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| QFO-AP-VA-011 | **رمز النموذج :** | **اسم النموذج :** مخطط حل الإمتحان | **جامعة فيلادلفيا**  Philadelphia University |
| 1 | **رقم الإصدار: (Revision)** | **الجهة المصدرة:**  نائب الرئيس للشؤون الأكاديمية |
| 7-3-2019 | **تاريخ الإصدار:** | **الجهة المدققة :** اللجنة العليا لضمان الجودة |
| 1 | **عدد صفحات النموذج :** |

**Lecturer:** Assistant Professor Dr. Yousef Abusamra

**Coordinator:** Assistant professor Dr. Yousef Abusamra

**Course Name (Course Number):** ADVANCEDPHARMACOLOGY & TOXICOLOGY (521413) **Section:** 1

**Mid-term Exam Semester of the year:** 2nd -2023-2024

**Date: Month, Day, Year:** 17/4/2024 **Exam duration:** 1 hour

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**Information for Candidates**

* *This examination paper includes* ***6*** *pages containing* ***20 MCQ*** *questions (****20 marks****), and* ***10 matching questions*** *(****10 marks****) totaling* ***30*** *marks.*
* *The marks for parts of the questions are shown in brackets.*

**Advice to candidates:**

* *You should attempt all questions.*
* *You should write your answers clearly.*
* *The answers should be transferred to the answer key on the last page.*

Student’s score: / **30**

**I. MULTIPLE CHOICE QUESTIONS (20 MARKS)**

**CHOOSE THE MOST CORRECT ANSWER IN EACH OF THE FOLLOWING STATEMENTS. [One mark each; 1 X 20 = 20 marks]**

**PHARMACOLOGY:**

1. **Which of the following statements is FALSE regarding lisinopril?**
2. It does not cause reflexive tachycardia.
3. It leads to the accumulation of bradykinin and consequently وبالتالي prostaglandin synthesis.
4. Potassium replacement should be considered during its use.
5. It is not safe during pregnancy.
6. **Which of the following statements is TRUE?**
7. Amiloride acts by mainly decreasing the expression of the genes that code for the biosynthesis of Na+/K+-ATPase.
8. The only site of action of adenosine receptor antagonists is the collecting duct.
9. The action of triamterene mainly includes inhibition of the influx of Na+ towards the circulation and Cl- subsequent movement to the circulation and K+ exit to urine.
10. Spironolactone inhibits the biosynthesis of aldosterone.
11. **The kidney does not play a role in controlling blood pressure; it is mainly the role of the CNS.**
12. True.
13. False.
14. **“Decrease the intracellular production of H+ by inhibiting carbonic anhydrase. H+ is supposed to be exchanged with Na+ which in turn will enter the luminal cells into the blood. Accordingly, Na+ absorption is inhibited and diuresis occurs”, this is a description of the mechanism of action of which of the following drugs?**
15. Acetazolamide.
16. Aliskiren.
17. Bumetanide.
18. Eplerenone.
19. **Which of the following statements is FALSE regarding candesartan?**
20. It decreases water and salt retention.
21. It can cause teratogenicity.
22. It increases renal blood flow.
23. It should be avoided يتم تجنبه in diabetic hypertensive patients.
24. **Eplerenone is an isomer of spironolactone, which of the following adverse effects can be caused by both drugs?**
25. Gynecomastia.
26. Impotence.
27. Hirsutism.
28. Hyperkalemia.
29. **The concomitant administration of indomethacin (a non-steroidal anti-inflammatory drug) remarkably بشكل واضح decreases the activity of which of the following drugs?**
30. Azilsartan.
31. Benzapril.
32. Eplerenone.
33. Minoxidil.
34. **Clonidine acts better when used with hydrochlorothiazide; the two drugs don’t antagonize each other;**
35. True.
36. False.
37. **Which of the following drugs acts by opening the potassium channels resulting in hyperpolarization?**
38. Fenoldopam.
39. Vasopressin.
40. Minoxidil.
41. Tolvaptan.
42. **A patient on thiazide therapy suffers from hand tremors, prolonged muscle spasms, and tingling in the face and hands which are signs of metabolic alkalosis and hypokalemia, which of the following drugs can remarkably ameliorate يحسن these symptoms?**
43. Acetazolamide.
44. Triamterene.
45. Hydralazine.
46. Amlodipine.
47. **Which of the following statements best illustrates تشرح the mechanism of action of clonidine?**
48. Blockage of the presynaptic alpha-2 receptors.
49. Blockage of the postsynaptic alpha-1 receptors.
50. Stimulation of the postsynaptic alpha-1 receptors.
51. Stimulation of the presynaptic alpha-2 receptors.
52. **Which of the following diuretics can significantly cause metabolic acidosis via its significant inhibitory effect on carbonic anhydrase?**
53. Chlorthalidone.
54. Chlorthiazide.
55. Hydrochlorthiazide.
56. Bumetanide.
57. **A 72-year-old male patient suffering from acute pulmonary edema of heart failure, which of the following diuretics is the best treatment?**
58. Chlorthalidone.
59. Bumetanide.
60. Chlorthiazide.
61. Acetazolamide.
62. **Of the thiazide diuretics, chlorthalidone is preferred for parentral administration;**
63. True.
64. False.
65. **Which of the following statements is FALSE regarding calcium channel blockers?**
66. Constipation is an adverse effect.
67. Nicardipine has many drug-drug interactions (such as with digoxin and warfarin.
68. They can be prescribed for hypertension treatment in asthmatic patients.
69. Verapamil has a more powerful negative entropic effect than diltiazem.

