

1. Select the coupling enzyme used in the hexokinase method for glucose:-
 - a. Glucose dehydrogenase.
 - b. Glucose - 6- phosphatase
 - c. Glucose - 6- phosphate dehydrogenase
 - d. Peroxidase.
2. Which of the following results are the most consistent with high risk for coronary heart disease:-
 - a. 20 mg/dL HDL cholesterol and 250 mg/dL total cholesterol.
 - b. 35 mg/dL HDL cholesterol and 200 mg/dL total cholesterol
 - c. 50 mg/dL HDL cholesterol and 140 mg/dL total cholesterol
 - d. 60 mg/dL HDL cholesterol and 170 mg/dL total cholesterol
3. Which of the following is used in early diagnosis of AMI:
 - a. an elevated CK.MB
 - b. an elevated AS T
 - c. an elevated AL T
 - d. Normal myoglobin
4. Addison's disease is characterized by:
 - a. high cortisol level
 - b. low cortisol level
 - c. normal levels of ACTH
 - d. low serum sodium
5. In cases of acute hepatitis, we find:
 - a. Marked elevation of both AST and ALT.
 - b. Increased serum bilirubin
 - c. Bilirubin in urine
 - d. Decreased plasma proteins
 - e. All of the above
 - f. None of the above

- 6- Thyrotropin releasing hormone (TRH) stimulate the secretion of:
- Prolactin
 - Growth hormone
 - Thyroid stimulating hormone
 - Both a & c
7. The hormone produced by the pineal gland is:
- Oxytocin
 - Melatonin
 - Pinealtonin
 - Non of the above
8. Which of the following is not a hormone of the GI system:
- Gastrin
 - Cholecystokinin
 - Intrinsic factor
 - Secretin
9. Creatinine clearance is corrected using body surface area to account for difference in:
- Age
 - Muscle mass
 - Protein intake
 - Fluid intake.
10. In Froin's syndrome, which is true:
- Increased CSF cell number
 - Increased CSF protein
 - Increased CSF protein with normal cell number
 - Increased CSF protein and increased cell number
- Case studies (5 marks each).

1- A young adult student used to eat delivered food. After about a month from his last meal in a famous restaurant, he started to feel unwell with loss of appetite, nausea and right hypochondrial pain. He developed yellow coloration of the eyes & skin.

He asked medical advice.

Laboratory findings.

- Serum AST markedly elevated.
- Serum ALT markedly elevated.
- Serum bilirubin increased.
- Serum ALP increased.
- Serum 'albumin and total protein were normal.

6. Urine showed increased urobilinogen and presence of bilirubin.
- What is your provisional diagnosis?
 - Comment on the laboratory results.
 - What are further investigations needed to reach final diagnosis?

II - A 34-year-old man was admitted for diagnostic evaluation with the complaint of epigastric pain of 2 years' duration, which was variously described as burning. He had been diagnosed with a duodenal peptic ulcer 18 months ago; at that time, therapy with antacids and dietary revision provided considerable alleviation of symptoms. More recently, the pain had become more persistent and awakened the patient 4-6 times each night. Radiologic studies revealed a 2.5 cm ulcer crater in the first portion of the duodenum and a 0.5 cm ulcer in the antrum of the stomach. Gastric analysis revealed 640 ml of secretion in the basal hour, with an acid output 38mEq, and 780 ml of secretion in the I-hour pentagastrin stimulation test, with acid output of 84 mEq.

- What is the probable disease?
- What other tests would be diagnostic for this disease?

Give an account on:- (3 marks each).

1. Thyroid hormones synthesis steps.
2. Kidney function tests (enumeration).
3. Syndrome of inappropriate secretion of ADH (SIADH)
definition, causes and Laboratory findings.
4. Causes of increased gastrin hormone level.
5. Causes of increased protein in CSF.
6. Serum IgG.
7. C-reactive protein
8. Laboratory findings in primary hyperparathyroidism.
9. Laboratory findings in diabetic ketoacidosis.
10. Osteoporosis, causes and laboratory findings.

Good Luck

PHARMACOLOGY EXAMINATION

For

Clinical Pharmacy Students

(PHARMACOLOGY 2)

(Code PO 802)

Time Allowed: 2 hours

All questions are to be attempted

1. Classify oral antidiabetic agents gIVIng drug examples. Mention the mechanism of action and side-effects of each group. (5 marks)
2. Write an account of the pharmacological actions, mechanism of action, therapeutic uses and side-effects of antiestrogenic drugs. (5 marks)
3. Mention the main therapeutic uses, adverse effects and contraindications of opioids with drug examples. (10 marks)
4. Define selective toxicity of antimicrobial agents giving drug examples with an emphasis on the mechanism of action. (5 marks)
5. Write an account of the rapid and delayed adverse effects of phenothiazines and how to avoid. (5 marks)
6. Mention some members of the antibiotics used in fungal infections and write down the mechanism of action and main adverse effects of each member. (5 marks)
7. Discuss the mechanism of action, pharmacokinetics and therapeutic uses of metronidazole. (5 marks)
8. Mention the drug groups used to treat Parkinsonism with drug examples, mechanism of action and adverse effects of each group. (10 marks)

كلية الصيدلة – جامعة أسيوط

لجنة الممتحنين:

١- أ.د. عادل ريان محمد

٢- د. نادية أمين محمد

الصيدلة الاكلينيكية

الفرقة الرابعة

كود المقرر: pp806

امتحان دور مايو ٢٠١٠

المادة: التسويق الدوائى

عدد الصفحات: ٢

زمن الامتحان: ساعة ونصف

التاريخ: ٩ يونيو ٢٠١٠

أجب الأسئلة التالية:

السؤال الأول: ناقش مدى صحة العبارات التالية (مع التعليق) (٢٠ درجة)

- ١- يشمل النشاط التسويقي كل الأطراف التى تهتم برعاية المريض وصحته ورفاهيته.
- ٢- تأتى المنافسة فى الصناعات الدوائية من شركات الأدوية الأخرى التى تنتج نفس الأدوية التى تنتجها شركتنا.
- ٣- إن عملية التغليف فى المنتجات الصيدلانية ليست كأي عملية تغليف أخرى.
- ٤- مندوب المبيعات الطبية هو الذى يتعامل مع الأطباء لإقناعهم باستخدام أدوية شركته دون الشركات الأخرى.

السؤال الثانى: اذكر المصطلح العلمى للمفاهيم التالية: (٢٥ درجة)

- ١- هو العملية التى يتم من خلالها بلوغ سوق الرعاية الصيدلانية.
- ٢- هو أى مادة أو خليط من المواد ، يتم تصنيعها كدواء فى شكل صيدلى ، سواء للاستعمال الأدمى أو البيطرى ، وتخضع لرقابة التشريعات والقوانين الصحية للبلاد.
- ٣- المزايا الأساسية التى يبحث عنها المشتري والتى تسمح بإشباع حاجاته.
- ٤- مجموع العناصر التى تكون جزء من المنتج والتى تباع معه من أجل حفظ محتوياته.
- ٥- عملية وضع أهم البيانات والمعلومات على أو داخل المنتج وهى مهمة لإظهار كيفية استعمال المنتج وفاعليته بالإضافة الى المضاعفات الناتجة عن استعماله.
- ٦- هو التعبير النقدى لقيمة السلعة فى وقت ومكان معين وهو العنصر الوحيد من المزيج التسويقي الذى يمثل إيرادات المنشأة.
- ٧- عملية نقل المنتجات الدوائية من أماكن الانتاج الى أماكن الاستهلاك فى الوقت والمكان المناسبين.
- ٨- مجموعة الجهود الترويجية التى تسعى لتعريف جمهور الأطباء واقناعهم بأنواع المنتجات الدوائية ودفعهم لوصفها لمرضاهم.
- ٩- هو الذى يتعامل مع الأطباء لإقناعهم باستخدام أدوية شركته دون الشركات الأخرى.

١٠- هو الذى يتركز عمله على توفير طلبيات الأدوية التى تحتاجها الصيدليات.

السؤال الثالث: ما اسم الاستراتيجية المتبعة فى كل حالة مما يلى: (٢٥ درجة)

١- يتعامل المسوق فى تلك الاستراتيجية مع السوق الكلى ككتلة واحدة أو كقطاع واحد.

٢- يحدد السوق المستهدف للمنظمة بقطاع سوقى واحد.

٣- تبنى ما يسمى بأساليب التسوق الهجومى مثل التخفيضات الملموسة فى الأسعار أو الإعلان المكثف أو أساليب تنشيط المبيعات غير التقليدية.

٤- تبحث المؤسسة عن رفع مبيعاتها بدخول منتجاتها الحالية لأسواق جديدة ، تستطيع توسيع أسواقها محليا أو وطنيا أو دوليا.

٥- تحاول المنظمة أن تميز منتجاتها عن منتجات أخرى من نفس النوع ، وتطوير العمق بإضافة منتجات جديدة على خط المنتجات أى يزيد عدد المنتجات ولكن لا تتخلى عن ما هو موجود من منتجات سابقا.

٦- تطوير أو تغيير بعض الصفات للمنتجات القائمة مع ابقاء عدد المنتجات ثابت.

٧- تهدف الشركة من اتباع هذه الاستراتيجية الى الحصول على حجم كبير من السوق غير المجزأ حسب الدخل بحيث تسعى الى الوصول الى السوق الكلية وذلك عن طريق تحديد أسعار منخفضة لسلعها.

٨- يقوم المنتج باختيار موزع وحيد أو عدد محدود من الوسطاء للتعامل مع السلعة فى منطقة معينة.

٩- يحاول المنتج تحقيق أكبر قدر من تغطية السوق ولذا فإنه يتعامل مع الأكبر عدد ممكن من تجار التجزئة والجملة فى كل منطقة.

١٠- تتبع هذه الاستراتيجية فى السوق المتباينة حسب فئات الدخل ، ويتم تحديد سعر مرتفع للسلعة الجديدة بحيث يوجه هذا السعر الى الفئة الأولى فى السوق والتى يهتمها الحصول على السلعة مهما كان مرتفعا.

السؤال الرابع: اكتب فى الموضوعات التالية: (٢٠ درجة)

١- خصائص المنتجات الصيدلانية.

٢- أهمية الترويج بالنسبة للمنتج الدوائى.

انتهى الامتحان مع أطيب التمنيات بالتوفيق

Final Examination
In
Drug Interactions

Course Code PO 803

Time allowed: Two hours

Date: 23/6/2010

Answer Sheet

Question NO III

1 2 3 4 5

Question NO IV

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

1- Read carefully the following case and answer the following questions **(15 marks)**

A 60 year old man suffered from increased intraocular pressure "about 30 mm/Hg". He was treated with one of anticholine esters for along period of time. Suddenly he developed an acute attack of appendicitis and surgery was recommended. The patient was prepared for such surgical procedure using different preanesthetic medications.

Write letter (T) for the true & (F) for the false statement regarding the expected drug-drug interactions. Justify your answer.

a- Flaxedil may be used safely as skeletal muscle.

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b- Succinyl choline must be used cautiously as skeletal muscle relaxant in this case.

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d- Preanesthetic medication with atropine is highly recommended.

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e- Blood transfusion is one of the main treating measure in case of succinyl choline toxicity in this case.

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II- Write in details how the combination of each pair of the following drugs lead to adverse effect:-
(10 marks)

1- Warfarin + Phenylbutazone

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2- Neomycin + Succinylcholine

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3- Tolbutamide + Sulfisoxazole

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4- MAOIs + Tyramine

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III- For each of the following MCO(s) select the most appropriate answer **(10 marks)**

- 1- Regarding the renal drug interaction, all the following statements are False Except:-
- A) Renal tubular secretion is mainly affected by pH of the urine.
 - B) Acidification of the urine increases the renal reabsorption of weak acids.
 - C) Alkalinization of the urine may inhibit the carrier transport mechanism of drugs.
 - D) Renal drug interaction represents a pharmacodynamic drug-drug interaction mechanism.
- 2- Regarding the interaction of N-methyl-3-piperidyl diphenyl carbonate (NMPDC) with hexobarbitone, all the following statements are False Except:-
- A) If NMPDC is given 12 hours after hexobarbitone leads to prolongation of sleeping time.
 - B) If NMPDC is given 24-48 hours after hexobarbitone leads to prolongation of sleeping time.
 - C) Shorter exposure of liver microsomal enzymes to NMPDC "12 hours" enhances hexobarbitone induced sleeping.
 - D) NMPDC exhibits no interaction with hexobarbitone.
- 3- Regarding drug-drug interaction which involves the modification of biotransformation, all the following statements are False Except:-
- A) Enzyme inducers inhibit the metabolism of co-administered drugs.
 - B) Phenobarbitone may increase the toxicity of dicoumarol.
 - C) Enzyme inhibitors induce the microsomal enzymes which metabolize aspirin.
 - D) In case of enzyme inducers or inhibitors the dose of the co-administered drug must be corrected.
- 4- Regarding modification of water and electrolyte balance as a target system for drug-drug interaction all the following statements are False Except:-
- A) Hypokalemic drugs decrease the toxicity of digitales.
 - B) Hypokalemic drugs increase the toxicity of digitales.
 - C) Hyperkalemic drugs decrease absorption of digitales.
 - D) Hyperkalemic drugs decrease distribution of digitales.
- 5- Regarding drug-drug interaction which involves the displacement from plasma protein binding sites, all the following statements are False Except:-
- A) It represents one of the pharmacokinetic drug-drug interaction.
 - B) Dicoumarol displaces tolbutamide from plasma protein binding leading to severe hyperglycemia.
 - C) Tolbutamide displaces dicoumarol from plasma protein binding leading to severe bleeding.
 - D) Salicylates decrease the toxicity of bilirubin due to their displacement from plasma protein.

IV-Write (T) for the True and (F) for the False statement:- (10 marks)

- 1- Cholestyramine inhibits absorption of thyroxine.
- 2- Quinidine displaces digoxin from its binding site.
- 3- Verapamil can elevate plasma levels of digoxin.
- 4- Dicoumarol inhibits biotransformation of phenytoin.
- 5- Probencid increases the renal excretion of penicillin.
- 6- Lithium clearance is increased by diuretics.
- 7 - Sildenafil and nitroglycerin administration causes hypertension.
- 8- Amiodarone inhibits excretion of digoxin.
- 9- Aspirin decreases incidence of bleeding in warfarin.
- 10- Isoniazid inhibits phenytoin metabolism.
- 11- Sulfonamides increase the hypoglycemic effect of sulfonylurease due to displacement from plasma protein.
- 12- The antibacterial activity of chloramphenicol is enhanced by penicillin.
- 13- Milk drinking decrease the absorption of tetracycline.
- 14- Ether enhances the respiratory paralysis induced by neomycin.
- 15- Aminoglycosides decrease the presynaptic release of epinephrine.
- 16- The ototoxicity of furosemide is decreased by concurrent use of topiramate.
- 17- Sulbactam protect penicillins against the hydrolysis by β -lactamase producing microorganisms.
- 18- Vitamin K is used to treat the hypoprothrombinemia-induced by cefoperazone.
- 19- Rifampin increases the biotransformation of oral contraceptives but not methadone.
- 20- A diet with high protein content suppress the renal excretion of amphetamine.

V- Write short notes on drug-drug interactions of each of the following: **(15 marks)**

A) β -adrenergic antagonists.

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B) Anticonvulsants.

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C) Quinidine.

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VI- In drug-food interactions, the food may act as interactant and modify the pharmacodynamic effects of the drug.

(10 marks)

Discuss this statement giving examples.

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting practice. There are no margins, text, or other markings on the page.



