



RAN - 2106000102020102

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**IInd M.B.B.S. Examination January - 2023**

**Pharmacology - Paper II**

**Time: 3 Hours ]**

**[ Total Marks: 100**

**સૂચના : / Instructions**

- (1) નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**
- Name of the Examination:  
IInd M.B.B.S.
- Name of the Subject :  
Pharmacology - Paper II
- Subject Code No.: 2106000102020102

Seat No.:

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Student's Signature
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- (2) Encircle the single most appropriate answer.  
(3) Each question carries one mark and there is no negative marking.  
(4) Overwriting is not allowed.

**Q.1 Multiple Choice Questions (MCQs)**

**[Marks 20]**

- Select the drug combination which does NOT exhibit supra-additive synergism :
  - Nalidixic acid + nitrofurantoin
  - Amoxicillin + clavulanic acid
  - Pyrimethamine + sulfadoxine
  - Sulfamethoxazole + trimethoprim
- Which of the following is NOT a valid indication for parenteral iron therapy ?
  - Inadequate response to oral iron due to patient non-compliance
  - Anemia during pregnancy
  - Severe anemia associated with chronic bleeding
  - Anemia in a patient of active rheumatoid arthritis
- Which diuretic is preferred in cirrhotic ascites ?
  - Furosemide
  - Spironolactone
  - Acetazolamide
  - All of the above

4. A clinician diagnosed isoniazid induced neurological disturbances in a 30-year-old male patient on anti-tubercular drug regimen. Which vitamin should be prescribed ?
  - a. Vitamin B1
  - b. Vitamin B6
  - c. Vitamin B12
  - d. Vitamin B2
5. The management of thyrotoxicosis crisis includes all the following except:
  - a. Propranolol
  - b. Hydrocortisone
  - c. Oral I<sup>131</sup>
  - d. Propylthiouracil
6. Combine oral contraceptive pill reduces the risk of:
  - a. Breast cancer
  - b. Ovarian cancer
  - c. Cervical cancer
  - d. Vaginal cancer
7. Which drug should not be given in pregnancy ?
  - a. Labetalol
  - b. Hydralazine
  - c. ACE inhibitors
  - d. Methyldopa
8. Which of the following statements about octreotide is FALSE ?
  - a. It is used for the treatment of acromegaly
  - b. It stops oesophageal variceal bleeding
  - c. It can be used for the management of secretory diarrhoea
  - d. It is effective orally
9. The following antianginal drug is most likely to produce tachycardia as a side effect:
  - a. Amlodipine
  - b. Nifedipine
  - c. Diltiazem
  - d. Verapamil
10. When are proton pump inhibitors most effective ?
  - a. After meals
  - b. Along with H2 blockers
  - c. Shortly before meals
  - d. During prolonged fasting periods
11. Which of the following purgative increases the fecal bulk due to their water absorbing and retaining capacity ?
  - a. Methyl cellulose
  - b. Lactulose
  - c. Liquid paraffin
  - d. Dioctyl sodium sulfosuccinate
12. The drug of choice for neurocysticercosis is :
  - a. Albendazole
  - b. Niclosamide
  - c. Praziquantel
  - d. Ivermectin

13. The multidrug therapy of leprosy is superior to monotherapy on the following basis :
- It prevents emergence of dapsone resistance
  - It is effective in cases with primary dapsone resistance
  - It shortens the total duration of drug therapy and improves compliance
  - All of the above
14. Dobutamine is preferred, over dopamine in cardiogenic shock because of its relatedness to :
- Better cardiac stimulation
  - Less peripheral vasoconstriction
  - Lower risk of cardiac arrhythmias
  - More CNS stimulation
15. Which antifungal agent is effective in both dermatophytosis as well as systemic mycosis :
- Amphotericin B
  - Griseofulvin
  - Clotrimazole
  - Ketoconazole
16. On which enzymes do statins act ?
- Acyl CoA synthetase
  - Acyl CoA reductase
  - HMG CoA synthetase
  - HMG CoA reductase
17. 'Red man syndrome' has been associated with rapid intravenous injection of the following antibiotic:
- Vancomycin
  - Clindamycin
  - Cefoperazone
  - Piperacillin
18. Astringents are substances that:
- Irritate sensory nerve endings
  - Precipitate proteins
  - Penetrate target cell nucleus for their action
  - All of the above
19. The following anticancer drug has high emetogenic potential:
- Vincristine
  - Chlorambucil
  - 6-Mercaptopurine
  - Cisplatin
20. Which vitamin acts as a hormone ?
- Vitamin A
  - Vitamin D
  - Vitamin C
  - Vitamin E

