

M.MED.FAMILY MEDICINE

SECOND YEAR THEORY EXAM– AUG 2013

PAPER II - SURGERY AND ALLIED SCIENCES

TIME: THREE HOURS

MAXIMUM MARKS: 100

INSTRUCTIONS

- The paper will be for a total of **100 marks**.
- Answer **all** the Questions.
- The Paper has 2 parts – **Part A & Part B**.
- **Part A** will be **descriptive type questions** based on case scenarios (**40 marks**).
- **Part B** will have Objective type EMQs **extended matching questions (60 marks)**.
 - ✓ This will have 10 sets of these questions.
 - ✓ Each set will have 6 questions.
 - ✓ Each question will carry 1 mark.
 - ✓ Each set has a **theme** on the top. Below this, some **options** are given followed by some **questions**. The options are lettered using the English Alphabets **A, B, C, D** and so on.

Example:

3. THEME –COMMON PSYCHIATRIC PROBLEMS [QUESTIONS. 3(i) – 3(vi)] (6marks)

From the options 'A to H' given below, choose the best answer for the questions 3(i) – 3(vi)

Options:

- A. Inj. Haloperidol
- B. Amitriptyline + counseling
- C. Tab. Chlorpromazine
- D. Tab. Trihexyphenidyl
- E. Tab. Diazepam
- F. Tab. Lithium
- G. Inj. Fluphenazine deconoate
- H. Tab. Risperidone

Questions: What is your treatment option in the following cases?

- 3(i) What is the drug of choice for Acute Psychosis?
- 3(ii) What is the drug of choice for Bipolar illness?

PART – A
DESCRIPTIVE QUESTIONS

(ANSWER ALL QUESTIONS)

1. 7 year old Meeran is brought to you with blindness. Answer the following questions regarding blindness

(5 x 4 = 20 marks)

- A. What are the causes of childhood blindness at birth? How will you manage them?
- B. What are the causes of childhood blindness at Pre-school and school age group? How will you manage them?
- C. What is Amblyopia? When it occurs?
- D. What are the four types of amblyopia? Write about their causes.
- E. What are the principles of treatment of amblyopia?

2. 3 year old Avinash is brought to you with extensive burns, allegedly sustained by falling into a trough of very hot water. When you saw him, the burns involved the following areas:

The chest and abdomen in the front and half of the back was burnt. The whole of the right upper limb, the whole of the right lower limb, roughly half of the face and the whole of the genital area were scalded.

(5 x 4 = 20 marks)

- A. Calculate the extent of the burns.
- B. Calculate the fluid requirement if his original weight was 20 kgs.
- C. How will you manage him?
- D. List indications for admission for a burns patient.
- E. Describe about the acute management of burns admitted in the ward.

PART – B
EXTENDED MATCHING QUESTIONS
(ANSWER ALL QUESTIONS)

1. THEME: DIMINISHED VISION [QUESTIONS.1(i) - 1(vi)] (TOTAL: 6 MARKS)
From the options ‘A to N’ given below, choose the best answer for the questions 1(i) - 1(vi)

- | | |
|-----------------------------------|--|
| A. Primary angle closure glaucoma | H. 11-21 mmHg |
| B. Posterior Subcapsular cataract | I. Laser Iridotomy |
| C. Subluxation of lens | J. Shrinking and elongation of the lens |
| D. Spectacles with convex lens | K. Primary open angle glaucoma |
| E. Oral 50% glycerol | L. 16-31 mmHg |
| F. Trabeculectomy | M. Optic atrophy |
| G. Cycloplegic retinoscopy | N. Hypermature lens leaking lens protein into anterior chamber |

Questions

Mr.Shankar, 51 years of age comes to you with a history of diminished vision. You do a fundoscopy and see a pale disc.

1. (i) What is the diagnosis?

Mrs.Sharmila, 62 years of age comes to your clinic with complaints of diminished vision. On ophthalmic evaluation, visual acuity is 6/9. Colour of lens is grayish white, iris shadow is seen. Distant direct ophthalmoscopy showed central dark shadow against red glow.

1. (ii) What type of cataract does she have?

Eight year old Madan complained of headache and decreased vision. Initial screening revealed that the vision is normal.

1. (iii) What is the next step in management?

