

(LM 0218)

M.MED. FAMILY MEDICINE

(Sub Code: 4011)

**SECOND YEAR THEORY EXAM- FEBRUARY 2018
PAPER I - MEDICINE AND ALLIED SCIENCES**

QP .CODE: 434011

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 deconate
- 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. Some options may not be used at all.

PART – A
DESCRIPTIVE QUESTIONS
(ANSWER ALL QUESTIONS)

1. 35 year old Mrs.Renuka, a house wife has come with joint pains for the past 2 months. The joint involvement is bilateral and symmetrical and involves all the fingers and wrist joint. There is history of morning stiffness. **(Total: 20 Marks)**

- A. What is the likely diagnosis for Mrs. Renuka? What are the criteria for making this diagnosis? **(4 Marks)**
- B. What are the other clinical features you will look for in this patient? **(5 Marks)**
- C. How will you investigate this patient? **(4 Marks)**
- D. How will you manage this patient? What are the safety precautions and monitoring required during drug therapy? **(7 Marks)**

2. 25 year old Mrs. Lalitha, a mother of four children has come with complaints of excessive tiredness, breathlessness on exertion, palpitations and dizziness. On examination, she is looking pale. **(Total: 20 Marks)**

- A. What are the common types of anaemia in our country? List the common causes of each type of anaemia. **(5 Marks)**
- B. How will you grade the severity of anemia? **(3 Marks)**
- C. How will you investigate a patient with anemia? **(4 Marks)**
- D. When will you suspect Vit.B12 deficiency? What are the ways it can present clinically? **(5 Marks)**
- E. How will you treat a patient with B12 deficiency anemia? **(3 Marks)**

PART – B
EXTENDED MATCHING QUESTIONS
(ANSWER ALL QUESTIONS)

1. **Theme: Bites and Stings [Questions 1(i) – 1(vi)]** **(Total: 6 Marks)**
From the options 'A to J' given below, choose the best answer for questions 1(i) – 1(vi):

Options:

- | | |
|------------------|-------------------|
| A. Cobra bite | F. Scorpion sting |
| B. Dry bite | G. Krait bite |
| C. Viper bite | H. Centipede bite |
| D. Hemotoxicity | I. Sea snake bite |
| E. Neurotoxicity | J. Millipede bite |

Questions:

When Tarun brought his wife with a snake bite, he brought the killed snake along with him. The snake was about 4-5 feet long, with a brown body and three rows of dark blotches. He said that his wife was working alone in the house. There is no mark on the hood of the snake and the fangs are anteriorly placed.

1(i). What bite is this?

1(ii). What is the type of toxicity you expect with this snake?

Mrs. Aruna was bitten by a snake. She was brought to the hospital after 4 hours with pain at the bite site; she also had hazy vision, drooping of eyelids, dysarthria, dysphagia, paresthesia, and somnolence.

1(iii). What bite is this?

DhuruV was bitten by a snake. He reported to the hospital after 6 hours of the bite with a history of painful swelling in the back of his left hand. On examination, he was afebrile, vital signs were normal, and there were no abnormal neurological signs. His hemoglobin was 13g/dl, clotting time was 10 mins, PT INR 1.2, Blood urea/creatinine – within normal limits and the urine was clear.

1(iv). What bite is this?

15 year old Sunil is brought with vomiting, salivation, sweating, priapism and history of unknown bite. His blood pressure is 140/ 98 mm Hg.

1(v). What could be the possible bite?

Seela was bitten by a snake and she developed generalized pain, tenderness, stiffness of muscles and trismus within 30 minutes of the bite.

1(vi). What kind of snake bite did Sheela sustain?

2. Theme: Diagnosis of Common Skin Infections [Questions 2 (i) – 2(vi)] (Total: 6 Marks)

From options ‘A to J’ given below, choose the best answer for questions 2(i) – 2(vi):

Options:

- | | |
|------------------|--------------------------------------|
| A. Impetigo | F. Pityriasis Versicolor |
| B. Candidiasis | G. Tinea Corporis |
| C. Scabies | H. Common Wart |
| D. Herpes Zoster | I. Herpes Simplex gingivo stomatitis |
| E. Oral Thrush | J. Condyloma acuminata |

Questions: What is the diagnosis for the patient descriptions given below?

2(i). "Burrow" is characteristic of this infection which you found in the finger webs of 7 year old Suresh, who came with the complaint of itching.

2(ii). 30 year old man presents with skin lesions on his hands which are smooth skin coloured papules with a hyperkeratotic surface.

2(iii). 5 year old Usha with lesions over her face, which has golden-yellow crusts on them.

2(iv). 15 year old Mala presents with a 2 days history of fever and painful oral lesions.

