



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



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Result (Code No: DLH308 / CHRISTIAN INSTITUTE OF HEALTH SCIENCES AND RESEARCH)

Batch Name	28th QC, November	Batch Marks	71
Start By Date	17-Nov-2021	Submit By Date	24-Dec-2021

Q1. Smear :

1.1 : A 55 year old man who is a known case of alcoholic liver disease presented with fever & abdominal distension of 3 days duration. Smear prepared from ascitic fluid is provided to you. Perform Gram stain & report as below. (Marks: 5)

Expected Result (Cells):--Moderate no. of PMN cells seen. (Marks :2)

Participant's Answer (Cells):--Few pus cells (Marks :2)

Expected Result (Organism):--Moderate no. of gram negative bacilli seen. (Marks :2)

Participant's Answer (Organism):--Few Gram negative bacilli (Marks :2)

Expected Result (Interpretation):--Gram negative bacterial peritonitis. (Marks :1)

Participant's Answer (Interpretation):--Suggestive of Gram negative bacilli infection (Marks :1)

Marks Obtained :-- 5

1.2 : A 45 year old man, HIV positive presented with loose stool. Smear from Stool specimen is provided. Perform Kinyoun stain & report as below. (Marks: 5)

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

Participant's Answer (Findings):--Acid fast oocyst of Cryptosporidium seen (Marks :2)

Expected Result (Interpretation):--Suggestive of diarrhea due to Cryptosporidium. (Marks :3)

Participant's Answer (Interpretation):--Suggestive of Cryptosporidiosis. (Marks :3)

Marks Obtained :-- 5

1.3 : A 5 year old child presented with fever & shortness of breath, 5 days duration. Smear prepared from bronchoalveolar lavage is provided. Perform Gram stain & report as below. (Marks: 5)

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

Participant's Answer (Cells):--Occasional pus cells (Not evaluated.)

Expected Result (Organism):--Many Gram negative pleomorphic bacilli resembling Haemophilus influenzae seen. (Marks :2)

Participant's Answer (Organism):--Few Gram negative bacilli (Not evaluated.)

Expected Result (Interpretation):--Suggestive of pneumonia caused by H.influenzae. (Marks :1)

Participant's Answer (Interpretation):--Suggestive of Gram negative bacilli infection. (Not evaluated.)

Marks Obtained :-- (Not evaluated.)

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; tick whichever applicable. Attempt only one: Either "A" or "M". Kindly do not report both, even if done. Organism Isolated From Stool: (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Vibrio</i> (Marks: 3)	<i>cholerae</i> (Marks: 2)
Participant's Answer	<i>Enterococcus</i> (Marks: 0)	<i>faecalis</i> (Marks: 0)

Antibiotics	Cefotaxime	Ciprofloxacin	Tetracycline	Amikacin	Co-trimoxazole
Expected Result	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	R(Marks: 2)
Participant's Answer	R (Marks: 0)	S (Marks: 0)	S (Marks: 0)	R (Marks: 0)	S (Marks: 0)
Participant's Test Method	Disc diffusion	Vitek -2	Vitek -2	Disc diffusion	Disc diffusion
Participant's Zone Size (mm) or MIC (ug/ml)	0 mm	1 ug/ml	1 ug/ml	0 mm	22 mm
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 0					

2.2 Organism Isolated From Urine: (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Escherichia</i> (Marks: 3)	<i>coli</i> (Marks: 2)
Participant's Answer	<i>Escherichia</i> (Marks: 3)	<i>coli</i> (Marks: 2)

Antibiotics	Nitrofurantoin	Co-trimoxazole	Ertapenem	Amikacin	Cefuroxime
Expected Result	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)
Participant's Answer	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)
Participant's Test Method	Disc diffusion	Vitek -2	Vitek -2	Vitek -2	Vitek -2
Participant's Zone Size (mm) or MIC (ug/ml)	17 mm	20 ug/ml	0.12 ug/ml	2 ug/ml	4 ug/ml

Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)
Marks Obtained: 15

2.3 Organism Isolated from Blood : (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Enterococcus</i> (Marks: 3)	<i>faecalis</i> (Marks: 2)
Participant's Answer	<i>Enterococcus</i> (Marks: 3)	<i>faecalis</i> (Marks: 2)