كلية الصيدلة

Assiut University-Faculty of Pharmacy
Pharmaceutical- Analytical Chemistry Department
Pharmaceutical Analysis & Quality Control (PC808)
Final Examination-June 26, 2010
Time Allowed: 2 hours



جامعة أسيوط

Part (A), Dr. Ashraf Mohamed (25 Marks)

1- Write short notes on each of the following:

1. The objectives of quality control? (3 Marks)

2. Factors affecting the selection of an analytical method (3 Marks)

3. The differences between random and systematic errors and numerate how can you minimize the errors? (6Marks)
(اكمل اجابة هذا السؤال في ظهر الورقة)

II- Complete the following sentences with the missing word(s) (7 Marks)

- 1- Quality can be defined as a product or service free of
and quality control can be defined as of defects, while quality assurance can be defined as of defects.
- 2- Deming Cycle is an iterative-
- 3- Quality is concerned with sampling, specifications, testing, organization, documentation & release, and it is a part of quality
- 4- Calibration is the conversion of value into a more reliable result, which is called value. It can be made by using in similar matrices.
- 5- Sample is a -portion selected from the bulk.
- 6- The samples can be classified according to the sampling plan into 4 types:
a- c-
b- d-

III- Mark [✓] for the correct statement and [x] for the wrong one, underline the wrong words and then correct it in the correction column. (6 Marks)

The statement	Mark	correction
1.Sampling tools should be made of active materials, avoid glass	-----	
2.Disposable sampling materials cannot be used for sampling.	-----	
3.Samples should never be returned to the bulk.	-----	
4.Representative samples must be taken in very small quantity.	-----	
5.Operating Characteristic Curve is a designed three-point method to accept or reject the sample	-----	
6.The "n-plan" is used only when material is considered non-uniform and from a recognised source.		
7.The "r-plan" is used for herbal medicinal products used as starting materials		

Part (B), Prof. Dr. Abdel-Maaboud Ismail

(25 Marks)

[I] Stability indicating analytical methods would be achieved via: (3 Marks)

1-

2-

3-

[II] In general, validation protocol should contain the following: (3 Marks)

1-

2-

3-

4-

5-

6-

7-

8-

9-

[III] Reference Standards are characterized according to the intended use as follows: (4 Marks)

[IV] Chemicals can be classified depending on their purity to different grades including: (4 Marks)

1-

2-

3-

4-

[V] Give reason for each of the following: (4.5 Marks)

1- Inactivation of Gentamycin by penicillin in admixtures for injection

2- Aspirin is inactivated with time in the presence of moisture

3- Sodium metabisulfite (NaHSO_3) is incompatible with catecholamines in solutions for injection

[VI] Select from list (A) the correct statement for each in list (8): (6.5 Marks)

(A)

- | | |
|--------------------|-----------------------------|
| 1· LOD | 2- Pure chemicals |
| 3· Incompatibility | 4- Accuracy |
| 5- Stability | 6- Intermediate precision |
| 7· Robustness | 8· Working standards |
| 9- Racemization | 10- Linearity |
| 11· Repeatability | 12- Primary standards |
| 13· LIMS | 14- LOQ |
| 15· Range | 16· Specificity |
| 17.Ruggedness | 18- Precision |
| 19.Reproducibility | 20- System suitability test |

(B)

- () Is the interval between upper and lower concentration of analyte in a sample
- () Laboratory information management system
- () Agreement between the value which is accepted either as a conventional true value or an accepted reference value--and the value found
- () Is the within-laboratories variations: different days, different analysts, etc.
- () Is the lowest amount of analyte in a sample which can be detected but not necessarily quantified as an exact value.
- () Is a measure of procedure capacity to remain unaffected by small variations in method parameters and provides an indication of its reliability during usage.
- () Ensures that total system is functioning well at any given time.
- () Materials which are accepted"without reference to other standards
- () Is the ability to assess analyte in presence of components which expected to be present.
- () Reagent-grade chemicals, which have been purified as possible as could be
- () Undesirable reactions between two or more components are said to result in physical and/or chemical changes.
- () Materials which are designed for daily use in analysis (routine quality control)
- () It is the process of changing from an optically active compound into a racemic (optically inactive or less active) mixture.

Assiut University
Faculty of Pharmacy
Department of Pharmaceutics
Clinical students (Class 6&8)
Final cosmetics preparation examination
(Elective course)

Instructors: Dr. Fawzia Habib Dr. Fergany
Total grade (75 marks)
Time allowed: 2 hours
Date: Monday 28/6/2010

All questions should be answered

Part I (40 Marks)

Prof. Dr. Fawzia Habib

Q1)

1- Surfactants are the main ingredients in shampoo manufacturing, enumerate the requirements of shampoo surfactants **(4 Marks)**.

2- What is the main composition and function of each of the following **(6 Marks)**:

a- dry shampoo

b- shampoo for dry hair

3- Explain the "half lead comparison test" for evaluating the success of shampoo **(4 Marks)**.

4- On the Basis of the effect of solar radiation on the skin, classify the UV range **(6 Marks)**.

5- Write the main factors affecting the efficacy of sunscreen **(6 Marks)**.

6-a) Titanium dioxide is preferred as covering powder over zinc oxide in preparing face powder, Give reason (s) **(4 Marks)**.

b) What is the importance of particle size reduction in face powder technology? **(4 Marks)**.

Q2) In tabulated form state the role of each ingredient in the next face powder
(6 Marks, each point 2 marks)

Face powder Formulation	Role of each ingredient
Formula 1 Talc 65 Precipitated chalk 10 Zinc oxide 24 Zinc stearate 6 Perfume, colour q.s.	
Formula 2 Talc 60 Kaolin 20 Zinc oxide 15 Zinc stearate 5 Perfume, colour q.s.	
Formula 3 Talc 50 Rice starch 15 Precipitated chalk 15 Zinc oxide 15 Zinc stearate 5 Perfume, colour q.s.	

Q3) Complete the Following (10 Marks)

a- The properties required for a good cleaning cream are (4 Marks):

1.

2.

3.

4.

2- The shaving lather must be ----- in texture and reasonably ----- (2 Marks):

3- Shaving Stik composed of (write the formula) (4 Marks):

1.

2.

3.

4.

5.

GOOD LUCK



Assiut University
Faculty of Pharmacy
Pharm. Anal. Chem. Dept.

PC 808
2nd Semester 2010/2011
Mid-Term Exam
May, 14, 2011
Time Allowed: 1/2 Hour

رقم الطالب:

اسم الطالب:

[I] Mark [✓] for the correct statement and (X) for the wrong one (2.5 marks)

- () Deming cycle involves three steps problem solving process
- () Sampling tools should be made of active materials
- () Quality control can be defined as prevention of defects
- () The indeterminate type-errors are often unidirectional
- () Samples should be returned to the bulk
- () Analytical sample should not be taken directly from the bulk lot
- () SO procedure means a procedure of step-operations
- () Quality must be built into the product during research development and production
- () In good analytical practice each worker in the laboratory looks for the source of variability and try to minimize or cure it
- () GMP abbreviates good manufacturing practice

[II] Select from list (A) the correct statement for each in list (B): (2.5 Marks)

(A)

- | | |
|----------------------------|----------------------|
| 1- System suitability test | 2- Specificity |
| 3- Intermediate precision | 4- LOO |
| 5- Working standards | 6- Range |
| 7 - Repeatability | 8- Primary standards |
| 9- LOQ | 10-ICH |
| 11- Accuracy | 12- Robustness |
| 13- Precision | 14- Reproducibility |
| 15- Ruggedness | 16- Linearity |

(B)

- () A measure of reproducibility of test results under normal, expected operational conditions from laboratory to laboratory and from analyst to analyst.
- () Agreement between the value which is accepted as a conventional true value and the value found
- () Is the lowest amount of analyte in a sample which can be quantitatively determined with suitable precision and accuracy.
- () Is a measure of procedure capacity to remain unaffected by small variations in method parameters and provides an indication of its reliability during usage.
- () Ensures that total system is functioning well at any given time.
- () Materials which are accepted without reference to other standards
- () Is the ability to assess analyte in presence of components which expected to be present.
- () Materials which are designed for daily use in analysis (routine quality control)
- () International Conference on Harmonization of Technical Requirements for the Registration of Pharmaceuticals for Human Use
- () Agreement between a series of measurements obtained from multiple sampling of the same homogeneous authentic sample under prescribed conditions.

Pharmacology (2) Examination For
Clinical pharmacy students

Date: June 9th 2011

Time allowed: 2 hours

All questions are to be attempted

QUESTION (1)

Write an account of the following: (30 marks):

- A. Pharmacological actions, therapeutic uses, adverse reactions, contraindications and precautions during use of morphine and its congeners (8 marks)
- B. Drug treatment of rheumatic disorders (7 marks)
- C. Causes of failure of antibiotic therapeutic (4 marks)
- D. Therapeutic uses of fluoroquinolones (5 marks)
- E. Side-effects of aminoglycosides (3 marks)
- F. Examples and therapeutic indications of thionamides (3 marks)

QUESTION (2):

In your answer notebook write down T for the true and F for the false statement (10 marks):

1. Corticosteroids cause hypokalemia, hypocalcemia and hyponatremia
2. Estrogens and progestins as oral contraceptives inhibit ovulation by suppressing gonadotropin release from anterior pituitary gland
3. Ethambutol or rifampin should never be used alone in treatment of TB
4. Biliary excretion increases duration of some drugs as estrogens
5. Mebendazole is a drug of choice in treatment of taenia and hemonolepsis
6. Insulin is contraindicated in case of hyperglycemic ketoacidosis
7. Co-trimoxazole causes sequential blockade of folic acid synthesis
8. Metronidazole is used in cases of amebiasis, trichomoniasis, giardiasis and anaerobic bacterial infections
9. The effect of methotrexate is potentiated by leucovorin
10. Erythromycin is an aminoglycoside antibiotic used against aerobic gram negative bacteria

QUESTION (3):

In your answer notebook match each statements in the left column with the most appropriate drug in right column (10 marks):

No	Statement	Letter	Drug
1	A Disease Modifying Anti- rheumatic Drug (DMARD)	A	Sertraline
2	Used prophylactically as mood elevator in bipolar manic depressive illness with low therapeutic index	B	Haloperidol
3	A potent and effective butyrophenone antipsychotic that produces more extrapyramidal disorders than chlorpromazine	C	Acetylsalicylic acid
4	Can be used prophylactically in chronic attacks of gout	D	Clozapine
5	Must not be used with tyramine containing food	E	β -endorphin
6	An effective antipsychotic devoid of extrapyramidal disorders	F	Tranlycypromine
7	benzodiazepine receptor agonist used to induce sleeping	G	Sulfasalazine
8	An endogenous opioid released in cases of stress and trauma	H	Lithium chloride
9	A relatively safe antidepressant acting as SSRI	I	Zaleplon
10	Its action on uric acid is dose-dependent	J	Colchicine

المادة: التسويق الدوائي	الصيدلة الاكلينيكية	لجنة الممتحنين:
عدد الصفحات: ٢	فصل: ٨	١- أ.د. عادل ريان محمد
زمن الامتحان: ساعة واحدة	كود المقرر: PP 608	٢- د. نادية أمين محمد
التاريخ: ١١ يونيو ٢٠١١	امتحان دور يونيو ٢٠١١	

أجب الأسئلة التالية:

- السؤال الأول:** ناقش مدى صحة العبارات التالية (مع التعليق): (٢٠ درجة)
- ١- إن التسويق الدوائي أو الصيدلاني هو العملية التي لا يتم من خلالها بلوغ سوق الرعاية الصيدلانية.
 - ٢- تستمد شركات الأدوية بقائها من خلال تكيفها مع بيئتها المحيطة.
 - ٣- إن السوق الصيدلاني ينفرد ويتميز عن غيره من الأسواق في عدة خصائص مهمة.
 - ٤- في الصناعة الدوائية، يوجه المزيج الترويجي في الغالب الى المستهلك أو المستخدم النهائي للدواء المريض.

- السؤال الثاني:** أذكر المصطلح العلمي للمفاهيم التالية: (٢٥ درجة)
- ١- تشمل هذه الفئة الأطباء والصيدلة والأطباء البيطريين والمرضات، وهؤلاء يمثلون أهمية خاصة لشركات صناعة الدواء لأنهم يمثلون المستهلك أو العميل الداخلي.
 - ٢- هي القوى الفعالة داخل وخارج المنظمة التي تؤثر على قدرة إدارة التسويق لإجراء التبادلات مع المستهلكين.
 - ٣- مادة تستعمل في تغيير أو معالجة الأنظمة الفسيولوجية الخاصة بالمريض.
 - ٤- هي تركيبات كيميائية تستعمل للوقاية وكذا التجميل، التنظيف، ولها نفس مصدر الأدوية.
 - ٥- عملية وضع أهم البيانات والمعلومات على أو داخل المنتج وهي مهمة لإظهار كيفية استعمال المنتج وفاعليته بالإضافة الى المضاعفات الناتجة عن استعماله.
 - ٦- اسم أو تعبير أو إشارة أو رمز أو تصميم أو تركيبة من المفاهيم التي تهدف الى تشجيع العملاء المحتملين لتمييز سلعة أو سلع يمتلكها شخص عن سلعة أو سلع منافسة.
 - ٧- هو القيمة النقدية للمنتج مقابل المنفعة.
 - ٨- هي الطريق الذي يسلكه المنتج الدوائي من المنتج الى المستهلك النهائي أو المستعمل الصناعي من خلال مجموعة من الأجهزة المتخصصة التي إما أن تكون تابعة للمنتج أو مستقلة.
 - ٩- مجموعة العناصر التي مع بعضها البعض لتحقيق الأهداف الترويجية المستهدفة للمنتج الدوائي.
 - ١٠- هو الذي يتركز عمله على توفير طلبات الأدوية التي تحتاجها الصيدليات.

- السؤال الثالث:** ما اسم الاستراتيجية المتبعة في كل حالة مما يلي: (١٥ درجة)
- ١- عندما يتحدد السوق المستهدف بقطاعين أو أكثر من قطاعات السوق.
 - ٢- عندما يتم استبعاد خطوط منتجات قائمة أو تبسيط بعض التشكيلات داخل خطوط المنتجات واسقاط منتجات غير مربحة والتركيز على المنتجات المربحة فقط.
 - ٣- عند اضافة خطوط جديدة الى خطوط منتجاتها الحالية التي تختلف استخداماتها عن المنتجات الأخرى ولكن تحت نفس العلامة.
 - ٤- عندما تهدف الشركة من اتباع هذه الاستراتيجية الى الحصول على حجم كبير من السوق غير المجزأ حسب الدخل بحيث تسعى الى الوصول الى السوق الكلية وذلك عن طريق تحديد أسعار منخفضة لسلعها.
 - ٥- عندما تحاول توفير السلع في متاجر أو منافذ قليلة ومنقاة من عدة بدائل فيتم اختيارها على أساس سمعة الموزع والتزامه بالسعر.

السؤال الرابع: اكتب في الموضوعات التالية:

- ١- مراحل تطوير المنتج الصيدلاني الجديد.
- ٢- سلبيات مهنة مندوبى البيع في شركات الأدوية.

انتهى الامتحان مع أطيب التمنيات بالتوفيق



كلية الصيدلة

Assiut University-Faculty of Pharmacy
Pharmaceutical- Analytical Chemistry Department
Pharmaceutical Analysis & Quality Control (PC808)
Final Examination-June 18, 2011
Time Allowed: 2 hours



جامعة أسيوط

Part (A), Prof. Dr. Hassan F. Askal

(25 Marks)

[1] Draw and comment on each of the following:

(8 Marks)

1. Deming Management Cycle:

2. Sampling Operation Scheme

3. Good Manufacturing Practices Chart

4. Sample Thieve

[II] Define each of the following

(3 Marks)

1- Quality assurance

2- Quality control

3- Analytical protocol

4- Standard operational procedures

5- Units of analytical control laboratory

a-

b-

c-

6- Representative sample

[III] Answer the following questions:

(6 Marks)

1- What are the reasons for incorrect analytical results?

(3 Marks)

a-

b-

c-

d-

e-

f-

2- How can you minimize and correct errors?

