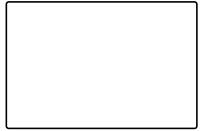


**National Level ScienceX Olympiads**

ScienceX AI Olympiad | Level 3

Name: \_\_\_\_\_

Date: \_\_\_\_\_



**Question: 1 of 50**

QID: 328

Marks: 4

\_\_\_\_\_ is an exercise that does not require even a tiny bit of technological knowledge, But when it comes to analyzing the data, it becomes a tedious process for humans as it is all about numbers and alpha-numerical data.

Please mark (✓) for the correct answer.

- A. Data Mining  B. Data Features  
 C. Data Processing  D. Data Collection

**Question: 2 of 50**

QID: 326

Marks: 4

CTR stands for

Please mark (✓) for the correct answer.

- A. Customer Transform Rate  B. Call Through Rate  
 C. Call Transform Rate  D. Call Time Rate

**Question: 3 of 50**

QID: 344

Marks: 4

Which of the following formats is used to store data in tabular form and each record consists of one or more fields which are separated by commas?

Please mark (✓) for the correct answer.

- A. doc  B. csv  
 C. xls  D. pdf

**Question: 4 of 50**

QID: 340

Marks: 4

Data Science can be a combination of

Please mark (✓) for the correct answer.

- A. Python and Mathematics  B. C++ and Mathematics  
 C. Algorithm and Science  D. Python and Science

Data Science is the concept of (i) Unify statistics (ii) data analysis (iii) machine learning (iv) intelligent learning

Please mark (✓) for the correct answer.

- A. (i) and (iii)  B. (ii) and (iv)
- C. All of them  D. (i) , (ii) and (iii)

Data fed into AI machine makes it \_\_\_\_\_

Please mark (✓) for the correct answer.

- A. non-rational  B. dumb
- C. obtuse  D. intelligent

Vishesh has downloaded an image with a resolution of 2000 x 1280. However, he is confused about which pixels are considered from one side to another and which ones are from top to bottom. Assist him by selecting an appropriate option out of the following:

Please mark (✓) for the correct answer.

- A. None of these  B. 1280, 2000
- C. Resolution is not considered as 2000 x 1280 only not one side another or top to bottom  D. 2000, 1280

Artificial Intelligence is technology which totally depends on \_\_\_\_\_

Please mark (✓) for the correct answer.

- A. Data  B. Flow chart
- C. Sensors  D. Robotics

\_\_\_\_\_ is the process of detecting instances of the objects, giving them a category, and then giving each pixel a label based on that.

Please mark (✓) for the correct answer.

- A. Classification and Localization  B. Instance Segmentation
- C. Object Detection  D. Classification

A segmentation algorithm takes an \_\_\_\_\_ as input and outputs a \_\_\_\_\_

Please mark (✓) for the correct answer.

- A. labels and segments
- B. pixels and labels
- C. image and segments
- D. segments and pixels

Which of the following is an example of an offline data collection method?(i) Kaggle(ii) Government Portals (iii) Sensors (iv) Interview

Please mark (✓) for the correct answer.

- A. (i) & (iv)
- B. (ii) & (iii)
- C. (i) & (ii)
- D. (iii) & (iv)

Which of the following is a domain-specific language used in programming and is designed for managing data held in different kinds of structured data?

Please mark (✓) for the correct answer.

- A. SQL
- B. Python
- C. C++
- D. Java

Which of the following software is used to create spreadsheets?

Please mark (✓) for the correct answer.

- A. MS Powerpoint
- B. MS Excel
- C. MS Word
- D. MS Publisher

Which of the following is not an application of data science?

Please mark (✓) for the correct answer.

- A. Online Price Comparison
- B. Image & Speech Recognition
- C. Recommendation Systems
- D. Privacy Checker

Vikash has made a model which predicts the performance of Indian Cricket players in upcoming matches. He collected the data of players' performance with respect to stadium, bowlers, opponent team and health. His model works with good accuracy and precision value. Which of the statement given below is incorrect?

Please mark (✓) for the correct answer.

- A. Data given to an AI model to check accuracy and precision is Testing Data.
- B. Data gathered with respect to stadium, bowlers, opponent team and health is known as Testing Data.
- C. Training data and testing data are acquired in the Data Acquisition stage.
- D. Training data is always larger as compared to testing data.

Which of the following is an application of data sciences?

Please mark (✓) for the correct answer.

- A. Email filters
- B. Face lock in smartphones
- C. Text summarization
- D. Targeted Advertisements

The number of pixels in an image is called \_\_\_\_\_ of image.

Please mark (✓) for the correct answer.

- A. Width
- B. Resolution
- C. Height
- D. Dimension

Which of the following tasks identifies the object present in the image and where it is present in the image?

Please mark (✓) for the correct answer.

- A. Object Detection
- B. Instance Segmentation
- C. Classification
- D. Classification and Localization

If  $b \sin \theta = a$ , then  $\sec \theta + \tan \theta = ?$

Please mark (✓) for the correct answer.

