Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II Degree Examination - 07-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PATHOLOGY – PAPER I (RS-3)
Q.P. CODE: 1081

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Define thrombosis. Explain in detail about pathogenesis of thrombosis. Add a note on fate of thrombus
2. Define Apoptosis and give examples. Describe the mechanism of apoptosis

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Immune thrombocytopenic purpura
4. Semen analysis
5. Cellular events of acute inflammation
6. What is a granuloma? Enumerate the types with examples
7. Difference between reversible and irreversible cell injury
8. Sickle cell anemia
9. Viral carcinogenesis
10. Turner syndrome
11. Chronic lymphocytic leukemia
12. Hemophilia B

SHORT ANSWERS **10 x 3 = 30 Marks**

13. What is exfoliative cytology?
14. Name three indications of bone marrow examination
15. What are the six causes of proteinuria?
16. Cross matching of blood
17. Red cell indices
18. Enumerate the types of necrosis with examples
19. What is ESR? Enumerate four causes of increase ESR
20. Difference between transudate and exudate
21. Laboratory diagnosis of iron deficiency anemia
22. Urinometer

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 07-Apr-2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER I (RS-4 & RS-5)
Q.P. CODE: 1026
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. 65 year old male, known case of interstitial lung disease and pulmonary hypertension is brought to the emergency department with decreased urine output and altered sensorium. On examination pulse is 123 beats/min, BP- 96/60 mmhg, RR-28cycles/min with cold extremities.

    a. What is the probable clinical diagnosis?
    b. Discuss the pathogenesis and various organ changes.
    c. Enumerate the laboratory findings.

2. 28 year old female presented with history of menorrhagia. She gives history of fever 15days back. On examination pallor and petechiae present. No splenomegaly. CBC reveals Hemoglobin- 7.6 gm/dl, WBC count- 6000 cells/cumm, Platelet- 28,000/cumm.

    a. What is the clinical diagnosis and why?
    b. Discuss the etiopathogenesis of the above condition
    c. Enumerate the lab findings investigations

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Describe the various vascular events involved in acute inflammation.
4. Discuss antibody mediated hypersensitivity with examples.
5. Define Hyperplasia. Briefly discuss the pathogenesis
6. Describe urinary Casts with a neat diagram.
7. List the difference between leukemoid reaction and chronic myeloid leukemia.
8. Pathology and laboratory diagnosis of Hereditary spherocytosis
9. Paraneoplastic syndromes.
10. Role of p53 in carcinogenesis.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Morphology of caseous necrosis
12. Bone marrow findings in megaloblastic anemia.
13. Microscopy of neuroblastoma.
14. CSF findings in tuberculous meningitis.
15. Cerebral malaria.
16. Bombay blood group.
17. Chemokines.
18. Dystrophic Calcification.
19. Three causes of target cells in peripheral smear.
20. Enumerate neoplasms found in patients with HIV infection.

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) All of the following are powerful antioxidant **EXCEPT**
- A. Superoxide dismutase
- B. Ceruloplasmin
- C. Transferin
- D. Nitric oxide synthase

21 ii) Prolonged production of Acute phase proteins in chronic infection can cause
- A. Amyloidosis
- B. SLE
- C. Myocardial infarction
- D. Rheumatoid arthritis

21 iii) A decrease in organ size(atrophy) may be result of each of the following **EXCEPT**
- A. Lack of innervation
- B. Ageing
- C. Metabolic storage disorder
- D. Reduction of hormone stimulation

21 iv) **A 30 year old woman got a cut on her finger while cutting vegetables. On examination the wound was clean and approximated with the help of sutures. By what day would you expect to see the formation of granulation tissue in this type of healing?**
- **A. Day 1-3**
- **B. Day 3-5**
- **C. Day 5-7**
- **D. After 1 week**

21 v) **Vitamin K dependent clotting factors include all EXCEPT**
- **A. Factor VII**
- **B. Factor IX**
- **C. Factor XI**
- **D. Factor X**

22 i) Which of the following is matched correctly
- A. Huntington's disease- Autosomal recessive
- B. Familial hypercholesterolemia- X linked recessive
- C. Marfan syndrome- X linked dominant
- D. Alkaptonuria- Autosomal recessive

22 ii) EBV induced Burkitt's lymphoma causes following translocation
- A. 14:8
- B. 18:4
- C. 8:14
- D. 4:18

22 iii) All are examples of tumour suppressor genes implicated in human cancer **EXCEPT**
- A. RB gene
- B. RET
- C. APC
- D. Tp-53

22 iv) Most common presentation of paraneoplastic syndrome is
- A. Hypercalcemia
- B. Acanthosis nigricans
- C. Cushing's syndrome
- D. Hypoglycemia

22 v) Lead poisoning produces following change in RBC's
- A. Pappenheimer bodies
- B. Heinz bodies
- C. Howell-Jolly bodies
- D. Basophilic stippling

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MBBS Phase – II (CBME) Degree Examination - 09-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PATHOLOGY – PAPER II (RS-4 & RS-5)
Q.P. CODE: 1027
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. 50 year female presented with lump breast on the right side. On examination the lump measured 5 cm in size with restricted mobility. There was nipple retraction with axillary lymphadenopathy.
   a) What is the probable diagnosis?
   b) Write the classification, morphology and microscopy of the lesion
   c) Write the prognostic markers of the lesion.

2. 35 year old female presents with history of breathlessness and palpitations on exertion since 6 months. Past history recurrent sore throat during childhood. On examination a mild diastolic murmur in the mitral area.
   a) What is the diagnosis?
   b) Discuss the etiopathogenesis of the condition
   c) Describe the morphologic features of the organ involved

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Squamous intraepithelial lesions of the uterine cervix.
4. Mature teratoma of ovary.
5. Gall bladder calculi.
6. Microscopic changes in diabetic nephropathy.
7. Difference between ulcerative colitis and Crohn's disease.
8. Serum markers in viral hepatitis
9. Seminoma Testis
10. Aneurysms.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Linitis plastica
12. Carcinoid syndrome.
13. Basal cell carcinoma
14. Complications of bronchiectasis.
15. Complications of atherosclerosis.
16. Pleomorphic adenoma.
17. Microscopic features of Hashimoto's thyroiditis.
18. CSF findings in tubercular meningitis.
19. Microscopic features of Osteosarcoma.
20. Phyllodes tumor.

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Regarding melanoma all are true **EXCEPT**
- A. Radial growth pattern
- B. Pleomorphic tumor cells
- C. Breslow depth is a important prognostic features.
- D. BRAF mutation testing is not recommended for patient with stage III – IV melanoma.

21 ii) Barrett's esophagus predisposes to the development of
- A. Reflux esophagitis
- B. Squamous cell carcinoma
- C. Esophageal varices
- D. Adenocarcinoma

21 iii) The most common site for hydatid cyst is
- A. Liver
- B. Spleen
- C. Lung
- D. Brain

21 iv) Most common features of nephrotic syndrome is
- A. Heavy proteinuria
- B. Microscopic hematuria
- C. Hypertension
- D. Oliguria

21 v) The most aggressive ovarian germ cell tumor is
- A. Malignant teratoma
- B. Embryonal carcinoma
- C. Endodermal sinus tumor
- D. Dysgerminoma

22 i) Indian file pattern is seen in
- A. Infiltrating duct carcinoma breast
- B. Infiltrating lobular carcinoma breast
- C. Medullary carcinoma breast
- D. Tubular carcinoma breast

22 ii) Molluscum contagiosum is caused by
- A. Papilloma virus
- B. Pox virus
- C. Herpes virus
- D. EB virus

22 iii) In Giant cell tumor of bone the tumor cells are
- A. Osteoclastic giant cells
- B. Mononuclear stromal cells
- C. Fibroblastic cells
- D. Sinusoidal lining cells

22 iv) Gout is associated with all **EXCEPT**
- A. Acute arthritis
- B. Hyperuricemia
- C. Tophi
- D. Calcification

22 v) Type of meningioma associate with extraneural metastasis
- A. Syncytial meningioma
- B. Fibrous meningioma
- C. Anaplastic meningioma
- D. Angioblastic meningioma

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MBBS Phase – II (CBME) Degree Examination - 11-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY – PAPER I (RS-4 & RS-5)
Q.P. CODE: 1028
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Define Bioavailability. Discuss various factors that affect Bioavailability

2. A 22 year old unresponsive and unconscious man is brought to hospital. His heart rate is 60 per minute, blood pressure is 90/60 mm of Hg and respiratory rate is 10 per minute. He has pinpoint pupils. The treating doctor made a diagnosis of Morphine poisoning.
   a) Write the drug treatment for Morphine poisoning
   b) Write the central nervous system actions, therapeutic uses and adverse effects of morphine

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Adverse effects and contraindications of beta blockers
4. Methods of prolonging drug action
5. Discuss the management of organophosphorous Poisoning
6. Therapeutic uses of atropine substitutes
7. Disease Modifying Anti-Rheumatoid Drugs (DMARDs)
8. Inhalational glucocorticoids used in Bronchial Asthma
9. A 40 year old businessman presents with complaints of dyspepsia and epigastric pain. Endoscopy revealed Peptic ulcer. He was prescribed pantoprazole.
   a) Explain the rationale of using pantoprazole in this patient.
   b) Write its uses and adverse effects

10. A 45 year old man presents with sad mood, low energy and loss of interest and pleasure. The psychiatrist diagnosed him to be suffering from depression and prescribed Fluoxetine.
    a) Explain the rationale of using fluoxetine in this patient.
    b) Write its other therapeutic uses and adverse effects.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Explain the term first order kinetics with an example
12. Rationale of using latanoprost in Glaucoma
13. What is diffusion Hypoxia? How is it prevented?
14. Explain the rationale of using Diazepam in Insomnia
15. Rationale of combining Lignocaine with Adrenaline
16. Mention three disadvantages of using Liquid Paraffin as a Purgative
17. Rationale of using Paracetamol in fever
18. Write three mucolytics
19. Explain the concept of Essential medicines (drugs)
20. Write three uses of d-Penicillamine