Mr. Naidu, a 76 year old was brought to you with difficulty in vision in the left eye. On examination, you find out that he has uveitis along with cataract.

1. (iv) What is the cause of uveitis in untreated cataract?

Mrs. Sharada, a 47 year old housewife came to your clinic with decreased vision of 1 month's duration. She has mild headache and minimal photophobia but does not have any eye pain. Intraocular pressure was found to be high. Presence of optic nerve head changes were seen with visual field abnormalities.

1. (v) What is the normal intraocular pressure in the general population?

1. (vi) What does Mrs. Sharadha have?

**2. THEME: DIAGNOSIS OF COMMON FOOT PROBLEMS [QUESTIONS.2(i) - 2(vi)]
(TOTAL: 6 MARKS)**

From the options 'A to K' given below, choose the best answer for the questions 2(i) - 2(vi)

Options

- | | |
|---------------------------------|---------------------------------|
| A Hallux rigidus | F Plantar fasciitis |
| B Verruca plantaris | G Plantar warts |
| C Corn | H Hallux valgus |
| D Tarsal tunnel syndrome | I Morton's Metatarsalgia |
| E Gouty tophi | J Talipes equinovarus |
| | K Talipes calcaneovalgus |

Questions:

30 years old Mohali Sahib comes to you with pain in the heel which is worse in the mornings for the past 2 weeks. He has recently started jogging. On examination there is tenderness along the medial tuberosity of the calcaneum.

2.(i) What is the diagnosis?

55 year old Sheila comes to you with history of pain and deformity in both feet. On examination she has lateral deviation of both big toes along with a medial prominence along the first metatarsal head.

2.(ii) What is the diagnosis?

42 year old Sethu comes with pain and swelling painful swelling at the top of his third toe where it comes in contact with the shoe. On examination, there is a circumscribed hyperkeratotic lesion with a central conical core of keratin.

2.(iii) What is the diagnosis?

47 year old Meena has come with sharp pain in the forefoot radiating to the toes .The pain is exacerbated by walking and relieved by rest. On examination tenderness is localized in the third inter-digital space.

2.(iv) What is the diagnosis?

48 year old Savithri comes with sharp, burning pain and sensory disturbance in the medial part of the forefoot not related to weight bearing. The pain is often worse at night.

2.(v) What is the diagnosis?

Parents of 2 month old Tina bring her to you with complaints of a foot deformity which has been present since birth. They are very anxious and are keen for a speedy resolution of the problem. The foot is both turned and twisted inwards so that the sole faces posteromedially.

2.(vi) What is the diagnosis?

**3. THEME – TREATMENT OF COMMON FOOT PROBLEMS [QUESTIONS. 3(i) – 3(vi)]
(TOTAL: 6 MARKS)**

From the options ‘A to K’ given below, choose the best answer for the questions. 3(i) – 3(vi)

- | | |
|---|---|
| A. Analgesics, ultra sound therapy | G. Analgesics, remove the cause, warm water soaks ,salicylic acid preparations and debridement |
| B. Analgesics, rest, warm water soaks and removal of pressure on the affected area | H. Analgesics, Local capsaicin injection |
| C. Analgesics, wax bath | I. Analgesics, rest, tendon stretching and strengthening exercises |
| D. Analgesics, change the offending footwear, metatarsal pad, Local inter-digital nerve blocks | J. Reassurance |
| E. Analgesics, TENS | K. Casting or splinting |
| F. Analgesics, stop the triggering activity, heel cups, exercises , fasciotomy | |

Questions:

Select the most appropriate answer to the following clinical situations from the options A-K:

30 years old Murali comes to you with pain in the heel which is worse in the mornings for the past 2 weeks. He has recently started jogging. On examination there is tenderness along the medial tuberosity of the calcaneum.

3.(i) What is the treatment?

55 year old Sridevi comes to you with history of pain and deformity in both feet. On examination she has lateral deviation of both big toes along with a medial prominence along the first metatarsal head.

3 (ii) What is the treatment?

42 year old Suman comes with pain and swelling painful swelling at the top of his third toe where it comes in contact with the shoe. On examination, there is a circumscribed hyperkeratotic lesion with a central conical core of keratin.

3. (iii) What is the treatment?

