

**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**PAEDIATRICS**

**PAPER – II**

*(General Pediatrics I)*

**Q.P. Code: 1246**

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 the characteristics features of primary immune deficiency. Discuss about the pathogenesis & clinical features of chronic granulomatous disease. (8+4+8)
2. Discuss the etiopathogenesis and approach to the diagnosis of hypertension in childhood. Discuss the management of a child presenting with acute hypertensive encephalopathy. (5+7+8)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Enumerate the causes & discuss the management of hyperkalemia in children. (5+5)
4. Discuss the clinical features & management of Gastroesophageal reflux.
5. Discuss pharmacokinetics & indications of use of oral iron chelators in children.
6. Discuss the clinical features & management of cryptorchidism.
7. Discuss the role of imaging studies in urinary tract infections in children.
8. Discuss Genetic Counseling in Down's syndrome.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**PSYCHIATRY**

**PAPER – I**

*(Basic Sciences as related to Psychiatry)*

**Q.P. Code: 1249**

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 and classify neurotransmitters. Discuss excitatory neurotransmitters and their significance in psychiatry. (6+6+8)
2. Discuss psycho neuro endocrinology & it's significance in psychiatric disorders. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Importance of neuro-imaging in psychiatry.
4. Describe Type-I & Type-II errors in statistics.
5. Enumerate and discuss in brief mature defence mechanism.
6. Discuss psychology of aggression. (AGGRESSION)
7. Paired T-test and its place in psychiatry.
8. Relevance of neurological soft sign.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**RADIO-DIAGNOSIS**

**PAPER – I**

*(Basic Sciences as applied to Radio-diagnosis and  
Basics of Ultrasound, CT, Nuclear Medicine and MRI)*

**Q.P. Code: 1253**

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 the essential features of various radiographic X-ray tubes.
2. Discuss mediastinal radiological anatomy. Mention the imaging findings in posterior mediastinal masses. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain T.L.D. (Thermo Luminescent Dosimeter) badge.
4. Correlation between automatic film processing and manual film processing.
5. Describe 4 D ultrasound.
6. Explain new MR pulse sequence.
7. Principles, techniques, advantages and limitations of C.T Angiography.
8. Mention types of Iso-osmolar contrast media.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**RESPIRATORY MEDICINE**

**PAPER – I**

*(Basic sciences including anatomy and physiology pertaining to respiratory system)*

**Q.P. Code: 1257**

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 embryonic development of lung and its clinical significance. (12+8)
2. Discuss role of spirometry in evaluation of pulmonary diseases. Discuss its contraindications. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Discuss oxygen dissociation curve.
4. Discuss respiratory alkalosis.
5. Discuss Cassion's disease.
6. Discuss clubbing.
7. Discuss role of body Plethsmography.
8. Discuss Koch's Postulates.

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**POST-GRADUATE DEGREE (M.S.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**GENERAL SURGERY**

**PAPER – I**

*(Basic Sciences)*

**Q.P. Code: 1261**

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 critical limb ischaemia. Describe the etiology, clinical features and management of a 45 years old patient presenting with critical limb ischaemia. (2+4+6+8)
2. Define and classify Surgical Site Infection (SSI). What are the factors responsible for SSI? Describe how you will manage SSI in a 40 year old lady who has undergone open mesh repair for incisional hernia. Add a note on strategies to prevent SSI. (4+4+8+4)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Write a short note on role of lasers in general surgery. Add a note on safety precautions to be taken by the surgical team. (7+3)
4. Classify analgesics. What are the side effects of analgesics? Write a brief note on different routes of administration for analgesics. (2+3+5)
5. Enumerate indications for nutritional support. What are the various routes of administration of nutritional support? Write a brief note on feeding, enterostomy. (2+4+4)
6. Write a note on etiology clinical features and management of TB lymphadenitis of the neck. (3+3+4)
7. Enumerate the indications for blood transfusion. Write a note on complications of blood transfusion. (4+6)
8. What is the basis of obtaining consent in surgical practice? What are the different types of consent? Write a brief note on ethical practice of surgery. (2+4+4)

