

AP Biology Unit 1

Chemistry of Life

One-page sprint review
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EXAM WEIGHT

8-11%

MCQs

5-7

FRQ APPEARANCE

Very Frequent

SPRINT TIME

~90 min

Inside this pack

- Quick Glance at every Unit topic with priority + format
- Topic-by-topic key traps, must-know rules, and exam frames
- Worked example questions on the highest-yield topics

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AP Biology Unit 1 – Chemistry of Life

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Zero fluff. Maximum exam yield. Every bullet here is either a direct MCQ target, a FRQ component, or a common trap. Master this unit in one focused session.



Exam Weight

8–11%



~MCQs

5–7 questions



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Very Frequent



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~90 min



Quick Glance — All Topics at a Glance

Topic	Priority	Exam Format	Key Trap
1.1 Water & H-Bonding	★★★★	MCQ, FRQ	Cohesion ≠ Adhesion; ice has more H-bonds than liquid water
1.2 Elements of Life	★★★	MCQ	Carbon has 4 bonds, not 2; phosphorus ≠ phosphate
1.3 Dehydration & Hydrolysis	★★★★	MCQ, FRQ	Dehydration RELEASES water (builds); Hydrolysis CONSUMES water (breaks)
1.4 Carbohydrates	★★★★	MCQ, Data	Starch vs. cellulose = α vs. β glucose, NOT different monomers
1.5 Lipids	★★★★	MCQ, FRQ	Lipids are NOT polymers; steroids cross membranes freely
1.6 Nucleic Acids	★★★★	MCQ, Calc, FRQ	Chargaff (%A=%T, %G=%C) applies to dsDNA only, NOT RNA or ssDNA
1.7 Proteins	★★★★	MCQ, FRQ, Data	Denaturation does NOT break peptide bonds (1° structure stays intact)

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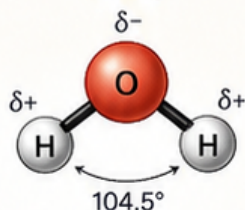
1.1 Water & Hydrogen Bonding

High-yield concepts, traps, and one practice question

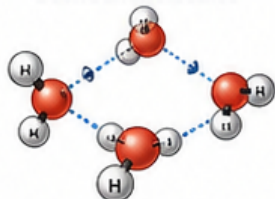
1 Why Water is Special

- O is highly electronegative → pulls e^- away from H
- **Result:** polar covalent bonds → δ^- on O, δ^+ on H
- **Bent shape** → molecule is polar overall
- **Polarity** → hydrogen bonds between molecules
- **H-bonds:** weak individually, collectively powerful
- Each H_2O can form up to 4 H-bonds

Water Molecule Polarity



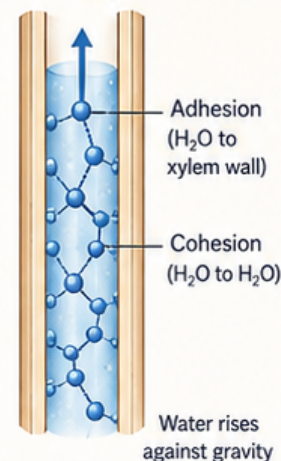
Hydrogen Bonds Between Molecules



2 Cohesion & Adhesion

- **Cohesion:** $H_2O \leftrightarrow H_2O$ → surface tension
- Enables water striders; paper clip float on water
- **Adhesion:** $H_2O \leftrightarrow$ other polar surfaces (xylem walls)
- Together → capillary action in xylem
- Transpiration pull: tension + cohesion = continuous column
- **Cohesion \neq Adhesion:** **common exam trap!**

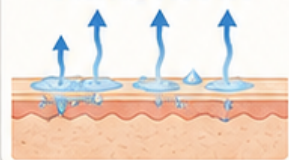
Capillary Action in Xylem



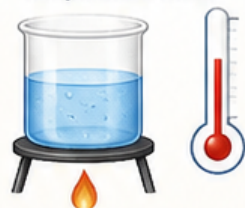
3 Thermal Properties

- **High specific heat** ($4.18 \text{ J/g}\cdot^\circ\text{C}$): H-bonds absorb energy before temp rises → stabilizes body temp, moderates climate
- **High heat of vaporization:** evaporation removes lots of heat → sweating cools mammals
- Both stem from energy needed to break H-bonds

