National Level ScienceX Olympiads

ScienceX AI Olympiad | Level 2

Name:

Date:

Exam Instructions

1. The timer has been set for the exam, and a countdown will display the remaining time. When the timer runs out, the exam will end automatically. No further action will be required after that.
2. You can flag any question that you want.
3. If you don't want to submit any of your provided answers, you can clear them.
4. If you choose to drop this exam, it will not be submitted, and no result will be generated.
5. Once you finish the exam, you cannot resume it.

Secure Exam Advice

This exam is specially secured. Which means you cannot leave your browser window once the exam starts.

The following actions are not supported during your exam.

- Minimizing the browser
- Resizing the browser
- Open a new tab
- Open a new program
- Taking a screenshot
- Pressing Ctrl + C
- Pressing Ctrl + V
- Pressing Print Screen
- Pressing F12

We are monitoring your activity during the exam, and any unusual behaviour is being tracked. Your admin has set the exam to terminate if a certain number of unusual activities are detected, which could be as low as one. To avoid your exam from being terminated, please refrain from any behaviour that may be considered unusual. All the best!

Question: 1 of 50   QID: 284   Marks: 4

Which of the following AI domains attempts to extract the information from spoken and written words using algorithms?

Please mark (✓) for the correct answer.

( ) **A.** Data Science

( ) **B.** neural network

( ) **C.** Natural Language Processing

( ) **D.** Computer Vision

Ms. Akriti is intelligent in performing calculations and logical reasoning. This ability refers to

Please mark (✓) for the correct answer.

A. Existential Intelligence   B. Lingustic Intelligence

C. Spatial Visual Intelligence   D. Mathematical Intelligence

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Which of the following components is the core of every AI system?

Please mark (✓) for the correct answer.

A. Data   B. Information

C. Testing   D. Training

Systems for differently-abled individuals is an example of

Please mark (✓) for the correct answer.

A. Environment Perception   B. Face recognition

C. Content-Based Image Retrieval   D. Smart Interactions

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

Please mark (✓) for the correct answer.

A. hospitality   B. automobiles

C. technology   D. all of the above

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. Neural Network   B. Data Science

C. Natural Language Processing   D. Computer Vision

The input for the Computer Vision project can be:

Please mark (✓) for the correct answer.

○ **A.** programming code files

○ **B.** audio and mp3 files

○ **C.** binary object files

○ **D.** images and videos

The full form of AAAI is:

Please mark (✓) for the correct answer.

○ **A.** Asian Association of Artificial Intelligence

○ **B.** Australian Association of Artificial Intelligence

○ **C.** American Association of Artificial Intelligence

○ **D.** African Association of Artificial Intelligence

Which of the following tasks are very important in face lock systems?

Please mark (✓) for the correct answer.

○ **A.** checking images in the database

○ **B.** creating a password

○ **C.** initiating the features of the face and matching while unlocking

○ **D.** capturing photos and generating pattern

_____ are made with the intent of accomplishing tasks which either too tedious for humans or are time-consuming.

Please mark (✓) for the correct answer.

○ **A.** Gadgets

○ **B.** Equipment

○ **C.** Tools

○ **D.** Machines

Which of the following are limitations of AI i) Training Time ii) Unemployment iii) Increasing the work speed iv) Lack of creativity

Please mark (✓) for the correct answer.

○ **A.** i, iii and iv

○ **B.** i, ii, and iv

○ **C.** i, ii and iii

○ **D.** ii, iii and iv

QID: 313

Marks: 4

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

Please mark (✓) for the correct answer.

○ **A.** Black

○ **B.** Green

○ **C.** Blue

○ **D.** Red

Question: 13 of 50

QID: 279

Marks: 4

Which can be an input source for computer vision?

Please mark (✓) for the correct answer.

○ **A.** keyboard

○ **B.** joystick

○ **C.** infrared

○ **D.** mouse

Question: 14 of 50

QID: 306

Marks: 4

Which of the following uses data science? i) Email Spam Filter ii) Autocomplete iii) Facelock iv) Virtual Assistance

Please mark (✓) for the correct answer.

○ **A.** i, ii and iv

○ **B.** i, iii and iv

○ **C.** ii, iii and iv

○ **D.** i, ii and iii

Question: 15 of 50

QID: 272

Marks: 4

_____ refers to man-made does not occur naturally.

Please mark (✓) for the correct answer.

○ **A.** Intelligence

○ **B.** Artificial

○ **C.** Native

○ **D.** Natural

Question: 16 of 50

QID: 294

Marks: 4

Unscramble the letters and find the word that name a quiz show which solve complex problems as well as riddles.

Please mark (✓) for the correct answer.

○ **A.** IRIS

○ **B.** NOSTAW

○ **C.** PSIL

○ **D.** ABOROM

What was the main reason behind the funding of the AI research projects being reduced?

Please mark (✓) for the correct answer.

