

**The West Bengal University of Health Sciences**  
**MBBS 2nd Professional Examination (Old Regulation) September 2022**

**Subject: Pharmacology**  
**Paper: I**

**Full Marks: 40**  
**Time: 2 hours**

*Attempt all questions. The figures in the margin indicate full marks.*

1. a) A 25 year old lady is brought to emergency room by her family members. She is unconscious with constricted pupils and froth coming out her mouth and convulsion. She is reported to consume some insecticide. 1+1+3+5
- a) What is the probable diagnosis ?  
b) What drug is given to control her convulsion ?  
c) Mention the general measures to be taken for her ?  
d) Outline the specific treatment in this case.

**Or**

- b) Enumerate the drugs used in the treatment of glaucoma. Mention the reasons of using each drug. 3+7

2. Explain **any three** of the following: 3 x 3
- a) Montelukast is not used in acute attack of bronchial asthma.  
b) Intravenous route is the route of emergency.  
c) Chloroquine is given in loading dose in vivax malaria.  
d) Folic acid is used in combination with vitamin B<sub>12</sub> in megaloblastic anaemia.

3. Write the mechanism of action of **any three** of the following: 3 x 3
- a) Neostigmine in the treatment of myasthenia gravis.  
b) Atorvastatin as hypolipidemic drug.  
c) Nitrates in stable angina pectoris.  
d) Ondansetron as antiemetic agent.

4. Write short notes on **any four** of the following: 4 x 3
- a) Parenteral iron therapy.  
b) Penicillamine.  
c) Competitive and non competitive antagonism (Diagram with examples).  
d) Rational use of drugs.  
e) Antitussive agents.

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Subject: Pharmacology  
Paper: II

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*Attempt all questions. The figures in the margin indicate full marks.*

1. a) Enumerate antithyroid drugs. What is the mechanism of action of iodine as antithyroid agent? How will you manage a case of myxedema coma. 3+4+3

**Or**

- b) Enumerate glucocorticoids. Describe the therapeutic uses and adverse effects of glucocorticoids. Explain why glucocorticoids should not be withdrawn abruptly after prolonged therapy. 3+3+2+2

2. Explain **any three** of the following: 3 x 3

- a) Tetracyclines are contraindicated in pregnancy.
- b) Morphine is contraindicated in undiagnosed abdominal pain.
- c) Both estrogen and progesterone are combined in oral contraceptive pill.
- d) Centrally acting anticholinergics are used in drug induced parkinsonism.

3. Write the mechanism of action of **any three** of the following: 3 x 3

- a) Lactulose in hepatic encephalopathy.
- b) Lithium in bipolar disorder.
- c) Multi drug therapy is used in the treatment of tuberculosis.
- d) Metformin as oral antidiabetic agent.

4. Write short notes on **any four** of the following: 4 x 3

- a) Amphotericin B.
- b) Ketamine.
- c) Metronidazole.
- d) Post exposure prophylaxis against HIV.
- e) Methotrexate.

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Subject : Pathology  
Paper : II

Full Marks : 40  
Time : 2 hours

*Attempt all questions. The figures in the margin indicate full marks.*

1. A 60 year old man was brought to the emergency room following an episode of crushing retro-sternal pain with profuse sweating. An urgent ECG was done which showed ST segment elevation with deep Q wave.
  - a) What is the provisional diagnosis ?
  - b) What other laboratory investigations to be done for evaluation in this case ?
  - c) What are the gross and microscopic changes in the affected organ ? 1+4+5
  
2. Comment on **any two** of the following: 2 x 5
  - a) Neonatal respiratory distress syndrome.
  - b) Sequestrum and involucrum are not similar.
  - c) FNAC from a breast lump can differentiate between a benign and a malignant growth.
  
3. Answer **any two** of the following: 2 x 5
  - a) Complications of Atheroma.
  - b) Nephritic syndrome versus nephrotic syndrome.
  - c) Role of H.Pylori in the pathogenesis of peptic ulcer.
  
4. Write short notes on **any two** of the following: 2 x 5
  - a) Diagnosis of a suspected tubercular lymphadenopathy.
  - b) Dermoid cyst of ovary.
  - c) Giant cell tumour of bone.
  - d) Serological tests in a case of hepatitis B.

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Subject : Pathology  
Paper : I

Full Marks : 40  
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*Attempt all questions. The figures in the margin indicate full marks.*

1. A 12 year old female child presented with fever, gum bleeding and pallor. Peripheral blood examination by leishman stain revealed a fair number of large round cells with rounded hyperchromatic nucleus and diagnosis ? 2+4+4
  - a) What is your provisional diagnosis ?
  - b) What will be your plan of investigations to arrive at a diagnosis ?
  - c) Describe the findings of bone marrow examination in this case.
  
2. Comment on *any two* of the following: 2 x 5
  - a) Reticulocyte count is helpful in differentiating types of anaemia.
  - b) Healing by first intention.
  - c) Pathogenesis of edema are different in different diseases.
  
