

Course No: BIPH 5247  
Course Title: Pharmacology III  
Date: 29/05/2018  
No. of Questions: (7)  
Time: 2hours  
Using Calculator (No)

University of Palestine



Final Exam For 2<sup>nd</sup>  
Semester.  
2017/2018  
Total Grade:50

Instructor Name: Mohammed Jami  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Pharm. Sciences  
Dep. / Specialist: Pharmacy  
Using Dictionary (No)

**Question One:** Please select the most appropriate answer from the options below. (20 M)

1. An 11-year-old boy recently diagnosed with type 1 diabetes started insulin therapy. Which of the following insulin regimens (from A to D) would be appropriate for the chronic therapy of this boy?

Regimen	Before . . . . .			
	Breakfast	Lunch	Supper	Bedtime
A	Lispro	Lispro	Lispro	Glargine
B	Regular	–	–	Lispro
C	NPH	Lispro	NPH	Lispro
D	Lispro	Regular	–	Regular

2. Which of the following insulins can be administered intravenously?  
(a) Regular insulin (c) Protamine zinc insulin  
(b) Isophane insulin (d) Detemir insulin
3. A 44-year-old man with type 1 diabetes started an intensive therapy to achieve a tight control of his diabetes. Which of the following complications will the man be at greatest increased risk of experiencing?  
(a) Loss of vision (c) Nephropathy  
(b) Weight loss (d) Hypoglycemia
4. Which of the following drugs is taken during the first part of a meal for the purpose of delaying the absorption of dietary carbohydrates?  
(a) Acarbose (c) Glipizide  
(b) Colestipol (d) Pioglitazone
5. Which of the following drugs is most likely to cause hypoglycemia when used as monotherapy in the treatment of type 2 diabetes?  
(a) Acarbose (c) Metformin  
(b) Glyburide (d) Miglitol
6. Which of the following classes of compounds stimulates the release of insulin from pancreatic  $\beta$ -cells?  
(a) Sulfonylureas (c)  $\alpha$ -Glucosidase inhibitors  
(b) Biguanides (d) Thioamides
7. Hormones that are useful in the diagnosis of endocrine insufficiency include:  
(a) Corticotropin-releasing hormone (c) Gonadotropin-releasing hormone  
(b) Thyrotropin-releasing hormone (d) All of the above

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- 8. Which of the following substances when present in urine is the most likely positive sign of pregnancy?**  
(a) TSH (c) HCG  
(b) Corticotropin (d) FSH
- 9. A young woman had unprotected sexual intercourse 12 hours earlier. Based on her menstrual cycle, she believes that conception is possible. Which of the following drugs should she use as a postcoital contraceptive?**  
(a) Clomiphene (c) Ethinyl estradiol plus norethindrone  
(b) Diethylstilbestrol plus raloxifene (d) Flutamide
- 10. Propylthiouracil is useful in the treatment of:**  
(a) Thyroiditis (c) Hypoparathyroidism  
(b) Hypothyroidism (d) Hyperthyroidism
- 11. Gynaecomastia can be treated with:**  
(a) Chlorpromazine (c) Bromocriptine  
(b) Cimetidine (d) Metoclopramide
- 12. Finasteride acts by:**  
(a) Blocking testosterone receptors in the prostate gland  
(b) Reducing testosterone secretion from testes  
(c) Reducing LH secretion from pituitary  
(d) Reducing prostatic dihydrotestosterone concentration
- 13. Anabolic steroids are contraindicated in:**  
(a) Prostatic carcinoma  
(b) Carcinoma of the breast in females  
(c) Promoting growth in hypogonadal children  
(d) Refractory anaemias associated with hypoplastic bone marrow
- 14. Estrogens:**  
(a) Block bone resorption (c) Decrease HDL levels  
(b) Maintain negative calcium balance (d) Increase bile acid secretion
- 15. A 23-year-old male with a history of influenza A infection. An outbreak of influenza A has just been reported in his community and he is exhibiting initial symptoms of influenza A. Which agent would be the most useful to treat him?**  
(a) Cidofovir (c) Rimantidine  
(b) Famciclovir (d) Foscarnet
- 16. The antiviral actions of this drug include inhibition of both RNA and DNA synthesis. The drug is used for the treatment of severe respiratory syncytial virus infections in neonates.**  
(a) Amantadine (c) Foscarnet  
(b) Trifluridine (d) Ribavirin

