

**The West Bengal University of Health Sciences**  
**M.S. (Ophthalmology) February, 2026 Examination**

Paper: I

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. How do you define a biosimilar drug? Describe briefly the mode of action and the clinical indications of use of one such biosimilar Drug. 2+3+5
2. What are the layers of Human Cornea? Describe briefly the Cellular pattern in each layer of Cornea and their functions. 5+5
3. Describe the anatomy of cavernous sinus and its communications. 10
4. Draw a diagram of the superior orbital fissure showing the structures passing through it. 10
5. Write briefly about the optics of slit lamp biomicroscope. Discuss the various illumination techniques and clinical uses. 4+6
6. Describe the technique and interpretation of Hess charting in paralytic strabismus. 10
7. Describe the anatomical landmarks and histology of macula. How can you test macular function in presence of hazy media? 4+6
8. Discuss the role of systemic steroids in various eye disorders with special reference to Uveitis. Discuss its side effects after long term use. 4+6
9. What is blood retinal barrier? Discuss the difference between retinal circulation and choroidal circulation. 5+5
10. Write in brief about visual evoked potential and its importance. 10

**The West Bengal University of Health Sciences**  
**M.S. (Ophthalmology) February, 2026 Examination**

Paper: II

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Describe briefly the signs, symptoms and management protocol of Anterior Ischaemic Optic Neuropathy. 3+3+4
2. Briefly describe the diagnostic modalities and the management protocol of Macular Hole with Epiretinal Membrane. 4+6
3. Write in brief on congenital cataract and management. 10
4. What are causes of non healing corneal ulcer? How you will manage them? 4+6
5. Write down the genetics, clinical features, investigations and treatment of Retinoblastoma. 2+2+3+3
6. Describe the clinical features and management of Giant retinal tear. 5+5
7. Describe the organizational structure for National Program for control of Blindness. 10
8. Discuss the etiopathogenesis and management of Pseudophakic bullous Keratopathy. 5+5
9. Describe the clinical features and management of anterior uveitis. 5+5
10. Write down the management of congenital Nasolacrimal duct obstruction. 10

**The West Bengal University of Health Sciences**  
**M.S. (Ophthalmology) February, 2026 Examination**

Paper: III

Full Marks: 100

Time: 3 Hours

*Attempt all questions*

1. Discuss the investigations and management of a case of pulmonary tuberculosis in a young male, who had developed sudden decrease of vision after one month of starting routine antitubercular therapy? 6+4
2. What is the nature of biochemical abnormality in homocystinuria? Discuss its ocular and systemic manifestations, genetics and management. 2+2+2+2+2
3. Discuss the methods of evaluation in a 50 year old female with transient monocular loss of vision in one eye. 10
4. Discuss the etiopathogenesis and management of Diabetic maculopathy. 5+5
5. Write down various ocular manifestations of AIDS in brief. 10
6. Enumerate the causes and write down the management of ophthalmological headache in an adult patient. 10
7. Discuss in brief about optical biometry. 10
8. Management of a basal cell carcinoma 5 mm in diameter, located in the centre of lower lid margin. 10
9. Write down the advantages and disadvantages of sclera buckling in Retinal detachment surgery. 5+5
10. Describe the diagnosis and management of siderosis bulbi. 6+4

**The West Bengal University of Health Sciences**  
**M.S. (Ophthalmology) February, 2026 Examination**

Paper: IV

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Describe the indications and contraindications of a toric intra ocular lens (IOL). Mention the pre-planning of incision and IOL alignment; pre-operative axis marking and methods of Intra-operative alignment of IOL. 2+2+2+2+2
2. What are glaucoma drainage devices? What is their mechanism of action? What are the complications following surgery? What is their role in glaucoma management as compared to conventional trabeculectomy? 2+2+2+4
3. Enumerate different anti-VEGF agents and their indication in ophthalmology. Write down the merits and demerits of conventional anti-VEGF agents in comparison with newer anti VEGF agents. 10
4. Briefly discuss on the complications of LASIK. 10
5. Write a note on Pneumatic retinopexy. 10
6. Write down the indications and complications associated with Boston Keratoprosthesis. 5+5
7. Write in brief about Corneal inlays. 10
8. Write on the advancements in treatment of Thyroid ophthalmopathy. 10
9. What is micropulsed retinal laser? What is the change in concept of application of lasers in a micropulsed design and what are its advantages? 3+7
10. Write a note on different immunomodulators in Ophthalmology. 10

