



IAMM EQAS Microbiology: Bacteriology/ Serology
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MICROBIOLOGY EXTERNAL QUALITY ASSESSMENT SCHEME
 Under the aegis of Indian Association of Medical Microbiologists



0 1 1 0 0

CODE NO:

98th EQAS PACKAGE

MARCH 2018

MARCH 2018 / BACTERIOLOGY SMEARS:

Evaluation format: Presence of Pus cells-many/moderate/few/no, Presence of epithelial cells –many/ moderate/few/no (1 mark)
 Presence of organism/s and gram stain finding, morphology (shape), arrangement and any other special characteristics observed and grading (2mark) Probable organism/ Impression (1mark)

Exercise Number	Question	Report	Evaluation		
			0	0.5	1
SM1	Please carry out a Gram stain on the given fixed smear prepared from a 24 year old lactating mother with fever and a painful indurated, erythematous breast swelling.	Pus cells: Many pus cells Epithelial cells: No epithelial cells Organism: grading /morphology: Many Gram positive spherical cocci arranged in pairs, short chains and groups. Impression/Probable organism: Probable case of breast abscess / <i>Staphylococcus</i> spp	0	0.5	1
			1.5	2	2.5
			3	3.5	4
SM2	Please carry out a Gram stain on the given fixed smear prepared from a 23 year old female patient with a 2 day history of dysuria, increased frequency and urgency of micturition.	Pus cells: Many pus cells Epithelial cells: No epithelial cells Organism: grading /morphology: Many gram negative bacilli Impression/Probable organism: Appropriately collected specimen. Gram stain findings consistent with a urinary tract infection.	0	0.5	1
			1.5	2	2.5
			3	3.5	4
SM3	Please carry out a Gram stain on the given fixed smear prepared from a throat swab from a 5 year old child with a 3 day history of fever, sore throat and dyspnea. A mild pharyngeal membrane is noticed on examination.	Pus cells: No pus cells Epithelial cells: No epithelial cells Organism: grading /morphology: Many Gram positive pleomorphic bacilli-club shaped in cuneiform arrangement. Few slender Gram positive bacilli in palisade arrangement. Impression/Probable organism: Probable case of diphtheria/ <i>Corynebacterium diphtheriae</i>	0	0.5	1
			1.5	2	2.5
			3	3.5	4

MARCH 2018 / BACTERIOLOGY CULTURE:

A freeze-dried (lyophilized) culture of an organism isolated from a clinical specimen is given. Identify the pathogen and carryout the antimicrobial susceptibility testing according to the panel given below.

Evaluation format: Microscopy: Gram stain / Hanging drop (2 marks), Culture description: Minimum 2 culture plates (2 marks), Minimum 3 key characteristics (2marks), Final identification (1mark), Susceptibility (2 marks/drug - Total: 12 marks)

*Final identification: For confirmatory tests by automated systems, the VITEK/ other printouts MUST be attached with the report.

Susceptibility interpretation errors:

Minor error (mE) : Susceptible / resistant isolate reported as intermediate susceptible (1 mark)

Major error (ME) : Susceptible isolate reported as resistant (0 marks)

Very major error (VME) : Resistant isolate reported as susceptible (-1 marks)

✓ VITEK/ E-test MIC will be awarded the complete mark if the interpretation is consistent with the expected report.

CUI: Isolated from a blood specimen of a 17 year old male patient with fever and chills along with constipation for 5 days
FINAL IDENTIFICATION: *Salmonella enterica* subsp *enterica* serovar Paratyphi A

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 1 2
Culture description	✓		0 1 2
Minimum of 3 key characteristics	✓		0 1 2
Final report	✓		0 1

Susceptibility report	EXPECTED REPORT		REPORTED		MARK
	Zone size (mm)	Interpretation	Correct	Incorrect	
Ampicillin	≥17	Susceptible	✓		-1 0 1 2 mE/ ME/ VME
Chloramphenicol	≥18	Susceptible	✓		-1 0 1 2 mE/ ME/ VME
Co-trimoxazole	≥16	Susceptible	✓		-1 0 1 2 mE/ ME/ VME
Ciprofloxacin	Ciprofloxacin 24 mm - Intermediate Susceptible Pefloxacin - Resistant	Resistant			NOT EVALUATED
Ceftriaxone	≥23	Susceptible	✓		-1 0 1 2 mE/ ME/ VME

CU2: Isolated from a urine specimen from a 75 year old man, case of multiple myeloma admitted to the ICU and has a new spike of fever on antibiotics.

FINAL IDENTIFICATION: *Enterococcus faecium* (VRE)

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy(Gram stain + Motility)	✓		0 1 2
Culture description	✓		0 1 2
Minimum of 3 key characteristics	✓		0 1 2
Final report	✓		0 1

Susceptibility report	EXPECTED REPORT		REPORTED		MARK	Error
	Zone size	Interpretation	Correct	Incorrect		
Ampicillin	≤16	Resistant	✓		-1 0 1 2	mE / ME / VME
High level Gentamicin	6 mm	Resistant	✓		-1 0 1 2	mE / ME / VME
Nitrofurantoin	≤14	Resistant	✓		-1 0 1 2	mE / ME / VME
Vancomycin	≤14	Resistant	✓		-1 0 1 2	mE / ME / VME
Linezolid	≥23	Susceptible	✓		-1 0 1 2	mE / ME / VME

CU3: Isolated from a urine specimen from a 40 year old female patient, a known case of renal calculi with a 3 day history of fever with chills along with increased frequency of micturition and dysuria.

FINAL IDENTIFICATION: *Proteus mirabilis*

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy(Gram stain + Motility)	✓		0 1 2
Culture description	✓		0 1 2
Minimum of 3 key characteristics	✓		0 1 2
Final report	✓		0 1

Susceptibility report	EXPECTED REPORT		REPORTED		MARK
	Range	Interpretation	Correct	Incorrect	
Cefotaxime	≥26	Susceptible	✓		12 marks
Ceftazidime	≥21	Susceptible	✓		-1 0 1 (2)
Nitrofurantoin	≤14	Resistant	✓		-1 0 1 (2)
Co-trimoxazole	≥16	Susceptible	✓		-1 0 1 (2)
Piperacillin/tazobactam	≥21	Susceptible	✓		-1 0 1 (2)
Ertapenem	≥22	Susceptible	✓		-1 0 1 (2)
					mE / ME / VME
					mE / ME / VME
					mE / ME / VME
					mE / ME / VME
					mE / ME / VME
					mE / ME / VME
					mE / ME / VME

MARCH 2018 / SEROLOGY

Test method employed for detection of Rheumatoid Factor at your lab: Turbidimetry
 Name of kit used: Tulip Diagnostics Ltd

Peer group (n) =15

Evaluation format for Rheumatoid Factor full mark for correct interpretation

	Parameter	Your Result	Your Value (IU/ml)	Intended Result	Expected Range (IU/ml)	Median	Max Marks	Your Score
SE1	Rheumatoid Factor	Negative	3.97	Negative	0.5-58	8.3	2	2
SE2	Rheumatoid Factor	Negative	104	Negative	1.0-43	9.5	2	2
SE3	Rheumatoid Factor	Positive	52.95	Positive	13.1-184	78	2	2

CODE NO:

0 1 1 0 0

SM 1	SM2	SM3	CU1	CU2	CU3	SE1	SE2	SE3	Marks obtained	
4	4	4	15	17	19	2	2	2	69	100%
4	4	4	15	17	19	2	2	2	Maximum marks = 69	

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Date: 30.4.18