

JAI HIND COLLEGE

Basantsing Institute of Science & J.T. Lalvani College of
Commerce. and Sheila Gopal Raheja College of Management.
(*Autonomous*)

Entrance Exam for admission to MSc Big Data Analytics (PG) Self Financing Program for 2024-2025

Admission to the MSc. Big Data Analytics program (in collaboration with TCS) under the self-financing scheme will be based on the Online Entrance Exam and CGPA of Degree program. This Program will be aligned with NEP-2020 as per govt. of Maharashtra guidelines. The number of seats available is 30.

Eligibility & Admission Criteria: A learner for being eligible to apply for admission to the M.Sc. degree Program by papers in MSc. Big Data Analytics, must have passed: - B.Sc.IT./ B.Sc. C.S. /B. Voc. SD/ B.Sc. Mathematics / B.Sc. Statistics / BCA / B.Tech./B.E. degree examination of this University or an equivalent degree of any other University with a minimum of 46 credits or its equivalent (i.e. the minimum credits required for majoring in a subject, and excluding the credits for optional courses) in the subject which he wants to offer for the M.Sc. degree program by papers provided the above candidate undergoes the proposed Bridge Courses in Mathematics, Statistics and IT, each for a duration of 15 hours, satisfactorily.

OR

Students who have graduated majoring in Economics, with Econometrics as one of the Courses or students who have graduated in BAF/BMS/BBA/BFM/BBI/ BCom Program of this University or any other University equivalent thereto will also be eligible for admissions, provided they had passed Standard XII Board Examinations with Mathematics or Statistics as one of the subjects and undergo

Satisfactorily the proposed Bridge Courses in Mathematics, Statistics and IT for a duration of 15 hours each.

AND

Provided further the candidates hold a Graduate/Post Graduate Degree with a minimum of 60% marks or CGPA 6.5 on a 10-point scale in the qualifying Degree of BSc/ BCA/ B.Tech./B.E./ BA/ BAF/ BMS/ BBA/ BFM/ BBI/ BCom or equivalent will be eligible for this program provided he/she has scored not less than 60% in the aggregate at the other threshold Examinations of Standard X and Standard XII.

Note: Candidates from the SC / ST Category will be eligible for a relaxation of 5% in respect of the above requirement.

Candidates, who are in the Final Year of their Degree Program, are also eligible to apply provided that their admission will be subject to the condition that they appear and pass in the final examination with a minimum of 46 credits or its equivalent (i.e, the minimum credits required for majoring in a subject, and excluding the credits for optional courses) in the subject and complete other academic requirements as specified above. Their marksheets need to be uploaded before the Final Merit list.

- **Merit list for Admission:** The merit list for Admissions will be based on (percentage of aggregate marks/grade secured in Sem 5 & 6 of Bachelor or Sem 7 & 8 of B.E./B.Tech.) as well as marks secured in PG entrance test conducted by college.

Instructions to apply for Entrance Exam:

Applicants are required to read carefully the following step by step instructions

guide in order to apply for Entrance Exam:

1. Go to the below link and register yourself to fill the online form to apply for JHC Entrance Exam: <http://jaihind.radicalforms.com> (link will be activated from 14/05/2024)

2. Fill the form in entirety and click on 'Next' to proceed towards online payment of test fees.

Note: Please keep the following documents handy as they would be required to be uploaded while you fill the form:

- Aadhaar Card

- Recent Photo

3. Proceed towards online payment of entrance test fees of Rs.1200/- (all inclusive).

4. Upon successful payment of the entrance exam fee, a unique application number shall be displayed and an acknowledgement shall be sent to the registered email id and mobile number.

5. This application number will be your point of reference / identification and shall be needed to be entered when you take the online entrance exam.

6. You can login anytime to view your submitted entrance exam form and can reach out to us on the below admission coordinates in case of any queries:

Exam/admission related queries:

jhc.bigdata@jaihindcollege.edu.in

Tech support:support@radicalforms.com

Marking Scheme

- The Online Entrance Exam will consist of Multiple-Choice Questions (MCQ)

as per the detailed structure specified here under.

Structure of Online Entrance Exam

Subject Matter	Weightage	Number of Question	Total Marks	Total Duration
Logical Reasoning	20%	10	100	1 hour 30 minutes
Mathematics	25%	13		
Statistics	25%	12		
Computer Science	30%	15		

There is no negative marking System for this test.

Test Duration: 90 minutes

Medium of Test: English

Mode of Examination - Online

Kindly Note: Prior to entrance exam a mock test will be conducted for the students to get familiar with the system. The mock test will be conducted on 13th & 14th June 2024 from 10am to 5pm. Details of Mock test will be sent on the students email id and will also be available on <http://www.jaihindcollege.com>

PLEASE NOTE – MOCK TEST MANDATORY FOR ALL STUDENTS.