**The West Bengal University of Health Sciences**  
**M.D. (General Medicine) February, 2026 Examination**

Paper: I

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Give an overview of the Coronary circulation. Briefly describe how ECG can be used to localize the site of culprit vessel occlusion. 5+5
2. What are the common causes of non-anion gap metabolic acidosis? Briefly outline the common clinical manifestations and treatment of Type-1 distal Renal Tubular Acidosis. 4+3+3
3. Briefly describe the role of Gut Microbiota in health, and in different metabolic diseases like diabetes, obesity, MASLD and dyslipidemia. 3+7
4. Explain the physiological regulation of erythropoiesis, including the role of erythropoietin. 10
5. Discuss the immunological markers of Connective tissue disorders and their interpretations. 10
6. Briefly describe the electrophysiological mechanism of SVT and its diagnostic approach. 10
7. Describe the portal circulation and portosystemic shunts. Describe the etiology, classification and pathophysiology of portal hypertension. 10
8. What is Precision medicine? How it is developed? What are the essential elements of Precision medicine? Give some examples of convergent and divergent phenotypes. 2+3+3+2
9. What are the categories of diseases that present with fever as clinical sign? Describe the chronology of events required for induction of fever. 5+5
10. Discuss the Ethical issues in Biomedical Research. 10

**The West Bengal University of Health Sciences**  
**M.D. (General Medicine) February, 2026 Examination**

Paper: II

Full Marks: 100

Time: 3 Hours

*Attempt all questions*

1. Classify the Direct-Acting Antiviral Agents (with examples) used to treat hepatitis C. According to Indian Guidelines under National Viral Hepatitis Control Program, How will you treat a patient with Hepatitis C, i) In presence of compensated cirrhosis, ii) In presence of decompensated cirrhosis, and iii) in absence of cirrhosis? 4+6
2. Give a brief overview of the clinical presentations, diagnosis and management of Multiple Myeloma. 3+3+4
3. Briefly discuss the diagnostic approach to a patient with Obstructive Sleep Apnea (OSA) and its management. 5+5
4. Briefly discuss on: 5+5
  - a) Non-invasive Ventilation
  - b) Treatment of Interstitial Lung Disease
5. Enumerate the high risk factors and the warning signs associated with severe Dengue. Briefly outline the treatment algorithm for patients with DHF grade III and grade IV. 2+3+5
6. Classify Seizure Disorders. Discuss the management of Refractory Seizure. 10
7. Describe the Rheumatological Emergencies. How to approach to these conditions and outline their management. 10
8. Enumerate the different mechanisms of hypertension. What are the causes of systolic hypertension with high pulse pressure? What are the relevant history, clinical examination and basic investigations needed for all the hypertension cases? 3+3+4
9. What is the fundamental difference between anemia due to blood loss and haemolytic anaemia? What are the causes of acute haemolytic anaemia? How to approach a case of acute haemolytic anaemia? 2+4+4
10. Pituitary apoplexy: diagnosis and treatment. 10

**The West Bengal University of Health Sciences**  
**M.D. (General Medicine) February, 2026 Examination**

Paper: III

Full Marks: 100

Time: 3 Hours

*Attempt all questions*

1. Briefly outline the classification and management of atrial fibrillation. What are pros and cons of the strategy of rate control vs. rhythm control in long term management of atrial fibrillation? 2+4+4
2. Briefly discuss the diagnostic criteria and treatment of NMO spectrum disorder. 5+5
3. Briefly outline the algorithmic approach to the diagnosis of Hyponatremia. How will you treat a case of acute severe symptomatic Hyponatremia? Enumerate the risk factors for osmotic demyelination syndrome. 5+3+2
4. Discuss the recent guidelines of Adult immunization Programme. 10
5. A patient presents with fatigue and diffuse muscle pain. Discuss the diagnostic approach and treatment options for fibromyalgia. 6+4
6. Explain the principles of polypharmacy in elderly patients and strategies to mitigate drug related adverse events. 10
7. Discuss the Medicolegal aspects of Suicidal and Homicidal Poisoning. 10
8. Define Hirsutism. Mention common causes of Hirsutism. Describe the evaluation and treatment of Hirsutism. 2+4+4
9. Describe the clinical features and pathological features of IgG4-RD. Mention the differential diagnosis of IgG4-RD. 6+4
10. What are the risk factors associated with gout? Enumerate the musculoskeletal manifestations of crystal induced arthritis. How to manage acute attack of gout? 3+4+3

