetic engineering?

- A. Yeast only
- B. Escherichia coli
- C. Virus
- D. Algae

 **Answer:** B

8. Southern blotting is used to detect:

- A. RNA
- B. Protein
- C. DNA
- D. Lipids

 **Answer:** C

9. Northern blotting is used for:

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- A. DNA analysis
- B. RNA analysis
- C. Protein analysis
- D. Enzyme assay

 **Answer:** B

10. Western blotting detects:

- A. DNA
- B. RNA
- C. Protein
- D. Carbohydrates

 **Answer:** C

11. Which technique is used for large-scale production of biological products?

- A. PCR
- B. Bioreactor technology
- C. Gel electrophoresis
- D. ELISA

 **Answer:** B

12. CRISPR-Cas9 is mainly used for:

- A. DNA sequencing
- B. Gene editing
- C. Protein purification
- D. Cell staining

 **Answer:** B

13. Which field studies the complete set of genes?

- A. Proteomics
- B. Metabolomics
- C. Genomics
- D. Transcriptomics

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 **Answer: C**

14. Which enzyme synthesizes DNA from RNA template?

- A. DNA polymerase
- B. RNA polymerase
- C. Reverse transcriptase
- D. Ligase

 **Answer: C**

15. Which medium is used for animal cell culture?

- A. LB medium
- B. Nutrient agar
- C. DMEM
- D. Potato dextrose agar

 **Answer: C**

16. Monoclonal antibodies are produced by:

- A. Hybridoma technology
- B. Recombinant PCR
- C. Fermentation
- D. Gel filtration

 **Answer: A**

17. Which biotechnology branch is related to medical applications?

- A. Green biotechnology
- B. White biotechnology
- C. Red biotechnology
- D. Blue biotechnology

 **Answer: C**

18. Which technique is used to quantify proteins?

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- A. PCR
- B. ELISA
- C. Blotting
- D. Electrophoresis

 **Answer:** B

19. Bioinformatics mainly deals with:

- A. Wet lab experiments
- B. Computational analysis of biological data
- C. Drug formulation
- D. Microbial culture

 **Answer:** B

20. M.Sc. Biotechnology graduates mainly work in:

- A. Software companies only
- B. Research, pharmaceuticals, and biotech industries
- C. Banking sector
- D. Civil services only

 **Answer:** B

MODEL QUESTION PAPER

M.Sc. Microbiology

MCQs | 20 Questions

1. Microbiology is the study of:

- A. Plants only
- B. Animals only
- C. Microorganisms
- D. Human anatomy

 **Answer: C**

2. Which of the following is a prokaryote?

- A. Algae
- B. Fungi
- C. Bacteria
- D. Protozoa

 **Answer: C**

3. Who is known as the father of microbiology?

- A. Louis Pasteur
- B. Robert Koch
- C. Antonie van Leeuwenhoek
- D. Alexander Fleming

 **Answer: C**

4. The Gram staining technique differentiates bacteria based on:

- A. Shape
- B. Motility
- C. Cell wall structure
- D. Metabolism

 **Answer: C**

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5. Which medium is used to culture bacteria?

- A. Blood agar
- B. Potato dextrose agar
- C. Sabouraud agar
- D. Czapek Dox agar

 **Answer:** A

6. Which microorganism lacks a cell wall?

- A. Mycoplasma
- B. Streptococcus
- C. Bacillus
- D. Clostridium

 **Answer:** A

7. Sterilization is defined as:

- A. Removal of dirt
- B. Destruction of all forms of life
- C. Removal of pathogens only
- D. Killing spores only

 **Answer:** B

8. Which method is used for sterilization of heat-sensitive materials?

- A. Autoclaving
- B. Dry heat
- C. Filtration
- D. Incineration

 **Answer:** C

9. Which structure helps bacteria in motility?**Note for Candidates**

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- A. Pili
- B. Capsule
- C. Flagella
- D. Endospore

 **Answer:** C

10. Virus replication occurs inside:

- A. Nutrient medium
- B. Living host cells
- C. Agar plates
- D. Culture broth

 **Answer:** B

11. Which disease is caused by a virus?

- A. Tuberculosis
- B. Cholera
- C. Influenza
- D. Typhoid

 **Answer:** C

12. Antibiotics are effective against:

- A. Viruses
- B. Fungi
- C. Bacteria
- D. Protozoa

 **Answer:** C

13. Which scientist discovered penicillin?

- A. Louis Pasteur
- B. Robert Koch
- C. Alexander Fleming
- D. Joseph Lister

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 **Answer: C**

14. The ability of bacteria to withstand antibiotics is called:

- A. Virulence
- B. Resistance
- C. Immunity
- D. Tolerance

 **Answer: B**

15. Which staining technique is used to identify acid-fast bacteria?

- A. Gram stain
- B. Ziehl-Neelsen stain
- C. Simple stain
- D. Negative stain

 **Answer: B**

16. Which microorganism causes tuberculosis?

- A. Mycobacterium tuberculosis
- B. Escherichia coli
- C. Salmonella typhi
- D. Vibrio cholerae