Rules to be followed – before and during the conduct of examination.

- a. The candidate will take the entrance exam from a separate place/room where there is no other person in vicinity during the entire duration of the exam.
- b. The place should be noise-free with no movement of people in the surroundings.
- c. Candidates must not talk to anyone during the entrance exam period or talk/read to themselves loudly.
- d. Candidates must not use head phones, ear buds, or any other type of listening equipment except the speaker of the laptop.
- e. All the computer settings need to be done much before the entrance exam time and to be tested properly. For any failure of the computer system, during the entrance exam period, Jai Hind College will not be responsible and the candidate will lose his/her attempt; no reexamination will be conducted.
- f. Candidates must not switch off the webcam or mic or cover the webcam during the entrance exam. Changing of the camera angles to obstruct views can lead to stopping of the test by the online invigilator or AI enabled system. Candidates must face the computer screen and must not look away from the laptop/desktop.
- g. Candidates must not communicate with any other person by any means. Candidates must not seek any assistance or refer to study material/mobile/ for answering the questions.
- h. During the online examination the IP address of the candidate will be tracked to monitor individual participation. This measure is in place to prevent multiple individuals from sitting together and taking the exam simultaneously. It is imperative that each candidate accesses the examination independently, from their own designated location. Candidates adhere strictly to this guideline to avoid any potential issues during the examination.

Action against candidates found guilty of misconduct/ use of unfair means

Candidates are advised in their own interest that they should not furnish any particulars that are false, tampered with or fabricated and should not suppress any

material information while submitting online application. At the time of examination or in a subsequent admission procedure, if a candidate is (or has been) found guilty of

–

- (i) Using unfair means or
- (ii) Impersonating or procuring impersonation by any person or
- (iii) disclosing, publishing, reproducing, transmitting, storing or facilitating transmission and storage of contents of the test (s) or any information therein in whole or part thereof in any form or by any means, verbal or written, electronically or mechanically for any purpose or resorting to any irregular or improper means in connection with his/ her candidature or
- (iv) Obtaining support for his/ her candidature by unfair means, or
- (v) Carrying mobile phones or similar electronic devices of communication in the examination hall, such a candidate may, in addition to rendering himself/ herself is liable to criminal prosecution, be liable to be disqualified from the examination for which he/ she is a candidate

General Instructions

1. The possibility of occurrence of some problem in the administration of the examination cannot be ruled out completely which may impact test delivery and/or result from being generated. In that event, every effort will be made to rectify such problems, which may include movement of candidates, delay in tests. Conduct of a re-exam is at the absolute discretion of the test conducting body i.e. Jai Hind College. Candidates will not have any claim for a re-test. Candidates not willing to move or not willing to participate in the delayed process of test delivery shall be summarily rejected from the process.
2. Decision of Jai Hind College in all matters relating to conduct of Jai Hind College Entrance exam will be final and binding on the candidate. No correspondence or personal enquiries shall be entertained by the College on

this behalf.

3. Instances for providing incorrect information and/or process violation by a candidate detected at any stage of the admission process will lead to disqualification of the candidate from the entire admission process.
4. Candidates will take the entrance exam under virtual/online invigilation mode. This is also called the Remote Proctored Exam.
5. Candidates must Login 30 minutes before the entrance exam start time to ensure a smooth process.
6. Exam will go live on 15th June, 2024 as per slots assigned to respective students based on application number.
7. Candidate has to use his/her user id and Password sent on his/her email for logging into the entrance examination system. Candidates have to click on the link sent on the candidates registered email id.
8. Once he/she logs into the system he/she will be shown the exam available for him/her. The exam will be available only during the defined time slot.
9. Candidate needs to sit for the exam in a position so that his/her face is clearly visible in the camera of the laptop / PC. Place should have proper lighting and no one else should enter the same place in the entire duration of the exam.
- 10.No TOILET or other breaks will be allowed during the entire duration of the exam. Candidates are advised to keep water with them if they want.
- 11.During the entire duration of the exam, the candidate's activities will be monitored and recorded.
12. If the candidate indulges in unfair practices/suspicious acts like talking to someone else, trying to share screen, leaving their place etc. the AI Enabled system or online invigilator will intervene and cancel/stop the entrance test immediately.
13. No reexamination will be conducted under any circumstances. The decision of Jai Hind College will be final and binding on the student.

Syllabus and Sample Questions

Section I - Logical Reasoning and Verbal Ability.

