

MBZUAI Online Entry Exam Guidelines

The 45-minute online entry exam will be fully automated with AI proctoring to ensure fairness and transparency. Its details, including the exam questions, are deemed confidential and must not be shared with any party in any form whatsoever. Confidentiality breaches will have serious implications on the concerned applicant's admission status and/or future studies at the University.

Please read the following instructions carefully:

Before the exam

Entry exam

- The entry exam details will be sent to selected applicants a week before their scheduled exam. They will include the login credentials, exam PIN code, exam date and instructions.
- Entry exam participants must install the **Exam Portal** software, run a system check and complete the demo exam well ahead of time.
- The demo exam (**PIN: ue7044**) will be available for multiple use after logging in to the **Exam Portal** software to allow entry exam participants to familiarize themselves with the system.

Equipment and browser requirements have to be strictly followed. The exam cannot be conducted if they are not available.

System requirements

- **Desktop or laptop: the exam portal does not run** on Google Chromebooks, virtual machines, machines running Linux, tablets, or mobile phones
- **Operating system**
 - **Windows:** 10 and 11 on 64-bit platforms or
 - **macOS:** OS X 10.15 and higher
- CPUs newer than 2011 (Intel Sandy Bridge or newer)
- At least 75 MB of free storage space per hour
- At least 500 MB of available disk space
- A stable broadband internet connection (with at least 0.15Mbps upload speed)
- Full device admin access
- **Web camera & microphone (internal or external)**
 - To be switched on during the exam
 - Full access to the camera and microphone must be given to the **Exam Portal** software

Required program

- Download and install the **Exam Portal** software on the computer that will be used during the exam: <https://mbzuai.inspera.com/get-iep>
- Accept all the permissions while installing the **Exam Portal** software.

Additional reminders

- The MBZUAI IT team may be emailed at IT_external@mbzuai.ac.ae for technical support. Working hours are at 8:00 AM – 5:00 PM (UAE time) on Mondays to Thursdays and at 8:00 AM – 12:30 PM (UAE time) on Fridays.
- Entry exam participants will only be given one chance to do the actual exam and no further attempt will be allowed for any reason (e.g., late attendance, internet disconnection, insufficient battery power, power failure, email ID and login key hacking, etc.). Thus, it must be ensured that all technical issues are addressed and resolved before the scheduled exam.
- The entry exam must be taken honestly, ethically and with an understanding and compliance to the exam rules and instructions.
- Sample exam questions are available in the last pages of this document

During the exam

Exam essentials

- A device that is **Exam Portal**-ready **before** opening the **Exam Portal** software
 - The desktop/laptop must be plugged in to a power source and connected to a stable internet connection prior to and throughout the exam.
 - All external displays, secondary screens and virtual machines must be disconnected.
 - All background applications and blockers must be switched off.
 - There should be full admin access to the device that will be used during the exam.
 - Web camera and microphone (internal or external) must be working properly and have given full access permissions to the **Exam Portal** software.
- **Exam Portal** username, password and exam PIN code
 - These will be sent to selected applicants prior to their scheduled exam.
- Valid ID (e.g., passport, school ID, company ID, driver's license, etc.)
 - Must clearly show the entry exam participant's full name in English as well as his/her most recent photo
- Blank paper, pen and calculator
 - Minimal use is advised.

Exam surroundings

- The exam must be taken alone in a private location with proper lighting and not in a public area (e.g., library, park, mall, restaurant, internet cafe, etc.).
- The computer equipment must be placed on a desk during the exam while the entry exam participant is seated on a standard chair with the camera at eye-level.
- The exam room must be clear of the following:
 - other people
 - mobile and recording devices (e.g., phone, tablet, etc.)
 - books, study materials and reference notes
 - food and drink
 - background noises

Clothing and appearance

- An entry exam participant must be dressed presentably and ensure that his/her face will not be covered.
- Unnecessary hair accessories and covering are prohibited.
- Hair covering for religious or cultural reasons will be allowed.

