University of Hong Kong
School of Chinese Medicine
Bachelor of Traditional Chinese Medicine Examination
2003-2004

Contents

University No: _____

THE UNIVERSITY OF HONG KONG

Department of Biochemistry

Bachelor of Science: Final Examination (2003-2004)

Biochemistry (BIOC1001) – Basic Biochemistry

&

Bachelor of Chinese Medicine – Final Examination (2003-2004)

BCHM1013 – Biochemistry I

Date: 15 December 2003 (Monday) **Time: 6:30 pm – 8:30 pm**

Candidates may use any self-contained, silent, battery-operated and pocket-sized calculator. It is the candidate's responsibility to ensure that his/her calculator operates satisfactorily and it is used only for the purposes of calculation. Recorded material of any kind is not permitted to be stored in the calculator.

Candidates must record the name and type of their calculators on the front page of their examination scripts.

Both British and American spellings of biochemical words and terms are acceptable.

Instruction:

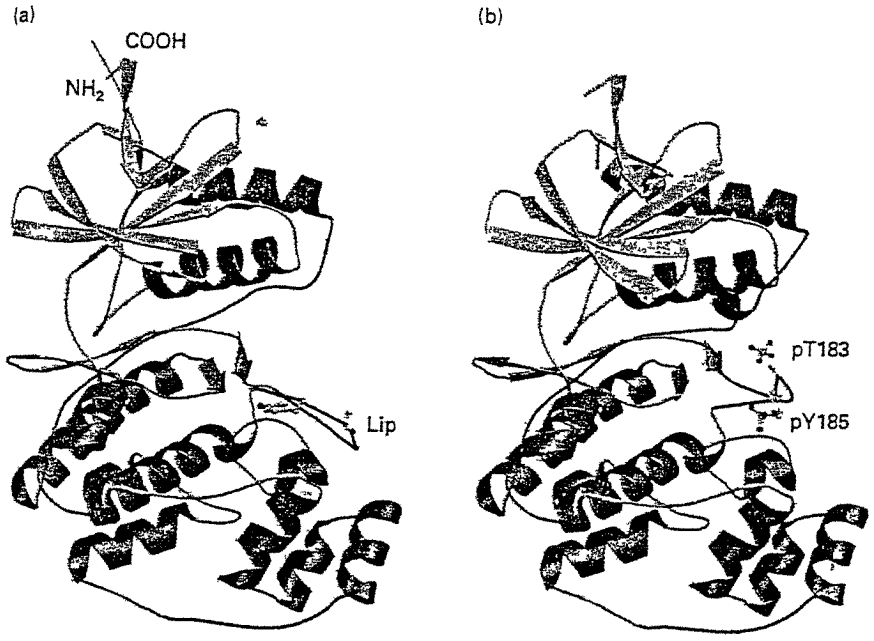
- Please count and make sure that you have **13 pages** (including the cover page). There should be **THREE Sections.**
- Make sure that you write down your student number on every sheet.
- Please answer **ALL** questions

Section	Marks
A	**37%**
B	**16%**
C	**47%**

University No: _____

Section A (37%)

1. The structure of a protein kinase is shown in figure *a* below. This enzyme can be converted to an active form (figure *b*) by phosphorylation of two amino acid residues, T and Y, located at positions 183 and 185, respectively. The covalent modification of T and Y to pT183 and pY185 promotes the dimerization of the protein kinase and the binding of its substrates, ATP and certain proteins, to the active site.



a) Name five types of secondary structures that you can discern or identify in this protein kinase. (5%)

Ans.: _____

_____

_____

_____

_____

University No: _____

b) What amino acid residues are represented by T and Y? (2%)

Ans.: T = _____

Y = _____

c) What kind of structural change can be observed upon phosphorylation of the protein kinase? (1%)

Ans.: _____

d) Hydrogen bonds are used to stabilize the protein structure. What three other non-covalent forces or interactions also are being used? (3%)

Ans.: _____

_____

_____

e) You want to determine the thermodynamic parameters for the conversion reaction of *a* to *b* form. You find that at 37 °C, $\Delta G = -2$ kcal/mol and $\Delta H = 1$ kcal/mol. What will be the ΔS value? (2%)

Ans.: _____

f) The formation of a dimer can provide the protein kinase with new properties. Suggest two such properties. (2%)

Ans.: _____

_____

g) Besides ion-exchange and gel filtration chromatography, what three other methods could be used to purify the protein kinase? (3%)

Ans.: _____

_____

_____

h) If the protein kinase can absorb ultraviolet (UV) light at wavelengths between 260 and 280 nm, what three amino acid residues would you expect to be present in the protein? (3%)

Ans.: _____

_____

_____

i) Suppose the extinction coefficient or molar absorptivity (ε) of the protein kinase is 10,000 M^{-1} cm^{-1} at 280 nm. You prepare a solution of this enzyme and obtain an absorbance value = 0.1 using a cuvette of 1 cm in length. What is the concentration of your protein kinase? (2%)

Ans.: _____

j) How could an enzyme increase the rate of a biochemical reaction? (1%)

Ans.: _____

k) What is the relationship between the rate of a reaction and the temperature at which the reaction is carried out? (2%)

Ans.: _____

l) What kinetic parameters define the catalytic efficiency of an enzyme? (1%)

Ans.: _____

m) Suppose the covalent modification of the protein kinase only enhances the binding of the substrates to the active site, what kinetic parameter is affected, K_m or V_m? (1%)

Ans.: _____

University No: _____

n) Name three other methods that a cell can use to regulate the activity of an enzyme. (3%)

Ans.: _____

_____

_____

o) Vitamins and minerals are important cofactors for some enzymes. Give one example of a water-soluble vitamin, one example of a lipid-soluble vitamin, and one example of a metal ion that can help enzyme catalysis. (3%)

Ans.: one water-soluble vitamin is _____

one lipid-soluble vitamin is _____

one metal ion is _____

p) Water is chosen in biological systems because of its unique properties. Name three such properties. (3%)

Ans.: _____

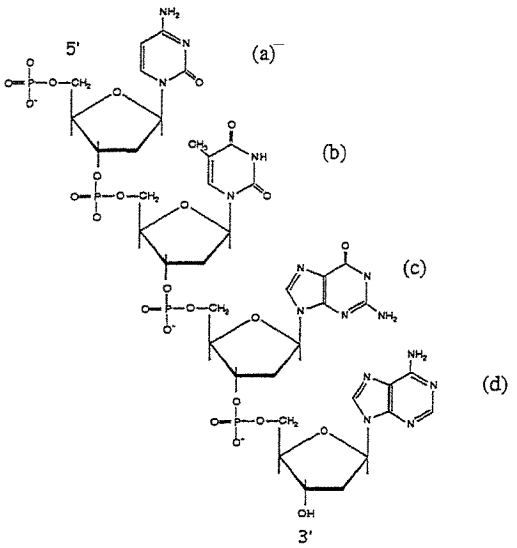
_____

_____

University No: _____

Section B (16%)

2) Name the bases in the following oligonucleotide. (2%)



Ans: (a) _____, (b) _____, (c) _____, (d) _____

3) Group the above bases into purines and pyrimidines (1%).

