



## Therapeutics I Final Exam

COURSE CODE: PO905

DATE: Jan. 9<sup>th</sup>, 2020

TERM: 1

TOTAL ASSESSMENT MARKS: 50

TIME ALLOWED: 2 HOURS

This exam comprises **3 parts**: **Part I (MCQs)** and **Part II (fill in the spaces)** and **Part III (give a brief account)** in pages numbered **1-3** in addition to this answer sheet

### Part I (22 MCQs):

- Select only one answer for each question.
- Answers outside this answer sheet will not be marked.
- Transfer your selection properly to this answer sheet.

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1-The following analgesics are indicated in myocardial infarction:

A-Morphine. B-Meperidine. C-Nalbuphine. D-All of the above. E-None of the above.

2-In myocardial infarction therapy:

A-Oxygen therapy is indicated.

B-Aspirin should be prohibited.

C-Narcotic analgesics should be prohibited.

D-Both A & B.

E-Both B & C.

3-Diagnosis of myocardial infarction through:

A-ECG changes.

B-Creatine kinase.

C-Troponin.

D-Lactate dehydrogenase.

E-All of the above.

4-The major symptoms of myocardial infarction are:

A-Chest pain.

B-Diaphoresis.

C-Nausea and vomiting.

D-All of the above.

E-None of the above.

5-Nitroglycerin activity by:

A-Decreasing the cardiac preload.

B-Arteriolar dilation.

C-Venular dilation.

D-All of the above.

E-None of the above.

6-The signs and symptoms of digoxin toxicity are:

A-Nausea and vomiting.

B-Ventricular arrhythmia.

C-Atrioventricular block.

D-All of the above.

E-None of the above.

7-Digoxin mechanism of action is:

A-Increase chronotropicity.

B-Increase cardiac output.

C-Decrease inotropicity.

D-Both A & B.

E-Both A & C.

8-Eplerenone plerenone indication in heart failure due to:

A-Inhibition of heart fibrosis.

B-Stimulation of heart remodeling.

C-Enhancement of sodium reabsorption.

D-All of the above.

E-None of the above.

9-Milrinone mechanism of action through:

A-Activation of phosphodiesterase III enzyme.

B-Conversion of cyclic AMP to adenosine monophosphate.

C-Its hypotensive activity.

D-All of the above.

E-None of the above.

10-The inotropic action of dobutamine is referred to:

A-Beta-1 agonist activity.

B-Beta-2 agonist activity.

C-Alpha-1 agonist activity.

D-All of the above.

E-None of the above.

11-Hospitalization should be considered in heart failure if:

A-There is a marked weight gain.

B-There is electrolytes disturbance.

C-There is a concomitant pneumonia.

D-All of the above.

E-None of the above.

12-The decompensating heart failure is characterized by:

A-Resting tachypnea.

B-Increase in cardiac output.

C-Resting tachypnea.

D-All of the above.

E-None of the above.

13-The use of candesartan in heart failure therapy to:

A-Increase heart rate.

B-Increase heart inotropicity.

C-Decrease mortality.

D-Both A & B.

E-Both B & C.

14-The following drugs are indicated in heart failure therapy:

A-Hydrochlorothiazide. B-Captopril. C-Carvedilol. D-All of the above. E-None of the above.

15-Drug therapies for congestive heart failure include:

A-Bumetanide.

B-Glucocorticoids.

C-Phenytoins.

D-Both A & B.

E-Both B & C.

16-The symptoms of heart failure are:

A-Dyspnea.

B-Nocturia.

C-Tachycardia.

D-All of the above.

E-None of the above.

17-The clinical presentation of heart failure include:

A-Bradycardia.

B-Loss of fluid.

C-Cardiomegaly.

D-All of the above.

E-None of the above.

18-The following drugs precipitate heart failure:

A-Propranolol.

B-Indomethacin.

C-Dexamethasone.

D-All of the above.

E-None of the above.



19-The following drugs can exacerbate heart failure:

A-Disopyramide. B-Diltiazem. C-Cyclophosphamide. D-All of the above. E-None of the above.

20-The circulatory mediators in heart failure are:

A-Angiotensin II. B-Acetylcholine. C-Nitric oxide. D-All of the above. E-None of the above.

21-The compensatory response in heart failure are:

A-Decreased preload.

B-Vaso constriction.

C-Sodium and water loss.

D-Both A & B.

E-Both A & C.

22-Cause of heart failure include:

A-Reduction in myocardium muscle mass.

B-Ventricular hypertrophy.

C-Pressure overload.

D-Myocardial ischemia.

E-All of the above.

## PART II

**Fill in the following spaces with appropriate answers:**

1) Myocardial Nodal cells have no true resting membrane potential, this is because of a type of channels known as ..... which mediate the following ion fluxes ..... . These ion channels open when the membrane potential of the nodal cells drops to ..... millivolts and inactivates when the that potential reaches ..... millivolts, and can be uniquely targeted by a drug named .....

2) With the lack of proper patient counseling about his medications, fatal hypotension can occur if glyceryl trinitrate was co-administered with either of the following drugs:

a) .....

b) .....

c) .....

3) Mr. Ibrahim is a 70-years old patient who is diagnosed with variant angina. Mr Ibrahim went to a community pharmacy to purchase an OTC medication for the common cold that he is currently suffering from. The pharmacist provided him with a multi-ingredient tablets that can effectively control sneezing, rhinorrhea, body ache and fever. However, 1 hour after administering that flu medication Mr. Ibrahim unexpectedly suffered from an angina attack. What would be the possible explanation for the cause of that angina attack?

.....  
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4) How does digoxin change the excitability of myocardial nodal cells during sinus tachyarrhythmia?

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and describe how digoxin will change the nodal action potential.....

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5) The following are nicorandil pharmacologic effects:

a) .....

b) .....

c) .....

d) .....

- 6-..... is a selective renin inhibitor used for treatment of .....  
 .....and is contraindicated in .....
- 7- ..... is a drug used in patient who have severely elevated triglycerides.
- 8-Rebound hypertension is due to .....  
 and an example of drugs which causes this phenomena is .....
- 9-Risk of ..... increases when lovastatin is used with erythromycin or niacin  
 and the patient's ..... level should be checked and the drug therapy  
 should be ..... if levels exceed ten times UNL.
- 10-Cholestyramine is contraindicated in .....
- 11-Non pharmacological therapy for hyperlipidemia is used in patient .....  
 ..... and include:  
 a).....  
 b).....  
 c).....

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### PART III

**Give a brief account on the following:**

1-Mention mechanisms contribute to the pathogenesis of primary hypertension.

2-Mention in a table the main 3 differences between dalteparin and warfarin.

3-Mention drugs which may induce VTE.



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