

MODEL QUESTION PAPER
Bachelor of Science – 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 Bachelor of Science 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%**
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Branches Covered (Bachelor of Science)

Agriculture	Computer Science
Nursing	Chemistry
Microbiology	Physics
Biotechnology	Mathematics
Biology	Environmental Science

Note for Candidates

This is a **model reference document** intended for **general understanding only**.

MODEL QUESTION PAPER

Agriculture – B.Sc. (MCQs | 20 Questions)

1. Agriculture is mainly concerned with:

- A. Industrial production
- B. Crop cultivation and livestock management
- C. Mining activities
- D. Software development

 Answer: B

2. Which crop is known as a Kharif crop in India?

- A. Wheat
- B. Barley
- C. Rice
- D. Mustard

 Answer: C

3. The process of loosening and turning the soil is called:

- A. Irrigation
- B. Tillage
- C. Harvesting
- D. Weeding

 Answer: B

4. Which nutrient is essential for leaf growth?

- A. Phosphorus
- B. Potassium
- C. Nitrogen
- D. Calcium

 Answer: C

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5. The scientific study of soil is called:

- A. Agronomy
- B. Horticulture
- C. Pedology
- D. Entomology

 Answer: C

6. Which irrigation method conserves maximum water?

- A. Flood irrigation
- B. Furrow irrigation
- C. Sprinkler irrigation
- D. Drip irrigation

 Answer: D

7. Which fertilizer mainly supplies nitrogen?

- A. Urea
- B. Single super phosphate
- C. Muriate of potash
- D. Gypsum

 Answer: A

8. Crop rotation helps in:

- A. Increasing soil erosion
- B. Maintaining soil fertility
- C. Reducing crop yield
- D. Increasing pest attack

 Answer: B

9. The branch of agriculture dealing with fruits and vegetables is:

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- A. Agronomy
- B. Floriculture
- C. Horticulture
- D. Sericulture

 Answer: C

10. Which microorganism is used for nitrogen fixation?

- A. Rhizobium
- B. Yeast
- C. Virus
- D. Algae

 Answer: A

11. The practice of growing crops without soil is called:

- A. Organic farming
- B. Hydroponics
- C. Mixed farming
- D. Terrace farming

 Answer: B

12. Which crop is a Rabi crop?

- A. Rice
- B. Cotton
- C. Wheat
- D. Jute

 Answer: C

13. The process of removing unwanted plants is called:

- A. Harvesting
- B. Threshing

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C. Weeding

D. Sowing

☒ Answer: C

14. Which tool is used for ploughing?

A. Harrow

B. Plough

C. Sickle

D. Sprayer

☒ Answer: B

15. The main source of energy for agriculture is:

A. Wind

B. Solar energy

C. Chemical energy

D. Mechanical energy

☒ Answer: B

16. Which soil type is best suited for agriculture?

A. Sandy soil

B. Clay soil

C. Loamy soil

D. Gravel soil

☒ Answer: C

17. Green revolution mainly aimed at increasing:

A. Cotton production

B. Milk production

C. Food grain production

D. Oilseed production

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 Answer: C

18. Which pesticide is used to control insects?

- A. Fungicide
- B. Herbicide
- C. Insecticide
- D. Rodenticide

 Answer: C

19. Organic farming avoids the use of:

- A. Compost
- B. Biofertilizers
- C. Chemical fertilizers
- D. Green manure

 Answer: C

20. Agriculture contributes mainly to:

- A. Space research
- B. National food security
- C. Software exports
- D. Industrial automation

 Answer: B

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MODEL QUESTION PAPER

Computer Science – B.Sc. (MCQs | 20 Questions)

1. Computer Science mainly deals with:

- A. Electrical machines
- B. Data, algorithms, and software systems
- C. Chemical processes
- D. Mechanical systems

 **Answer: B**

2. The smallest unit of data in a computer is:

- A. Byte
- B. Bit
- C. Nibble
- D. Word

 **Answer: B**

3. Which of the following is an input device?

- A. Monitor
- B. Printer
- C. Keyboard
- D. Speaker

 **Answer: C**

4. CPU stands for:

- A. Central Processing Unit
- B. Computer Processing Unit
- C. Control Program Unit
- D. Central Program Utility

 **Answer: A**

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5. Which memory is volatile?