**The West Bengal University of Health Sciences**  
**M.D. (General Medicine) February, 2026 Examination**

Paper: IV

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Briefly discuss the etiology, pathogenesis and the role of Rituximab in Membranous Nephropathy. 4+4+2
2. Briefly discuss on: 5+5
  - a) Coronary Artery Calcium Score
  - b) IVUS guided PTCA
3. Write a note on importance of Telemedicine in India. 10
4. Discuss in brief recent management of rapidly progressive renal failure. 10
5. Explain the emerging role of neuroimmunology in Demyelinating CNS disorders. 10
6. Evaluate the role of wearable biosensors in chronic disease monitoring and their integration with digital health platforms. 10
7. Discuss the recent update in MDR-TB management. 10
8. Discuss the development of long-acting injectable antiretroviral therapies in HIV management. 10
9. What is CVD-COPD overlap? Discuss briefly the Home Based Pulmonary Rehabilitation. 10
10. What is metabolomics? What are different technologies? Discuss the current clinical applications. 2+4+4

**The West Bengal University of Health Sciences**  
**MS (General Surgery) February, 2026 Examination**

**Paper: I**

**Full Marks: 100**  
**Time: 3 hours**

*Attempt all questions*

1. Peri-operative fluid management in patients with chronic kidney disease undergoing major surgery. 10
2. Discuss the different level of cervical lymph nodes with special reference to management of head and neck carcinoma. 10
3. Write on WHO check list for surgery. Describe the steps for safe laparoscopic surgery. 3+7
4. Discuss the phases of wound healing and factors affecting wound healing. 5+5
5. What are the molecular markers for cancer? Discuss targeted therapy for cancer. 5+5
6. Write bio-chemical, immunological and nutritional derangements in short bowel syndrome. 10
7. Discuss the surgical anatomy of esophago- gastric junction. Discuss the investigations for reflux disease. 5+5
8. Describe the blood supply of the stomach with a schematic diagram. Explain its surgical significance in partial and total gastrectomy. 6+4
9. What is ERAS protocol? Describe in detail the components and implementation of ERAS in modern surgery. 3+3+4
10. Describe the boundary of Retroperitoneum and management of Retroperitoneal sarcoma. 4+6

**The West Bengal University of Health Sciences**  
**MS (General Surgery) February, 2026 Examination**

Paper: II

Full Marks: 100  
Time: 3 hours

*Attempt all questions*

1. Discuss the causes, assessment and management principle of gastro esophageal reflux disease. 10
2. Write down the indications, principle and complications of component separation of incisional hernia surgery. 10
3. Write down the causes of portal hypertension. Discuss the medical and surgical management of portal hypertension. 3+3+4
4. Describe the segmental anatomy of liver with a diagram. Discuss the etiopathogenesis, diagnosis and management of a case of liver hydatid cyst. 4+2+2+2
5. Classify parotid tumors. Discuss the localization of facial nerve in parotid surgery. What is Frey's Syndrome? 3+4+3
6. Describe the etiopathogenesis of acute necrotizing pancreatitis. Enumerate the biomarkers for Pancreatitis. What is step up approach for management? Mention extra abdominal complications due to necrotizing pancreatitis. 4+2+2+2
7. Enumerate the benign lesions of the rectum. Describe rectal polyps in terms of types, associated syndromes, evaluation and treatment. 2+2+2+2+2
8. Clinical presentation, diagnosis and current management of gastric Gastrointestinal Stromal Tumors (GIST). 4+6
9. Outline the principles of oncoplastic breast surgery with suitable examples. 10
10. Describe the etiology, diagnosis and surgical management of primary hyperparathyroidism. 3+3+4