 **Answer: A**

17. ELISA is mainly used for:

- A. DNA amplification
- B. Detection of antigens or antibodies
- C. Bacterial culture
- D. Protein separation

 **Answer: B**

18. Which phase of bacterial growth shows maximum division?

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- A. Lag phase
- B. Log phase
- C. Stationary phase
- D. Death phase

 **Answer:** B

19. Which organism is used as an indicator of fecal contamination?

- A. Staphylococcus
- B. Escherichia coli
- C. Bacillus subtilis
- D. Clostridium tetani

 **Answer:** B

20. M.Sc. Microbiology graduates mainly work in:

- A. Software industry
- B. Research labs, healthcare, and pharmaceutical industries
- C. Banking sector
- D. Civil services only

 **Answer:** B

MODEL QUESTION PAPER

M.Sc. Computer Science

MCQs | 20 Questions

1. Computer Science primarily deals with:

- A. Hardware manufacturing
- B. Computation, algorithms, and data processing
- C. Electrical circuits
- D. Networking cables

 **Answer:** B

2. An algorithm is:

- A. A programming language
- B. A step-by-step procedure to solve a problem
- C. A computer hardware component
- D. An operating system

 **Answer:** B

3. Which data structure follows FIFO principle?

- A. Stack
- B. Tree
- C. Queue
- D. Graph

 **Answer:** C

4. Time complexity is used to measure:

- A. Memory usage
- B. Execution speed of hardware
- C. Efficiency of an algorithm
- D. Code readability

 **Answer:** C

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5. Which of the following is a non-linear data structure?

- A. Array
- B. Stack
- C. Queue
- D. Tree

 **Answer:** D

6. Which language is considered platform-independent?

- A. C
- B. C++
- C. Java
- D. Assembly

 **Answer:** C

7. Operating system is responsible for:

- A. Writing programs
- B. Managing hardware and software resources
- C. Compiling code
- D. Creating databases

 **Answer:** B

8. Which scheduling algorithm gives minimum average waiting time?

- A. FCFS
- B. Round Robin
- C. Shortest Job First
- D. Priority scheduling

 **Answer:** C

9. DBMS is used for:

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- A. Writing code
- B. Managing and organizing data
- C. Networking
- D. Operating systems

 **Answer:** B

10. Which normal form removes transitive dependency?

- A. First Normal Form
- B. Second Normal Form
- C. Third Normal Form
- D. Boyce-Codd Normal Form

 **Answer:** C

11. Which protocol is used for secure web communication?

- A. HTTP
- B. FTP
- C. HTTPS
- D. SMTP

 **Answer:** C

12. Which of the following is NOT an operating system?

- A. Linux
- B. Windows
- C. UNIX
- D. Oracle

 **Answer:** D

13. Which sorting algorithm has the best average-case time complexity?

- A. Bubble sort
- B. Selection sort
- C. Merge sort
- D. Insertion sort

Note for Candidates

 **Answer: C**

14. Compiler is used to:

- A. Execute programs
- B. Translate high-level language to machine code
- C. Debug programs
- D. Store programs

 **Answer: B**

15. Which concept allows the same function name to have different meanings?

- A. Inheritance
- B. Encapsulation
- C. Polymorphism
- D. Abstraction

 **Answer: C**

16. Which data structure is used in recursion?

- A. Queue
- B. Stack
- C. Tree
- D. Graph

 **Answer: B**

17. SQL is mainly used for:

- A. Programming logic
- B. Database querying
- C. System design
- D. Networking

 **Answer: B**

18. Deadlock occurs when:

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- A. CPU is idle
- B. Two or more processes wait indefinitely for resources
- C. Memory is full
- D. Disk fails

 **Answer:** B

19. Artificial Intelligence mainly focuses on:

- A. Hardware design
- B. Making machines intelligent
- C. Network security
- D. Data storage

