

(LF 0214)

M.MED.FAMILY MEDICINE

Sub Code: 4012

SECOND YEARTHEORY EXAM– AUGUST 2014

PAPER II - SURGERY AND ALLIED SCIENCES

QP CODE: 434012

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?

- ✓ Match each question to a **single best option** and write it in your paper in the column provided like this:

3(i)	
3(ii)	
3(iii)	
3(iv)	
3(v)	
3(vi)	

- ✓ Each option may be used more than once.  
options may not be used at all.

Some

## **PART – A**

### **DESCRIPTIVE QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. 52 years old Mr. Sathish has come to you with the complaint of sudden, diminution of vision and severe pain on the right eye. There is no history of any trauma. **[ Total: 20 Marks]**
  - A. List the preventable causes of blindness **(2 marks)**
  - B. How will you classify Glaucoma? What are the main clinical findings you will look for to make a diagnosis of Glaucoma? **(8 marks)**
  - C. What are the clinical features of angle closure Glaucoma? How will you manage angle closure Glaucoma? **(8 marks)**
  - D. Discuss the role of screening in Glaucoma. **(2 marks)**
  
2. Mr. Pandian has come to you with the complaints of having tiredness, anorexia and jaundice. His blood test results showed increased total bilirubin and direct bilirubin levels. Indirect bilirubin levels are low. **[Total 20 Marks]**
  - A. List some common intrahepatic and extrahepatic conditions that can cause this type of jaundice. **(4 marks)**
  - B. What is Charcot's triad? Explain its significance. **(4 marks)**
  - C. What is Courvoisier's sign? What does it indicate? **(4 marks)**
  - D. How will you proceed to do investigations in this patient to come to a diagnosis? Explain it with the help of an algorithm. **(8 marks)**

## **PART – B**

### **EXTENDED MATCHING QUESTIONS**

**(ANSWER ALL QUESTIONS)**

1. **THEME: FOOT DEFORMITIES [QUESTIONS 1(i)-1(vi)]** **(Total:6 Marks)**  
**From the options 'A to L' given below, choose the best answer for the questions 1(i) - 1(vi)**

#### **Options**

A. Metatarsus adductus

B. Talipes calcaneo valgus

- C. Femoral anteversion
- D. 2 – 3 years
- E. Femoral retroversion
- F. Talipes equinovarus
- G. 6 – 12 months

- H. Internal tibial torsion
- I. External tibial torsion
- J. 8 – 12 weeks
- K. Patellofemoral instability
- L. Slipped femoral epiphysis

### Questions

*Mrs. Thenmozhi brought her 4 years old child with the complaint of foot deformity. On examination, you found that the child has out-toeing and excessive wear along the lateral border of the shoes of the child. You put the child in a prone position with knees flexed at 90 degrees and measured thigh-foot angle and found that it was greater than 30 degrees of external rotation.*

1. (i) What is your diagnosis?
1. (ii) What complication can occur in untreated cases?

*Mrs. Suhasini brought her 1 year old child to you with anxiety about the foot deformity her child has. On examination you found that the child's feet showed out-toeing and the child walks with feet turned out at greater than 90 degrees from the line of forward progression (Charlie Chaplin posture).*

1. (iii) What is your diagnosis?
1. (iv) At what age this deformity will resolve?

*Mrs. Ponni came to you for a normal delivery. After conducting the delivery, you notice that the baby has some foot deformity. The foot is both turned and twisted inwards so that the sole faces postero-medially. The fore foot is adducted and supinated.*

1. (v) What is your diagnosis?
1. (vi) At what age, will you send the baby to an orthopedic surgeon?