- A. ROM
- B. Hard disk
- C. RAM
- D. SSD

 **Answer: C**

6. Which data structure follows FIFO principle?

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

 **Answer: B**

7. Which programming language is object-oriented?

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

 **Answer: B**

8. The process of converting source code into machine code is called:

- A. Execution
- B. Interpretation
- C. Compilation
- D. Debugging

 **Answer: C**

9. Which operating system is open-source?

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- A. Windows
- B. macOS
- C. Linux
- D. DOS

 **Answer: C**

10. The full form of SQL is:

- A. Structured Query Language
- B. Simple Query Language
- C. Standard Query Logic
- D. System Query Language

 **Answer: A**

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

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

 **Answer: D**

12. A collection of related records is called:

- A. File
- B. Field
- C. Byte
- D. Character

 **Answer: A**

13. Which network device connects computers within a LAN?

- A. Router
- B. Modem

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- C. Switch
- D. Repeater

 **Answer: C**

14. Which protocol is used for secure web browsing?

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

 **Answer: C**

15. Which language is used for web page structure?

- A. CSS
- B. JavaScript
- C. HTML
- D. Python

 **Answer: C**

16. Debugging is the process of:

- A. Writing code
- B. Executing programs
- C. Finding and fixing errors
- D. Translating code

 **Answer: C**

17. Which storage device has the fastest access speed?

- A. Hard disk
- B. SSD
- C. Cache memory
- D. Optical disk

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 **Answer: C**

18. Which algorithm is used for searching in a sorted array?

- A. Linear search
- B. Binary search
- C. Bubble sort
- D. Selection sort

 **Answer: B**

19. Which of the following is a database?

- A. MS Excel
- B. MySQL
- C. Notepad
- D. Chrome

 **Answer: B**

20. Computer Science aims to:

- A. Build roads
- B. Develop efficient computing solutions
- C. Manufacture machines
- D. Control chemical reactions

 **Answer: B**

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Nursing – B.Sc. (MCQs | 20 Questions)

1. Nursing is primarily concerned with:

- A. Diagnosing diseases
- B. Caring for individuals, families, and communities
- C. Performing surgeries
- D. Manufacturing medicines

 **Answer: B**

2. The primary role of a nurse is to:

- A. Prescribe medication
- B. Provide patient care and support
- C. Perform diagnostic tests
- D. Conduct surgeries

 **Answer: B**

3. Which vital sign measures body temperature?

- A. Pulse
- B. Respiration
- C. Blood pressure
- D. Temperature

 **Answer: D**

4. Normal adult body temperature is approximately:

- A. 35°C
- B. 36°C
- C. 37°C
- D. 38°C

 **Answer: C**

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5. The normal pulse rate for a healthy adult is:

- A. 40–60 beats/min
- B. 60–100 beats/min
- C. 100–120 beats/min
- D. 120–140 beats/min

 **Answer: B**

6. Which position is used for examining the abdomen?

- A. Fowler's position
- B. Supine position
- C. Prone position
- D. Lithotomy position

 **Answer: B**

7. Hand hygiene is most effective in preventing:

- A. Non-communicable diseases
- B. Hospital-acquired infections
- C. Genetic disorders
- D. Nutritional deficiencies

 **Answer: B**

8. The instrument used to measure blood pressure is:

- A. Thermometer
- B. Stethoscope
- C. Sphygmomanometer
- D. Pulse oximeter

 **Answer: C**

9. Which route of drug administration is the fastest?

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- A. Oral
- B. Intramuscular
- C. Subcutaneous
- D. Intravenous

 **Answer: D**

10. Which personal protective equipment (PPE) protects hands?

- A. Mask
- B. Gown
- C. Gloves
- D. Goggles

 **Answer: C**

11. The process of recording patient information is called:

- A. Diagnosis
- B. Documentation
- C. Evaluation
- D. Prescription

 **Answer: B**

12. Which vitamin deficiency causes night blindness?

- A. Vitamin A
- B. Vitamin B₁
- C. Vitamin C
- D. Vitamin D

 **Answer: A**

13. The correct site for intramuscular injection in adults is:

- A. Deltoid muscle
- B. Abdomen

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- C. Forearm
- D. Wrist

 **Answer: A**

14. Which sign indicates dehydration?

- A. Moist skin
- B. Excess urination
- C. Dry mouth
- D. Increased appetite

 **Answer: C**

15. Sterilization means:

- A. Cleaning equipment
- B. Destroying all microorganisms
- C. Reducing bacteria only
- D. Removing visible dirt

