



Target MLT

Class-8

TOP



MLT MCQS

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



Target MLT

Chinese letter appearance

Meta chromatic granules

Albert stain

Selective media for Corynebacterium diphtheria is-

A. Mannitol salt agar

→ selective media for Staphylococcus
↳ cluster

✓ B. Potassium tellurite agar

→ C.D

C. TCBS (Thiosulfate Citrate Bile Sucrose agar)

→ Vibrio

D. Crystal violet blood agar

→ Streptococcus
↓
Chain

Target MLT

Which of the following is Acid fast parasite?

A. Nocardia ✓

B. Cryptosporidium ✓

C. M. tuberculosis ✓

D. M. leprae ✓

A/C/D ⇒ Bacteria

Staining → Crush Course

Target MLT

Paul Ehrlich
↓
A.F. staining

Which staining technique is primarily used for the identification of acid-fast bacteria like *Mycobacterium tuberculosis*?

A. Gram staining → Gram +ve or Gram -ve

B. Ziehl-Neelsen staining → also known as Acid fast stain

C. Giemsa staining ✓

D. India ink staining

↓
Negative staining → Nigrosin

↓
(Capsule) Demonstration

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- ① Nagler's Reaction
- ② Reverse CAMP Test.

Which of the following is the causative agent of gas gangrene?

A. Clostridium botulinum

B. Clostridium tetani → Tetanus

C. Clostridium perfringens → Gas Gangrene

D. Bacillus anthracis → Anthrax

Anaerobic, spore forming Bacteria

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Which of the following organisms are lactose fermenters and grow pink on MacConkey agar?

A. Escherichia coli and Klebsiella

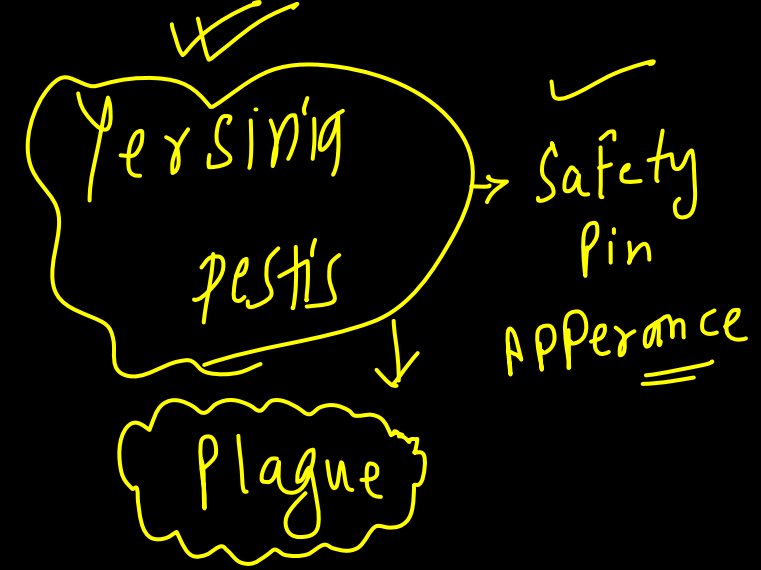
Ans

B. Proteus mirabilis and Shigella sonnei

C. Salmonella typhi and Vibrio cholerae

D. Pseudomonas aeruginosa and Clostridium difficile

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Examples
Escherichia, Klebsiella Citrobacter
Salmonella, Shigella Proteus, Morganella, Providencia and Yersinia
Shigella sonnei

Lactose fermentor

Non Lactose ~~fermentor~~

Late lactose fermentor



Q Vaccine Term → Louis Pasteur

Target MLT

Louis Pasteur is associated with all EXCEPT-

- A. Vaccination of smallpox → First vaccine of world → Edward Jenner
- B. Germ theory — L.P
- C. Pasteurization — L.P
- D. Vaccination of rabies — L.P

✓ ✓
C A R
| | |
— — —
Bullet shaped virus

Rabies

Hydrophobia
Fear from water.