### **2. THEME – DIAGNOSIS OF FOOT PAIN [QUESTIONS 2(i) – 2(vi)] (Total: 6 Marks)**

**From the options 'A to M' given below, choose the best answers for the questions 2 (i) – 2(vi)**

### Options:

- |                                     |                      |
|-------------------------------------|----------------------|
| A. Metatarsal stress fracture       | F. Morton's neuroma  |
| B. Metatarsalgia                    | G. Adson's Sign      |
| C. Club Foot                        | H. Morton's sign     |
| D. Tarsal navicular stress fracture | I. Mulder's Click    |
| E. Tinel's sign                     | J. Plantar fasciitis |

K. Tarsal tunnel syndrome

M. Bony tumour of foot

L. Arthritis

**Questions:**

*45-year-old Mrs. Hamsa came to you with the complaint of having pain on her left foot for the past 2 days. On further questioning, you found that she is having diffuse pain along the medial longitudinal arch of the left foot, which is worsened by weight-bearing activities. On inspection, there is mild swelling but there is no gross deformity.*

2. (i) What is the possible diagnosis?

*60 years old lady came to you with the complaint of having heel pain, which is most pronounced with the first steps she takes on getting up*

2. (ii) What is the common cause of this type of heel pain?

*53-year-old Mr. Francis presents 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. On examination, as you tap over the posterior tibial nerve just posterior to the medial malleolus, he experiences tingling sensation along the path of the nerve.*

2. (iii) What is the name of this sign elicited?

2. (iv) What is your diagnosis?

*A 39-year-old woman came to you with the complaint of having sharp pain in the forefoot radiating to the toes. The pain is exacerbated by standing or walking and is relieved by rest. On examination, tenderness is localized in one of the interdigital spaces and there is tenderness on squeezing the web space. Sensation diminished in the cleft of the involved interdigital space and adjacent toes.*

2. (v) What is the possible diagnosis?

*Mr. Nandhan, who is doing vigorous walking exercise to control his pre-diabetes sugar levels, came to you with the complaint of pain in the forefoot. On examination you found that he has flat foot and plantar callus beneath the metatarsal heads. There is tenderness on palpation of the metatarsal heads.*

2. (vi) What is the possible diagnosis?

**3. THEME – DIAGNOSIS OF SHOCK [QUESTIONS 3(i) – 3(vi)] (Total: 6 Marks)**

**From the options 'A to I' given below, choose the best answers for the questions 3(i) – 3(vi)**

**Options:**

- A. Hypovolemic shock
- B. Myocardial infarction
- C. Obstructive shock
- D. Sepsis
- E. Cardiogenic shock
- F. Distributive shock
- G. Adult Respiratory Distress Syndrome
- H. Local inflammation
- I. Avascular necrosis of femur

**Questions:**

*You gave a test dose of Inj. Penicillin to Ms. Sarala and immediately she developed respiratory distress, wheezing and urticarial rashes. She feels giddy and her blood pressure is very low.*

3. (i) What kind of shock does Ms. Sarala have?

*70 years old Mr. Ravi Kumar was hospitalised for a surgery and was put on indwelling urinary catheter for more than a week. Suddenly he developed high fever, tachycardia and his blood pressure was low*

3. (ii) What kind of shock does Mr. Ravi Kumar have?  
3. (iii) What could be the cause for his shock?

*Mrs. Vimala 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.*

3. (iv) What kind of shock does Mrs. Vimala have?

*55 year old Mr. Kuberan, a known diabetic and hypertensive, had a fracture of the neck of femur and he is at home undergoing conservative treatment with bed rest and traction for the last one week. He calls you with a sudden history of unease, sweating and chest pain and when you visit him, you find that his BP is 86/60.*

3. (v) What kind of shock does Mr. Kuberan have?  
3. (vi) What could be the cause for his shock?

**4. THEME: DIAGNOSIS OF DIMINISHED VISION [QUESTIONS 4(i) - 4(vi)]  
(Total:6 Marks)**

**From the options 'A to J' given below, choose the best answer for the questions 4(i) - 4(vi)**

### Options

- |                                   |                           |
|-----------------------------------|---------------------------|
| A. Anisometropic amblyopia        | F. Vitamin A deficiency   |
| B. Retinoblastoma                 | G. Strabismic amblyopia   |
| C. Stimulus deprivation amblyopia | H. Ophthalmia neonatorum  |
| D. Buphthalmos                    | I. Vernal Conjunctivitis  |
| E. Ametropic amblyopia            | J. Angle Closure Glaucoma |

### Questions:

*Mrs. Kamalam has brought her 6 months old baby to you with the complaint that the baby is not smiling or looking at her. On examination, you found that the baby has congenital cataract.*

4.(i) What is the possible diagnosis?

