

**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**ANATOMY**

**PAPER – IV**

*(Applied Anatomy, Neuroanatomy, Cross sectional Anatomy &  
Newer Imaging Techniques)*

**Q.P. Code: 1204**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Describe applied anatomy of larynx. Add a note on phonation.
2. Describe basal nuclei. Add a note on their applied anatomy.

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Applied importance of paranasal air sinuses.
4. Trochlear nerve.
5. Pineal gland.
6. Draw and label cross section at transpyloric plane.
7. Applied anatomy of inguinal canal.
8. Ultrasonography.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

**PATHOLOGY**  
**PAPER – IV**

*(Systemic Pathology – Central and peripheral nervous system, endocrine system,  
Musculo-skeletal system, reticulo-endothelial system ( lymph nodes, spleen and Thymus ),  
Dermatopathology and ophthalmic pathology, bone, joints and soft tissues.  
Recent advances and applied pathology)*

**Q.P. Code: 1216**

Answers should be specific to the Questions asked.  
Draw neat labeled diagrams and flow charts wherever necessary.  
All questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. Discuss the role of prion proteins in health and diseases.	
2. Classify and discuss tumors of thyroid.	
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Rheumatoid arthritis.	
4. Role of immunofluorescence technique in diagnosis of skin disorders.	
5. Small cell tumors of childhood.	
6. Kikuchi's disease.	
7. Principle and application of FISH.	
8. Malignant peripheral nerve sheath tumor.	

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**MICROBIOLOGY**

**PAPER – IV**

*(Parasitology)*

**Q.P. Code: 1220**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Enumerate opportunistic amoebae. Discuss their morphology, life cycle, pathogenicity. Laboratory diagnosis of two important opportunistic amoebae. Add a note on their scenario in India. (2+4+4+4+4+2)
2. Enumerate Filarial nematodes. Discuss morphology, life cycle, pathogenicity of *Wuchereria bancrofti* and laboratory diagnosis of Filariasis. (3+4+3+3+7)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe Oriental Score.
4. Describe life cycle, pathogenesis and lab diagnosis of *Toxoplasma gondii*.
5. Discuss life cycle, lab diagnosis of *D. medenesis* add a note on its control programmes.
6. Discuss general characteristics of Cestodes. Add a note on their lab diagnosis.
7. Describe larva migrans.
8. Discuss laboratory diagnosis of Malaria.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

PHARMACOLOGY

PAPER – IV

*(Recent advances, therapeutics and experimental pharmacology)*

Q.P. Code: 1224

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number	Marks
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. Discuss the recent advances in pharmacotherapy of anti-platelet drugs. Enumerate various screening methods for anti-platelet drugs.	(10+10)
2. Enumerate the various clinical and experimental evaluations of analgesic drugs?	(10+10)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Discuss the salient features of Chronopharmacology.	
4. Enumerate the various experiments that are conducted on Rabbit as experimental animal.	
5. Discuss the salient features of pediatric dose estimations in therapeutics with suitable examples.	
6. Discuss the recent advances in drug therapy of neurodegenerative disorder.	
7. Discuss the pharmacotherapy of biological response modifier in cancer therapy.	
8. Discuss the pharmacotherapy of chronic smoking.	

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**FORENSIC MEDICINE**

**PAPER – IV**

**Q.P. Code: 1228**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. What are Date Rape Drugs? Discuss the complications of Drug Abuse.  
Write postmortem findings in death due to drug abuse. (5+7+8)
2. As a specialist forensic pathologist, you are asked to manage a satellite mortuary. What occupational health and safety measures would you implement in the dissecting room to ensure the safety of your staff?

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe the principle of Narcoanalysis.
4. What is Bioterrorism and its medicolegal significance.
5. Differentiation of ante-mortem and post-mortem fractures with MRI.
6. What do you understand by ballistics co-efficient? Give the relevant physics behind it and its significance in Forensic Medicine.
7. Discuss the reliability of ethanol level in cadaveric body fluids as an indicator for the ethanol level during the ante mortem period.
8. Compare and contrast in a tabular form the various provisions of McNaughten's rule, Durham's rule, Curren's rule and ALI test. Give hypothetical examples of each case for fixing criminal responsibility.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

COMMUNITY MEDICINE

PAPER – IV

*(Health and hospital administration, health care delivery including national programmes, public health legislation, genetics and counseling, mental health, international health, voluntary health organizations, NGOs.)*

Q.P. Code: 1232

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Define 'Evaluation'. List and describe the steps you would take in evaluating a program aimed at improving maternal and child health status in a district.
2. Discuss the National Strategic Plan 2017-2025 for TB elimination in India.

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Describe Health & Wellness centers under Aayushman Bharat
4. Discuss the salient features and uses of Gantt Chart.
5. Discuss Intensified Mission Indradhanush 3.0 in India.
6. Describe the various measures taken for the control of tobacco use in India.
7. Describe the Epidemic Disease Act 1897 in context of SARS-CoV-2 pandemic in India.
8. Describe the indicators of mental health in community.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**ANAESTHESIOLOGY**  
**PAPER – IV**  
*(Recent Advances in Anaesthesia)*

**Q.P. Code: 1236**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Design pain clinic. Outline the role of anesthesiologist in a pain clinic.
2. Describe pathogenesis, clinical features and ventilator management of Acute Respiratory Distress syndrome.

