

UNBOXING JEST EXAM

1. Predictions about JEST 2021 exam

- a. Exam is most likely to be held on 2nd week of June or later. It is clearly indicated from the notification posted on the website.
- b. Level of exam will remain same. However because more time is available to students. Cut off can be little high. But this will be counterbalanced by students not giving exam. Many students won't exam due to corona virus, and also many students by then will get IIT or NIT after counseling. So some of them may be absent.

2. Pattern of JEST

Part A : 25 questions (MCQ) 1 mark each Total 25 marks -1/3 for wrong

Part B : 15 questions (MCQ) 3 mark each Total 45 marks -1 for wrong

Part C : 10 questions (NAT) 3 mark each Total 30 marks no negative marking

Total 50 questions 100 marks 3 hours OFFLINE exam

Scientific Calculator Available

3. Cut off marks

a. In int. Phd approximately 350-400 students qualify this exam.

b. In 2020 cut off was 25 marks for general

c. In easiest exam scenario, 45+ marks will give you under 50 rank

40+ marks will give you under 100 rank

35+ marks will give you under 200 rank

In an moderate level exam these marks will be 5 marks less. That is under 50 can be obtained at 40 marks

(These are last year trends and doesn't guarantee anything)

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4. Institutes cutoff

After clearing JEST different institutes will call you for interview.

- a. IISERs : under 200-250 rank
- b. Tifr and NCRA pune and Tifr hydrabadh : under 60 -80 rank
- c. Tifr ICTS : under 20 rank
- d. HRI : Under 80
- e. NISER : under 200 rank
- f. IISC ; Under 100 rank

So getting under 250 rank will guarantee atleast 4-5 interviews

Target should be under 50 rank

5. How JEST is different from JAM and how is it same?

- a. In Both Jam and Jest previous year questions are very important.
- b. In Jam formula sheets , hand written short notes can be enough for some topics. But in Jest these only help you in guiding and understanding concept easily. Reading books and solving good problems is necessary in JEST. Jest is very conceptual exam. Jam is very formula based exam.
- c. In Jam covering entire syllabus is necessary. In Jest completing syllabus is not important. Since phd and msc students give same exam.
- d. Competition in Jam is more than JEST.

6. What are the things which are absolutely necessary for good rank in JEST?

- a. Forget your jam rank. Erase jam memories from the brain. Even if you were a topper or couldn't qualify.
- b. Forget jam rank but not what you learnt from the JAM. That should always be remembered.
- c. Hard work is absolutely necessary. Studying 25-30 hours per week only for jest is necessary. Calculate study hours weekly instead of daily.

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- d. Book reading and concepts bulding is absolutely necessary.
- e. More concepts less useless problem solving. Solving right problems is needed.
- f. Don't call yourself average. Stay away from this word. In our group we all are hardworking students working for good rank in JEST.

JEST BY AARYAN

JEST TOPICS

Hard Topics

(These topics are above bsc level and need extra efforts)

1. Time independent Perturbation theory(*)
2. Time dependent Perturbation Theory
3. Quantum statistics(*)
4. Fermi and Bose gases
5. Active filters and Oscillators
6. Amplifiers
7. Boundary Level Problems
8. Multipole expansion
9. Special Functions and Groups
- 10 Tensors

Some of these topics are important while some are not

*Topics we will do in priority. Others we will do in the end

Moderate Topics

(These topics are of bsc level but these were not in the jam)

These are the topics which will give you rank and we will focus most in this section

1. Complex Analysis
2. Fourier and Laplace Transforms
3. Probability theory

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4. Lagrangian and Hamiltonian
5. Small oscillations and normal modes
6. Propagation of em waves
7. Em waves in different medias
8. Energy and momenta of em waves
- 9 Basic Quantum mechanics (Dirac Notations, operators, Matrix formulation etc.)
- 10 Orbital and spin angular momentum
- 11 Hydrogen atom
- 12 Microstates and Macrostates
- 13 Partition function
- 14 Classical ideal gas
- 15 Harmonic oscillator
- 16 Canonical, Microcanonical and grand canonical ensemble
- 17 Statistics of paramagnetism
- 18 Advanced questions of OPAMP and applications
- 19 Few additional concepts of Digital
- 20 Black body radiations in stat mech

Easy Topics

These are the topics which will give you basic marks of 20-25. These are jam level topics. We will strengthen these topics a lot.

- 1 Vector algebra and vector calculus
- 2 Curvilinear coordinates
- 3 Fourier Series

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- 4 Linear algebra
- 5 Differential equations
- 6 Newton laws, Conservation of energy and momentum
- 7 collisions
- 8 Central forces
- 9 Relativity
- 10 Electrostatics
- 11 Magnetostatics
- 12 Maxwell equations
- 13 Faraday laws
- 14 1d,2d,3d potential problems in QM (potential well and harmonic oscillators)
- 15 Thermodynamic laws
- 16 Kinetic theory of gases
- 17 Thermodynamic potential and Maxwell relations
- 18 Semiconductor physics
- 19 Pn junction, diodes and applications (rectifiers etc)
- 20 Transistors biasing and characteristics
- 21 LCR circuits