2020: 4th IAMM EQAS Microbiology: Bacteriology/ Serology
Department of Clinical Microbiology, Christian Medical College, Vellore-632004, Tamil Nadu
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NABL ACCREDITED ISO / IEC 17043:2010, PC-1033 / 27.12.2018

Member Id: M 0 5 3 2

Last date for receiving reports: July 15, 2020

MARCH 2020 / BACTERIOLOGY SMEARS:

Question: Carry out the appropriate staining procedure and document the relevant observation.
Evaluation format:
Presence and grading of host cells & debris (many/ moderate/few/no) **(1 mark)**
Presence & grading of organism/s gram stain finding, morphology (shape), arrangement and any other special characteristics observed **(2 marks)**
Interpretation: Probable organism OR Impression- as asked in the question **(1 mark)**

Exercise Number	Question	Report	Evaluation
SM1	**Please carry out a Gram stain on the given fixed smear prepared from a voided URINE specimen of a 63 year old diabetic lady with a history of mild dysuria and increased frequency for 2 days.**	**Presence of host cells & debris (1mark):** Pus cells - rare; Epithelial cells - Few **Description of Organism/s (2marks):** Many gram positive cocci in single, pairs & short chains and many gram negative long slender bacilli along with few gram negative cocci in pairs and candida seen. **Impression/comment (1 mark):** Improper collection, "mid stream clean catch" urine sample should be asked for	
SM2	**Please carry out a Gram stain on the given fixed smear prepared from an EXUDATE specimen of a 23 year old man presenting with an exudative lesion on the right leg associated with high grade fever, chills and myalgia for 2 days**	**Presence of host cells & debris (1mark):** Many pus cells. Background filled with debri. **Description of Organism/s (2 marks):** Many gram positive cocci in single pairs and chains seen **Possible organism (1 mark):** Streptococcus pyogenes.	

SM3	**Please carry out a Gram stain on the given fixed smear prepared from an ENDOTRACHEAL ASPIRATE specimen of a 69 year old gentleman admitted in the ICU with worsening saturation.**	**Presence of host cells & debris (1mark):** Many pus cells. Background filled with debris **Description of Organism/s (2 marks):** Many gram negative coccobacilli seen. Few gram negative diplococci seen. **Possible organism (1 mark):** Acinetobacter baumanii along with probably moraxella.	

MARCH 2020 / BACTERIOLOGY CULTURE:

Question: A freeze-dried (lyophilized) culture of an organism isolated from a clinical specimen is given. Carry out the appropriate techniques for each exercise and identify the pathogen. Carry out the antimicrobial susceptibility testing according to the panel given below.

INSTRUCTION: RECONSTITUTION OF LYOPHILIZED CULTURES

The vial containing freeze-dried material must be handled carefully. These vials contain infectious organisms. Please follow standard safety procedures and usual universal precautions when handling this material. It is advised to open the vial in a Bio-safety cabinet Type 2A2

Opening of the lyophilized vial

1. The lyophilized material provided must be rehydrated. When reconstituting them, exercise extreme caution not to create aerosols or spills.
2. Do not mouth pipette.
3. Reconstitute when you are ready to inoculate onto culture plates.
4. Do not remove the whole cap. Lift only the pre-cut section of the metal cap.
5. Disinfect the rubber stopper with 70% alcohol/ rectified spirit.
6. With a sterile needle and syringe pierce the rubber cap and inoculate the rehydrating broth.

Re-hydration and Recovery

1. Add about **0.5ml of Nutrient broth** using a sterile needle and syringe.
2. Gently swirl the vial and allow 5-10 minutes for the dried material to rehydrate completely.
3. Hold the vial vertically.
4. Draw the reconstituted fluid up into the syringe slowly.
5. Separate the needle tip from the syringe carefully.
6. Inoculate the specimen / organism appropriate enriched and/or selective media to facilitate recovery of the organisms.
7. Incubate both vial with remaining contents and plate cultures in the appropriate environment – ambient / CO2 incubator at 35-37°C as per routine procedures.
8. Overnight vial contents can be sub cultured again, if required.
9. After use decontaminate and then discard the vial according to your hospital / lab policy.