 **Answer: B**

16. Which document gives legal evidence of patient care?

- A. Nurse's notes
- B. Prescription pad
- C. Lab report
- D. Appointment slip

 **Answer: A**

17. Oxygen is administered to patients mainly to:

- A. Reduce pain
- B. Improve oxygen saturation
- C. Control blood pressure
- D. Increase appetite

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 **Answer: B**

18. Which pulse site is used in emergencies?

- A. Radial
- B. Brachial
- C. Carotid
- D. Dorsalis pedis

 **Answer: C**

19. The nursing code of ethics emphasizes:

- A. Speed of care
- B. Patient safety and dignity
- C. Hospital rules only
- D. Cost reduction

 **Answer: B**

20. Nursing aims to:

- A. Replace doctors
- B. Promote health, prevent illness, and care for patients
- C. Focus only on hospitals
- D. Perform medical research only

 **Answer: B**

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MODEL QUESTION PAPER

Chemistry – B.Sc. (MCQs | 20 Questions)

1. Chemistry is the study of:

- A. Living organisms
- B. Matter and its changes
- C. Energy only
- D. Motion of objects

 **Answer: B**

2. The smallest unit of an element that retains its properties is:

- A. Molecule
- B. Atom
- C. Ion
- D. Compound

 **Answer: B**

3. The pH value of a neutral solution is:

- A. 5
- B. 6
- C. 7
- D. 8

 **Answer: C**

4. Which gas is known as laughing gas?

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

 **Answer: B**

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5. The chemical symbol of sodium is:

- A. So
- B. Na
- C. Sn
- D. S

 **Answer: B**

6. Which bond involves sharing of electrons?

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

 **Answer: B**

7. Which acid is present in lemon?

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

 **Answer: B**

8. Which metal is liquid at room temperature?

- A. Lead
- B. Zinc
- C. Mercury
- D. Silver

 **Answer: C**

9. The process of rusting involves:

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- A. Reduction
- B. Neutralization
- C. Oxidation
- D. Sublimation

 **Answer: C**

10. Which element has atomic number 1?

- A. Helium
- B. Hydrogen
- C. Oxygen
- D. Carbon

 **Answer: B**

11. Avogadro's number is:

- A. 6.02×10^{23}
- B. 3.14×10^{23}
- C. 9.81×10^{23}
- D. 1.66×10^{23}

 **Answer: A**

12. Which process separates liquids with different boiling points?

- A. Filtration
- B. Evaporation
- C. Distillation
- D. Crystallization

 **Answer: C**

13. Which salt is used in baking powder?

- A. Sodium chloride
- B. Sodium bicarbonate

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- C. Calcium carbonate
- D. Ammonium chloride

 **Answer: B**

14. The SI unit of amount of substance is:

- A. Gram
- B. Liter
- C. Mole
- D. Kilogram

 **Answer: C**

15. Which type of reaction absorbs heat?

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

 **Answer: B**

16. Which element is essential for photosynthesis?

- A. Nitrogen
- B. Magnesium
- C. Iron
- D. Calcium

 **Answer: B**

17. The chemical formula of water is:

- A. H_2O
- B. H_2O_2
- C. HO_2
- D. H_3O

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 **Answer: A**

18. Which indicator is used to test acidity?

- A. Phenolphthalein
- B. Methyl orange
- C. Litmus
- D. All of the above

 **Answer: D**

19. Which gas is released during photosynthesis?

- A. Carbon dioxide
- B. Oxygen
- C. Nitrogen
- D. Hydrogen

 **Answer: B**

20. Chemistry helps mainly in:

- A. Understanding matter and chemical processes
- B. Road construction
- C. Software development
- D. Space navigation

 **Answer: A**

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MODEL QUESTION PAPER

Microbiology – B.Sc. (MCQs | 20 Questions)

1. Microbiology is the study of:

- A. Plants
- B. Animals
- C. Microorganisms
- D. Minerals

 **Answer: C**

2. Which of the following is NOT a microorganism?

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

 **Answer: D**

3. The scientist known as the father of microbiology is:

- A. Isaac Newton
- B. Louis Pasteur
- C. Charles Darwin
- D. Robert Boyle

 **Answer: B**

4. Bacteria are classified as:

- A. Eukaryotic
- B. Multicellular
- C. Prokaryotic
- D. Non-living

 **Answer: C**

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5. Which microscope is commonly used to observe bacteria?