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POST-GRADUATE DEGREE (M.S.) EXAMINATION – JULY 2020

Time: 3 Hours

Max. Marks: 100

OBSTETRICS AND GYNAECOLOGY

PAPER – I

(Basic Sciences and medical genetics)

Q.P. Code: 1265

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 the development of urogenital system. How will you classify Mullerian anomalies? Write management of vaginal agenesis. (5+5+10)
2. Discuss the physiology of Puerperium. Enumerate complications of Puerperium. Write management of puerperal sepsis. (5+5+10)

SHORT ESSAY QUESTIONS:

6 X 10 = 60

3. What are SERMS (Selective Estrogen Receptor Modulators)? Discuss the pharmacological actions of SERMS. Enumerate the various indications and adverse effects of SERMS. (2+4+2+2)
4. Discuss the anatomy of perineal body with a neat labeled diagram. (6+4)
5. Discuss the lymphatic drainage of vulva with a neat labeled diagram. (6+4)
6. Describe HELLP syndrome. Discuss the management of HELLP syndrome. (5+5)
7. Describe the procedure of large loop excision of the transformation zone (LLETZ). Enumerate the advantages & risk of the procedure. (6+2+2)
8. Discuss the physiology of menstruation with a neat labeled diagram. (5+5)

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**POST-GRADUATE DEGREE (M.S.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**OPHTHALMOLOGY**

**PAPER – I**

*(Basic Sciences, optics and refraction, ocular motility and strabismus,  
Ocular pharmacology, instrumentation and investigations in ophthalmology)*

**Q.P. Code: 1269**

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 the origin, course & distribution of 3<sup>rd</sup> cranial nerve. Brief its lesions at various levels. (10+10)
2. Discuss corneal microscopic anatomy and development. Discuss corneal metabolism and factors responsible for corneal transparency. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Write a note on:
  - a) Discuss vitreous anatomy and development.
  - b) Discuss viscoelastic substance.
4. Describe histopathology of malignant melanoma.
5. Draw life cycle and lab diagnosis of Acanthamoeba.
6. DESEK procedure, complications and management.
7. Draw eye lid anatomy and applied importance.
8. Discuss Gonioscopy, principle, types and uses.

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**POST-GRADUATE DEGREE (M.S.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**ORTHOPAEDICS**

**PAPER – I**

*(Basic and clinical sciences as applied to orthopaedics)*

**Q.P. Code: 1273**

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. Classify peripheral nerve injuries. Describe methods of nerve repair. (10+10)
2. Describe biomechanics of hip joint and its application in total hip replacement. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe the types and indications of bone graft.
4. Discuss the clinical features and management of unicameral bone cyst.
5. Define carpal tunnel syndrome its clinical features & management.
6. Describe the etiology, clinical features and management of painful heel syndrome.
7. Describe the blood supply to femoral head in children and its importance.
8. Discuss in brief about Bohler's splint.

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**POST-GRADUATE DEGREE (M.S.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**OTORHINOLARYNGOLOGY**

**PAPER – I**

*(Basic Sciences)*

**Q.P. Code: 1277**

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 embryogenesis and management of Choanal atresia. (10+10)
2. Describe the osteomeatal complex of nose. Supplement your answer with diagram. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain Otolith organs with diagram.
4. Discuss Oesophageal sphincters with respect to their location & clinical importance. (5+5)
5. Describe histology of lymph node.
6. Explain deep cervical fascia with diagram.
7. Summarize the diagrammatic description of internal auditory meatus.
8. Discuss the mechanism of deglutition.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**PATHOLOGY**

**PAPER – I**

*(General Pathology including environmental pathology / pathophysiology / immunopathology with recent advances and applied pathology )*