*Mrs. Ragini has brought her 8 years old child to you with the complaint that the child is having squint of the eye and blurred vision.*

4.(ii) What is the possible reason for blurred vision?

*You went for a health screening camp for the school children in your locality. 12 years old Arun who is studying in 7th standard class, had vision test during this camp and was found that his one eye had a large refractive error and the other eye is almost normal. There is no detectable organic ocular lesion.*

4.(iii) What is the possible diagnosis?

*During that school health camp, you also noticed that another girl had a vision test and was found that her both eyes are having high refractive errors. There is no detectable organic ocular lesion.*

4.(iv) What is the possible diagnosis?

*You have conducted a normal vaginal delivery in a Primary health centre. The newborn baby is having large eyes, hazy cornea and watering from both eyes. The eyelids are normal.*

4.(v) What is the possible diagnosis?

*Mr. Natarajan brought his child to you with the complaint of not able to see properly. On examination you found that the child is having white reflex at the pupil.*

4.(vi) What is the possible diagnosis?

**5. THEME: MANAGEMENT OF VITAMIN A DEFICIENCY [QUESTIONS 5(i)-5(vi)]**

**(Total:6 Marks)**

From the options 'A to M' given below, choose the best answer for the questions 5(i) - 5(vi)

**Options**

- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| <b>A.</b> 2 years                     | <b>H.</b> 2,00,000 IU – single dose |
| <b>B.</b> 50,000 IU daily for 1 week  | <b>I.</b> 3 months                  |
| <b>C.</b> 18 months                   | <b>J.</b> 9 months                  |
| <b>D.</b> 1,00,000 IU – single dose   | <b>K.</b> Next day                  |
| <b>E.</b> 1 year                      | <b>L.</b> Next week                 |
| <b>F.</b> 10,000 IU daily for 2 weeks | <b>M.</b> After 4 weeks             |
| <b>G.</b> 6 months                    |                                     |

**Questions**

*28 years old Mrs. Madhu came to you with the complaint of not able to see properly in the night time. She is 4 months pregnant now. On examination you found that she is having conjunctival xerosis and Bitot's spots.*

5. (i) How will you treat her?

*You are working in a primary health centre. Mrs. Helen is bringing her 3 months old baby for routine immunisation. The baby is active and normal, doesn't have any Bitot's spots. You want to give Vitamin A prophylaxis for this baby under the child survival and safe motherhood programme.*

5. (ii) At what age you will recommend first dose of Vitamin A supplementation?  
5. (iii) At what age you will recommend second dose of Vitamin A supplementation?

*Mrs. Gomathi brought her 9 months old baby to you for measles vaccination. On examination you found that the baby has Bitot's spots.*

5. (iv) What is the dose of Vitamin A, you will give to treat this baby?  
5. (v) When will you give the second dose?  
5. (vi) When will you give the third dose?

**6. THEME – DIAGNOSIS OF BURNS[QUESTIONS 6 (i) – 6 (vi)]**

**(Total:6 Marks)**

From the options 'A to P' given below, choose the best answer for the questions 6(i)–6(vi)

**Options :**

- |                               |                              |
|-------------------------------|------------------------------|
| <b>A.</b> Third degree burns  | <b>I.</b> 27 %               |
| <b>B.</b> Hypokalemia         | <b>J.</b> Arc burns          |
| <b>C.</b> Contact burns       | <b>K.</b> Scalds             |
| <b>D.</b> First degree burns  | <b>L.</b> Cardiac arrhythmia |
| <b>E.</b> 45 %                | <b>M.</b> Flame burns        |
| <b>F.</b> Flash burns         | <b>N.</b> 9%                 |
| <b>G.</b> 18 %                | <b>O.</b> Hyponatremia       |
| <b>H.</b> Fourth degree burns | <b>P.</b> Pulmonary edema    |

**Questions:**

***50-year-old Mr. Oliver had exposure to hot sun on a long day out during the peak summer. He developed sunburn on his skin, no blisters.***

- 6. (i)** What is the likely depth of this burn on him?

