

MICROBIOLOGY EXTERNAL QUALITY ASSURANCE SCHEME

Under the aegis of Indian Association of Medical Microbiology

IAMM EQAS New Delhi

Department of Clinical Microbiology and Immunology Sir Ganga Ram Hospital, Rajinder Nagar, New Delhi-110060

Dr. Chand Wattal Chairman - EOAS Dr. Jaswinder K. Oberoi PT Coordinator - EQAS Dr. Neeraj Goel PT Coordinator - FOAS Dr. Sanghamitra Datta PT Quality Manager - EQAS Dr. Reena Raveendran PT Technical Manager - EOAS

Result (<u>Code No: DLH1089</u> / Microbiology Department, Pasteur Institute, Shillong)

| Batch Name | 35th QC, March | Batch Marks | 90 |
|---------------|----------------|----------------|-------------|
| Start By Date | 23-Mar-2024 | Submit By Date | 02-May-2024 |

Q1. Smear :

1.1: A 65-year-old man with uncontrolled diabetes mellitus presented with fever and loss of appetite. Pus aspirated from liver abscess. Do Gram stain of the smear prepared from aspirated pus & give your report. (Marks: 5)

Expected Result (Cells):--Many PMN cells seen. (Marks :2)

Participant's Answer (Cells):--Pus Cells - Numerous (Marks :2)

Expected Result (Organism):--Few thick gram negative bacilli seen. (Marks :2)

Participant's Answer (Organism):--Gram Negative Rods Short and Stout, uniformly stained (Marks :2)

Expected Result (Interpretation):--Liver abscess due to gram negative bacilli. (Marks :1)

Participant's Answer (Interpretation):--findings suggestive of suspected pyogenic liver abscess, Culture & Sensitivity test should be performed. (Marks :1)

Marks Obtained :-- 5

1.2 : A 62 year old man suffering from exacerbation of COPD, presented with lower respiratory tract infection. Smear prepared from sputum sample is provided. Do Gram stain and report on it. (Marks: 5)

Expected Result (Cells):--Moderate number of PMN cells (1) and no squamous epithelial cells (1) seen. (Marks :2)

Participant's Answer (Cells):--Epithelial Cells - < 10 cells/LPF Pus Cells - Numerous (>= 25 cells/LPF) (Marks :2)

Expected Result (Organism):--Moderate number of pleomorphic (1) gram negative bacilli (1) seen. (Marks :2)

Participant's Answer (Organism):--Gram Positive Cocci in Pairs - Few (2-10/OIF) (Marks :0)

Expected Result (Interpretation):--Haemophilus influenzae Pneumonia. (Marks :1)

Participant's Answer (Interpretation):--Findings suggestive of suspected bacterial pneumonia, Culture & Sensitivity to be performed (Marks :0)

Marks Obtained :-- 2

1.3 : A 45 year old HIV positive man, presented with intermittent episodes of loose stools, abdominal pain, and bloating. Smear prepared from stool sample is provided. Do modified Kinyoun stain and give your diagnosis. (Marks: 5)

Expected Result (Findings):--Few acid fast (1) spindle shaped oocysts (1) of Cystoisospora seen. (Marks :2)

Participant's Answer (Findings):--8-10 micrometers round to oval Acid-Fast Structures (Marks :2)

Expected Result (Interpretation):--Infection due to Cystoisospora belli. (Marks :3)

Participant's Answer (Interpretation):--Findings suggestive of oocysts of intestinal Coccidian parasites (Marks :0)

Marks Obtained :-- 2

Q 2. Culture/Sensitivity:

2.1 Three freeze dried (lyophilized) cultures of bacteria are provided. Identify and perform the antibiotic sensitivity testing. Use current CLSI guidelines wherever applicable for interpretation of antimicrobial sensitivity. EUCAST guideline can be used wherever CLSI guidelines are not available. A= Automated/M= Manual; select whichever applicable. Attempt only one: Either "A" or "M". Kindly do not report both, even if done. Organism Isolated From Blood: (Marks: 13)

| | Genus | Species | Serotype (if applicable) |
|--|-----------------------|---------------------------|--------------------------|
| Expected Result (Identification of given organism) | Salmonella (Marks: 3) | serotype Typhi (Marks: 2) | |
| | | | |

| Participant's Answer | | Salmonella (1 | Marks: 3) | serotype Typh | i (Marks: 2) | Typhi | |
|---|--------------|---------------|--------------|---------------|--------------|-------|----------------|
| Antibiotics | Ampicillin | | Chlorampher | nicol | Ceftriaxone | | Co-trimoxazole |
| Expected Result | R(Marks: 2) | | S(Marks: 2) | | R(Marks: 2) | | R(Marks: 2) |
| Participant's Answer | R (Marks: 2) | | S (Marks: 2) | | R (Marks: 2) | | R (Marks: 2) |
| Participant's Test Method | Vitek -2 | | Vitek -2 | | Vitek -2 | | Vitek -2 |
| Participant's Zone Size (mm) or MIC (ug/ml) | >= 32 | | 4 | | >= 64 | | >= 320 |
| Correct: 2 Minor Error: 1 Major Error: 0 Very Major Error: (-1) | | | | | | | |
| Marks Obtained: 13 | | | | | | | |