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Which of the following receptor is located intracellularly
- A. Opioid receptor
- B. Steroid receptor
- C. Dopamine receptor
- D. GABA receptor

21 ii) Nicotinic receptor is
- A. Ligand gated ion channel
- B. G protein coupled
- C. Tyrosine kinase linked
- D. Intra-cellular

21 iii) Propranolol is avoided in which one of the following conditions
- A. Hypertension
- B. Ischemic heart disease
- C. Cardiac arrhythmias
- D. Bronchial asthma

21 iv) Which of the following is a prodrug of adrenaline used in glaucoma
- A. Brimonidine
- B. Dipivefrine
- C. Phenylephrine
- D. Pilocarpine

21 v) The drug useful in the treatment of trigeminal neuralgia is
- A. Paracetamol
- B. Carbamazepine
- C. Aspirin
- D. Morphine

22 i) Prolonged treatment with Lithium can cause
- A. Diabetes mellitus
- B. Goitre
- C. Gout
- D. Rheumatoid arthritis

22 ii) A 35 year old woman is suffering from severe migraine. The migraine gets relieved by sumatriptan. Which drug is appropriate for prophylaxis of migraine?
- A. Dihydroergotamine
- B. Ibuprofen
- C. Propranolol
- D. Paracetamol

22 iii) Dextromethorphan is an
- A. Analgesic
- B. Antitussive
- C. Expectorant
- D. Antihistaminic

22 iv) Which antiemetic is used to inhibit levodopa induced vomiting without blocking its antiparkinsonian effect
- A. Dicyclomine
- B. Domperidone
- C. Itopride
- D. Ondansetron

22 v) An Orphan Drug is
- A. Low cost drug
- B. Inert drug
- C. Drug for rare disease/condition
- D. An essential drug

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MBBS Phase – II (CBME) Degree Examination - 15-Apr-2025

Time: Three Hours **Max. Marks: 100**

PHARMACOLOGY – PAPER II (RS-4 & RS-5)
Q.P. CODE: 1029
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. a) Discuss the endocrinal and non-endocrinal uses of corticosteroids.
   b) Write the measures to minimize HPA axis (hypothalamic–pituitary–adrenal axis) suppression during corticosteroid therapy.

2. A 48 year old executive was diagnosed with essential hypertension during his annual health screening. He was prescribed Angiotensin Converting Enzyme Inhibitors (ACEIs).
   a) Enumerate four ACEIs.
   b) Write the mechanism of action, uses and adverse effects of ACEIs.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Discuss the advantages and disadvantages of combined use of Antimicrobials.

4. Mention three Artemisinin-based Combination Therapy (ACT) regimens for uncomplicated falciparum malaria. Discuss the advantages of ACT regimens.

5. Write the mechanism of action, uses and adverse effects of Dapsone.

6. Discuss the general toxicities of Anticancer drugs.

7. Write the mechanism of action, advantages and disadvantages of Radioactive Iodine

8. A 20-year-old student with Type 1 Diabetes mellitus presenting to hospital was diagnosed with diabetic ketoacidosis. Explain the pharmacotherapy of diabetic ketoacidosis.

9. Explain the mechanism of action, uses and adverse effects of Organic nitrates

10. A 50-year-old patient was diagnosed with pulmonary embolism in the hospital. He was started on Heparin infusion. Write the rationale of using Heparin in this patient. Write the uses and adverse effects of Heparin.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Explain the rationale of using Digoxin in heart failure
12. List two Plasma expanders with their indications
13. Mention two thiazide diuretics. Explain the rationale of using thiazide diuretics in nephrogenic diabetes insipidus
14. Explain the rationale of combining Amoxicillin with Clavulanic acid
15. Write three uses of Cotrimoxazole
16. Write the goals of antibiotic stewardship program in a hospital
17. Write three advantages of Azithromycin over Erythromycin
18. Write three advantages of Liposomal Amphotericin B
19. List three different groups of antimicrobials used in typhoid fever
20. List three different preparations of Vitamin-D

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) The oral antidiabetic agent that rarely causes hypoglycemia is
- A. Metformin
- B. Glimepiride
- C. Glibenclamide
- D. Tolbutamide

21 ii) One of the following statements is TRUE regarding Octreotide
- A. Stimulate growth hormone secretion
- B. Used in secretory diarrheas associated with Carcinoid
- C. Contraindicated in Acromegaly
- D. Given by oral route

21 iii) The Calcium channel blocker with anti-arrhythmic action is
- A. Nifedipine
- B. Nicardipine
- C. Amlodipine
- D. Verapamil

21 iv) The drug which is a potassium channel opener and nitric oxide donor is
- A. Trimetazidine
- B. Nicorandil
- C. Diltiazem
- D. Sodium nitroprusside

21 v) Severe bleeding caused by fibrinolytic agents is preferably treated with
- A. Vitamin K
- B. Heparin
- C. Aspirin
- D. Epsilon aminocaproic acid

22 i) Which of the following is Potassium sparing diuretic?
- A. Furosemide
- B. Spironolactone
- C. Acetazolamide
- D. Hydrochlorothiazide

22 ii) Which one of the following Antitubercular drug is known to cause visual defects
- A. Isoniazid
- B. Rifampicin
- C. Pyrazinamide
- D. Ethambutol

22 iii) The anti-influenza drug that acts by inhibiting the viral neuraminidase enzyme is
- A. Acyclovir
- B. Oseltamivir
- C. Adefovir
- D. Nevirapine

22 iv) The antineoplastic drug which is a mitotic inhibitor and causes metaphase arrest is
- A. Procarbazine
- B. Doxorubicin
- C. Vincristine
- D. Methotrexate

22 v) The drug preferred in the treatment of psoriasis is
- A. Calcipotriol
- B. Mupirocin
- C. Miconazole
- D. Silver sulfadiazine

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MBBS Phase – II (CBME) Degree Examination - 17-Apr-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER I (RS-4 & RS-5)
Q.P. CODE: 1030
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 40-year-old-man presented to hospital with complaints of fever and weight loss. On examination, 102°F fever and anaemia were noted. Enlargement of liver and spleen were also present. The bone marrow aspirate collected was subjected to Giemsa staining which revealed amastigotes filled within a macrophage.
    a) Identify the etiological agent and the clinical diagnosis?
    b) Write about the life cycle & pathogenesis of the etiological agent.
    c) Describe the laboratory diagnosis of above condition.

2. A 25-year-old-man complains of mild fever, abdominal cramps, tenesmus, frequent passage of stools associated with blood and mucus. Stool microscopy shows abundant pus cells and no ova/cysts/trophozoites were seen. Stool culture yielded the growth of non-lactose fermenters.
    a) What is the etiological agent causing above clinical condition?
    b) Describe the pathogenesis and complications of the above clinical condition
    c) Describe the laboratory diagnosis of the above clinical condition

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Describe passive immunity.
4. Pathogenesis & prevention of tetanus.
5. Laboratory diagnosis of HIV infection
6. Molluscum contagiosum.
7. Give an outline of laboratory diagnosis of fungal infections.
8. Antibiotic associated diarrhoea.
9. Discuss the clinical manifestations and laboratory diagnosis of sporotrichosis.
10. Describe principle, types and applications of ELISA.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Modified Jones criteria for diagnosis of rheumatic fever.
12. Principle and uses of Widal test.
13. Enumerate methods of Antimicrobial Susceptibility test.
14. Write any three applications of PCR.
15. Name three agents causing Mycetoma.
16. Methods of HLA typing.
17. Life cycle of *Enterobius vermicularis*.
18. Modes of transmission of *Hepatitis B* Virus.
19. Structure of IgA.
20. Laboratory diagnosis of Chagas' Disease

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) The infective form of *Balantidium coli* is
- A. Cyst
- B. Sporozoite
- C. Trophozoite
- D. Tachyzoites

21 ii) All are heterophile antigen test **EXCEPT**
- A. Paul- Bunnell test
- B. Weil- Felix test
- C. Cold Agglutination Test
- D. Rose -Waaler test

21 iii) Hair perforation test is positive in one of the following dermatophytes;
- A. *Trichophyton rubrum*
- B. *Trichophyton mentagrophytes*
- C. *Trichophyton tonsurans*
- D. *Trichophyton violaceum*

21 iv) Traveler's diarrhea is caused by
- A. Enterohemorrhagic *E.coli*
- B. Enteropathogenic *E. coli*
- C. Enterotoxigenic *E. coli*
- D. Enteroinvasive *E.coli*

21 v) Hand –foot and mouth disease is caused by
- A. *Herpes Simplex virus*
- B. *Coxsackie virus*
- C. *Measles virus*
- D. *Chicken pox virus*

22 i) In which phase of bacterial growth curve sporulation occurs
- A. Lag Phase
- B. Log Phase
- C. Phase of decline
- D. Stationary Phase

22 ii) Which hepatitis virus is associated with the highest mortality in pregnancy?
- A. *Hepatitis E Virus*
- B. *Hepatitis C Virus*
- C. *Hepatitis B Virus*
- D. *Hepatitis A Virus*

22 iii) Which of the following clinical sample is **NOT** suitable for anaerobic infections?
- A. Swabs
- B. Tissue bit
- C. Necrotic material
- D. Aspirates in air tight container

22 iv) Which bacterial spores are used as sterilization control in autoclave?
- A. *Clostridium perfringens*
- B. *Bacillus cereus*
- C. *Geobacillus stearothermophilus*
- D. *Pseudomonas aeruginosa*

22 v) Babesiosis is transmitted by
- A. Mites
- B. Ticks
- C. Flea
- D. Mosquito

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MBBS Phase – II (CBME) Degree Examination - 19-Apr-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER II (RS-4 & RS-5)

Q.P. CODE: 1031

(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 20-year-old male was admitted to the hospital with fever, headache, nausea, confusion, restlessness, hallucination and difficulty in swallowing liquids. His friends mentioned that he had been bitten by a street dog two months ago. As the wound was neither deep nor painful, he was not taken to hospital then, instead simple wound cleaning was done at hostel without any medical treatment. After 2 days he developed painful spasm of the respiratory laryngeal and pharyngeal muscles and he died of respiratory failure.
    a) Draw a neat labelled diagram of causative agent
    b) Describe the pathogenesis of this condition
    c) Discuss the laboratory diagnosis.
    d) Add a note on post exposure prophylaxis for dog bite