Ans: purines = _____ and _____

Pyrimidines = _____ and _____

4) In 1941, George Beadle and Edward Tatum established the link between genes and proteins by irradiating *Neurospora* (bread mould) with X-ray. How were the genes affected by this procedure? (2%)

Ans: _____

5) Addition of NaCl to a solution of proteins can cause some proteins to aggregate and become insoluble. What is the major force that drives this aggregation process? (1%)

Ans: _____

University No: _____

6) Following selective precipitation of proteins using NaCl, without further processing of the sample, proteins that remained soluble can be applied directly to which chromatographic system? (1%)

Ans: _____

Give a reason for your selection. (2%)

Ans: _____

_____

7) The molecular weights and pI values of four proteins, designated A, B, C and D, are shown below.

Protein	Molecular weight (Daltons)	pI
A	45,000	5.2
B	25,500	10.2
C	12,000	7.9
D	100,200	4.1

At pH7.0, which of these protein(s) will **not** bind to a **cation** exchange column? (2%)

Ans: _____

Assuming all the four proteins are globular in shape, what will be their order of elution from a gel filtration column at pH7.0? (2%)

Ans: (1) _____, (2) _____, (3) _____, (4) _____

8) The absorbance at 280 and 260 nm of three different solutions (X, Y, and Z) were measured. The results are shown in the following table. Which of these solutions contain pure proteins, DNA or RNA? (3%)

Solution	$A_{260\ nm}$	$A_{280\ nm}$	
X	1.80	1.00	Ans:
Y	2.00	1.00	Ans:
Z	0.50	1.50	Ans:

University No: _____

Section C (47%)

9) Complete the following paragraph with words in the given list. (22%)

The body store of lipid is increased with excess dietary intake not only of fats, but also of (1) and (2). Caloric excess of dietary (1) and (2) can result in the synthesis of (3). In the case of (1), the major carbon source for synthesis of (3) is (4) that can be converted to (5); in the case of (2), the carbon source that comes from (6) can be metabolically converted to (5) or (7) intermediates. Synthesis of (3) occurs mainly in (8) cells in humans, although the process also occurs in (9). The fates of these (3), however, differ. In (8) cells, (10) reacts with (11) phosphate in a pathway that results in the formation of (12); the (12) are packaged with (13), (14) and (15) to form (16) for secretion into the (17) circulation. In the walls of capillaries that supply (9) and (18), (19) cleaves (12) of (16) to (3) and (11). The (3) that enter (18) undergo (20) in mitochondria, resulting ultimately in (21) formation. The (3) that enter (9) cells react with (11) phosphate to form (12); these (12) remain stored as such until (22) is activated to release (3) and (11) into the (17) circulation.

amino acids	carbohydrates	oxidation	chylomicrons	liver
cholesterol	phospholipids	transamination	HDL	muscle
fatty acids	proteins	lipoprotein lipase	LDL	$FADH_2$
glycerol	apolipoprotein	hormone-sensitive lipase	VLDL	NADH
glucose	lipoprotein	oxidative decarboxylation	adipose tissue	ATP
glycogen	acetyl CoA	oxidative phosphorylation	blood	DNA
triacylglycerols	fatty acyl CoA	TCA cycle	lymph	RNA

Answers

1)	9)	17)
2)	10)	18)
3)	11)	19)
4)	12)	20)
5)	13)	21)
6)	14)	22)
7)	15)	
8)	16)	

University No: _____

Circle the best answer to each of the following questions (10 – 16). (7%)

10) In the fluid mosaic model of a membrane, what term would best describe a protein that is associated with a leaflet through hydrogen-bondings or ionic interactions?

a) lipid-anchored protein
b) cytosolic protein
c) peripheral protein
d) mosaic protein
e) integral membrane protein

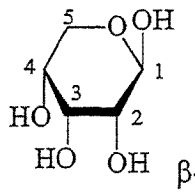
11) What property is important for lipid components of the cell membrane?

a) solubility in water
b) amphipathic properties
c) volatility
d) high molecular weight
e) electrically charged property

12) The K_m for hexokinase in muscle tissue is 0.1 mM and the circulating blood glucose level is usually 5 mM. Following a meal, blood glucose levels can rise to as much as 10 mM. What can you conclude from the information?

a) glucose inhibits hexokinase
b) glucose 6-phosphate will be produced twice as fast after a meal
c) glucose 6-phosphate is an allosteric activator of hexokinase
d) hexokinase in muscle will be saturated and unable to respond to changes in blood glucose
e) hexokinase does not exhibit Michaelis-Menten kinetics

13) Which is the anomeric carbon in the structure of β-D-ribopyranose?

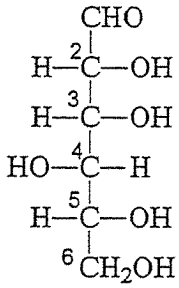


β-D-ribopyranose

a) carbon 1
b) carbon 2
c) carbon 3
d) carbon 4
e) carbon 5

University No: _____

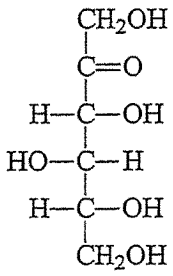
14) Which hydroxyl group in the open-chain form of D-gulose would participate in forming a pyranose structure?



D-gulose

a) hydroxyl group at C-2
b) hydroxyl group at C-3
c) hydroxyl group at C-4
d) hydroxyl group at C-5
e) hydroxyl group at C-6

15) Which of the following names best describes D-sorbose, a carbohydrate?

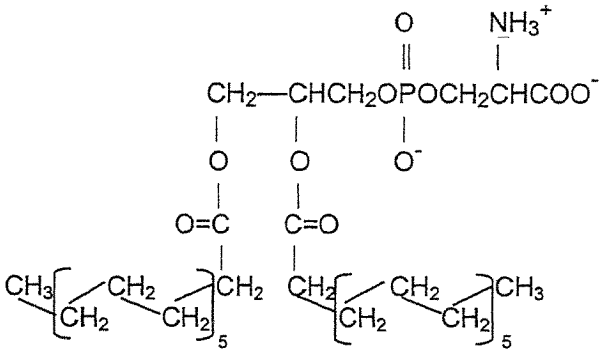


D-sorbose

a) aldotetrose
b) aldohexose
c) ketotetrose
d) ketopentose
e) ketohexose

University No: _____

16) The phosphatidylserine shown below has a transition temperature (T_m) of 50°C. What structural change in the phosphatidylserine would increase the T_m value?



a) increase the number of methylene units (—CH_2—)in the hydrocarbon tail
b) insert one double bond in the hydrocarbon tail
c) insert two conjugated double bonds in the hydrocarbon tail
d) eliminate the serine group
e) eliminate one of the hydrocarbon tails

17) Indicate whether the following statements are true or false. If false, explain. (18%)

a) Polysaccharides are water-soluble if their component monosaccharides are water-soluble. Examples can be found in glycogen and glycosaminoglycans.

b) Caveolae and rafts are domains enriched in cholesterol and sphingolipids in animal cell membranes. The fluidity of the lipid domain is determined by the presence of cholesterol and unsaturation in the hydrocarbon tails of the sphingolipids.

c) Amino acid breakdown products are transported to the kidney for excretion in the urine. Theses products include glutamine, alanine, urea and NH_4^+.

d) Bile salts, steroid hormones and cholesterol have structurally similar steroid nucleus. They can therefore enter cells by diffusion across the cell membrane.

e) The electron transport chain and the TCA cycle use the same pool of NAD^+ and NADH.

f) Phosphatidylcholine and phosphatidylserine seldom align against each other in a phospholipid bilayer because of repulsion between their head groups.