3. Answer *any two* of the following: 2 x 5
  - a) How will you differentiate myeloblast from lymphoblast.
  - b) Role of P<sub>53</sub> gene in carcinogenesis.
  - c) Diagnosis of suspected case of  $\beta$ - thalassemia.
  
4. Write short notes on *any two* of the following: 2 x 5
  - a) Microscopic examination of urine.
  - b) Pathogenesis of granuloma.
  - c) Plasma derived chemical mediators of inflammation.
  - d) Klinefelters syndrome.

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**Subject : Microbiology**  
**Paper : I**

**Full Marks : 40**  
**Time : 2 hours**

*Attempt all questions. The figures in the margin indicate full marks.*

1. a) Mention common methods of sterilization in a microbiological laboratory indicating suitability of its choice. How functioning of an autoclave can be monitored ? How the potency of a disinfectant solution can be evaluated ? 4+3+3

*Or*

- b) Define helminthes. Outline the general characters of cestode. Classify cestodes along with examples. Write briefly on the laboratory diagnosis of cysticercosis. 1+2+3+4
2. Write short notes on *any three* of the following: 3 x 4
- a) Scrub typhus.
  - b) Heterophile antigen.
  - c) Bacterial growth curve.
  - d) Escherichia coli.
3. Comments on *any three* of the following: 3 x 4
- a) Staphylococcus causes localized lesions while streptococcus causes spreading type of lesions.
  - b) All bacteria do not obey Koch's postulates.
  - c) Drug can lead to various types of hypersensitivity reactions.
  - d) Result of a single widal test is not treated as confirmatory.
4. Differentiate between the following: 3 x 2
- a) Enriched media and enrichment media.
  - b) Fumigation and sporicidal disinfection.
  - c) Agglutination and precipitation.

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Subject : Microbiology

Paper : II

Full Marks : 40

Time : 2 hours

*Attempt all questions. The figures in the margin indicate full marks.*

1. a) A 36 year old man attended OPD with vomiting, anorexia, malaise and yellowish discoloration of skin. He had an emergency operation following a road traffic accident 6 months back which required 2 units of blood transfusion.
- i) What may be the most probable diagnosis ?
  - ii) Name the viral agents responsible for the condition ?
  - iii) How will you proceed to confirm the diagnosis in the laboratory ?
  - iv) What are the vaccines available for prevention of the disease person suffering from.

1+1+6+2

*Or*

b) A 10 year old boy has been brought to OPD with severe anaemia and weakness. What is the most common parasite responsible for the clinical condition ? Discuss the pathogenesis of anaemia. Write briefly laboratory diagnosis of this case.

1+3+6

2. Write short notes on *any three* of the following: 3 x 4
- a) Occult filariasis.
  - b) Extraintestinal amoebiasis.
  - c) Polio vaccines.
  - d) Dimorphic fungi.
3. Comments on *any three* of the following: 3 x 4
- a) Hookworm infection can lead to anemia.
  - b) Fungi can be classified in different ways.
  - c) Viruses may lead to malignancy.
  - d) Inclusion bodies can help in the diagnosis of some viral infections.
4. Differentiate between the following: 3 x 2
- a) Platyhelminthes and Nematelminthes.
  - b) Dermatophytosis and dermatomycosis.
  - c) Entamoeba histolytica and Entamoeba coli.

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Subject : Forensic Medicine & Toxicology

Full Marks : 40  
Time : 2 hours

*Attempt all questions. The figures in the margin indicate full marks.*

1. a) Discuss the autopsy findings to opine as to the cause and nature of death in a dead body with ligature mark around neck. 5
- b) Define criminal abortion. Write in brief about the diagnosis and evidence of criminal abortion in a dead. Add a note on medico legal importance of criminal abortion. 1+2+2
2. a) Write medicolegal importance of **any two** of the following: 2 x 2½
  - i) Feigned insanity
  - ii) Temporary dentition
  - iii) Exit wound in a fire arm injury.
- b) Write short notes of **any two** of the following: 2 x 2½
  - i) Pathophysiology of salt water drowning.
  - ii) Police inquest.
  - iii) Delusion.
3. a) Differentiate between **any two** of the following: 2 x 2½
  - i) Still born and dead born foetus.
  - ii) Heat stroke and heat exhaustion.
  - iii) Criminal and civil negligence.
- b) Explain **any two** of the following: 2 x 2½
  - i) Rigor mortis passes off with the onset of decomposition.
  - ii) Medicolegally abrasion is more important than bruises.
  - iii) Stomach wash is contraindicated in strong mineral acid poisoning.
4. a) Write the active principles of i) Datura ii) Nuxvomica. 2 x 2½
- b) Write short notes on any two of the following: 2 x 2½
  - i) Skin changes in arsenic poisoning.
  - ii) Polyvalent anti snake venom used in India.
  - iii) Ichthyotoxicosis