



देव संस्कृति विश्वविद्यालय

शान्तिकुन्ज, हरिद्वार

आन्तरिक मूल्यांकन परीक्षा - INTERNAL EVALUATION TEST

**उत्तर-पुस्तिका**

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Student's Roll No. (in numbers) Paper code

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परीक्षार्थी के हस्ताक्षर  
Signature of student's

| लघुत्तरीय                              |   | योग/Total |
|--|---|-----------|
| A) Short Answer Type                   |   |           |
| 1                                      | 2 |           |
| दीर्घ उत्तरीय                          |   |           |
| B) Long Answer Type                    |   |           |
| 1                                      |   |           |
| कुल योग अंकों में<br>/ TOTAL IN DIGITS |   |           |
| कुल योग शब्दों में/TOTAL IN WORDS      |   |           |

परीक्षक के हस्ताक्षर  
Signature of Examiner



Short Answer

- Ans 1. The Artificial Neural Network (ANN) or Neural Network bases its assimilation of data on the way that the human brain processes information.
- Neural networks are used for effective data mining in order to turn raw data into useful information.
  - ~~Network~~ Neural networks look for patterns in large batches of data, allowing businesses to learn more about their customers which directs their marketing strategies, increase sales and lower costs.
  - Neural networks mine data in areas such as bioinformatics, banking, and retail.
  - Neural networks are applied across many industries and organizations —
    - (i) forecasting - ANN, can effectively forecast without limitations on data because of its modelling ability to extract unseen features and define relationships.
    - (ii) character and image recognition - Neural Networks are able to take multitude of inputs and process them in hidden and complex, non-linear relationship. This makes them perfectly positioned for character recognition, such as handwriting.
    - (iii) data mining - Neural Networks are used for effective data mining in order to turn raw data into useful information.
  - Application areas include system identification and control, quantum chemistry, game-playing and decision making, pattern recognition, sequence recognition, medical diagnosis, financial applications, visualization and e-mail spam filtering, etc.



## Ans 2. Multimedia Database

- Multimedia database is the collection of interrelated multimedia data that includes text, graphics (sketches, drawings), images, animations, video, audio, etc. and have vast amounts of multi-source multimedia data.
- The framework that manages different types of multimedia data which can be stored, delivered and utilized in different ways is known as multimedia database management system.
- There are three classes of the multimedia databases which includes static media, dynamic media and dimensional media.

### # Content of multimedia database management system -

- media data - The actual data representing an object.
- media format data - Information such as sampling rate, resolution, encoding scheme, etc. about the format of the media data.
- media keyword data - Keywords description relating to the generation of data. It is also known as content descriptive data. Ex - date, time and place of recording.
- media feature data - Content dependent data such as the distribution of colors, kinds of textures and different shapes present in data.

### # Applications

documents and record management, knowledge dissemination, Education and training, marketing, advertising, entertainment, real-time control and monitoring, etc.



Long AnswerAns 1 web data mining

- web mining can be widely seen as the application of adapted data mining techniques to the web, whereas data mining is defined as the application of the algorithm to discover patterns on mostly structured data.
- web mining has a distinctive property to provide a set of various data types.
- The web has multiple aspects that yield different approaches for the mining process, such as web pages consist of text, web pages are linked via hyperlinks, and user activity can be monitored via web server logs.

Need of web data mining

- It enables e-commerce to do personalized marketing, which eventually results in higher trade volumes.
- Government agencies can use this technology to classify threats and fight against terrorism.
- It helps to improve the power of web search engine by classifying the web documents and identifying the web pages.
- It is very useful to a particular website and e-services e.g. landing page optimization.
- The predicting capability of mining applications can benefit society by identifying criminal activities.

## Importance of web mining

- Processing used to Complete discovery

In this method, only bits of information like user information, IP addresses and sites are available. We can use these information to analyze and gather more information.

- Clustering and Categorization

The information containing same conversations or web-information like text, image, scripts and other useful forms are used to cluster and categorize web-page helps in Page information bases on titles, specified contents and images available.

- Structured processing -

Analysis of usage data will give the companies the information that is required to give an effective presence to their cutters.

The information that is gathered may combine ~~regits~~ and will provide the most valuable informations in online marketing, products, services, etc.

- It is also very important in the area of Personalization, showing interest based advertisements of the products.



Example

Let's take an example of E-business. web mining uncovers real-time e-business opportunities across geography.

It provides ways to target right customers and understand their needs and to customize services and strategies in near-or-real-time.

Web-mining also helps here to promote right products in real time to the right customer.

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