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| **Student’s name:** | **Registration No.:** |

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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 :** |

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| **الاحد/الثلاثاء: 9.45- 10.35** | **وقت شعبتك:**  **السبت/الاثنين: 11.15- 12.05** |

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

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

**Course Name (Course Number):** PHARMACOLOGY – 2 (521323) **Section:** 1 and 2

**/ Mid-term Exam Semester of the year:** 1st -2023-2024

**Date: Month, Day, Year:** 7-12-2024 **Exam duration:** 1 hour (9.30 – 10.30)

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**Information for Candidates**

* *This examination paper includes* ***7*** *pages containing* ***22 MCQ*** *questions (****22 marks****),* ***5 matching questions*** *(****5 marks****), and* ***essay*** *questions (****3 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 table on the last page.*

Score: / **30**

**I. MULTIPLE CHOICE QUESTIONS (22 MARKS)**

**CHOOSE THE MOST CORRECT ANSWER IN EACH OF THE FOLLOWING STATEMENTS. [One mark each; 1 X 22 = 22 marks]**

1. **Which of the following statements is TRUE regarding inhibition of phospholipase A2?**
2. This effect leads to the accumulation تراكم of leukotriens.
3. This effect weakens يضعف the function of osteoblasts (an adverse effect caused by prednisone).
4. This effect is one of the mechanisms of action of triamcinolone.
5. This effect results in the inhibition of the side-chain cleavage step necessary for the synthesis of cortisol (a mechanism of action of ketoconazole).
6. **Which of the following statements is FALSE regarding biguinides?**
7. It can cause lactic acidosis type B (aerobic).
8. It slows down gastric emptying.
9. It has a good profile in hyperlipidemia.
10. It should be used cautiously in severe renal impairment where eGFR is less than 30 ml/min.
11. **A 35-year-old nursing مرضع mother takes pramipexole (a D2 agonist) as a medication to treat Parkinson’s disease, her baby is expected to have plenty وفرة of milk;**
12. True.
13. False.
14. **Which of the following statements is TRUE regarding the expression: “A polymorphism in the deiodinase enzyme (D2) gene”?**
15. There is an overproduction of T3.
16. This condition requires a methimazole prescription and PTU during the first trimester of pregnancy.
17. This is one of the main merits مزايا and underlying causes of Grave’s disease.
18. There is a decrease in the thyroid hormone response.
19. **Which of the following drugs is LEAST related to the rest الاقل ارتباطا بالبقية?**
20. Fluprednisone.
21. Desoxycorticosterone acetate.
22. Prednisolone.
23. Betamethasone.
24. **In which of the following cases, a 27-year-old nursing مرضع lady most likely has hyperprolactinemia?**
25. With high levels of T3.
26. With high levels of T4.
27. With Low levels of TSH.
28. With High levels of TRH.
29. **Which of the following drugs is the LEAST likely الاقل احتمالا to necessitate يتطلبthe use of an antibiotic?**
30. Metformin.
31. PTU.
32. Saxagliptin.
33. Empagliflozin.
34. **Glucagon, in case of stress, raises يرفع blood sugar levels by stimulating glycogenolysis in the liver and skeletal muscles;**
35. True.
36. False.
37. **Which of the following drugs has the BEST impact تاثير on body fat distribution and blood cholesterol and LDL levels?**
38. Rosiglitazone.
39. Canagliflozin.
40. Metformin.
41. Betamethasone.
42. **Which of the following signs and symptoms CANNOT be seen in a patient with Hashimoto’s disease?**
43. Weight gain.
44. Depression.
45. Hypercholesterolemia.
46. Tachycardia.
47. **Which of the following expression pairs is MISMATCHED غير متطابق?**
48. Potassium iodide – used 48 hours before starting the therapy with radioactive iodine.
49. Propranolol – inhibition of T4 conversion to T3.
50. Barbiturates – decrease the activity of T4.
51. Aspart – indicated for intravenous use.
52. **Which of the following effects is NOT shared by exenatide and pramlintide ما هو التاثير الذي لا يشترك به الدواءان?**
53. Promoting satiety زيادة الشعور بالشيع.
54. Decreasing glucagon secretion.
55. Decreasing gastric emptying.
56. Increasing insulin secretion.
57. **Pramlintide can be prescribed for a patient with diabetes type 1;**
58. True.
59. False.
60. **If you know that diazoxide is prescribed in the treatment of low blood sugar in cases such as pancreatic cancer, accordingly which of the following statements is TRUE?**
61. Its mechanism of action includes increased calcium ion influx. دخول
62. Its mechanism of action includes the generation of hyperpolarization in the cell.
63. Its mechanism of action includes prevention منع of potassium ion efflux. خروج
64. Its mechanism of action includes depolarization of the cell and consequently insulin release.
65. **Which of the following statements is TRUE?**
66. The level of TSH is decreased by goitrogens.
67. Methimazole should not be administered to nursing mothers as it adversely affects the nursing infant.
68. Administration of potassium perchlorate may necessitate the use of a broad-spectrum antibiotic.
69. Lower doses of thyroxine should be administered to patients with gastritis.
70. **Glucagon is devoid of intrinsic activity on the beta-receptors;**
71. True.
72. False.
73. **Which of the following statements is TRUE?**
74. Aspart can elicit immune reactions more than regular insulin.
75. Generally, the extent مقدار of the onset and duration of action of NPH is small.
76. Glargine is formulated as acidic, thus, it is soluble in acidic media.
77. Insulin detemir demonstrates يظهر a bigger pharmacodynamic variability compared to glargine.
78. **Which of the following statements is FALSE?**
79. Ketoconazole blocks the conversion of cholesterol to pregnenolone.
80. The hypnotic dose of etomidate does not inhibit steroidogenesis.
81. Eplerenone does not block the androgenic receptor.
82. Alpha hydroxylation on carbon 17 of the steroidal structure is an essential step in steroidal hormone biosynthesis.
83. **Which of the following statements is TRUE regarding GSLT2 inhibitors?**
84. They are contraindicated in heart failure.
85. Chronic kidney disease does not seem to affect their efficacy.
86. They have a noticeable ملحوظ blood-thining activity مميع للدم.
87. Their use may necessitate the use of an antibiotic.
88. **The main goal of diltiazem prescription (use) in hyperthyroidism is to prevent cardiac agitation هيجان and other sympathetic symptoms;**
89. True.
90. False.
91. **The patient has the poorest compliance الاقل التزامwith which of the following drugs?**
92. Acarbose.
93. Pioglitazone.
94. Glibenclamide.
95. Valdagliptin.
96. **Which of the following drugs is the LEAST related to the rest regarding drug-drug interactions with sulfonylureas? الاقل ارتباطا**
97. Probenecid.
98. Rifampin.
99. Clarithromycin.
100. Alcohol.