- A. Electron microscope
- B. Compound light microscope
- C. Stereo microscope
- D. Phase contrast microscope

 **Answer: B**

6. The genetic material in bacteria is:

- A. RNA only
- B. DNA only
- C. DNA and RNA
- D. Protein

 **Answer: B**

7. Which microorganism causes tuberculosis?

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

 **Answer: B**

8. Viruses require _____ to reproduce.

- A. Water
- B. Air
- C. Host cell
- D. Nutrients

 **Answer: C**

9. Which staining technique is used to classify bacteria?

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- A. Acid-fast staining
- B. Gram staining
- C. Endospore staining
- D. Capsule staining

 **Answer: B**

10. Which shape is NOT associated with bacteria?

- A. Cocci
- B. Bacilli
- C. Spirilla
- D. Amoeboid

 **Answer: D**

11. The process of destroying all microorganisms is called:

- A. Disinfection
- B. Sterilization
- C. Pasteurization
- D. Sanitization

 **Answer: B**

12. Which microorganism is used in making curd?

- A. Yeast
- B. Lactobacillus
- C. Rhizobium
- D. Penicillium

 **Answer: B**

13. Antibiotics are effective mainly against:

- A. Viruses
- B. Bacteria

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- C. Fungi
- D. Protozoa

 **Answer: B**

14. Which disease is caused by a virus?

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

 **Answer: D**

15. The cell wall of bacteria is made of:

- A. Cellulose
- B. Chitin
- C. Peptidoglycan
- D. Lignin

 **Answer: C**

16. Which microorganism is used in bread making?

- A. Bacteria
- B. Virus
- C. Yeast
- D. Algae

 **Answer: C**

17. Which instrument is used for sterilization using steam?

- A. Hot air oven
- B. Incubator
- C. Autoclave
- D. Laminar airflow

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 **Answer: C**

18. Which type of bacteria grows in absence of oxygen?

- A. Aerobic
- B. Facultative
- C. Anaerobic
- D. Microaerophilic

 **Answer: C**

19. The study of fungi is called:

- A. Bacteriology
- B. Virology
- C. Mycology
- D. Phycology

 **Answer: C**

20. Microbiology is important because it helps in:

- A. Understanding diseases and immunity
- B. Road construction
- C. Software design
- D. Space research

 **Answer: A**

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Physics – B.Sc. (MCQs | 20 Questions)

1. Physics is the study of:

- A. Living organisms
- B. Matter, energy, and their interactions
- C. Chemical reactions
- D. Earth processes

 **Answer: B**

2. The SI unit of force is:

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

 **Answer: C**

3. The speed of light in vacuum is approximately:

- A. 3×10^6 m/s
- B. 3×10^7 m/s
- C. 3×10^8 m/s
- D. 3×10^9 m/s

 **Answer: C**

4. Which law relates force, mass, and acceleration?

- A. Ohm's law
- B. Newton's second law
- C. Boyle's law
- D. Faraday's law

 **Answer: B**

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5. The SI unit of electric current is:

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

 **Answer: B**

6. Which physical quantity is measured in Hertz?

- A. Force
- B. Energy
- C. Frequency
- D. Power

 **Answer: C**

7. Which instrument is used to measure electric current?

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

 **Answer: B**

8. The phenomenon of splitting white light into colors is called:

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

 **Answer: C**

9. Which type of lens is used to correct myopia?

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- A. Convex lens
- B. Concave lens
- C. Cylindrical lens
- D. Bifocal lens