 **Answer:** B

20. M.Sc. Computer Science graduates mainly work in:

- A. Civil engineering firms
- B. Software development, research, and IT industry
- C. Hospitals
- D. Banking clerical jobs

 **Answer:** B

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MODEL QUESTION PAPER

M.Sc. Mathematics

MCQs | 20 Questions

1. Mathematics is primarily the study of:

- A. Numbers only
- B. Shapes only
- C. Numbers, structures, and logical reasoning
- D. Physical objects

 **Answer: C**

2. The value of π (pi) is approximately:

- A. 2.14
- B. 3.14
- C. 3.41
- D. 4.13

 **Answer: B**

3. Which branch of mathematics deals with limits and continuity?

- A. Algebra
- B. Geometry
- C. Calculus
- D. Statistics

 **Answer: C**

4. The derivative of x^2 with respect to x is:

- A. x
- B. $2x$
- C. x^2
- D. 2

 **Answer: B**

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5. Integration is the reverse process of:

- A. Differentiation
- B. Multiplication
- C. Division
- D. Substitution

 **Answer: A**

6. Which matrix has equal number of rows and columns?

- A. Rectangular matrix
- B. Column matrix
- C. Square matrix
- D. Zero matrix

 **Answer: C**

7. The determinant of an identity matrix is:

- A. 0
- B. 1
- C. -1
- D. Undefined

 **Answer: B**

8. Which of the following is a vector space?

- A. Set of integers
- B. Set of rational numbers
- C. Set of real numbers
- D. Set of natural numbers

 **Answer: C**

9. A function is said to be continuous if it is:

- A. Defined everywhere only
- B. Differentiable everywhere
- C. Continuous at every point of its domain
- D. Increasing everywhere

 **Answer:** C

10. Which series is convergent?

- A. $1 + 1 + 1 + 1 + \dots$
- B. $1 + 1/2 + 1/4 + 1/8 + \dots$
- C. $1 + 2 + 3 + 4 + \dots$
- D. $1 - 1 + 1 - 1 + \dots$

 **Answer:** B

11. The solution of the equation $x^2 = 9$ is:

- A. 3
- B. -3
- C. ± 3
- D. 0

 **Answer:** C

12. Which branch of mathematics deals with data analysis?

- A. Algebra
- B. Trigonometry
- C. Statistics
- D. Topology

 **Answer:** C

13. The probability of a sure event is:

- A. 0
- B. 0.5
- C. 1
- D. -1

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 **Answer: C**

14. If $A \cup B = A$, then:

- A. $A \subset B$
- B. $B \subset A$
- C. $A = B$
- D. $A \cap B = \emptyset$

 **Answer: B**

15. Which trigonometric ratio is equal to $\sin\theta / \cos\theta$?

- A. $\sin\theta$
- B. $\cos\theta$
- C. $\tan\theta$
- D. $\sec\theta$

 **Answer: C**

16. A differential equation contains:

- A. Only constants
- B. Only variables
- C. Derivatives
- D. Matrices

 **Answer: C**

17. Eigenvalues are associated with:

- A. Algebraic equations
- B. Matrices
- C. Sets
- D. Probability

 **Answer: B**

18. Which mathematical concept deals with optimization?

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- A. Linear algebra
- B. Differential calculus
- C. Integral calculus
- D. Number theory

 **Answer:** B

19. Which transformation preserves distance?

- A. Scaling
- B. Translation
- C. Projection
- D. Stretching

 **Answer:** B

20. M.Sc. Mathematics graduates mainly work in:

- A. Construction industry
- B. Teaching, research, data science, and analytics
- C. Medical field
- D. Hospitality industry

 **Answer:** B

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MODEL QUESTION PAPER

M.Sc. Biology

MCQs | 20 Questions

1. Biology is the study of:

- A. Physical systems
- B. Living organisms
- C. Chemical reactions
- D. Mathematical models

 **Answer:** B

2. The basic unit of life is:

- A. Tissue
- B. Organ
- C. Cell
- D. Molecule

 **Answer:** C

3. Which branch of biology deals with heredity?

- A. Ecology
- B. Genetics
- C. Taxonomy
- D. Physiology

 **Answer:** B

4. DNA stands for:

- A. Deoxyribonucleic Acid
- B. Dinucleic Acid
- C. Deoxynucleic Acid
- D. Dioxyribonucleic Acid

 **Answer:** A

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5. RNA differs from DNA by having:

