

**MARCH 2020** 

## 104th 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

104th EOAS EVALUATION REPORT

**MEMBER ID:** 

Marks Obtained: 67.5/71 (95.1%)

## **MARCH 2020 / 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/answer template 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.

| <b>Exercise</b><br><b>Number</b>  | Question   | Expected Report  | Evaluation |     |     |
|---|--|--|------------|-----|-----|
| SM1   | Please carry out a Gram stain on the given fixed smear prepared  | Presence of host cells & debris (1 mark): Occasional pus cells, Many epithelial cells.   | 0          | 0.5 | 1   |
|   | from a voided URINE specimen<br>of a 63-year old diabetic lady<br>with a history of mild dysuria           | Description of Organism/s (2marks): Many Gram positive spherical cocci in pairs, chains, groups. Many Gram negative bacilli (slender and thick). Many Gram positive bacilli, Moderate oval budding yeast like organisms. | 1.5        | 2   | 2.5 |
|   | and increased frequency for 2 days.  | Impression/comment (1 mark): Improperly collected specimen. Suggest repeat appropriately collected mid-stream clean catch specimen for culture.  | 3          | 3.5 | 4   |
| SM2   | Please carry out a Gram stain on the given fixed smear prepared  | Presence of host cells & debris (1mark): Many pus cells.   | 0          | 0.5 | 1   |
| from an EXUDATE specimen of a 23-year old man presenting in pairs and chains. | Description of Organism/s (2 marks): Many Gram positive spherical cocci in pairs and chains.               | 1.5  | 2          | 2.5 |     |
|   | with an exudative lesion on the right leg associated with high grade fever, chills and myalgia for 2 days. | Possible organism (1 mark): Streptococcus species (Probably S. pyogenes)   | 3          | 3.5 | 4   |

| SM3 | Please carry out a Gram stain on the given fixed smear prepared | Presence of host cells & debris (1 mark): Many pus cells.  | 0   | 0.5 | 1   |
|-----|---|--|-----|-----|-----|
|     | from an ENDOTRACHEAL ASPIRATE specimen of a 69-                 | Description of Organism/s (2 marks): Many Gram negative cocco-bacilli  |     | 0.0 |     |
|     | year old gentleman admitted in<br>the ICU with worsening        | Possible organism (1 mark): Probable NFGNB- Acinetobacter spp  | 1.5 | 2   | 2.5 |
|     | saturation.   | THE PROPERTY OF THE PROPERTY O | 3   | 3.5 | 4   |

### 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.

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 FECES specimen of a 26year old gentleman with a 2-day history of diarrhea and vomiting associated with abdominal pain.

FINAL INDENTIFICATION: Non-agglutinating Vibrio cholerae (Non O1- Non O139)

| Identification details   | Reported                 | Not reported   | Evaluation (7 marks) |
|--|--------------------------|--|----------------------|
| Microscopy (Gram stain + Motility)   | questo vosMatechero      | Description of Organics  | 0 0.5 (1)            |
| Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics) | A makanga akananahanga a | The state of the s | 1 2 3 4              |
| Final identification   | <b>~</b>                 |  | 0 0.5 1 1.5 (2)      |

| Susceptibility |                            | EXPECTED | REPORT         | PARTICIPAN | NT REPORT | MARK      | TYPE OF ERROR |  |
|----------------|----------------------------|----------|----------------|------------|-----------|-----------|---------------|--|
| report         | Zone size MIC (mm) (µg/ml) |          | Interpretation | Correct    | Incorrect | 10 marks  | Error         |  |
| Ampicillin     | ≥17                        | ≤8       | Susceptible    | 1          |           | -1 0 1 2  | mE/ ME/ VME   |  |
| Tetracycline   | ≥15                        | ≤4       | Susceptible    | <b>V</b>   |           | -1 0 1(2) | mE/ ME/ VME   |  |
| Co-trimoxazole | ≥16                        | ≤2-38    | Susceptible    | <b>✓</b>   |           | -1 0 1(2) | mE/ ME/ VME   |  |
| Cefotaxmine    | ≥26                        | ≤1       | Susceptible    | <b>✓</b>   | 1 48 20   | -1 0 1 2  | mE/ ME/ VME   |  |
| Ciprofloxacin  | ≥21                        | ≤1       | Susceptible    | 1          | 3.500     | -1 0 1 2  | mE/ ME/ VME   |  |

