MVST BOD & NST PART IB **Thurs.26 th Fri. 27th Jan 2017**
Pathology Practical Classes 16

ANSWERS

Q1 Why were these controls included?

A1 Control tube 7 is designed to confirm that the Streptolysin O will lyse the horse red blood cells. Control tube 8 is designed to verify that the patient's serum will not lyse the horse red blood cells.

Q2 Do both bacterial species produce α toxin?

A2 Cl. perfringens produces **α toxin**

Q3 How do you account for the inherent differences between the antibiotic sensitivities of the standard strains of *Staphylococcus aureus, Escherichia coli* and *Pseudomonas aeruginosa* ?

A3 Generally, Gram positive bacteria are more sensitive than Gram negative bacteria to penicillins and other antibiotics. This is in part due to the presence of the outer membrane in Gram negative organisms which restricts antibiotic entry.
In Gram negative organisms, antibiotics enter the cell through porins (channels) in the outer membrane. *Pseudomonas aeruginosa* has fewer porins than most Gram negative bacteria and is thus inherently more selective, and thus resistant.

Plate D

Q4. How many colony types are present? Gram-stain the organisms.

A4 Three colonies are present.

Q5. Can you now identify them?

A5. ***Ent. faecalis***
Ps. aeruginosa
S. aureus

(The large amorphous colony producing a green pigment is a Gram negative bacillus *Ps. aeruginosa*. The golden colony is a Gram positive coccus in grape-like clusters, *S. aureus*. The semi-translucent colony with watery edges is a Gram positive cocci which may show chain formation and is therefore *Ent. faecalis*.)

Catalogue Number	Small Image	Large Image
M_BI_MX_23.jpg	Plate D	Plate D