## \& Your location: Assessments > Assessment Manager > Assessment Reports > Overall Statistics > Detail Summary

## Question Statistics

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Assessment title: Quiz9: Waves

## Question title: Phase and Group

The - Select choice - $\underset{\sim}{ }$ velocity describes the propagation of the wave energy while the - Select choice - $\uparrow$ velocity describes the propagation of individual crests and troughs.

## Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| phase, group | $0.00 \%$ | $2(6.7 \%)$ |  |
| group, phase | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 8 ( 9 3 . 3 \% )}$ |  |

Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 2 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 15 |  |


$\left.$| $\mathbf{N}$ | Percent Answering Correctly <br>  <br> Whole Group Upper 25\% |  |  | Lower 25\% | Discrimination | Mean | Median |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | | Standard |
| :--- |
| Deviation | \right\rvert\,

## Question title: Dispersion relation

The dispersion relation relates the wave frequency to the wave scale and phase velocity.

## Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| True | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 7}(\mathbf{9 0 \%})$ |  |
| False | $0.00 \%$ | $3(10 \%)$ |  |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 3 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 14 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 82.35 | 100.00 | 80.00 | 20.00 | $82.35 \%$ | $100.00 \%$ | $39.30 \%$ |

## Question title: dispersive and nondispersive waves

A wave is $\square$ when the group and phase velocities are equal.

## Responses: Answer Box 1

| Answer | Value | Frequency |  |
| :--- | :--- | :--- | :--- |
| COHERENT | $0.00 \%$ | $2(6.7 \%)$ |  |
| CREST | $0.00 \%$ | $1(3.3 \%)$ |  |
| IN PHASE | $0.00 \%$ | $2(6.7 \%)$ |  |
| LARGEST | $0.00 \%$ | $1(3.3 \%)$ |  |
| NONDISPERSIVE | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 3}(\mathbf{7 6 . 7 \% )}$ |  |
| STANDING | $0.00 \%$ | $1(3.3 \%)$ |  |

## Combined Results: All Answer Boxes

| Answer | Frequency |  |
| :--- | :--- | :--- |
| COHERENT | $2(6.7 \%)$ |  |
| CREST | $1(3.3 \%)$ |  |
| IN PHASE | $2(6.7 \%)$ |  |
| LARGEST | $1(3.3 \%)$ |  |
| NONDISPERSIVE | $23(76.7 \%)$ |  |
| STANDING | $1(3.3 \%)$ |  |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 7 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 10 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 58.82 | 80.00 | 40.00 | 40.00 | $58.82 \%$ | $100.00 \%$ | $50.73 \%$ |

## Question title: Surface gravity waves

Surface gravity waves are usually generated by anomalies in the1. surface height
2. velocity
3. density
4. rotation rate

Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| $\mathbf{1 .}$ | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 6}(\mathbf{8 6 . 7 \%})$ |  |


| Answer | Value | Frequency Distribution |
| :--- | :--- | :--- | :--- |
| 2. | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{1}(\mathbf{3 . 3} \%)$ |
| 3. | $0.00 \%$ | $2(6.7 \%)$ |
| 4. | $0.00 \%$ | $1(3.3 \%)$ |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 3 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 14 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  |  | Discrimination | Mean | Median | Standard <br> Deviation |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 82.35 | 100.00 | 60.00 | 40.00 | $82.35 \%$ | $100.00 \%$ | $39.30 \%$ |

## Question title: Surface gravity waves 2

Surface gravity waves are - Select choice - $\ddagger$ in intermediate and - Select choice - $\uparrow$ water, but not in - Select choice - $\uparrow$ water.

## Response Summary

| Answer | Value | Frequency |  |
| :--- | :--- | :--- | :--- |
| dispersive, -, shallow | $0.00 \%$ | $1(3.3 \%)$ |  |
| dispersive, deep, shallow | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 2 ( 7 3 . 3 \% )}$ |  |
| dispersive, shallow, deep | $0.00 \%$ | $\mathbf{7 ( 2 3 . 3 \% )}$ |  |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 7 |  |
| $11-20$ | 0 |  |


| Grade | Frequency Distribution |
| :--- | :--- |
| $21-30$ | 0 |
| $31-40$ | 0 |
| $41-50$ | 0 |
| $51-60$ | 0 |
| $61-70$ | 0 |
| $71-80$ | 0 |
| $81-90$ | 0 |
| $91-100$ | 10 |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 58.82 | 80.00 | 60.00 | 20.00 | $58.82 \%$ | $100.00 \%$ | $50.73 \%$ |

## Question title: Kelvin wave speed

Kelvin waves have the same speed as shallow-water nonrotating gravity waves.


Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| True | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 6}(\mathbf{8 6 . 7 \%})$ |  |
| False | $0.00 \%$ | $4(13.3 \%)$ |  |

Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 4 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 13 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 76.47 | 80.00 | 60.00 | 20.00 | $76.47 \%$ | $100.00 \%$ | $43.72 \%$ |

## Question title: Kelvin and Tides

Kelvin waves are not affected by the movement of the sun and moon.


## Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| True | $0.00 \%$ | $5(16.7 \%)$ |  |
| False | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{2 5 ( 8 3 . 3 \% )}$ |  |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 4 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 13 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  |  |
| 17 | 76.47 | 100.00 | 40.00 | 60.00 | $76.47 \%$ | $100.00 \%$ | $43.72 \%$ |

## Question title: Rossby waves

Planetary Rossby waves rely on the variation of - Select choice while topographic waves rely on the variation of - Select choice -

## Response Summary

| Answer | Value | Frequency Distribution |  |
| :--- | :--- | :--- | :--- |
| Coriolis parameter, depth | $\mathbf{1 0 0 . 0 0 \%}$ | $\mathbf{3 0} \mathbf{( 1 0 0 \% )}$ |  |

## Grade Distribution Summary

| Grade | Frequency Distribution |  |
| :--- | :--- | :--- |
| $0-10$ | 0 |  |
| $11-20$ | 0 |  |
| $21-30$ | 0 |  |
| $31-40$ | 0 |  |
| $41-50$ | 0 |  |
| $51-60$ | 0 |  |
| $61-70$ | 0 |  |
| $71-80$ | 0 |  |
| $81-90$ | 0 |  |
| $91-100$ | 17 |  |


| $\mathbf{N}$ | Percent Answering Correctly |  | Discrimination | Mean | Median | Standard <br> Deviation |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Whole Group | Upper 25\% | Lower 25\% |  |  |  | $0.00 \%$ |
| 17 | 100.00 | 100.00 | 100.00 | 0.00 | $100.00 \%$ | $100.00 \%$ | 0.0 |

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