- A. Thymine
- B. Deoxyribose sugar
- C. Uracil
- D. Double strand

 **Answer: C**

6. Which organelle is known as the powerhouse of the cell?

- A. Nucleus
- B. Ribosome
- C. Mitochondria
- D. Chloroplast

 **Answer: C**

7. Photosynthesis occurs in:

- A. Mitochondria
- B. Ribosomes
- C. Chloroplasts
- D. Nucleus

 **Answer: C**

8. Which pigment is responsible for photosynthesis?

- A. Carotene
- B. Xanthophyll
- C. Chlorophyll
- D. Anthocyanin

 **Answer: C**

9. Which system controls body activities through hormones?

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- A. Nervous system
- B. Digestive system
- C. Endocrine system
- D. Respiratory system

 **Answer:** C

10. Which blood cells help in immunity?

- A. RBC
- B. Platelets
- C. WBC
- D. Plasma

 **Answer:** C

11. Which process produces energy in cells?

- A. Photosynthesis
- B. Respiration
- C. Transpiration
- D. Diffusion

 **Answer:** B

12. Which kingdom includes bacteria?

- A. Protista
- B. Fungi
- C. Plantae
- D. Monera

 **Answer:** D

13. Which scientist proposed the theory of evolution?

- A. Lamarck
- B. Mendel
- C. Darwin
- D. Watson

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 **Answer: C**

14. Which organ filters blood in humans?

- A. Liver
- B. Kidney
- C. Heart
- D. Lungs

 **Answer: B**

15. The study of ecosystems is called:

- A. Genetics
- B. Ecology
- C. Physiology
- D. Morphology

 **Answer: B**

16. Which type of reproduction involves only one parent?

- A. Sexual reproduction
- B. Asexual reproduction
- C. Vegetative reproduction
- D. Artificial reproduction

 **Answer: B**

17. Enzymes are:

- A. Lipids
- B. Carbohydrates
- C. Proteins
- D. Vitamins

 **Answer: C**

18. Which vitamin deficiency causes scurvy?

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- A. Vitamin A
- B. Vitamin B
- C. Vitamin C
- D. Vitamin D

 **Answer:** C

19. Which blood group is universal recipient?

- A. O
- B. A
- C. B
- D. AB

 **Answer:** D

20. M.Sc. Biology graduates mainly work in:

- A. IT industry
- B. Research, education, and life science industries
- C. Banking sector
- D. Civil services only

 **Answer:** B

MODEL QUESTION PAPER

M.Sc. Chemistry

MCQs | 20 Questions

1. Chemistry is the study of:

- A. Living organisms
- B. Matter and its transformations
- C. Energy only
- D. Physical forces

 **Answer:** B

2. Which branch of chemistry deals with carbon compounds?

- A. Inorganic chemistry
- B. Physical chemistry
- C. Organic chemistry
- D. Analytical chemistry

 **Answer:** C

3. The atomic number of an element represents:

- A. Number of neutrons
- B. Number of protons
- C. Atomic mass
- D. Valency

 **Answer:** B

4. Which bond involves sharing of electrons?

- A. Ionic bond
- B. Metallic bond
- C. Covalent bond
- D. Hydrogen bond

 **Answer:** C

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5. pH value less than 7 indicates:

- A. Neutral solution
- B. Basic solution
- C. Acidic solution
- D. Buffer solution

 **Answer: C**

6. Which gas is known as “laughing gas”?

- A. Nitrogen dioxide
- B. Nitrous oxide
- C. Nitric oxide
- D. Ammonia

 **Answer: B**

7. Which law states that mass is conserved in a chemical reaction?

- A. Law of multiple proportions
- B. Law of constant proportions
- C. Law of conservation of mass
- D. Avogadro’s law

 **Answer: C**

8. Which element has the highest electronegativity?

- A. Oxygen
- B. Nitrogen
- C. Chlorine
- D. Fluorine

 **Answer: D**

9. The SI unit of molarity is:

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- A. mol/L
- B. g/L
- C. mol/kg
- D. mol/m³

 **Answer:** A

10. Which technique is used to identify functional groups?

- A. Titration
- B. Chromatography
- C. Infrared (IR) spectroscopy
- D. Electrolysis

 **Answer:** C

11. Which compound acts as a catalyst in the Haber process?

- A. Copper
- B. Iron
- C. Nickel
- D. Zinc

 **Answer:** B

12. The rate of a chemical reaction depends on:

- A. Temperature
- B. Concentration
- C. Catalyst
- D. All of the above

 **Answer:** D

13. Which type of reaction absorbs heat?

- A. Exothermic
- B. Endothermic
- C. Neutralization
- D. Displacement

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 **Answer: B**

14. Which orbital is spherical in shape?

- A. p-orbital
- B. d-orbital
- C. f-orbital
- D. s-orbital

 **Answer: D**

15. Chromatography is mainly used for:

- A. Chemical synthesis
- B. Separation of mixtures
- C. Measuring pH
- D. Heating samples