**The West Bengal University of Health Sciences**  
**MS (General Surgery) February, 2026 Examination**

**Paper: III**

**Full Marks: 100**  
**Time: 3 hours**

*Attempt all questions*

1. What are the common types of neural tube defect? Write a short note on spina bifida. 4+6
2. Discuss on anomalous development of abdominal wall with special reference to omphalocele and gastroschisis. 10
3. Classify Diaphragmatic Hernias. Describe the surgical management of post-traumatic diaphragmatic hernias. 4+6
4. Write a note on Microvascular surgery. 10
5. Define varicose vein and its complications. Outline the recent advances in the treatment of varicose vein. 2+3+5
6. What is pressure sore? Discuss the grades, causes, evaluation and management of pressure sores. 2+2+2+2+2
7. Outline the surgical anatomy of the thoracic outlet. Discuss the management of thoracic outlet syndrome. 5+5
8. Enumerate the motility disorders of the esophagus. Discuss the diagnosis and management of achalasia cardia. 3+3+4
9. A 2 days old neonate presents with persistent bilious vomiting and lethargy. X-Ray abdomen is suggestive of Double bubble sign. What is the diagnosis? Describe the clinical features and treatment of this patient. 1+4+5
10. Define skin flap and its principle. Write in brief about pectoralis major myocutaneous flap reconstruction. 2+3+5

**The West Bengal University of Health Sciences**  
**MS (General Surgery) February, 2026 Examination**

Paper: IV

Full Marks: 100  
Time: 3 hours

*Attempt all questions*

1. Enlist the features of Systemic Inflammatory Response Syndrome (SIRS). Name biomarkers of sepsis. Discuss the role of one biomarker for management of sepsis. 3+3+4
2. Discuss "Negative- Pressure assisted wound closure". 10
3. What is HIPEC? Write its use in gastrointestinal tract cancers and its efficacy. 4+6
4. Discuss the principle of advanced energy sources in surgery. 10
5. Write short notes on: 5+5
  - a. Chemobrain and Chemofog
  - b. Plagiarism in scientific publications: the recent guidelines
6. Describe the physiological effects of pneumoperitoneum. Enumerate the benefits of laproscopic surgery over open surgery. Describe the role of 3D laparoscopy and fluorescence guided laparoscopic surgery. 4+2+2+2
7. Describe the scope of artificial intelligence in modern surgical practice. What are the advantages and disadvantages of integration of surgery with AI. What is the advantage of augmented reality assisted surgery? 4+2+2+2
8. What is obscure GI haemorrhage? Enumerate the causes. Explain the role of capsule endoscopy in the evaluation of obscure GI haemorrhage. Describe the surgical strategies for management. 2+2+2+4
9. Discuss the rationale of bedside surgical procedure. Write in short the protocol of bedside surgery. 5+5
10. Explain the concept of precision oncology. Discuss its application in gastrointestinal cancers with suitable examples. 4+6

**The West Bengal University of Health Sciences**  
**M.D. (Anaesthesiology) February, 2026 Examination**

**Paper: I**

**Full Marks: 100**

**Time: 3 Hours**

*Attempt all questions*

1. Classify oxygen delivery devices with examples. What is the importance of Central venous oxygen saturation (Svo<sub>2</sub>) in clinical practice? 5+5
2. Discuss the blood supply of Liver and role of Liver in the maintenance of normal coagulation. What is anatomical dead space, its value in adults and the relevance to anaesthesia? 3+2+5
3. Write short notes on: 5+5
  - a. Beer Lambert law.
  - b. ACLS algorithm for management of Bradycardia
4. What is Advanced Life Support? Describe the new changes incorporated in CPR after 2005. 6+4
5. What is ejection fraction? How it is assessed? Discuss its importance to Anaesthesiologists during various types of surgery. 2+3+5
6. Describe the neuromuscular junction. Write down the distinguishing features of depolarizing and non- depolarizing muscle blockade. 4+6
7. Write short notes on: 5+5
  - a. Pin index system
  - b. Hypoxic pulmonary vasoconstriction
8. Write short notes on: 5+5
  - a. ASA classification
  - b. Informed consent
9. Describe the process of CSF production and absorption in human body. Explain in short different types of hydrocephalus found in infants. 5+5
10. Describe the factors affecting the uptake, distribution and elimination of volatile anaesthetic agents. 3+4+3