- END OF PAPER -

The University of Hong Kong

School of Chinese Medicine

Bachelor of Chinese Medicine

BCHM2014 Immunology

EXAMINATION

Time Allowed: 2 hours

Date: December 16, 2003 (Tuesday) **Time: 2:30pm to 4:30pm**

GENERAL INSTRUCTIONS:

1. This examination paper comprises 4 pages.
2. Answer ***ALL*** questions in Part A.
3. Answer any ***FIVE*** questions in Part B.
4. This written examination carries a total of 100 marks for this course.
5. Make sure that you enter your ***UNIVERSITY No.*** in the space provided below:

UNIVERSITY NO. _____

Part A: Multiple Choice Questions

Part B: Short Answer Questions

Answer any **FIVE** questions on the answer book provided. All questions carry **EQUAL** marks (14 marks each). Please allow 15 minutes for each question.

1. Describe the main differences between the primary and secondary antibody responses.

2. Describe the major molecular mechanisms involved in generating antibody diversity.

3. Describe briefly how cytosolic and endocytic antigens are processed and presented differently to the two main T cell subsets.

4. What are the underlying defects in B lymphocyte development in X-linked agammaglobulinaemia and in hyper-IgM syndrome?

5. Name four important adverse effects of corticosteroid treatment.

6. List three approaches for the control of acute allograft rejection.

7. Describe the classical experiment of Ader and Cohen in which the immune response of rats was "conditioned" to respond to the sweet taste of saccharine.

8. Give 2 examples to explain how immunological balance is important in health and in the fight against diseases.

~ END OF PAPER ~

The University of Hong Kong

School of Chinese Medicine

Bachelor of Chinese Medicine

BCHM2001 Diagnostics of Chinese Medicine 中醫診斷學

Time Allowed: 3 hours

Date: December 17, 2003(Wednesday) **Time: 9:30am - 12:30pm**

答題指示

1. 本試卷分爲單選題、多選題、填空題、名詞解釋題、問答題及病案分析題六部份，合共 10 頁。

2. 所有問題必須作答。

3. 全部單選題均須於選擇題答題紙上作答；
   全部多選題均須於多選題答題紙上作答；
   其他問題均須於本試卷適當位置作答。

4. 請在適當位置填上學生編號。

5. 考生不得攜帶本試題離開試場。

學生編號：_____

一、單選題（共40題，每題1分，共40分）

二、 多選題 (共10題，每題1分，共10分)

三、填空題 (每一空格 0.5 分，共 10 分)

四、名詞解釋 (每題 2 分，共 10 分)

1. 解顱

2. 熱結旁流

3. 除中

4. 寒包火

5. 身熱不揚

學生編號：_____

五、 問答題 （共3題，每題4分，共12分）

1. 試述促、結、代脈的異同。

2. 何謂心脈痹阻証？試述其四種不同成因的証型及其臨床証候。

3. 如何鑒別營分証和血分証？兩者關係如何？

六、病案分析　(主訴 2 分，証名 2 分，病機分析 5 分，共 9 分。兩個病案共 18 分。)

病例（一）

患者，女，47 歲。自述半年來經常頭暈頭熱，並見頭痛，面部發麻，晚上耳鳴目睛脹痛，睡眠甚差，心慌，全身拘緊作痛，時欲嘔吐，性急易怒，怒則手顫腳軟，步履不穩，脈細無力，舌紅無苔。

請寫出主訴、証名及病機分析。

學生編號：_____

病例（二）

患者，男，40 歲。兩年前開始浮腫，時腫時消，未及時治癒，病情遷延。近兩個月來常感心悸心慌。症見面色㿠白，身倦乏力，少氣懶言，形寒肢冷，心悸，面目及下肢浮腫，按之凹陷，腰膝酸冷，小便短少，舌質淡胖，苔白滑，脈沉遲而細。

請寫出主訴、証名及病機分析。

～ 全卷完 ～

The University of Hong Kong

Bachelor of Chinese Medicine

BCHM3002 Chinese Internal Medicine
中醫內科學

Time Allowed: 3 hours

Date: December 17, 2003 (Tuesday) Time: 9:30am to 12:30pm

答題指示

1. 本試卷分爲單選題、病例分析單選題、配搭題、簡答題及論述題五部分，共 19 頁。

2. 全部單選題、病例分析單選題、配搭題均須於選擇題答題紙上作答；
   簡答題可任意從 1 – 7 題選擇其中 5 題於本試卷作答；
   論述題可任意從 8 – 13 題選擇其中 3 題於本試卷作答；

3. 請在適當位置貼上學生編號標籤。

4. 考生不得攜帶本試題離開試場。

學生編號：_____

一、　單選題（每題1分，共30分）

二、 病例分析單選題 (每題 1 分，共 10 分)

三、 配搭題 (每題1分，共10分)

學生編號：_____

四、簡答題

從 1-7 題中選答 5 題，每題 4 分，共 20 分。

1. 中風如何分期？

學生編號：_____

2. 瘧疾的表現特徵是什麼？

學生編號：_____

3. 痢疾與泄瀉有何不同？

學生編號：_____

4. 失眠的診斷依據是什麼？

學生編號：_____

5. 簡述陽黃與陰黃的鑑別要點。

學生編號：_____

6. 簡述咳嗽的辨証要點。

學生編號：_____

7. 簡述肺脹的危重症候分型。

學生編號：_____

五、論述題

從 8 - 13 題中選答 3 題，每題 10 分，共 30 分

8. 真心痛口何與一般的胸痹心痛相區別？

學生編號：_____

9. 試述眩暈的辨証要點及治療原則。

學生編號：_____

10. 心悸一病，介紹了哪些証型？安神定志丸、歸脾湯和桃仁紅花煎參用於其中哪三個証型？這三個証型在臨床表現上如何區別？

學生編號：_____

11. 中風的閉証及脫証有何異同？

學生編號：_____

12. 柴胡是肝病常用藥物，請評述“柴胡劫肝陰”之說。

13. 試述喘証的辨証論治。

~ 全卷完 ~

The University of Hong Kong

School of Chinese Medicine

BCHM1001 Foundation Theories of Chinese Medicine

中醫基礎理論

Examination

Time Allowed: 3 hours

Date: December 19, 2003 (Friday) Time: 9:30am to 12:30pm

答題指示

1. 本試卷分爲單選題、多選題、填空題、簡答題及論述題五部分，共 24 頁。

2. 全部單選題均須於選擇題答題紙上作答；
   全部多選題均須於多選題答題紙上作答；
   全部填空題均須於本試卷作答；
   簡答題: 可任意從 1-8 題選答其中 5 題於本試卷作答；
   論述題: 可任意從 9-16 題選答其中 4 題於本試卷作答。