Antibiotics	Benzylpenicillin/ Ampicillin	Teicoplanin	Linezolid	Gentamicin High Level	Vancomycin
Expected Result	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)
Participant's Answer	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	S (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)	2 ug/ml	0.5 ug/ml	2 ug/ml	SYN-S	1 ug/ml

Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)

Marks Obtained: 15

Q3. : Serology:

3.1 : Please carry out following serological tests on the given samples. (Marks: 8)

Q.No.	3.1.1	3.1.2
Test	Herpes IgM	ASO
Expected Result	Negative (Marks: 4)	Negative (Marks: 4)
Participant's Answer	Not Attempted (Not evaluated.)	Negative (Marks: 4)

Marks Obtained :-- 4

3.2 : Perform the Blood Borne Viral (BBV) serology: HBsAg, HCV and HIV antibody on both the samples (Sample nos. 3.2.1 & 3.2.2) (Marks: 12)

Sample		HIV Antibody	HBsAg	HCV Antibody
3.2.1	Expected Result	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)
	Participant's Answer	Negative (Marks: 2)	Negative (Marks: 2)	Negative (Marks: 2)
3.2.2	Expected Result	Reactive (Marks: 2)	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)
	Participant's Answer	Positive (Marks: 2)	Negative (Marks: 2)	Negative (Marks: 2)

Marks Obtained :-- 12

Grand Total Marks : 71
Marks Obtained: 56

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

-----End of Report-----



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Result (Code No: DLH308 / CHRISTIAN INSTITUTE OF HEALTH SCIENCES AND RESEARCH)

Batch Name	26th QC, March	Batch Marks	80
Start By Date	10-Apr-2021	Submit By Date	24-May-2021

Q 1. Smear :

1.1 : Pus Sample: A 30 year old lactating lady presented with abscess in the left breast. Smear prepared from pus aspirate is provided. Perform Gram stain & report as below. (Marks: 5)

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

Participant's Answer (Cells):--Many PMN cells (Marks :2)

Expected Result (Organism):--Many GPCs (1) in pairs & small groups (1) seen. (Marks :2)

Participant's Answer (Organism):--Gram positive cocci in pairs and clusters (Marks :2)

Expected Result (Interpretation):--Staphylococcal abscess. (Marks :1)

Participant's Answer (Interpretation):--Staphylococcal infection (Marks :1)

Marks Obtained :-- 5

1.2 : Sputum Sample: A 25 year old man presented with fever, cough & night sweats for 3 weeks. Smear prepared from sputum sample is provided. Perform ZN stain & report giving RNTCP grading. (Marks: 5)

Expected Result (Findings):--Slender, beaded acid fast bacilli seen. (Marks :1)

Participant's Answer (Findings):--AFB positive (Marks :1)

Expected Result (Grading):--AFB seen 2+. (Marks :4)

Participant's Answer (Grading):--1+ (Marks :4)

Marks Obtained :-- 5

1.3 : ET Sample: A 65 year old covid-19 patient on ventilatory support. Smear prepared from ET aspirate is provided. Perform Gram stain & report as below. (Marks: 5)

Expected Result (Cells):--Many (1) PMN (1) cells seen. (Marks :2)

Participant's Answer (Cells):--Many PMN cells (Marks :2)

Expected Result (Organism):--Many (1) GNCBs (1) seen. (Marks :2)

Participant's Answer (Organism):--Gram negative cocci (Marks :1)

Expected Result (Interpretation):--Suggestive of VAP due to Acinetobacter species. (Marks :1)

Participant's Answer (Interpretation):--Commensal flora (Marks :0)

Marks Obtained :-- 3

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; tick whichever applicable. Attempt only one: Either "A" or "M". Kindly do not report both, even if done. Organism Isolated From Pus: (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Enterococcus</i> (Marks: 3)	<i>faecium</i> (Marks: 2)
Participant's Answer	<i>Enterococcus</i> (Marks: 3)	<i>faecium</i> (Marks: 2)