**The West Bengal University of Health Sciences  
M.D. (Anaesthesiology) February, 2026 Examination**

**Paper: II**

**Full Marks: 100**

**Time: 3 Hours**

*Attempt all questions*

1. Briefly discuss about Anaesthesia consideration in MRI suite. 10
2. A 6.5 years old child (weight 20kg) who underwent tonsillectomy 2 hours earlier is scheduled for re-exploration for bleeding from oral cavity. Describe the pre-operative evaluation, preparation and anaesthetic management. 2+2+6
3. Define intracranial pressure (ICP). Enumerate the factors causing increase in ICP. Mention the pharmacological measures to reduce ICP intraoperatively in a patient undergoing craniotomy. 2+4+4
4. Enumerate the neonatal emergencies. Describe in detail the peri-operational management of any one of them. 3+7
5. Write short notes on: 5+5
  - a. Awareness in anaesthesia
  - b. Medical waste disposal
6. Describe the pre-operative evaluation, preparation and anaesthetic management of a Multinodular goiter with retrosternal extension. 2+2+6
7. Diagnosis and management of Myocardial ischemia in a 55 year old male patient under General Anaesthesia. 4+6
8. a. Enumerate the methods to prevent haemodynamic response to Laryngoscopy and intubation. 5+5  
b. Ventricular fibrillation: Types and management.
9. Discuss the anaesthetic management of a case of fracture neck femur of a 70 years old lady with IHD posted for surgical fixation. 10
10. Write short notes on: 5+5
  - a. Paradoxical Air Embolism.
  - b. Oxygen Toxicity.

**The West Bengal University of Health Sciences**  
**M.D. (Anaesthesiology) February, 2026 Examination**

**Paper: III**

**Full Marks: 100**  
**Time: 3 Hours**

*Attempt all questions*

1. Pre operative evaluation and anesthetic management in a one day old neonate, scheduled for repair of trachea-esophageal fistula. 3+7
2. A 54 year old known diabetic patient posted for bilateral TKR. He is on metformin 1g, dapaglifozin 10mg, glimepride 2 mg. What are the pre-operative preparation and post-operative pain management? 5+5
3. Discuss the pre-anaesthetic consideration and intraoperative management of a patient with permanent pacemaker posted for right inguinal herniorrhaphy. 4+6
4. Enumerate the indications of OPCAB. Describe technique, advantages and disadvantages of this method. 2+4+2+2
5. Write short notes on: 5+5
  - a. Post-operative cognitive dysfunction
  - b. Opioid free anaesthesia
6. Define anemia in pregnancy. Discuss evaluation, preparation and anaesthetic management of a patient of severe anemia posted for elective caesarean section. 2+8
7. Discuss the pre-anaesthetic evaluation and anaesthetic management of a 65 year old patient posted for TURP with history of MI 6 months back. 5+5
8. What are the indications of transversus abdominis plane block? With the help of a diagram, describe the block. 5+5
9. Discuss the pathophysiology of malignant hyperthermia. How will you manage such a case? 5+5
10. Write short notes on: 5+5
  - a) Bone cement implantation syndrome and its treatment.
  - b) Management of thyroid storm.

**The West Bengal University of Health Sciences  
M.D. (Anaesthesiology) February, 2026 Examination**

**Paper: IV**

**Full Marks: 100**

**Time: 3 Hours**

*Attempt all questions*

1. What are the clinical features of DVT? Describe prophylaxis and management strategies. 3+3+4
2. Write short notes on: 5+5
  - a. Cardioplegia
  - b. Adductor canal block.
3. What are the indications of percutaneous dilatational tracheostomy and what are its advantages over surgical tracheostomy? 5+5
4. A patient with catatonic schizophrenia will undergo ECT under anaesthesia. Describe your approach. 10
5. What is ECMO? What are the modalities of ECMO? Write the indications of ECMO. What are the common alarms encountered during ECMO. 2+2+4+2
6. What is the neuropathic pain? Discuss various interventional pain management techniques for neuropathic pain. 4+6
7. What is the role of ultrasound in advanced airway imaging? Discuss the recent updates in closed loop blood delivery system. 5+5
8. Discuss the ethical issues in: 5+5
  - a) Organ transplantation
  - b. Children as a research subject
9. Write a note on Environmental pollution in Operation Theatre. 10
10. You are assigned to setup an intensive care unit (ICU) for a 300 bedded new hospital. Outline briefly your plan of action with emphasis on location, number of ICU beds, design, Equipments and staff requirement. 2+2+2+2+2