47 year old Amutha has come with sharp pain in the forefoot radiating to the toes .The pain is exacerbated by walking and relieved by rest. On examination tenderness is localized in the third inter-digital space.

3. (iv) What is the treatment?

48 year old Kalyani comes with sharp, burning pain and sensory disturbance in the medial part of the forefoot not related to weight bearing. The pain is often worse at night.

3. (v) What is the treatment?

Parents of 2 month old Tina bring her to you with complaints of a foot deformity which has been present since birth. They are very anxious and are keen for a speedy resolution of the problem. The foot is both turned and twisted inwards so that the sole faces posteromedially.

4. (vi) What is the treatment?

4 THEME – DIAGNOSIS OF RED EYE [QUESTIONS. 4 (i) – 4(vi)] (TOTAL: 6 MARKS)

From the options ‘A to R’ given below, choose the best answer for the questions 4 (i) – 4(vi)

Options:

- | | |
|---|--|
| A. Congenital obstruction of lacrimal duct | K. Simple allergic conjunctivitis |
| B. Hyper acute bacterial conjunctivitis | L. Congenital glaucoma |
| C. Phlyctenular conjunctivitis | M. Ulcerative blepharitis |
| D. Scleritis | N. Cavernous sinus thrombosis |
| E. Episcleritis | O. Entropion |
| F. Vernal Conjunctivitis | P. Viral conjunctivitis |
| G. Bacterial conjunctivitis | Q. Orbital cellulitis |
| H. Pingecula | R. Pterygium |
| I. Squamous blepharitis | |
| J. Ectropion | |

Questions: Match the cases described below with the diagnoses listed above

- 4 (i).** 7 year old Mala is brought to you by her mother with recurrent history of a red swelling in the left eye. She has associated pain, irritation and photophobia. On examination she has a peri-limbal raised vascular nodule at the temporal limbus of the left eye. Her visual acuity is normal.
- 4 (ii).** 68 year old Arumugam has come with excessive tearing, irritation, redness and eye discomfort in the left eye. There is pain and photophobia. On examination, lid margin are inverted. Visual acuity is 6/60 in the affected eye.
- 4 (iii).** 14 year old Mani has come with seasonal complaints of severe itching and a ropy discharge. There is no pain or photophobia. On examination, in the upper palpebral conjunctiva, papillary reaction is seen. There is a broad, gelatinous opacification of the superior limbus of cornea. Visual acuity is normal.
- 4 (iv).** 25 year old Subha has come with deep-seated right eye pain; pain radiates to the forehead, brow and sometimes jaw. Pain is made worse with eye movements. There is photophobia. On examination, there is a sectoral bluish discoloration of the temporal sclera of the right eye. Visual acuity and intra ocular pressure is normal.
- 4 (v).** 52 year old Santhanu, a diabetic for 6 years has come with fever, severe pain right eye and photophobia for one day. On examination there is swelling in the right periorbital area. Conjunctiva is congested and chemosed. There is painful limitation of ocular movements; there are no other neurological deficits. Visual acuity is 6/60 in the affected eye.
- 4 (vi).** Mona has brought her 4 days old child with complaints of watering of both eyes since birth, on examination; there is no conjunctival or ciliary congestion. The tears are clear. The diameter of the cornea seems to be more than the other newborn babies.

5. THEME – THERMAL INJURIES [QUESTIONS. 5(i) – 5(vi)] (TOTAL: 6 MARKS)

From the options ‘A to S’ given below, choose the best answer for the questions 5(i)–5(vi):

Options :

- | | |
|-------------------------------------|-------------------------------------|
| A. First degree burns | K. Parkland formula |
| B. Second degree burns | L. Modified Brooke’s |
| C. Third degree burns | M. Wallace’s “Rule of Nines” |
| D. Fourth degree burns | N. 27% |
| E. Burn lung syndrome | O. 18% |
| F. Sick Cell Syndrome | P. 14% |
| G. Arc burns | Q. 19% |
| H. Contact burns | R. 48% |
| I. Flash burns | S. 24% |
| J. Lund and Brower’s formula | |

Questions:

- 5. (i)** Ali a 37 year old man got burnt when he slept with his cigarette in his hand, but got up soon enough to douse the flame in the mattress quickly. On examination he has a burnt area on his loin region which is very painful, pink and moist. What is the likely depth of the burns?
- 5. (ii)** For children under 12 years of age, ----- chart is used to estimate the total body surface area involved in burns.
- 5. (iii)** Patekar, a 45 year old man, attempted suicide by pouring petrol over himself and lighting it with a match stick. His skin has turned black and leathery and he seems oblivious to pain. What is the likely depth of the burns?
- 5. (iv)** Name the condition which occurs in burn patients, late in the shock period and is characterized by restlessness, disorientation and acidotic breathing.
- 5. (v)** 28 year old Radha was boiling water on the kitchen platform. When she was trying to remove the big pot of water from the stove, she slipped and fell and spilled the boiling water all over her. The front of her chest (not abdomen) and half of both upper limbs were involved, what would be the extent of burns?
- 5.(vi)** The commonest type of electrical burns are -----

**6. THEME – TREATMENT OF THERMAL INJURIES [QUESTIONS 6(i) - 6(vi)]
(TOTAL: 6 MARKS)**

From the options ‘A to N’ given below, choose the best answer for the questions 6(i) – 6(vi)

Options:

- | | |
|---|-----------------------|
| A. Lund and Brower’s formula | H. 4 hours |
| B. Parkland formula | I. 8 hours |
| C. Modified Brooke’s | J. 18-24 hours |
| D. Hyperkalemia | K. 36-48 hours |
| E. Hypokalemia | L. 15% |
| F. Refer to a burns unit for specialist care | M. 50% |
| G. Can be treated as an outpatient | N. 25% |

Questions:

- 6 (i).** Ringer lactate solution should not to be used for patients with -----
- 6 (ii).** Mani, a 6 yr old boy while playing with fireworks got burnt and rushed to your hospital. He had second degree burns involving 14% total body surface area. What will you do?
- 6 (iii).** Name the formula which is widely accepted for calculating the fluid requirement after burns.
- 6 (iv).** While replacing fluids in a burns patient, half of the calculated fluid volume is to be given in the first ----- hours post-burn.
- 6 (v).** In fluid resuscitation of a burns patient, fluid administration should be decreased ----- -----hours after the burn, as capillary integrity generally returns.
- 6(vi).** Adult burns of less than ----- TBSA (total body surface area) are usually not enough to initiate a generalized capillary leak, and these patients can be rehydrated successfully primarily via the oral route and can be safely managed by the general practitioner

7. THEME – TREATMENT OF EYE PROBLEMS [QUESTIONS 7(i) - 7(vi)] (TOTAL: 6 MARKS)

From the options 'A to L' given below, choose the best answer for the questions 7(i) – 7(vi)

Options

- | | |
|--|--|
| A. Trabeculectomy. | G. Oral 50% glycerol |
| B. Laser Iridotomy | H. Tab. Acetazolamide |
| C. Primary open angle glaucoma | I. 200,000 IU orally every 6 months |
| D. 5 years after the onset of diabetes | J. Subluxation of lens. |
| E. At the time of diagnosis | K. Primary angle closure glaucoma |
| F. 10 years after the onset of diabetes | L. 100,000 IU every 3-6 months |

Thankam, 51 years old lady is a newly diagnosed type 2 diabetic, coming to you. Her blood sugars are under control.

7. (i) When will you do first fundus examination for her?

Mrs. Shailaja brings her 7 month old baby to you for vaccination.

7. (ii) What is the WHO recommended schedule for prophylaxis against Vit A deficiency?

10 year old Manisha is diagnosed to have Type I DM.

7. (iii) When is the recommended time of the first ophthalmic examination for her?

Mr. Paranthaman, aged 71 years is brought to you with sudden onset of severe right sided headache and painful decreased vision in right eye. On examination, you can see ciliary congestion & shallow anterior chamber. You diagnose him to have acute primary angle closure glaucoma.

7. (iv) What is your possible diagnosis?

7. (v) What immediate treatment will you give to Mr. Paranthaman?

7. (vi) What is the surgery of choice for him?