Sweating Cools You



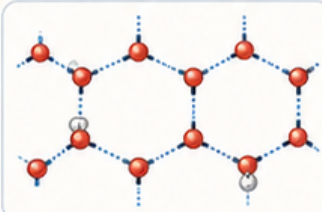
Heat Absorbed Before Temperature Rises



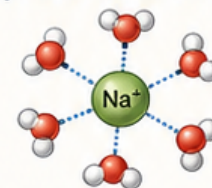
4 Density & Solvent

- **Ice less dense** than liquid water: crystal lattice = more spacious → ice floats → insulates aquatic life in winter
- Ice has **MORE** organized H-bonds than liquid water (4 each, fixed)
- **Universal solvent:** dissolves polar/ionic solutes via hydration shells
- Hydrophobic molecules excluded → drives bilayer formation & protein folding

Ice Lattice (Hexagonal)



Hydration Shell Around Na^+



Exam Sniper — Where This Shows Up

- ⊗ **MCQ:** "Why can water striders walk on water?" → cohesion / surface tension (NOT viscosity, NOT adhesion)
- ⊗ **MCQ:** "Why does sweating cool the body?" → high heat of vaporization
- ⊗ **MCQ/FRQ:** Xylem water transport always requires both cohesion AND adhesion to be mentioned
- ⊗ **FRQ:** Water temp vs. heat added graph — flat parts = phase changes (H-bonds breaking); steep parts = kinetic energy increasing
- ⊗ **Data Q:** Climate data → ocean temperature stability = high specific heat of water

Trap Alert

- ✗ H-bonds are NOT covalent — they are weak electrostatic attractions
- ✗ Ice has more H-bonds than liquid water, NOT fewer
- ✗ Cohesion (H_2O-H_2O) \neq Adhesion (H_2O -surface)
- ✗ "High specific heat" \neq "high heat of vaporization"

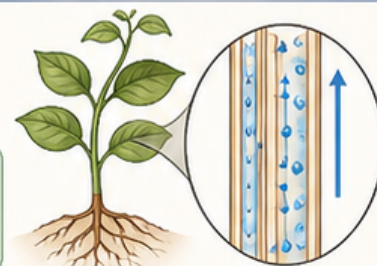
Practice Question

Question: In a plant on a hot day, water moves from roots to leaves through xylem vessels even without a pump. Which combination of water properties best explains this movement?

- (A) High specific heat and high heat of vaporization
- (B) Cohesion and adhesion
- (C) Lower density of ice and universal solvent ability
- (D) Hydrogen bonding and high specific heat



Answer: (B) — Cohesion holds the water column together as tension pulls it upward. Adhesion to xylem cell walls helps support the column against gravity. Always name both cohesion AND adhesion for full credit.



1.2–1.3 Elements of Life + Dehydration & Hydrolysis

Sprint Review • Exam in 3 Days

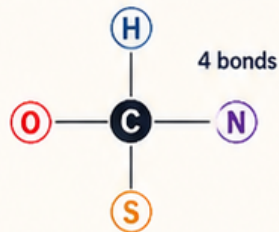
1.2 Elements of Life

CHONPS — The Six Elements

- C Carbon** — backbone of all organic molecules
- H Hydrogen** — in all organic molecules + water
- O Oxygen** — in most macromolecules + water
- N Nitrogen** — in amino acids (amino group) & nucleic acids (bases)
- P Phosphorus** — in DNA/RNA backbone, ATP, phospholipids
- S Sulfur** — in some amino acids (cysteine, methionine) → disulfide bonds

Why Carbon = Life

- 4 valence electrons → can form 4 covalent bonds
- Bonds to C, H, O, N, S, P → enormous molecular diversity
- Can form: chains, branches, rings
- Functional groups determine reactivity: hydroxyl (–OH), carboxyl (–COOH), amino (–NH₂), phosphate (–PO₄), carbonyl (C=O), methyl (–CH₃)