2(v). 50 year old Mr. Ram, a diabetic, presents with vesicular eruptions over the right side of the trunk which have a dermatomal distribution.

2(vi). 10 year old Babu who lives in a school hostel presents with a hypo-pigmented coalesced macules over his chest and upper back. He says that many of his hostel-mates also have similar lesions.

3. Theme: Treatment of Common Skin Infections [Questions 3(i) – 3(vi)] (Total: 6 Marks)

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

Options:

- | | |
|------------------------------|---------------------------------------|
| A. Systemic antifungals | G. Coal Tar |
| B. Cryotherapy | H. Surgical excision |
| C. Permethrin | I. Topical erythromycin |
| D. Acyclovir | J. Oral erythromycin |
| E. Terbinafine, hair removal | K. Topical fusidic acid, hair removal |
| F. 20% salicylic acid | L. Ciclopiroxolamine |

Questions: What is the treatment for the following patient scenarios?

- 3(i). 8 year old child comes with Pediculosis of the scalp hair.
- 3(ii). 38 year old Mrs. Kalyani has asymptomatic, relapsing lesions of brown scaly, well defined macules in flexures of axillae and submammary area.
- 3(iii). 45 year old Mrs. Sharmila has fine punched out pits, coalescing to give a cribriform pattern over soles.
- 3(iv). Mr. Natarajan comes with Common warts
- 3(v). 50 year old Saradha comes with fungal infection of toe nail and doesn't want oral drugs.
- 3(vi). 12 year old Savitha comes with yellowish brown concretions on hair shafts in axillae, causing yellow-brown staining of clothes in the area of arm pits.

4. Theme: HIV Related Infections [Questions 4(i) – 4 (vi)] (Total: 6 Marks)

From options 'A to N' given below, choose the best answer for the questions 4(i) – 4(vi):

Options:

- | | |
|-----------------------------------|-----------------------------------|
| A. Cerebral Lymphoma | H. Tuberculosis |
| B. Cerebral Toxoplasmosis | I. Streptococcal angina |
| C. Antibiotic associated diarrhea | J. Pneumocystis carinii infection |
| D. Esophageal Candidiasis | K. Cryptococcal Meningitis |
| E. Herpes Zoster | L. Norwegian Scabies |
| F. Lymphoma | M. Seborrheic Dermatitis |
| G. Streptococcal skin infection | N. Kaposi's Sarcoma |

Questions: What is the likely diagnosis for the following case scenarios?

- 4(i). 35 year old man with HIV presents with dysphagia and weight loss.
- 4(ii). 29 year old Murali was diagnosed with HIV, 2 years back. Now he presents with several large cervical lymph nodes. Aspiration of lymph node is negative for Acid Fast Bacilli. Lymph node biopsy shows caseation.
- 4(iii). 33 year old Mrs. Kala with HIV presents with left thoracic pain. On examination, she has a few vesicular lesions where she is feeling the pain.
- 4(iv). 18 year old young man, diagnosed to be HIV positive, presented with high fever and protracted headache. What will be your first differential diagnosis in this case?

4(v). 25 year old who was diagnosed to have HIV infection 2 years back did not come for regular follow-up. He presents now with seizure. After recovering from seizures, he was noticed to have left hemiparesis. What could he probably have?

4(vi). 26 year old HIV positive patient presents with dry cough and progressively increasing breathlessness. On examination, he is tachypnoeic disproportionate to the X-ray findings and his SPO2 is 86%. What is your diagnosis?

5. Theme: Geriatrics – Diagnosis [Questions 5 (i) – 5 (vi)] (Total: 6 Marks)

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

Options:

- | | |
|-------------------------------|--|
| A. Urge incontinence | G. Dementia |
| B. Stress incontinence | H. Atrophic vaginitis |
| C. Osteoporosis | I. Decreased response of |
| D. Osteoarthritis | J. hypothalamic-pituitary-adrenal axis |
| E. Age associated memory loss | K. Decreased testosterone |
| F. Delirium | L. Parkinsonism |

Questions: What is the likely diagnosis for the following case scenarios?

5(i). Mr. Raju, 67 year old, a retired engineer is distressed because he could not remember the name of a friend he met that morning. He has no other functional impairment.

5(ii). Mr. Krishnan, 75 year old has been fit till 6 months back when his relatives found him difficult to manage. He repeats the same questions several times; he goes to visit friends and cannot find his way back. He becomes angry when cautioned and becomes restless and is unable to sleep.

5(iii). An 87 year old Mrs. Murali presents with urinary incontinence, this occurs while at sleep at 2 or 3 AM. She also leaks 3-4 times during the day. The post void volume is 20ml.

5(iv). 84 year old Savithri had a trivial fall in the house last month and sustained a fracture neck of femur which required surgery.

5(v). 60 year old post-menopausal woman complains of dyspareunia and dysuria.