2. A 25-year-old male presented to STD clinic with a single, painless genital ulcer of 12days duration. He had a history of sexual exposure with a commercial sex worker. On examination the penile ulcer was hard and indurated along with inguinal lymph node enlargement. Blood sample was collected and sent for VDRL test. The test was reactive at 1:128 dilution.
    a) What is your diagnosis and mention the causative agent?
    b) Enumerate the other causative agents of genital ulcer
    c) Describe the laboratory diagnostic methods in above case
    d) Mention the complications of the above condition

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Aseptic meningitis
4. Cryptococcal meningitis
5. Laboratory diagnosis of pulmonary tuberculosis.
6. Enumerate the viruses causing respiratory tract infections. Describe the laboratory diagnosis of viral Influenza
7. Infectious mononucleosis.
8. Neurocysticercosis.
9. Discuss the preventive measures of surgical site infection.
10. Enumerate the oncogenic viruses. Discuss the mechanism of viral oncogenesis

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Enumerate the causative agents of neonatal meningitis
12. Prion diseases
13. Draw a neat labelled diagram of hydatid cyst
14. Hib Vaccine
15. **Loeffler's** syndrome
16. Draw neat labeled diagram of *Aspergillus niger*
17. Preventive measures of sexually transmitted diseases
18. List three causative agents of discharge per vagina

19. Clinical types of human Plague
20. Enlist six opportunistic fungal agents.

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) The most infective stage in whooping cough is
- A. Catarrhal stage
- B. Convalescent stage
- C. Paroxysmal stage
- D. All of the above

21 ii) Which of the following parasite does not pass through the lungs during its life cycle
- A. *Strongyloides stercoralis*
- B. *A.duodenale*
- C. *A.lumbricoides*
- D. *T.trichiura*

21 iii) Treatment of the sexual partner is generally not required in which of the following infections
- A. Bacterial Vaginosis
- B. Trichomoniasis
- C. Herpes viral infection
- D. Gonorrhea

21 iv) Inverted fir tree appearance on gelatin stab culture is a characteristic feature of
- A. *Bacillus anthracis*
- B. *Coxiella burnetii*
- C. *Brucella melitensis*
- D. *Leptospira icterohaemorrhagica*

21 v) Which of the following is the most common etiological agent of UTI?
- A. *Escherichia coli*
- B. *Staphylococcus aureus*
- C. *Pseudomonas aeruginosa*
- D. *Enterobacter spp*

22 i) Ophthalmia neonatorum is caused by which of the following?
- A. *Listeria monocytogenes*
- B. *Moraxella catarrhalis*
- C. *Neisseria gonorrhoeae*
- D. *Hemophilus influenzae*

22 ii) Which of the following is not an agent of non-Gonococcal urethritis?
- A. *Chlamydia trachomatis*
- B. *Candida albicans*
- C. *Gardnerella vaginalis*
- D. *Mycoplasma hominis*

22 iii) Which of the following virus possess haemagglutinin but not neuraminidase spikes
- A. *Parainfluenza virus*
- B. *Pneumovirus*
- C. *Measles virus*
- D. *Respiratory syncytial virus*

22 iv) All of the following infections are vector borne infections in India **EXCEPT**
- A. Dengue
- B. Chikungunya
- C. Japanese encephalitis
- D. Yellow fever

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22 v) Drug of choice for rat bite fever
A. Amikacin
B. Cephalosporin
C. Penicillin G
D. Tetracycline

MBBS Phase – II Degree Examination - 07-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PATHOLOGY – PAPER I (RS-3)
Q.P. CODE: 1081

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Define thrombosis. Explain in detail about pathogenesis of thrombosis. Add a note on fate of thrombus
2. Define Apoptosis and give examples. Describe the mechanism of apoptosis

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Immune thrombocytopenic purpura
4. Semen analysis
5. Cellular events of acute inflammation
6. What is a granuloma? Enumerate the types with examples
7. Difference between reversible and irreversible cell injury
8. Sickle cell anemia
9. Viral carcinogenesis
10. Turner syndrome
11. Chronic lymphocytic leukemia
12. Hemophilia B

SHORT ANSWERS **10 x 3 = 30 Marks**

13. What is exfoliative cytology?
14. Name three indications of bone marrow examination
15. What are the six causes of proteinuria?
16. Cross matching of blood
17. Red cell indices
18. Enumerate the types of necrosis with examples
19. What is ESR? Enumerate four causes of increase ESR
20. Difference between transudate and exudate
21. Laboratory diagnosis of iron deficiency anemia
22. Urinometer

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MBBS (Phase - II) Degree Examination - 09-Apr-2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER - II (RS-3)
Q.P. CODE: 1082

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Classify lung tumors. Describe etiopathogenesis, morphology of Bronchogenic carcinoma.
2. A 45 year old multiparous female, presented with complication of post-coital bleeding and foul smelling white discharge per vagina. On per speculum examination growth bleeds on touch noted.
    a. What is the probable diagnosis and why?
    b. Discuss the risk factors and etiopathogenesis.
    c. Add a note on screening test for the above condition.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Morphology of heart in Rheumatic Heart Disease.
4. Difference between Nephrotic versus Nephritic Syndrome.
5. Etiopathology of Hepatocellular carcinoma.
6. Seminoma.
7. Meningioma.
8. Discuss pathogenesis of Type II Diabetes Mellitus.
9. Histological subtypes of Osteogenic sarcoma.
10. Basal cell carcinoma.
11. Schwannoma.
12. Describe features of Hodgkins lymphoma in gross and microscopy.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Microscopic findings of Hashimotos thyroiditis with labelled diagram.
14. Enumerate risk factors for Pneumoconiosis.
15. Causes for Fatty liver.
16. Microscopic findings in papillary carcinoma thyroid.
17. Name three complications of portal hypertension.
18. Microscopic findings in Crohn's disease.
19. Biochemical markers available for Myocardial Infarction.
20. Labelled microscopic diagram of Warthin's tumor.
21. Pheochromocytoma.
22. Cholelithiasis.

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination – 21st April 2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER - II (RS-3)
Q.P. CODE: 1082A

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the etiopathogenesis, morphological features and complications of Atherosclerosis
2. Classification and microscopic features of Bronchogenic carcinoma

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Pathogenesis of Hashimotos thyroiditis
4. Pheochromocytoma
5. Inflammatory bowel disease
6. Hepatoma
7. Classify breast carcinoma and discuss any one
8. Leiomyoma of uterus
9. Malignant melanoma
10. Giant cell tumor of bone
11. Peptic ulcer disease
12. Hodgkins lymphoma

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Pleomorphic adenoma
14. Cholelithiasis
15. Microscopic subtypes of osteosarcoma
16. Causes for splenic enlargement
17. Diabetic glomerulosclerosis
18. Wilms tumor
19. Benign Prostatic Hyperplasia (BPH)
20. Papillary carcinoma thyroid
21. Microscopy of basal cell carcinoma
22. Microscopy of meningioma

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 11-Apr-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER I (RS-3)
Q.P. CODE: 1083

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the pathogenesis. Laboratory diagnosis, treatment and prophylaxis of enteric fever
2. Define and classify hypersensitivity reactions. Describe type I hypersensitivity reactions

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Anaerobic culture methods
4. Plasmids
5. Louis Pasteur
6. Mechanisms of **Innate Immunity**
7. Laboratory diagnosis of diphtheria
8. Treatment and prophylaxis of pulmonary tuberculosis
9. Bacterial spore
10. Gonorrhea
11. Koch's postulates
12. Biomedical waste

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Selective media
14. Bacterial growth curve
15. Indole test
16. IgM antibody
17. Name three **live attenuated vaccines.**
18. Name three gram negative bacilli
19. Name three culture media
20. **Anti Streptolysin O (ASO)** test
21. Name three gram positive bacilli
22. **Write the** uses of autoclave

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 15-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

MICROBIOLOGY – PAPER II (RS3)
Q.P. CODE: 1084

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Enumerate Nematodes. Describe life cycle, pathogenesis and laboratory diagnosis of Ascaris lumbricoides.

2. Enumerate Entero Viruses. Describe pathogenicity and prophylaxis of Polio.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Infections caused by Candida albicans **and its laboratory diagnosis**.
4. Amoebiasis.
5. Dengue fever.
6. Tissue culture.
7. Aspergillosis.
8. Laboratory diagnosis of Hepatitis B.
9. Draw a neat labelled diagram of HIV virus.
10. Inclusion bodies.
11. Prevention of Rabies.
12. Dermatophytes.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Name three soil transmitted helminths.
14. Sabouraud's media.
15. Name three bile stained ova in stool.
16. Flotation method for stool **examination**.
17. Otomycosis.
18. Name three arboviruses.
19. Name three viral vaccines.
20. Larva Migrans.
21. Name three uses of suckling mice.
22. Draw a labelled diagram of Giardia **cyst**.