Key Functional Groups

Carboxyl (–COOH)		acidic, in amino acids & fatty acids
Amino (–NH₂)	–NH ₂	basic, in amino acids
Phosphate (–PO₄)		in ATP, DNA, phospholipids; transfers energy
Hydroxyl (–OH)	–OH	polar, in sugars & alcohols; participates in dehydration reactions
Sulfhydryl (–SH)	–SH	in cysteine; forms disulfide bonds in proteins

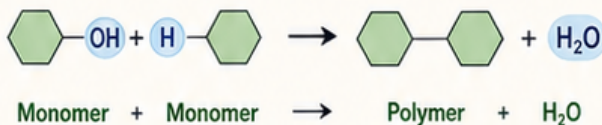
Exam Sniper

- Given a molecular diagram, identify –OH, –COOH, –NH₂, –PO₄, –SH
- “Which element is found in proteins but NOT carbohydrates?” → **Nitrogen** (and sulfur)
- “Which element distinguishes nucleic acids from proteins?” → **Phosphorus**

1.3 Dehydration & Hydrolysis

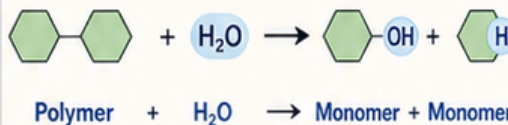
Dehydration Synthesis (Condensation)

- Builds polymers from monomers
- Releases one H₂O molecule per bond formed
- Requires energy input (anabolic)
- Forms glycosidic, ester, peptide, and phosphodiester bonds



Hydrolysis

- Breaks polymers into monomers
- Consumes one H₂O molecule per bond broken
- Releases energy (catabolic) — used in digestion
- All digestion enzymes catalyze hydrolysis



Exam Sniper

- Digesting stored glycogen → **Hydrolysis**
- During translation, amino acids are joined → **Dehydration synthesis**; water is released
- Compare **anabolic** vs. **catabolic**: dehydration = anabolic; hydrolysis = catabolic
- 50-amino acid polypeptide forms → 49 water molecules released ($n-1$)

The Four Macromolecules

- Carbohydrates**: glucose → starch/cellulose/glycogen
- Proteins**: amino acids → polypeptides
- Nucleic acids**: nucleotides → DNA/RNA
- Lipids**: NOT true polymers — no repeating monomers
- Triglycerides**: glycerol + 3 fatty acids (ester bonds)

Trap Alert

- Dehydration **removes** water; hydrolysis **uses** water
- Water molecules released = $n-1$
- Lipids are NOT polymers — do not say “**lipid monomers**”



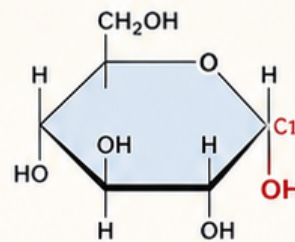
1.4 Carbohydrates

α vs. β glucose is one of the highest-yield distinctions

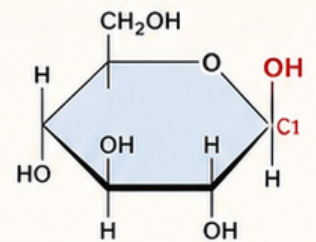
The Critical Comparison: α vs. β Glucose

Feature	α -Glucose	β -Glucose
-OH on C1	Points down	Points up
Bond formed	α -1,4-glycosidic bond	β -1,4-glycosidic bond
Polysaccharides	Starch (amylose/ amylopectin), Glycogen	Cellulose, Chitin
3D shape	Coiled helix \rightarrow energy storage	Straight, stacked sheets \rightarrow structural
Humans digest?	Yes (amylase breaks α bonds)	No (no enzyme for β bonds)
Function	Short-term energy storage	Cell walls (plants), exoskeletons (chitin in insects/fungi)