3. 請在適當位置貼上學生編號標籤。

4. 考生不得攜帶本試題離開試場。

學生編號：_____

一、 單選題（每題 0.5 分，共 24 分）

二、 多選題 (每題1分，共14分)

學生編號：_____

三、填空題 (每空格 0.5 分，共 10 分，同頁作答)

學生編號：_____

四、簡答題（任意從 1-8 題選答其中 5 題，每題 4 分，共 20 分）

1. 簡述津液的生理功能。

學生編號：_____

2. 簡述“肺主治節”的含義及作用。

學生編號：_____

3. 何謂“心腎相交”？

學生編號：_____

4. 簡述脾與腎的關係。

學生編號：_____

5. 經絡系統由哪些部分組成？

學生編號：_____

6. 簡述風邪的性質和致病等點。

學生編號：_____

7. 簡述濕邪的性質和致病特點。

學生編號：_____

8. 急則治標與緩則治本有何不同？

學生編號：_____

五、論述題（任意從 9-16 題選答其中 4 題，每題 8 分，共 32 分）

9. 試述氣在人體中的作用。

學生編號：_____

10. 試述肝主疏泄的含義及具體生理作用。

學生編號：_____

11. 如何理解“六腑以通爲用”？對臨床辨証有何意義？

學生編號：_____

12. 試述女子胞的生理功能與臟腑的關係？

學生編號：_____

13. 沖脈、任脈、督脈、帶脈名稱的含義是什麼？

學生編號：_____

14. 如何理解“七情皆從心發”？

學生編號：_____

15. 何謂氣虛？其成因和臨床表現如何？

學生編號：_____

16. 何謂因時制宜？試舉例說明之。

~ 全卷完 ~

The University of Hong Kong

School of Chinese Medicine

BCHM3001 Golden Chamber
金匱要略

Time Allowed: 3 hours

Date: December 19, 2003 (Friday) Time: 9:30 am – 12:30 pm

答題指示

1. 本試卷分爲單選題、配伍題、多選題、名詞解釋、論述題及醫案六部分，共 9 頁。

2. 全部單選題均須於選擇題答題紙上作答；
   全部配伍題及多選題均須於多選題答題紙上作答；
   全部填空題均須於答題簿上同頁分行作答；
   名詞解釋可任意選擇其中 4 題於答題簿上分頁作答；
   論述題可任意選擇其中 3 題於答題簿上分頁作答；
   醫案可任意選擇其中 1 題於答題簿上作答。

3. 不論答題紙或答題簿，只能填上學生編號。

4. 考生不得携帶本試題離開試場。

學生編號：_____

一、 單選題（每題0.5分，共50題，共25分）

二、 配伍題 (每題1分，共10題，共10分)

三、　多選題　(每題 2 分，共 14 題，共 28 分)

四、名詞解釋（從 1-6 題中選答 4 題，每題 3 分，共 12 分）

1. 扎動微緊
2. 脇下逆搶心
3. 水分
4. 胕腫
5. 疼痛
6. 郁冒

五、論述題（從 7-11 題中選答 3 題，每題 5 分，共 15 分）

7. 滑脈與澀脈爲相反之脈像，爲何均主宿食在裏？
8. 腎氣丸何以既治小便不利，又治小便過多？
9. 論述“陰陽相得，其氣乃行，大氣一轉，其氣乃散”的含義與其臨床意義。
10. 試比較小半夏湯、生姜半夏湯和半夏乾姜散三方証之異同？
11. 治產後太陽中風的陽旦湯、治虛勞的小建中湯、治腎氣奔豚的桂枝加桂湯，三方中桂枝的作用各是什麼？

六、醫案（從 12-13 題中選答 1 題，共 10 分）

12. 王先生，59 歲。主訴：氣短，胸悶痛 3 年，加重半個月。3 年來，常覺胸部悶痛，時而背部亦牽痛，呼吸氣短，咳吐涎唾。近半月上症加劇，心痛引背，氣喘不能平卧，心悸、納呆。素嗜肥甘厚味。形體肥胖，面色無華，神疲。舌質淡，苔白膩，脈弦滑。西醫作心電圖檢查後，診斷爲冠心病。

    請寫出：
    1. 《金匱》之病名証型
    2. 病因病機
    3. 治則
    4. 選方
    5. 用藥

13. 肖某，男，48 歲，患者因大便後流血三日，前來就醫。並訴或無大便時亦有流血，血濡濕內褲。血色暗淡，便溏腹痛。喜溫喜按，面色白光白，神疲倦怠，頭昏心悸，氣短自汗，手足不溫，舌淡苔少，脈弱。

    請寫出：
    1. 《金匱》之病名証型
    2. 病因病機
    3. 治則
    4. 選方
    5. 用藥

~ 全卷完 ~

The University of Hong Kong

School of Chinese Medicine

BCHM4008 Chinese Emergency Medicine 中醫急診學

Time Allowed: 2 hours

Date: December 19, 2003 (Friday) **Time: 9:30am to 12:00 noon**

答題指示

1. 本試卷分爲單項選擇題、多項選擇題、填空題、簡答題及論述題五部份，合共 8 頁。

2. 所有問題必須作答。

3. 全部單項選擇題均須於選擇題答題紙上作答；
   全部多項選擇題均須於多選題答題紙上作答；
   填空題須於答題簿同頁分行作答；
   簡答題及論述題須於答題簿分頁作答。

4. 考生不得攜帶本試題離開試場。

學生編號：_____

一、　單項選擇題（每題 1 分，共 20 分）

二、　多項選擇題（每題 1 分，共 20 分）

三、　填空題（每空格占 1 分，共 20 分，請同頁分行作答）

四、簡答題（每題 5 分，共 20 分，請分頁作答）

1. 簡述脫証之陽復陰生之象與心肺之氣已生之徵。
2. 急性脾心痛與膽脹發病的病症有何不同。
3. 簡述心衰的病象。
4. 簡述抽搐的針灸治療。

五、論述題（每題 10 分，共 20 分，分頁作答）

5. 試述溫熱外邪致暴喘的病機。
6. 外感高熱與內傷發熱的鑒別。

~ 全卷完 ~

The University of Hong Kong
School of Chinese Medicine

BCHM1009 Histology and Embryology

Examination

Time Allowed: 2 hours

Date: December 20, 2003 (Saturday)
Time: 9:30 a.m. – 11:30 a.m.

GENERAL INSTRUCTIONS

1. This examination paper comprises 13 pages.
2. Answer BOTH Part A and Part B.
3. Make sure that you enter your *UNIVERSITY NO.* in the space provided by using the label provided.

UNIVERSITY NO._____

Part A: Multiple Choice Questions

UNIVERSITY NO. _____

Part B

1. **Briefly describe the basic histological organization and functions of nervous tissue.**

UNIVERSITY NO. _____

2. **Describe briefly the role of microtubules in cell division.**

3. **Describe the three types of proprioceptors found in the musculoskeletal system.**

UNIVERSITY NO. _____

4. **Where does fertilization normally occur? How is polyspermy prevented?**

5. What are the criteria used in the classification of epithelia?

6. ~~What are the criteria used in the classification of epithelia?~~
   What are the structures and functions of the periosteum?