2.2 Organism Isolated From Bronchoalveolar Lavage (BAL): (Marks: 15)

| | Genus | Species | Serotype (if applicable) |
|--|-----------------------|-----------------------|--------------------------|
| Expected Result (Identification of given organism) | Klebsiella (Marks: 3) | pneumoniae (Marks: 2) | |
| Participant's Answer | Klebsiella (Marks: 3) | pneumoniae (Marks: 2) | |

| Antibiotics | Piperacillin/ Tazobactam | Cefepime | Meropenem | Ciprofloxacin | Co- trimoxazole |
|--|-----------------------------|-----------------------|--------------|---------------|--------------------|
| Expected Result | R(Marks: 2) | R(Marks: 2) | R(Marks: 2) | R(Marks: 2) | S(Marks: 2) |
| Participant's Answer | R (Marks: 2) | R (Marks: 2) | R (Marks: 2) | R (Marks: 2) | S (Marks: 2) |
| Participant's Test Method | Vitek -2 | Vitek -2 | Vitek -2 | Vitek -2 | Vitek -2 |
| Participant's Zone Size (mm) or MIC (ug/ml) | >=128 | >= 32 | 8 | >= 4 | <= 20 |
| Correct: 2 Minor Error: | 1 Major Error: 0 | Very Major Error: (-1 |) | | |
| Marks Obtained: 15 | | | | | |

2.3 Organism Isolated From Urine: (Marks: 15)

| | Genus | Species | Serotype (if applicable) |
|--|-------------------------|--------------------|--------------------------|
| Expected Result (Identification of given organism) | Enterococcus (Marks: 3) | faecium (Marks: 2) | |
| Participant's Answer | Enterococcus (Marks: 3) | faecium (Marks: 2) | |

| Antibiotics | Benzylpenicillin/ Ampicilllin | Ciprofloxacin | Nitrofurantoin | Tetracycline | Vancomycin |
|--|----------------------------------|-----------------------|----------------|--------------|-----------------|
| Expected Result | R(Marks: 2) | R(Marks: 2) | R(Marks: 2) | R(Marks: 2) | R(Marks: 2) |
| Participant's Answer | R (Marks: 2) | R (Marks: 2) | R (Marks: 2) | R (Marks: 2) | R (Marks: 2) |
| Participant's Test Method | Vitek -2 | Vitek -2 | Vitek -2 | Vitek -2 | Vitek -2 |
| Participant's Zone Size (mm) or MIC (ug/ml) | >= 64 | >= 8 | 256 | >= 16 | >= 32 |
| Correct: 2 Minor Error:- | - 1 Major Error: 0 | Very Major Error: (-1 |) | , | , |
| Marks Obtained: 15 | | | | | |

Q 3. : Serology:

3.1 : Please carry out following serological tests on the given samples (Marks: 16)

| Q.No. | 3.1.1 | 3.1.2 | 3.1.3 | 3.1.4 |
|------------------------|--------------------------|-------------------------------|-------------------------------|---------------------|
| Test | Hepatitis A serology IgM | Anti-HBs | Rubella IgM antibody | CRP |
| Expected Result | Negative (Marks: 4) | Positive (Marks: 4) | Negative (Marks: 4) | Positive (Marks: 4) |
| Participant's Answer | Negative (Marks: 4) | NotAttempted (Not evaluated.) | NotAttempted (Not evaluated.) | Positive (Marks: 4) |
| Participant's Value | Negative | not attempted | not attempted | 104.72 mg/L |

| Method | ELISA | Not Attempted | Not Attempted | Immunoturbidimetric assay |
|-------------|-------|---------------|---------------|---------------------------|
| Name of Kit | OTHER | Not Attempted | Not Attempted | Tulip |

Marks Obtained :-- 8

3.2: Perform the Blood Borne Viral (BBV) serology: HBsAg, HCV and HIV antibody on the given samples (Sample nos. 3.2.1, 3.2.2, 3.2.3 & 3.2.4) (Marks: 24)

| Sample | | HIV Antibody | HBsAg | HCV Antibody |
|--------|----------------------|-------------------------|--------------------------|--------------------------|
| | Expected Result | Non-Reactive (Marks: 2) | Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| 3.2.1 | Participant's Answer | Negative (Marks: 2) | Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| | Method | ELISA | Immunochromatography | Immunofiltration |
| | Name of kit | OTHER | OTHER | OTHER |
| | Expected Result | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) | Reactive (Marks: 2) |
| 3.2.2 | Participant's Answer | Negative (Marks: 2) | Non-Reactive (Marks: 2) | Reactive (Marks: 2) |
| | Method | ELISA | Immunochromatography | Immunofiltration |
| | Name of kit | OTHER | OTHER | OTHER |
| | Expected Result | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| 3.2.3 | Participant's Answer | Negative (Marks: 2) | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| | Method | ELISA | Immunochromatography | Immunofiltration |
| | Name of kit | OTHER | OTHER | OTHER |
| 3.2.4 | Expected Result | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| | Participant's Answer | Negative (Marks: 2) | Non-Reactive (Marks: 2) | Non-Reactive (Marks: 2) |
| | Method | ELISA | Immunochromatography | Immunofiltration |
| | Name of kit | OTHER | OTHER | OTHER |

Marks Obtained :-- 24

Grand Total Marks: 90 Marks Obtained: 84

Note: This is computer generated report, does not require signature of the EQAS provider.

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