Note: The viability and culture purity of all batches of lyophilized cultures have been verified prior to packing. The identification has been confirmed by conventional, automated and molecular methods.

EVALUATION FORMAT:

Culture microscopy& identification: Microscopy (1mark), culture characteristics (2 mark), Biochemical key identification characteristics (2 marks), Final identification (2 marks)
Susceptibility testing: (2 marks per drug)

For culture identifications or susceptibility tests that have been performed by automated systems, the printouts of the automated report MUST be attached along with the report for the evaluator's reference.
✓HOWEVER, THIS REPORT SHEET MUST BE COMPLETED BY YOU.

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.**

CU 1: Isolated from a FECES specimen of a 26year old gentleman with a 2 day history of diarrhea and vomiting associated with abdominal pain.

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 key characteristics)	Method used in identification: (Please circle which is method has been used)
Gram negative short slim curved comma shaped rods seen. Highly motile	NA: Scanty growth of pale yellow coloured medium sized colonies with mucoid colonies with regular edges seen. BA: Beta haemolytic, moderate growth, large colonies. Mac: Non lactose fermenting	Catalase - Positive Oxidase - Positive Indole - Positive Citrate - Negative. Urease - Positive. TSI - A/A No gas, No H_2S MMM - Mannitol fermented, motile	Manual ✓ Automation Detail:
FINAL Identification of given organism	**Genus**	**Species**	**Serotype (if applicable)**
	Vibrio	cholerae	? O139 (as it is mucoid)

Antibiotics	Ampicillin	Tetracycline	Co-trimoxazole	Cefotaxmine	Ciprofloxacin
Zone size (mm) OR MIC(µg/ml)	20 mm	26 mm	27mm	32 mm	28 mm
Interpretation (S / MS / R)	S	S	S	S	S
Method Details if Automation: (e.g. Vitek – 2, Microscan etc.)					

Please note:

1. **Provide only ONE FINAL susceptibility report for each drug tested. If two reports with discrepant interpretations are reported, they will be marked as an incorrect answer henceforth.**
2. **Incomplete forms will NOT be evaluated henceforth.**

CU 2: Isolated from a URINE specimen of a 35year old gentleman with hemiplegia on a long term urinary catheter

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 key characteristics)	Method used in identification: (Please circle which is method has been used)
Short thin gram negative bacilli seen, some look like coccobacilli Motile	NA: Moderate growth of medium sized red colored circular colonies with smooth glistening surface and regular edges seen. BA: Beta haemolytic deep red coloured colonies. MAC: Red coloured lactose fermenting colonies.	Catalase – Positive Oxidase – Negative Indole – Negative Urease – Positive Citrate – Positive TSI – K/A with gas No H_2S MMM – Mannitol fermented, motile	Manual ✓ Automation Detail:
FINAL Identification of given organism	**Genus** Serratia	**Species** marcescens	**Serotype (if applicable)**

Antibiotics	Cefpodoxime	Co-trimoxazole	Amoxicillin-clavulanate	Levofloxacin	Meropenem
Zone size (mm) OR MIC(µg/ml)	29	24	12	30	26
Interpretation (S / MS / R)	S	S	R	S	S
Method Details if Automation: (e.g. Vitek – 2, Microscan etc.)					

Please note:

1. **Provide only ONE FINAL susceptibility report for each drug tested. If two reports with discrepant interpretations are reported, they will be marked as an incorrect answer henceforth.**
2. **Incomplete forms will NOT be evaluated henceforth.**

CU 3: Isolated from an EXUDATE specimen from a 22year old lady with a history of extensive burns to her right forearm.