~ END OF PAPER ~

The University of Hong Kong

School of Chinese Medicine

BCHM2103 Canon of Chinese Medicine
《內經》

Examination

Time Allowed: 3 hours

Date: December 22, 2003 (Monday) Time: 9:30am to 12:30pm

答題指示

1. 本試卷分爲單選題、多選題、填空題、原文分析題、簡答題及論述題六部分，共 23 頁。

2. 全部單選題均須於選擇題答題紙上作答；
   全部多選題均須於多選題答題紙上作答；
   全部填空題均須於本試題卷上作答；
   全部原文分析題均須於本試題卷上作答；
   簡答題: 可任意從 1-7 題選答其中 4 題於本試題卷上作答；
   論述題: 可任意從 8-12 題選答其中 3 題於本試題卷上作答。

3. 請在適當位置貼上上學生編號標籤。

4. 考生不得携帶本試題離開試場。

學生編號：_____

一、 單選題（每題 0.6 分，共 27 分）

二、 多選題 (每題1分，共12分)

學生編號：_____

三、填空題 (每題 1 分，共 12 分，同頁作答)

學生編號：_____

四、 原文分析題 （每題3分，共12分）

（提示：主要歸納原文的學術觀點，并結合該篇相關原文對所歸納的學術觀點作出相應分析。）

1. 《素問·上古天真論第一》：夫上古聖人之教下也，皆謂之虛邪賊風，避之有時，恬惔虛無，真氣從之，精神內守，病安從來。

2. 《素問·至真要大論》："諸嘔吐酸，暴注下迫，皆屬於熱"。

學生編號：_____

3. 《素問．痹論》：陰氣者，靜則神藏，躁則消亡。飲食自倍，腸胃乃傷。淫氣喘息，痹 聚在肺；淫氣憂思，痹聚在心；淫氣遺溺，痹聚在腎；淫氣乏竭，痹聚在肝；淫氣肌絕，痹聚在脾。

4. 《靈樞．百病始生》：“風雨寒熱，不得虛，邪不能獨傷人。卒然逢疾風暴雨而不病者，蓋無虛，故邪不能獨傷人。此必因虛邪之風，與其身形，兩虛相得，乃客其形。兩實相逢，眾人肉堅”。

學生編號：_____

五、簡答題（任意從 1-7 題選答其中 4 題，每題 4 分，共 16 分）

1. 《素問・五臟別論》提出診治疾病時應注意哪幾點？

學生編號：_____

2. 《素問・陰陽應象大論》是如何對藥食氣味進行陰陽分類的？

學生編號：_____

3. 《素問・咳論》指出咳主要和那兩個臟腑有關？簡述其病機及臨床意義。

學生編號：_____

4. 《素問・太陰陽明論》“脾與胃以膜相連耳，而能爲之行其津液，何也?” 簡述其機理及臨床意義。

學生編號：_____

5. 《素問・至真要大論》是如何論述反治法的？其臨床運用的要點爲何？

學生編號：_____

6. 《素問・痹論》所載痹症病因有哪些？

學生編號：_____

7. 《靈樞・百病始生》是怎樣認識外感發病機理的？

學生編號：_____

六、論述題（任意從 8-12 題選答其中 3 題，每題 7 分，共 21 分）

8. 《素問・太陰陽明論》指出“陽道實、陰道虛”。請從不同角度加以解釋，并結合本論經文內容，指出其臨床意義。

學生編號：_____

9. 爲什么說“凡陰陽之要，陽密乃固”？

學生編號：_____

10. 怎樣理解臟腑藏瀉的辨証關系？其臨床意義如何？

學生編號：_____

11. 試述《素問・痿論》對痿証提出的治療原則包括哪些？

學生編號：_____

12. 分析《素問・調經論》中“陰盛則內寒”的機理，并指出它與後世所說的“陰盛則寒”的含義有何不同？

~ 全卷完 ~

The University of Hong Kong

School of Chinese Medicine

BCHM4002 Schools of Thought of Chinese Medicine
中醫各家學說

Examination

Time Allowed: 3 hours

Date: December 22, 2003 (Monday) Time: 9:30am to 12:30pm

答題指示

1. 本試卷分爲單選題、配搭題、多選題、簡答題及論述題五部分，共 14 頁。

2. 全部單選題及配搭題均須於選擇題答題紙上作答；
   全部多選題均須於多選題答題紙上作答；
   簡答題可任意選擇其中 7 題於答題簿上分頁作答；
   論述題可任意選擇其中 1 題於答題簿上分頁作答。

3. 不論答題紙或答題簿，只能填上學生編號。

4. 考生不得携帶本試題離開試場。

學生編號：_____

一、 單選題（每題 0.6 分，共 30 分）

二、 配搭題（每題 0.6 分，共 9.6 分）

三、　多選題 (每題 0.6 分，共 8.4 分)

四、 簡答題（10題選答7題，每題6分，共42分，分頁作答）

1. 試述成無己注解《傷寒論》特點及成就。

2. 李杲的脾胃學說，在闡發脾胃生理功能方面有哪些主要論點？

3. 試述張從正病邪理論的要點。

4. 薛己認爲“治病求本，務滋化源”。簡要述其論點。

5. 趙獻可認爲命門“主宰先天之體，流行後天之用”。試解釋。

6. 試述葉桂的胃陰學說。

7. 試述吳瑭區別傷寒與溫病的要點。

8. 試述吳師機對內病外治的理論闡發內容。

9. 試述唐宗海治療吐血四法的內容要點。

10. 王清任診察瘀血証的要點是什么？

五、 論述題（2題選答1題，共10分）

11. 朱丹溪倡“陽有餘陰不足論”，張介賓議“陽常不足，陰本無餘”。兩家如何論述其觀點，有何臨床意義？試分述并加以比較。

12. 試比較劉完素、李杲、朱丹溪火熱証之論治。

~全卷完~

The University of Hong Kong
School of Chinese Medicine

Bachelor of Chinese Medicine

BCHM2006 Introduction to Chinese Ancient Philosophy
中國古代哲學概論

Time Allowed: 2 hours

Date: December 27, 2003 (Saturday) **Time: 9:30am – 11:30am**

答題指示

1. 本試卷分爲填空題、簡答題及論述題三部份，合共 4 頁。
2. 所有問題必須作答。
3. 所有填空題均在答題簿上同頁分行作答；
   所有簡答題及論述題均在答題簿分頁作答。
4. 請在適當位置填上學生編號。
5. 考生不得攜帶本試題離開試場。

學生編號：_____

一、填空題（每空格 0.5 分，共 40 分，同頁分行作答）

二、簡答題 (每題 4 分，共 20 分，分頁作答)

37. 孔子仁的基本形式是什麼？仁愛觀的直接目的是什麼？

38. 何謂“化性起僞”？“化性起僞”的基點是什麼？

39. 墨子三表法的認識論意義是什麼？

40. 規律有何特點？

41. 實事求是的含義是什麼？

三、論述題 (每題 10 分，共 40 分，分頁作答)

42. 爲什麼說辨證思維是中國哲學的根本特點。(12 分)