- Analogy
- Sequence
- Blood Relations
- Predicate and Propositional Logic
- Puzzle
- Coding-Decoding
- Cause-Effect
- Artificial Language
- Deductive Reasoning
- Seating Arrangements

Section II: Mathematics

- Sequences and Series Of Real Numbers
- Linear Algebra
- Vectors and Matrices
- Numerical Methods
- Set Theory
- Relations
- Logical Compound Statements
- Permutations and Combinations
- Differentiation

Section III: Statistics

- Elementary Statistics
- Measures Of Central Tendency
- Correlation
- Regression
- Sampling Theory
- Probability Distributions
- Data Visualization
- Testing Of Hypothesis

Section IV: Computer Science

- Data Structures
- Basics Of Programming Concepts And Algorithms
- Data Communication And Networking

- Database Management System
- Software Engineering
- Information Technology

SAMPLE QUESTION

Logical Reasoning and Verbal Ability

1. PETAL: FLOWER
 - a. Pen: Paper
 - b. Engine: Car
 - c. Cat: Dog
 - d. Ball: Game
2. Consider the following statements
 - I. All the colleges in the city had to keep closed for three days a week.
 - II. Many students have left the local colleges.
 - a. Statement II is the cause and statement I is its effect
 - b. Statement I is the cause and statement II is its effect
 - c. Both the statements are effects of independent causes
 - d. Both the statements are independent causes
3. Pointing to a photograph, a man said, "I have no brother, and that man's father is my father's son." Whose photograph was it?
 - a. His son
 - b. His own
 - c. His father
 - d. His nephew
4. Peter is in the East of Tom and Tom is in the North of John. Mike is in the South of John then in which direction of Peter is Mike?
 - a. South-East
 - b. South-West
 - c. South
 - d. North-East
5. What is Geeta's rank in the class?
 - I. There are 30 students in the class.
 - II. There are 10 students who scored less than Geeta.
 - a. Statement I alone is sufficient, but statement II alone is not sufficient
 - b. Statement II alone is sufficient, but statement I alone is not sufficient
 - c. Either I or II is sufficient
 - d. Both I and II are needed
6. If in a certain language, NOIDA is coded as OPJEB, how is DELHI coded in that language?
 - a. CDKGH
 - b. EFMIJ
 - c. FGJJK
 - d. IHLED

7. Essential part of Book is
- Education
 - Picture
 - Pages
 - Knowledge
8. Consider the following statements.
- Pooja is older than Mukesh.
 - Suresh is older than Pooja.
 - Mukesh is older than Suresh.
- If the first two statements are true, the third statement is
- FALSE
 - TRUE
 - Uncertain
 - Can't say
9. Which number should come next in the series, 48, 24, 12,?
- 8
 - 6
 - 4
 - 2
10. AA, PP, RR, XX, SS and ZZ are sitting in a row. SS and ZZ are in the center. AA and PP are at the ends. RR is sitting to the left of AA. Who is to the right of PP?
- XX
 - RR
 - ZZ
 - SS

Mathematics

- 1) If you roll a pair of dice, what is the probability that (at least) one of the dice is a 4 or the sum of the dice is 7?
- $\frac{1}{9}$
 - $\frac{13}{36}$
 - $\frac{7}{12}$
 - $\frac{5}{12}$
- 2) Two dices, one 6-sided and one 4-sided, are thrown. What is the probability that sum of the dots shown on the dices is 3 or 4.
- $\frac{2}{3}$
 - $\frac{3}{5}$
 - $\frac{7}{17}$
 - $\frac{5}{24}$

- 3) Insert the arithmetical signs in the following numerical figure. Insert the arithmetical signs in the following numerical figure.

$$963 = 27$$

- a. +, x
 - b. -, +
 - c. -, x
 - d. x, ÷
- 4) The ratio of boys and girls in a school is 3 : 2, 20% of boys and 25% of girls are scholarship holders. The percentage of students who are scholarship holders are ?
- a. 45
 - b. 35
 - c. 60
 - d. 22
- 5) If the order of matrix A is $m \times p$. And the order of B is $p \times n$. Then the order of matrix AB is ?
- a. $m \times n$
 - b. $n \times m$
 - c. $n \times p$
 - d. $m \times p$
- 6) If the number of elements in a set S are 5. Then the number of elements of the power set P(S) are ?
- a. 5
 - b. 6
 - c. 16
 - d. 32
- 7) In a class there are 100 students, 50 students passed in science and 70 passed in Hindi; 5 Failed in both Science and Hindi. Find out how many passed in both the subjects?
- a. 28
 - b. 40
 - c. 35
 - d. 25
- 8) The logical form of $(A \cup B)' = A' \cap B'$ is ?
- a. $\sim(p \vee q) = \sim p \wedge \sim q$
 - b. $\sim(p \wedge q) = \sim p \vee \sim q$
 - c. $\sim p \wedge \sim q = \sim(p \vee q)$

d. $\sim p \vee \sim q = \sim(p \wedge q)$

9) If $f(x) = \sqrt{\sin(x)}$ $x \in [0, \pi]$ then....