(3 Marks)

a-

b-

c-

d-

e-

f-

[IV] Write short notes on each of the following:

1- Characters of containers for bulk sample storage

(3.5 Marks)

a-

b-

c-

d-

e-

f-

g-

2- Factors to be considered in choosing an analytical method

(4.5 Marks)

a-

b-

c-

d-

e-

f-

g-

h-

i-

Part (B), Prof. Dr. Abdel-Maaboud Ismail

(25 Marks)

[V] Define the following terms:

(3 marks)

1- Penultimate intermediate

2- Pharmaceutical grade chemicals

3- Stability

4- Signal impurities

5- Accuracy

6- Robustness

[VI] Limits for impurities in bulk drug substances must consider a number of factors from which:

(3 marks)

1-

2-

3-

4-

5-

6-

[VII] Chemicals can be classified depending on their purity to different grades including:

(2 marks)

1-

2-

3-

4-

[VIII] Compare between the following pairs and give your comment (if any) for that comparison: (6 Marks)

Term A	Term B	Comment
Physical stability	Chemical stability	
Ionic strength	Inter-ionic compatibility	
Repeatability	Reproducibility	
Related products	Chiral products	
Primary standards	Pharmacopeial standards	
Synthesis-related impurities	Formulation-related impurities	

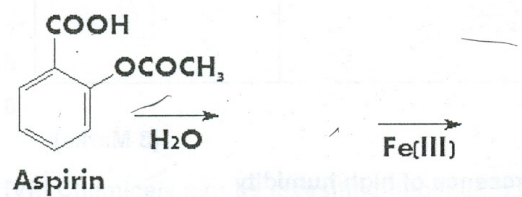
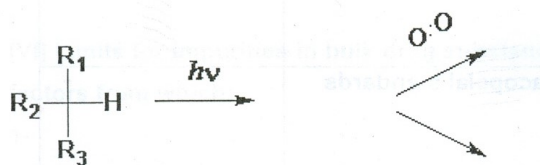
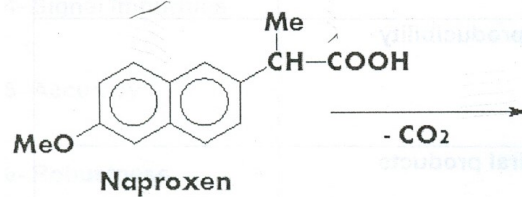
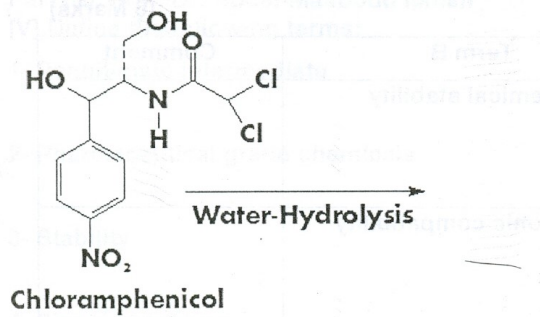
[IX] Give reason for each of the following:

1- Aspirin is inactivated with time in the presence of high humidity

2- Sodium metabisulfite (NaHSO_3) is incompatible with catecholamines in solutions for injection

[X] Complete the following equations:

(5 Marks)



[XI] SIAMs would be achieved via three different approaches:

(3 Marks)

1-

2-

3-

MCQ:

Choose the correct answer(s) :-

(1 mark each.)

1- The following cardiac markers are useful in diagnosis of late myocardial infarction:

- a- Troponin T.
- b- Troponin I.
- c- CK-MB.
- d- Myoglobin.
- e- LDH.

2- Monitoring the levels of ketone bodies in urine is

- a- Considered essential on a daily basis for all diabetic patients.
- b- A reliable method of assessing long term glucose control.
- c- Recommended for patients with type I diabetes on sick days.
- d- Not recommended.

3- Which of the following results are the most consistent with high risk of coronary heart disease?

- a- 20 mg/dl HDL cholesterol and 250 mg/dl total cholesterol.
- b- 35 mg/dl HDL cholesterol and 200 mg/dl total cholesterol.
- c- 50 mg/dl HDL cholesterol and 190 mg/dl total cholesterol.
- d- 60 mg/dl HDL cholesterol and 170 mg/dl total cholesterol.

4- The following enzymes are markedly increased in acute hepatitis:

- a- ALT alone.
- b- ALT and AST.
- c- ALP
- d- LDH.

5- In Cushing's syndrome the following are elevated

- a- Cortisol.
- b- ACTH.
- c- Cortisol and ACTH.
- d- Sodium.

6- Which of the following is not matched?

- a- Oxytocin Hypothalamus.
- b- Insulin Pancreas.
- c- Glucagon Pancreas.
- d- Thyroid hormone Pituitary gland.

7- Fixed specific gravity of urine around 1010 is observed in:

- a- pyelonephritis
- b- chronic renal failure.
- c- Diabetes mellitus.
- d- Liver cirrhosis.

8- CSF chloride level is decreased in:

- a- cerebral hemorrhage
- b- viral meningitis.
- c- tuberculous meningitis.
- d- Froin's syndrome.

9- Vasoactive intestinal polypeptide (VIP) physiological actions all are true except:

- a- stimulate pancreatic juice secretion
- b- Stimulation of gastric acid and gastrin secretion.
- c- Stimulation of pepsinogen secretion.
- d- Coronary vasodilation.

10- Which of the following elements is required for the synthesis of thyroxine?

- a- Iron.
- b- Sodium
- c- Potassium.
- d- Iodine.

Give a short account on:

(3 marks each)

- 1- Each adrenal cortex end product by functional layer and list a specific regulator of each.
- 2- The biological actions of PTH
- 3- CRP.
- 4- Laboratory findings in Addison's disease.
- 5- Early diagnosis of myocardial infarction.
- 6- Kidney function tests.
- 7 - Causes and laboratory findings of hyperthyroidism.
- 8- SIADH, definition, causes and laboratory findings.
- 9- Causes of increased gastrin secretion,
- 10- Causes of increased prolactin level.

Case history:

5 marks each

I - A female, 18 years old was admitted to the hospital. On exam, the following data were obtained

Pulse: 112 min, B.P. 95/60 mmHg, vomiting & drowsiness, cold extremities, deep sighing respiration with acetone smell in her breath

Lab. findings:-

Na⁺ 130 mmol/L (135-145)
K 5.8 mmol/L (3.5-5)
HCO₃⁻ 5 mmol/L (22-28)
Urea 18 mmol/L (2-8)
Creatinine 140 µmol/L (44-97 µmol/L)
Glucose 32 mmol/L (<6.1 mmol/L)

Arterial blood

pH: 7.05 = (7.34-7.44)

PCO₂: 15 mmHg (35-45 mmHg)

Urine exam: Glucose: ++++ Ketone: ++ pH: 5.5

-What is your diagnosis?

-Comment on abnormal data

A 60 year old man presented with intractable headache. MRI was requested to evaluate this complaint and a 2.5 cm pituitary tumor was discovered. In retrospect, he noted an unexplained 20 kg weight loss, cold intolerance, fatigue and loss of sexual desire

- 1- How would approach the evaluation of his anterior pituitary function?
- 2- What additional testing may be required to confirm a loss in anterior pituitary function?

PRACICAL EXAM.

- 1- Give an account on oral glucose tolerance test. Give the levels for fasting and after 2 hours in a diabetic patient.
- 2- Complete the missing parts:
In the determination of glucose by the hexokinase method,
Glucose + ATP $\xrightarrow{HK, Mg^{++}}$ G6P + ADP.
G6P + NADP $\xrightarrow{G6PD}$
- 3- The rate of formation of NADPH is measured at
- 4- Give the normal ranges for each of the following:
 - a- Serum corisol. b-CRP. c- serum albumin.
 - d- Serum total bilirubin. e- ALT.
- 5- CSF REPORT:

Aspect : Xanthochromic. Clot: Present.

Chloride : 730 mg/dl. Protein: 1000mg/dl

Sugar: 60 mg/dl Cells 4 lymphocytes/ul.

What is the diagnosis of the case.

Mention 5 causes of xanthochromia.
- 6-URINE REPORT:

The following findings were found: Albumin: ++.

Specific gravity: 1030. RBCs : 40 - 60/hpf.

Pus cells : 15 - 30 /hpf.

Casts: hyaline, red cell, epithelial and granular casts. Volume: 400 ml and smoky.

What is the diagnosis of the case?

Mention the causes of prerenal causes of azotemia.

GOOD LUCK

Give an account on: (50 marks)

- 1- Mechanism of resistance to antibacterial drugs with examples.
- 2- Enumerate the methods used for evaluation of bacteriostatic activity of antibacterial drugs.
- 3- Mention the role of resident flora in maintenance of health
- 4- Anti-tuberculous drugs.
- 5- Nosocomial infection types ,sources & prevention

Choose the correct answer in a table: (5 marks)

- 1- Inhibitors of DNA synthesis include
 - A. penicillins
 - B. polymyxins
 - C. quinolones
 - D. chloramphenicol
 - E. cephalosporins
- 2- The antimicrobial action is through inhibition of cell wall synthesis for all of the following drugs EXCEPT
 - A. cephalosporins
 - B. penicillins
 - C. cycloserine
 - D. aminoglycosides
 - E. vancomycin.
- 3- Evaluation of bacteriostatic activity of antibiotic can be evaluated by all of the following except:
 - A. Broth dilution method.
 - B. Agar dilution method.
 - C. Ditch plate technique.
 - D. Cup plate technique.
 - E. Phenol coefficient test.
- 4- Microbiological assays antibiotics include all of the following except:
 - A- The agar diffusion assay.
 - B- The serial dilution assay.
 - C- Turbidimetric assay.
 - D- Chick Martin test.
- 5- Acyclovir is characterized by all of the following except:
 - A- It is active against *Herpes simplex* and *Herpes zoster*.
 - B- Aciclovir targets virusinfected cells quite specifically.
 - C- The drug is used topically, orally and i.v.
 - D- It produces high toxicity.

Choose (T) for the correct answer and (F) for the false one in a table: (20 marks)

- 1- One of the advantages of agar dilution method is that many
- 2- Turbidimetric assay is the method of choice for evaluation of drug in blood.
- 3- Rifampicin acts through inhibition of transglycosylase enzyme.
- 4- β -lactams links covalently to penicillin-binding proteins to blocks crosslinkage of peptidoglycan.
- 5- Chemotherapy is the use of antimicrobial agents to prevent occurrence of infectious diseases.
- 6- Gonorrhea is transmitted by respiratory rout.
- 7- Zidovudine is a potent inhibitor of reverse transcriptase enzyme and is used in treatment of AIDS.
- 8- Ditch plate technique allows a single antibiotic to be tested against multiple microorganisms.
- 9--Cephalosporins are β -lactam antibiotics.
- 10 -Penicillin inhibits peptidoglycan synthesis.
- 11- Bacteriostatic antibiotics kill the bacteria.
- 12- Antibiotics binding to the ribosome interfere with protein synthesis
- 13- Resistance genes usually occur on the bacteriophage.
- 14-R- plasmids are those carrying resistant genes for antibiotics.
- 15-Commensal micro organisms do not cause disease but it may be potentially pathogenic when body resistance decrease.
- 16-.Penicillins, cephalosporins and bacitracin inhibit bacterial cell wall synthesis.
- 18-Sulphonamides are used in infections as a bactericidal drug
- 19- Organic matters always decrease the activity of antimicrobial agents.
- 20- Nosocomial infection is not present upon admission and appears 8 h or more following admission.

Good Luck

Answer Sheet

Student Number

1 	2 	3 	4 	5
6 	7 	8 	9 	10
11 	12 	13 	14 	15
16 	17 	18 	19 	20
21 	22 	23 	24 	25
26 	27 	28 	29 	30
31 	32 	33 	34 	35
36 	37 	38 	39 	40
41 	42 	43 	44 	45
46 	47 	48 	49 	50

EXAMINATION OF PHARMACOLOGY II

For each of the followings questions select the most appropriate answer: (1 mark each)

1-All are therapeutic uses of morphine except

- | | |
|-------------------------|-------------------|
| A-Acute pulmonary edema | B- Cerebral edema |
| C-In anesthesia | D-Diarrhea |

2-All are adverse effects of morphine except

- | | |
|---------------------|--------------------------------|
| A-Urinary retention | B-Sedation and mental clouding |
| C-Constipation | D-Hypertension |

3-All are contraindications of morphine except

- | | |
|--------------------|-------------------------|
| A-Bronchial asthma | B-Adrenal insufficiency |
| C-Hyperthyroidism | D-Head injury |

4- All are therapeutic uses of opioid antagonists except

- A-Treatment of opioid over dose
- B -Treatment of addict before withdrawal from opioid
- C -Reversal of respiratory depression caused by opioids
- D -Diagnosis of opioid addiction

5- All are therapeutic uses of phenytoin except

- | | |
|-------------------------------------|-------------------------|
| A-Generalized tonic- clonic seizure | B- Myoclonic seizure |
| C-Status epilepticus | D- Trigeminal neuralgia |

6-All are adverse effects of phenytoin except

- | | |
|------------------------|--------------|
| A-Nystagmus and ataxia | B- Edema |
| C-Osteomalacia | D- Hirsutism |

7-All are therapeutic uses of valproic acid except

- | | |
|----------------------|------------------------------|
| A-Status epilepticus | B-Absence seizure |
| C-Myoclonic seizure | D-Bipolar affective disorder |

8- Write true T or false F for the following statement

Carbamazepine is not used in bipolar affective disorder

9-All the followings are therapeutic uses of chlorpromazine except

- | | |
|-----------------|------------------------------|
| A-Schizophrenia | B- Parkinsonism |
| C-Hiccough | D-Bipolar affective disorder |

10-All are adverse effects of antipsychotics except

- | | |
|----------------|-----------------------|
| A-Weight gain | B-Hypoprolactinemia |
| C-Parkinsonism | D- Tardive dyskinesia |

11-Write true T or false F for the following statement

-Neuroleptic malignant syndrome is treated by dantrolene and bromocriptine.

12- All are therapeutic uses of tricyclic antidepressants except

- | | |
|------------------|------------|
| A- Depression | B-Mania |
| C-Panic disorder | D-Enuresis |

13- All are therapeutic uses of selective serotonin reuptake inhibitors except

- | | |
|---------------------------------|----------------------|
| A-Major depression | B-Serotonin syndrome |
| C-Obsessive compulsive disorder | D-Bulimia nervosa |

14-All the followings are therapeutic uses of corticosteroids except

- | | |
|-------------------------|-----------------------|
| A-Adrenal insufficiency | B- Ulcerative colitis |
| C- Shock | D- Diabetes |

15-All the followings are therapeutic uses of corticosteroids except

- | | |
|------------------------|------------------|
| A-Bronchial asthma | B-Conjunctivitis |
| C-Rheumatoid arthritis | D-Osteoporosis |

16-All the followings are adverse effects of corticosteroids except

- | | |
|-----------------------|--------------------|
| A-Adrenal suppression | B-Cushing syndrome |
| C-Hypotension | D-Hyperglycemia |

17-All the followings are adverse effects of insulin except

- | | |
|-----------------|---------------------------|
| A-Anorexia | B-lipodystrophy |
| C-Insulin edema | D-Formation of antibodies |

18-All the followings are uses of insulin except

- | | |
|----------------------|--|
| A- Type 1 diabetes | B-Diabetic ketoacidosis |
| C-Postpancreatectomy | D-Postoperative management of diabetes |

19-All the following are effects of sulfonylureas except

- A-Stimulation of insulin release
- B-Reduce glucagon release
- C-Increase number of insulin receptors
- D-Opening of ATP sensitive K⁺ channels

20-All the following are effects of rosiglitazone except

- A-Increase tissue sensitivity to insulin
- B-Increase glucose uptake in muscle
- C-Inhibition of hepatic gluconeogenesis
- D-Inhibition of peroxisome proliferator activated receptors gamma

21-All are uses of levothyroxine except

- A-Myxedema coma
- B-Cretinism
- C-Before thyroidectomy
- D- TSH suppression

22- All are uses of thioamides except

- A-Gravis disease
- B-Preoperative for thyroidectomy
- C- Before treatment with radioactive iodine
- D-lupus erythematosus

23- True (T) or False (F)

-Mecasermin is used in acromegaly

24 -Concerning oral contraceptives all the following statements are true except

- A-Estrogen inhibits release of LH and FSH
- B-Progestin inhibits LH release
- C-Contraceptives enhance implantation
- D-Progestin thickens the cervical mucous

25- True or false

- Heparin induces thrombocytopenia

26-Aspirin is contraindicated in gout if used in:

A-Small dose

B-large doses

C- More than 5gm/day

D- Both Band C

27-One of the followings is incorrect regarding paracetamol:

A-It inhibits prostaglandin centrally

B- It is mainly used as antipyretic analgesic drug

C- It does not cause gastric irritation as that produced ibuprofen.