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 17-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY – PAPER I (RS3)
Q.P. CODE: 1085

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Discuss the factors modifying Drug response with suitable examples
2. Enumerate the commonly used Antiepileptic drugs. Describe the treatment of Status Epilepticus

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Oral route of drug administration
4. Uses of Beta-blockers
5. Drug Antagonism
6. Lignocaine
7. Pre-anaesthetic medication
8. Atropine substitutes
9. Teratogenicity
10. Thiazide Diuretics
11. Describe the drugs used in the treatment of **Open Angle** Glaucoma.
12. Nitrates

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Mention three uses of Mannitol
14. Name three drugs used in the treatment of Congestive Heart failure
15. Name three nasal decongestants
16. Name three drugs used in Hypertensive emergencies
17. Mention three antiarrhythmic drugs
18. Tachyphylaxis
19. Name three competitive neuromuscular blockers
20. Mention three drugs used for Insomnia
21. Define a Prodrug; give two examples
22. Mention three haematinics

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 19-Apr-2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY – PAPER II (RS3)
Q.P. CODE: 1086

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Classify Penicillins. Write the mechanism of action and uses of Amoxicillin.
2. Classify glucocorticoids. Enumerate their uses and adverse effects

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Proton pump inhibitors
4. Uses and adverse effects of First generation **antihistamines**
5. Sympathomimetic Bronchodilators
6. Radioactive iodine
7. Isoniazid (INH)
8. Albendazole
9. Methotrexate
10. Osmotic Laxatives
11. d-Penicillamine
12. Uses and adverse effects of Insulin

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Superinfection
14. Mention three drugs used in Leprosy
15. Mention three **uses of Cyclosporine**
16. Mention three drugs used in Osteoporosis
17. Mention three drugs used in Typhoid fever
18. Mention three uses of Chloroquine
19. Mention three uses of **Vitamin D**
20. Name three Antiseptics
21. Name three Prostaglandin analogues
22. Uses of Ivermectin

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS PHASE II Degree Examination – 21-Apr-2025

Time: Three Hours **Max. Marks: 100**

FORENSIC MEDICINE (RS-3)
QP Code: 1087

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. What is feigned insanity? How feigned insanity is differentiated from true insanity? What is the criminal responsibility of a person with mental illness? Explain with legal basis
2. What is the mode of action of carbon monoxide in human body? Briefly explain the effect of different air concentrations of carbon monoxide when a person is exposed. Outline the management of acute exposure to carbon monoxide

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Superimposition: Technique, points of comparison and test value
4. What is suspended animation? List various conditions that can produce suspended animation. Add a note on its medico legal significance
5. Age of contusion: Colour changes and pigments responsible for changes
6. Differences between an entry wound from exit wound produced by a rifled firearm
7. Causes, source of bleeding and clinical features of extra dural hemorrhage
8. With the help of diagram explain Wallace rule of nine
9. What is traumatic asphyxia? Mention its causes, internal and external postmortem findings
10. Positive signs of pregnancy
11. Chemical tests for seminal stains
12. Clinical features of chronic arsenic poisoning

SHORT ANSWERS **10 x 3 = 30 Marks**

13. List six situations where oral evidence is exempted in a court of law
14. **List the conditions favorable for adipocere. What are its features and medico legal importance?**
15. Cleavage lines of Langer
16. Choking of barrel of firearm and its advantages
17. Contre coup injury
18. Bumper fracture
19. Immersion syndrome
20. What is Lochia? List the various types, add a note on importance of examination of Lochia
21. **Cephalohaematoma**
22. Widmarks' formula

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 14-Aug-2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER I (RS-4, RS-5 & RS-6)
Q.P. CODE: 1026
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. 30 year old male presented with loss of weight, loss of appetite and evening raise of temperature of three months duration. Cervical swelling biopsy showed Eosinophilic **acellular granular** amorphous a cellular material surrounded by **epithelioid** granulomas.
   a) What is the likely clinical diagnosis?
   b) Define Necrosis and describe the types of Necrosis **with examples**.
   c) Add a note on differences between Apoptosis and Necrosis.

2. 25 yr old male with **splenomegaly** and episodes of epistaxis revealed high WBC count. Peripheral smear showed more than 20% large cells with high N:C ratio, lacy chromatin with one to three nucleoli. Cytoplasm showed presents of Auer rods in most of these cells.
   a) What is the diagnosis?
   b) Discuss WHO and FAB classification
   c) Discuss the characterstic cytogenetic abnormality associated with this condition

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Laboratory investigations of Iron deficiency anemia.
4. Mention the anticoagulants used in blood banks. Write a note on the blood bags used in blood banking
5. Cellular events in acute inflammation.
6. Differences between benign and malignant neoplasms.
7. Describe the mechanism of cell mediated immunity.
8. Etiopathogenesis of septic shock
9. Multiple myeloma
10. What is FNAC? **Write about its indications, advantages and disadvantages**.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Metastatic calcification.
12. Fate of thrombus.
13. Name three tumour suppressor genes.
14. Packed cell volume.
15. CSF findings in tubercular meningitis.
16. Name six factors influencing wound healing.
17. Name three causes for massive proteinuria.
18. **Name 3 tumor markers and their associated cancers**.
19. Reed Sternberg cell.
20. Draw labelled diagram of **CVC, lung**.

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Opsonization is seen in
- A. Chemotaxis
- B. Phagocytosis
- C. Activation of NADPH oxidase
- D. Diapedesis

21 ii) Burkitt lymphoma involves.
- A. PTEN
- B. EGFR
- C. C-MYC
- D. RAS

21 iii) Which of these is a X-linked dominant disorder
- A. Hemophilia
- B. G-6PD deficiency
- ~~C.~~ **Duchenne Dystrophy**
- D. Fragile x syndrome

21 iv) 25 year old female with menorhagia was evaluated and found to have ~~heamoglobin~~ **haemoglobin** of 5 g/dl and reduced serum iron. Peripheral smear showed anisocytosis. Anisocytosis means
- A. Different shapes of RBCs
- B. Different sizes of RBCs
- C. Different inclusions in RBCs
- D. Increased RBC count

21 v) LE cells represents
- A. Damaged **RBCs**
- B. Damaged host cells
- C. Neutrophils containing damaged cells
- D. Lymphocyte with complement

22 i) 30 year old male on pure vegetarian diet presents with listlessness, tingling and numbness in his limbs. On lab evaluation his bone marrow shows presence of megaloblasts. Megaloblasts can be seen in
- A. Iron deficiency anaemia
- B. Haemolytic anaemia
- C. Vit B12 deficiency anemia
- D. Hereditary spherocytosis

22 ii) Philadelphia chromosome is associated with
- A. Sickle cell anemia
- B. Chronic myeloid Leukaemia
- C. Haemophilia
- D. Idiopathic Thrombocytopenic purpura

22 iii) Which of the following is a bleeding disorder
- A. Sickle cell anemia
- B. Thalessmia
- C. Idiopathic thrombocytopenic purpura
- D. Hereditary spherocytosis

22 iv) Sago spleen seen in
- A. Chronic venous congestion of spleen
- B. Chronic myeloid Leukemia
- C. Amyloidosis spleen
- D. Malaria Spleen

22 v) **All** the following antibodies may be identified on laboratory testing in a patient with systemic lupus **Erythematosus EXCEPT**
- A. Anti DS DNA
- B. SS-A
- C. SS -B
- D. Jo-1

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 16-Aug-2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER II (RS-4, RS-5 & RS-6)
Q.P. CODE: 1027
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. 47 year old male presents with central chest pain radiating to the left arm, associated with shortness of breath and diaphoresis. ECG shows ST- segment elevation in leads II, III and avF.
    a) What is the provisional diagnosis?
    b) Describe the gross and microscopic morphological changes.
    c) Discuss the biochemical findings.

2. 32 year old female presents with recurrent episodes of diarrhoea, abdominal pain and weight loss. On colonoscopic examination, small intestine reveals skip lesions and transmural inflammation.
    a) What is the most likely diagnosis?
    b) Discuss the etiopathogenesis.
    c) Describe the morphology of intestine in above condition.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Define emphysema. Discuss the pathogenesis.
4. Discuss the pathogenesis of HBV hepatitis.
5. Classify and describe the morphology of Urinary bladder tumours.
6. Discuss the etiology and morphology of Endometrial carcinoma.
7. Classify Breast carcinoma. Discuss the morphology of Medullary carcinoma of breast.
8. Describe the gross and microscopic features of Hashimoto's thyroiditis.
9. Classify bone tumours.
10. Discuss the morphological features of benign prostatic hyperplasia.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Microscopy of Fibroadenoma breast.
12. Lesions of Diabetic nephropathy.
13. Microscopy of Basal cell carcinoma.
14. Osteoclastoma.
15. Morphology of dysgerminoma.
16. Medulloblastoma.
17. Cardiac vegetations.
18. Hemochromatosis.
19. Types of renal cell carcinoma.
20. Stages of lobar pneumonia

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Libman sacks endocarditis occurs in
- A. Rheumatic heart disease
- B. SLE
- C. Systemic sclerosis
- D. Sjogrens syndrome

21 ii) Mutations commonly associated with adenocarcinoma lung in non smokers is
- E. P53
- F. EGFR
- G. RB gene
- H. Myc

21 iii) _____ syndrome is associated with renal cell carcinoma
- E. Maffucci syndrome
- F. Von-Hippel-Lindau syndrome
- G. Prader-Willi syndrome
- H. Carney syndrome

21 iv) Following are osteoid forming bone tumours **EXCEPT**
- E. **Osteosarcoma**
- F. Osteoblastoma
- G. **Osteoid** osteoma
- H. Osteochondroma

21 v) Skin carcinoma associated with Hedgehog signaling pathway
- E. Squamous cell carcinoma
- F. Basal cell carcinoma
- G. Melanoma
- H. Sebaceous carcinoma

22 i) Mallory weiss syndrome refers to occurance of GI hemorrhage as result of
- A. Esophageal varices
- B. Mucosal tear at **esophago**-gastric junction
- C. Iatrogenic perforation
- D. Peptic ulcer

22 ii) The most common cause of cervical carcinoma is
- A. HPV 6
- B. HPV 11
- C. HPV 16
- D. HHB

22 iii) Most prostatic adenocarcinomas arise commonly from
- E. Central zone
- F. Peripheral zone
- G. Transition zone
- H. None of the above

22 iv) Structural changes in brain of patient with Alzheimer's disease are due to
- A. Deposition of amyloid plaques and neurofibrillary tangles
- B. Degeneration of basal ganglia
- C. Demyelination of CNS
- D. Degeneration of dopamine receptors

22 v) Zellballen pattern is seen in
- A. Choriocarcinoma
- B. Renal cell carcinoma
- C. Transitional cell carcinoma
- D. Pheochromocytoma

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 18-Aug-2025

Time: Three Hours **Max. Marks: 100**

PHARMACOLOGY – PAPER I (RS-4, RS-5 & RS-6)
Q.P. CODE: 1028
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Enumerate various routes of drug administration with suitable examples. Mention the advantages and disadvantages of Intravenous route of drug administration.