 **Answer: B**

16. Which polymer is used to make PVC?

- A. Ethylene
- B. Propylene
- C. Vinyl chloride
- D. Styrene

 **Answer: C**

17. Which acid is present in vinegar?

- A. Citric acid
- B. Formic acid
- C. Acetic acid
- D. Lactic acid

 **Answer: C**

18. Which metal is extracted by electrolytic reduction?

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- A. Iron
- B. Copper
- C. Aluminium
- D. Zinc

 **Answer:** C

19. NMR spectroscopy is used to determine:

- A. Molecular weight
- B. Molecular structure
- C. Reaction rate
- D. Melting point

 **Answer:** B

20. M.Sc. Chemistry graduates mainly work in:

- A. Hospitality industry
- B. Research labs, pharmaceuticals, and chemical industries
- C. Construction sector
- D. Banking sector

 **Answer:** B

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MODEL QUESTION PAPER

M.Sc. Physics

MCQs | 20 Questions

1. Physics is the study of:

- A. Living organisms
- B. Matter, energy, and their interactions
- C. Chemical reactions
- D. Mathematical theories only

 **Answer:** B

2. Which branch of physics deals with motion?

- A. Optics
- B. Thermodynamics
- C. Mechanics
- D. Electromagnetism

 **Answer:** C

3. The SI unit of force is:

- A. Joule
- B. Newton
- C. Watt
- D. Pascal

 **Answer:** B

4. Newton's First Law is also known as:

- A. Law of acceleration
- B. Law of inertia
- C. Law of action and reaction
- D. Law of gravitation

 **Answer:** B

Note for Candidates

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5. Work done is zero when:

- A. Force is applied
- B. Object moves
- C. Force and displacement are perpendicular
- D. Motion is accelerated

 **Answer: C**

6. The SI unit of energy is:

- A. Watt
- B. Newton
- C. Joule
- D. Coulomb

 **Answer: C**

7. Which law relates pressure and volume of a gas?

- A. Charles' law
- B. Boyle's law
- C. Avogadro's law
- D. Gay-Lussac's law

 **Answer: B**

8. Absolute zero temperature is:

- A. 0°C
- B. -100°C
- C. -273.15°C
- D. -200°C

 **Answer: C**

9. Which phenomenon explains bending of light?

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- A. Reflection
- B. Refraction
- C. Diffraction
- D. Interference

 **Answer:** B

10. The speed of light in vacuum is approximately:

- A. 3×10^6 m/s
- B. 3×10^8 m/s
- C. 3×10^{10} m/s
- D. 3×10^{12} m/s

 **Answer:** B

11. Which wave does not require a medium?

- A. Sound wave
- B. Water wave
- C. Mechanical wave
- D. Electromagnetic wave

 **Answer:** D

12. Electric current is measured in:

- A. Volt
- B. Ohm
- C. Ampere
- D. Watt

 **Answer:** C

13. Ohm's law is given by:

- A. $V = IR$
- B. $P = VI$
- C. $E = mc^2$
- D. $F = ma$

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 **Answer: A**

14. Which device converts AC to DC?

- A. Transformer
- B. Rectifier
- C. Generator
- D. Capacitor

 **Answer: B**

15. Which particle has no electric charge?

- A. Proton
- B. Electron
- C. Neutron
- D. Positron

 **Answer: C**

16. Photoelectric effect supports the:

- A. Wave nature of light
- B. Particle nature of light
- C. Reflection of light
- D. Refraction of light

 **Answer: B**

17. Which scientist proposed the theory of relativity?

- A. Newton
- B. Maxwell
- C. Einstein
- D. Bohr

 **Answer: C**

18. Semiconductor devices are mainly made of:

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- A. Metals
- B. Insulators
- C. Silicon
- D. Plastics

 **Answer:** C

19. Which instrument is used to measure electric current?

- A. Voltmeter
- B. Ammeter
- C. Galvanometer
- D. Ohmmeter

 **Answer:** B

20. M.Sc. Physics graduates mainly work in:

- A. Hospitality industry
- B. Research, teaching, electronics, and scientific industries
- C. Banking sector
- D. Tourism sector

 **Answer:** B

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