Antibiotics	Benzylpenicillin/ Ampicillin	Gentamicin High Level	Linezolid	Vancomycin	Tigecycline
Expected Result	R(Marks: 2)	R(Marks: 2)	S(Marks: 2)	R(Marks: 2)	S(Marks: 2)
Participant's Answer	R (Marks: 2)	R (Marks: 2)	S (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)	64		2	32	0.12

Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)

Participant's Comments: VRE

Marks Obtained: 15

2.2 Organism Isolated From ET Secretions: (Marks: 15)

		Genus	Species		
Expected Result (Identification of given organism)		<i>Acinetobacter</i> (Marks: 3)	<i>baumannii complex</i> (Marks: 2)		
Participant's Answer		<i>Acinetobacter</i> (Marks: 3)	<i>baumannii complex</i> (Marks: 2)		
Antibiotics	Piperacillin/ Tazobactam	Meropenem	Amikacin	Levofloxacin	Co-trimoxazole
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)	128	16	64	8	320
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 15					

2.3 Organism Isolated from Blood culture: (Marks: 15)

		Genus	Species		
Expected Result (Identification of given organism)		<i>Salmonella</i> (Marks: 3)	<i>serotype Typhi</i> (Marks: 2)		
Participant's Answer		<i>Salmonella enterica</i> (Marks: 3)	<i>serotype Typhi</i> (Marks: 2)		
Antibiotics	Ampicillin	Ceftriaxone	Ciprofloxacin	Co-trimoxazole	Azithromycin
Expected Result	S(Marks: 2)	S(Marks: 2)	R(Marks: 2)	S(Marks: 2)	S(Marks: 2)
Participant's Answer	R (Marks: 0)	S (Marks: 2)	R (Marks: 2)	S (Marks: 2)	R (Marks: 0)
Participant's Test Method	Disc diffusion	Disc diffusion	Vitek -2	Vitek -2	Disc diffusion
Participant's Zone Size (mm) or MIC (ug/ml)	12	22	4	20	11
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 11					

Q.3.: Serology:**3.1 : Please carry out following serological tests on the given samples. (Marks: 8)**

Q.No.	3.1.1	3.1.2
Test	CRP	Dengue NS1
Expected Result	Positive (Marks: 4)	Negative (Marks: 4)
Participant's Answer	Positive (Marks: 4)	Negative (Marks: 4)

Marks Obtained :-- 8

3.2 : Perform the Blood Borne Viral (BBV) serology: HBsAg, HCV and HIV antibody on both the samples (Sample nos. 3.2.1 & 3.2.2) (Marks: 12)

Sample		HIV Antibody	HBsAg	HCV Antibody
3.2.1	Expected Result	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)
	Participant's Answer	Negative (Marks: 2)	Negative (Marks: 2)	Negative (Marks: 2)
3.2.2	Expected Result	Non-Reactive (Marks: 2)	Non-Reactive (Marks: 2)	Reactive (Marks: 2)
	Participant's Answer	Negative (Marks: 2)	Negative (Marks: 2)	Positive (Marks: 2)

Marks Obtained :-- 12

Grand Total Marks : 80

Marks Obtained: 74

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

-----End of Report-----

Marks Obtained: 15

2.2 Organism Isolated From Urine: (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Escherichia</i> (Marks: 3)	<i>coli</i> (Marks: 2)
Participant's Answer	<i>Escherichia</i> (Marks: 3)	<i>coli</i> (Marks: 2)

Antibiotics	Ceftriaxone	Piperacillin/ Tazobactam	Amikacin	Co-trimoxazole	Nitrofurantoin
Expected Result	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	R(Marks: 2)	S(Marks: 2)
Participant's Answer	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	R (Marks: 0)	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)	=1	=4	=2	=320	=16

Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)

Examiner Comments: AST for Co-trimoxazole has not been evaluated. This is due to the varied response of >30% of the participating centers.