D-Its hepatotoxicity is mainly treated by sulfhydryl containing compounds like n-acetylsalicylic acid

28-One of the followings is correct regarding NMDA receptors:

A- They are linked to ion channels

B- They are inhibitory receptors

C-NMDA antagonists are described as neurotoxicity drugs

D- They are target for GABA.

29- Regarding omeprazole, all the followings statements are true except

A-It blocks hydrogen / potassium adenosine triphosphate enzyme system B- It is readily absorbed from intestine

C-It may lead to hip fracture on prolonged use

D-It is contraindicated in hypersecretory conditions as Zollinger Ellison syndrome

30-Regarding zafirlukast, all the followings statements are true except

- A-It is leukotriene antagonist
- B-It is used prophylactically in bronchial asthma
- C- It is a lipoxygenase inhibitor that stimulates LTB₄ production
- D- It may elevate aminotransferase liver enzymes

31 Regarding sulfonamides all the followings are true except

- A-They have a common chemical nucleus resembling P- amino benzoic acid
- B- They are competitive inhibitors of dihydropteroate synthase enzyme
- C-They are acetylated in liver.
- D- It is metabolized mainly to active metabolites

32-Regarding aminoglycosides, all the followings are true except

- A-They are bactericidal antibiotics
- B- They inhibit cell wall synthesis
- C-They are very poorly absorbed from GIT
- D- They may lead to ototoxicity and nephrotoxicity

33-Regarding amphotericin B all the following statements are true except

- A-It binds to ergosterol of bacterial cell membrane forming pores that increase membrane permeability
- B-It is poorly absorbed from GIT
- C-It is used in systemic fungal infection

D-It may lead to nephrotoxicity

34-One of the following is considered cell cycle non-specific anticancer

- | | |
|---------------------|---------------------------------------|
| A -6 Mercaptopurine | B- Methotrexate |
| C- Vincristine | D-Antitumour antibiotics as bleomycin |

35- The followings anti-inflammatory are nonsteroidal except

- | | |
|--------------|--------------|
| A-Piroxicam | B-Diclofenac |
| C-Prednisone | D- Ibuprofen |

36-Flumazenil is antidote of:

- | | |
|-------------|-------------|
| A-Morphine | B-Insulin |
| C- Diazepam | D- Pimozide |

37-Buspirone is

- | | |
|-----------------------|----------------------|
| A-Antidepressant drug | B- Antianxiety drug |
| C-Antipsychotic drug | D-Antispasmodic drug |

38-This drug acts through stimulation of GABA_A receptors

- | | |
|---------------|--------------|
| A- Vigabatrin | B-Gabapentin |
| C- Valproate | D- Diazepam |

39-Benzodiazepines are used in all the followings cases except

- | | |
|-------------------|-------------|
| A-Sleep disorders | B-Alzheimer |
| C-Seizures | D-Anxiety |

40- This drug is lipoxygenase inhibitor:

- A- Ketoprofen
- B- Sodium cromoglycate
- C- Zileuton
- D- Beclomethasone

41-One of the following is correct regarding aspirin

- A-It exhibits antipyretic effect in all dose levels
- B- It decreases prostaglandin synthesis
- C-It is effective in treatment of slow to moderate intensity pain but not visceral pain
- D-It inhibits platelet production of TXA₂

42-Regarding the inhibition of cyclo-oxygenases, all the following statements are true except

- A-Their inhibition lead to inhibition of prostaglandin production
- B-Indomethacin is considered as non selective COX inhibitor
- C-Meloxicam inhibits COX -1 up to 50 times more than COX -2
- D-Celecoxib is considered as selective COX -2 inhibitors

43-Write true (T) or false (F)

- Aspartate is considered as excitatory neurotransmitter

44- Write true (T) or false (F)

- Buspirone is considered as 5-HT I_A antagonist

45- Write true (T) or false (F)

- In patients with chronic obstructive pulmonary disease benzodiazepines lead to respiratory acidosis

46- Write true (T) or false (F)

-Zolpidem exhibits anxiolytic non hypnotic effect

47-Write true (T) or false (F)

-Indomethacin is considered as selective COX -1 inhibitor

48- Write true (T) or false (F)

-Aspirin inhibits prostaglandin synthesis that increase gastric acidity

49- Write true (T) or false (F)

-Administration of NSAIDS might weakened the effectiveness of ACE inhibitors

50-All the following are therapeutic uses of diazepam except

A-Anxiety

B-Preanaesthetic medication

C-Anticonvulsant

D- Respiratory stimulant

GOOD LUCK



ASSIUT UNIVERSITY
FACULTY OF PHARMACY
PHARM. ANAL. CHEM. DEPT.

Clinical Pharmacy
Fourth Year
Quality control and pharmaceutical
analysis
FINAL EXAM
JUN 7, 2012
TIME ALLOWED: 2 HOURS

Mark [✓] for the correct statement and [x] for the wrong one, underline the wrong words or sentences and then correct it. (11 marks)

The statement	Mark	Correction
1. Samples should never be returned to the bulk.		
2. Sampling tools should be made of active materials, avoid glass		
3. Disposable sampling materials cannot be used for sampling.		
4. Samples from liquid preparations can be classified as heterogenous materials		
5. Sample collection form is written record of the sampling operations, always kept together with the collected form.		
6. Good man,ufacture practice is concerned with production only.		
7. ISO have been released guidelines for sampling of pharmaceutical products.		
8. Representative samples must be taken in very small quantity.		
9. Karl-Fischer titration method is used for the determination of acids in the compounds in physico-chemical investigation unit		
10. Composite sample consists of two or more portions of material collected at different time selected to represent the material being investigated.		
11. Indomethacin undergo photodegradation in its solid form		

II Complete the following sentences with the missing word(s) (19 marks)

- 1- ----- is collected as part of the original sampling process and reserved for future testing and its size should be sufficient to allow for at least two confirmatory analyses.
- 2- p-Aminosalicylic acid undergo degradation by,----- to form----- form and carbon dioxide
- 3- Quality can be defined as a product or service free of ----- and quality control can be defined as ----- of defects, while quality assurance can be defined as -----of defects.
- 4- Deming Cycle is an iterative -----
Quality ----- is concerned with sampling, specifications,. testing, organization, documentation & release, and it is a part of quality -----
- 5- Sample is a -----portion selected from the bulk.
- 6-The samples can be classified according to the sampling plan into 4 types:
- 7- Quality control units are -----
- 8- -----is the written record (documentation) of the sampling operations and always kept together with the collected sample.
- 9-The systematic errors can be minimized by -----

- 10- Types of documents for quality assurance are -----

- 11- The analytical method is considered precise if the RSD% is -----

- 12- If the calculated Q-value is..... the suspected observation can be rejected.
- 13- The value of (r) must lie between..... and..... which indicates
- 14- Ruggedness is..... while, Robustness is
- LOD is while, LOQ is
- 15- Factors influence the choice of an analytical method
- 16- Specificity iswhile selectivity is.....
- 17- L-epinephrine istimes more active than its d-form while the activity of the racemic mixture is that of the L-form.

III A- Analysis of sample of iron gave the following results; 11.3, 11.1, 11.0, 10.2, 11.2, 10.9, 11.0 µg/g. One value appears suspicious. Determine if it should be rejected or not (Tabulated $Q_{95\%} = 0.568$) (4 marks)

III B - A Calibration data for a chromatographic determination of vitamin K1 in a mixture of water soluble vitamins are shown in the following table:

Sample concentration (X_i) ($\mu\text{g/ml}$)	Peak area (Y_i)
5	3.7
15	11.2
20	14.3
25	18.2
30	21.9
35	25.1
Unknown concentration	9.2

Determine by the least square method the equation of the best straight line for the calibration curve (4 marks)

IV- Write short notes on:

(12 marks)

1- The objectives of quality control

2- Stability indicating assay of Aspirin with equations, mention its type.

3- Degradation of Tetracycline by two ways.

4- Reasons for incorrect analytical results

5- Factors affecting the limits of impurity levels in drug substances

6- Different reactions affect the chemical stability of the drug products (discuss one in details)

انتهت الأسئلة

عدد صفحات الامتحان ٦ صفحات

الشفوى يبدأ بعد النظرى مباشرة

With best wishes

Prof. Niveen A. Mohamed

Dr. Noha N. Atia

All questions should be answered

Part I (35 Marks)
Prof. Dr. Fawzia Habib

35

A) Modern shampoo must : (5 marks)

- 1- -----
- 2- -----
- 3- -----
- 4- -----
- 5- -----

B) Surfactants are main ingredients in shampoo formulations, what are the requirements? (5 Marks),

- 1- -----
- 2- -----
- 3- -----
- 4- -----
- 5- -----

C) With examples (if possible), mention the active ingredients that may be contained in shampoo composition. (5 Marks).

- 1- -----
- 2- -----
- 3- -----
- 4- -----
- 5- -----

D) Among the desirable properties of face powder is to have a good covering power. Mention TWO substances with reference to their advantages and diadvantages? (5 Marks).

- 1- -----
- 2- -----
- 3- -----
- 4- -----
- 5- -----

E) Enumerates 4 properties of face powder and mention the chemical substance responsible for achieving this property? (5 Marks).

- 1- -----e.g. -----
- 2- -----e.g. -----
- 3- -----e.g. -----
- 4- -----e.g. -----

F) Exposure to sunlight can be harmful adverse effect on human body. Mention ONE of them. (3 Marks)

- 1- -----
- a- -----
- b- -----

G) Mention some properties of sun screen preparations. (4 Marks)

- 1- -----
- 2- -----
- 3- -----
- 4- -----

H) The efficacy of sun screen preparations depends on: (3 Marks)

- 1- -----
- 2- -----
- 3- -----

Part II (40 Marks)
Prof. Dr. Fergany A Mohammed

40

A) Put (T) for the True statement and (F) for the False one
(Write your answer in the table) **(20Marks)**

- 1- Many typical cosmetic ingredients are identical to the components used in the Rx and OTC drugs.
- 2- Important regulations set forth specific GMP requirements for cosmetics.
- 3- FDA maintains the obligatory Cosmetic Registration Program.
- 4- A cosmetic product must be labeled according to cosmetic labeling regulations which are different from drugs labeling regulations.
- 5- Mouth washes considered deodorant preparations.
- 6- Body and baby powders are considered protective preparations.
- 7- Most emulsified cleansing creams can be considered as vanishing creams.
- 8- The cleansing power of a cream is related to its mineral oil content.
- 9- Liquid petrolatum is a good solvent for the oils and greases
- 10- Stearyl alcohol, in a proportion of about 1 % acts as emollient and as an emulsion stabilizer.
- 11- Cleansing lotions create stability problems, but they are less difficult to manufacture than cleansing creams.
- 12- Triethanolamine is usually utilized in lather creams.
- 13- Hexachlorophene has been added by some manufactures for its contribution as a stabilizing agent.
- 14- For preoperative and/or postoperative dental sedation, the barbiturates are desired.
- 15- Triethanolamine will often discolor with age and, upon hydrolysis, can produce HCl.
- 16- The ease of lathering depends on the type of the soaps.
- 17- Sodium soaps in general are more soluble than the corresponding Potassium soaps.
- 18- (Potassium soaps alone are usually softer, and a certain proportion of sodium soap must be present to give body to the mixture.
- 19- A lather-type shaving cream contains ingredients similar to those of the bar shaving, soap.
- 20- Brushless shaving creams are oil-in-water emulsions of the vanishing cream type.

Write your answer in the table

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

B) Complete the Following (20 Marks)

a- The properties required for a good cleansing cream are:

- 1- -----
- 2- -----
- 3- -----
- 4- -----

b- The shaving lather must be -----in texture and reasonably –

c- Shaving Stick composed of (write the formula):

- 1- -----
- 2- -----
- 3- -----
- 4- -----
- 5- -----

d- Halitosis is characterized by ----- . It is highly
prevalent and is a source of -----
to many. Halitosis is commonly a symptom of -----
disease.

GOOD LUCK

(1 mark each.)

- 21

- 7- Which of the following elements is required for the synthesis of thyroxine?
- a- Iron.
 - b- Sodium
 - c-Potassium.
 - d- Iodine.
- 8- Thyrotropin releasing hormone (TRH) stimulates the secretion of:
- a. Prolactin
 - b. Growth hormone
 - c. Thyroid stimulating hormone
 - d. Both a & c
- 9- CSF chloride level is decreased in:
- a- cerebral hemorrhage
 - b- viral meningitis.
 - c- T. B. meningitis.
 - d- Froin's syndrome.
- 10- Which of the following is not a hormone of the GI system:
- a. Gastrin
 - b. Cholecystokinin
 - c. Intrinsic factor
 - d. Secretin

Give a short account on:

(3 marks each)

- 1- Each adrenal cortex end product by functional layer and list a specific regulator of each.
- 2- C-reactive protein.
- 3- Laboratory findings in diabetic ketoacidosis.
- 4 - Causes and laboratory findings of osteoporosis.
- 5- Laboratory findings in Addison's disease.
- 6- Causes of increased protein in CSF.
- 7- Kidney function tests (enumeration).
- 8- Types and laboratory findings of hypothyroidism.
- 9- SIADH, definition, causes and laboratory findings.
- 10- Causes of increased prolactin level.

Case history:

1- A 50 years old female complaining of ureteric colic and constipation. Radiological examination showed ureteric calculi.

Laboratory findings:

Serum calcium = 12 mg/dl (8.5 -

10.5) Serum phosphorus = 1.8 mg/dl
(2.7 - 4.5).

Total CO₂ = 19 mmol/l (22 - 29).

PTH (intact) = 150 ng/l (10 - 65).

Blood urea, albumin and alkaline
phosphatase are normal.

1- What is your diagnosis?

2- Comment on the abnormal findings.

3 - What are other laboratory findings in this case?

11 - A 34 year old man was admitted for diagnostic evaluation with the complaint of epigastric pain of 2 years' duration, which was variously described as burning. He had been diagnosed with a duodenal peptic ulcer 18 months ago; at that time, therapy with antacids and dietary revision provided considerable alleviation of symptoms. More recently, the pain had become more persistent and awakened the patient 4-6 times each night. Radiologic studies revealed a 2.5 cm ulcer crater in the first portion of the duodenum and a 0.5 cm ulcer in the antrum of the stomach. Gastric analysis revealed 640 ml of secretion in the basal hour, with an acid output 38 mEq, and 780 ml of secretion in the I-hour pentagastrin stimulation test, with acid output of 84 mEq .

- What is the probable disease?
- What other tests would be diagnostic for this disease?

PRACICAL·EXAM.

- 1- Give an account on the conditions needed to collect sample for the assay of lipid profile. Give the normal levels of cholesterol , triglycerides , HDL- cholesterol and LDL- cholesterol.
- 2- Complete the missing parts:
In the determination of glucose by the hexokinase method, Glucose +ATP $\xrightarrow{HK, Mg^{++}}$ G6P + ADP.
G6P + NADP $\xrightarrow{G6PD}$
3- The rate of formation of NADPH is measured at
4- Give the normal ranges for each of the following:
a- Serum coriso!. b-Fasting blood glucose .
 . c-Serum albumin. d- Serum total bilirubin.
 c- ALT.
- 5- CSF REPORT:
Aspect: Xanthochromic. Clot: Present.
Chloride: 730 mg/dl. Protein: 1000mg/dl
Sugar : 60 mg/dl Cells: 4 lymphocytes/ul.
 - What is the diagnosis of the case?
 Mention 5 causes of xanthochromia.
- 6-UR1NE REPORT:
The following findings were found: Albumin: ++.
Specific gravity: 1030. RBCs: 40 - 60/HPF.
Pus cells: 15- 30 /hpf.
Casts: hyaline, red cell, epithelial and granular casts.
Volume: 400 ml and smoky.
What is the diagnosis of the case?
Mention the causes of prerenal azotemia.