 **Answer: B**

10. The unit of electrical resistance is:

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

 **Answer: C**

11. Which energy is stored in a stretched spring?

- A. Kinetic energy
- B. Thermal energy
- C. Potential energy
- D. Electrical energy

 **Answer: C**

12. Which law explains conservation of energy?

- A. First law of thermodynamics
- B. Second law of thermodynamics
- C. Boyle's law
- D. Coulomb's law

 **Answer: A**

13. The SI unit of power is:

- A. Joule
- B. Newton

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- C. Watt
- D. Ampere

 **Answer: C**

14. Which particle has no electric charge?

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

 **Answer: C**

15. Which phenomenon allows sound to bend around obstacles?

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

 **Answer: C**

16. Which wave does not require a medium to travel?

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

 **Answer: D**

17. The unit of magnetic flux is:

- A. Tesla
- B. Weber
- C. Henry
- D. Gauss

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 **Answer: B**

18. Which device converts mechanical energy into electrical energy?

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

 **Answer: C**

19. The process of charging a body without contact is called:

- A. Conduction
- B. Induction
- C. Friction
- D. Radiation

 **Answer: B**

20. Physics helps mainly in:

- A. Understanding natural laws and technological development
- B. Agriculture only
- C. Medicine only
- D. Software design

 **Answer: A**

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MODEL QUESTION PAPER

Biotechnology – B.Sc. (MCQs | 20 Questions)

1. Biotechnology is the application of:

- A. Physics to medicine
- B. Biology and technology
- C. Chemistry to agriculture
- D. Engineering to construction

 **Answer: B**

2. Which organism is commonly used in biotechnology laboratories?

- A. Frog
- B. Mouse
- C. Escherichia coli
- D. Earthworm

 **Answer: C**

3. DNA stands for:

- A. Deoxyribonucleic Acid
- B. Dioxyribonuclear Acid
- C. Deoxyribose Nucleic Acid
- D. Double Nucleic Acid

 **Answer: A**

4. The basic unit of heredity is:

- A. Chromosome
- B. DNA
- C. Gene
- D. Cell

 **Answer: C**

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5. Which enzyme is used to cut DNA?

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

 **Answer: B**

6. Which enzyme joins DNA fragments?

- A. Restriction enzyme
- B. Helicase
- C. DNA ligase
- D. Primase

 **Answer: C**

7. PCR stands for:

- A. Protein Chain Reaction
- B. Polymerase Chain Reaction
- C. Primary Cell Reaction
- D. Protein Coding Region

 **Answer: B**

8. PCR is used to:

- A. Cut DNA
- B. Sequence proteins
- C. Amplify DNA
- D. Translate RNA

 **Answer: C**

9. Which vector is commonly used in genetic engineering?

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

 **Answer: B**

10. Recombinant DNA technology involves:

- A. Mixing chemicals
- B. Joining DNA from different sources
- C. Breaking proteins
- D. Sequencing RNA

 **Answer: B**

11. Which organism produces insulin through biotechnology?

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

 **Answer: B**

12. The process of growing cells in a controlled environment is called:

- A. Fermentation
- B. Cell culture
- C. Hybridization
- D. Incubation

 **Answer: B**

13. Which biotechnology product is used to treat diabetes?

- A. Antibiotics
- B. Vaccines

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- C. Insulin
- D. Hormones

 **Answer: C**

14. The study of proteins is called:

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

 **Answer: B**

15. Which technique separates DNA fragments?

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

 **Answer: C**

16. GM crops are developed mainly to:

- A. Reduce nutrition
- B. Increase crop yield and resistance
- C. Eliminate farming
- D. Increase pesticide use

 **Answer: B**

17. Which vitamin is produced using biotechnology?

- A. Vitamin A
- B. Vitamin B₁₂
- C. Vitamin C
- D. Vitamin D

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 **Answer: B**

18. Bioreactors are used for:

- A. DNA sequencing
- B. Large-scale production of biological products
- C. Microscopy
- D. Gene mapping

 **Answer: B**

19. Which biotechnology field deals with medical applications?

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

 **Answer: C**

20. Biotechnology mainly aims to:

- A. Replace biology
- B. Improve healthcare, agriculture, and industry
- C. Eliminate natural resources
- D. Focus only on research

