Target MLT

Class-1

TOP

MLT MCQS

- RRB - LA / LS
- AIIMS - JLT/SLT
- PGIMER Chandigarh
- MHSRB Telangana

Target MLT

Beer's law states that the darker the color produced, the more light absorbed in the specimen; the more light absorbed, the-

A. Lower the concentration of the analyte
B. Higher the concentration of the analyte (solute)
C. More light transmitted
D. Longer the wavelength required

Spectrophotometer ⇒ Lambert law
Beer's law

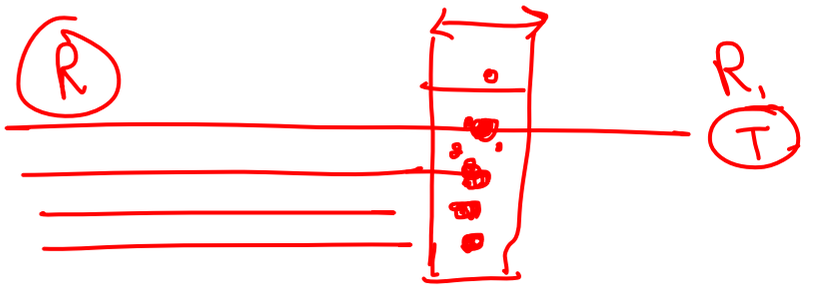
Target MLT

Lambert's Law ⇒ Absorbance ∝ Path length

Beer's Law ⇒ Absorbance ∝ Conc. of Analyte.

Transmitted

Transmittance ∝ $\frac{1}{\text{Conc. of Analyte}}$



Target MLT

NaOH → 23, 16, 1 = 40

N

What is the normality of a solution of sodium hydroxide (molecular weight=40) containing 20 grams in 100 mL of solution?

A. 5.0N
B. 1.0N
C. 0.5N
D. 0.4N

N = ?? ⇒ gram eq. / Vol of solution

Normal

HCl ⇒ N/10 HCl

0.1 Normal

Target MLT

NaOH = Na - OH

$$\text{Gm eq} = \frac{\text{wt.}}{\text{Eq. wt}}$$

$$N = \frac{\text{Gram eq. of Solute}}{\text{Volume of sol. in litre}}$$

$$= \frac{\text{Weight}}{\text{Equivalent weight}} \times \frac{1000}{V\ ml}$$

$$\Rightarrow \frac{20}{40} \times \frac{1000}{100}$$

$$= \frac{20}{4} = 5$$

$$\text{Equivalent Weight} = \frac{\text{Molar Mass}}{n}$$

Valency = 1

$$eq \Rightarrow \frac{40}{1} = 40$$

Target MLT

Carbon

Carbohydrates are organic compounds of-

1. carbon 2. hydrogen 3. oxygen

$C_n H_{2n} O_n$

A. 1 and 2 only

B. 1 and 3 only

C. 2 and 3 only

D. 1,2, and 3

C H O

1 : 2 : 1

$C_6 H_{12} O_6$

Target MLT

To make a 1:5 dilution of serum sample, dilute-

A. 1.0 mL of serum + 5.0 mL of diluent
B. 1.0 mL of serum + 4.0 mL of diluent
C. 1.0 mL of serum + 6.0 mL of diluent
D. 5.0 mL of serum + 1.0 mL of diluent

Target MLT

Cell Mediated
Ab Mediated
Humoral Immunity

Which one of the following is a function of gamma globulin?

A. Transports glucose
B. Regulates body temperature
C. Performs as fibrinogen for blood coagulation
D. Provides humoral immunity

Plasma Protein
- Albumin → osmotic Balance
- Fibrin → Blood Coagulation
- Globulin ⇒ γ-Globulin = Antibodies or ⇒ Immunoglobulins

Target MLT

Most methods for the determination of blood creatinine are based on the reaction of creatinine and-

A. Sulfuric acid
B. Alkaline picrate
C. Acetic anhydride
D. Ammonium hydroxide

Jaffe Test?

0.7 - 1.5 mg/dL

Serum Creatinine

Target MLT

Jaffe's test

Creatinine reacts with picric acid in alkaline medium to form orange red color complex.