2. A patient is prescribed Morphine for pain following fracture femur.
   a. Explain the mechanism of analgesic action of morphine in this patient.
   b. Write three contraindications for morphine with reasons.
   c. Discuss the management of morphine poisoning.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Discuss the various methods of prolonging drug action.
4. Write the therapeutic uses of Adrenaline. Explain the rationale of combining adrenaline with Lignocaine in local anaesthesia
5. Write the therapeutic uses and adverse effects of Alpha adrenergic blockers
6. A 45-year-old lady presented with weakness and easy fatigability. Diagnosis of Myasthenia Gravis was made after clinical evaluation. Discuss the pharmacotherapy of Myasthenia Gravis.
7. Enumerate Four centrally acting muscle relaxants. Write their therapeutic uses
8. A student presented with rash and intense itching all over his body on the morning of his practical examination.
   a) Which class of antihistaminic is preferred in this patient and give the rationale?
   b) Explain its other therapeutic uses.
9. Enumerate three classes of Bronchodilators with their mechanism of action
10. A 45-year-old patient is diagnosed with Gastroesophageal reflux disease (GERD).
    a) Mention any three classes of drugs used with suitable examples.
    b) Write the mechanism of action of any one drug.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Define plasma half life. Explain its clinical significance
12. Explain the dose dependent actions of Dopamine
13. Mention the drug used in the treatment of malignant hyperthermia with rationale
14. Write two advantages of Ketamine. Why is it contraindicated in hypertensive patients
15. Write the mechanism of action and uses of Lithium
16. Write the rationale of using low dose Aspirin in secondary prevention of myocardial infarction
17. Name three Mucolytics with their mechanism of action
18. Write the mechanism of action and therapeutic uses of Aprepitant
19. Write three advantages of Fixed Dose Combination of drugs.
20. Write the objectives of conducting Phase IV clinical trial (Post Marketing Surveillance)

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) An orphan drug is
- A. A drug which is easily available
- B. A drug which has no therapeutic use
- C. A drug needed for treatment or prevention of rare disease
- D. A drug which is cheap

21 ii) The loading dose of a drug is governed by its
- A. Plasma half life
- B. Volume of distribution
- C. Renal clearance
- D. Elimination rate constant

21 iii) The drug preferred for prevention of motion sickness is
- A. Hyoscine
- B. Cyclopentolate
- C. Aprepitant
- D. Cetirizine

21 iv) Pilocarpine eye drops produces its effect by which of the following actions in glaucoma
- A. Activation of Muscarinic M3 receptors
- B. Activation of Beta 2 receptors
- C. Activation of Dopamine 1 receptors
- D. Activation of 5-HT3 receptors

21 v) The drug used in the treatment of Diazepam overdose is
- A. Fomepizole
- B. Flumazenil
- C. Finasteride
- D. Flecainide

22 i) Which of the following blood tests should be recommended weekly for a patient on Clozapine for resistant Schizophrenia?
- A. Creatinine
- B. Blood Urea Nitrogen
- C. Transaminases
- D. Leucocyte Count

22 ii) N-Acetyl cysteine is useful in Paracetamol poisoning because:
- A. It inhibits the excretion of paracetamol
- B. It inhibits the metabolism of paracetamol
- C. It replenishes glutathione stores of liver
- D. It inhibits reabsorption of paracetamol

22 iii) Which of the following drug is **NOT** used as an inhalational Corticosteroid in Bronchial Asthma
- A. Budesonide
- B. Fluticasone
- C. Beclomethasone
- D. Hydrocortisone

22 iv) Which of the following antiemetic agent is most preferred in cancer chemotherapy induced vomiting
- A. Ondansetron
- B. Promethazine
- C. Cisapride
- D. Doxylamine

22 v) Drug induced diseases are also called as
- A. Iatrogenic diseases
- B. Nosocomial diseases
- C. Teratogenic diseases
- D. Mutagenic diseases

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 20-Aug-2025

Time: Three Hours **Max. Marks: 100**

PHARMACOLOGY – PAPER II (RS-4, RS-5 & RS-6)
Q.P. CODE: 1029
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Mention four Aminoglycoside antibiotics. Explain their common properties, mechanism of action and adverse effects.
2. A 69-year-old man presents to the hospital with increasing fatigue, shortness of breath and swelling of lower extremities. A diagnosis of Heart Failure was made.
   a) Mention three groups of drugs with suitable examples used in Heart failure.
   b) Write the mechanism of action and adverse effects of any one of the drugs used.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. A 10-year-old boy with fever and sore throat was prescribed Azithromycin. Describe mechanism of action, antibacterial spectrum and uses of Azithromycin.
4. Discuss the therapeutic uses of Glucocorticoids.
5. Write the mechanism of action, adverse effects and uses of Alendronate.
6. Write the mechanism of action, adverse effects and uses of Vinca alkaloids.
7. A 55-year-old patient was diagnosed with new onset Type 2 Diabetes mellitus.
   a) Mention two classes of Oral antidiabetic drugs with suitable examples that can be prescribed to this patient.
   b) Describe mechanism of action and adverse effects of any one class of drug.
8. Write the mechanism of action, adverse effects and uses of Clomiphene citrate.
9. Discuss the drug therapy of Myocardial infarction.
10. Write the mechanism of action, uses and adverse effects of Loop Diuretics.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Mention three drugs used in the management of Hypertensive emergencies
12. Mention three Uses of Acetazolamide
13. Mention three advantages of Low molecular weight Heparin
14. Write two uses of Methotrexate. Explain the reason for using Folinic acid in Methotrexate toxicity
15. Explain the reasons for combining Ceftazidime with Tazobactam
16. Mention three drugs used in Lepra reaction with reasons
17. Mention three Protease inhibitors used in the treatment of HIV infection
18. Write three measures to reduce development of antimicrobial resistance
19. Write two uses of penicillin G. Why is it not preferred in Gram negative bacterial infection?
20. Mention three Live attenuated vaccines

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) The Long acting Insulin preparation producing a smooth peakless effect is
- A. Glargine
- B. Lispro
- C. Aspart
- D. Glulisine

21 ii) Anastrozole inhibits which of the following enzyme to produce its therapeutic effect
- A. Transpeptidase
- B. DNA Polymerase
- C. Aromatase
- D. Ribonucleotide reductase

21 iii) The drug used in Angina pectoris which dilates the coronary arteries is
- A. Nitroglycerine
- B. Metoprolol
- C. Ivabradine
- D. Trimetazidine

21 iv) Which of the following is contraindicated in the treatment of pregnancy induced hypertension?
- A. Enalapril
- B. Alpha methyl dopa
- C. Labetalol
- D. Hydralazine

21 v) Absorption of oral iron preparations can be facilitated by co-administration of
- A. Antacids
- B. Tetracycline
- C. Ascorbic acid
- D. Calcium

22 i) Which of the following is an adverse effect of Atorvastatin
- A. Retinopathy
- B. Gout
- C. Thromboembolism
- D. Myopathy

22 ii) The objectives of using antimicrobial combinations are
- A. To achieve synergism
- B. To prevent emergence of resistance
- C. To broaden the antimicrobial spectrum
- D. All of the above

22 iii) A patient receiving an antimicrobial agent since a week for amoebiasis, had dizziness, flushing and vomiting after drinking alcohol. Which of the following drugs most likely caused this interaction with alcohol
- A. Imipenem
- B. Levfloxacin
- C. Griseofulvin
- D. Metronidazole

22 iv) The anticancer drug that is not derived from plant source is
- A. Irinotecan
- B. Vincristine
- C. Doxorubicin
- D. Paclitaxel

22 v) The potassium channel opener used for treatment of Alopecia is
- A. Nicorandil
- B. Diazoxide
- C. Cromakalim
- D. Minoxidil

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MBBS Phase – II (CBME) Degree Examination - 22-Aug-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER I (RS-4, RS-5 & RS-6)
Q.P. CODE: 1030
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 40-year-old farmer was admitted 2 days after crush injury to his right leg following a road traffic accident. On examination, local muscles have been crushed, there was edema, black discoloration of the skin and crepitus was felt on palpation
   a) What is the provisional diagnosis?
   b) List the etiological agents causing the above condition
   c) Discuss the pathogenesis of the clinical condition
   d) Describe the laboratory diagnosis of the above case

2. A 17-year-old boy presented with diarrhea with blood and mucus, colicky abdominal pain, fever and prostration. He developed the symptoms following consumption of street food. The wet mount examination of stool sample showed motile trophozoites
   a) What is the clinical diagnosis?
   b) List the etiological agents of dysentery
   c) Describe the life cycle, pathogenesis and complications in the above condition
   d) Discuss the Laboratory diagnosis and treatment

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Bacterial spore
4. Modes of transmission of infection
5. Structure and functions of IgM antibody
6. Type I hypersensitivity
7. Laboratory diagnosis of HIV infection
8. Laboratory diagnosis of cholera
9. Histoplasmosis
10. Mucormycosis

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Three contributions of Louis Pasteur
12. Phases of Bacterial growth curve
13. Three examples of active Immunity
14. Name three viruses causing gastroenteritis
15. Methicillin Resistant *Staphylococcus Aureus* (MRSA)
16. Morphology of egg of *Ascaris lumbricoides* with diagram
17. Name three causes of infective endocarditis
18. Name three causes of viral hemorrhagic fever
19. **Post Streptococcal complications and the mechanism involved**
20. Cutaneous larva migrans

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Antibody that crosses placenta
- A. IgA
- B. IgG
- C. IgE
- D. IgM

21 ii) Three components of PCR involve all **EXCEPT**
- A. DNA extraction
- B. Amplification
- C. Gel documentation
- D. Blotting

21 iii) The part of bacteria that is most antigenic
- A. Protein
- B. Carbohydrate
- C. Lipid
- D. Nucleic acid

21 iv) Infective form of malaria parasite
- A. Merozoite
- B. Sporozoite
- C. Trophozoite
- D. Gametocyte