 **Answer: B**

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MODEL QUESTION PAPER

Mathematics – B.Sc. (MCQs | 20 Questions)

1. Mathematics is the study of:

- A. Living organisms
- B. Numbers, quantities, and structures
- C. Chemical reactions
- D. Physical laws

 **Answer: B**

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

- A. 2.14
- B. 3.14
- C. 4.13
- D. 1.34

 **Answer: B**

3. The square root of 144 is:

- A. 10
- B. 11
- C. 12
- D. 13

 **Answer: C**

4. If $x + 5 = 12$, then x equals:

- A. 5
- B. 6
- C. 7
- D. 8

 **Answer: C**

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5. The value of 5^2 is:

- A. 10
- B. 20
- C. 25
- D. 30

 Answer: C

6. Which of the following is a prime number?

- A. 9
- B. 15
- C. 17
- D. 21

 Answer: C

7. The sum of angles of a triangle is:

- A. 90°
- B. 180°
- C. 270°
- D. 360°

 Answer: B

8. The derivative of a constant is:

- A. 1
- B. Constant
- C. Zero
- D. Infinity

 Answer: C

9. The integral of $1 \, dx$ is:

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- A. x
- B. 1
- C. $x + C$
- D. 0

 **Answer: C**

10. The determinant of a 2×2 identity matrix is:

- A. 0
- B. 1
- C. 2
- D. -1

 **Answer: B**

11. If $a = 3$ and $b = 4$, then $\sqrt{a^2 + b^2}$ equals:

- A. 5
- B. 6
- C. 7
- D. 25

 **Answer: A**

12. The probability of getting a head when tossing a fair coin is:

- A. 0
- B. 1
- C. $\frac{1}{2}$
- D. $\frac{1}{3}$

 **Answer: C**

13. The mean of first five natural numbers is:

- A. 2
- B. 2.5

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- C. 3
- D. 5

 **Answer: C**

14. The value of $\log_{10}(100)$ is:

- A. 1
- B. 2
- C. 10
- D. 100

 **Answer: B**

15. A straight line has slope zero if it is:

- A. Vertical
- B. Inclined
- C. Horizontal
- D. Parallel to y-axis

 **Answer: C**

16. The solution of equation $x^2 = 16$ is:

- A. 4
- B. -4
- C. ± 4
- D. 8

 **Answer: C**

17. The perimeter of a square with side 5 units is:

- A. 10
- B. 15
- C. 20
- D. 25

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 Answer: C

18. Which of the following is an irrational number?

- A. 2
- B. $\frac{3}{4}$
- C. $\sqrt{2}$
- D. 5

 Answer: C

19. The value of $\sin 90^\circ$ is:

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

 Answer: B

20. Mathematics helps mainly in:

- A. Logical reasoning and problem solving
- B. Chemical analysis
- C. Medical diagnosis
- D. Farming

 Answer: A

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MODEL QUESTION PAPER

Biology – B.Sc. (MCQs | 20 Questions)

1. Biology is the study of:

- A. Chemicals
- B. Living organisms
- C. Physical laws
- D. Minerals

 **Answer: B**

2. The basic unit of life is:

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

 **Answer: C**

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

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

 **Answer: C**

4. Photosynthesis occurs in which organelle?

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

 **Answer: C**

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5. Which gas is released during photosynthesis?

- A. Carbon dioxide
- B. Oxygen
- C. Nitrogen
- D. Hydrogen

 **Answer: B**

6. The green pigment in plants is called:

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

 **Answer: B**

7. Which blood cells help in oxygen transport?

- A. White blood cells
- B. Platelets
- C. Red blood cells
- D. Plasma

 **Answer: C**

8. DNA carries information for:

- A. Energy production
- B. Protein synthesis
- C. Cell respiration
- D. Digestion