***28-year-old Radhika 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.***

- 6.(ii)** What type of thermal injury would you call this?

- 6. (iii)** If the front of her chest (not abdomen) and half of both upper limbs were involved, what would be the extent of burns?

***40-year-old Mrs. Kumari had touched the live wires accidentally and sustained injuries.***

- 6. (iv)** What is the type of burns she would have had?

- 6. (v)** What is the likely complication you can expect in this patient?

***37-year-old Mr. Rahumangot burnt when he slept with his cigarette in his hand, but got up soon enough to douse the flame in the mattress. On examination he had a burnt area on his loin region which was very painful, pink and moist. Soon after few days, it got infected and become painless.***

- 6. (vi)** What is likely to be the depth of this burn wound?

**7. THEME – TREATMENT OF SHOCK [QUESTIONS 7(i) – 7(vi)] (Total: 6 Marks)**

**From the options ‘A to M’ given below, choose the best answers for the questions 7(i) – 7(vi)**



**Options:**

- |                         |                     |
|-------------------------|---------------------|
| A. Sodium nitroprusside | H. 0.3 – 0.5 mg     |
| B. 3 – 5 mg             | I. 2-20 µg/kg/min   |
| C. 5-15 µg/kg/min       | J. Dopamine         |
| D. Adrenaline           | K. 0.5 to 30 µg/min |
| E. 5 to 20µg/min        | L. 6 – 10 mg        |
| F. Nitroglycerine       | M. Dobutamine       |
| G. Noradrenaline        |                     |

**Questions:**

*Mr. Murali who got admitted with the problem of meningitis received a test dose of Inj. Penicillin by you and immediately he developed respiratory distress, wheezing and urticarial rashes. He feels giddy and his blood pressure is very low.*

7. (i) What is your drug of choice to manage his shock?
7. (ii) What is the dose in which you will administer this drug?

*60 years old Mrs. Lalitha was hospitalised for a surgery and having indwelling urinary catheter for more than a week. Suddenly she developed high fever, tachycardia and blood pressure was low with systolic less than 70 mmHg.*

7. (iii) What is your drug of choice to manage her shock?
7. (iv) What is the dose in which you will administer this drug?

*65 years old Mrs. Violet is brought to you with the complaint of Chest pain, shortness of breath, sweating, nausea and vomiting. On examination, she has marked tachycardia, cool and clammy extremities, poor peripheral pulses, and BP is 90/70.*

7. (v) What is your drug of choice to manage her shock?
7. (vi) What is the dose in which you will administer this drug?

**8. THEME: RED EYE [QUESTIONS 8(i) - 8(vi)]**

**(Total: 6 Marks)**

**From the options 'A to N' given below, choose the best answer for the questions 8(i) - 8(vi)**

**Options**

- |                             |                         |
|-----------------------------|-------------------------|
| A. Herpes simplex keratitis | B. Antibiotic eye drops |
|-----------------------------|-------------------------|

- C. Chemical keratitis
- D. Topical steroid drops
- E. Fungal keratitis
- F. Pterygium
- G. Atopy
- H. Genetic factor

- I. Tuberculosis
- J. Allergic conjunctivitis
- K. Phlyctenular conjunctivitis
- L. Vernal Conjunctivitis
- M. Topical antihistamines
- N. Refer for surgery

**Questions:**

*30 year old Mr. Velu, an agricultural labourer, comes to you with history of redness in the right eye for two days. Patient gives you history of eye trauma caused by a leaf. He has associated symptoms of pain, watering and photophobia.*

8. (i) What would be your diagnosis based on this history?

*Manimala a 9 year old girl is brought to you by her mother with history of a red swelling in the left eye for the past one week. She has associated pain, irritation and photophobia. On examination the patient has a raised vascular nodule at the temporal limbus of the left eye.*

8. (ii) What could be the diagnosis?  
 8. (iii) How would you treat this patient?  
 8. (iv) In severe or recurrent cases, what could be the cause?