GOOD LUCK

Drug interactions Examination
For
Clinical Pharmacy Students

Time allowed: Two hours

18 June, 2012

Multidrug therapy is a double-edged sword. Decide whether each of the following drug combinations is recommended or not and explain the pharmacological rationale behind your decision:

- 1- Estrogen and ampicillin
 - 2- Theophylline and diltazem
 - 3- Metformin and statins
 - 4- Sotalol and thiazide diuretics
 - 5- Dopamine and monamine oxidase inhibitors(MAOIs)
 - 6~ Penicillins with gentamycin in cases of enterococcal endocarditis
 - 7 - Administration of digoxin following erythromycin
 - 8- A patient on oral anticoagulant starts therapy with cefanlandole
 - 9- A patient on receive oral ranitidine and ketoconazole
 - 10- An epileptic case on phenytoin starts treatment with INH
- N.B.* Each question equal 7.5 Marks

GOOD LUCK

مخبر الصيدلة – جامعة أمهوت

المادة: التسويق الدوائى	الصيدلة الاكلينيكية	لجنة الممتحنين:
عدد الصفحات: ٢	الفرقة: الرابع	١ - د. نادية أمين محمد
زمن الامتحان: ساعة واحدة	فصل: ٨	٢ - د. أحمد سيد سباعى
التاريخ: ٢٠١٢/٦/٢١	امتحان دور يونيو ٢٠١٢	

أجب الأسئلة التالية:

السؤال الأول: ناقش مدى صحة العبارات التالية (مع التعليق): (٢٠ درجة)

- ١ - التسويق الدوائى موجه فقط للمرضى.
- ٢ - لا يمثل المنافسون الذين يعملون فى نفس المجال تهديدا مباشرا للمنظمة.
- ٣ - للأدوية تسمية واحدة.
- ٤ - ان اختيار المزيج الترويجى الملائم يتحدد من قبل مستهلكى أو مشتري الدواء.

السؤال الثانى: أذكر المصطلح العلمى للمفاهيم التالية: (٢٥ درجة)

- ١ - العملية التى يتم خلالها بلوغ سوق الرعاية الصيدلانية.
- ٢ - هو أى مادة أو خليط من المواد ؛ يتم تصنيعها كدواء فى شكل صيدلى ، سواء للاستعمال الأدمى أو البيطرى ، وتخضع لرقابة التشريعات والقوانين الصحية للبلاد.
- ٣ - هى تركيبات كيميائية تستعمل للوقاية وكذا التجميل، التنظيف، ولها نفس مصدر الأدوية.
- ٤ - مجموع العناصر التى تكون جزء من المنتج والتى تباع معه من أجل حفظ محتوياته.
- ٥ - اسم أو تعبير أو إشارة أو رمز أو تصميم أو تركيبية من المفاهيم التى تهدف الى تشجيع العملاء المحتملين لتمييز سلعة أو سلع يمتلكها شخص عن سلعة أو سلع منافسة.
- ٦ - هو التعبير النقدي لقيمة السلعة فى وقت ومكان معين وهو العنصر الوحيد من المزيج التسويقى الذى يمثل ايرادات المنشأة.
- ٧ - هى الطريق الذى تسلكه السلعة من المنتج الى المستهلك النهائى أو المستعمل الصناعى من خلال مجموعة من الأجهزة المتخصصة التى إما أن تكون تابعة للمنتج أو مستقلة.
- ٨ - مجموعة الجهود الترويجية التى تسعى لتعريف جمهور الأطباء واقناعهم بأنواع المنتجات الدوائية ودفعهم لوصفها لمرضاهم..
- ٩ - هو الذى يتعامل مع الأطباء لإقناعهم باستخدام أدوية شركته دون الشركات الأخرى.
- ١٠ - هو الذى يتركز عمله على توفير طلبيات الأدوية التى تحتاجها الصيدليات.

السؤال الثالث: ما اسم الاستراتيجية المتبعة في كل حالة مما يلي. (٢٥ درجة)

- ١- يتعامل المسوق في تلك الاستراتيجية مع السوق الكلي ككتلة واحدة أو كقطاع واحد.
- ٢- يحدد السوق المستهدف للمنظمة بقطاع سوقى واحد.
- ٣- تبنى مايسمى بأساليب التسويق الهجومى مثل التخفيضات الملموسة فى الأسعار أو الإعلان المكثف أو أساليب تنشيط المبيعات غير التقليدية.
- ٤- تبحث المؤسسة عن رفع مبيعاتها بدخول منتجاتها الحالية لأسواق جديدة ، تستطيع توسيع أسواقها محليا أو وطنيا أو دوليا.
- ٥- استبعاد خطوط منتجات قائمة أو تبسيط بعض التشكيلات داخل خطوط المنتجات بهدف التبسيط فى خط المنتجات وإسقاط منتجات غير مربحة والتركيز على المنتجات المربحة فقط.
- ٦- تطوير أو تغيير بعض الصفات للمنتجات القائمة مع إبقاء عدد المنتجات ثابت.
- ٧- تهدف الشركة من اتباع هذه الاستراتيجية الى الحصول على حجم كبير من السوق غير المجزأ حسب الدخل بحيث تسعى الى الوصول الى السوق الكلية وذلك عن طريق تحديد أسعار منخفضة لسلعها.
- ٨- يقوم المنتج باختيار موزع وحيد أو عدد محدود من الوسطاء للتعامل مع السلعة فى منطقة معينة.
- ٩- يحاول المنتج تحقيق أكبر قدر من تغطية السوق ولذا فإنه يتعامل مع أكبر عدد ممكن من تجار التجزئة والجملة فى كل منطقة.
- ١٠- تتبع هذه الاستراتيجية فى السوق المتباينة حسب فئات الدخل ، ويتم تحديد سعر مرتفع للسلعة الجديدة بحيث يوجه هذا السعر الى الفئة الأولى فى السوق والتي يهملها الحصول على السلعة مهما كان السعر مرتفعا.

السؤال الرابع: اكتب فى الموضوعات التالية: (٢٠ درجة)

- ١- خصائص المنتجات الصيدلانية.
- ٢- أهمية الترويج بالنسبة للمنتج الدوائى.

انتهى الامتحان مع أطيب التمنيات بالتوفيق

(Read the Questions carefully) (All questions should be attempted)

Question 1 (25 marks)

1. Give definitions for: (4 points)

A. Anaemia (according to WHO):

B. Parenteral Nutrition:

2. Give TWO examples for each of the following: (4 points)

A. Causes of iron deficiency anaemia among adult males.

B. Advantages of enteral nutrition over parenteral nutrition.

C. Disadvantages of gastrostomy.

D. Factors that increase the risk of phlebitis on administration of parenteral nutrition

3. Complete the followings: (5 points)

A. Birth take place beforeweeks of gestation are technically "premature".

B. The main symptoms of respiratory distress syndrome (RDS) in neonates are:

- i.
- ii.
- iii.

C. In the treatment of elderly patients, some factors may impair counseling adherence of the patients to their medicines such as:

- i.
- ii.

D. The primary prevention of stroke in elderly includes the control of risk factors such as:

- i.
- ii.
- iii.
- iv.

4. Give the reason(s) for: (4 points)

A. Metronidazole having elimination half-life of over 20 hours in term babies, while is up to 109 hours in preterm babies.

B. The incidence of medication errors occurring in children is significantly greater than in adults.

C. Many medicine granted a product license for adult use have not been scrutinized by the licensing authorities for use in children.

D. The clinical effects of some drugs such as the hypotensive effect of nifedipine, may be significantly enhanced in the elderly.

5. Indicate whether each of the following statements is true (✓) or false (X) and justify your answer: (8 points)

() A. Enteral drug absorption is erratic in any newborn, therefore most drugs are given intravenously to ensure maximum bioavailability.

() B. Drug metabolism is affected by the physiological hyperbilirubinaemia of the newborn.

() C. In the treatment of venous ulcers, in elderly patients, antiseptics should not be used when there is granulation tissue.

() D. Gentamicin and vancomycin must be administered far less frequently to neonates than in children or adults and plasma drug levels must be assayed.

Question 2 (25 marks)

I. Write short notes on each of the following:

(5 marks)

1. The fertile window.

2. Etiology of menorrhagia.

3. Ovarian changes in post-menopausal age.

4. Management options of menopause

5. Nausea and vomiting in pregnancy.

II. Choose the most appropriate choice the following statements: (4 marks)

1. The following reasons are involved in the etiology of PMS EXCEPT:

- A. Progesterone/estradiol imbalance B. Increased production of aldosterone
C. Increased production of serotonin D. Increased production of prolactin

2. ----- keeps the corpus luteum viable, so it can continue pumping out hormones

- A. Luteinizing hormone B. Follicular stimulating hormone
C. Chorionic gonadotrophin D. Prolactin

3. The following are symptoms of endometriosis EXCEPT:

- A. Urinary incontinence B. Dysmenorrhea and pelvic pain
C. Dyspareunia D. Infertility

4. Which of the following shows poor oral bioavailability?

- A. Progesterone B. Hydroxyprogesterone
C. Dydrogesterone D. Levonorgestrel

5. The following drugs are useful in treatment of menopausal symptoms EXCEPT:

- A. Gabapentin B. Raloxifene
C. Gestrinone D. Teriparatide

6. Pregnancy causes the following EXCEPT:

- A. decrease insulin production B. Increased need of insulin
C. Worsening of ketoacidosis D. Raising renal glucose

7. The following are known teratogens EXCEPT:

- A. Isotretinoin B. Lithium
C. Warfarin D. Phenobarbital

8. Etiology of pregnancy-induced hypertension include the following EXCEPT:

- A. Altered sensitivity to angiotensin II B. Overproduction of aldosterone
C. Overproduction of prostacyclin D. Genetic cause

Answer Sheet

1	2	3	4	5	6	7	8

III. Define the following terms:

1. Eumenorrhea.

2. Preeclampsia.

3. Hyperemesis gravidarum.

4. Premenstrual dysphoric disorder

5. Adenomyosis

6. Perimenopausal women.

7. Oligomenorrhea.

8. Neonatal death.

9. Melasma.

10. Retrograde menstruation.

IV. Denote (T) for the true statements and (F) for the false ones and correct them:

(6 marks)

1	Endometriosis is a major cause of infertility.	()
2	Women with endometriosis have an increased risk for development of ovarian cancers.	()
3	Hysterectomy is the traditional surgical treatment of menorrhagia.	()
4		()
5	Menstrual cramps are caused by the uterine contractions that occur in response to prostaglandins and other chemicals such as vasopressin.	()
6	HCG can be detected as early as 7 days after fertilization.	()
7	Natural estrogens are less potent than synthetic ones.	()
8	Alendronate is a human parathyroid hormone which stimulates new bone formation and increase resistance to fracture.	()
9	Pregnancy test becomes negative 1 week after delivery and 2 weeks after abortion.	()
10	A woman who has 2 living children born as preterm twins in her first pregnancy would be designated as: TPAL 0-1-0-2.	()
11	Regarding Class C drugs, no animal studies have been conducted and there are no adequate and well-controlled studies in pregnant women.	()
12	Penicillins and cephalosporins are agents of choice as anti-infective agents in pregnant women.	()

V. Complete the following table:

(5 marks)

Drug	Class/Use
<u>Spironolactone</u>	
<u>Ethinyl estradiol</u>	
<u>Seligiline</u>	
<u>Donepezil</u>	
<u>Tibolone</u>	
<u>Nafarelin</u>	
<u>Celecoxib</u>	
<u>Tranexamic acid</u>	
<u>Paroxetine</u>	
<u>Danazole</u>	

• مع تمنياتنا للجميع بالتوفيق •

أ.د. أحمد مصطفى السيد د. إبراهيم عبد الرحيم

الامتحان الشهري لجميع الطلاب سوف يعقد بمشيئة الله تعالى اليوم عقب الامتحان النظري مباشرة بقسم الصيدلانيات



كلية الصيدلة - جامعة أسبوط

لجنة الممتحنين:

- ١- د. نادية أمين محمد
٢- د. أحمد سيد سباعي

الصيدلة الأكاديمية
الفرقة: الرابعة
(فصل ٨)

امتحان دور يونيو ٢٠١٣

المادة: التسويق الدوائي
عدد الصفحات: ٢
زمن الامتحان: ساعة واحدة
التاريخ: ٢٠ / ٦ / ٢٠١٣

أجب الأسئلة التالية:

السؤال الأول: ناقش مدى صحة العبارات التالية (مع التعليق): (١٥ درجة)

- ١- يعمل مسوقو الدواء في معزل عن البيئة التي يعيشون فيها.
- ٢- إن السوق الصيدلاني ينفرد و يتميز عن غيره من الأسواق في عدة خصائص مهمة.
- ٣- إن عملية التغليف في المنتجات الصيدلانية ليست كأي عملية تغليف أخرى.

السؤال الثاني: اذكر المصطلح العلمي للمفاهيم التالية: (٣٠ درجة)

- ١- هو العملية التي يتم من خلالها بلوغ سوق الرعاية الصيدلانية.
- ٢- هي القوى الفاعلة داخل وخارج المنظمة التي تؤثر على قدرة إدارة التسويق لإجراء التبادلات مع المستهلكين.
- ٣- تشمل هذه الفئة الأطباء و الصيادلة و الأطباء البيطريين و الممرضات، و هؤلاء يمثلون أهمية خاصة لشركات صناعة الدواء لأنهم يمثلون المستهلك أو العميل الداخلي.
- ٤- هو أي مادة أو خليط من المواد ؛ يتم تصنيعها كدواء في شكل صيدلي ، سواء للاستعمال الآدمي أو البيطري ، و تخضع لرقابة التشريعات و القوانين الصحية للبلاد .
- ٥- " مادة تستعمل في تغيير أو معالجة الأنظمة الفسيولوجية الخاصة بالمرضى".
- ٦- هي تركيبات كيميائية تستعمل للوقاية و كذا التجميل، التنظيف، و لها نفس مصدر الأدوية.
- ٧- هو عبارة عن مجموعة من المنتجات التي تقدمها المؤسسة والتي يرتبط كل منها بالآخر.
- ٨- المزايا الأساسية التي يبحث عنها المشتري والتي تسمح بإشباع حاجاته.
- ٩- مجموع العناصر التي تكون جزء من المنتج و التي تباع معه من أجل حفظ محتوياته.
- ١٠- عملية وضع أهم البيانات والمعلومات على أو داخل المنتج وهي مهمة لإظهار كيفية استعمال المنتج وفاعليته بالإضافة إلى المضاعفات الناتجة عن استعماله.
- ١١- اسم أو تعبير أو إشارة أو رمز أو تصميم أو تركيبة من المفاهيم التي تهدف إلى تشجيع العملاء المحتملين لتمييز سلعة أو سلع يمتلكها شخص عن سلعة أو سلع منافسة.
- ١٢- هو التعبير النقدي لقيمة السلعة في وقت ومكان معين وهو العنصر الوحيد من المزيج التسويقي الذي يمثل إيرادات المنشأة.
- ١٣- عملية نقل المنتجات الدوائية من أماكن الإنتاج إلى أماكن الاستهلاك في الوقت والمكان المناسبين .
- ١٤- مجموعة الجهود الترويجية التي تسعى لتعريف جمهور الأطباء وإقناعهم بأنواع المنتجات الدوائية ودفعهم لوصفها لمرضاهم.

