



Birzeit University
Electrical and Computer Engineering Department
Faculty of Engineering and Technology
ENC539: Information Retrieval NLP, Quiz1 , October 11, 2017

Student Name: _____ **SAMPLE SOLUTION** _____ Student Number: _____

Circle check and/or write the correct answer (12 in total):

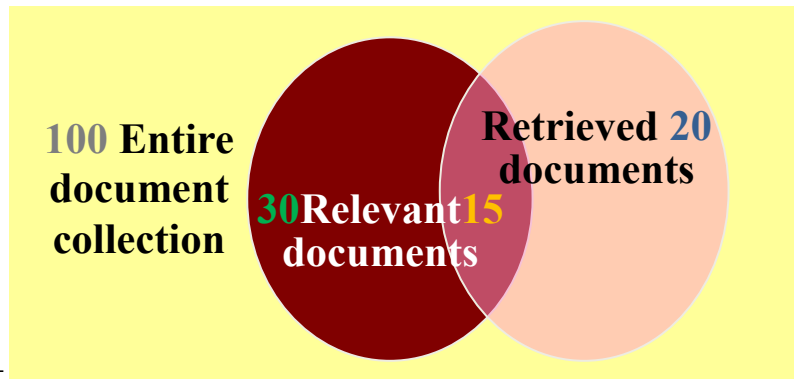
In the adjacent diagram the entire document collection has **100** documents, the relevant documents (right Circle) are **20**, the retrieved documents (left circle) are **30** and retrieved relevant documents are **15**.

- 1- The precision is: A: 2/3, B: 1/3, C: 0.2, D: 0.3, E: 3/4 → Answer is: **1/2**
- 2- The recall is: A: 2/3, B: 1/3, C: 0.2, D: 0.3, E: 3/4 E: 3/4 → Answer is: **E**
- 3- The true positives are: A: 100, B: **15**, C: 30, D: 20, E: 80 → Answer is: **B**
- 4- The false positives are: A: 100, B: 15, C: 30, D: 20, E: 80 → Answer is: **5**
- 5- The F value is: **0.6** (Value)

$$1/F = 1/2(2+4/3) = 5/3. F = 3/5 = 0.6$$

Given the table with the result for a query that has **6** relevant documents in the system:

- 6- Precisions at 6 (P@6)= **2/3** (Value)
- 7- After we see document 5 (986) the precision Is **0.6** (value) and the recall is **0.6**
- 8- Interpolated precision at recall = 0.5 equals **0.75**
- 9- Interpolated precision at recall = 0.6 equals **2/3**
- 10- Interpolated precision at recall = 1.0 equals **0**
- 11- Normalized Discounted Cumulative Gain (NDCG) cannot be more than 1. A True, False,



n	doc #	relevant		
1	588	x		
2	589	x		
3	576			
4	590	x		
5	986			
6	592	x		
7	984			
8	988			
9	578			
10	985			
11	103			
12	591			
13	772	x		
14	990			