**II. MATCHING QUESTION: [5 marks]**

**Match the expressions in the two columns below in questions 23 through 27?**

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

**A. Decrease in the absorption of other drugs 26**

**B. Its toxicity is increased by tissue hypoxia 27**

**C. Powerful CYP-induction 24**

**D. Inhibition of steroids biosynthesis 23**

**E. Progesterone-receptor antagonist 25**

**23) Aminoglutathimide D**

**24) Barbiturates C**

**25) Mifepristone E**

**26) Colestipol A**

**27) Metformin B**

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**III. ESSAY QUESTIONS:**  **[3 marks]**

**A 65-year-old diabetic male patient with diabetes type 2 is on glimepiride therapy. He also takes furosemide (a loop diuretic) to control blood pressure.**

**1. Choose one of the following statements: [1 mark]**

* **The glimepiride effect will be potentiated (increased)**
* **Glimepiride effect will be weakened (decreased)**

**2. Clarify, *IN DETAIL,* how this interaction takes place? [2 marks]**

**The glimepiride effect will be weakened by furosemide which has an intrinsic effect in raising blood sugar. One mechanism of how it does so is that these drugs, the diuretics, result in hypokalemia. Hypokalemia weakens the magnitude of the depolarization needed by the pancreatic cells, as calcium channels depend on this depolarization state to open and let calcium ions enters the cell. Calcium ions entry ultimately results in the contraction of the smooth muscles of the vesicles where insulin is stored. This will cause the secretion of insulin. So hypokalemia will result in a decrease in insulin levels in the matter that antagonizes the effect of sulfonylureas.**

**Answer table 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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**/30**

Score:

With best wishes for success