# CU2: Isolated from a URINE specimen of a 35year old gentleman with hemiplegia on a long-term urinary catheter

## FINAL IDENTIFICATION: Serratia marcescens

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

| Susceptibility report       | E              | KPECTED REPO | RT                   | PARTICIPA | NT REPORT | MARK       | TYPE OF ERROR |  |
|-----------------------------|----------------|--------------|----------------------|-----------|-----------|------------|---------------|--|
|                             | Zone size (mm) | MIC (μg/ml)  |                      | Correct   | Incorrect | 8 marks    | Error         |  |
| Cefpodoxime                 | 18-20          | 4            | Caution use          |           | NOT       | EVALUATED  |               |  |
| Co-trimoxazole              | ≥16            | ≤2-38        | Susceptible          | 1         |           | -1 0 1(2)  | mE/ ME/ VME   |  |
| Amoxicillin-<br>clavulanate | 6              | >32          | Intrinsic resistance |           | 1         | (-1) 0 1 2 | mE/ ME/VME    |  |
| Levofloxacin                | / ≥21          | ≤0.5         | Susceptible          | NOT DONE  |           |            |               |  |
| Meropenem                   | ≥23            | ≤1           | Susceptible          | <b>V</b>  |           | -1 0 1 2   | mE/ ME/ VME   |  |

CU3: Isolated from an EXUDATE specimen from a 22year old lady with a history of extensive burns to her right forearm.

# FINAL IDENTIFICATION: Staphylococcus aureus (MRSA)

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

| Susceptibility | Tara Company   | EXPECTED    | REPORT         | PARTICIPAL                            | NT REPORT | MARK      | TYPE OF ERROR |  |
|----------------|----------------|-------------|----------------|---------------------------------------|-----------|-----------|---------------|--|
| report         | Zone size (mm) | MIC (μg/ml) | Interpretation | Correct                               | Incorrect | 10 marks  | Error         |  |
| Cefoxitin      | ≤21            | ≥8          | Resistant      | · · · · · · · · · · · · · · · · · · · |           | -1 0 1(2) | mE/ ME/ VME   |  |
| Erythromycin   | ≥23            | ≤0.5        | Susceptible    | 1                                     |           | -1 0 1 2  | mE/ ME/ VME   |  |
| Co-trimoxazole | ≥16            | ≤2-38       | Susceptible    | <b>~</b>                              |           | -1 0 1(2) | mE/ ME/ VME   |  |
| Clindamycin    | ≥21            | ≤0.5        | Susceptible    | <b>/</b>                              |           | -1 0 1(2) | mE/ ME/ VME   |  |
| Linezolid      | ≥21            | ≤4          | Susceptible    | <b>✓</b>                              |           | -1 0 1 2  | mE/ ME/ VME   |  |

MARCH 2020 / SEROLOGY

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

Peer group (n) = 320

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

|     | Parameter | Your               | Your Value (mg/L) | Intended<br>Result | Robust<br>Mean | Robust<br>SD | Range<br>(mg/L) | Z & Z'<br>score | Max Marks | Your<br>Score |
|-----|-----------|--------------------|-------------------|--------------------|----------------|--------------|-----------------|-----------------|-----------|---------------|
| SE1 | CRP       | Result<br>Positive | 42.68             | Positive           | 36.7014        | 8.8178       | 1 to 312        | 0.7             | 2         | 2             |
| SE2 | CRP       | Negative           | 2.12              | Negative           | 2.1770         | 1.4239       | 0.0 to 39.65    | 0.0             | 2         | 2             |
| SE3 | CRP       | Positive           | 11.55             | Positive           | 10.8659        | 2.9648       | 0.22 to 241.8   | 0.2             | 2         | 2             |

# MARCH 2020 / SEROLOGY

Test method employed for detection Rheumatoid Factor (RF) at your lab: Turbidimetry