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**17. Which one of the following anticancer drugs acts in the M-phase of the cell cycle to prevent disassembly of the mitotic spindle?**

- (a) Dactinomycin (c) Paclitaxel  
 (b) Etoposide (d) Vinblastine

**18. Which of the following chemotherapeutic agents is classified as an alkylating agent?**

- (a) Cyclophosphamide  
 (b) Mechlorethamine  
 (c) Paclitaxel  
 (d) Cyclophosphamide and mechlorethamine

**19. Which of the following chemotherapy agents acts by intercalation?**

- (a) Vincristine (c) Doxorubicin  
 (b) Paclitaxel (d) Vincristine and paclitaxel

**20. Vincristine differs from vinblastine in the following respect(s):**

- (a) Its prominent adverse effect is neuropathy  
 (b) It frequently produces alopecia  
 (c) It does not significantly depress bone marrow  
 (d) All of the above

**Answer Key**

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

**Question Two:**

(5 M)

**A: Match anti-cancer drug with its main adverse effect:**

Anti-Cancer Drug	Adverse Effect
1 _____ Bleomycin	a Hepatotoxicity
2 _____ Doxorubicin	b Peripheral Neuropathy
3 _____ Cyclophosphamide	c Hemorrhagic Cystitis
4 _____ Vincristine	d Cardiotoxicity
5 _____ Methotrexate	e Lung fibrosis
	f Anemia

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B: Match each endocrine drug with the appropriate description:

Description	Drug
1 _____ This drug is a target for thyroid deiodinase	a Leuprolide
2 _____ This drug causes thyroid cell necrosis	b Propylthiouracil
3 _____ This drug acts mainly by inhibiting hormone release from the thyroid gland	c Levothyroxine
4 _____ A somatropin receptor antagonist	d Pegvisomant
5 _____ A gonadotropin-releasing hormone (GnRH) analogue	e Octreotide
	f Potassium iodide
	g Radioactive iodine

**Question Three:**

**(4 M)**

1. What is the rationale behind administering leucovorin with methotrexate and fluorouracil?
  
  
  
  
  
  
  
  
  
  
2. Which body organs are particularly vulnerable to damage during cytotoxic chemotherapy?



**Question Four:**

(5 M)

Matilda Miller, aged 25 years, has commenced a course of therapy with ribavirin and peginterferon  $\alpha$ 2b for chronic hepatitis C.

- a. What is interferon?
  
  
  
  
  
  
  
  
  
  
- b. How is interferon effective as an antiviral agent?
  
  
  
  
  
  
  
  
  
  
- c. What are the side effects of interferon therapy?

**Question Five:**

(6 M)

Indicate the therapeutic uses of the following gonadal hormones:

- a. SERMs
  
  
  
  
  
  
  
  
  
  
- b. Antiandrogens
  
  
  
  
  
  
  
  
  
  
- c. Progestogens
  
  
  
  
  
  
  
  
  
  
- d. Estrogen–progestogen combinations

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**Question Six:**

(4 M)

Margaret Smith is a 60-year-old woman with type 2 diabetes. She has been managing her condition by dietary measures and therapy with the oral hypoglycaemic agent gliclazide. She is experiencing some problems with the control of postprandial blood glucose levels. Her doctor prescribes acarbose.

What advice would you give regarding Margaret's preparation for the nature and type of common adverse effects she might experience?

**Question Seven:**

(6 M)

1. For each of the following endocrine agents, name the tissue(s) it acts on, the effects desired and one clinical application:

a. Propylthiouracil

b. L-thyroxine

c. Potassium iodide

2. Outline why L-thyroxine is the agent of choice in hypothyroid states.

End of Questions

*Good Luck*