○ **A.** People were not interested

○ **B.** lack of resources

○ **C.** lack of awareness towards research

○ **D.** lack of computational facilities to train the data

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

Please mark (✓) for the correct answer.

○ **A.** C++

○ **B.** LISP

○ **C.** Python

○ **D.** PHP

The intention of Machine Learning is

Please mark (✓) for the correct answer.

○ **A.** recognize human's face

○ **B.** trained with huge amounts of data

○ **C.** think through the algorithm and execute the task

○ **D.** enable machines to learn by themselves using the provided data

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The main function of smart assistants like Apple Siri and Amazon Alexa is

Please mark (✓) for the correct answer.

○ **A.** Trying to recognize the voice

○ **B.** None of these

○ **C.** Searching the word from the database

○ **D.** Trying to read from the dictionary

_____ refers to the ability to perceive or infer information, and to retain it as knowledge to be applied toward adaptive behaviors within an environment or context.

Please mark (✓) for the correct answer.

○ **A.** Behavior

○ **B.** Intelligence

○ **C.** Habits

○ **D.** Nature

Law enforcement agencies for identifying illegal/suspicious behavior is an example of

Please mark (✓) for the correct answer.

○ **A.** Content-Based Image Retrieval   ○ **B.** Environment Perception

○ **C.** Smart Interactions   ○ **D.** Face recognition

In computer vision and image processing, a _____ is a piece of information that is relevant for solving the computational task related to a certain application.

Please mark (✓) for the correct answer.

○ **A.** source   ○ **B.** features

○ **C.** pixels   ○ **D.** location

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.** Knowledge Intelligence   ○ **B.** Artificial Intelligence

○ **C.** Informative Intelligence   ○ **D.** Emotional Intelligence

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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.** 1959-1974   ○ **B.** 1974-1980

○ **C.** 1960-1965   ○ **D.** 1947-1974

In which year the expert systems were introduced?

Please mark (✓) for the correct answer.

○ **A.** 1986   ○ **B.** 1982

○ **C.** 1984   ○ **D.** 1980

QID: 260

Marks: 4

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

Please mark (✓) for the correct answer.

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

Question: 28 of 50

QID: 282

Marks: 4

How the spam messages are detected in email filters?

Please mark (✓) for the correct answer.

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

Question: 29 of 50

QID: 266

Marks: 4

AI systems are made up of

Please mark (✓) for the correct answer.

- A. machines, hardware and software
- B. o only hardware
- C. o only machine
- D. only software

Question: 30 of 50

QID: 309

Marks: 4

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

Please mark (✓) for the correct answer.

- A. White
- B. Gray
- C. Black
- D. Red

Question: 31 of 50

QID: 288

Marks: 4

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

_____ includes our past experience, intuition, knowledge, and self-awareness

Please mark (✓) for the correct answer.

- ○ **A.** nature
- ○ **B.** habits
- ○ **C.** behaviour
- ○ **D.** information

Question: 33 of 50   QID: 310   Marks: 4

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

Please mark (✓) for the correct answer.

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

Question: 34 of 50   QID: 311   Marks: 4

Features refer to specific structures such as (i) points (ii) edges (iii) objects (iv) File path

Please mark (✓) for the correct answer.

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

Question: 35 of 50   QID: 269   Marks: 4

Which of the following most advanced form of AI?

Please mark (✓) for the correct answer.

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

Question: 36 of 50   QID: 277   Marks: 4

The machine becomes intelligent once they are

Please mark (✓) for the correct answer.

- ○ **A.** trained
- ○ **B.** started
- ○ **C.** turned off
- ○ **D.** installed

QID: 312 Marks: 4

_____ are considered to be good features in an image.

Please mark (✓) for the correct answer.

A. corners

B. flat area

C. lines

D. edges

Question: 38 of 50 QID: 261 Marks: 4

Which of the following is a price comparison website?

Please mark (✓) for the correct answer.

A. Facebook

B. youtube

C. google

D. Shopzilla

Question: 39 of 50 QID: 291 Marks: 4

The first AI winter starts in

Please mark (✓) for the correct answer.

A. 1977

B. 1976

C. 1978

D. 1974

Question: 40 of 50 QID: 297 Marks: 4

Assertion (A) : The funding of AI was halted in the second AI winter.
Reason(R) : Developing systems were costly.

Please mark (✓) for the correct answer.

A. A is correct but R is incorrect

B. Both A and R incorrect

C. Both A and R are correct

D. B is correct but R is incorrect

Question: 41 of 50 QID: 301 Marks: 4

Watson was developed by

Please mark (✓) for the correct answer.

A. Apple

B. Google

C. Amazon

D. IBM

The ability to communicate with others by understanding other people's feelings & influence on the person is known as

Please mark (✓) for the correct answer.

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

Arrange the AI evolution in proper order: i) neural network ii) machine learning iii) deep learning iv) birth of AI

Please mark (✓) for the correct answer.

