

MANSOURA UNIVERSITY
FACULTY OF VETERINARY MEDICINE
DEPT. BACTERIOLOGY, MYCOLOGY AND IMMUNOLOGY



SYSTEMATIC BACTERIOLOGY EXAM.
3rd year Students, 2nd Semester (2011/2012)

Answer the following questions

Time: 2 hours

1) Why are the following sentences incorrect (x)?

(3 marks)

1. Strangles in equines is caused by *Burkholderia mallei*.
2. Brucella species are acid fast organisms.
3. Mycoplasmas are sensitive to penicillins.
4. Vaccination of pregnant ewes against lamb dysentery is active for lambs.
5. Tetanus must occur by oral infection through ingestion of food.
6. Spores of *S. pyogenes* are found subterminal.

2) How can you differentiate.....?

(2 marks)

1. Listeriae from corynebacteria.
2. Pseudomonads from each other.

3) Choose between brackets to complete the following sentences?

(5 marks)

1.toxin is produced only by *C. perfringens* type E.
2. Milk ring test is used for diagnosis of..... (salmonellae, listeriae, brucellae, corynebacteria, mycobacteria) in raw milk.
3. Neurotoxin that produced by *C. tetani* binds..... (reversibly, irreversibly, with acetyl choline) to the gangliosides of nerve cells, so, antitoxin is..... (highly, mostly, not, less) effective.
4. Generally, pathogenic clostridia give..... (positive, negative, suspected) results with gelatin liquefaction test.
5. M-protein is present in the cell wall of..... (*S. aureus*, *S. pyogenes*, *E. coli*, *A. pyogenes*).
6. Different species of pseudomonads are.....(less active, active, of no value in their results) for carbohydrate fermentation.
7. Digitonin test is an important test for..... (salmonellae, listeriae, mycoplasmas, brucellae, spirochaetes).

Please, follow the questions on back of your questions paper

8.is a commensally potential pathogen (*Salmonella* Enteritidis, *Brucella abortus*, *Mycobacterium tuberculosis*, *Pasteurella multocida*).
9. ETEC differs from EIEC in..... (motility, capsule, enterotoxins production, microscopic appearance).

4) Put the mark (✓) or (X) in front of each of the following sentences? (3 marks)

1. There is a strong relationship between motility of *salmonellae* and their pathogenicity.
2. Tetanolysin is only produced by all toxigenic strains of *C. perfringens*.
3. Symptomatic anthrax is a disease infecting sheep and caused by *B. anthracis* type A through ingestion of its spores.
4. Bacillary haemoglobinuria in cattle is a disease caused by *C. novyi* type D.
5. Chickens and pigeons are susceptible to infection by *B. abortus*.
6. Fried egg microcolonies is a character of *mycoplasmas*.

5) Mention the cause(s) and explain your answer.....? (2 marks)

1. Food poisoning in humans arises from eating salted fish.
2. Septic shock syndrome.

6) Give an idea on: (5 marks)

1. Role of rodents in the transmission of some pathogenic bacteria.
2. Lipids in the cell wall of mycobacteria and their importance.
3. Staphylococcal super-antigens.
4. Vaccination against *B. anthracis*.
5. How can you obtain a pure culture of an organism suspected to be salmonellae from intestinal contents.

7) Discuss: (5 marks)

1. Laboratory diagnosis of spirochaetes.
2. Streptococcal toxins.
3. Ascoli test.
4. Classification of mycobacteria.
5. Antigenic structure of *P. multocida*.

GOOD LUCK

Prof.Dr. Gamal Abd EL-Gaber Mohamed Younis
Professor and Chairman of the Department