

**UNIVERSITI SAINS MALAYSIA**

**PEPERIKSAAN TAMBAHAN  
PROGRAM SARJANA FARMASI  
1993-94**

**JUN 1994**

**FCP 555 PHARMACOTHERAPEUTICS IV  
(2 HOURS)**

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This examination consists of **two sections** and 48 printed pages.

**Section A** consists of 50 multiple choice questions.

**Section B** consists of **two (2)** long questions.

Answer **ALL** questions.

Answers to Section A must be entered into the scripts provided.

...2/-

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**SECTION A**

Mark (/) all answers on the opposite space corresponding to a correct or most appropriate answer for each question. Each question has only one correct or most appropriate answer or statement.

1. Which of the following antidepressants cause the least severe orthostatic hypotension?  
  
.....(a) Amitriptyline.  
.....(b) Trimipramine.  
.....(c) Doxepin.  
.....(d) Fluoxetine.
  
2. Which of the following antidepressants possesses the most severe anticholinergic effect?  
  
.....(a) Amitriptyline.  
.....(b) Trazodon.  
.....(c) Fluoxetine.  
.....(d) Bupropion.
  
3. Which of the following antidepressants causes the least severe orthostatic hypotension and possesses the least severe anticholinergic effects?  
  
.....(a) Amitriptyline.  
.....(b) Trimipramine.  
.....(c) Desipramine.  
.....(d) Fluoxetine.

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4. Which of the following adverse effect of lithium is not dose related?
- .....(a) Nausea.
  - .....(b) Diarrhea.
  - .....(c) Polyuria.
  - .....(d) Hypothyroidism.
5. Which of the following is not a criterion for major depressive illness?
- .....(a) Depressed mood.
  - .....(b) Significant weight gain.
  - .....(c) Psychomotor agitation.
  - .....(d) More talkative than usual.
6. Which of the following is not a psychological manifestation of anxiety?
- .....(a) Apprehension.
  - .....(b) Irritability.
  - .....(c) Indecision.
  - .....(d) Grandiosity.
7. Which of the following antidepressants has the highest oral bioavailability?
- .....(a) Amitriptyline.
  - .....(b) Fluoxetine.
  - .....(c) Doxepin.
  - .....(d) Maprotiline.

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8. The Interaction between heterocyclic antidepressants and procainamide can cause.....
- .....(a) cardiotoxicity.
  - .....(b) sympathetic stimulation.
  - .....(c) sedation.
  - .....(d) increase anticholinergic effects.
9. Which of the following anticholinergics is not used in the treatment of Parkinsonism?
- ..... (a) Biperidine
  - ..... (b) Benztropine
  - ..... (c) Propantheline
  - ..... (d) Trihexyphenidyl
10. The maximum recommended daily dose of levodopa for the treatment of Parkinsonism is.....
- ..... (a) 2 grams
  - ..... (b) 4 grams
  - ..... (c) 8 grams
  - ..... (d) 10 grams
11. When administered with carbidopa the dosage of levodopa is usually decreased by a factor of .....
- ..... (a) 75%
  - ..... (b) 50%
  - ..... (c) 40%
  - ..... (d) 20%

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12. The major dose-limiting adverse effect of levodopa is .....
- ..... (a) gastrointestinal effects
  - ..... (b) cardiovascular effects
  - ..... (c) neurological effects
  - ..... (d) involuntary movements
13. The main cause of death in myaesthesia gravis is.....
- ..... (a) renal failure
  - ..... (b) respiratory weakness
  - ..... (c) cardiovascular problems
  - ..... (d) liver dysfunction
14. By how much of the waking hours dose should the dosage of anticholinesterase be reduced in a severe myaesthesia gravis patient who requires anticholinesterase during sleep?
- ..... (a) 90%
  - ..... (b) 75%
  - ..... (c) 50%
  - ..... (d) 25%
15. Which of the following drugs has the highest potential to induce acute extrapyrimidal syndrome?
- ..... (a) Trifluoperazine
  - ..... (b) Chlorpromazine
  - ..... (c) Thioridazine
  - ..... (d) Loxapine

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16. In which of the following conditions is the anticholinergic drug not usually employed?
- ..... (a) Akathisia
  - ..... (b) Pseudoparkinsonism
  - ..... (c) Tardive dyskinesia
  - ..... (d) Acute dystonia
17. Which of the following statements regarding the pathophysiology of migraine is true?
- ..... (a) The headache is caused by cerebero-vascular dilation.
  - ..... (b) The headache is a presentation of transient ischemia of the brain.
  - ..... (c) The headache occurs secondary to increased intracranial pressure.
  - ..... (d) The headache occurs as a consequence of increased intraocular pressure.
18. Which of the following is the drug of choice in the management of migraine headache?
- ..... (a) A beta blockers.
  - ..... (b) An ergot alkaloid.
  - ..... (c) A nonsteroidal anti inflammatory agents.
  - ..... (d) An opoid analgesic.
19. Which of the following is the best treatment to abort a migraine headache?
- ..... (a) 6 mg SQ sumatriptan at the onset of migraine.
  - ..... (b) 80 mg IV propranolol at the onset of migraine.
  - ..... (c) 500 mg PO naproxen at the onset of migraine.
  - ..... (d) 2 tablets of Cafergot<sup>(R)</sup> at the onset of migraine.