- ○ **A.** ii – iii – iv – i
- ○ **B.** iv – i – ii – iii
- ○ **C.** i – ii – iii – iv
- ○ **D.** i – iii – iv – ii

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

Please mark (✓) for the correct answer.

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

Which of the following processes is not involved in Computer Vision image processing?

Please mark (✓) for the correct answer.

- ○ **A.** acquiring images
- ○ **B.** deleting images
- ○ **C.** extracting information
- ○ **D.** screening images

In automatic cars, which of the following functions can be performed by the car itself?

Please mark (✓) for the correct answer.

- ○ **A.** blowing the horn
- ○ **B.** predicting the distance from source to destination
- ○ **C.** decision to run or stop
- ○ **D.** changing gears

The Machine is said to be intelligent if,

Please mark (✓) for the correct answer.

A. it collects data

B. all of the above

C. it understands data

D. it analyses data

Mr. Anurag is excellent at publishing articles on his blog. This ability refers to

Please mark (✓) for the correct answer.

A. Lingustic Intelligence

B. Mathematical Intelligence

C. Spatial Visual Intelligence

D. Existential Intelligence

Which of the following is AI-based vacuum cleaner?

Please mark (✓) for the correct answer.

A. Siri

B. Roomba

C. Sophia

D. Deep Blue

The advertisement of merchandise is an example of which of the following domains of AI?

Please mark (✓) for the correct answer.

A. natural language processing

B. All of the above

C. data science

D. computer vision

--- END OF QUESTION PAPER ---

Answer Key

No	Question Type	QID	Correct Answer
Question - 1	Multiple Choice (Radiobutton)	284	C
Question - 2	Multiple Choice (Radiobutton)	256	D
Question - 3	Multiple Choice (Radiobutton)	281	A
Question - 4	Multiple Choice (Radiobutton)	285	D
Question - 5	Multiple Choice (Radiobutton)	271	D
Question - 6	Multiple Choice (Radiobutton)	258	B
Question - 7	Multiple Choice (Radiobutton)	274	D
Question - 8	Multiple Choice (Radiobutton)	300	C
Question - 9	Multiple Choice (Radiobutton)	262	C
Question - 10	Multiple Choice (Radiobutton)	255	D
Question - 11	Multiple Choice (Radiobutton)	305	B
Question - 12	Multiple Choice (Radiobutton)	313	B
Question - 13	Multiple Choice (Radiobutton)	279	C
Question - 14	Multiple Choice (Radiobutton)	306	A
Question - 15	Multiple Choice (Radiobutton)	272	B
Question - 16	Multiple Choice (Radiobutton)	294	B
Question - 17	Multiple Choice (Radiobutton)	303	D
Question - 18	Multiple Choice (Radiobutton)	307	B
Question - 19	Multiple Choice (Radiobutton)	259	D
Question - 20	Multiple Choice (Radiobutton)	289	A
Question - 21	Multiple Choice (Radiobutton)	263	B
Question - 22	Multiple Choice (Radiobutton)	286	B
Question - 23	Multiple Choice (Radiobutton)	314	B
Question - 24	Multiple Choice (Radiobutton)	278	B
Question - 25	Multiple Choice (Radiobutton)	302	A
Question - 26	Multiple Choice (Radiobutton)	304	D
Question - 27	Multiple Choice (Radiobutton)	260	A
Question - 28	Multiple Choice (Radiobutton)	282	C
Question - 29	Multiple Choice (Radiobutton)	266	A
Question - 30	Multiple Choice (Radiobutton)	309	D
Question - 31	Multiple Choice (Radiobutton)	288	D
Question - 32	Multiple Choice (Radiobutton)	273	D
Question - 33	Multiple Choice (Radiobutton)	310	B
Question - 34	Multiple Choice (Radiobutton)	311	B
Question - 35	Multiple Choice (Radiobutton)	269	C
Question - 36	Multiple Choice (Radiobutton)	277	A
Question - 37	Mutliple ChoiCe (Radiobutton)	312	A
Question - 38	Multiple Choice (Radiobutton)	261	D
Question - 39	Multiple Choice (Radiobutton)	291	D
Question - 40	Multiple Choice (Radiobutton)	297	C
Question - 41	Multiple Choice (Radiobutton)	301	D
Question - 42	Multiple Choice (Radiobutton)	265	D
Question - 43	Multiple Choice (Radiobutton)	295	B

No	Question Type	QID	Correct Answer
Question - 44	Multiple Choice (Radiobutton)	267	D
Question - 45	Multiple Choice (Radiobutton)	268	B
Question - 46	Multiple Choice (Radiobutton)	275	C
Question - 47	Multiple Choice (Radiobutton)	264	B
Question - 48	Multiple Choice (Radiobutton)	276	A
Question - 49	Multiple Choice (Radiobutton)	293	B
Question - 50	Multiple Choice (Radiobutton)	280	C

--- END OF ANSWER KEY ---