**Q.P. Code: 1213**

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. Explain the role of free radicals in cell injury.
2. Explain etiopathogenesis, pathology and recent advances in systemic lupus erythematosus (SLE). (5+10+5)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain mechanism of granuloma formation and use of ancillary techniques in establishing its etiology. (5+5)
4. Explain medical complications of obesity.
5. Explain Paraneoplastic syndromes.
6. Explain principles and applications of FISH technique. (5+5)
7. Explain current concepts of tumour angiogenesis.
8. Explain role of tumour suppressor gene in carcinogenesis. Add a note on multistep carcinogenesis. (5+5)

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**PHARMACOLOGY**

**PAPER – I**

*(Basic and General Pharmacology including Bio-statistics, Toxicology)*

**Q.P. Code: 1221**

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 the various factors affecting the action of a drug with suitable examples. Add a note on Bioavailability? (15+5)
2. Discuss the various theoretical concept of Receptors-Effector system by giving examples. Add a note on second messenger? (16+4)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Enumerate the salient features of phase "0" clinical trial.
4. Discuss the role and function of Chi-square test in research and drug application.
5. Enumerate the merits and demerits of nebulization as drug delivery system.
6. Enumerate the various antidotes used in poisoning with suitable clinical examples.
7. Enumerate the role and function of pharmacovigilance in monitoring adverse drug events.
8. Enumerate various sources of drugs with suitable examples.

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**ANAESTHESIOLOGY**

**PAPER – I**

*(Basic Science as applicable to Anaesthesia)*

**Q.P. Code: 1233**

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 development of inhalational anaesthetic agents. Discuss in detail about sevoflurane. (10+10)
2. Describe the distribution of ventilation and perfusion. Evaluate the alterations in them that occur in paralyzed and mechanically ventilated patients. (8+12)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain the oxygen dissociation curve. Appraise the factors affecting it.
4. Explain aorto canal compression. Discuss its assessment and management.
5. Discuss the contribution of Arthur E Guedel in anaesthesia.
6. Relate the pumping and pressurizing effects in vaporizers.
7. Evaluate the effects of steroids in anaesthetic practice.
8. Classify Laryngeal Mask Airway. Outline the uses of Fastrach LMA

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**DERMATOLOGY, VENEREOLOGY AND LEPROSY**

**PAPER – I**

*(Basic sciences as applied to Dermatology, Venereology and Leprosy)*

**Q.P. Code: 1237**

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 is thermoregulation? Write about the role of skin in thermoregulation. (10+10)
2. Describe complement cascade and write a note on familial angioedema. (10+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Write briefly about human papilloma virus and its role in oncogenesis. (6+4)
4. Mechanism of drug resistance in leprosy.
5. Structure of hair follicle and write briefly about hair cycle. (5+5)
6. Discuss various stages of HIV infection.
7. Discuss various palisading granulomas.
8. Lymphatic drainage of female genitalia and its clinical applications. (6+4)

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**POST-GRADUATE DEGREE (M.D.) EXAMINATION – JULY 2020**

**Time: 3 Hours**

**Max. Marks: 100**

**GENERAL MEDICINE**

**PAPER – I**

*(Basic sciences, current advances in genetics,  
nutrition and clinical pharmacology)*

**Q.P. Code: 1241**

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 the life cycle of plasmodium falciparum. Enumerate clinical features. Discuss the treatment and list the complications of plasmodium falciparum infection. (5+5+5+5)
2. Discuss the etiology, enumerate clinical features, investigations and treatment of delirium in elderly. (5+5+5+5)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Describe the types, list the indications and discuss the challenges of gene therapy. (2+4+4)
4. Enumerate the indications, describe procedure and list the complications of bone marrow aspiration. (4+3+3)
5. Discuss the role of GLP-1 agonist in the management of T<sub>2</sub>DM.
6. Describe the clinical features and discuss the management of pellagra.(5+5)
7. Discuss the management of thyrotoxicosis.
8. Discuss the importance of urine examination in health and diseases.

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