α -Glucose

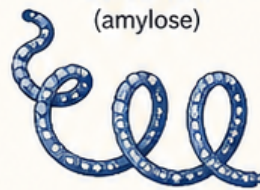


β -Glucose



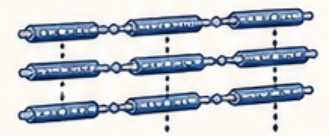
Starch (α)

Coiled helix (amylose)



Cellulose (β)

Straight, parallel fibers



Polysaccharide Summary

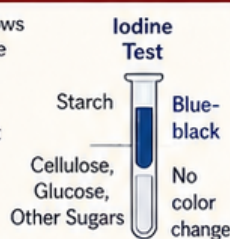
	Starch: α -glucose; plants store energy; amylose (unbranched) + amylopectin (branched)
	Glycogen: α -glucose; animals/fungi store glucose; highly branched \rightarrow quick mobilization
	Cellulose: β -glucose; plant cell walls; hydrogen bonds between chains = incredible strength
	Chitin: β -glucose + nitrogen; insect/crustacean exoskeletons & fungal cell walls

Simple Sugars

	Glucose ($C_6H_{12}O_6$): most common; cellular respiration substrate
	Fructose: found in fruits; isomer of glucose (same formula, different structure)
	Ribose ($C_5H_{10}O_5$): in RNA; Deoxyribose: in DNA (missing -OH at C2)
	Disaccharides: sucrose = glucose + fructose; lactose = glucose + galactose; maltose = glucose + glucose

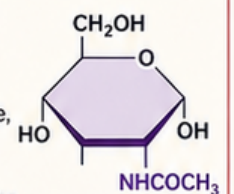
Exam Sniper

- Why can cows digest grass but humans cannot? \rightarrow cows have bacteria with β -glucosidase; humans lack enzyme for β -1,4 bonds in cellulose
- Starch and cellulose are both made of glucose. Why different functions? \rightarrow α vs. β bond types \rightarrow different 3D shapes \rightarrow different properties
- Iodine test: starch turns blue-black; does NOT react with cellulose, glucose, or other sugars
- Animals store excess glucose as glycogen, NOT starch



Trap Alert

- Starch and cellulose differ by bond type, NOT by monomer
- Glycogen is animal storage polysaccharide, NOT starch
- Chitin contains nitrogen — do not describe it as "pure glucose"



Practice Question

A researcher compares the digestibility of starch and cellulose in human subjects. Starch is completely broken down, but cellulose passes through undigested. Which molecular difference best explains this result?

- (A) Starch is made of glucose while cellulose is made of galactose
- (B) Starch contains α -glycosidic bonds while cellulose contains β -glycosidic bonds
- (C) Starch is a disaccharide while cellulose is a polysaccharide
- (D) Cellulose monomers are linked by hydrogen bonds rather than covalent bonds

Answer

(B) — Both starch and cellulose are made entirely of glucose. Human amylase breaks α -1,4 bonds but not β -1,4 bonds. The key difference is bond geometry, not monomer identity.





1.5 Lipids

The macromolecule that isn't a polymer

! Critical Fact — Lipids are NOT Polymers

- ✓ No repeating monomer unit — unified by being hydrophobic / nonpolar
- ✓ Poorly soluble in water because they lack polar functional groups
- ✓ Four main types: triglycerides, phospholipids, waxes, steroids



Triglycerides (Fats & Oils)

- **Structure:** 1 glycerol + 3 fatty acids → linked by ester bonds (dehydration synthesis)
- **Saturated fat:** no double bonds; straight chains; pack tightly; solid at room temp (animal fats)
- **Unsaturated fat:** one or more C=C double bonds; kinked chains; can't pack tightly; liquid at room temp (plant oils)
- **Function:** long-term energy storage (2× more energy per gram than carbs)

Fatty Acid Structures

Saturated (no double bonds)



Unsaturated (one or more C=C)

