寄生蟲學(25分)

請依題號順序做答(共10題選擇題，每題2.5分)

1. *Trichuris suis* 之寄主是：(1)狗; (2)貓; (3)豬; (4)雞
2. *Demodex* spp. 之寄生部位是：(1)毛囊; (2)腸道; (3)血液; (4)直腸
3. *Taenia taeniaeformis* 之終寄主是：(1)豬; (2)貓; (3)人; (4)狗
4. 吸蟲 *Schistosoma japonicum* 在牛的寄生部位是：(1)肺臟之靜脈內; (2)腦部之靜脈內; (3)肝門靜脈內; (4)脾之動脈內
5. 腸結節蟲(nodular worm)之結節主要發生原因：(1)寄生部位感染細菌; (2)失血過多; (3)寄主的免疫反應所致; (4)梭菌毒素所致
6. 下列何種原蟲之主要致害是會造成牛之流產：(1)*Trypanosoma gambiense*; (2)*Trichomonas fetus*; (3)*Trypanosoma evansi*; (4)*Trypanosoma congolense*
7. 犬壁蝨(*Rhipicephalus sanguineus*)之宿性是：(1)一宿性; (2)二宿性; (3)三宿性; (4)四宿性
8. 指出下列何種豬之寄生蟲，其幼蟲會在肝臟週轉並在日後造成肝臟白斑：(1)*Ascaris*; (2)*Trichuis*; (3)*Dictyocalus*; (4)*Oesophagostomum*
9. 終寄主僅寄生於貓科動物之胞子蟲是：(1)*Toxoplasma gondii*; (2)*Hepatozoon canis*; (3)*Klossiella* spp. (4)*Leucocytozoon caulleryi*
10. 下列何種寄生蟲可經由胎盤感染？(1)*Toxocara cati*; (2)*Toxocara caninum*; (3)*Toxascaris leonina*; (4) *Diphyllobothrium latum*

免疫學 (25 分)

1. 藥物過敏的原理建立在 hapten-polysaccharide carrier 的概念，此段敘述有何不正確？(2 分)
2. 何謂 T-cell epitope？(2 分)
3. 爲何 Rabbit anti-mouse IgG Fab Ab 可和 mouse IgM 作用？(2 分)
4. 爲何 CDR3 可因 Ig gene recombination 而增加其 variability？(2 分)
5. ELISA 與 Immunoblotting 所用的 substrate 在呈色方面有何不同？(2 分)
6. Follicular dendritic cell 是 APC，此段敘述有何不正確？(2 分)
7. MHC 分子那個區域 (region) 爲 polymorphic？(2 分)
8. 複選：下列何者跟 Th1 response 有關 1) NK 2) IFN-g 3) IL-12 4) IgE (2 分)
9. IL-15 receptor = IL-15Ra + IL-15Rb + common g subunit，此段敘述有何不正確？(2 分)
10. Aa 陽性之母馬若第二次懷 Aa 陰性之幼馬，將有可能造成幼馬之 hemolytic disease of new born，此段敘述有何不正確？(2 分)
11. Inactivated influenza vaccine 可用來治療 influenza virus 感染，此段敘述有何不正確？(2 分)
12. 何謂 cross priming？其重要性爲何？(3 分)

見背面

Bacteriology (25 points)

1. Please give four agar names (such as Baird-Parker Medium) which are used for bacteria cultivation. (10 points)
2. Please give the regular high pressure saturated steam autoclave conditions for biomedical materials sterilization. (5 points)
3. An article published in Veterinary Microbiology with the title of "Phylogenetic analysis of livestock oxacillin-resistant *Staphylococcus aureus*." The abstract excluding conclusion is "The aim of this study was to characterize oxacillin-resistant *Staphylococcus aureus* (ORSA) isolates from livestock environments and meat market workers by molecular epidemiological analysis. Staphylococcal enterotoxin reversed passive latex agglutination (RPLA) and multiplex polymerase chain reactions (PCR) were used to detect enterotoxin-producing *S. aureus*. The molecular genetic similarity of ORSA was also compared by pulse-field gel electrophoresis (PFGE) and multi-locus sequence typing (MLST). A total of 30 ORSA isolates were identified and 27 of these strains were from human sources—a higher contamination potential from human origin in the animal raising and handling field was suspected. The most common type of enterotoxin detected in this study was type B. Regarding the bacterial phylogenetic analysis of ORSA isolates, five major clusters of PFGE patterns were suggested with >80% similarity in cluster I. Seven MLST patterns were identified with the most prevalent types being ST338/ST338slv and ST59. Population genetic studies based on MLST have shown that major ORSA clones have emerged from six clonal complexes (CCs), with CC59 being the dominant one." Please give your comments for the conclusion and further suggestions". (10 points)

Virology (25 points)

1. What are the characteristics that distinguish viruses from other microorganisms?
2. What are the differences between DNA and RNA viruses?
3. What determines the ability of a virus to replicate in particular cells?
4. How can a virus be cultivated and quantitated *in vitro*?
5. Name a virus that can cause disease with central nervous system involvement in any animal. Describe how is the disease transmitted.

試題隨卷繳回