Neurobodies

Target MLT

Which is not present in Gram-negative bacteria-

A. Peptidoglycan

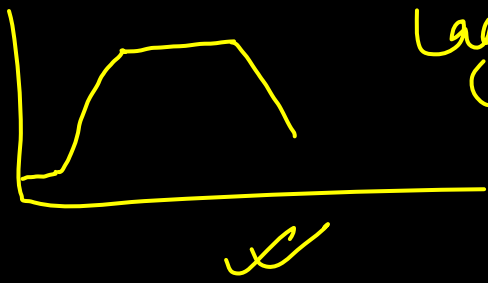
B. Teichoic acid

C. LPS → Lipopolysaccharide

D. Porin channels

Acid fast nature
of Mycobacteria
is due to ⊕ of

↓
Mycolic Acid



Lag → Log → Stationary → Decline Phase

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Lag phase

Bacteria size

Live
Dead viable

Correct sequence of bacterial growth curve-

- A. Log phase – Lag Phase – Stationary phase – Decline phase
- B. Lag Phase – Log phase – Stationary phase – Decline phase
- C. Stationary phase – Log phase – Lag Phase – Decline phase
- D. Lag phase – Exponential phase – Log phase – Death phase X

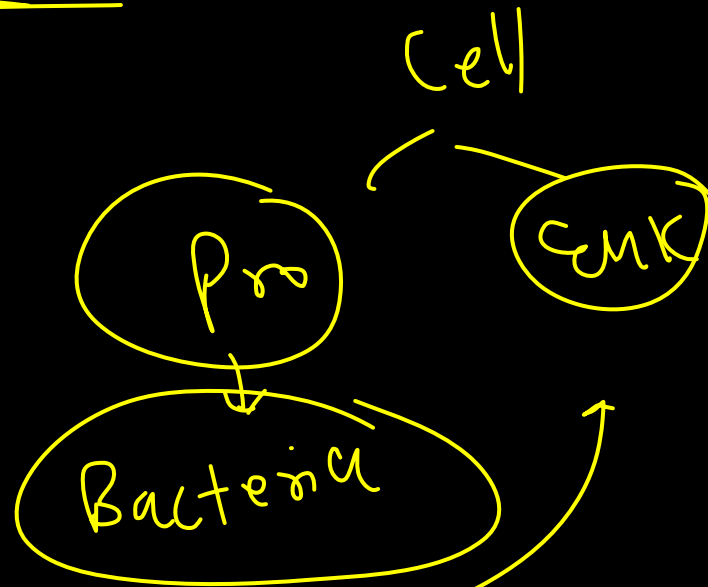
Exponential phase ⇒ Log Phase
 Exponential growth Linear

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Which is not a prokaryote?

- ✓ A. Mycoplasma ✓
- ✓ B. Rickettsiae ✓
- ✓ C. Shigella ✓
- ✓ D. Entamoeba

↓
Parasite



Cell wall
Deficient
Bacteria
↓
Mycoplasma
↓
Pleomorphism =

Target MLT

Pike's media
↓
transport

Which of the following is Anaerobic Culture Media?

~~A. MacConkey agar~~ → Lactose / Non-lactose fermentor

~~B. Stuart's medium~~ → Transport media.

~~C. Lowenstein Jensen (LJ) medium~~ → Selective for MTB

D. Robertson's cooked meat (RCM) broth

↓
Anaerobic
culture
media

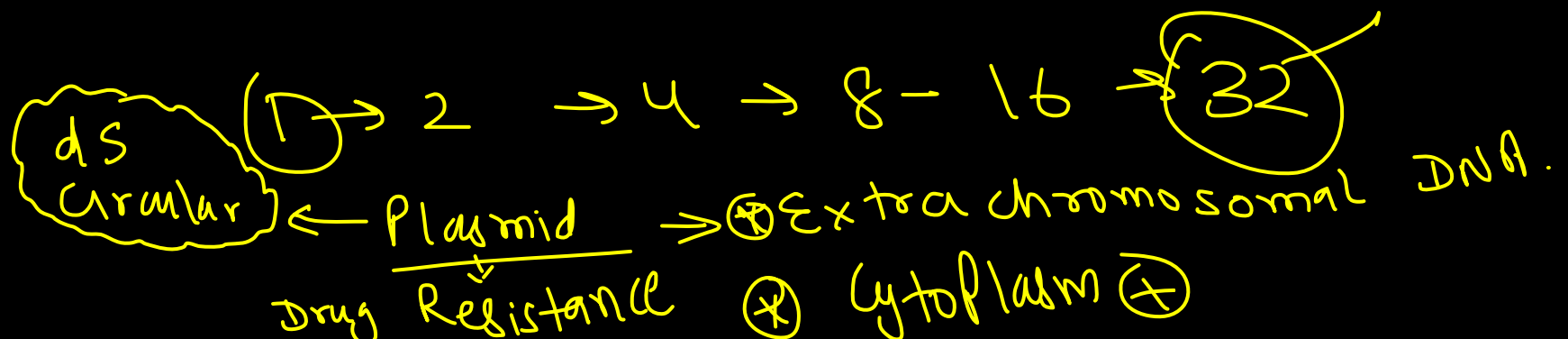
Marathon
(55+)