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Apnea test.
4. Post-operative cognitive dysfunction.
5. Multimodal analgesia.
6. Weaning from cardiopulmonary bypass.
7. New generation carbon dioxide absorbents.
8. Discuss Triage. Critique its importance in mass casualty.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

DERMATOLOGY, VENEREOLOGY AND LEPROSY

PAPER – IV

*(Dermatology in relation to other systemic diseases, dermato-therapeutics,  
dermato-surgery and recent advances in Dermatology, Venereology & Leprosy)*

Q.P. Code: 1240

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Discuss in detail nail changes seen in various systemic diseases.
2. Classification, pathogenesis and surgical management of Vitiligo.

(6+6+8)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Describe various skin changes associated with thyroid disorders.
4. Role of photodynamic therapy in dermatology.
5. Narrow band UVB therapy and its uses in dermatology.
6. Classification and treatment of acne scars.
7. Interleukins and use of anti-IL 17 agents in dermatology.
8. Clinical features, diagnosis and management of calciphylaxis.

(5+5)

(5+5)

(5+5)

(3+3+4)

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

GENERAL MEDICINE

PAPER – IV

*(Nephrology, endocrinology and metabolism, haematology, oncology,  
dermatology and psychiatry, poisoning, environmental and occupational hazards)*

Q.P. Code: 1244

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number	Marks
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. Describe the mechanism of microangiopathy in Diabetes Mellitus. Discuss classifications, complications and management of diabetic nephropathy.	(5+5+5+5)
2. Describe regulation of thyroid axis. Enumerate causes, classification and management of primary hypothyroidism.	(5+5+5+5)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Enumerate novel anticoagulants. Discuss mechanism of action of any three.	(1+3+3+3)
4. Skin manifestations of systemic diseases.	
5. Schizophrenia.	
6. Tumor lysis syndrome.	
7. What are clinical features, complications and management of methyl alcohol poisoning?	(3+3+4)
8. Discuss occupational hazards related to recent pandemic in health workers and its preventive aspects.	(5+5)

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**PAEDIATRICS**

**PAPER – IV**

*(Ambulatory OPD Pediatrics, community and social pediatrics,  
emergency and critical care pediatrics)*

Answers should be specific to the

**Q.P. Code: 1248**

Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Discuss the pathophysiology, clinical features and management of a 3 year old child with tuberculous meningitis. (5+7+8)
2. Discuss the classification and recent advances in the management of acute childhood leukemias. (8+12)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe the causes and management of myoclonic seizures in children.
4. Define odd's ratio and discuss its implications in clinical research.
5. Discuss platelets functions defects.
6. Discuss the treatment of steroid resistant Nephrotic syndrome.
7. Discuss the recent advances in management of bronchial asthma.
8. Discuss scrub typhus.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

PSYCHIATRY

PAPER – IV

*(Recent Advances in Psychiatry and applied Psychiatry related to  
Neurology and Medicine)*

Q.P. Code: 1252

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Define Dementia. Discuss etiology, clinical features and management of different types of dementia. (4+4+4+8)
2. Discuss neuropsychiatric morbidities related to HIV infection and AIDS and their management in brief. (12+8)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Discuss role of TDCS in psychiatry and evidence for it. (6+4)
4. Discuss neuropsychiatric aspects of Wilson's disease and its management. (6+4)
5. Discuss Tardive dyskinesia and its management. (5+5)
6. Korsakoff's syndrome and its management. (6+4)
7. Discuss indications and contraindications of Telepsychiatry. (5+5)
8. What are mirror neurons? State their relevance. (6+4)

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**RADIO-DIAGNOSIS**

**PAPER – IV**

*(CNS including head and neck, Interventional radiology and Recent advances)*

**Q.P. Code: 1256**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Role of MRI in posterior cranial Fossa Masses.
2. Explain in detail digital subtraction angiography equipment and procedure. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe liquid embolic agents.
4. Methods of localization of foreign body in orbit.
5. Explain PCPNDT act.
6. Imaging in middle ear pathologies.
7. Explain virtual CT colonoscopy.
8. Importance of PACS in radiodiagnosis department.