- A.  $\sqrt{\frac{1}{ba}}$
- B.  $\sqrt{\frac{b+a}{b-a}}$
- C.  $\sqrt{\frac{1}{b-a}}$
- D.  $\sqrt{\frac{1}{b+a}}$

As humans can see things, analyse them, and then take required action based on what they see. Which of the following helps machines to perform similar kinds of tasks?

Please mark (✓) for the correct answer.

- A. Camera Vision
- B. Computer Vision
- C. Data Science
- D. Natural Language Processing

Most of the datasets are curated in the form of \_\_\_\_\_ in data science.

Please mark (✓) for the correct answer.

- A. Pictures
- B. Tables
- C. Graphs
- D. Documents

Which of the following is not a task of Computer Vision?

Please mark (✓) for the correct answer.

- A. Guest Recognition
- B. Attendance System
- C. Air Line route plan
- D. Snap Chat Filters

\_\_\_\_\_ algorithms typically use extracted features and learning algorithms to recognize instances of an object category.

Please mark (✓) for the correct answer.

- A. Classification
- B. Object Detection
- C. Classification and Localization
- D. Instance Segmentation

Which of the following is an application of Data Science?

Please mark (✓) for the correct answer.

- A. To understand the Impact of DNA
- B. Google
- C. To know the customer's purchase power
- D. All of these

Classification and localization are used for

Please mark (✓) for the correct answer.

- A. Multiple objects
- B. Only two objects
- C. Three objects
- D. Single Objects

The data collection process is categorized into which of the categories?

Please mark (✓) for the correct answer.

- A. Internal & External
- B. Input & Output
- C. Structured and Unstructured
- D. Offline & Online

AI-based project requires data for

Please mark (✓) for the correct answer.

- A. Training Only
- B. No use of collecting data in AI
- C. Both a) & b)
- D. Testing Only

The Object detection task is used in \_\_\_\_\_

Please mark (✓) for the correct answer.

- A. Image retrieval and automated vehicle parking systems
- B. MRI Scan
- C. Identifying objects in the image such as a dog or cat
- D. Self Driving car

Which of the following are major data types used in Data Science?

Please mark (✓) for the correct answer.

- A. Videos  B. Numbers and Alpha-Numeric  
 C. Sound and Voice  D. Images and Graphics

State True or False – Data Science employs techniques and theories drawn from many fields within the context of Mathematics, Statistics, Computer Science, and Information Science.

Please mark (✓) for the correct answer.

- A. False  B. True

The full form of AAAI is:

Please mark (✓) for the correct answer.

- A. African Association of Artificial Intelligence  B. American Association of Artificial Intelligence  
 C. Australian Association of Artificial Intelligence  D. Asian Association of Artificial Intelligence

Which can be an input source for computer vision?

Please mark (✓) for the correct answer.

- A. keyboard  B. infrared  
 C. mouse  D. joystick

\_\_\_\_\_ refers to man-made does not occur naturally.

Please mark (✓) for the correct answer.

- A. Native  B. Artificial  
 C. Natural  D. Intelligence

Which of the following languages was introduced to write AI-related programs?

Please mark (✓) for the correct answer.

- A. LISP  B. PHP  
 C. C++  D. Python

Which of the following duration was marked as golden years of AI research in the history of AI?

Please mark (✓) for the correct answer.

- A. 1974-1980  B. 1947-1974  
 C. 1959-1974  D. 1960-1965

Systems for differently-abled individuals is an example of

Please mark (✓) for the correct answer.

- A. Content-Based Image Retrieval  B. Face recognition  
 C. Environment Perception  D. Smart Interactions

How the spam messages are detected in email filters?

Please mark (✓) for the correct answer.

- A. By copying the message directly  B. By sender's information  
 C. By the content of the email  D. By uncovering certain words

Speech recognition, Image recognition, and the ability to take action are examples of

Please mark (✓) for the correct answer.

- A. reasoning and planning  B. learning and adaption  
 C. to perceive, understand, and act  D. none of these



When a machine possesses the ability to mimic human traits like making decisions, predicting the future, learning, and improving on its own said to have

Please mark (✓) for the correct answer.

- A. Informative Intelligence
- B. Knowledge Intelligence
- C. Emotional Intelligence
- D. Artificial Intelligence

Which of the following most advanced form of AI?

Please mark (✓) for the correct answer.

- A. Neural Network
- B. Data Science
- C. Deep Learning
- D. Machine Learning

Why do we need AI

- i) automates repetitive tasks
- ii) making humans lazy
- iii) adds intelligence to existing products
- iv) digital assistance

Please mark (✓) for the correct answer.

- A. i, ii and iv
- B. i, iii and iv
- C. i, iii and iv
- D. ii, iii and iv

The output of  $R+G+B=0+0+255$  is

Please mark (✓) for the correct answer.

- A. Blue
- B. Black
- C. Red
- D. Green

Which of the following AI domain collects data, maintain the datasets, and derives the meaning out of it?

Please mark (✓) for the correct answer.

