



## SAUDI BOARD RESIDENCY TRAINING PROGRAM

### Applied Medical Sciences - Medical Microbiology

#### Promotion Examination

##### Written Examination Format:

- A written examination shall consist of one paper with not less than 100 MCQs with a single best answer (one correct answer out of four options).
- The examination shall contain type K2 questions (interpretation, analysis, reasoning and decision making) and type K1 questions (recall and comprehension).
- The examination shall include basic concepts and clinical topics relevant to the specialty.
- Clinical presentation questions include history, clinical finding and patient approach. Diagnosis and investigation questions; include the possible diagnosis and diagnostic methods. Management questions; including treatment and clinical management, either therapeutic or non-therapeutic, and complications of management. Materials and Instruments questions; including material properties, usage, and selection of instruments and equipment used. Health maintenance questions; include health promotion, disease prevention, risk factors assessment, and prognosis.

##### Passing Score for Promotion Exam:

The trainee's performance is assessed in each of the evaluation formulas according to the following scoring system:

Score	Less than 50%	50% – 59.4%	60% - 69.4%	More than 70%
Description	Clear Fail	Borderline Fail	Borderline Pass	Clear Pass

1. To upgrade the trainee from a training level to the next level, She/he must obtain at least a **Borderline Pass** in each evaluation form.
2. The program director may recommend to the local supervision committee to request the promotion of the trainee who did not meet the previous promotion requirement according to the following:
  - A. In case that the trainee gets a **borderline Fail** result in **one** of the evaluation forms, the remaining evaluation forms must be passed with **Clear Pass** in at least **one** of them.
  - B. In case that the trainee gets a **borderline Fail** result in **two** of the evaluation forms to a maximum, provided they do not fall under the same theme (Knowledge, Attitude, Skills). The remaining evaluation forms must be passed with **Clear Pass** in at least **two** of them.
  - C. The promotion must be approved in this case by the scientific council for the specialization.



### Blueprint Outlines

No.	<b>R1</b>	Section	Proportion%
1		Lab Safety	10%
2		Quality Control	10%
3		Sterilization and Disinfection	15%
4		Handling of Specimens	15%
5		Microscopy	5%
6		Culture Methods	20%
7		Further Processing	5%
8		Antimicrobial Investigations	15%
9		Lab Ethics	5%
<b>Total</b>			<b>100%</b>

#### **Note:**

Blueprint distributions of the examination may differ up to +/-3% in each category.

#### **Suggested References for R1:**

- Manual of Clinical Microbiology, 10<sup>th</sup> Edition. James Versalovic.
- Medical Microbiology, 8<sup>th</sup> Edition. Patrick Murray.
- Bailey & Scott's Diagnostic Microbiology, 13<sup>th</sup> Edition. Betty Forbes.
- Microbiology with Diseases by Body System, 4<sup>th</sup> Edition. Robert Bauman.

### Blueprint Outlines

No.	<b>R2</b>	Section	Proportion%
1		Clinical and systematic Bacteriology – Section 1	13%
2		Clinical and systematic Bacteriology – Section 2	13%
3		Clinical and systematic Bacteriology – Section 3	11%
4		Clinical and systematic Bacteriology – Section 4	13%
5		Clinical and systematic Bacteriology – Section 5	12%
6		Clinical and systematic Bacteriology – Section 6	13%
7		Clinical and systematic Bacteriology - Section 7	12%
8		Clinical and systematic Bacteriology – Section 8	13%
<b>Total</b>			<b>100</b>

#### **Note:**

Blueprint distributions of the examination may differ up to +/-3% in each category.

### Suggested References for R2:

- Bailey & Scott's Diagnostic Microbiology, 13th Edition. Forbes, Sahn, Weissfeld.
- Murray, Medical Microbiology, 9 th Edition

### Blueprint Outlines

No. <b>R3</b>	Section	Proportion%
1	Molecular and Emerging Technologies-1	10%
2	Molecular and Emerging Technologies-2	10%
3	Clinical Parasitology-1	10%
4	Clinical Parasitology-2	10%
5	Virology	15%
6	Clinical Immunology	15%
7	Mycology-1	10%
8	Mycology-2	10%
9	Environmental Microbiology	10%
<b>Total</b>		<b>100%</b>

### **Note:**

Blueprint distributions of the examination may differ up to +/-3% in each category.

### Suggested References for R3:

- Manual of Clinical Microbiology, 10<sup>th</sup> Edition. James Versalovic.
- Medical Microbiology, 8<sup>th</sup> Edition. Patrick Murray
- Bailey & Scott's Diagnostic Microbiology, 13<sup>th</sup> Edition. Betty Forbes
- Microbiology with Diseases by Body System, 4<sup>th</sup> Edition. Robert Bauman
- Diagnostic Medical Parasitology, 5<sup>th</sup> Edition. Lynne S Garcia

### Crash Courses:

- Outline of each course including suggested reading references given by the provider.

### **Note:**

This list is intended for use as a study aid only. SCFHS does not intend the list to imply endorsement of these specific references, nor are the exam questions necessarily taken solely from these sources.



### Example Questions

#### EXAMPLE OF K1 QUESTIONS

##### Question 1

Which of the following Plasmodium is a causative agent of malignant malaria?

- A. *P. vivax*
- B. *P. ovale*
- C. *P. malariae*
- D. *P. falciparum*



## EXAMPLE OF K2 QUESTIONS

### Question 1

A 50-year-old man presents with abdominal pain and diarrhea. The blood and stool samples sent for analysis (see lab results and reports).

#### **CBC results:**

Test	Result	Normal Values
WBC	5.5	4.5–10.5 x 10 <sup>9</sup> /L
Neutrophils	54.7	40–60%
Lymphocytes	34.1	20–40 %
Monocytes	7.5	2–8 %
Eosinophils	3.0	1–4 %
Basophils	0.7	0.5–1 %
RBC	4.28	4.7–6.1 x 10 <sup>12</sup> /L
HGB	9.7	13.5–17.5 gm/dL
HCT	29.9	42–52%
MCV	69.7	80–95 fl
MCH	22.6	27–31 pg
MCHC	32.4	32–36 gm/dL
RDW	18.4	11.5–14.5%
PLT	331	150–450 x 10 <sup>9</sup> /L
MPV	8.8	7.4–10.4 fl

#### **Microscopic examination of stool:**

Pus cell	+1	Nil
RBC	Nil	Nil
Mucous	++	
Parasite	Oval and thin shell with immature content. The size is 65 µm. There are 50 eggs/slide.	

#### **Macroscopic examination of stool**

Color: Dark brown      Consistency: loose

#### **Fecal Occult Blood:**

Positive

Which of the following is the most likely diagnosis?

- A. Filariasis
- B. Onchocerciasis
- C. Strongyloidiasis
- D. Ancylostomiasis