**The West Bengal University of Health Sciences**  
**M.D. (Paediatrics) February, 2026 Examination**

Paper: I

Full Marks: 100

Time: 3 Hours

*Attempt all questions*

1. Write briefly on the anatomy and physiological function of adrenal gland. Enumerate newborn screening for endocrinal disorders. 3+3+4
2. How will you approach to a patient with suspected primary immune deficiency disorder? Enumerate the functions of neutrophil. Write briefly on leukocyte adhesion disorder. 4+3+3
3. Discuss the development of Haematopoietic system. How do you evaluate the child with Haemolytic anaemia? 5+5
4. How do you classify shock in children? Write about the etiopathogenesis and management of dengue shock. Mention the indications of blood component therapy in Dengue shock patient. 10
5. Write about the structure of a nephron. How will you diagnose and manage a case of Type 1 RTA? 10
6. Write a brief note on calcium metabolism in the body. What are causes of hypocalcaemia in children? Write down the management of nephrocalcinosis with chronic renal disease. 4+4+2
7. What is Triple burden of malnutrition in children? Discuss the approach to a child with obesity. 4+6
8. Write short notes on: 5+5
  - a. Randomized control trial (RCT).
  - b. Confidence Interval (CI) in medical statistics.
9. Write short notes on: 5+5
  - a. CSF Circulation and its clinical importance
  - b. Circle of Willis with its clinical significance
10. Discuss the clinical importance of bone age. 10

**The West Bengal University of Health Sciences**  
**M.D. (Paediatrics) February, 2026 Examination**

Paper: II

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Broncho-pulmonary dysplasia: Discuss the etiopathogenesis, Clinical features prevention and management. 10
2. Write a note on transport of a critically newborn. 10
3. Approach to a case of Inborn error of metabolism. 10
4. Management of a child with seizure. 10
5. Discuss the risk factors of vertical transmission of HIV infection and methods to prevent parent to child transmission of HIV. 5+5
6. Feeding difficulty in the nursery: Causes and management. 10
7. Write brief notes on: 5+5
  - a. National Policy in Rare Diseases 2024, in India.
  - b. RBSK(Rastriya Bal Swasthya Karyakram).
8. Sudden infant death syndrome: Etiology, pathophysiology and prevention. 10
9. Clinical feature of Infant of a Diabetic Mother (IDM), post-natal complications and management of IDM. 10
10. Discuss briefly about Congenital Diaphragmatic Hernia. 10

**The West Bengal University of Health Sciences  
M.D. (Paediatrics) February, 2026 Examination**

Paper: III

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Define cold chain. Discuss the importance and procedures to maintain cold chain in vaccination programme. 2+8
2. Write a brief note on Immune reconstitution inflammatory syndrome. 10
3. Behavioral approach, parenteral guidance and red flags of Temper tantrums and conduct disorders. 10
4. Discuss the approach to a child with prolonged fever, differentials, investigations and management. 10
5. Write down the clinical spectrum, diagnostic criteria, investigations and treatment of Systemic Lupus Erythematosus (SLE) in children. 10
6. Write short notes on: 5+5
  - a. Obstructive sleep apnea syndrome (OSAS) in children
  - b. Congenital cataract
7. What are arrhythmias in children? How do you manage a case of Paroxysmal supraventricular tachycardia? 5+5
8. A 10 months old baby boy has admitted with pneumonia. Since the age of 6month this is the third admission for lower respiratory tract infection. What are possible differentials and how to manage this baby? 10
9. Approach to a child with short stature. 10
10. Discuss briefly about Hand Foot Mouth Disease (HFMD). 10

**The West Bengal University of Health Sciences**  
**M.D. (Paediatrics) February, 2026 Examination**

Paper: IV

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Describe pain mitigation interventions during vaccination. Write short note on intra nasal vaccination. 7+3
2. Discuss the risk of radiation exposure of medical imaging. 10
3. Uses of Recent Biologics in paediatric diseases. 10
4. Write short notes on: 5+5
  - a. AI In medical sciences
  - b. Teleconsultation: Advantages and disadvantages
5. Tumor lysis syndrome: Risk factors, diagnostic criteria and management. 10
6. How to avoid Medico legal issues in pediatric and adolescent emergencies? 10
7. Write short notes on: 5+5
  - a. Haematopoietic growth factor
  - b. Renal transplantation in children
8. Write a note on Chromosomal microarray. 10
9. Discuss on recent advances in Plasmapheresis in pediatric practice. 10
10. Write about "Fetal and childhood origin of Adult cardiovascular disease." 10