- A. Data Science
- B. Neural Network
- C. Computer Vision
- D. Natural Language Processing

In which of the following field price comparison websites are available?

Please mark (✓) for the correct answer.

- A. hospitality
- B. all of the above
- C. technology
- D. automobiles

The ability of religious and spiritual awareness is related to which of the following intelligences?

Please mark (✓) for the correct answer.

- A. kinaesthetic intelligence
- B. interpersonal intelligence
- C. existential intelligence
- D. naturalist intelligence

Search engines like Google and Bing use which of the following technique with the help of computer vision/

Please mark (✓) for the correct answer.

- A. Face recognition
- B. Environment Perception
- C. Content-Based Image Retrieval
- D. Smart Interactions

A human can make decisions based on

- i) availability of information
- ii) past experience
- iii) positive attitude
- iv) self-awareness

Please mark (✓) for the correct answer.

- A. i, iii and iv
- B. i, ii, iii and iv
- C. ii, iii and iv
- D. i, ii and iv

The intention of Machine Learning is

Please mark (✓) for the correct answer.

- A. enable machines to learn by themselves using the provided data
- B. trained with huge amounts of data
- C. recognize human's face
- D. think through the algorithm and execute the task

The Machine is said to be intelligent if,

Please mark (✓) for the correct answer.

- A. it analyses data
- B. it understands data
- C. it collects data
- D. all of the above

Which of the following is not a part of the Natural Language Generation?

Please mark (✓) for the correct answer.

- A. Text Analysing
- B. Sentence Planning
- C. Text Planing
- D. Text realization

--- END OF QUESTION PAPER ---



## Answer Key

No	Question Type	QID	Correct Answer
Question - 1	Multiple Choice (Radiobutton)	328	D
Question - 2	Multiple Choice (Radiobutton)	326	B
Question - 3	Multiple Choice (Radiobutton)	344	B
Question - 4	Multiple Choice (Radiobutton)	340	A
Question - 5	Multiple Choice (Radiobutton)	333	D
Question - 6	Multiple Choice (Radiobutton)	334	D
Question - 7	Multiple Choice (Radiobutton)	325	D
Question - 8	Multiple Choice (Radiobutton)	330	A
Question - 9	Multiple Choice (Radiobutton)	319	B
Question - 10	Multiple Choice (Radiobutton)	320	C
Question - 11	Multiple Choice (Radiobutton)	332	D
Question - 12	Multiple Choice (Radiobutton)	336	A
Question - 13	Multiple Choice (Radiobutton)	329	B
Question - 14	Multiple Choice (Radiobutton)	337	D
Question - 15	Multiple Choice (Radiobutton)	338	B
Question - 16	Multiple Choice (Radiobutton)	341	D
Question - 17	Multiple Choice (Radiobutton)	324	B
Question - 18	Multiple Choice (Radiobutton)	321	D
Question - 19	Multiple Choice (Radiobutton)	475	B
Question - 20	Multiple Choice (Radiobutton)	315	B
Question - 21	Multiple Choice (Radiobutton)	331	B
Question - 22	Multiple Choice (Radiobutton)	316	C
Question - 23	Multiple Choice (Radiobutton)	322	B
Question - 24	Multiple Choice (Radiobutton)	339	D
Question - 25	Multiple Choice (Radiobutton)	318	D
Question - 26	Multiple Choice (Radiobutton)	343	D
Question - 27	Multiple Choice (Radiobutton)	335	C
Question - 28	Multiple Choice (Radiobutton)	323	A
Question - 29	Multiple Choice (Radiobutton)	327	B
Question - 30	Multiple Choice (Radiobutton)	342	B
Question - 31	Multiple Choice (Radiobutton)	300	B
Question - 32	Multiple Choice (Radiobutton)	279	B
Question - 33	Multiple Choice (Radiobutton)	272	B
Question - 34	Multiple Choice (Radiobutton)	307	A
Question - 35	Multiple Choice (Radiobutton)	302	C
Question - 36	Multiple Choice (Radiobutton)	285	D
Question - 37	Multiple Choice (Radiobutton)	282	D
Question - 38	Multiple Choice (Radiobutton)	260	C
Question - 39	Multiple Choice (Radiobutton)	278	D
Question - 40	Multiple Choice (Radiobutton)	269	C
Question - 41	Multiple Choice (Radiobutton)	290	C
Question - 42	Multiple Choice (Radiobutton)	310	A
Question - 43	Multiple Choice (Radiobutton)	258	A

No	Question Type	QID	Correct Answer
Question - 44	Multiple Choice (Radiobutton)	271	B
Question - 45	Multiple Choice (Radiobutton)	267	C
Question - 46	Multiple Choice (Radiobutton)	288	C
Question - 47	Multiple Choice (Radiobutton)	299	D
Question - 48	Multiple Choice (Radiobutton)	259	A
Question - 49	Multiple Choice (Radiobutton)	264	D
Question - 50	Multiple Choice (Radiobutton)	283	A

--- END OF ANSWER KEY ---