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 key characteristics)	Method used in identification: (Please circle which is method has been used)
Gram positive cocci in single pairs and clusters Non motile	NA: Moderate growth of golden yellow coloured circular medium sized colonies with smooth moist surface and regular edges. BA: Beta haemolytic Mac: No growth.	Catalase - Positive Oxidase - Negative Slide coagulase - Positive Tube coagulase - Positive Mannitol - fermented Urease - Positive,	Manual ✓ Automation Detail:
FINAL Identification of given organism	**Genus** Methicillin Resistant	**Species** Staphylococcus aureus (MRSA)	**Serotype (if applicable)**

Antibiotics	Cefoxitin	Erythromycin	Co-trimoxazole	Clindamycin	Linezolid
Zone size (mm) OR MIC(µg/ml)	0 mm	26 mm	30 mm	28 mm	33 mm
Interpretation (S / MS / R)	R	S	S	S	S
Method Details if Automation: (e.g. Vitek – 2, Microscan etc.)					

Please note:

1. Provide only ONE FINAL susceptibility report for each drug tested. If two reports with discrepant interpretations are reported, they will be marked as an incorrect answer henceforth.
2. Incomplete forms will NOT be evaluated henceforth.

Please indicate the exercises that you have participated in: ☑ Bacteriology smears ☑ Cultures ☐ Serology

Laboratory head name: Dr. Jothi Prasad

Signature / Seal: [signature] Date of dispatch: 14-7-2020.

Dr. JOTHI PRASAD, M.D.,
MICROBIOLOGIST
Reg. No: 79307

MORRIS HATHLAS NAGERCOIL

Member ID: ☐☐☐☐☐

SM 1	SM2	SM3	CU1	CU2	CU3	SE1	SE2	SE3	Marks obtained
4	4	4	17	17	17	2	2	2	Maximum marks

TOTAL MARKS: ☐☐ Evaluator name / Signature_____ Date_____

103rd IAMM EQAS Microbiology: Bacteriology/ Serology
Department of Clinical Microbiology, Christian Medical College, Vellore-632004, Tamil Nadu
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NABL ACCREDITED ISO / IEC 17043:2010, PC-1033 / 27.12.2018

OCTOBER 2019

103rd EQAS EVALUATION REPORT

MEMBER ID: M 0 5 3 2

Marks Obtained: 61.5 / 65 (94.6%)

OCTOBER 2019 / BACTERIOLOGY SMEARS:

Question: Carry out the appropriate staining procedure and document the relevant observation.
Provide the Impression or probable organism seen (AS ASKED)
Please refer the attached evaluation format for details on the criteria for evaluation.

PLEASE NOTE: The inaccuracies in the participant report resulting in deduction of marks has been underlined in the expected report.

Exercise Number	Question	Expected Report	Evaluation		
SM1	Please carry out a Gram stain on the given fixed smear prepared from a Pleural fluid specimen of a 74 year old gentleman with a history of high grade fever associated with cough, breathlessness and chest pain for 2 days.	Presence of host cells & debris (1mark): **Many pus cells** Organism (2marks): **Many Gram positive (oval / flame/ lanceolate) shaped cocci in pairs.** Possible organism (1 mark): ***Streptococcus pneumoniae***	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 throat swab specimen of a 6 year old girl with history of low grade fever for 3 days associated with sore throat and stridor.	Presence of host cells & debris (1mark): **No pus cells** Organism (2 marks): **Many Gram positive slender, club shaped bacilli arranged in a cuneiform (X and V letter pattern/ Chinese letter) arrangement.** Possible organism (1 mark): **Corynebacterium species (*Corynebacterium diphtheria*)**	0	0.5	1
			1.5	2	2.5
			3	3.5	(4)