**TOXICOLOGY:**

1. **Which of the following statements best explains the meaning of the expression ” BIOMAGNIFICATION” as used in toxicology?**
2. Transfer of the particles into the cell via energy-requiring processes such as pinocytosis.
3. Increase in the biological response to a poison when it skips over the hepatic first-pass effect.
4. The accumulation of poison in biological systems, where the levels increase as the reputation of the biological system (e.g. animal) increases in the food hierarchy.
5. The doubling of the biological response (toxicity) when two heavy metals bearing the same equivalence enter a biological system.
6. **Which of the following statements is TRUE?**
7. A CYP enzyme inducer such as phenobarbital is expected to reduce the toxicity of organophosphate insecticides (those that are activated by oxidative desulfuration) as it accelerates يسرع their hepatic inactivation.
8. Phenobarbital can cause tolerance to itself.
9. Ingestion of metallothionein potentiates يقوي the toxicity of cadmium.
10. Desensitization as related to tolerance is the increase in the expression of immunoglobulins to a certain antigen.
11. **Dispositional antagonism includes prevention of a poison to access its site of action;**
12. True.
13. False.
14. **Which of the following expression pairs are FALSELY coupled?**
15. DDT – the site of action is a tissue other than where it is stored or accumulated.
16. Tetraethyl lead – local and system toxic effects.
17. Overdetoxification – idiosyncrasy.
18. Strychnine – causes hyperpolarization.
19. **Which of the following poisons has a dual-phase toxicity?**
20. Picrotoxin.
21. Morphine.
22. *d-*tubocurarine.
23. Nicotine.

**II. MATCHING QUESTION:**

**PHARMACOLOGY:**

**Match the expressions in the two columns below in questions 21 through 25?**

**[1 mark each; 5X1= 5 marks]**

**A. Retrograde ejaculation 24**

**B. Diabetes insipidus treatment 25**

**C. Mental depression 21**

**D. Hyponatremia treatment D**

**E. Treatment of hypercalciuria 22**

**21) Clonidine C**

**22) Thiazides E**

**23) Conivaptan D**

**24)** **Guanithidine** **A**

**25) Desmopressin B**

**TOXICOLOGY:**

**Match the expressions in the two columns below in questions 26 through 30?**

**[1 mark each; 5X1= 5 marks]**

**A. Rediscovered drug 29**

**B. Heavy metal poisoning 30**

**C. Dispositional antagonism of a weak acid 26**

**D. Strychnine poisoning 28**

**E. Binding to transcriptional protein 27**

**26) Sodium bicarbonate C**

**27) Dioxin E**

**28) Diazepam D**

**29) Thalidomide A**

**30) DSMA B**

**Answer sheet of the multiple-choice and matching questions (1-27):**

|  |  |  |  |  |  |  |  |  |  |
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|  | a | **B** | **C** | **D** |  | a | **B** | **C** | **D** |
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| **6** |  |  |  |  | **21** |  |  |  |  |  |
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| **11** |  |  |  |  | **26** |  |  |  |  |  |
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| **14** |  |  |  |  | **29** |  |  |  |  |  |
| **15** |  |  |  |  | **30** |  |  |  |  |  |

**/30**

Score:

With best wishes for success