١٥- هو الذي يتركز عمله على توفير طلبيات الأدوية التي تحتاجها الصيدليات.

السؤال الثالث: ما اسم الاستراتيجية المتبعة في كل حالة مما يلي: (٣٠ درجة)

- ١- يتعامل المسوق في تلك الاستراتيجية مع السوق الكلى ككتلة واحدة أو كقطاع واحد.
- ٢- يُحدد السوق المستهدف للمنظمة بقطاع سوقى واحد.
- ٣- يتحدد السوق المستهدف بقطاعين أو أكثر من قطاعات السوق.
- ٤- تبني ما يسمى بأساليب التسويق الهجومي مثل التخفيضات الملموسة في الأسعار أو الإعلان المكثف أو أساليب تنشيط المبيعات غير التقليدية.
- ٥- تبحث المؤسسة عن رفع مبيعاتها بدخول منتجاتها الحالية لأسواق جديدة، تستطيع توسيع أسواقها محليا أو وطنيا أو دوليا.
- ٦- التخلي عن بعض المنتجات التي أصبحت في طريق الزوال وليس لها إي مروية.
- ٧- تحاول المنظمة أن تميز منتجاتها عن منتجات أخرى من نفس النوع، وتطوير العمق بإضافة منتجات جديدة على خط المنتجات أي يزيد عدد المنتجات و لكن لا تتخلي عن ما هو موجود من منتجات سابقا.
- ٨- إضافة خطوط جديدة إلى خطوط منتجاتها الحالية التي تختلف استخداماتها عن المنتجات الأخرى و لكن تحت نفس العلامة.
- ٩- تطوير أو تغيير بعض الصفات للمنتجات القائمة مع إبقاء عدد المنتجات ثابت.
- ١٠- استبعاد خطوط منتجات قائمة أو تبسيط بعض التشكيلات داخل خطوط المنتجات بهدف التبسيط في خط المنتجات وإسقاط منتجات غير مربحة و التركيز على المنتجات المربحة فقط.
- ١١- تتبع هذه الإستراتيجية في السوق المتباينة حسب فئات الدخل ، ويتم تحديد سعر مرتفع للسلعة الجديدة بحيث يوجه هذا السعر إلى الفئة الأولى في السوق والتي يهملها الحصول على السلعة مهما كان السعر مرتفعا.
- ١٢- تهدف الشركة من اتباع هذه الإستراتيجية إلى الحصول على حجم كبير من السوق غير المجزأ حسب الدخل بحيث تسعى إلى الوصول إلى السوق الكلية و ذلك عن طريق تحديد أسعار منخفضة لسلعها.
- ١٣- يحاول المنتج تحقيق أكبر قدر من تغطية السوق ولذا فإنه يتعامل مع الأكبر عدد ممكن من تجار التجزئة والجملة في كل منطقة.
- ١٤- يقوم المنتج باختيار موزع وحيد أو عدد محدود من الوسطاء للتعامل مع السلعة في منطقة معينة.
- ١٥- توفير السلع في متاجر أو منافذ قليلة ومتنقاة من عدة بدائل ويتم اختيارها على أساس سمعة الموزع و التزامه بالسعر.

السؤال الرابع: اكتب في الموضوعات التالية: (١٥ درجة)

- ١- أهمية دراسة السوق..
- ٢- مراحل تطوير المنتج الصيدلاني الجديد.
- ٣- سلبيات مهنة مندوبي البيع في شركات الأدوية.

انتمى الامتحان مع أطيب التمنيات بالتوفيق

Answer the following questions:

I- MCQ:

Choose the correct answer:-

(1 mark each)

- 1- Secondary hyperlipidemia is caused by the following except:**
 - a. Diabetes mellitus.
 - b. Nephrotic syndrome.
 - c. Malnutrition.
 - d. Hypothyroidism.
- 2- which is the following element required for synthesis of thyroxine:**
 - a. Iron.
 - b. Iodine.
 - c. Sodium.
 - d. Calcium.
- 3- The most specific marker used for diagnosis of early and late myocardial infarction is:**
 - a. Myoglobin.
 - b. AST.
 - b. LDH.
 - d. Troponin.
- 4- Thyroxin hormone causes the following except:**
 - a. Increase basal metabolic rate.
 - b. Decrease growth.
 - c. Has thermogenic effect.
 - d. Increase heart rate and cardiac output.
- 5- Glucocorticoid excess causes the following except:**
 - a. Cushing's syndrome.
 - b. Osteoporosis.
 - c. Hyperglycemia.
 - d. Diabetes insipidus.
- 6- Drugs which cause hyperlipidemia are the following except:**
 - a. Thiazid.
 - b. β -blockers.
 - c. Salicylates.
 - d. Anabolic steroids

- 7- Oxytocin is a hormone which has the following character:**
- Causes contraction of smooth muscle cells in uterus.
 - Stimulates contractile cells in mammary glands.
 - Secreted by adrenal glands.
 - Plays role in labour.
- 8- Cortisol is hormone which has the following character except:**
- Secreted from zona reticularis of adrenal cortex.
 - Its secretion is diurnal.
 - Stimulate gluconeogenesis and inhibit protein synthesis.
 - Its over production cause Cushing's syndrome.
- 9- Which of the following is not a hormone of the GI system?**
- Gastrin.
 - Cholecystokinin.
 - Intrinsic factor.
 - Secretin.
- 10- CSF chloride level is decreased in:**
- Cerebral haemorrhage.
 - TB meningitis.
 - Viral meningitis.
 - Froin's syndrome.
- 12- Prerenal zotemia is caused by:**
- Acute renal failure.
 - Congestive heart failure.
 - Renal tumor.
 - Chronic renal failure.
- 13- Which of the following enzymes are markedly increased in acute Hepatitis :**
- ALT.
 - ALP.
 - ALT. and AST.
 - LDH.
- 14- The most common cause of heavy proteinuria is:**
- Diabetes mellitus.
 - Nephrotic syndrome.
 - Liver disease.
 - Chronic renal failure.
- 15- Causes of exudate ascites include the following except:**
- TB.
 - GIT malignancy.
 - Bacterial peritonitis.
 - Hepatic vein thrombosis.
- 16- Creatinine clearance results are correct using patients body surface area to account for difference in:**
- Age.
 - Dietary intake.
 - Sex.
 - Muscle mass.

17- In primary biliary cirrhosis all the following are true except:

- a. Anti nuclear antibody is positive.
- b. Anti smooth muscle antibody is positive.
- c. Anti HCV antibody is positive.
- c. Anti mitochondrial antibody is positive.

18-A patient with insulinoma may exhibit dizziness and fainting attributable to:

- a, Hypoglycemia.
- b. Ketosis.
- b. Hyperglycemia.
- d. Acidosis.

II- Put false or true:

(0.5 mark each)

- a. Hypercalcemia of malignancy is characterized by elevated PTHrP and normal intact PTH.
- b. Myoglobin is a late marker of myocardial infarction and not affected by kidney diseases.
- c. Urinary and plasma catecholamines and urinary VMA are markers of pheochromocytoma.
- d. Cholesterol form steroid hormones and vitamin D.
- e. The specific gravity of urine increased in diabetic insipidus.
- f. The most important abnormality of liver cirrhosis is decreased serum albumin.

III- Answer in short :

(3 marks each)

- 1- Enumerate hormones secreted by the anterior pituitary.
- 2- What are the layers of adrenal glands and hormones secreted from each layer.
- 3- Biological action of parathyroid hormone.
- 4- Action of aldosterone and control of its secretion.
- 5- Mention physiological action of prolactin.
- 6- Causes of xanthochromic CSF.
- 7- Causes of increased plasma level of β_2 microglobulin.
- 8- The acute metabolic complications of diabetes mellitus.
- 9- Causes of polyuria.
- 10- Laboratory findings in liver cirrhosis.

„Good Luck,,

انتهت الأسئلة،،،

ملحوظة هامة :

سوف يعقد الامتحان الشفهي عقب انتهاء الامتحان النظري والعملى وذلك فى نفس المكان



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امتحان دور يونيو ٢٠١٣

المادة: التسويق الدوائي
عدد الصفحات: ٢
زمن الامتحان: ساعة واحدة
التاريخ: ٢٠١٣ / ٦ / ٢٠

أجب الأسئلة التالية :

المسألة الأولى: ناقش مدى صحة العبارات التالية (مع التعليق): (١٥ درجة)

- ١- يعمل مسوقو الدواء في معزل عن البيئة التي يعيشون فيها.
- ٢- إن السوق الصيدلاني ينفرد و يتميز عن غيره من الأسواق في عدة خصائص مهمة.
- ٣- إن عملية التغليف في المنتجات الصيدلانية ليست كأي عملية تغليف أخرى.

المسألة الثانية: اذكر المصطلح العلمي للمفاهيم التالية: (٣٠ درجة)

- ١- هو العملية التي يتم من خلالها بلوغ سوق الرعاية الصيدلانية.
- ٢- هي القوى الفاعلة داخل وخارج المنظمة التي تؤثر على قدرة إدارة التسويق لإجراء التبادلات مع المستهلكين.
- ٣- تشمل هذه الفئة الأطباء و الصيادلة و الأطباء البيطريين و الممرضات، و هؤلاء يمثلون أهمية خاصة لشركات صناعة الدواء لأنهم يمثلون المستهلك أو العميل الداخلي.
- ٤- هو أي مادة أو خليط من المواد ؛ يتم تصنيعها كدواء في شكل صيدلي ، سواء للاستعمال الأدمي أو البيطري ، و تخضع لرقابة التشريعات و القوانين الصحية للبلاد .
- ٥- " مادة تستعمل في تغيير أو معالجة الأنظمة الفسيولوجية الخاصة بالمريض".
- ٦- هي تركيبات كيميائية تستعمل للوقاية و كذا التجميل، التنظيف، و لها نفس مصدر الأدوية.
- ٧- هو عبارة عن مجموعة من المنتجات التي تقدمها المؤسسة والتي يرتبط كل منها بالآخر.
- ٨- المزايا الأساسية التي يبحث عنها المشتري والتي تسمح بإشباع حاجاته.
- ٩- مجموع العناصر التي تكون جزء من المنتج و التي تباع معه من أجل حفظ محتوياته.
- ١٠- عملية وضع أهم البيانات والمعلومات على أو داخل المنتج وهي مهمة لإظهار كيفية استعمال المنتج وفاعليته بالإضافة إلى المضاعفات الناتجة عن استعماله.
- ١١- اسم أو تعبير أو إشارة أو رمز أو تصميم أو تركيبية من المفاهيم التي تهدف إلى تشجيع العملاء المحتملين لتمييز سلعة أو سلع يمتلكها شخص عن سلعة أو سلع منافسة.
- ١٢- هو التعبير النقدي لقيمة السلعة في وقت ومكان معين وهو العنصر الوحيد من المزيج التسويقي الذي يمثل إيرادات المنشأة.
- ١٣- عملية نقل المنتجات الدوائية من أماكن الإنتاج إلى أماكن الاستهلاك في الوقت والمكان المناسبين .
- ١٤- مجموعة الجهود الترويجية التي تسعى لتعريف جمهور الأطباء وإقناعهم بأنواع المنتجات الدوائية ودفعهم لوصفها لمرضاهم.

١٥- هو الذي يتركز عمله على توفير طلبات الأدوية التي تحتاجها الصيدليات.

المسألة الخامسة، ما اسم الاستراتيجية المتبعة في كل حالة مما يلي: (٣٠ درجة)

- ١- يتعامل السوق في تلك الاستراتيجية مع السوق الكلي ككتلة واحدة أو قطاع واحد.
- ٢- يُحدد السوق المستهدف للمنظمة بقطاع سوقي واحد.
- ٣- يحدد السوق المستهدف بقطاعين أو أكثر من قطاعات السوق.
- ٤- تبني ما يسمى بأساليب التسويق الهجومي مثل التخفيضات الملموسة في الأسعار أو الإعلان المكثف أو أساليب تشييط المبيعات غير التقليدية.
- ٥- تبحث المنظمة عن رفع مبيعاتها بدخول منتجاتها الحالية لأسواق جديدة، تستطيع توسيع أسواقها محليا أو وطنيا أو دوليا.

٦- التخلي عن بعض المنتجات التي أصبحت في طريق الزوال وليس لها أي مروية.

٧- تحاول المنظمة أن تميز منتجاتها عن منتجات أخرى من نفس النوع، وتطوير العمق بإضافة منتجات جديدة على خط المنتجات أي يزيد عدد المنتجات ولكن لا تتخلي عن ما هو موجود من منتجات سابقا.

٨- إضافة خطوط جديدة إلى خطوط منتجاتها الحالية التي تختلف استخداماتها عن المنتجات الأخرى ولكن تحت نفس العلامة.

٩- تطوير أو تغيير بعض الصفات للمنتجات القائمة مع إبقاء عدد المنتجات ثابت.

١٠- استبعاد خطوط منتجات قائمة أو تبسيط بعض التراكيبات داخل خطوط المنتجات بهدف التبسيط في خط المنتجات وإسقاط منتجات غير مربحة و التركيز على المنتجات المربحة فقط.

١١- تتبع هذه الإستراتيجية في السوق المتباعدة حسب فئات الدخل ، ويتم تحديد سعر مرتفع للسلعة الجديدة بحيث يوجه هذا السعر إلى الفئة الأولى في السوق والتي يهدف الحصول على السلعة مهما كان السعر مرتفعا.

١٢- تهدف الشركة من اتباع هذه الإستراتيجية إلى الحصول على حجم كبير من السوق غير المجزأ حسب الدخل بحيث تسعى إلى الوصول إلى السوق الكلية و ذلك عن طريق تحديد أسعار منخفضة لسلعها.

١٣- يحاول المنتج تحقيق أكبر قدر من تغطية السوق ولذا فإنه يتعامل مع الأكبر عدد ممكن من تجار التجزئة والجملة في كل منطقة.

١٤- يقوم المنتج باختيار موزع وحيد أو عدد محدود من الوسطاء للتعامل مع السلعة في منطقة معينة.

١٥- توفير السلع في متاجر أو منافذ قليلة ومتناثرة من عدة بدائل ويتم اختيارها على أساس سمعة الموزع و إنترامه بالسعر.

المسألة السادسة: اكتب في الموضوعات التالية: (١٥ درجة)

- ١- أهمية دراسة السوق..
- ٢- مراحل تطوير المنتج الصيدلاني الجديد.
- ٣- سبلات مهنة مندوبي البيع في شركات الأدوية.

انتهى الامتحان مع أطيب التحيات والتوفيق

Practical examination

1) Liver function test

Parameters	Value	
Serum bilirubin (total)	8	mg/dl
Serum bilirubin (cong)	2.4	mg/dl
Plasma protein (total)	6.2	gm/dl
Albumin	4.1	gm/dl
Globulin	2.1	gm/dl
Alkaline phosphatase	12	K.A.U/dl
SGOT	20	I.U/L
SGPT	6	I.U/L

1- What is your diagnosis?

2- What is the significance of increased alkaline phosphatase enzyme in liver diseases?

3- In this case LDH enzyme if measured is it normal, increased or decreased?

2) Kidney function test

Parameters	Value	
S. Urea	96	mg/dl
S. Creatinine	1.5	mg/dl
Creatinine in urine	120	mg/dl
Urine volume /min	1.5	mL
Creatinine clearance	120	ml/min

1- What is your provisional diagnosis? Why?

2- What are the causes of increased blood urea?

3) Oral Glucose tolerance test

	Blood	Sugar	Acetone
Fasting	300 mg/dl	+ve	- ve
1/2 hour (after glucose)	400 mg/dl	++ve	+ ve
1 hour	600 mg/dl	+++ve	+ ve
1 1/2 hours	550 mg/dl	+++ve	+ ve
2 hours	500 mg/dl	+++ve	+ ve
2 1/2 hours	420 mg/dl	++ve	+ ve

1- What is your diagnosis?

2- What is the normal fasting blood glucose level?

3- What other causes of acetonuria?