SM3	.Please carry out a Ziehl-Neelsen stain on the given fixed smear prepared from a sputum specimen of a 45 year old gentleman with a history of low grade fever and productive cough for 3 weeks. Please provide the report as per the RNTCP grading format.	Organism (2 marks): **Long, slender, acid fast bacilli with a beaded appearance** FINAL REPORT (2 marks): **Acid-fast bacilli seen - Probably *Mycobacterium tuberculosis*** **RNTCP grading: 1+ (Few AFB seen / 100 oil immersion fields)**	**0**	**0.5**	**1**
			1.5	**2**	**2.5**
			3	**3.5**	**4**

OCTOBER 2019 / BACTERIOLOGY CULTURE:

Question: A freeze-dried (lyophilized) culture of an organism isolated from a clinical specimen is given. Carry out the appropriate techniques for each exercise and identify the pathogen. Carry out the antimicrobial susceptibility testing according to the panel given below.

Please refer the attached evaluation format for details on the criteria for evaluation.

A 'partially correct' or 'incorrect' component of the participant report which has resulted in a deduction of marks has been in indicated in the evaluation report below.

CU1: Isolated from a blood culture specimen of a 72 year old gentleman admitted with high grade fever, chills and increasing somnolence for 2 days.

FINAL INDENTIFICATION: *Escherichia coli*

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		**0 0.5 (1)**
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		**1 2 3 (4)**
Final identification	✓		**0 0.5 1 1.5 (2)**

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	10 marks	Error
Ceftazidime	≤17	≥ 16.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Cefotaxime	6mm (≤22 R)	≥4.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Amikacin	≥17	≤16.0	SUSCEPTIBLE	✓		-1 0 1 (2)	mE/ ME/ VME
Ciprofloxacin	6mm (≤21 R)	≥1.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Meropenem	≥23	≤1.0	SUSCEPTIBLE	✓		-1 0 1 (2)	mE/ ME/ VME

CU2: Isolated from an exudate specimen of a 65 year old diabetic lady who presented casualty with an exudative burn ulcer on her left lower limb. She had been discharged from hospital 8 days ago with healing ulcers and had been advised daily dressings.

FINAL IDENTIFICATION: *Shewanella algae*

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 0.5 (1)
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 (4)
Final identification	✓		0 0.5 1 1.5 (2)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	8 marks	Error
Ceftazidime	Disk diffusion not recommended as per CLSI-M100 Ed 29 (2019)*	≤8.0	Susceptible	NOT EVALUATED			
Amikacin		≤16.0	Susceptible				
Piperacillin/ Tazobactam		≤16.0/4	Susceptible				
Ciprofloxacin		≥4.0	RESISTANT				
Imipenem		8.0 (BMD)	Intermediate susceptible				

*Disk diffusion reports NOT evaluated.

CU3: Isolated from a urine specimen of a 66 year old gentleman on an indwelling urethral catheter, following trans-urethral resection of the prostate gland.

FINAL IDENTIFICATION: ***Staphylococcus epidermidis***

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 0.5 (1)
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 (4)
Final identification	✓	Species Incorrect	0 0.5 (1) 1.5 2

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	10 marks	Error
Cefoxitin	≥18	Oxacillin ≤0.25	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Nitrofurantoin	≥17	≤32.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Co-trimoxazole	≥16	<2.0/38	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Ciprofloxacin	≥21	≤1.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Linezolid	≥21	≤4.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME

OCTOBER 2019 / SEROLOGY

Test method employed for detection C-reactive protein (CRP) at your lab: Turbidimetry
Peer group (n) = 342
Please refer the attached evaluation format for details on the criteria for evaluation

	Parameter	Your Result	Your Value (mg/L)	Intended Result	Robust Mean	Robust SD	Range (mg/L)	Z & Z' score	Max Marks	Your Score
SE1	CRP	Positive	18.8	Positive	7.8969	2.2991	0.43 to 91.0	4.7	2	1
SE2	CRP	Positive	14.4	Positive	9.5119	2.7355	0.58 to 53.9	1.8	2	2
SE3	CRP	Positive	60.1	Positive	41.1027	8.3918	0.1 to 112.4	2.2	2	1.5