Peer group (n) = 237

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

|     | Parameter | Your               | Your Value<br>(IU/mL) | Intended<br>Result | Robust<br>Mean | Robust<br>SD | Range<br>(IU/mL) | Z & Z'<br>score | Max<br>Marks | Your<br>Score |
|-----|-----------|--------------------|-----------------------|--------------------|----------------|--------------|------------------|-----------------|--------------|---------------|
| SE1 | RF        | Result<br>Negative | <20.0                 | Negative           | 11.5177        | 5.3985       | 0.0 to 230       | 1.6             | 2            | 2             |
| SE2 | RF        | Negative           | <20.0                 | Negative           | 6.8716         | 4.9366       | -2.70 to 389.96  | 2.7             | 2            | 1.5           |
| SE3 | RF        | Positive           | 51.6                  | Positive           | 45.2702        | 10.2638      | 0.0 to 268.8     | 0.6             | 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:** 

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|---|---|---|---|-----|
|   |   |   |   | BAL |

| SM1 | SM2 | SM3 | CU1 | CU2 | CU3 | SE1 | SE2 | SE3 | Marks   | obtained   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|------------|
| 4   | 4   | 4   | 17  | 10  | 17  | 4   | 3.5 | 4   | 67.5    | 95.1%      |
| 4   | 4   | 4   | 17  | 13  | 17  | 4   | 4   | 4   | Maximum | marks = 71 |

Energy V

Dr. Rani Diana Sahni Scientific Co-ordinator

Report Dispatch Date: 15.09.2020

Dr. John A Jude Prakash

**Quality Manager** 

V. Boran Dr. V. Balaji PT Co-ordinator

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

# KOTOCK

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

 $\sec \operatorname{group}(n) = 339$ 

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

| 7          | τ         | £.0  | S\$1 - 9L.0     | 6408.41      | 1801.29 | Positive           | 99                | Positive | СВЪ       | SE3 |
|------------|-----------|------|-----------------|--------------|---------|--------------------|-------------------|----------|-----------|-----|
| 7          | τ         | 1.0  | 29.02 - 0.0     | 1.2641       | 690£.2  | Negative           | 2.4               | Negative | СВЪ       | 2E2 |
| 7          | τ         | 1.0- | 26.84 - 0.0     | 9722.1       | 2.9013  | 9vitsg9N           | 8.2               | 9vitag9N | СВЪ       | SEI |
| Your Score | Max Marks | Z/Z, | Капде<br>(тд/L) | Robust<br>SD | Robust  | Intended<br>Result | Your Value (mg/L) | Your     | Рагатетег |     |

Test method employed for detection Antistreptolysin O (ASO) your lab:  $\overline{\text{Turbidimetry}}$ Peer group (n) = 177

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

| 7          | 7         | ۲.0- | 2.478 – 88    | L901.24      | 138.059  | Negative           | <b>p.</b> 70I      | Negative       | OSV       | SE3 |
|------------|-----------|------|---------------|--------------|----------|--------------------|--------------------|----------------|-----------|-----|
| 7          | 7         | 1.0  | 6.32 – 254.3  | 7822.62      | 2864.78  | Negative           | 8.19               | Negative       | osv       | RET |
| 7          | 7         | 2.0- | 6.8£2 – 78.£  | 1680.25      | 69\$8.46 | Negative           | 8.38               | Negative       | OSV       | eei |
| Your Score | Max Marks | Z/Z, | Range (IU/mL) | Robust<br>SD | Robust   | Intended<br>Result | Your Value (IU/mL) | Your<br>Result | Parameter |     |

Fw: 104th EQAS package



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Dear Participants,

We hope that you are all safe and doing well.

Further to our last communication regarding the dispatch of the EQAS packages, we would like to inform you that due to the continuing lockdown and courier facilities unavailable to all locations at the current time, we plan to dispatch your EQAS packages only once the nation-wide lockdown ends.

With best wishes,

Dr. V.Balaji Professor Coordinator IAMM EQAS Microbiology Department of Clinical Microbiology Christian Medical College, Vellore 4