AI Proctor

- The web camera must always be at eye-level.
- There must be no background noises (e.g., human voice/s, music, environmental sounds, etc.).
- The entry exam participant's face must remain within the middle of the computer screen throughout the exam.

Exam proper

- The exam can only be taken through the **Exam Portal** software which has to be installed and tested at least two days before the scheduled exam.
- The exam will include questions related to the items below. More information is available on our website: <https://mbzuai.ac.ae/study/msc-programs/> | <https://mbzuai.ac.ae/study/phd-programs/>
 - Math
 - Programming
 - Machine Learning (only for applicants of MSc in CS, MSc in Robotics, PhD in CS, PhD in CV, PhD in ML, PhD in NLP and PhD in Robotics)
 - Computer Science specialization topics (only for applicants of MSc in CS and PhD in CS)
 - Robotics specialization topics (only for applicants of MSc in Robotics and PhD in Robotics)
- All the rules and instructions must be reviewed and understood beforehand.
- The exam has to be done in one sitting and only one attempt will be allowed.
- Entry exam participants must allot at least 30 minutes prior to their planned exam start time to complete the system checks as well as the face and ID verification stages.
- The exam will have 40 questions and may be taken for a maximum of 45 minutes any time within the 24-hour exam schedule.
- The exam will automatically stop either when the 45-minutes duration has been completed or the 24-hour exam schedule ended, whichever comes first.
- The 'Submit' button will appear after responding to the last exam item.
- For better results, it is advisable to answer all exam questions. There will be no negative marking so exam participants will not lose marks for incorrect answers.

After the exam

- The exam scores will be automatically forwarded to the MBZUAI Admission team.
- Final scores will be part of the application file but will not be disclosed to entry exam participants.
- Admission-related questions may be sent to admission@mbzuai.ac.ae

Sample Exam Questions

1. Which of the following is TRUE about Linear Regression and Logistic Regression?

- A. Linear Regression predicts a continuous dependent variable
- B. Logistic Regression predicts a categorical/discrete dependent variable
- C. Both A and B ✓
- D. None of the above

2. Gradient Descent computes derivative of loss function w.r.t

- A. Input
- B. Activation value
- C. Weight ✓
- D. None of the above

3. Find angles (α, β, γ) such that

$$2\sin\alpha - \cos\beta + 3\tan\gamma = 3$$

$$4\sin\alpha + 2\cos\beta - 2\tan\gamma = 2$$

$$6\sin\alpha - 3\cos\beta + \tan\gamma = 9$$

- A. $(\pi/2, 0, \pi/4)$
- B. $(\pi, \pi/2, 0)$
- C. $(\pi/2, \pi, \pi/4)$
- D. $(\pi/2, \pi, 0)$ ✓

4. From a bag of 6 red and 2 blue balls, two balls are drawn consecutively without replacement. What is the probability that the second ball drawn is red?

A. $\frac{3}{4}$ ✓

B. $\frac{5}{8}$

C. $\frac{1}{4}$

D. $\frac{3}{8}$

5. In the worst case, the number of comparisons needed to search a singly linked list of length n for a given element is

- A. $\log_2 n$
- B. $n/2$
- C. $\log_2 n - 1$
- D. n ✓



6. Which of the following WHILE loops prints the same output as this FOR loop

```
sum = 0  
counter = 100  
for i = 1 to counter  
sum = sum + i  
end  
print (sum)
```

A. sum = 0
counter = 1
while (counter >=100)
sum = sum + counter
counter = counter + 1
end while
print (sum)

B. sum = 0
counter = 1
while (counter <=100)
sum = sum + counter
end while
print (sum)

C. sum = 0
counter = 1
while (true)
if (counter ==100)
break
end if
sum = sum + counter
counter = counter +1
end while
print (sum)

D. sum = 0
counter = 1
while (true)
sum = sum + counter
if (counter ==100)
break
else
counter = counter +1
end if
end while
print (sum)

✓