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20. Which of the following drugs reduces intracranial pressure by forming osmotic gradient?
- ..... (a) Mannitol.
  - ..... (b) Dexamethasone.
  - ..... (c) Pentobarbitone.
  - ..... (d) Frusemide.
21. Which of following drugs is associated with a localized shrinkage of the brain?
- ..... (a) Mannitol.
  - ..... (b) Dexamethasone.
  - ..... (c) Pentobarbitone.
  - ..... (d) Frusemide.
22. Which of the followings is the drug of choice in the treatment of increased intracranial pressure secondary to cereberal haemorrhage?
- ..... (a) Mannitol.
  - ..... (b) Dexamethasone.
  - ..... (c) Pentobarbitone.
  - ..... (d) Frusemide.
23. Which of the following drugs is best avoided in the management of increased intracranial pressure secondary to cereberal haemorrhage?
- ..... (a) Mannitol.
  - ..... (b) Dexamethasone.
  - ..... (c) Pentobarbitone.
  - ..... (d) Frusemide.

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24. Which of the following is an appropriate nonpharmacologic management of increased intracranial pressure?
- ..... (a) Lowering of body temperature.
  - ..... (b) Increasing  $PCO_2$ .
  - ..... (c) Correcting dehydration.
  - ..... (d) Alkalinization of the urine.
25. Which of the following is not considered a first-line antiepileptic drug?
- ..... (a) Carbamazepine
  - ..... (b) Valproic acid
  - ..... (c) Phenytoin
  - ..... (d) Chlorazepate
26. Which of the following is considered a common type of hallucination in schizophrenia ?
- ..... (a) Visual
  - ..... (b) Tactile
  - ..... (c) Somatic
  - ..... (d) Auditory
27. Which of the following treatments is commonly use in anxiety neurosis?
- ..... (a) Relaxation training
  - ..... (b) Hypnosis
  - ..... (c) Systemic desensitisation
  - ..... (d) Modelling



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28. Which of the following is a characteristic feature of mania?
- ..... (a) Pressure of speech
  - ..... (b) Concious of association
  - ..... (c) Flight of idea
  - ..... (d) Persecutory delusion
29. Which of the following factors is not a criterion in the selection of antipsychotic drug?
- ..... (a) Differences in side effects
  - ..... (b) Differences in antipsychotic effect
  - ..... (c) Past history of drug response
  - ..... (d) Patient attitude and past compliance
30. The minimum period between neuroleptic dosage increment should be \_\_\_\_\_
- ..... (a) 2-3 days
  - ..... (b) 7-10 days
  - ..... (c) 14 days
  - ..... (d) 30 days
31. Which of the following drug regimens would most likely cause eye pigmentation?
- ..... (a) Haloperidol 20 mg daily for two months
  - ..... (b) Chlorpromazine 200 mg TID for two years
  - ..... (c) Fluphenazine 5 mg BID for three months
  - ..... (d) Thioridazine 800 mg daily for one week

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32. Fixed false beliefs which are not commonly shared by society are called \_\_\_\_\_
- ..... (a) inappropriate affect
  - ..... (b) hallucinations
  - ..... (c) delusions
  - ..... (d) loose association
33. Which of the following factors is considered to be good prognosticator of successful withdrawal of antiepileptic drug therapy ?
- ..... (a) Onset of seizures before two years of age.
  - ..... (b) Normal EEG
  - ..... (c) Seizures controlled within two years of onset.
  - ..... (d) Freedom from seizures for at least five years.
34. A principle for the pharmacologic management of chronic seizure disorders includes all of the following except \_\_\_\_\_
- ..... (a) the identification of specific seizure type.
  - ..... (b) dose titration to achieve a therapeutic serum antiepileptic drug concentration.
  - ..... (c) education of the patient.
  - ..... (d) beginning treatment with more than one antiepileptic drugs.
35. Which of the following factors indicates a good prognosis in psychosis?
- ..... (a) Good premorbid adjustment.
  - ..... (b) Insidious onset.
  - ..... (c) The absent of precipitating factors.
  - ..... (d) Poor premorbid adjustment.

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36. Which of the following has the least severe anticholinergic side effects?
- ..... (a) Aliphatic phenothiazine.
  - ..... (b) Piperidine phenothiazine
  - ..... (c) Peperazine phenothiazine.
  - ..... (d) Dibenzodiazepine.
37. Which of the following has the most severe anticholinergic side effects?
- ..... (a) Aliphatic phenothiazine.
  - ..... (b) Piperazine phenothiazine.
  - ..... (c) Thiothixene.
  - ..... (d) Haloperidol.
38. Which of the following is the most prominent symptom of tardive dyskinesia?
- ..... (a) Torticolis.
  - ..... (b) Occulogyric crisis.
  - ..... (c) Bucco-lingual-masticatory.
  - ..... (d) Uncontrolled fine movement of the extremities.
39. Which of the following is not a primary indication for neuroleptic therapy?
- ..... (a) Acute anxiety episode.
  - ..... (b) Adjunt to lithium for manic episodes.
  - ..... (c) Organic brain syndrome with psychosis.
  - ..... (d) Chronic schizophrenia.
40. Which of the following is not a chemical class of neuroleptic drugs?
- ..... (a) Benzodiazepine.
  - ..... (b) Dihydroindolones.
  - ..... (c) Dibenzoxazepine.
  - ..... (d) Diphenylbutylpiperidines.