Target MLT

Polymerase chain Reaction
↓
Cary B mulis (1984)

PCR is used to-

- A. Detect target plasmids
- B. Amplify small amount of DNA**
- C. Seal the cut ends of DNA
- D. Cleave the bacterial plasmid

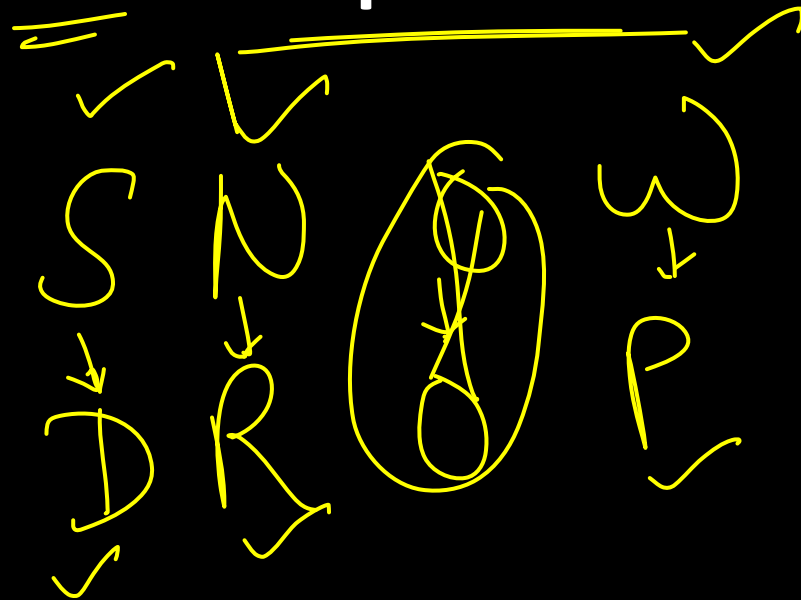


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Southern → DNA
Northern → RNA
Western → Protein

Northern blotting is used for separation of-

- A. DNA ✓
- B. RNA** ✓
- C. Proteins ✓
- D. None ✓



Target MLT

Which is used in digestion and decontamination of sputum in smear preparation?

- A. NaOH and NaCl
- B. KOH and HCl
- C. NaCl and NALC
- D. N-acetyl-L-cysteine and NaOH

NALC & NaOH

Petroff's

NaOH

Sodium Hydroxide

Material → ↘
↘
↘

Target MLT

Sputum and specimens from non-sterile sites need prior treatment for digestion (to liquefy the thick pus cells and homogenization) and decontamination (to inhibit the normal flora) and concentration (to increase the yield).

- Petroff's method (4% NaOH): Most commonly followed
- NALC (N-acetyl-cysteine) + 2% NaOH: This is superior to Petroff's method for isolation. NALC liquefies the sputum and NaOH kills the normal flora. This method is better compatible with automated culture systems.

Target MLT

CBNAAT
✓ MTB Detected
✓ Rif Resistance Not detected

Tuberculosis
↓
Nikshay
NID

Xpert MTB/RIF test is/are used for-

A. For assessing resistance to isoniazid X

✓ B. For assessing rifampicin resistance ✓

✓ C. Diagnosis of TB

D. Both B and C

CBNAAT = Cartridge based
Nucleic Acid Amplification
Test