O.D.

Target MLT

The ketone bodies include acetoacetic acid, acetone, and- ?

A. Lactic acid
B. 3-hydroxy butyric acid
C. Oxaloacetic acid
D. Acetic acid

Beta- Hydroxy Butyrate

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Rothera Test

Examples of Ketone bodies

- Acetone (2%)
- Aceto-acetate (20%)
- Beta-hydroxybutyrate (or 3-hydroxy butyrate)- 78%

Harts

Only the first two are true ketones while hydroxy butyrate does not possess a keto (C=O) group.

ISRO

Target MLT

Exo → Duct ⊕

Endo ⇒ Ductless

⊛ Langerhans cell are ⊕ in :→ SKin

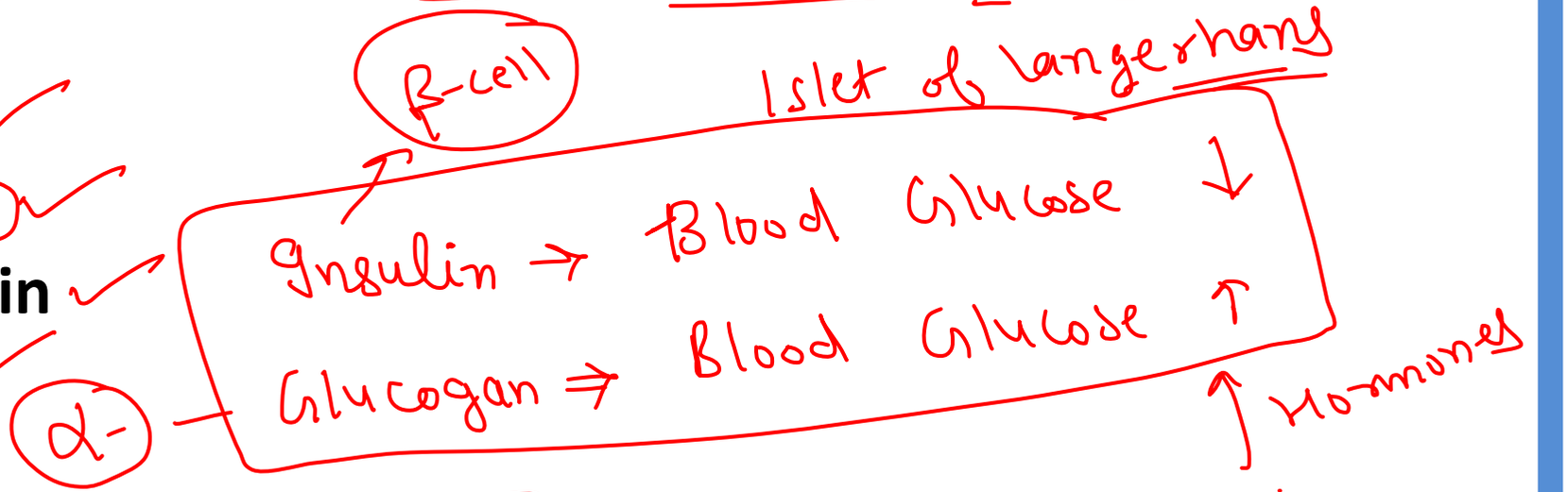
Blood glucose levels are directly regulated by the hormone –

A. ACTH ✓

B. Insulin ✓

C. Thyroxin ✓

D. FSH ✓



⊛ Antagonist

Pancreas → Compound / mixed → Endocrine

Exocrine → Enzyme

Target MLT

Albumin, alpha1, alpha2, beta, and gamma globulin are electrophoretic fractions of-