43. 試述周易的基本思想。(8 分)

44. 試述老子反者道之動的辯證法思想。(8 分)

45. 什麼是內因？什麼是外因？它們對事物發展所起的作用有何不同？(6 分)

46. 試述實踐在認識中的作用。(6 分)

~全卷完~

The University of Hong Kong

School of Chinese Medicine

BCHM4004 Chinese Medicine Gynaecology

中醫婦科學

Time Allowed: 3 hours

Date: December 27, 2003 (Saturday) Time: 9:30am to 12:30pm

答題指示

1. 本試卷分爲單選題、配搭題、多選題、填空題、問答題及病案分析六部分，共 10 頁。

2. 全部單選題及配搭題均須於選擇題答題紙上作答；
   全部多選題均須於多選題答題紙上作答
   其他問題請在本試卷上作答。

3. 請在適當位置填上學生編號。

4. 考生不得携帶本試題離開試場。

學生編號：_____

一、 單選題（每題 0.5 分，共 15 分）

二、 配搭題 (每題 1 分，共 20 分)

三、　多選題　(每題 1.5 分，共 15 分)

四、　填空題：（每空格2 分，共10分）

五、　問答題（每題 5 分，共 20 分）

1. 經斷前後諸証的定義是什麼？

2. 何謂下丘腦 - 腦垂體 - 卵巢軸？

學生編號：_____

3. 妊娠期間用藥應注意什麼？

4. 產後病的治療原則是什麼？

六、　病案分析（每題10分，共20分）

1. 欣某，女，22歲，未婚，初診日期，2003年4月18日，患者近1 年來，先爲月經後期，量少，漸至6個月未行，形體肥胖，胸脘滿悶，嘔惡痰多，神疲倦怠，面浮足腫，平素帶下量多，色白質稠。舌淡胖，苔白膩，脈滑。
請寫出：診斷（病名、証型），証候分析，治則，方藥。

2. 田女士，38 歲，結婚 6 年，孕 3 產 0，自然流產 3 次，均在孕 50 天時自然殞墮。現停經 7 周，尿妊娠試驗陽性。惡心嘔吐，食入即吐 1 周，伴頭暈眼花，神疲乏力，心慌氣短。2 天前出現陰道少許出血，無腰酸痛，B 超提示宮內早孕，子宮增大符合停經月份，舌質淡，苔薄白，脈細弱。

請寫出：診斷（中西醫病名、中醫証型），証候分析，治則，方藥，醫囑。

~ 全卷完 ~

The University of Hong Kong

Bachelor of Chinese Medicine

BCHM4009 Medical Psychology 醫學心理學

Time Allowed: 2 hours

Date: December 29, 2003 (Monday) Time: 9:30am – 11:30am

答題指示

1. 本試卷分爲選擇題、填空題、簡答題及論述題四部分，共7頁。

2. 全部擇選題均須於選擇題答題紙上作答；
   其他問題請在本試卷上作答；

3. 請在適當位置填上學生編號。

4. 考生不得携帶本試題離開試場。

學生編號：_____

甲. 選擇題：(A 型題)(每題 1.5 分，共 45 分)

乙. 填空題：（每空格 2 分，共 20 分）

丙. 簡答題：（每題 5 分，共 15 分）

1. 什麼是抑鬱？

2. 什麼是“移情易性”？

3. 何謂“心身疾病”？請舉三個例子。

學生編號：_____

丁.論述題（每題 10 分，共 20 分。）

1. 如何理解中醫學的“心主神明論”？

2. 如何建立良好的醫患關係？

～全卷完～

The University of Hong Kong
School of Chinese Medicine

BCHM2013 Medical Parasitology

Time Allowed: 2 hours

Date: January 3, 2004 (Saturday) **Time: 9:30am – 11:30am**

GENERAL INSTRUCTIONS

1. **This examination paper comprises 1 page only.**
2. **Answer any FOUR questions. All questions carry equal marks.**
3. **Make sure that you enter your *UNIVERSITY No.* in the space provided.**

UNIVERSITY NO._____

Answer any FOUR questions. All questions carry equal marks.

1. Give an account of the different systems of transmission of parasitic diseases.

2. A woman went to Cambodia for holidays and visited a country park at night. Afterwards she noticed some itching spots on her skin of her legs. About 10 days after returning to Hong Kong, she began to develop a light fever, fatigue, headache, myalgia (muscle pain), dry cough, gastrointestinal symptoms. The fever became very high (41°C) in the evening, with profuse sweating. The fever and chills seemed to die down but re-appeared every other day. Between attacks, the woman felt fine but tired. Examination by a doctor showed splenomegaly and the liver is slightly enlarged. The doctor diagnosed the case as influenza but despite the medication, the woman began vomiting and showed signs of disorientation and neurological signs.
   Do you agree with the diagnosis of the doctor? If not, which parasitic disease can cause the above symptoms? Explain the basis of your diagnosis and write briefly on the biology of the parasite.

3. Name the parasites which can invade the lungs. Give one specific example on how the parasite can reach the lungs and how man can acquire such an infection.

4. Write short notes on two of the following:
   (a) Trichinellosis.
   (b) Neurocysticercosis.
   (c) Giardiasis and Cryptosporidiasis.
   (d) Soil-borne parasitic diseases.

5. What are the different factors which can affect the spreading of a parasitic disease in a population? Describe their epidemiological significance and the possible methods of controlling the spreading.

6. How can a parasite affect its host? Are parasitic organisms always harmful? Give a brief account of the factors which can determine the pathogenicity of an infection.

~ END OF PAPER ~

THE UNIVERSITY OF HONG KONG
SCHOOL OF CHINESE MEDICINE

Bachelor of Chinese Medicine

BCHM2011 Microbiology

EXAMINATION

Time Allowed: 2 hours

Date: January 5, 2004 (Monday)

Time: 9:30am to 11:30am

INSTRUCTIONS

1. This examination paper comprises 11 pages.

2. Answer all 60 MCQs.

3. Make sure that you enter your UNIVERSITY No. in the space provided below:

UNIVERSITY NO. _____

INSTRUCTIONS

(i) Choose the BEST answer. Put your answers on the MCQs answer sheet provided.
(ii) Answer ALL 60 questions.
(iii) Each question carries EQUAL marks.
(iv) No marks will be deducted for wrong answers.

1 Viral infections may be diagnosed in the laboratory by:
A Culture on blood agar.
B Detection of viral antigen using immunological tests.
C Identifying individual virus particles under the light microscope.
D Their ability to ferment sugars in liquid culture media.
E Their sensitivity to antibiotics.

2 Examples of DNA viruses include the following EXCEPT:
A Herpes simplex virus
B Varicella-zoster virus
C Variola (smallpox) virus
D Influenza virus
E Cytomegalovirus

3 Viral latency
A Invariably follows *in utero* infection.
B Invariably leads to tumour formation.
C Is characteristic of herpesviruses.
D Leads to a decrease in immunological competence.
E Is confined to human viruses.