 **Answer: B**

9. Which system controls body activities?

Note for Candidates

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

 **Answer: C**

10. Which vitamin is produced in the skin by sunlight?

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

 **Answer: D**

11. The process of cell division for growth is called:

- A. Meiosis
- B. Mitosis
- C. Fertilization
- D. Mutation

 **Answer: B**

12. Which organism is known as the father of genetics?

- A. Charles Darwin
- B. Gregor Mendel
- C. Louis Pasteur
- D. Robert Hooke

 **Answer: B**

13. Which tissue connects muscles to bones?

- A. Ligament
- B. Tendon

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- C. Cartilage
- D. Nerve

 **Answer: B**

14. The largest organ in the human body is:

- A. Liver
- B. Heart
- C. Skin
- D. Brain

 **Answer: C**

15. Which blood group is known as universal donor?

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

 **Answer: D**

16. The breathing process in humans is called:

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

 **Answer: B**

17. Which part of the plant absorbs water?

- A. Stem
- B. Leaf
- C. Root
- D. Flower

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 **Answer: C**

18. Which disease is caused by a virus?

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

 **Answer: C**

19. Which enzyme digests proteins?

- A. Amylase
- B. Lipase
- C. Pepsin
- D. Maltase

 **Answer: C**

20. Biology helps mainly in:

- A. Understanding life and health
- B. Road construction
- C. Software design
- D. Space navigation

 **Answer: A**

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MODEL QUESTION PAPER

Environmental Science – B.Sc. (MCQs | 20 Questions)

1. Environmental Science is the study of:

- A. Computers
- B. Environment and human interaction
- C. Mechanical systems
- D. Chemical industries

 **Answer: B**

2. Which component of environment includes air, water, and soil?

- A. Biosphere
- B. Lithosphere
- C. Hydrosphere
- D. Atmosphere

 **Answer: A**

3. Which gas is most abundant in Earth's atmosphere?

- A. Oxygen
- B. Carbon dioxide
- C. Nitrogen
- D. Hydrogen

 **Answer: C**

4. Global warming is mainly caused by increase in:

- A. Oxygen
- B. Nitrogen
- C. Greenhouse gases
- D. Ozone

 **Answer: C**

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5. Which gas is a major greenhouse gas?

- A. Oxygen
- B. Carbon dioxide
- C. Nitrogen
- D. Argon

 **Answer: B**

6. The pH of pure water is:

- A. 5
- B. 6
- C. 7
- D. 8

 **Answer: C**

7. Which pollutant causes acid rain?

- A. Carbon monoxide
- B. Sulphur dioxide
- C. Oxygen
- D. Methane

 **Answer: B**

8. Which process is used for wastewater treatment?

- A. Distillation
- B. Sedimentation
- C. Polymerization
- D. Crystallization

 **Answer: B**

9. Solid waste management mainly involves:

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- A. Waste generation only
- B. Collection, treatment, and disposal
- C. Transportation only
- D. Recycling only

 **Answer: B**

10. Which renewable energy source uses sunlight?

- A. Wind energy
- B. Hydro energy
- C. Solar energy
- D. Nuclear energy

 **Answer: C**

11. Which layer of the atmosphere protects Earth from UV rays?

- A. Troposphere
- B. Stratosphere
- C. Ozone layer
- D. Mesosphere

 **Answer: C**

12. Which pollutant causes smog?

- A. Sulphur dioxide
- B. Nitrogen oxides
- C. Carbon monoxide
- D. All of the above

 **Answer: D**

13. Noise pollution is measured in:

- A. Hertz
- B. Decibel

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C. Pascal

D. Watt

 **Answer: B**

14. Which gas is released from landfills?

A. Oxygen

B. Nitrogen

C. Methane

D. Hydrogen

 **Answer: C**

15. Which practice helps conserve biodiversity?

A. Deforestation

B. Poaching

C. Wildlife conservation

D. Industrialization

 **Answer: C**

16. Which water pollution indicator measures organic matter?

A. pH

B. Turbidity

C. BOD

D. Temperature

 **Answer: C**

17. Which international day is celebrated as World Environment Day?

A. June 1

B. June 3

C. June 5

D. June 10

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 **Answer: C**

18. Which energy source is non-renewable?

- A. Solar
- B. Wind
- C. Coal
- D. Hydropower

 **Answer: C**

19. Which practice reduces air pollution?

- A. Burning fossil fuels
- B. Afforestation
- C. Deforestation
- D. Industrial waste

 **Answer: B**

20. Environmental Science aims to:

- A. Increase pollution
- B. Promote sustainable development
- C. Focus only on industry
- D. Eliminate natural resources

 **Answer: B**

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