- a. $f(x)$ is continuous in $[0, \pi]$
- b. $f(x)$ is discontinuous in $[0, \pi]$
- c. $f(x)$ is discontinuous only at 0 and nowhere else.
- d. $f(x)$ is discontinuous only at 0 and π , and nowhere else.

10) A running man crosses a bridge of length 500 meters in 4 minutes. At what speed he is running?

- a. 8.5 km/s
- b. 7.5 km/s
- c. 9.5 km/s
- d. 6.5 km/s

Statistics

1) If the standard deviation of a population is 9, the population variance is:

- a. 9
- b. 3
- c. 27
- d. 81

2) The middle value of an ordered array of numbers is the

- a. mean
- b. mode
- c. median
- d. mid-point

3) Which of the following is not a condition of the binomial distribution

- a. Only 2 possible outcomes
- b. Have a constant probability of success
- c. Must have at least 3 trials
- d. Trials must be independent

4) 2nd Quartile = 5th Decile = 50th Percentile = ?

- a. Geometric Mean
- b. Mean
- c. Median
- d. Mode

- 5) The slope of the regression line of Y on X is also called the
- Correlation coefficient of X on Y
 - Correlation coefficient of Y on X
 - Regression coefficient of X on Y
 - Regression coefficient of Y on X
- 6) What is the arithmetic mean of the data set: 4, 5, 0, 10, 8, and 3?
- 4
 - 5
 - 6
 - 7
- 7) A group of 210 students appeared in some test. The mean of $\frac{1}{3}$ rd of students is found to be 60. The mean of the remaining students is found to be 78. The mean of the whole group will be:
- 80
 - 76
 - 74
 - 72
- 8) The ratio among the number of items and the sum of reciprocals of items is called:
- Arithmetic mean
 - Geometric mean
 - Harmonic mean
 - Mode
- 9) Ten families have an average of 3 boys. How many boys do they have together?
- 3
 - 10
 - 20
 - 30
- 10) The null hypothesis in the chi-square test states that ____
- The rows and columns in the table are associated
 - The rows and columns in the table are not associated
 - all attributes are connected
 - all columns are connected

- 1) What is the full form of PDF?
 - a. Printed Document Format
 - b. Public Document Format
 - c. Portable Document Format
 - d. Published Document Format

- 2) In the software life cycle ____ model is not suitable for accommodating any change?
 - a. RAD
 - b. Waterfall
 - c. Build & Fix
 - d. Prototyping

- 3) What is internet?
 - a. A network of interconnected local area networks
 - b. A collection of unrelated computers
 - c. Interconnection of wide area networks
 - d. A single network

- 4) The data structure required for Breadth First Traversal on a graph is?
 - a. Stack
 - b. Array
 - c. Queue
 - d. Tree

- 5) Which of the following is a type of architecture used in the computers nowadays?
 - a. Von-Neumann Architecture
 - b. Harvard Architecture
 - c. Microarchitecture
 - d. System Design

- 6) If a link transmits 3000 frames per second, and each slot has 8 bits, what is the transmission rate of the circuit using Time Division Multiplexing (TDM)?
 - a. 500kbps
 - b. 24kbps
 - c. 24bps
 - d. 500bps

- 7) The data structure required to check whether an expression contains a balanced parenthesis is?
- Queue
 - Array
 - Tree
 - Stack
- 8) What will be the output of the following Python expression if x=56.234?
`print("%.2f"%x)`
- 56.234
 - 56.23
 - 56.00
 - 56.24
- 9) _____ operations do not preserve non-matched tuples.
- Left outer join
 - Inner join
 - Natural join
 - Right outer join
- 10) Given below are two statements
Statement I: Cache memory is faster than random access memory
Statement II: Random access memory is closer to the processor than cache memory
In light of the above statements, choose the most appropriate answer from the options given below
- Both Statement I and Statement II are correct
 - Both Statement I and Statement II are incorrect
 - Statement I is correct but Statement II is incorrect
 - Statement I is incorrect but Statement II is correct

Important Dates:-

- The link for Online Registration for the Entrance Exam will be opened on **14/05/2024** and will be available for Registration up to **05/06/2024 (6.00pm)**.
- The mock test will be conducted on **13th & 14th June 2024 from 10am to 5pm**.

- The Entrance Exam will be held online on **15th JUNE 2024**.
- The schedule displayed above is provisional and may change under unavoidable circumstances. The revised schedule, if any, will be notified on website <https://www.jaihindcollege.com/>
- Further details of the Entrance Exam will be announced on the website.
- The college reserves the right to alter the above schedule if required, which will be notified on the website.

Note: Subject to qualifying the entrance exam, candidates need to separately fill a JHC admission form without which the admission process cannot proceed. Details of the same will be available on the website in due course.

Principal

Jai Hind College (Autonomous)