

03/26

The West Bengal University of Health Sciences
MBBS 2nd Professional Examination (New Regulation) January-February, 2026

Subject : Pharmacology
Paper : II

Full Marks : 100
Time : 3 hours

Attempt **all** questions and answer in **sequential** order. The figures in the margin indicate full marks.

1. a) A 48 year old female patient presented with intermittent pain in upper abdomen. Pain aggravated at night usually 2-3 hours after taking meals. She was advised upper GI endoscopy with rapid biopsy urease test which revealed active duodenal ulcer with H. pylori infection. 5+4+6
 - i. Describe the pharmacotherapy of duodenal ulcer.
 - ii. Mention the rationale of fixed dose combination (FDC) of drugs for treatment of H. pylori infection.
 - iii. Name two ulcer protective drugs with mechanism of action and adverse effects.

- b) A 48 year old diabetic stabilized on metformin, glimepiride and pioglitazone had to walk to his office due to transport strike and had to postpone lunch due to pressing office work. During late afternoon he felt dizzy, sweating, incoherent and soon lost consciousness. 2+4+4+5
 - i. What is the most logical diagnosis?
 - ii. Write down the management of this condition.
 - iii. Describe the mechanism of action and advantages of DPP-4 inhibitors in Type-2 Diabetes Mellitus.
 - iv. Enumerate various preparations of insulin and newer insulin delivery devices.

2. Answer the following:
 - a) Outline the principles of treatment of urinary tract infection. Describe the commonly used antimicrobials used in acute pyelonephritis. How can recurrent urinary tract infections be prevented? 4+4+2
 - b) Classify antipsychotic drugs. Describe the mechanism of action of any two antipsychotics. Mention major neurological adverse effects during their chronic use. 4+3+3
 - c) A lower limb operative procedure has been planned under spinal anesthesia. The expected duration of surgical procedure is 2 hours. 2+2+3+3
 - i. Which local anesthetic drug should be used in this case and why?
 - ii. Write down the mechanism action of local anesthetics.
 - iii. Which local anesthetic is preferred in obstetrics for epidural anesthesia and why?
 - iv. What are the complications of spinal anesthesia and how to prevent them?

3. Write short notes on following: 2x5
 - a) Health benefits of ORAL contraception drugs.
 - b) TNF-alpha inhibitors.

4. Explain the following statements: 5x4
 - a. Empiric antibiotic use is not justified in all cases of diarrhea.
 - b. HAART is preferred in management of HIV infection.
 - c. Thiopentone sodium is not used as a maintenance agent in General anaesthesia.

- d. Cilastatin is combined with imipenem.
- e. T₄ is preferred over T₃ in myxoedema coma.

5. Choose the correct option for each of the following:

10x1

i. Androgen synthesis inhibitor is:

- a. Finestrade b. Flutamide c. Ketoconazole d. Cypoterone acetate

ii. A patient under long term treatment with antiepileptic agents is complaining of overgrowth of gingival tissue. Which one is responsible?

- a. Carbamazepine b. Valproic Acid c. Phenytoin. d. Phenobarbital

iii. Which of the following is not antihelmintic?

- a. Mebendazole b. Albendazole c. Itraconazole d. Ivermectin

iv. Which of the following is not a rapid action Insulin?

- a. Inj.glulisine b. Inj.lispro c. Inj.aspart d. Inj.Detemir

v. Which of the following is live attenuated vaccine?

- a. Vi Typhoid polysaccharide b. Typhoid-Ty 21a
- c. Purified chick embryo cell vaccine d. Human diploid cell vaccine

vi. Which of the following tetracyclines can be used in renal failure without dose adjustment?

- a. Oxytetracycline b. Doxycycline c. Demeclocycline d. Clindamycin

vii. Which of the following drugs can cause haemorrhagic cystitis?

- a. Cyclophosphamide b. Cycloserine c. Ciprofloxacin d. Cyclosporine

viii. Which of the following is a nootropic drug?

- a. Rivastigmine b. Tacrine c. Amantidine d. Piracetam

ix. First line agent against Hepatitis B:

- a. Zanamivir b. Valacyclovir c. Entecavir d. Interferon alpha

x. Clinical use of ergot alkaloids includes all except:

- a. Parkinson's disease b. Hyperprolactinemia c. Hypertension d. Acromegaly