4 Which of the following infections is transmitted by needle sharing among intravenous drug abusers in Hong Kong?
A Hepatitis A infection
B Hepatitis C infection
C Hepatitis E infection
D Herpes simplex type 2
E Rotavirus

5 Effective antiviral agents are available for which one of the following viruses?
A Influenza virus
B Norwalk virus
C Hepatitis A virus
D Hepatitis E virus
E Epstein-Barr virus

6 The key mechanism of action of cholera toxin is
A Activation of adenylate cyclase.
B Induction of cytokine release.
C Inhibition of signal transduction.
D Inhibition of protein synthesis.
E Inhibition of adenylate cyclase.

7 **The formation of spores allows a bacterium to:**
A Exchange genetic materials with other bacterial cells.
B Undergo mutation at a faster rate.
C Survive in the environment for a prolonged period of time.
D Persist in the body of the host for a prolonged period of time.
E Exhibit latent infection in the host.

8 **The most widely used staining method in routine clinical bacteriology is:**
A Albert stain
B Gram stain
C Ziehl-Neelsen stain
D Acridine orange stain
E Giemsa stain

9 **In which of the following bacteria is the presence of a capsule an important pathogenic mechanism?**
A *Mycobacterium tuberculosis*
B *Clostridium perfringens*
C *Proteus mirabilis*
D *Shigella sonnei*
E *Haemophilus influenzae*

10 **Example of a strictly aerobic bacterium include:**
A *Escherichia coli*
B *Enterococcus faecalis*
C *Clostridium perfringens*
D *Pseudomonas aeruginosa*
E *Streptococcus pyogenes*

11 **Which of the following diseases CANNOT be prevented by vaccination?**
A Hepatitis A
B Hepatitis C
C Poliomyelitis
D Rubella
E Chickenpox

12 **Which of the following infections is NOT an example of a disease mediated by secreted toxin from the bacterium?**
A Cholera caused by *Vibrio cholerae*
B Tetanus caused by *Clostridium tetani*
C Tuberculosis caused by *Mycobacterium tuberculosis*
D Botulism caused by *Clostridium botulinum*
E Diphtheria caused by *Corynebacterium diphtheriae*

13 **Which of the following bacteria may colonize the body surface without causing any disease?**

A *Streptococcus pneumoniae*
B *Haemophilus influenzae*
C *Neisseria meningitides*
D *Staphylococcus aureus*
E All of the above

14 **A patient informs you that she had a history of "severe penicillin allergy" resulting in anaphylaxis. Which group of antibiotics below should be regarded as potentially dangerous when it is being used?**

A Aminoglycosides
B Cephalosporins
C Macrolides
D Quinolones
E Tetracyclines

15 **Which of the followings is/are part of the normal defence mechanism of the body against infections?**

A Normal integrity of the skin and mucosa.
B Presence of normal flora on the skin and mucosal surfaces.
C Circulating neutrophils.
D Circulating and secreted antibodies.
E All of the above.

16 **The commonest mechanism of bacterial resistance towards penicillins is caused by:**

A Reduced permeability of the cell wall to antibiotics.
B Production of enzymes (beta lactamases) to break down the penicillin molecules.
C Active efflux of penicillin molecules from the bacterial cells.
D Alteration of target binding sites.
E Presence of an alternative metabolic pathway to bypass the action of penicillins.

17 **Which of the following vaccines is a live-attenuated vaccine?**

A Tetanus
B Diphtheria
C Hepatitis B
D Bacille Calmette-Guerin (BCG)
E *Haemophilus influenza* type b

18 **Which of the following antibiotics acts by inhibition of bacterial protein synthesis?**

A Clindamycin
B Ampicillin
C Vancomycin
D Cotrimoxazole (trimethoprim-sulphamethoxazole)
E Metronidazole

19 **Which of the following antibiotics acts by inhibition of bacterial cell wall synthesis?**

A Gentamicin
B Tetracycline
C Erythromycin
D Penicillin
E Rifampicin

20 **Which of the following cocci is commonly associated with abscess formation?**

A *Staphylococcus epidermidis*
B *Staphylococcus aureus*
C *Streptococcus pneumoniae*
D Viridans streptococci
E *Enterococcus faecalis*

21 **A 2-year old boy developed skin rash, severe headache, and high fever. Gram stain of the cerebrospinal fluid showed the presence of Gram negative cocci. The most likely identity of the organism is:**

A *Haemophilus influenzae*
B *Streptococcus pneumoniae*
C *Moraxella (Branhamella) catarrhalis*
D *Neisseria gonorrhoeae*
E *Neisseria meningitides*

22 **Lancefield group B *Streptococcus* (*Streptococcus agalactiae*) is an important cause of meningitis in:**

A Pregnant women
B HIV positive patients
C Neonates
D Healthy young adults
E Neutropenic patients following cancer chemotherapy

23 **In general, most of the invasive infections (e.g. bacteraemia, meningitis) cause by *Haemophilus influenzae* are due to serotype:**

A a
B b
C c
D d
E e

24 The cell wall of staphylococci may contain the following substances except:

A Teichoic acid
B Lipopolysaccharide
C N-acetylmuramic acid
D N-acetylglucosamine
E Polysaccharide capsule

25 The most effective way to prevent an outbreak of tuberculosis in the hospital is by:

A Airborne precaution
B Droplet precaution
C Contact precaution
D Standard precaution
E Hand washing

26 Gram negative bacteria is distinguished from Gram positive bacteria by the fact that only the former possess:

A Peptidoglycan
B Flagella
C Capsule
D Outer membrane
E Ribosomes

27 A 25-year old man developed bloody diarrhoea with mucus in faeces, abdominal pain, and high fever shortly after a trip to India. Culture of the faeces yielded a lactose non-fermenting Gram negative bacillus. The bacterium is most likely:

A *Haemophilus influenzae*
B *Pseudomonas aeruginosa*
C *Proteus vulgaris*
D *Vibrio cholerae*
E *Shigella flexneri*

28 Which of the following infections is commonly caused by *Salmonella typhi*?

A Enteric fever
B Gastroenteritis
C Urinary tract infection
D Meningitis
E Pneumonia

29 Which of the following infections is NOT commonly caused by *Escherichia coli*?

A Pyelonephritis
B Traveller's diarrhoea
C Meningitis in an otherwise healthy young adult
D Neonatal meningitis
E Peritonitis

30 Six persons developed watery diarrhoea and abdominal pain 12 hours after eating together in a seafood restaurant. They had consumed a lot of shrimps, clams, and fish during the meal. The most likely cause for this outbreak of food poisoning is:

A *Vibrio parahaemolyticus*
B *Salmonella enteritidis*
C *Clostridium botulinum*
D *Entamoeba histolytica*
E *Campylobacter jejuni*

31 Fungi can usually be classified into yeasts and moulds. Which of the followings is an example of a yeast?

A *Aspergillus flavus*
B *Microsporum canis*
C *Cryptococcus neoformans*
D *Epidermophyton floccosum*
E *Trichophyton mentagrophytes*

32 Which of the following fungi is the most important dimorphic fungus affecting AIDS patients in Hong Kong?

A *Aspergillus fumigatus*
B *Candida albicans*
C *Cryptococcus neoformans*
D *Histoplasma capsulatum*
E *Penicillium marneffei*