21 v) Germ tube formation is seen in:
- A. *Candida glabrata*
- B. *Candida albicans*
- C. *Cryptococcus neoformans*
- D. *Coccidioides immitis*

22 i) The recommended investigation for typhoid after two weeks of onset of fever is
- A. Blood culture
- B. Stool culture
- C. Urine culture
- D. Widal test

22 ii) Amastigote form of Leishmaniasis is found in
- A. Gastrointestinal tract of insect vector
- B. Salivary gland of mosquito
- C. Cells of reticuloendothelial system
- D. NNN Culture media

22 iii) Hepatitis virus that spreads by faecal-oral route
- A. Hepatitis A
- B. Hepatitis B
- C. Hepatitis C
- D. Hepatitis D

22 iv) Pityriasis versicolor is caused by
- A. *Malassezia furfur*
- B. *Trichophyton rubrum*
- C. *Actinomadura madurae*
- D. *Hortaea werneckii*

22 v) The concentration of glutaraldehyde used in disinfection of endoscopes is
- A. 2%
- B. 0.5%
- C. 1.5%
- D. 1%

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II Degree Examination - 24/Sep/2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER I (RS-3)
Q.P. CODE: 1081

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the etiopathogenesis and lab diagnosis of megaloblastic anemia
2. Describe the cellular and vascular events in acute inflammation

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Type I hypersensitivity reaction
4. Criteria for blood donor screening
5. ESR
6. Ghon's complex
7. Sickle cell anemia
8. Haemophilia
9. Vitamin D deficiency
10. Chemical carcinogenesis
11. Septic shock
12. Discuss urine microscopic findings under the following subheads.
    a) Crystals
    b) Cast
    c) Micro organisms

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Klinefelter's syndrome
14. Philadelphia chromosome
15. Gaucher's disease
16. What are Supra vital stains? Give examples
17. Exfoliative cytology
18. CSF examination in viral meningitis
19. M protein in multiple myeloma
20. Define Paraneoplastic syndromes with examples
21. Indications for bone marrow aspiration
22. Define Metaplasia with examples

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 26/Sep/2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER - II (RS3)
Q.P. CODE: 1082

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 65 year old female, presented with bloody discharge from nipple and palpable lump 3x2cm. Mammogram revealed complex lesion with calcification.
   a. What is the probable diagnosis and why?
   b. Describe etiopathology of this condition.
   c. Mention various histological subtypes of this disease.

2. Describe etiopathogenesis of Coronary Atherosclerosis. Explain morphology of heart in Myocardial Infarction.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Early and late complications of Diabetes Mellitus
4. Cirrhosis of Liver.
5. Morphological types of Emphysema.
6. Differences between ulcerative colitis and Crohn's disease
7. Dysgerminoma.
8. Papillary carcinoma Thyroid.
9. Morphology of Osteosarcoma.
10. Neuroblastoma.
11. Bronchiectasis.
12. Discuss the etiology and pathogenesis of Hyperthyroidism.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Menton three conditions associated with Helicobacter pylori.
14. Simple cystic hyperplasia of Endometrium.
15. Morphology of Ewings sarcoma.
16. Microscopy of squamous cell carcinoma of skin.
17. Labelled microscopic diagram of Hodgkins lymphoma.
18. Name three causes for massive splenomegaly.
19. Being prostatic hyperplasia.
20. Complications of Brain tumor.
21. Gall stones.
22. Microscopic diagram of Adenocarcinoma of colon.

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 29/Sep/2025

Time: Three Hours **Max. Marks: 100 Marks**

MICROBIOLOGY – PAPER I (RS3)
Q.P. CODE: 1083

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Draw a neat labelled diagram of morphology of bacteria and describe in detail about it
2. Discuss the pathogenesis, lab diagnosis of Enteric Fever.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Louis pasteur
4. Bacterial growth curve.
5. Gaseous disinfectants.
6. Enzyme Linked Immunosorbent Assay.
7. Mechanisms and pathogenesis anaphylaxis.
8. Bacillary dysentry-causes and lab diagnosis.
9. Nosocomial infection.
10. Gram stain and its uses.
11. Antigen.
12. Lab diagnosis of pulmonary tuberculosis.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Define Transport Media. Give two examples of transport media.
14. Clinical significance of bacterial capsule. Any two methods of detection of capsule.
15. Name three gram positive bacilli.
16. Name three bacteria causing sexually transmitted infections.
17. Name three selective media.
18. Name three tests for syphilis.
19. Name the different classes of immunoglobulins
20. Name three immunodeficiency diseases.
21. Three mechanisms of innate immunity.
22. Name three acid fact bacteria.

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination - 03/Oct/2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY - PAPER II (RS-3)
QP CODE: 1084

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the lifecycle and laboratory diagnosis of Entamoeba histolytica
2. Classify Herpes viruses. Describe the pathogenesis and laboratory diagnosis of Herpes Simplex Virus – I

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Describe the morphology and life cycle of Ascaris lumbricoides
4. List the differences between Taenia solium and Taenia saginata
5. Discuss lab diagnosis of malaria
6. Enumerate dimorphic fungi and write the laboratory diagnosis of any one of them
7. Laboratory diagnosis of Mucormycosis
8. Describe the laboratory diagnosis of urinary tract infection
9. List any four organisms associated with causing Pyrexia of Unknown Origin (PUO). Describe collection of blood specimen for laboratory diagnosis of PUO
10. Describe the laboratory diagnosis of Hepatitis –B infection
11. Describe the prophylaxis of rabies
12. Define and classify viral inclusion bodies with examples

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Name three DNA viruses
14. Name three culture media used for fungi
15. Name three soil transmitted helminthes
16. List three vectors and the parasites transmitted to man.
17. Explain N.I.H swab with a diagram
18. Name the complications of COVID infection
    Or
    List three parasites affecting the brain.
19. Name any four opportunistic infections in HIV
20. What are diploid cell lines? Give two examples
21. What is viral interference? Give one example of a virus which is diagnosed by viral interference
22. Draw a neat labelled diagram of influenza virus

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS (Phase - II) Degree Examination – 06/Oct/2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY – PAPER I (RS3)
Q.P. CODE: 1085

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Discuss the factors modifying drug action with suitable examples.
2. Classify adrenergic drugs. Enumerate the uses and adverse effects of adrenaline.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Uses of beta blockers
4. Angiotensin Converting Enzyme (ACE) inhibitors
5. Treatment of Organophosphorus poisoning
6. Fibrinolytics
7. Intravenous route of drug administration
8. First pass metabolism
9. Halothane - advantages and disadvantages
10. Succinylcholine.
11. Furosemide.
12. Sodium valproate.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Name three local anaesthetics
14. Name three Calcium Channel Blockers
15. Mention three uses of benzodiazepines
16. Name three drugs obtained from animal sources
17. Mention three contraindications for Morphine
18. Name two selective serotonin reuptake inhibitors (SSRIs); mention one use
19. Mention three drugs used in the management of hypertensive emergencies
20. Mention three drugs used in glaucoma
21. Name three iron preparations
22. Write three drugs used in Angina pectoris

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Rajiv Gandhi University of Health Sciences, Karnataka

M.B.B.S. PHASE II Degree Examination – 08/Oct/2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY - PAPER -II (RS3)
QP Code: 1086

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Classify oral antidiabetic agents. Describe the mechanism of action, uses and adverse effects of sulfonyl ureas.
2. Classify Penicillins. Enumerate the mechanism of action, uses and adverse effects of Penicillin G.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Metronidazole.
4. Vinca alkaloids.
5. Chloroquine.
6. Ondansetron.
7. Amphotericin B.
8. Oral contraceptives.
9. Chelating agents.
10. Second generation antihistaminics.
11. Drugs for treating rheumatoid arthritis.
12. Rifampicin.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Cyclosporine.
14. Name three anti microbials used in Typhoid fever.
15. Lactulose.
16. Name three live attenuated vaccines.
17. Acyclovir.
18. Name three drugs used in peptic ulcer disease.
19. Ivermectin.
20. Tocolytics.
21. Name three drugs used in Gout.
22. Name three antithyroid drugs.

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase II Degree Examination – 10/Oct/2025

Time: Three Hours **Max. Marks: 100 Marks**

FORENSIC MEDICINE (RS3)
QP Code: 1087

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAYS **2 x 10 = 20 Marks**

1. Define Head Injury. Describe the mechanism of Brain Injury. Add a note on Extradural Haemorrhage.
2. Define Hanging. Enumerate various types of Asphyxial death. Write in detail the Postmortem findings in case of Hanging. Add a note on Hyoid bone fracture.

SHORT ESSAYS **10 x 5 = 50 Marks**

3. Privileged communication.
4. Hallucination.
5. Symptoms, signs, postmortem, appearance and treatment of Cyanide poisoning.
6. Datura Poisoning.
7. Gustafson's technique.
8. Difference between Antemortem and Postmortem Burns.
9. Livor mortis.
10. Enumerate the various types of Hymen and add a note on false virgin.
11. Therapeutic misadventure.
12. Forensic odontology and Medico legal importance.

SHORT ANSWERS **10 x 3 = 30 Marks**

13. Hesitation cuts.
14. Superfecundation.
15. Tribadism.
16. **Quoad hanc**
17. Atavism.
18. Rule of Hasse.
19. Run Amok.
20. Expert witness.
21. Gettler test.
22. Lochia.