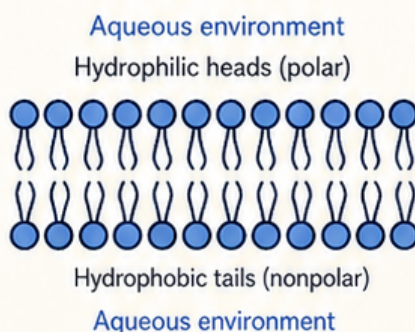


Kink from double bond

Phospholipids

- **Structure:** glycerol + 2 fatty acids + 1 phosphate group
- **Amphipathic:** hydrophilic phosphate head + hydrophobic fatty acid tails
- In water → spontaneously form bilayer (tails inward, heads outward)
- Foundation of ALL cell membranes
- **Fluidity** affected by:
 - Unsaturation (increases fluidity)
 - Cholesterol (buffers fluidity)
 - Temperature

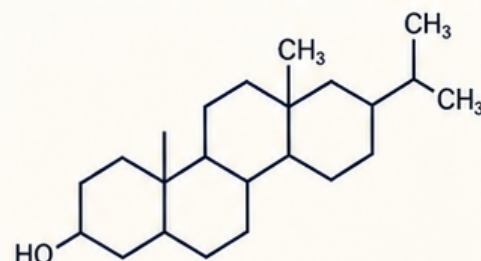
Phospholipid Bilayer



Steroids

- 4 fused carbon rings — very different structure from other lipids
- **Cholesterol:** in animal cell membranes → regulates fluidity; precursor for other steroids
- **Steroid hormones:** testosterone, estrogen, cortisol — all derived from cholesterol
- Steroid hormones are lipid-soluble → cross membranes directly → bind intracellular receptors (NOT membrane receptors)

Steroid (Cholesterol) Structure



Exam Sniper

💧 Why do phospholipids form a bilayer in water? → amphipathic nature; minimizes hydrophobic exposure

❓ Which is NOT a polymer? → Lipid / Triglyceride

➡ A steroid hormone can enter a cell without a membrane receptor because it is nonpolar / lipid-soluble

🌊 Membrane fluidity: unsaturated fatty acids increase fluidity; cholesterol acts as a buffer (more fluid when cold, less when hot)

🧈🌿 Butter vs. olive oil at room temperature explained by saturated vs. unsaturated molecular packing

! Trap Alert

✗ Lipids are NOT polymers — never say “lipid monomers”

✗ Steroid hormones do NOT need membrane receptors — they enter cells directly

✗ “Saturated” refers to hydrogen saturation of C–C bonds

✗ Waxes are ester-linked lipids, also NOT polymers, highly hydrophobic

1.6 Nucleic Acids

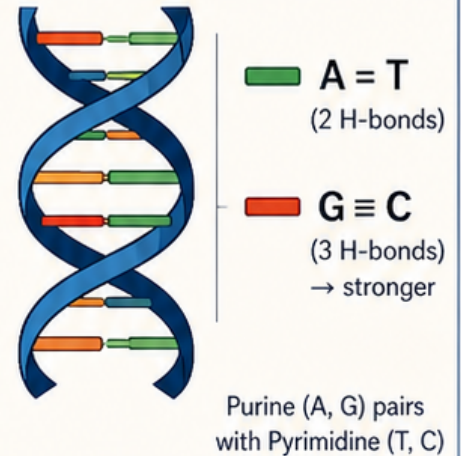
Master DNA vs. RNA and Chargaff calculations



DNA vs. RNA — The Must-Know Comparison

Feature	DNA	RNA
Sugar	Deoxyribose (no -OH at C2)	Ribose (-OH at C2)
Bases	A, T, G, C	A, U (uracil, no thymine), G, C
Strands	Double-stranded (helix)	Single-stranded (usually)
Location	Nucleus (+ mitochondria, chloroplasts)	Nucleus → cytoplasm
Function	Long-term information storage	mRNA (message), tRNA (translator), rRNA (ribosome)
Stability	More stable (no 2'-OH)	Less stable

DNA Helix & Base Pairing



Chargaff's Rules (dsDNA only)

- A pairs with T (2 hydrogen bonds)
- G pairs with C (3 hydrogen bonds) → stronger
- Therefore: %A = %T and %G = %C
- Also: %A + %G = %T + %C = 50% (purines = pyrimidines)
- Applies to double-stranded DNA only — NOT ssDNA, NOT RNA
- More G≡C pairs → higher melting temperature