5(vi). 72 year old Mr. Rangasamy presents with resting tremor, rigidity, bradykinesia, postural instability and cognitive impairment.

6. THEME: Poisoning [Questions 6(i) – 6 (vi)] (Total: 6 Marks)

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

Options:

- | | |
|-------------------|-----------------------------|
| A. Flumazenil | F. Forced alkaline diuresis |
| B. Atropine | G. Orciprenaline |
| C. Ethanol | H. N acetyl cysteine |
| D. Naloxone | I. Specific Fab fragments |
| E. Zinc carbonate | |

Questions: Choose the appropriate antidote for the patient descriptions given below:

6(i). Antidote for an alcoholic who has attempted suicide by taking around 20 tablets of Paracetamol.

6(ii). Antidote for overdose of diazepam.

6(iii). Munna is brought to casualty with a history of ingestion of poison. The container that is brought along with reads 'carbamates'. What is the antidote?

6(iv). 6 men are brought to emergency after drinking illicitly brewed alcohol containing methanol. What is the antidote?

6(v). 4 year old Sheila has ingested 12 tablets of her grandfather's digoxin tablets accidentally.

6(vi). A habitual drug user is brought to the casualty with overdose of barbiturates. What is the antidote?

7. THEME: Diabetes mellitus [Questions 7 (i) –7 (vi)] (Total: 6 Marks)

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

Options:

- | | |
|------------------------------------|------------------------|
| A. Sulphonylureas | F. Acarbose |
| B. Life style modification | G. Metformin |
| C. Insulin therapy | H. Pioglitazone |
| D. ACE Inhibitors | I. Nateglinide |
| E. Calcium channel blockers | J. Liraglutide |

Questions: What is your treatment of choice in the following cases?

7(i). Mrs. Banu, age 45, is a newly diagnosed diabetic with no complications. In spite of her lifestyle modifications, her BMI is 32. The investigations are as follows: FBS 183mg%; PPBS 384mg%; urinary acetone negative.

7(ii). Mr. Shaheen, age 18, newly detected diabetic with no complications. His BMI: 15. The investigations are as follows: FBS: 233 mg%; PPBS: 483 mg%. Urinary Acetone: Negative.

7(iii). Mr. Mani, age 47, diagnosed to have diabetes a month ago with no complications. His BMI 21. He was advised 1800 kilo calories diet and walking for 45 minutes a day; He followed meticulously. After one month, the investigations are as follows: FBS: 186 mg%; PPBS: 376 mg%.

7(iv). Mr. Ramachandran, age 51, diabetic on Biguanides for the past two years. BMI 35. Occasional poor compliance. Now he has come with cellulitis of right leg extending to the knees. The investigations are as follows FBS 180 mg%; PPBS: 294 mg%, Creatinine normal.

7(v). Mrs. Kalaivani, age 24, primigravida with 6 months amenorrhoea, was found to have gestational diabetes in GTT. Fasting sugar after 2 weeks of diet and exercise is 148 mg%. She is not willing for insulin at all.

7(vi). Mr. Subash, age 48, diabetic on Sulphonylureas for the past three years. BMI 21. very good compliance. FBS 100 mg%; PPBS: 148 mg%. BP 140/ 90 in repeated occasions. Creatinine normal. Urine micro albumin 145 µg/minute.

8. THEME: Fever [Questions 8 (i) – 8 (vi)] (Total: 6 Marks)

From the options 'A to L' given below, choose the best answer for questions 8 (i) – 8 (vi):

Options:

- | | |
|-----------------------------------|---|
| A. Ampicillin + Gentamicin | G. IV fluids and monitoring |
| B. Imipenem | H. Plasma expanders and monitoring |
| C. Ceftriaxone | I. Oral fluids and monitoring |
| D. Chloroquine + Primaquin | J. Artesunate followed by ACT |
| E. Metronidazole | K. Chloroquine |
| F. Doxycycline | L. Ciprofloxacin |

Questions: Choose the correct management for the following patients:

8(i). Mr. Leo, a 35 year old business man has come with complaints of sudden onset of fever, malaise, headache for the past 12 hours. You find that he also has severe back pain, retro orbital pain and mild conjunctival suffusion. There is no vomiting, pain abdomen or evidence of any mucosal bleeds. On examination, his blood pressure is 120/80 mmHg. There is a faint macular rash or mottling of the skin and liver is just palpable. Tourniquet test is positive. On investigating, Mr. Leo's platelet count is 2,12,000/ mL.

8(ii). Mr. Hari has come with complaints of fever, headache, myalgia, cough and diarrhoea for the past 5 days. On examination, he is febrile; pulse rate is 88/minute and his blood pressure is 130/80 mmHg. There is a small black scab like lesion in the left forearm and the left axillary nodes are enlarged. Liver is palpable 3 cm below the right costal margin.