**The West Bengal University of Health Sciences**  
**M.D. (Microbiology) February 2026 Examination**

Paper: I

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Describe the role of microbiologists in Hospital Infection Control Committee and Anti Microbial Stewardship programme. 5+5
2. Write about sterilization techniques in a CSSD. 10
3. Discuss the post exposure management in case of NSI. 10
4. Write the different components of Bacterial Virulence factors with examples. 10
5. Write about the alternative pathway of the Complement system and diseases associated with complement deficiency. 5+5
6. Comment on: Vaccines play a role in reduction of AMR. 10
7. Describe Antibody responses to T cell independent Antigens.
8. Write a note on L form of bacteria. 10
9. Discuss briefly about Hybridoma technique with its application in modern medicine. 10
10. Discuss the latest guidelines of BMD segregation, treatment and disposal after segregation. 10

**The West Bengal University of Health Sciences**  
**M.D. (Microbiology) February 2026 Examination**

Paper: II

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Discuss the various methods of anaerobic culture of bacteria. 10
2. Write an account on MDR Acinetobacter spp. 10
3. Enumerate the bacterial agents of Urethritis. Describe the mode of transmission, pathogenicity and laboratory diagnosis of any one of them. 10
4. Discuss the phenotypic and genotypic methods of ESBL detection in laboratory. 10
5. Classify Chlamydia and enumerate the diseases caused by them. Write down the approach for laboratory diagnosis of these infections. 10
6. Write a note on small colony variants (SCV) of Staphylococcus aureus. Discuss the mechanism of resistance of S. aureus to Vancomycin. 3+7
7. Write briefly about the aetiology of fungal meningitis and its laboratory diagnosis. 10
8. Write brief about non-albicans Candidiasis. 10
9. Describe the clinical spectrum of infections and laboratory diagnosis of Malassezia species. 10
10. Discuss Entomophthorales: Pathogenesis and Laboratory Diagnosis. 5+5

**The West Bengal University of Health Sciences**  
**M.D. (Microbiology) February 2026 Examination**

Paper: III

Full Marks: 100  
Time: 3 Hours*Attempt all questions*

1. Describe the recent changes in the Polio vaccination programme in India. Describe clinical and epidemiological importance of VDPVs. 10
2. Discuss the pathogenesis of Covid-19 virus infection. 10
3. Write a note on Anti-Malarial drug resistance. 10
4. Discuss Congenital Rubella Syndrome. 10
5. Give an account on antiviral disinfectants. 10
6. What is principle of LAMP? Describe its utility in diagnosis of parasitic infections. 4+6
7. Describe briefly laboratory diagnosis of Lymphatic filariasis and challenges for control of filariasis in India. 6+4
8. Discuss post-exposure prophylaxis in a rabid dog bite patient. 10
9. Enumerate parasitic zoonotic diseases. Write about the mode of transmission and pathogenesis of any one of them. 5+5
10. Enumerate different parasitic infections of brain. Write down the laboratory diagnose of any one of them. 3+7

**The West Bengal University of Health Sciences  
M.D. (Microbiology) February 2026 Examination**

Paper: IV

Full Marks: 100  
Time: 3 Hours

*Attempt all questions*

1. Describe the serological markers used to diagnose fungal infections. 10
2. Discuss on antigenic variation of Influenza and strategy of vaccine preparation. 10
3. Discuss in short how do you establish a PCR lab in a new set-up. 10
4. Describe the drug resistance patterns of Acinetobacter Baumannii. 10
5. Write briefly on alternative options to antibiotics in post-antibiotic era. 10
6. Write an account on Point-of-care tests in Microbiology. 10
7. Discuss the merits and demerits of real-time PCR as compared to conventional end point PCR. 10
8. What is the principle behind the One Health programme and its different components? 10
9. Give an account of Quorum sensing inhibitors and their use in infectious diseases. 10
10. Write a note on Group-B Streptococcus vaccine in Indian context. 10