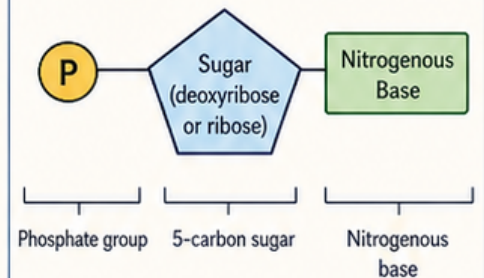


Nucleotide Structure

- Monomer = nucleotide = phosphate + sugar + nitrogenous base
- Nucleotides linked by phosphodiester bonds (3'-5' direction)
- DNA strands are antiparallel: 5'→3' and 3'→5'
- Purines (2 rings): Adenine, Guanine
- Pyrimidines (1 ring): Cytosine, Thymine, Uracil
- ATP: adenine + ribose + 3 phosphates — energy currency



Parts of a Nucleotide



$$\%G = \%C = (100 - 2 \times \%A) \div 2$$



Exam Sniper

- ✓ DNA sample has 30% adenine. What is % cytosine? → 20%
- ✓ Which base pairs with guanine in DNA? In RNA? → Cytosine in both
- ✓ 60% G+C vs 40% G+C: higher melting temperature? → 60% G+C
- ✓ DNA found in eukaryotes: nucleus, mitochondria, chloroplasts
- ✓ Unit 1 nucleic acid structure is foundational for Unit 6 gene expression



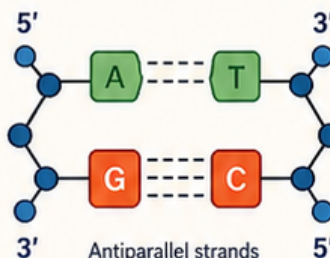
Trap Alert

- ✗ Chargaff's rules apply to dsDNA only
- ✗ RNA uses uracil, not thymine
- ✗ DNA backbone = phosphate-deoxyribose; RNA = phosphate-ribose
- ✗ Purines are larger bases: A and G

Practice Question

Analysis of a double-stranded DNA molecule reveals that 22% of the nucleotides contain adenine. Which composition is correct?

- (A) 22% thymine, 28% guanine, 28% cytosine
- (B) 22% thymine, 28% guanine, 28% cytosine
- (C) 22% thymine, 56% guanine, 0% cytosine
- (D) 44% thymine, 6% guanine, 6% cytosine



Answer

(B) — %A = %T = 22%.
So %G + %C = 56%,
and each is 28%.

Memorize:
 $\%G = \%C = (100 - 2 \times \%A) \div 2$

1.7 Proteins

Protein structure, denaturation, and why shape = function



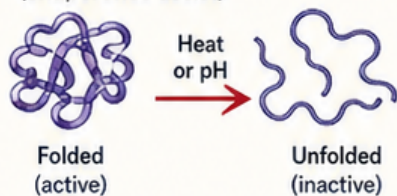
The Four Levels of Protein Structure — CRITICAL

Level	What it is	Bond / Interaction	Exam Key Point
1° Primary	Sequence of amino acids	Peptide bonds (covalent)	Determined by DNA. Dictates all other levels. NOT broken by denaturation
2° Secondary	α -helix or β -pleated sheet	Hydrogen bonds (between backbone NH and C=O)	Broken by heat / pH changes
3° Tertiary	Overall 3D shape of polypeptide	H-bonds, ionic bonds, hydrophobic interactions, disulfide bonds	Shape = function. Disulfide bonds most stable
4° Quaternary	Multiple polypeptide chains assembled together	Same as 3° between subunits	Only proteins with multiple subunits (e.g., hemoglobin)