8. THEME – DIAGNOSIS OF SHOCK [QUESTIONS. 8(i) – 8(vi)]
(TOTAL: 6 MARKS)

From the options ‘A to J’ given below, choose the best answers for the questions ‘ 8 (i) – 8(vi)’:

Options:

- | | |
|------------------------------|---------------------------------|
| A. Distributive shock | G. Myocardial infarction |
| B. Hypovolemic shock | H. Myocarditis |
| C. Obstructive shock | I. 2-3 seconds |
| D. Cardiogenic shock | J. 6-10 seconds |
| E. 50 mmHg | K. 30 seconds |
| F. 60 mmHg | |

Questions:

Ranchi is a 34 year old woman who has come to you with one day history of nausea, vomiting and diarrhea. She feels very giddy and also complains of fever. On examination her BP is 94/50.

8(i). What is the kind of shock you think of first?

However you find out that she had only 3 episodes of diarrhea and that too very small volume stools. You begin to ask for more history and realize that she has been feverish for 2 days, well before the diarrhea started. Her extremities feel warm.

8(ii). Now what is your diagnosis?

8(iii). If the Mean arterial blood pressure falls significantly below ----- for an appreciable time, the end organ will not get enough blood flow, and will become ischemic.

8(iv). At normal room temperature, the distal capillary bed normally refills within -----

36 year old Monica, mother of two presented to a clinic with flu-like symptoms twice in the last 3 weeks. She received analgesics, antibiotics and vitamins. Now she has presented with weakness, dizziness, fever and with severe chest pain as well as chest tightness. Her BP was 84/56. The JVP was elevated and she had elevated cardiac enzymes. An ECHO was done which showed that there was global akinesia and her ejection fraction (EF) was <10%, with a cardiac output of 1.5 L/min.

8(v). What is the possible diagnosis for her cardiac condition?

Gayathri is a 20 year old who was bitten by a snake and she was given snake antivenom intravenously as the snake could not be identified and there was a possibility that it was poisonous. About 10 minutes later Gayathri began to feel dizzy and faint and her blood pressure was 70/50.

8.(vi). What is the kind of shock Gayathri has?

**9. THEME – CHILDHOOD BLINDNESS [QUESTIONS. 9(i) – 9(vi)]
(TOTAL: 6 MARKS)**

From the options ‘A to H’ given below, choose the best answer for the questions 9(i) – 9(vi)

Options :

- | | |
|---------------------------------|----------------------------|
| A. Buphthalmos | E. Retinoblastoma |
| B. Ophthalmia Neonatorum | F. Refractive Error |
| C. Astigmatism | G. Amblyopia |
| D. Vit A deficiency | H. Strabismus |

Questions: What is the correct diagnosis?

- 9. (i)** Radhika delivered a baby boy whose eyes were large with hazy cornea and he also had watering of eyes and photophobia.
- 9. (ii)** Child with a white reflex at the pupil
- 9. (iii)** Pranav has congenital ptosis, what condition can this lead to?
- 9. (iv)** 8 year old Sushma has difficulty in seeing what the teacher is writing on the blackboard in school.
What is the commonest cause for this in this age group?
- 9. (v)** Child with Bitot Spots
- 9. (vi)** Pratima is made fun of in school for her ‘cross eyes’

**10. THEME – MANAGEMENT OF SHOCK [QUESTIONS 10(i) - 10(vi)]
(TOTAL: 6 MARKS)**

From the options ‘A to M’ given below, choose the best answer for the questions 10(i) – 10(vi)

Options :

- | | |
|--------------------------------|--------------------------|
| A. Norepinephrine | E. 2 ml |
| B. Dopamine | F. 0.2 ml |
| C. Atropine | G. Nitroglycerine |
| D. Sodium nitroprusside | H. Adrenaline |

Questions:

Kavitha is a 8 year old child who was bitten by a snake and she was given snake antivenom intravenously. Kavitha began to feel dizzy and faint and her blood pressure was not recordable.

10(i) How will you manage?

10(ii) The weight of Kavitha is 20 Kg. What is the dose you will give?

40 years old Manish is brought to casualty with shock. The right aspects of management of cardiogenic shock are:

10(iii). If the systolic BP is between 70-100 mmHg then ----- is indicated.

10(iv) If the BP is less than 70 mmHg, then ----- is indicated.

10(v) If the systolic BP is greater than 100 mmHg, as may happen when the after load is high as in mitral & aortic regurgitation----- may be given.

10(vi) If cardiogenic shock accompanied by inappropriately high pre-load, as evidenced by high JVP then----
----- is indicated.