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 21-Nov-2025

Time: Three Hours **Max. Marks: 100**

PATHOLOGY – PAPER II (RS-4, RS-5 & RS-6)
Q.P. CODE: 1027
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A middle-aged female presented with migratory polyarthritis, weak heart sound, tachycardia, pericardial friction rub following recurrent attacks of Pharyngitis.
   a) What is your diagnosis?
   b) Describe the pathophysiology and morphology of this condition.
   c) List the complications associated with this condition
2. A 50-year-old postmenopausal woman presented with hard lump of 8x8 cm in the lower outer quadrant of left breast. Fine needle aspiration cytology showed groups and clusters of ductal epithelial cells with cellular and nuclear atypia.
   a) What is your diagnosis?
   b) Discuss the morphology and list the types of the above condition.
   c) Enumerate the prognostic factors of the disease.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Differences between Ulcerative colitis and Crohn's disease
4. Discuss the gross, microscopy, X ray appearance of Osteoclastoma
5. Describe the etiopathogenesis and morphological types of Emphysema
6. Describe the pathogenesis and morphological findings in Hashimoto's thyroiditis
7. Describe the etiopathogenesis and complications of Acute Pyelonephritis
8. Describe the morphology of acute and chronic hepatitis. Add a note on outcome of chronic hepatitis
9. Cryptorchidism
10. Endometriosis

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Krukenberg tumor
12. Gout
13. Pheochromocytoma
14. Basal cell carcinoma
15. Enumerate the glial neoplasms of brain
16. Warthin's tumour
17. Diabetic kidney
18. List the complications associated with lung cancer
19. **Types of Reed Sternberg Cells**
20. Complications of cirrhosis

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Which of the following is most reliable feature of malignant transformation of pheochromocytoma?
   A. Presence of mitotic figures

B. Presence of metastasis to other organs
C. Vascular/ capsular invasion
D. All of the above

21 ii) A pediatrician performing an ophthalmoscopic examination on a four-year-old boy, notices several small pigmented nodules in his irises. He also notices six light brown macules on the trunk of the child of variable sizes. This boy may have a propensity to develop tumors in which of the following structures?
A. Bladder
B. Colon
C. Peripheral nerve
D. Skin

21 iii) Paget's disease of the bone is also called
A. Osteitis deformans
B. Brittle bone disease
C. Fibrous dysplasia
D. Osteomalacia

21 iv) Hematuria with red cell cast and dysmorphic RBC are seen in:
A. Acute glomerulonephritis
B. Renal TB
C. Renal Calculi
D. Chronic renal failure

21 v) Inflammatory Causes of pleural effusion include all **EXCEPT**
A. Tuberculosis
B. Bronchiectasis
C. Lung infarct
D. Renal failure

22 i) Choriocarcinoma is characterized by all **EXCEPT**
A. Primarily trophoblastic tumor
B. It can occur following hydatidiform mole
C. Villi present
D. It can metastasize to lungs

22 ii) In an individual with suspected myocardial infarction of 24 hours duration, the serum enzyme estimation of choice is
A. Lactate dehydrogenase
B. Myoglobin
C. Creatine phosphokinase-MB
D. Oxaloacetate transaminase

22 iii) Myasthenia gravis is associated with
A. Hypergammaglobulinemia
B. Thymoma
C. Squamous cell carcinoma
D. Hepatic adenoma

22 iv) Chronic ulcerative colitis usually starts in the:
A. Hepatic or splenic flexure
B. Rectosigmoid area
C. Transverse colon
D. Terminal ileum

22 v) Conjugated hyperbilirubinemia results from
A. Gilberts jaundice
B. Dubin Johnson syndrome
C. Physiological jaundice
D. Decreased hepatic uptake

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 24-Nov-2025

Time: Three Hours **Max. Marks: 100 Marks**

PHARMACOLOGY – PAPER I (RS-4, RS-5 & RS-6)
Q.P. CODE: 1028
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 25 year old lady with anaemia was administered Iron sucrose intravenously. She developed breathlessness, swelling of face and lips immediately. Blood pressure was 90/60 mm of Hg. A diagnosis of Anaphylactic shock was made. Iron sucrose was stopped immediately. The physician decided to give Injection adrenaline.
    a) Explain the rationale of using Adrenaline in this patient
    b) Describe the pharmacological actions, Therapeutic uses and adverse effects of Adrenaline

2. Define an Adverse drug reaction. Explain various types of adverse drug reactions with suitable examples

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Mechanism of action and adverse effects of Levodopa

4. Clinical significance of Plasma Protien Binding

5. Mechanism of action, uses and adverse effects of Sodium valproate

6. Therapeutic uses of Atropine Substitutes

7. Mechanism of action and therapeutic uses of Diazepam

8. Describe the drug treatment for acute severe asthma (status asthmaticus)

9. A 35 year old man is being administered platinum based chemotherapy. A combination of palonosetron, Aprepitant and dexamethasone is used for antiemetic effect. Explain the mechanism of antiemetic action of all three drugs in this patient.

10. A 3 year old child was brought to hospital with fever. The doctor prescribed paracetamol syrup. Explain the mechanism of action of Paracetamol as an antipyretic. Outline the management of paracetamol poisoning.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Write three advantages and three Disadvantages of Oral route of drug administration
12. Rationale of using Timolol in the treatment of Glaucoma
13. Name three surface anaesthetics
14. Mention three Non depolarising skeletal muscle relaxants
15. Write three advantages of Halothane as general anaesthetic agent
16. Explain how Aspirin causes gastric mucosal damage
17. Rationale of using Omeprazole in peptic ulcer
18. Rational of using Montelukast in Bronchial asthma
19. Write three disadvantages of fixed dose combination of drugs
20. Mention three over the counter (OTC) drugs available in India

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Drug administered by which of the following route undergoes First Pass metabolism
- A. Oral
- B. Sublingual
- C. Subcutaneous
- D. Intravenous

21 ii) **All the following drug combinations exhibit synergism EXCEPT**
- **A. Lignocaine+Adrenaline**
- **B. Levodopa+Carbidopa**
- **C. Sulfamethoxazole+ Trimethoprim**
- D. **Morphine+ Naloxone**

21 iii) A 40 year old male presents with drooping eyelids, difficulty in chewing and swallowing, muscle fatigue. Which drug is useful to diagnose myasthenia gravis in this patient?
- A. Atropine
- B. Edrophonium
- C. Pralidoxime
- D. Adrenaline

21 iv) Atropa belladona is a plant that contains atropine. Which of the following drug could be useful in poisoning with belladona?
- A. Adrenaline
- B. Physostigmine
- C. Noradrenaline
- D. Dopamine

21 v) A patient received Pancuronium for skeletal muscle relaxation during surgery. Which drug is useful in reversing the effect of Pancuronium?
- A. Dicyclomine
- B. Succinylcholine
- C. Neostigmine
- D. Atropine

22 i) A healthy 2 year old boy ingested Diazepam tablets accidentally. The child presents to emergency department with altered consciousness. On examination, heart rate and blood pressure were within normal limits. His blood glucose level was found to be normal. Which antidote is helpful in this condition?
- A. Flumazenil
- B. Naloxone
- C. Physostigmine
- D. Fomepizole

22 ii) A 43 year old heavy machine operator complains of seasonal allergies. Which of the following medication would be appropriate to manage his allergy symptoms?
- A. Diphenhydramine
- B. Promethazine
- C. Hydroxyzine
- D. Fexofenadine

22 iii) Bromhexine acts by
- A. Inhibiting cough centre
- B. Activating β2 receptors in lungs
- C. Depolymerising Mucopolysaccharides in sputum
- D. Blocks stretch receptors in lungs

22 iv) Which of the following lowers blood ammonia levels in hepatic encephalopathy
- A. Bisacodyl
- B. Dietary fibre
- C. Liquid paraffin
- D. Lactulose

22 v) Antidote used in Morphine poisoning is
- A. Naloxone
- B. N-Acetylcysteine
- C. Naphazoline
- D. Norgestrel

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MBBS Phase – II (CBME) Degree Examination - 26-Nov-2025

Time: Three Hours **Max. Marks: 100**

PHARMACOLOGY – PAPER II (RS-4, RS-5 & RS-6)
Q.P. CODE: 1029
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 48-year-old male patient presented with chest pain after walking briskly. This was relieved after 5 to 10 minutes of rest. His blood pressure and resting ECG were normal. Stress test was positive. A diagnosis of exertional angina was made.
   a) Enumerate three classes of antianginal drugs with one suitable example for each
   b) Describe the mechanism of action, uses and adverse effects of any one of them.

2. a) Enumerate four classes of oral antidiabetic drugs with suitable examples.
   b) Describe the mechanism of action and adverse effects of any one class of drugs.

SHORT ESSAYS **8 x 5 = 40 Marks**

3. A 29-year-old lady presented with fever, dysuria and increased frequency of micturition. A diagnosis of acute uncomplicated urinary tract infection was made. She was prescribed Cotrimoxazole. Discuss the mechanism of action and adverse effects of Cotrimoxazole
4. Write the mechanism of action, uses and adverse effects of Metronidazole
5. Describe the mechanism of action, uses and adverse effects of Chloroquine
6. Discuss the general toxicities of anticancer drugs and measures to ameliorate them
7. Name two Selective Estrogen Receptor Modulators (SERMs). Discuss their uses and adverse effects
8. Explain the mechanism of action and uses of Bisphosphonates
9. Write the mechanism of action, therapeutic uses and adverse effects of Heparin
10. A 48-year-old lady visited hospital for general health screening. On examination, her blood pressure was 150/94 mm of Hg. She was diagnosed with essential hypertension.
    a) Mention the antihypertensive drug that can be prescribed to this patient.
    b) Write its mechanism of action and adverse effects.