8(iii). Mr. Paul has come with fever for the past 4 days. He has vomiting and body ache, but he is otherwise fine. His peripheral smear shows plasmodium vivax. What will be your first drug of choice for treatment of the present episode?

8(iv). Mrs. Geetha is febrile and looks dehydrated. She has two children and her LMP was 2 weeks ago. Her blood pressure is 90/60 mmHg. She is continuously vomiting and not retaining anything orally. Her blood smear is positive for malaria, serum bilirubin is 4 mg/dl and serum creatinine 2.2mg/dl.

8(v). Mrs. Palaniamma, a 42 year old a mother of three children who works as a manual laborer, comes to you with dysuria and fever for 3 days.

8(vi). A 40 year Mr. Bhuiyo has been brought to you in a state of coma. He is from a malarial endemic area and a blood smear confirms the presence of Falciparum Malaria. You catheterize him and you get about 100 ml of reddish urine.

9. Theme: Weight Loss in the Adult [Questions 9 (i) –9(vi)] (Total: 6 Marks)

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

Options:

- | | |
|--------------------------|---------------------------|
| A. Hypothyroidism | B. Hyperthyroidism |
|--------------------------|---------------------------|

- | | |
|--------------------------|-------------------------------|
| C. Diabetes Mellitus | G. Tuberculosis |
| D. Chronic Renal Failure | H. Pheochromocytoma |
| E. Depression | I. Congestive cardiac failure |
| F. Malignancy | J. Chronic liver disease |

Questions: What could be the likely cause for loss of weight in the following scenarios?

9(i). 60 year old Mr. Titus, a known diabetic comes to you with the complaints of nausea and decreased appetite. He has noticed that his weight has reduced from 55 kg to 44 kg over the past six months. His sugars are under control. On examination his blood pressure is 140/90, he has pallor and mild bilateral pitting pedal edema.

9(ii). 55 year old Mrs. Cynthia presents with complaints of loss of appetite since 1 month. On examination, there is raised JVP, pedal edema and basal crackles on auscultation.

9(iii). A 28 year old Maya presents with complaints of weight loss though she has increased appetite, She is very happy with her family and her work. She also says that she has become intolerable to heat, feels anxious, and has palpitations, sweating and tremors.

9(iv). 26 year old Dinakaran came with history of loss of appetite and loss of weight. He has lost interest in his work and gets tired easily. He has lost his father six months ago.

9(v). 40 years old Hafeez presents with increased appetite but has loss of weight, he also feels thirsty and increase in frequency of micturition.

9(vi). 60 year old Narayan came with weight loss and constipation for the past three months. Constipation alternates with periods of diarrhea. There is blood associated with stools.

10. Theme: Palliative care [Questions 10 (i) –10 (vi)] (Total: 6 Marks)

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

Options:

- | | |
|--|--------------------------|
| A. Oral Morphine | G. Step 3 analgesia |
| B. Step 2 analgesia | H. Vomiting |
| C. Haloperidol | I. Hyoscine Butylbromide |
| D. Constipation | J. Anaphylaxis |
| E. Stop Morphine | K. Fluoxetine |
| F. Increase dose of dextropropoxyphene & paracetamol | L. Domperidone |
| | M. Headache |

Questions:

10(i). Mrs. Saraswathi has carcinoma breast which was operated. She came back with severe bone pain due to bone secondaries. She went to the palliative clinic where she was started on a combination of paracetamol and dextropropoxyphene which she is taking once or twice a day. She comes to you with complaints that pain has not subsided. How will you manage her?

10(ii). Mr. Dayalan has Rhabdomyosarcoma of thigh which was operated. He was on chemotherapy. He has come back with lung secondaries with severe chest pain and cough. His pain is relieved only on taking Tab. Morphine. What is the commonest side effect of morphine?

10(iii). Mrs. Leela, a known patient of long standing diabetes mellitus, hypertension and foot ulcers which are non-healing, comes to you with severe pain of both feet not relieved on taking

different types of medicines. You examine her and find her pain to be neuropathic. What is the next step of analgesia you would recommend?

10(iv). Mr. Sridhar has large liver secondaries from an unknown primary. He has severe abdominal pain and was started on Tab. Morphine. He developed severe, unrelenting nausea. What is your next line of management?

10(v). Mr. Chellappa has inoperable carcinoma of the urinary bladder which has spread to the lungs. He has developed breathlessness which has become frightening for him and his family. How will you treat him?

10(vi). Mrs. Parvathi has end stage carcinoma of ovary with multiple metastasis. She is taken care of at home by her family. She is terminal now and produces a noise when she is breathing which is frightening for the family. How will you treat this?