4) Lipid Profile

Age: 8 years

Sex: Male

Parameter	Normal values	Patient values
Triglycerides	1-8 mmol/L.	12
T.chplesterol	3.5 – 6.5 mmol/L	5.7
LDL-c	2.5 – 4.5 mmol/L	3.2
HDL-c	0.7 – 2 mmol/L	1.7

Comment:

- Lipoprotein electrophoresis show intense band at origin of serum application.
 - Increase Apo – B48
- 1- What is your diagnosis?
 - 2- Precaution of sampling for determination of lipids?
 - 3- What is the lipid parameters consist with high risk of coronary heart disease? What is the antirisky factor?

5) Case:

A 68 year old man presented to the ICU with sudden onset of severe chest pain, left arm pain, dyspnea, and weakness while away from home on a business trip.

Investigations:

Serum:	7Am	4PM
Total CK	200U/L	700 (normal, 54-186 U/L)
CK-MB	16 U/L	150 (normal, 0-24U/L)
Myoglobin	76 ug/L	124 (normal, <70 ug/L)
Troponin T	<0.1 ug/L	1.3 (normal, 0-0.1 ug/L)
LD1 > LD2 flipped ratio	<1	3
LDH	250	328 (normal, 75-280 U/L)

1- What is your diagnosis of this case? Why

2- From the previous data, what is the most diagnostic pattern for diagnosis of this case?

3- Mention 2 inflammatory markers predict future cardiac disease?

9/12/13

Pharmaceutics Department
Clinical Pharmacy Program
Clinical Pharmacy 2 – Class 8
Total Marks : 50

Instructors : Prof. Ahmed Mostafa and Dr. Mostafa Abdel-Rahman

Time allowed : 2 hours

Wednesday, June 12, 2013

Notes : Read the questions carefully before you start to answer -
the examination paper contains eight pages - all questions should
be attempted.

PART 1 (25 marks)

Prof. Ahmed Mostafa El-Sayed

Question1 : Indicate whether each of the following statements is
true (☒) or false (☐) and mention why : (4.5 marks)

(☐) A-Larger dose amount of lipid-soluble drug are required for
infant of a diabetic mother.

(☐) B-The metabolic fate of drugs in the newborn is affected by
the physiological hyperbilirubinaemia

(☐) C-Central parenteral nutrition allows the infusion of a highly
concentrated, hypertonic nutrient admixture.

Question 2 : Give TWO examples for each : (3 marks)

A-The most significant drug - nutrient interactions in enteral nutrition which result in reduced bioavailability and suboptimal therapeutic effect

B-Drugs used in the treatment of osteoporosis

C-Causes of medication errors which are now recognized as an important cause of adverse drug events in pediatric practice

Question 3 : Give definition for each : (3 marks)

A-Malnutrition :

B-Anaemia in adults according to WHO definition :

Questions 4 : Give reason(s) for : (3 marks)

A-In geriatric patients, the free fraction of acidic drugs in blood such as cimetidine, furosemide and warfarin is increased than in case of adult patients

B-Patients with end-stage renal disease suffer from aenemia

C-The loss of public confidence in the MMR vaccine and a decrease in its coverage for 2 years old infants

Questions 5 : Complete the followings : (7.5 marks)

A-In the treatment of respiratory distress syndrome of neonates, the major pulmonary toxicity is (1 mark)

B-In children, non-adherence may be caused by several factors such as (2 marks)

i-

ii-

iii-

iv-

C-Aenemia is classified by size and colour of red cells into :

(1.5 marks)

i-

e.g.

ii-

e.g.

iii-

e.g.

D-Enteral nutrition is contraindicated in case of : (1 mark)

i-

ii-

E-The main risk factors contributing to increased incidence of stroke in geriatric patients are : (2 marks)

i-

ii-

iii-

iv-

Questions 6 : Select and circle the ONE lettered answer that is correct : (4 marks)

A-The respiratory rate (breath/minute), in children of age range 5-12 years old, is equal to :

i-25 - 30

ii-16 - 25

iii-25 - 45

B-In parenteral nutrition, we consider reducing the fluid output in case of :

i-Fever

ii-Cardiac failure

ii-Low humidity environment

iv-Acute anabolic

C-Among the symptoms of respiratory distress syndrome in neonates :

i-Tachypnoea

ii-Abdominal distension

iii-Absence of breathing

iv-Intracranial bleeding

D-Largest dose of theophylline, in children older than 1 year, is required for :

i-Adult children.

ii-9 -12 years old.

iii-1-9 years old.

iv-12-16 years old

Part II (25 Marks): Instructor Dr. Mostafa AbdelRahman Sayed

Q1: Discuss the most common causes of primary vaginitis and mention the GENERAL mode of infection (1.5 Mark)

Q2: Discuss common THREE mechanisms of action of intrauterine contraceptive devices (IUD) (1.5 mark)

Q3: How to counsel patients with anxiety about the use of benzodiazepines (referring to the common side effects and withdrawal syndromes) (2 marks)

Q4: Choose the most appropriate answer for the following questions (5 Marks, each point 0.5 mark)

1. The urine may become dark or red brown following the treatment with

- A. Metronidazole B. Doxycycline C. Azithromycin D. Penicillin

2. Primary site of infection for *Neisseria gonorrhoea* include the following except

- A. Urethra and Skene's tubules B. Tubes and ovaries C. Bartholin glands D. Endocervix

3. When *Chlamydia trachomatis* is associated with gonococcal infection, both are better treated with

- A. IM procain penicillin B. Azithromycin C. Fluconazole D. All of the above

4. Syphilis infection is a sexually transmitted disease which can be treated with

- A. Benzathine penicillin B. Doxycycline C. Metronidazole D. Both A and B

5. Ophthalmia neonatorum is an acquired eye infection during vaginal delivery by a mother infected with

- A. Syphilis B. Gonorrhoea C. *Trichomonas vaginalis* D. *Candida albicans*

6. Patients with history of asthma, eczema or hay fever are at high risk to caused by administering penicillin

- A. Anaphylactic reactions B. Renal failure C. Encephalopathy D. Hepatic impairment

7. Patients with tonic seizures may manifest

- A. Loss of muscles tones B. Muscle jerking
C. Rigidity of body muscles D. Loss of muscles followed by jerking

8. Which of the following antiepileptic drugs may worsen absence and myoclonic seizures?

- A. Oxcarbazepine B. Sodium valproate C. Topiramate D. Zonisamide

9. Paroxysmal severe anxiety associated with severe autonomic symptoms are usually know as

- A. Bipolar disorder B. Depression C. Panic attacks D. Parkinson's disease

10. An oestrogen receptor modulator which is given in a cyclic schedule to treat female infertility

- A. Ethinylestradiol B. Clomiphene citrate C. Levenorgestrel D. Follitropin

Q5. State whether each of the following statements is true (T) or false (F) and CORRECT THE FALSE ONE (5 marks, each 1 mark)

1. () Dyspareunia is defined as painful micturition associated with Trichomonas vaginitis infection
2. () Gummas is a flat wart-like growth on the vulva associated with syphilis infection
3. () Hyperemesis gravidarum can be treated with antipsychotic phenothiazines
4. () MAOIs can be combined with SSRI's to treat major depression
5. () Paroxetine and citalopram antidepressant could be used safely in pregnancy

Q6: Give reason(s) for the following sentences (5 marks)

1. Triphasic oral COC may be preferred over monophasic pills (1 mark)
2. Females on antiepileptic drugs require higher doses of ethinylestradiol-containing contraceptive pills (1 mark)

3. Barbiturates are not preferred to be used as sedative-hypnotic nowadays (1 mark)

4. Diazepam and flurazepam are long acting sedative-hypnotic drugs (1 mark)

5. Co-careldopa (the combination of carbidopa and levodopa) is preferred over levodopa in treatment of Parkinson's disease (1 mark)

Q7. Complete the following spaces in the following sentences (5 marks)

1. Parkinson's disease is a neurological degenerative diseases caused by depletion of the neurotransmitter
2. Parkinson's disease is characterised by a triad of common symptoms which are
3. The common side effects of using bromocriptine in the treatment of Parkinson's disease are such as
4. The contraindications of using oral COC pills are such as
5. Cheese reaction is an elevation of blood pressure caused by ingestion of foods rich inconcurrently with takingdrugs
6. Amantadine, an antiviral drug, may be used to treat Parkinson's disease through the action
7. It was suggested that major depression could be due to a cerebral deficiency of the neurotransmitters
8. The common causes of female infertility are such as
9. Tricyclic Antidepressant (TCA) lost its rank as first choice of treating depression because of their adverse effects.
10. Fluoxetine is an antidepressant drug and acts by

****** End of questions, best wishes!******

يعقد امتحان الشفوي عقب امتحان النظرى مباشرة، الساعة الحادية عشرة ص الموافق ١٢-٦-٢٠١٣

**Drug interactions Examination
For
Clinical Pharmacy Students**

Time allowed: Two hours

9 June, 2013

Multidrug therapy is a double-edged sword. Decide whether each of the following drug combinations is recommended or not and explain the pharmacological rationale behind your decision :

- 1- Chlorpropamide and cortisone (6Marks)
- 2- Oral contraceptives and metoprolol (6Marks)
- 3- MAO inhibitors and epinephrine (6Marks)
- 4- Sotalol and thiazide diuretics (6Marks)
- 5- Propranolol and chlorpromazine (6Marks)
- 6- Estrogen and phenytoin (4Marks)
- 7- Tolbutamide and diazoxide (4Marks)

GOOD LUCK



Assiut University
Faculty of Medicine
Pharmacology Department

Date: 9/6/2013

Final Examination for clinical pharmacy students

"Drug Interactions"

Part two ((MCQs & T or F))

(I) for each of the following MCQs, Select the one most appropriate answer:

(Two Marks for each)

1-When prescribing each of the following drug combinations, the physician expect no possible significant interaction except with:

- | | |
|---------------------------------|---------------------------------|
| A. Azithromycin and terfenadine | B. Amiodarone and fluvastatin |
| C. Propranolol and aspirin | D. Atorvastatin and Propranolol |

2- Recently, a young female patient was referred to a dentist for the removal of an abscessed maxillary first molar tooth. The patient had significant swelling in the area and the dentist initiated an antibiotic regime of Pen Vee "K" 500 mg four times a day and rescheduled her extraction for later that week, when the infection was contained by the antibiotic. The patient had no significant past medical history although she was using birth control pills. The dentist explained to her that the antibiotic might reduce the effectiveness of the oral contraceptive. She laughed and showed the dentist a picture of her 8 month old daughter. She then said, "I wished my dentist had told me that".

The most widely promulgated theory of oral pills failure in this case is that:

- A. The antibiotic interferes with absorption of the oral pill after dosing
- B. The antibiotic impairs recycling of ethinylestradiol from the gut
- C. The antibiotic induces metabolism of ethinylestradiol content of the pills
- D. The antibiotic alters plasma protein binding of hormones in the pills

3- In which of the following drug combinations, one drug increases serum level and enhances pharmacodynamics of the other one:

- | | |
|-------------------------------|-----------------------------|
| A. Propranolol and Digoxin | B. Verapamil and Digoxin |
| C. Amiodarone and simvastatin | D. Amiodarone and verapamil |

4- Oral amoxicillin for 7 days was given to a patient taking a 7.5mg weekly dose of methotrexate (MTX). The patient developed neutropenia and thrombocytopenia and died despite folinic acid rescue therapy.

The cause of MTX toxicity is:

- A. Penicillins interfere with glomerular filtration of MTX
- B. Penicillins reduce tubular secretion of MTX
- C. Both A and B
- D. Neither A nor B

5-The antibiotic that may accentuate the muscle relaxant effect produced by d-tubocurarine is

- A. Pencillin G B. Erythromycin C. Streptomycin D. Chloramphenicol

6- A post operative patient developed septicemia and was empirically started on combination chemotherapy by a new resident doctor. However, when the patient did not respond even after 10 days of antibiotics treatment, the review of the charts was done. It was found that the resident doctor had started the combination of antibiotics which was mutually antagonistic in action.

Which one of the following is the most likely combination that was given?

- A. Vancomycin and Amikacin B. Cephalexin and Gentamicin
C. Ampicillin and Chloramphenicol D. Ciprofloxacin and Piperacillin

7-With regard to drug interactions, all the following statements are correct except:

- A. Use of either omeprazole or esomeprazole with clopidogrel should be discouraged
B. Concomitant therapy of CYP3A4 inhibitor with pravastatin results in rhabdomyolysis
C. Antiplatelet effect of low dose aspirin is reduced by concurrent ibuprofen administration
D. Coadministration of itraconazole necessitates reduction of digoxin dose

8- Which ONE of the following drugs displaces plasma protein bound phenytoin as well as decreases its metabolism?

- A. Carbamazepine B. Sodium valproate C. Cimetidine D. Chloramphenicol

9- ONE of the following drugs produces an increase in serum level of ciprofloxacin:

- A. Methotrexate B. Theophylline C. Probenicid D. Antacids

10- A 57-year-old man presents to the emergency department with a nosebleed for the past 2 hours. The patient received a prosthetic heart valve 5 months ago and is currently taking warfarin (7.5 mg per day) and oral antibiotics. Laboratory evaluation reveals an INR of 6.4.

Which of the following antibiotics is the patient most likely taking?

- A. Ampicillin B. Cephalexin C. Nitrofurantoin D. Norfloxacin

11- All the following list of drug interactions is potentially hazardous except:

- A. Digoxin and Furosemide
B. Nifedipine and Propranolol
C. Theophylline and Ciprofloxacin
D. Sildenafil and Isosorbide dinitrate

(II) Decide whether each of the following statements is true or false:

(One Mark for each)

- 1- Unlike doxycycline, tetracycline is not likely to interact with carbamazepine
- 2- When prescribing quinidine to a patient on digoxin therapy, a clinically relevant p-glycoprotein interaction inevitably springs into mind
- 3- Inducing activity of cytochrome P450 1A2 reduces efficacy of clopidogrel
- 4- Simultaneous administration of troleandomycin and oral contraceptives markedly increases the risk of jaundice
- 5- Amiodarone-Digoxin is a mixed pharmacokinetic/pharmacodynamic interaction
- 6- Physician should monitor for decreased therapeutic effects of digoxin tablets if cyclophosphamide is initiated
- 7- Penicillin and gentamicin should not be mixed in the same syringe
- 8- It is expected that oral verapamil can control supraventricular tachycardia in a patient receiving rifampin for pulmonary tuberculosis
- 9- Concurrent use of aspirin and ACE inhibitor in moderate to high degree of heart failure patient will reduce the effect of ACE inhibitor
- 10- Oral digoxin should be taken at least 2 hours prior to an antacid
- 11- Spironolactone/ACE inhibitor concomitant therapy carries a high risk for heart failure patients
- 12- Concomitant use of digoxin and sympathomimetics increases the risk of cardiac arrhythmias.
- 13- Alcoholic beverages consumed concurrently with , or up to 72 hours after taking, cefaperazone may lead to acute alcohol intolerance
- 14- Ketoconazole can be administered simultaneously with ranitidine
- 15- Using hydrochlorothiazide and gentamicin together can lead to hearing loss

Good Luck

Dr. Romany H Thabet



كلية الصيدلة

Assiut University-Faculty of Pharmacy
Pharmaceutical-Analytical Chemistry Department
Pharmaceutical Analysis & Quality Control (PC808)
Final Examination- June 4, 2013
Time Allowed : 2 Hours



جامعة
أسيوط

Part (A), Dr. Mohammed Abdel-Galil

(25 Marks)

[I] In the provided tables, compare between the following:

(5 marks)

Quality Assurance	Quality Control
1-	
2-	
3-	

Constant errors	Proportional errors
1-	
2-	

[II] Complete the following:

(5 marks)

- 1- Two characteristic features which determine the quality of drug products are
and
- 2- The quality control unit can be subdivided into
and
- 3- Errors can be minimized by
 - (a)
 - (b)
 - (c)
- 4- Types of documents for quality assurance include
 - (a)
 - (b)
 - (c)

[III] Select from (B) the correct scientific term that matches the definitions in (A) then write the matching number in the provided space. (5 marks)

(A)

Matching number	Definition
	a) Errors due to imperfection in the analytical measuring devices.
	b) A 4-step (P-D-C-A) simple method to test information before making a major decision.
	c) A quantity of any drug produced during a given cycle of manufacture.
	d) A split of a sample prepared in such a way that there is confidence that it has the same concentration of the analyte as that in the original sample.
	e) Scheme for products moving in international commerce to enable countries with limited drug regulatory capacity to obtain partial assurance from exporting countries.
	f) speed and completeness of entrance of the used drug to the blood stream.
	g) The sample weight necessary to ensure a relative sampling error of 1% in a single determination.
	h) The degree or grade of excellence possessed by a certain item.
	i) Sample consisting of 2 or more portions of material (collected at the same time) taken in proportion to the amount of the material they represent.
	j) The minimum requirements that the industry must meet when manufacturing, processing or packing drugs for human and veterinary use.