...12/-

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41. Which of the following drugs is least likely to cause postural hypotension?
- ..... (a) Clozapine.
  - ..... (b) Thiothixene.
  - ..... (c) Thioridazine.
  - ..... (d) Chlorpromazine.
42. Under the biogenic amine hypothesis, mania is thought to be due to \_\_\_\_\_
- ..... (a) an excess of adrenaline activity
  - ..... (b) an excess of noradrenaline activity
  - ..... (c) an excess of dopamine activity
  - ..... (d) a deficiency of dopamine activity
43. Which of the following statements regarding the treatment of epilepsy is true?
- ..... (a) Tapering of phenobarbitone must be done every 4 to 5 days to avoid withdrawal seizures.
  - ..... (b) The majority of patients needs only a single antiepileptic to control their seizure.
  - ..... (c) Treatment must be continued for at least 2 years after seizure is controlled.
  - ..... (d) Treatment is indicated in all patient with seizures.
44. What is the anticonvulsant therapeutic range for phenytoin?
- ..... (a) 1- 5mg/L
  - ..... (b) 4-12 mg/L
  - ..... (c) 10-20 mg/L
  - ..... (d) 20-40 mg/L

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45. Which of the following is/are useful in treating a simple partial seizure?
- ..... (a) Carbamazepine.
  - ..... (b) Ethosuximide
  - ..... (c) Valproic acid
  - ..... (d) All of the above.
46. Which of the following is/are dose-related side effect(s) associated with the use of diazepam as an anticonvulsant?
- ..... (a) Lethargy.
  - ..... (b) Depression.
  - ..... (c) Hirsutism.
  - ..... (d) Both (a) and (b).
47. Which of these products is/are formulated with phenytoin sodium and therefore contains only 92% phenytoin acid?
- ..... (a) Dilantin infatabs.
  - ..... (b) Dilantin Kapseals.
  - ..... (c) Dilantin parentral.
  - ..... (d) Both (b) and (c).
48. What type of release profile do Dilantin infatabs have?
- ..... (a) Immediate release.
  - ..... (b) Sustain release.
  - ..... (c) Controlled release.
  - ..... (d) Delayed release.

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49. When do dystonic reactions occur in the course of antipsychotic treatment?
- ..... (a) During the 1st week.
  - ..... (b) During the 2nd week.
  - ..... (c) During the 3rd week.
  - ..... (d) During the 4th week.
50. The manifestation of anticholinergic activity most commonly reported by patients is \_\_\_\_\_
- ..... (a) hypotension.
  - ..... (b) dry mouth.
  - ..... (c) dizziness.
  - ..... (d) poor vision.

(50 marks)

...15/-

**Section B**

Question 1

S.A. a 33 year old female, has been employed as a clerk for the past five years. She had an excellent work record until seven months ago when excessive absences and inclination to become easily upset at customers and coworkers became noticeable. Upon clinical assessment, S.A. complains of being tired and tense with frequent stomach problems and diarrhea. She has no previous history of mental illness; however, she admits to previous brief episodes of being stressed by "just little things".

After physical examination, behavior, mood, sensorium and thoughts assessment were done, a provisional diagnosis of Generalized Anxiety Disorder was made.

Questions.

- (A) Discuss the common symptoms of generalized anxiety disorders.

(6 marks)

- (B) Discuss the rationale and selection of a benzodiazepine for the management of the above patient.

(7 marks)

- (C) For how long does S.A. need to be treated with medication?

(7 marks)

- (D) Discuss the possible problems associated with benzodiazepines therapy?

(5 marks)

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Question 2

A 30 year old man was admitted after being involved in a motor vehicle accident. He suffered multiple head injuries and had remained unconscious since the last 48 hours. His vitals however remained stable. A CT scan and the relevant laboratory tests have been carried out and the results are pending.

- (A) Is the patient at risk of developing post-traumatic seizures? Explain. Give your reasons.

(4 marks)

- (B) Is there a need to give prophylactic antiseizure therapy at this time? Explain. Give your reasons.

(3 marks)

- (C) How effective is prophylactic antiseizure therapy in preventing post-traumatic seizures? Explain the difficulties in documenting the effectiveness of prophylactic anti seizure therapy.

(5 marks)

- (D) If antiseizure therapy is required for the patient, suggest an appropriate drug and its regimen. (The patient weighed about 50 kg).

(10 marks)

- (E) What steps would you take to ensure that the patient benefits from the drug therapy?

(3 marks)

-ooOoo-