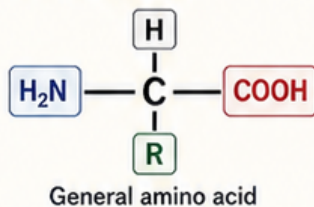
Denaturation

- Loss of 3D shape = loss of function
- Caused by high temperature, extreme pH, heavy metals, certain chemicals
- Breaks H-bonds, ionic bonds, hydrophobic interactions (2°, 3°, 4° structure)
- Does NOT break peptide bonds (1° structure intact)
- Usually irreversible (cooked egg white)
- Some proteins can refold (chaperones assist)



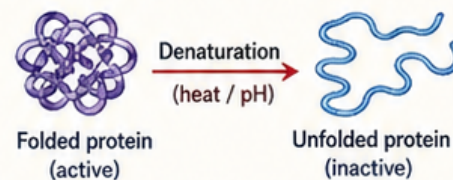
Amino Acid Structure

- Central carbon bonded to NH_2 , COOH , H, and R-group
- R-group determines identity and properties
- Nonpolar R-groups \rightarrow hydrophobic core; polar/charged R-groups \rightarrow outside, facing water
- 20 different amino acids \rightarrow nearly unlimited protein diversity
- Peptide bond forms between carboxyl of one AA and amino of next by dehydration



Protein Functions

- **Enzymes:** catalysts; active site shape = substrate specificity
- **Structural:** collagen, keratin, actin/myosin
- **Transport:** hemoglobin, channel/carrier proteins
- **Defense:** antibodies
- **Signaling:** some hormones and receptors
- **Motor:** myosin, dynein, kinesin



Exam Sniper

- Mutation changes one amino acid \rightarrow may alter 3D shape and function
- Explain why an enzyme stops working at high temp: heat disrupts non-covalent interactions, active site loses shape, substrate cannot bind
- Enzyme activity vs. pH / temperature graphs: identify optimum and explain extremes using structure knowledge
- Hemoglobin has four subunits \rightarrow quaternary structure
- DNA mutation \rightarrow AA sequence change \rightarrow protein shape change \rightarrow function change \rightarrow selection pressure



Question: A researcher heats an enzyme solution from 37°C to 90°C and observes a complete loss of enzymatic activity. When cooled back to 37°C, activity does not return. What best explains this?

- Peptide bonds were hydrolyzed by heat
- Substrate concentration decreased as temperature increased
- High temperature disrupted non-covalent interactions, causing the protein to unfold and lose its active site shape irreversibly
- Heat caused the DNA encoding the enzyme to denature



Trap Alert

- ✗ Denaturation does NOT break peptide bonds
- ✗ All proteins have 1°, 2°, 3°; only some have 4°
- ✗ Disulfide bonds are covalent and not broken by temperature alone
- ✗ R-groups can be polar, nonpolar, acidic, or basic



Answer: (C) — Heat disrupts hydrogen bonds, hydrophobic interactions, and ionic bonds that maintain higher-order structure. The active site loses shape, so the enzyme no longer functions. Peptide bonds are not broken by heat.



Sprint Practice — Mixed Questions

Cross-topic exam-style reasoning

1 MCQ Cross-Topic



Which of the following correctly pairs a macromolecule with its monomer AND the type of bond linking monomers together?

- (A) Starch — fructose — glycosidic bond
- (B) Protein — nucleotide — hydrogen bond
- (C) DNA — deoxyribonucleotide — phosphodiester bond
- (D) Triglyceride — amino acid — ester bond



Answer / Reasoning

Answer: (C) — DNA monomers are deoxyribonucleotides, linked by phosphodiester bonds.

Starch is made of glucose, proteins are made of amino acids and linked by peptide bonds, and triglycerides are glycerol + fatty acids.

2 FRQ-Style Data Analysis



A DNA sample from a bacterium contains 15% adenine. A student predicts that the DNA of an extremophile living in hot springs would have a higher percentage of G+C pairs than the bacterium. Provide TWO pieces of reasoning that support this prediction.

- (A) G-C pairs have 2 hydrogen bonds; more G-C = lower melting point
- (B) G-C pairs have 3 hydrogen bonds; more energy is needed to break them; high G+C raises DNA melting temperature
- (C) Extremophiles use RNA instead of DNA
- (D) High G+C content shortens DNA strands



Answer / Reasoning

Answer: (B) — G≡C pairs form 3 hydrogen bonds vs. 2 for A=T.