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Which drug is used in the management of Lithium induced Diabetes insipidus and why?
12. Give the rationale for prescribing Aldosterone antagonists in heart failure.
13. Mention THREE drugs used in pregnancy induced Hypertension
14. Write the rationale for including Rifampin in multi drug therapy of Leprosy
15. Name three Protease inhibitors used in treatment of HIV infection
16. Explain the rationale for combining Tazobactam with Piperacillin
17. Write three uses of Ivermectin
18. Mention three antimicrobials used in the treatment of typhoid
19. Mention three antiseptics
20. Mention three antimicrobials used in the treatment of MRSA (Methicillin Resistant

Staphylococcus Aureus) infection

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) The drug which is an antiprogestin
- A. Mifepristone
- B. Medroxyprogesterone
- C. Dydrogesterone
- D. Hydroxyprogesterone

21 ii) The long-acting insulin analogue with a smooth peakless effect is
- A. Insulin Aspart
- B. Insulin Lispro
- C. Insulin Glargine
- D. Isophane Insulin

21 iii) A fibrinolytic used in acute myocardial infarction is
- A. Streptokinase
- B. Dalteparin
- C. Dipyridamole
- D. Abciximab

21 iv) Which of the following anticancer drug is a microtubule damaging agent?
- A. Vincristine
- B. Cyclophosphamide
- C. Methotrexate
- D. Cisplatin

21 v) Which of the following is a cardio selective beta blocker?
- A. Propranolol
- B. Atenolol
- C. Pindolol
- D. Sotalol

22 i) Which of the following enzymes should be monitored to prevent a serious adverse effect of statin
- A. Aromatase
- B. Dihydrofolate reductase
- C. Galactokinase
- D. Creatine kinase

22 ii) The diuretic which can cause hyperkalemia is
- A. Hydrochlorothiazide
- B. Furosemide
- C. Spironolactone
- D. Indapamide

22 iii) Posaconazole exerts its therapeutic action by which of the following mechanisms
- A. Formation of artificial pores in the fungal membrane
- B. Inhibition of fungal mitosis
- C. Inhibition of squalene synthesis
- D. Inhibition of conversion of lanosterol to ergosterol

22 iv) Which of the following is a urinary antiseptic?
- A. Vancomycin
- B. Carbenicillin
- C. Ciprofloxacin
- D. Nitrofurantoin

22 v) Albendazole is **NOT** used in which of the following
- A. Enterobius vermicularis
- B. Entamoeba histolytica
- C. Ancylostoma duodenale
- D. Ascaris lumbricoides

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MBBS Phase – II (CBME) Degree Examination - 28-Nov-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER I (RS-4, RS-5 & RS-6)
Q.P. CODE: 1030
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. An adult man presented with intermittent fever, loss of appetite and pain abdomen since 8 days. On examination he is febrile and spleen is palpable. Titres obtained in Widal test are O=80, H=160, AH=<20 and BH=<20.
   a) Identify the causative agent
   b) Describe laboratory diagnosis of this condition during different phases of infection
   c) Suggest methods to prevent this infection
2. A truck driver with history of exposure to multiple sex workers presents with loss of weight for the past three months and on investigation he is reactive for HIV-1.
   a) Draw neat labelled diagram of HIV virus
   b) Discuss the different modes of transmission of HIV and measures to prevent this condition
   c) Discuss the different NACO strategies for the laboratory diagnosis

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Antibiotic susceptibility testing methods for bacteria
4. Mention different types of graft rejection and suggest measures to prevent rejection
5. Mention the differences between innate and acquired immunity
6. A boy has intermittent fever with chills and rigors since 5 days. His spleen is enlarged and palpable. Peripheral blood smear showed ring-shaped structures inside the RBCs. Describe the life cycle and outline the laboratory diagnosis
7. An elderly man has painful erythematous mucosa of oral cavity and tongue, covered with white patches. Gram positive budding yeast-like organism was demonstrated in the swab taken from patch. Describe etiopathogenesis and laboratory diagnosis of this condition
8. Pathogenesis and laboratory diagnosis of Hepatitis A
9. Mycetoma
10. Mucor mycosis

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Transduction and its implications
12. Ethylene oxide sterilisation (ETO)
13. Chemiluminescence assay (CLIA)
14. Laboratory diagnosis of Kala azar
15. Mention three sepsis markers
16. Name three causes of dysentery
17. Draw a labelled diagram of ovum of Ascaris *lumbricoides*
18. Piedra
19. Name three atypical mycobacteria causing skin lesions
20. Name the hosts involved in life cycle of dracunculiasis

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Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Motility of spirochetes is because of
- A. Peritrichous flagella
- B. Endoflagella
- C. Special fimbriae
- D. Flexible cell walls

21 ii) Inclusion bodies are seen in the following conditions **EXCEPT**
- E. Rabies
- F. Herpes
- G. Yellow fever
- H. HIV

21 iii) **False** about herd immunity is
- E. It is pathogen-specific
- F. Depends upon the population composition
- G. Completely a natural phenomenon
- H. Determines occurrence of epidemics in the population

21 iv) **True** about hapten is
- A. Molecular weight higher than that of simple antigens
- B. Lack immunogenicity
- C. Not capable of immunological reactivity
- D. Always protein in nature

21 v) **NOT** a professional antigen presenting cell is
- E. Macrophage
- F. Dendritic cell
- G. B lymphocyte
- H. T lymphocyte

22 i) Antigenic cross-reactivity between Streptococcal antigen and corresponding human antigen is the underlying mechanism in rheumatic fever. The correct combination of cross-reacting antigens is
- A. Hyaluronic acid – skin antigen
- B. Cytoplasmic membrane – synovial tissue
- C. Cell wall C antigen – Cardiac wall
- D. M protein – glomerular vascular intima

22 ii) A diabetic patient with polytrauma with multiple infected wounds is admitted in the hospital for one month and received multiple antibiotics. He develops diarrhea and colonoscopy showed membranous patches. Most probable causative agent is
- A. *Corynebacterium diphtheriae*
- B. *Enteroaggregative Escherichia coli*
- C. *Clostridioides difficile*
- D. *Candida albicans*

22 iii) **NOT** suitable for diagnosis of enterobiasis is
- A. Demonstration of adult worm in clothes
- B. NIH swab
- C. Microscopy of freshly passed stool
- D. Perianal cellophane tape mount

22 iv) Cystic lesion in liver of a veterinarian, showed brood capsules and protoscolices under the microscopy. The probable organism is
- A. Entamoeba histolytica
- B. Echinococcus granulosus
- C. Faciola hepatica
- D. Schistosoma japonicum

22 v) A girl aged 4 years has rashes on the skin along with fever. Rashes are centripetally distributed. Rashes appeared in crops and have macules, papules, vesicles, pustules and scabs. The girl had most probably acquired the infection by
- A. Aerosols

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B. Insect bite
C. Ingestion
D. None of the above

MBBS Phase – II (CBME) Degree Examination - 01-Dec-2025

Time: Three Hours **Max. Marks: 100**

MICROBIOLOGY – PAPER II (RS-4, RS-5 & RS-6)
Q.P. CODE: 1031
(QP contains two pages)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS **2 x 10 = 20 Marks**

1. A 5-year-old child with the history of pain in the throat and fever since 2 days was brought to the ENT OPD. On examination the child was febrile and toxic. Throat examination showed pseudomembrane in right fauces. Albert stain of throat swab showed Green bacilli in cuneiform arrangement with dark blue metachromatic granules at the ends.
    a) What is your diagnosis? mention the etiological agent
    b) Describe virulence factors of the causative agent
    c) Discuss the laboratory diagnosis
    d) Add a note on prophylaxis
2. A 2-year-old child was brought to paediatric OPD with complaints of sudden onset of weakness in the right lower limb. The past history revealed that the child was not immunized. On examination, total flaccid paralysis and absent deep tendon reflexes in the right lower limb was observed.
    a) What is the clinical diagnosis and the probable etiological agent?
    b) Discuss the pathogenesis of the above clinical condition
    c) Describe approach to the laboratory diagnosis of the above condition
    d) Discuss in detail about the prophylaxis to prevent such infections

SHORT ESSAYS **8 x 5 = 40 Marks**

3. Life cycle and laboratory diagnosis of toxoplasmosis
4. Pathogenesis and laboratory diagnosis of dengue fever
5. Catheter associated urinary tract infection
6. Laboratory diagnosis of pulmonary tuberculosis
7. Describe the clinical features and laboratory diagnosis of brucellosis
8. Antigenic variations in influenza virus and their implications
9. Hand hygiene
10. Biomedical waste management

SHORT ANSWERS **10 x 3 = 30 Marks**

11. Enumerate the causative agents of neonatal meningitis
12. Enumerate three slow viral diseases (Prion)
13. Name three Arboviruses prevalent in India
14. Draw a neat labeled diagram of Rabies virus
15. Significant bacteriuria
16. List three causative agents of discharge per vagina
17. Biological false positive reactions in VDRL test

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18. Mention the definitive host of the following:
    a. *Taenia solium* b. *Taenia saginata* c. *Echinococcus granulosus*
19. Mention three vaccines for Covid-19
20. Satellitism

Multiple Choice Questions **10 x 1 = 10 Marks**

21 i) Serotyping and sero-subtyping of *Neisseria meningitidis* are done based on
- A. Outer membrane proteins
- B. Endotoxin
- C. Capsular polysaccharide
- D. Transferrin binding proteins

21 ii) Most common location of intracranial neurocysticercosis is
- A. Brain parenchyma
- B. Subarachnoid space
- C. Brain stem
- D. Orbit

21 iii) **Candida albicans identified by**
- **A. Germ tube test**
- **B. Nitrate test**
- **C. Urease test**
- **D. Citrate test**

21 iv) Owl eye inclusion bodies are seen in
- A. *Herpes simplex virus*
- B. *Cytomegalovirus*
- C. *Epstein-Barr virus*
- D. *Varicella Zoster virus*

21 v) Presence of clue cells in Gram stain is suggestive of
- A. Bacterial vaginosis
- B. Trichomoniasis
- C. Candidal vaginitis
- D. Gonorrhoea

22 i) What is the insect vector for tularemia?
- A. Sand fly
- B. Mite
- C. Rat flea
- D. Tick

22 ii) Which of the following viruses have segmented genome?
- A. *Measles virus*
- B. *Mumps virus*
- C. *Respiratory Syncytial virus*
- D. *Influenza virus*

22 iii) **Used gloves are discarded in which color coded bag?**
- **A. Red**
- **B. Blue**
- **C. Yellow**
- **D. White**

22 iv) *Ebstein-Barr virus* is associated with following malignancies **EXCEPT**
- A. Nasopharyngeal carcinoma
- B. Burkitts lymphoma
- C. Carcinoma Cervix
- D. Non Hodgkins Lymphoma

22 v) Zoophilic dermatophyte is

A. *Trichophyton rubrum*
B. *Trichophyton tonsurans*
C. *Microsporum canis*
D. *Epidermophyton floccosum*

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