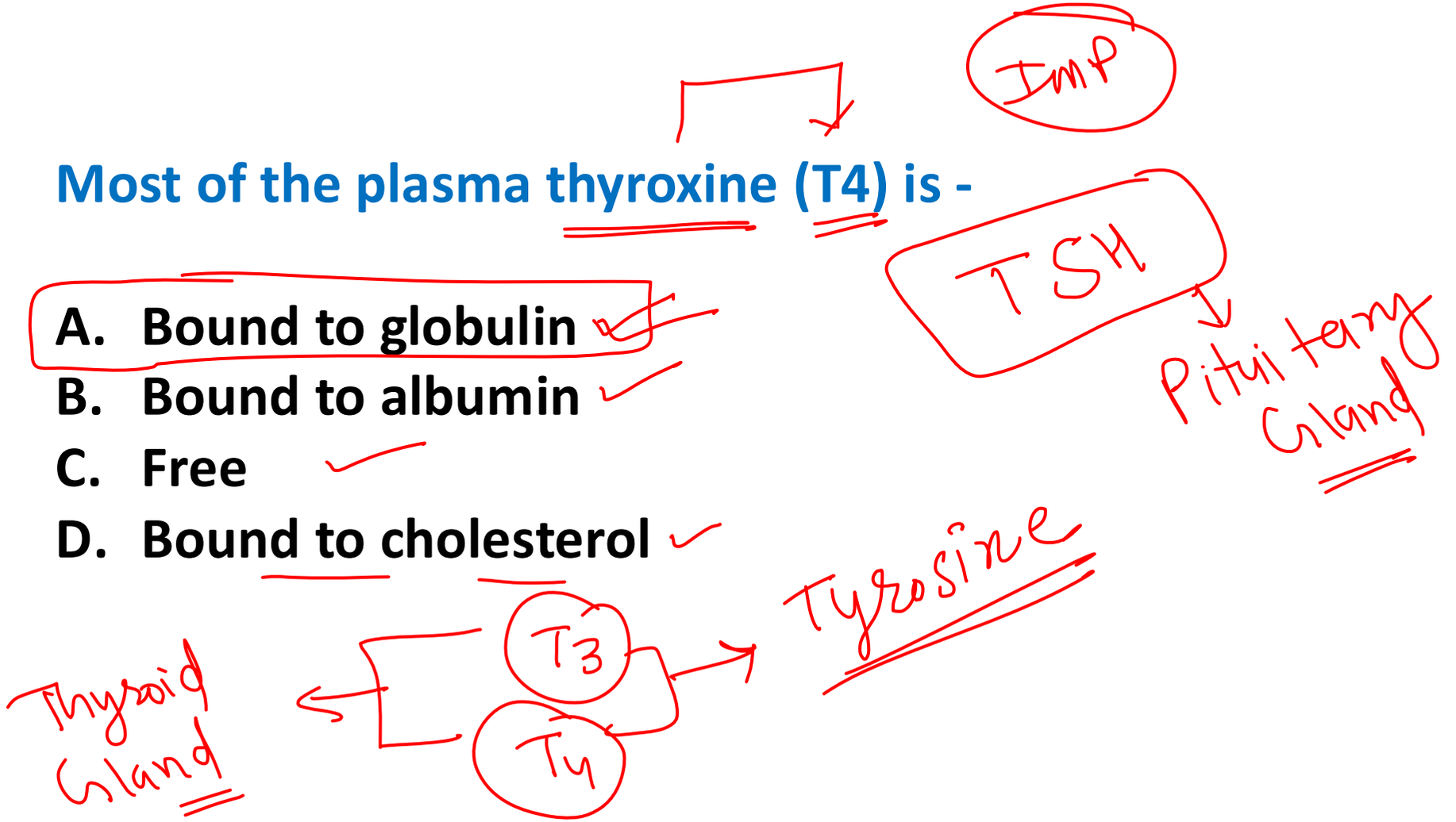
A. Hemoglobin
B. Amino acid
C. Serum protein
D. Serum lipoprotein

Plasma – clotting factor = Serum

Target MLT

Most of the plasma thyroxine (T4) is -

A. Bound to globulin
B. Bound to albumin
C. Free
D. Bound to cholesterol



Target MLT

- Two specific binding proteins are responsible for the transport of thyroid hormones.
- Thyroxine binding globulin (TBG)
- Thyroxine binding pre-albumin (TBPA)
- Both T4 and T3 are more predominantly bound to TBG.
- A small fraction of free hormones are biologically active.
- T4 has a half-life of 4-7 days while T3 has about one day.