33 Serology is most useful in the diagnosis of fungal infections due to:

A *Candida albicans*
B *Candida tropicalis*
C *Candida glabrata*
D *Cryptococcus neoformans*
E *Malassezia furfur*

34 Selective and differential culture media are most useful when one is looking for pathogens in:

A Faeces
B Blood culture
C Cerebrospinal fluid
D Joint fluid
E Pleural fluid

35 All health care workers should be routinely vaccinated against:

A Smallpox
B Hepatitis A
C Hepatitis B
D Japanese encephalitis
E Rabies

36 **Which of the following measures is NOT an essential component of contact precautions in infection control practice?**

A Hand washing
B Aprons
C Gloves
D Dedicate the use of non-critical patient-care equipment to a single patient
E N95 respirator

37 **Which of the following agents has the highest resistance to disinfectants?**

A Influenza virus
B *Escherichia coli*
C Enterovirus
D *Mycobacterium tuberculosis*
E Spores of *Bacillus* species

38 **Which of the following agents is most suitable for routine hand antisepsis?**

A Glutaraldehyde
B Sodium hypochlorite
C Chlorhexidine gluconate
D Phenolics
E Hydrogen peroxide

39 **The best way to sterilize a surgical gown in the hospital setting is by:**

A Autoclaving
B Gamma irradiation
C Ultraviolet radiation
D Ethylene oxide
E Fumigation using formaldehyde

40 **Which of the following mode of transmission does NOT commonly occur in hospitals?**

A Contact transmission
B Droplet transmission
C Airborne transmission
D Vector-borne transmission
E Transmission through contaminated inanimate objects

41 **Which of the following *Staphylococcus* species is the most important cause of acute cystitis in young healthy women?**

A *Staphylococcus aureus*
B *Staphylococcus epidermidis*
C *Staphylococcus haemolyticus*
D *Staphylococcus intermedius*
E *Staphylococcus saprophyticus*

42 A 32-year old previously healthy woman was admitted to the hospital for high fever and a clinical diagnosis of upper urinary tract infection was made. Blood culture grew a Gram negative bacillus. The most likely identity of the bacterium is:

A *Escherichia coli*
B *Haemophilus influenzae*
C *Pseudomonas aeruginosa*
D *Salmonella typhi*
E *Vibrio cholerae*

43 Which of the following statements on laboratory diagnosis of cystitis is correct?

A Urine sample can be stored at room temperature for more than 4 hours before sending to the laboratory.
B A Gram smear of urine is routinely recommended.
C Culture method for mid-stream urine must be quantitative or semi-quantitative.
D Urinalysis by urine strip is of no value.
E The urethral orifice should be disinfected using chlorhexidine before getting a voided urine sample for culture.

44 Which of the followings is an important defence mechanism against cystitis?

A Chemotaxis
B Cell-mediated immunity
C Mucosal IgA antibody
D Normal voiding
E Complement system

45 "Significant bacteriuria" in a mid-stream urine sample is usually defined as bacterial count of over:

A 10^2 colony-forming units (CFU) per mL urine
B 10^3 colony-forming units (CFU) per mL urine
C 10^4 colony-forming units (CFU) per mL urine
D 10^5 colony-forming units (CFU) per mL urine
E 10^6 colony-forming units (CFU) per mL urine

46 Which of the following sexually transmitted diseases can cause congenital infection?

A Trichomoniasis
B Syphilis
C Chancroid
D Gonorrhoea
E Non-gonococcal urethritis

47 **The following agents causing sexually transmitted disease can result in chronic infection EXCEPT:**

A Human immunodeficiency virus
B *Treponema pallidum*
C *Chlamydia trachomatis* serotypes L1, L3, L3
D Hepatitis B virus
E *Neisseria gonorrhoeae*

48 **Which of the following diseases is most readily transmissible from an infected patient to the health care worker following a needlestick injury?**

A Hepatitis A
B Hepatitis B
C Hepatitis C
D Hepatitis D
E Hepatitis E

49 **Which of the following statements on laboratory diagnosis of sexually transmitted disease is correct?**

A *Trichomonas vaginalis* infection is usually diagnosed by serology.
B *Chlamydia trachomatis* infection is best diagnosed by a routine bacterial culture.
C A presumptive diagnosis of gonorrhoea can be made if Gram smear of the urethral discharge showed numerous leukocytes and intracellular Gram negative cocci are seen.
D In primary syphilis (chancre), the VDRL test is always reactive.
E Serological test for herpes simplex virus is routinely recommended for suspected genital herpes.

50 **Serology is most often used for the diagnosis of:**

A Genital herpes
B Chancroid
C Non-gonococcal urethritis
D Syphilis
E Genital warts

51 **Overall, the commonest cause of infective arthritis is:**

A *Staphylococcus aureus*
B *Streptococcus pneumoniae*
C *Streptococcus pyogenes*
D *Klebsiella pneumoniae*
E *Mycobacterium tuberculosis*

52 **The most important investigation in a patient with suspected infective arthritis is:**

A Blood culture
B Joint fluid aspiration
C Plain X ray of the affected joint
D CT scan of the affected joint
E Radionuclide imaging of the affected joint (e.g. gallium scan)

53 Necrotizing fasciitis is commonly caused by:
A *Staphylococcus aureus*
B *Streptococcus pyogenes*
C *Enterococcus faecalis*
D *Legionella pneumophila*
E *Haemophilus influenzae*

54 The following statements are true for vertebral osteomyelitis EXCEPT:
A It may destroy the intervertebral disk.
B It may extend posteriorly and compress the spinal cord.
C It is commonly caused *Escherichia coli.*
D It often affects two adjacent vertebral bodies.
E Its extent of involvement is best delineated by computed tomography (CT) or magnetic resonance imaging (MRI).

55 Which of the following diseases represents a superficial infection of the skin?
A Ringworm (dermatophytosis)
B Carbuncle
C Cellulitis
D Necrotizing fasciitis
E Gas gangrene

56 Which of the following organisms is NOT a common cause of acute meningitis?
A *Staphylococcus aureus*
B *Streptococcus pneumoniae*
C *Haemophilus influenzae*
D *Neisseria meningitides*
E Herpes simplex virus

57 A 50-year old man was diagnosed to be suffering from *Cryptococcus neoformans* meningitis. The most likely underlying disease is:
A Head injury with fracture of the skull.
B Presence of a foreign body in the brain.
C Uncontrolled diabetes mellitus.
D Prolonged neutropenia as a result of cancer chemotherapy.
E Human immunodeficiency virus infection.

58 Acute bacterial meningitis is characterized by the following features of the cerebrospinal fluid EXCEPT:
A Low protein level.
B Low glucose level.
C High neutrophil count
D High opening pressure
E High lactate level

59 Which of the following viruses does NOT normally cause central nervous system infection?

A Japanese encephalitis
B Herpes simplex virus
C Enteroviruses (e.g. EV71)
D West Nile virus
E Coronavirus

60 Prions

A Can be destroyed by autoclaving at 121°C for 15 minutes.
B Cause bovine spongiform encephalopathy ("mad cow disease").
C Contain double-stranded RNA as their genetic material.
D Are found only in humans.
E Cause diseases that can be diagnosed by serology.

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