OCTOBER 2019 / SEROLOGY

Test method employed for detection Widal at your lab: Tube Agglutination

Please refer the attached evaluation format for details on the criteria for evaluation

Parameter		Your Interpretation		Intended Result					Max Marks	Your Score
		Correct	Incorrect	STO	STH	SPAH	SPBH	Interpretation		
SE1	Widal	√		Negative	Negative	Negative	Negative	Negative	2	2
SE2	Widal	√		Negative	Negative	Negative	Negative	Negative	2	2
SE3	Widal	√		Negative	Negative	Negative	Negative	Negative	2	2

Disclaimer:

This is a confidential document and subject to the rules of confidentiality as described by the ISO 17043:2010 standard.

MEMBER ID: M 0 5 3 2

SM 1	SM2	SM3	CU1	CU2	CU3	SE1	SE2	SE3	Marks obtained	
3.5	4	3.5	17	7	16	3	4	3.5	61.5	94.6%
4	4	4	17	7	17	4	4	4	Maximum marks = 65	

Dr. Rani Diana Sahni
Scientific Co-ordinator

Dr. John A Jude Prakash
Quality Manager

Dr. V. Balaji
PT Co-ordinator

Report Dispatch Date: 15.02.2020

********** End of Report **********

IAMM EQAS Microbiology: Bacteriology/ Serology
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MICROBIOLOGY EXTERNAL QUALITY ASSESSMENT SCHEME

Under the aegis of Indian Association of Medical Microbiologists

NABL ACCREDITED ISO / IEC 17043:2010, PC-1033 / 27.12.2018

JUNE 2019

102nd EQAS EVALUATION REPORT

MEMBER ID: M 0 5 3 2

Marks Obtained: 74.5 / 77 (96.8%)

JUNE 2019 / BACTERIOLOGY SMEARS:

Question: Carry out the appropriate staining procedure and document the relevant observation.
Provide the Impression or probable organism seen (AS ASKED)
Please refer the attached evaluation format for details on the criteria for evaluation.

PLEASE NOTE: The inaccuracies in the participant report resulting in deduction of marks has been underlined in the expected report.

Exercise Number	Question	Expected Report	Evaluation		
SM1	Please carry out a Gram stain on the given fixed smear prepared from a **BLOOD** culture of a 45year old gentleman with a history of low grade intermittent fever for 3 weeks and worsening breathlessness.	Organism: **Gram positive spherical cocci arranged in pairs, short chains and predominantly long chains. (2)** Impression and probable organism: **Case of PUO- Probable case of infective endocarditis. Probably caused by *Streptococcus* spp - Viridans Streptococcus. (2)**	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 **CSF** specimen of a 2 year old child with a history of high grade fever, irritability and vomiting.	Presence of host cells & debris: **Many pus cells (1)** Organism: **Many Gram negative coccobacilli, short slender bacilli and long slender bacilli. [Pleomorphism seen] (2)** Possible organism: **Probably *Hemophilus* species (1)**	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 an **EXUDATE** specimen of a 21 year old lady with a history of burns to her right forearm.	Presence of host cells & debris: **Many pus cells (1.0).** **[NO epithelial cells]** Organism: **Many Gram negative long, slender bacilli and Gram negative short, plump bacilli seen. (2)** Probable organism/s: **Gram negative bacterial infection.** **Predominant organism probably *Pseudomonas* spp (1)**	**0** **1.5** **3**	**0.5** **2** **3.5**	**1** **2.5** **(4)**

JUNE 2019 / BACTERIOLOGY CULTURE:

Question: A freeze-dried (lyophilized) culture of an organism isolated from a clinical specimen is given. Carry out the appropriate techniques for each exercise and identify the pathogen. Carry out the antimicrobial susceptibility testing according to the panel given below.

Please refer the attached evaluation format for details on the criteria for evaluation.

A 'partially correct' or 'incorrect' component of the participant report which has resulted in a deduction of marks has been in indicated in the evaluation report below.

