

**Exam correction : Digital Humanities (DiHum)**

Time: 1H/30min

Date: 14/01/2026

Name:.....

The Point/20

Surname:.....

**Question:**

1/ choose the correct answer: **17 Points**

1- Digital Humanities describes

- A \_ A field that combines humanities disciplines with digital technologies for analysis and research
- B \_ A branch of computer science focused on cultural data only
- C \_ A discipline limited to digital archiving without analytical methods

2-What is one main advantage of the digital approach in the humanities?

- A \_ It depends only on manual reading
- B \_ It analyzes data quickly using computers
- C \_ It uses fewer sources

3-Which field uses Natural Language Processing (NLP) to analyze texts and social media content?

- A \_ Mathematics
- B \_ Computer Science
- C \_ Philosophy
- D \_ History

4-Which mathematical tool is mainly used to analyze social networks in cultural and social studies?

- A \_ Statistics
- B \_ Probability
- C \_ Graph Theory
- D \_ Mathematical Modeling

5-What does N-grams frequency analysis study?

- A \_ Individual letters only
- B \_ Single words only
- C \_ Pairs or triplets of words
- D \_ Images and videos

6-What does TF (Term Frequency) measure?

- A \_ The total number of documents in a corpus
- B \_ The number of characters in a word
- C \_ How often a word appears in a document relative to total words
- D \_ The importance of a word across all documents

7-What is co-occurrence analysis mainly used for?

- A \_ Editing images and videos
- B \_ Understanding how concepts are linked in texts
- C \_ Translating texts automatically

8-What is the main difference between a Markov Model and a Hidden Markov Model (HMM)?

- A \_ In HMM, the states are hidden but the observations are visible
- B \_ In a Markov Model, states are hidden, but in HMM they are visible
- C \_ In a Markov Model, the future depends on the entire past
- D \_ HMM does not use probabilities

9-Which tool is mainly used to analyze and visualize networks in cultural and social data?

- A \_ Python
- B \_ Voyant Tools
- C \_ R
- D \_ Gephi

10-What is the main difference between SQL and NoSQL databases?

- A \_ SQL uses tables to organize data, while NoSQL can handle large, unstructured, and flexible data.
- B \_ SQL is only for text data, while NoSQL is only for numbers.
- C \_ NoSQL replaces SQL completely in all fields.
- D \_ SQL is faster than NoSQL in handling unstructured data.

11-What are the main steps in image analysis?

- A \_ Text cleaning, database creation, and programming
- B \_ Segmentation, Feature Extraction, and Pattern Recognition
- C \_ Statistical modeling, probability calculation, and graph theory
- D \_ Sentiment analysis, topic modeling, and N-grams

12-What is the first step in practical audio analysis?

- A \_ Recognize the speaker
- B \_ Convert sound to text
- C \_ Extract acoustic features
- D \_ Convert audio to a spectrogram

13-A city has a population of 100,000 and grows at 2% per year. Using the exponential growth formula, what is the population after 10 years?

- A \_ 120,000
- B \_ 124,000
- C \_ 122,000

14-In graph theory applied to digital humanities, what do nodes usually represent in historical correspondence networks?

- A \_ Messages and letters
- B \_ People, cities, or manuscripts
- C \_ Time periods

15-Which of the following is an example of a question that can be studied using simulation in digital humanities?

- A \_ What is the definition of a word?
- B \_ How did a language spread across different regions?
- C \_ How to print a manuscript?

16-What is the main goal of open archives?

- A \_ To sell scientific articles
- B \_ To remove authors' rights
- C \_ To provide free access to scientific and cultural content

17-Which of the following is an example of good ethical practice in research?

- A \_ Hiding names when necessary
- B \_ Publishing all raw data without limits
- C \_ Ignoring the communities involved

2/ What are the steps in applying Social Network Analysis (SNA) to historical or literary data? **3 Points**

- 1-Data collection**.....
- 2-Data cleaning**.....
- 3-Building the nodes table**.....
- 4-Building the edges table**.....
- 5-Entering data into Gephi**.....

**Good luck**