Marks Obtained: 13

2.3 Organism Isolated From Pus: (Marks: 15)

	Genus	Species
Expected Result (Identification of given organism)	<i>Staphylococcus</i> (Marks: 3)	<i>aureus</i> (Marks: 2)
Participant's Answer	<i>Staphylococcus</i> (Marks: 3)	<i>aureus</i> (Marks: 2)

Antibiotics	Cefoxitin	Erythromycin	Clindamycin	Co-trimoxazole	Vancomycin
Expected Result	S(Marks: 2)	R(Marks: 2)	R(Marks: 2)	S(Marks: 2)	S(Marks: 2)
Participant's Answer	Not Done (Marks: 2)	R (Marks: 2)	S (Marks: -1)	S (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)	NEGATIVE	=8	0.25	=10	=0.5

Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)

Examiner Comments: As per the CLSI antibiotic susceptibility interpretation for vancomycin is based on MIC result only. Disc diffusion is not a valid method.

Marks Obtained: 12

Q3.: Serology:

3.1 : Please carry out following serological tests on the given samples. (Marks: 8)

Q.No.	3.1.1	3.1.2
Test	RA factor	Rubella IgG antibody
Expected Result	Negative (Marks: 4)	Positive (Marks: 4)
Participant's Answer	Negative (Marks: 4)	NotAttempted (Not evaluated.)

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; tick whichever applicable. Attempt only one: Either "A" or "M". Kindly do not report both, even if done. Organism Isolated From Blood: (Marks: 15)

		Genus	Species
Expected Result (Identification of given organism)		<i>Serratia</i> (Marks: 3)	<i>marcescens</i> (Marks: 2)
Participant's Answer		<i>Serratia</i> (Marks: 3)	<i>marcescens</i> (Marks: 2)

Antibiotics	Piperacillin/ Tazobactam	Ceftriaxone	Imipenem	Amikacin	Levofloxacin
Expected Result	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)	S(Marks: 2)
Participant's Answer	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)	S (Marks: 2)
Participant's Test Method	Disc diffusion	Disc diffusion	Disc diffusion	Vitek -2	Vitek -2
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 15					

2.2 Organism Isolated From Stool: (Marks: 15)

		Genus	Species
Expected Result (Identification of given organism)		<i>Shigella</i> (Marks: 3)	<i>sonnei</i> (Marks: 2)
Participant's Answer		<i>Shigella</i> (Marks: 3)	<i>sonnei</i> (Marks: 2)

Antibiotics	Ampicillin	Ceftriaxone	Ciprofloxacin	Azithromycin	Co-trimoxazole
Expected Result	S(Marks: 2)	S(Marks: 2)	R(Marks: 2)	wild-type(Marks: 2)	R(Marks: 2)
Participant's Answer	R (Marks: 0)	S (Marks: 2)	R (Marks: 2)	R (Marks: 0)	R (Marks: 2)
Participant's Test Method	Disc diffusion	Disc diffusion	Vitek -2	Disc diffusion	Vitek -2
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 11					

2.3 Organism Isolated from Blood: (Marks: 15)

		Genus	Species
Expected Result (Identification of given organism)		<i>Streptococcus</i> (Marks: 3)	<i>agalactiae</i> (Group B Streptococci) (Marks: 2)
Participant's Answer		<i>Serratia</i> (Marks: 0)	<i>marcescens</i> (Marks: 0)

Antibiotics	Ampicillin	Cefotaxime	Levofloxacin	Clindamycin	Tetracycline
Expected Result	S(Marks: 2)	S(Marks: 2)	R(Marks: 2)	S(Marks: 2)	R(Marks: 2)
Participant's Answer	R (Marks: 0)	S (Marks: 0)	S (Marks: 0)	R (Marks: 0)	R (Marks: 0)
Participant's Test Method	Disc diffusion	Disc diffusion	Vitek -2	Disc diffusion	Disc diffusion
Correct:-- 2 Minor Error:-- 1 Major Error:-- 0 Very Major Error:-- (-1)					
Marks Obtained: 0					

Q 3.: Serology:

3.1 : Please carry out following serological tests on the given samples. (Marks: 8)

Q.No.	3.1.1	3.1.2
Test	CMV- IgG	ASO
Expected Result	Positive (Marks: 4)	Negative (Marks: 4)
Participant's Answer	Not Attempted (Not evaluated.)	Negative (Marks: 4)

Marks Obtained :- 4