CU1: Isolated from a sputum specimen of a 55 year old gentleman with a history smoking for the past 30 years and admitted with high grade fever and cough with increasing breathlessness.

FINAL INDENTIFICATION: *Klebsiella pneumoniae* subspp pneumoniae (no marks deducted if subspecies was not mentioned)

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		**0 0.5 (1)**
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		**1 2 3 (4)**
Final identification	✓		**0 0.5 1 1.5 (2)**

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	12 marks	Error
Cefotaxime	6	≥4.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Ceftazidime	6	>64.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Amikacin	6	≥64.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Piperacillin/ tazobactam	6	≥128/4	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Levofloxacin	6	>8.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Meropenem	6	>32.0	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME

CU2: Isolated from a urine specimen of a 22 year old married woman with a 2 day history of increased urgency, frequency of micturition and dysuria.

FINAL IDENTIFICATION: ***Staphylococcus saprophyticus***

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 0.5 (1)
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 (4)
Final identification	✓		0 0.5 1 1.5 (2)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	10 marks	Error
Cefoxitin	27	≤4.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Co-trimoxazole	30	≤2.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Nitrofurantoin	21	<32.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Ciprofloxacin	24	≤1.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Linezolid	30	≤4.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME

CU3: Isolated from stool specimen of a 45 year old gentleman with a history of abdominal pain, frequent loose stools and fatigue for 2 days.

FINAL IDENTIFICATION: *Salmonella enterica* subsp *enterica* serovar Typhimurium

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 0.5 (1)
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 (4)
Final identification	✓		0 0.5 1 1.5 (2)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation	Correct	Incorrect	10 marks	Error
Ampicillin	24	≤8.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Chloramphenicol	24	≤8.0	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Co-trimoxazole	28	≤2.0 (0.125)	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Ceftriaxone	30	≤1.0 (0.047)	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Ciprofloxacin	33	≤0.25 (0.015)	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME

JUNE 2019 / SEROLOGY

Test method employed for detection C - reactive protein at your lab: Turbidimetry

Peer group (n) = 339

Please refer the attached evaluation format for details on the criteria for evaluation

	Parameter	Your Result	Your Value (mg/L)	Intended Result	Robust Mean	Robust SD	Range (mg/L)	Z /Z' score	Max Marks	Your Score
SE1	CRP	Positive	7.0	Negative	2.9013	1.2276	0.0 – 43.92	3.3	2	0
SE2	CRP	Negative	5.6	Negative	2.3069	1.2641	0.0 – 50.65	2.6	2	1.5
SE3	CRP	Positive	67.2	Positive	62.1031	14.8079	0.76 - 145	0.3	2	2

Test method employed for detection Antistreptolysin O (ASO) your lab: Turbidimetry

Peer group (n) = 177

Please refer the attached evaluation format for details on the criteria for evaluation

	Parameter	Your Result	Your Value (IU/mL)	Intended Result	Robust Mean	Robust SD	Range (IU/mL)	Z / Z' score	Max Marks	Your Score
SE1	ASO	Negative	83	Negative	94.8569	32.0891	3.87 – 236.9	-0.4	2	2
SE2	ASO	Negative	86	Negative	87.4985	29.2287	0.32 – 254.3	-0.1	2	2
SE3	ASO	Negative	128	Negative	138.059	45.1067	33 – 374.2	-0.3	2	2

Disclaimer:

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MEMBER ID: M 0 5 3 2

SM 1	SM2	SM3	CUi	CU2	CU3	SE1	SE2	SE3	Marks obtained	
4	4	4	19	17	17	2	3.5	4	74.5	96.8%
4	4	4	19	17	17	4	4	4	Maximum marks = 77	

Dr. Rani Diana Sahni
Scientific Co-ordinator

Dr. John A Jude Prakash
Quality Manager

Dr. V. Balaji
PT Co-ordinator

Report Dispatch Date: 31.10.2019

********** End of Report **********