## SECTION - I

### Instructions:

1. Answers should be precise and to the point.
2. Give examples and figures if needed.
3. First 20 mins have been allotted to solve multiple choice questions.

**Q.2. Answer in brief [any five] : [3×5 = 15]**

- a. Discuss briefly about heparin versus warfarin.
- b. Classify thyroid inhibitors. Write a note on thyroid storm management.
- c. Management of erectile dysfunction.
- d. Outline the pharmacotherapy of psoriasis.
- e. Describe various types of oral contraceptives. What is the rationale of combining estrogen and progesterone for contraception?
- f. Write a note on drug therapy for constipation.

**Q.3. Write short notes [any three] : [5×3 = 15]**

- a. Mention various thrombolytic agents. Describe their uses, mechanism of action and precautions required while using them.
- b. Discuss various insulin preparations available. Write in detail about newer insulin preparations, their uses, pros and cons of each.
- c. Enumerate commonly used glucocorticoids. Discuss their adverse effect profile.
- d. Classify diuretic agents. Explain mechanism of action, uses and adverse effect profile of thiazide-like diuretics in detail.

**Q.4. Case based questions : [10×1 = 10]**

An adult 40 years male, an executive in a multi-national company, has complaints of pain in abdomen since a month, along with occasional heart burn due to which he is unable to sleep. It worsens with ingestion of spicy and oily meals. After a thorough examination, physician diagnosed him as a case of peptic ulcer. Along with appropriate diet and lifestyle modifications, physician prescribed him anti-ulcer drugs.

**Answer the following questions :**

- a. Enumerate various drugs from different groups which can be prescribed to him along with mechanism of action of any two drug classes. [4]
- b. Which drugs should be prescribed to the above patient if he develops gastroesophageal reflux disease (GERD)? [2]
- c. Write briefly about treatment regimens for H. pylori infection. [4]

## SECTION - II

**Q.5 Answer in brief [any five] :** **[3×5 = 15]**

- a. Elaborate mechanism of action, therapeutic uses and adverse effects of metronidazole.
- b. Outline the pharmacotherapy of urinary tract infection.
- c. What is post exposure prophylaxis for HIV infection? Write two NACO recommended regimens for same.
- d. Describe measures to prevent antimicrobial drug resistance in detail.
- e. Write a short note on anti-hypertensives in pregnancy.
- f. Enumerate HMG-CoA reductase inhibitors along with their uses.

**Q.6. Write short notes [any three] :** **[5×3 = 15]**

- a. Enlist anti-malarial drugs. Discuss the treatment regimens for chloroquine resistant *P. falciparum* malaria.
- b. Classify fluoroquinolones. Describe the mechanism of action, therapeutic uses and adverse effects of any one fluoroquinolone.
- c. Which are the drugs for congestive heart failure? Discuss the mechanism of action of digoxin in this scenario.
- d. Describe in detail general principles for cancer chemotherapy.

**Q.7. Case based questions :** **[10×1 = 10]**

A 55-year-old male patient was admitted to casualty with chief complaint of heaviness in chest, squeezing midsternal pain which was radiating to jaw and left shoulder without any precipitating factor, lasting for about few minutes. He was sweating profusely. His electrocardiogram showed ST segment elevation. He was diagnosed as having acute myocardial infarction.

**Answer the following questions :**

- a. Write in detail about the management of above-mentioned diagnosis. [5]
- b. Classify anti-anginal drugs. [3]
- c. What is the rationale of using  $\beta$  blocker + long-acting nitrate combination in classical angina? [2]