(B)

1- Sampling Constant (K_s).	9- Sub-sample.
2- Quality.	10- Good Manufacturing Practice (GMP)
3- Personal Errors	11- Shewhart Cycle.
4- Composite Sample.	12- Batch
5- Instrumental Errors.	13- Quality management.
6- WHO Certification Scheme.	14- Internal standard.
7- Random Sample	15 Bioavailability.
8- Blank Experiment	

[IV] Choose the most correct answer and write the matching letter in the provided space. (5 marks)

1- A good sample container should

- a) interact with the sampled material.
- b) protect the sample from light, air and moisture.
- c) allow sample contamination.
- d) be easily damaged on transport.

()

2- All the following are types of Random sampling except

- a) selective.
- b) simple.
- c) stratified.
- d) systemic.

()

3- Running parallel determinations

- a) indicate the accuracy of the method.
- b) correct the random errors.
- c) indicate only the precision of the analysis.
- d) None of the above.

()

4- The internal standard method

- a) is a blank experiment.
- b) is used to test dosage uniformity.
- c) is of particular value in HPLC and GC analysis
- d) is a method of random sampling.

()

5- A standard operating procedure (SOP)

- a) is a sampling method.
- b) is not necessary for a good quality system.
- c) is a type of systemic errors.
- d) is detailed, written instructions to achieve uniformity of the performance of a specific function.

()

6- Quality assurance

- a) is part of quality control.
- b) means detection of defects.
- c) means prevention of defects.
- d) None of the above.

()

7- The standard addition method

- a) A known amount of the analyte is added to the sample, which is then analyzed for the total amount of the analyte.
- b) is used to minimize errors.
- c) The difference between the results for samples with and without the added analyte gives the recovery of added amount.
- d) All of the above.

()

8- Types of documents for quality assurance include

- a) Specifications
- c) Procedures.

- b) Records.
- d) All of the above.

()

9- Analytical method errors

- a) are inherent to the method and difficult to detect.
- b) are a type of random errors.
- c) are induced by carelessness of the analyst.
- d) All of the above.

()

10- A representative sample is

- a) chosen by a sampling plan that screens out materials with certain characteristics.
- b) consisting of 2 or more portions of material collected at the same time.
- c) typical of the parent material.
- d) All of the above.

()

[V] Mark (✓) in front of the correct sentence and (x) in front of the wrong sentence and correct the error in the wrong ones. (5 marks)

1- Quality control includes all the operational techniques and activities used to fulfill the requirements for quality.

()

2- Quality system is the aspects of the overall management that determines and implements the quality policy.

()

3- Weight variation and dosage uniformity testing are carried out in the stability indication unit.

()

4- Spectrophotometry is more sensitive than spectrofluorometry.

()

5- According to the type of material, samples can be classified into homogenous and heterogeneous materials.

()

[VI] Define the following terms:

(2.5 Marks)

1- Accuracy

2- Ruggedness

3- Stability-indicating assay

4- Signal impurities

5- Penultimate intermediate

[VII] Define and/or compare between the following pairs:

(5 Marks)

Term A	Term B
Therapeutic incompatibility	Chemical incompatibility
Selectivity	Specificity
Synthesis-related impurities	Formulation-related impurities
Related products	Concomitant compounds
Primary standards	Pharmacopoeial standards

[VIII] Complete the following:

(8 Marks)

1- With respect to the chemical stability of drug products; the following factors usually cause loss of active drug content:

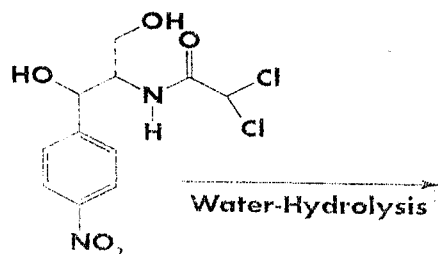
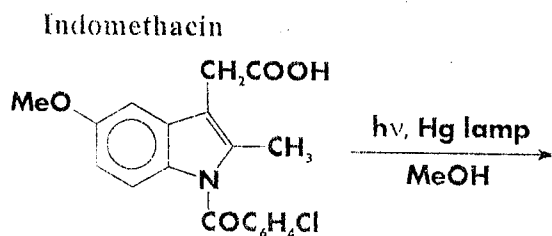
2- SIAMs would be achieved via three different approaches which are:

3- Chemicals can be classified depending on their purity to different grades including:

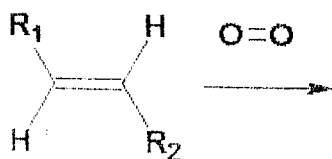
4- Limits for impurities in bulk drug substances must consider a number of factors from which:

[IX] Complete the following equations:

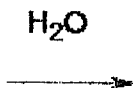
(3 Marks)



Chloramphenicol



Alkene compound



[X] What happened if the following drugs are concomitantly administered with each other : (2.5 Marks)

1- Ketoconazole & antacids.

2- Digoxin & antibiotics

3- Tolbutamide & aspirin

4- Erythromycin & astemizole

5- Indomethacin & sulphonamides

[XI] Supported by chemical equations; give reason for each of the following: (4 Marks)

1- Inactivation of Gentamycin by penicillin in admixtures for injection

2- Aspirin is inactivated with time in the presence of high humidity

3- Sodium metabisulfite (NaHSO_3) is incompatible with catecholamines in solutions for injection:

4- Codeine is incompatible with aspirin in tablets.

***EXAMINARION OF PHARMACOLOGY II
FOR STUDENTS OF CLINICAL PHARMACY***

**For each of the followings questions select the most appropriate answer:
(1 mark each)**

1-All the following are uses of levothyroxine except

- A-Myxedema coma B-Cretinism
C-Before thyroidectomy D-TSH suppression

2-All are uses of thioamides except

- A-Gravis disease B- lupus erythromatosus
C- Before treatment with radioactive iodine
D- Preoperative for thyroidectomy

3-All the followings are uses of corticosteroids except

- A-Addison's disease B-Acute adrenal insufficiency
C-Congenital adrenal hyperplasia
D-Cushing syndrome

4-All are contraindications of corticosteroids except

- A-Diabetes mellitus B- Peptic Ulcer
C-Heart failure D-Ulcerative colitis

5-All the followings are adverse effects of corticosteroids except

- A-Osteoporosis
- B-Bronchial asthma
- C-Hirsutism
- D-Hypokalemia

6-All the followings are adverse effects of insulin except

- A-Anorexia
- B-lipodystrophy
- C-Insulin edema
- D-Formation of antibodies

7-All the followings are uses of insulin except

- A-Type 1 diabetes
- B-Diabetic ketoacidosis
- C-Postpancreatectomy
- D-Postoperative management of diabetes

8-All the following are effects of sulfonylureas except

- A-Stimulation of insulin release
- B-Reduce glucagon release
- C-Increase number of insulin receptors
- D-Opening of ATP sensitive K^+ channels

9-Concerning oral contraceptives all the followings are true except

- A-Estrogen inhibits release of LH and FSH
- B-Progestin inhibits LH release
- C-Contraceptives enhance implantation
- D-Progestin thickens the cervical mucous

10-All the followings are true except

- A-Tamoxifen is used in endometrial cancer
- B-Raloxifene is used osteoporosis
- C-Clomiphene is used as ovulating agent

D- Bisphosphonate is used in paget, s disease

11-All are therapeutic uses of heparin except

A-Acute deep venous thrombosis

B- Pulmonary hypertension

C-Treatment of disseminated intravascular coagulation

D- Pulmonary embolism

12-All are adverse effects of heparin except

A-Thrombocytopenia

B-Angina

C-Osteoporosis

D Alopecia

13- All are adverse effects of warfarin except

A-Bleeding

B- Skin necrosis

C- Purple toe syndrome

D-Nephrotoxicity

14-Warfarin is used for prevention of all the following except

A -Progression of acute deep venous thrombosis

B-Peripheral vascular disease.

C-Pulmonary embolism and Systemic embolization

D-Venous thromboembolism

15-All the followings are therapeutic uses of chlorpromazine except

A-Schizophrenia

B-Parkinsonism

C-Hiccough

D- Bipolar affective disorder

16- All are therapeutic uses of selective serotonin reuptake inhibitors except

A-Major depression

B-Neuropathic pain

C-Obsessive compulsive disorder

D-Bulimia nervosa

17- All are therapeutic uses of phenytoin except

- A-Generalized tonic- clonic seizure
- B- Myoclonic seizure
- C-Status epilepticus
- D-Trigeminal neuralgia

18-All are adverse effects of phenytoin except

- A-Nystagmus and ataxia
- B- Edema
- C-Osteomalacia
- D- Hirsutism

19- Write true T or false F for the following statement

Carbamazepine is used in trigeminal neuralgia but not bipolar affective disorder

20-All are therapeutic uses of valproic acid except

- A-Status epilepticus
- B-Absence seizure
- C-Myoclonic seizure
- D-Bipolar affective disorder

21-Concerning mechanism of action of penicillins, all are true except

- A- Penicillins bind to penicillin binding protein.
- B-They inhibit cross linking of peptidoglycan chain of cell wall.
- C-They activate autolytic enzymes
- D-They inhibit protein synthesis

22-All uses of metronidazole except

- A-Metronidazole is used in eradication of Helicobacter pylori in gastric ulcer
- B-It is used in hepatic but not intestinal amoebiasis
- C-It is drug of choice in trichomoniasis
- D-It is used in Pseudomembranes colitis caused by C difficile infection

23-Concerning tetracyclines all are true except

- A-Tetracyclines bind to 50S ribosome.
- B-They are used in treatment of mycoplasma pneumoniae infection
- C--They cause superinfection
- D They are used in Helicobacter pylori infection

24-All are uses of cephalosporins except

- A-Cefazolin and cephalexin are used in staphylococcal infection
- B-First generation cephalosporins are used in bacterial meningitis
- C-Ceftriaxone is the drug of choice in gonorrhea
- D-Cefuroxime is used in H influenza infection.

25-All the following are therapeutic uses of chloroquine except

- A-Acute attack of nonfalciparum malaria
- B-Amebic liver disease
- C-Rheumatoid arthritis
- D-Porphyria

26-One of the followings is incorrect regarding antimicrobial combination

- A-It is used for mixed bacterial infection
- B-It is used to enhance therapeutic efficiency
- C-It is used when the specific cause is unknown
- D-It is used to enhance the emergence of resistance as in T.B.

27-One of the following is not the cause of resistance to anti-microbial agents

- A-Reduce entrance of the drug into pathogen
- B-Enhanced export of antibiotic by influx pump
- C-Release of microbial enzymes that destroy the antibiotic
- D-Reduced affinity of the drug to altered drug structure in the microorganism

28-One of the following is not correct regarding the types of sulfonamides

- A-Sulfasalazine is poorly absorbed from gut
- B-Sulfadoxine is one of long acting sulfonamides
- C-Topically used sulfonamides include sulfacetamide
- D-Sulfamethoxazole exhibits longer duration of action about 100-230 h

29-One of the following is not correct regarding adverse effects of sulfonamides

- A-Nephrotoxicity
- B-Hemolytic anemia
- C-Ototoxicity
- D-Hypersensitivity

30-Regarding therapeutic uses of cotrimoxizole all the following are true except

- A- Urinary tract infection
- B-Acute bronchitis
- C-Acute otitis media
- D-Non of the above

31-One of the following is correct regarding the mechanism of action of aminoglycosides

A-Inhibition of cell wall synthesis

B-Inhibition of plasma membrane synthesis

C-Inhibition of protein synthesis through binding with 30 S ribosomal subunit

D-Inhibition of protein synthesis through binding with 50 S ribosomal subunit

32-One of the following drugs enhance the ototoxicity of streptomycin

A-Furosemide

B-Hydrochlorothiazide

C-Prazosin

D-Mannitol

33-Fanconi syndrome may be a side effect of one of the following

A-Sulfasalazine

B-Tetracycline

C-Methacillin

D-Nafcillin

34-First line agents for treatment of T.B. include all the following except

A-Amikacin

B-Moxifloxacin

C-Isoniazid

D-Rifampin

35-One of the following is not considered an alkylating agent

A-Cyclophosphamide

B- Busulfan

C-Carmustine

D- Bleomycin

36-One of the following is the drug of choice in treatment of NSAIDs induced ulcer

A-Misoprostol

B-Cimetidine

C-Sodium bicarbonate

D-Sucralfate

37-Regarding uricosuric effect of aspirin all the following are true except

- A-Small doses 1-2 gm/day lead to hyperuricemia
- B-Large doses 5-7 g/day lead to hypouricemia
- C-Its effect on uric acid level in the blood is dose dependent
- D-Intermediate doses produce no changes in uric acid level

38-Regarding celecoxib all the following statements are true except

- A-It is antipyretic, analgesic and anti-inflammatory
- B-It has half life of about 17 hours
- C-It exhibits side effects on GIT due to inhibition of cyclooxygenase
- D-It is more expensive compared to aspirin

39-All the following drugs induce parkinsonism

- A-Haloperidol
- B-Chlorpromazine
- C-Methyl dopa
- D-Ropinirole

40-Regarding bromocriptine, all the following are true except

- A-It is a potent D₂ antagonist
- B-It is used as adjunct to dopa in treatment of Parkinsonism
- C-It used in hyperprolactinemia
- D-It is contraindicated in peptic ulcer and mental illness

41-Regarding levodopa , all the following statements are true except

- A-It is a precursor to dopamine
- B-It does not cross blood brain barrier
- C-It stimulates D₂ receptors
- D-It is transported by active transport mechanism

42-Regarding cromolyn sodium, all the following statements are true except

- A-It stabilizes the mast cell membrane
- B-It is given in the form of suppositories
- C-It is not a bronchodilator
- D-It decreases the release of histamine and SRSA

43-Regarding tiotropium all the following statements are true except

- A-It is one of anticholinergic drugs
- B-It has a shorter duration $t_{1/2}$ compared with ipratropium
- C-It is used alone or in combination with β agonist in treatment of bronchial asthma
- D-It is given once daily

44-Regarding proton pump inhibitors all the following statements are true except

- A-Omeprazole is a prodrug which requires activation in an alkaline medium
- B-They are the most effective suppressors of gastric acid secretion
- C-Lansoprazole and pantoprazole are examples of proton pump inhibitors
- D-They produce few side effects as nausea and abdominal pain

45- Pharmacological effects of morphine include all the following except

A-Analgesia

B-Euphoria

C-Pin point mydriasis

D-Vagal stimulation

46-Regarding flumazenil all the following statements are true except

A-It is a competitive antagonist to benzodiazepines

B-It exhibits a longer duration of action 8-10 hours

C-It is subjected to first pass metabolism

D-It is used in treatment of benzodiazepine over dose

Write True T or false F for each of the following statements

47-Ciprofloxacin inhibits both DNA gyrase and topoisomerase IV

48-Aminoglycosides are absorbed if given orally

49-Isoniazid inhibits mycolic acid synthesis in the fungal cell wall

50-Rifampin is considered as a microsomal enzyme inducer