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POST-GRADUATE DEGREE (M.D.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

**RESPIRATORY MEDICINE**

**PAPER – IV**

*(Recent Advance in Respiratory Medicine including  
Critical Care aspects)*

**Q.P. Code: 1260**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Describe etiology, pathogenesis, diagnosis and management of Acute Respiratory Distress Syndrome (ARDS). Discuss newer strategies in the management of ARDS. (5+5+3+7)
2. Describe Bronchoscopy under following headings:
  - a) Procedure
  - b) Therapeutic uses
  - c) Indications
  - d) Contraindications
  - e) Complications. (3+10+2+2+3)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. New GINA guidelines.
4. MRI in chest medicine.
5. Discuss Pulmonary rehabilitation under following headings:
  - a) Definition
  - b) Components
  - c) Clinical applications (2+2+6)
6. Discuss airway stents under following headings:
  - a) Types
  - b) Indications
  - c) Clinical implications (2+3+5)
7. Discuss preoperative assessment of lung for major lung surgery.
8. What is FiO<sub>2</sub> (Fractional concentration of O<sub>2</sub> in inspired air). What are the methods to measure it? State normal and abnormal values of the same. Discuss its clinical implications. (2+2+2+4)

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**POST-GRADUATE DEGREE (M.S.) EXAMINATION – MAY 2022**

**Time: 3 Hours**

**Max. Marks: 100**

**GENERAL SURGERY**

**PAPER – IV**

*(Musculo-skeletal disorders, nervous system, uro-genital disorders)*

**Q.P. Code: 1264**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. Write in brief about the embryological development of testis. Discuss the investigations management and complications of undescended testis.	(5+6+6+3)
2. Classify fractures. Discuss the clinical features investigations and general principles of management of fractures.	(3+4+3+10)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Write a note on Percutaneous Nephrolithotomy (PCNL) (Indications, steps of PCNL and its complications).	(3+5+2)
4. Discuss the etiology, clinical features, investigations and management of stricture urethra in a 30 year old male.	(2+4+4)
5. Write a note on meningomyelocele.	
6. Describe the general principles of management of diabetic foot. Add a note on counseling a patient with diabetic foot.	
7. Describe how you will investigate a 60 year old male patient with haematuria.	
8. Write a note of nerve injuries.	

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POST-GRADUATE DEGREE (M.S.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

OBSTETRICS AND GYNAECOLOGY

PAPER – IV

*(Operative obstetrics and gynaecology, newborn and social obstetrics)*

Q.P. Code: 1268

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All the questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Describe the precancerous lesions of cervix. Discuss diagnosis and management of preinvasive and early invasive cancer cervix. (5+5+10)
2. Discuss the management of Rhesus negative isoimmunized gravida and patient with one previous hydropic baby reporting at 26 weeks of gestation.

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Enumerate three HPV (Human Papilloma Virus) vaccines. Discuss the mechanism of action and contraindications of HPV vaccine. (3+4+3)
4. Discuss the principles of microsurgery.
5. Discuss the fertility preserving surgery in ovarian cancer.
6. What is PCPNDT act?
7. Discuss the advantages and disadvantages of stem cell banking. (5+5)
8. Discuss the diagnosis and management of placenta percreta.

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POST-GRADUATE DEGREE (M.S.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

OPHTHALMOLOGY

PAPER – IV

*(Surgical ophthalmology, community ophthalmology,  
ophthalmic research and recent advances)*

Q.P. Code: 1272

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Discuss causes, clinical features and management of Limbal Stem Cell Deficiency (ISCD). (10+10)

2. Discuss retinoblastoma inheritance pattern classification, management with recent advances. (4+4+10+2)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Discuss SMILE and RELEX procedure.

4. Write a brief note on VISION 2020.

5. Discuss newer anti VEGF's and complications.

6. Minimally Invasive Vitrectomy Surgeries (MIVS).

7. Write short notes on CTR and INTACS. (5+5)

8. Discuss on Microstents in glaucoma.

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POST-GRADUATE DEGREE (M.S.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

ORTHOPAEDICS  
PAPER – IV  
(Recent advances in orthopaedics)

Q.P. Code: 1276

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 20 = 40

1. Describe in detail cemented total hip replacement arthroplasty.
2. Discuss the modern trends of limb salvage surgery in orthopaedics.

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. Multi drug resistant tuberculosis.
4. Thrombo-embolism.
5. DEXA scanning.
6. Nerve grafting.
7. Tumor necrosis factor.
8. Discuss in brief bone bank.

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POST-GRADUATE DEGREE (M.S.) EXAMINATION – MAY 2022

Time: 3 Hours

Max. Marks: 100

OTORHINOLARYNGOLOGY

PAPER – IV

*(Pharyngology and Broncho-oesophagology including recent advances)*

**Q.P. Code: 1280**

Answers should be specific to the Questions asked.  
Draw neat, labeled diagrams wherever necessary.  
All questions are compulsory.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS:**

**2 X 20 = 40**

1. Discuss the etiopathology of Oesophageal strictures. How will you manage a case of corrosive injury of oesophagus? (10+10)
2. Classify salivary gland neoplasms. Discuss the etiopathology, clinical features and management of Mucoepidermoid carcinoma. (4+4+4+8)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe clinical features and management of deep plunging ranula. (5+5)
4. Describe the management and complications of Brachial cysts. (5+5)
5. Write a brief note on complications of paediatric tracheostomy.
6. Discuss the role of MRI in head and neck lesions.
7. Describe the complications of tracheo bronchial foreign bodies.
8. Write a brief note on clinical features of unilateral superior laryngeal nerve palsy.

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