

COM6115 L3

Number of participants: 163

-  1. **The information content $I(s)$ of a symbol s is the number of bits in which s should be coded. Which of the following are correct? (More than one answer may be correct)**

12 correct answers
out of 90 respondents

$I(s) = \log(P(s))$

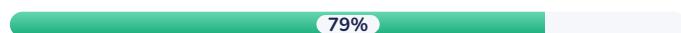


14%

13 votes



$I(s) = -\log(P(s))$



79%

71 votes

$I(s) = \log(1-P(s))$



16%

14 votes



$I(s) = \log(1/P(s))$



21%

19 votes

$I(s) = -\log(1/P(s))$



14%

13 votes

$I(s) = -\log(1-P(s))$



12%

11 votes



2. **The information content $I(s)$ of a symbol s increases as the probability $p(s)$ decreases.**

57 correct answers
out of 78 respondents



True



73%

57 votes

False



27%

21 votes

3. Entropy H sets ... for compression

52 correct answers

out of 83 respondents

a lower bound

 63%

52 votes

an upper bound

 37%

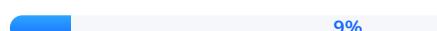
31 votes

4. More than one correct answer. Huffman coding...

10 correct answers

out of 85 respondents

results in lossy compression.

 9%

8 votes

uses a code tree.

 95%

81 votes

is more effective for character-based models than word-based models.

 28%

24 votes

is suitable when the probability distribution of the symbols is static.

 69%

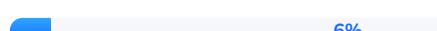
59 votes

is not a required step for applying canonical Huffman coding.

 11%

9 votes

is a dictionary compression method.

 6%

5 votes

is a symbolwise compression method.

 47%

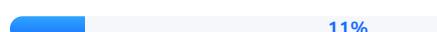
40 votes

is a static compression method.

 44%

37 votes

is a semi-static compression method.

 11%

9 votes

is an adaptive compression method.

 33%

28 votes



5. More than one correct answer. Arithmetic coding...

0 correct answer
out of 0 respondent

is faster than Huffman coding.

0%

0 votes

uses a coding tree.

0%

0 votes

achieves compression close to the lower achievable bound as set by entropy.

0%

0 votes

does not support random access.

0%

0 votes