DNA with higher G+C requires more thermal energy to separate, so genomes are more stable in high-temperature environments.

If %A = 15%, then %T = 15% and %G+%C = 70%.

3 MCQ Reasoning



A student argues that lipids should not be classified with carbohydrates, proteins, and nucleic acids as 'macromolecules' because lipids lack a defining characteristic shared by the other three groups. Which characteristic is the student referring to?

- (A) Lipids do not contain carbon atoms
- (B) Lipids are not polymers composed of repeating monomer subunits
- (C) Lipids cannot form hydrogen bonds with water
- (D) Lipids are not involved in any cellular processes



Answer / Reasoning

Answer: (B) — Carbohydrates, proteins, and nucleic acids are polymers with repeating monomers.

Lipids have no repeating monomer unit; triglycerides are glycerol + 3 fatty acids, and steroids are 4 fused rings.



Tip: For every practice question, identify the trap before choosing the answer.



Final Review — Exam Traps + Checklist

Use this page the night before and the morning of the exam

1. Unit 1 High-Frequency Exam Traps

- **Cohesion ≠ Adhesion.** Cohesion = water-to-water; Adhesion = water-to-surface. Both are needed for xylem transport.
- **Ice has MORE H-bonds than liquid water.** Ice floats because the lattice is more spacious, not because it has fewer bonds.
- **Starch vs. cellulose:** different bonds, SAME monomer. Both are glucose; α -1,4 vs. β -1,4.
- **Lipids are NOT polymers** — never write “lipid monomers.”
- **Denaturation does NOT** break peptide bonds; primary structure stays intact.
- **Chargaff’s rules** apply ONLY to double-stranded DNA.
- **Steroid hormones** cross membranes directly and bind intracellular receptors.
- **Nitrogen** is in proteins and nucleic acids; phosphorus is in nucleic acids and phospholipids; sulfur is in some amino acids.

2. Pre-Exam 10-Minute Checklist

Water:

- I can explain why water is polar
- I can name all 4 water properties and their biological significance
- I know cohesion \neq adhesion, and both are needed for xylem transport
- I know ice is less dense because of its more ordered H-bond lattice



Elements & Reactions:

- I can name CHONPS and where each element is found
- I know phosphorus is in nucleic acids, ATP, and phospholipids — not proteins or carbs
- Dehydration synthesis = builds polymers + releases H_2O
- Hydrolysis = breaks polymers + consumes H_2O
- n monomers joined = (n-1) water molecules released

Carbohydrates:

- α -glucose \rightarrow starch & glycogen; energy storage, digestible
- β -glucose \rightarrow cellulose & chitin; structural, indigestible
- Starch vs. cellulose = same monomer, different bond type
- Glycogen is more branched than starch

Lipids:

- Lipids are NOT polymers
- Phospholipids are amphipathic and form bilayers
- Unsaturated fats = kinked chains = more fluid
- Steroid hormones are lipid-soluble and use intracellular receptors



Nucleic Acids:

- DNA: deoxyribose, T, double-stranded
- RNA: ribose, U, single-stranded
- A=T and G=C in dsDNA only
- I can calculate %G and %C if given %A
- Higher G+C content \rightarrow higher melting temperature



Proteins:

- I know the 4 levels of protein structure
- Denaturation breaks non-covalent bonds, not peptide bonds
- Shape determines function
- I can explain why an enzyme stops working at high temperature or extreme pH

3. Final Sprint Strategy for Unit 1



Highest-yield topics first: protein denaturation, α vs. β glucose, Chargaff calculations, phospholipid bilayer formation, water properties + xylem



FRQ danger zone: explain HOW a property causes a biological outcome



Data questions: Iodine = starch only; Biuret = proteins; Benedict’s = reducing sugars



Connection forward: Unit 1 appears in Unit 2, Unit 3, Unit 6, and Unit 7



If you can explain every checked item out loud, you’re ready.

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