*45 year old Mr. Annamalai presents with a history of growth in both eyes for the past five years. Apart from mild discomfort he has no symptoms. On examination there is a triangular fleshy growth on both corneas. The growth in the right eye is approaching the center of the cornea.*

8. (v) What is your diagnosis?  
 8. (vi) How will you manage him?

**9. THEME –TREATMENT OF THERMAL INJURIES [QUESTIONS 9(i) - 9(vi)]**

**(Total: 6 Marks)**

**From the options 'A to L' given below, choose the best answer for the questions 9(i) – 9(vi)**

**Options:**

- |                            |                  |
|----------------------------|------------------|
| A. 1 - 2ml/kg/hr           | E. 0.5-1ml/kg/hr |
| B. Silver sulphadiazine 1% | F. 5000 ml       |
| C. 2390 ml                 | G. Mafenide 10%  |
| D. 1% Povidone Iodine      | H. 2500 ml       |

I. 0.25-0.5ml/kg/hr

K. Ringer lactate

J. Isotonic sodium chloride

L. Neosporin

**Questions:**

*40-year-old Mr. Muragan's dress caught fire when he was burning the waste of the house. The burns, when you examined him involved the anterior thorax and abdomen and both fore arms. You admitted him in your hospital under a specialist care.*

9. (i) Which intra venous fluid you will prefer to give him first?

9. (ii) What is the first day IV fluid requirement needed for Mr. Murugan?

*After some time, his blood test results came and it was found that he is having hyperkalemia*

9. (iii) Now, which intra venous fluid you will avoid in him?

*You catheterize him and adjust the IV fluids according to urine output. You know that the best guideline for fluid calculation is to be based on hourly urine output.*

9. (iv) What is the desired level of hourly urine output, you will aim in this patient?

*Mrs. Geetha brought her seven year old son with the complaint of burns in his forearm. You gave him some ointment to apply locally for two weeks.*

9. (v) Name the ointment which is painful for application and prevents epithelialization?

*After 2 weeks, again Mrs. Geetha brought her son to you. Now the wound is healing well. But he developed a bad sore throat and fever which was not subsiding. You checked his peripheral blood smear and his total count was 2200!*

9. (vi) Name the ointment which can cause this side effect.

**10. THEME: JAUNDICE [QUESTIONS 10(i) - 10(vi)]**

**(Total:6 Marks)**

**From the options 'A to H' given below, choose the best answer for the questions 10(i) - 10(vi)**

**Options**

A. Refer to a higher centre

E. Obstructive jaundice

B. Hemolytic jaundice

F. Explain and reassure

C. Cholestatic jaundice

G. Start Liv 52 tablets

D. Hepatocellular jaundice

H. Stop all haematinics

**Questions:**

*30 years old Mrs. Valli, who is on oral contraceptives for the past 2 years, had an ear infection followed by purulent ear discharge. She went to a local doctor who gave her Amoxycillin/Clavulanate combination and steroids. After few days she developed jaundice.*

**10. (i)** What type of jaundice is Mrs. Valli likely to have developed?

*45 years old Mr. Natarajan has been started on anti-tubercular therapy with Rifampicin, INH pyrazinamide and ethambutol. You advise him to undergo monthly laboratory testing for the first three months of therapy and then every three to six months to prevent the development of complication of therapy.*

**10. (ii)** What type of jaundice do you anticipate Mr. Natarajan to develop?

*20 years old Mr. Murugan is a known alcoholic and he is also on anti-Seizure medications for the past 5 years. He took many tablets of Paracetamol from the medical stores for body pain he had for the past 2 weeks. Now he developed jaundice.*

**10. (iii)** What type of jaundice is Mr. Murugan likely to have developed?

*50 year old Mrs. Radha comes to you with the complaint of itching all over the body and jaundice. She had no abdominal pain. Her blood test results showed conjugated hyperbilirubinemia and high levels of alkaline phosphatase.*

**10. (iv)** What type of jaundice does Radha have?

*23 year old pregnant lady in third trimester comes to you with the complaint of fatigue and pruritus. She has fever, vomiting and jaundice. Her LFT shows marked elevations of transaminases (ALT and AST).*

**10. (v)** What does this patient suffer from?

**10. (vi)** How will you manage her?

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