



**UNITED**  
**UNIVERSITY**

**B.Tech & B.Tech (Hons) ADMISSION TEST**

**INSTRUCTIONS**

- The Entrance Test will be of 60 mins.
- The booklet has three Sections

PHYSICS	5 Questions	(5 X 1 = 5)
CHEMISTRY	5 Questions	(5 X 1 = 5)
MATHS	5 Questions	(5 X 1 = 5)
ENGLISH	15 Question	(15 X 1 = 15)
REASONING	10 Questions	(10 X 1 = 10)
APTITUDE	10 Questions	(10 X 1 = 10)
- All questions carry equal marks.
- For each correct answer 1 mark will be awarded. There is no negative marking.
- Answer to be given by ticking the correct option.
- Use ball pen or dot pen only.
- All the rough work should be done on the space provided in the booklet.

MM- 50

Time:60 Mins

**Details of the candidate**

Name .....

Father's Name .....

Course Applied for .....

## PHYSICS

**1. The particles which can be added to the nucleus of an atom without changing its chemical properties are**

- A. Electrons
- B. Protons
- C. Neutrons
- D. Positron

**2. Who gave the Quantum model of hydrogen atom?**

- A. S.N Bose
- B. Neils Bohr
- C. James Clerk Maxwell
- D. R.A Millikan

**3. What is the unit of Astronomical Distance ?**

- A. Light Year
- B. Angstrom
- C. Weber
- D. Lux

**4. Charge is the property associated with the matter due to which it produces and experiences**

- (a) electric effects only
- (b) magnetic effects only
- (c) both electric and magnetic effects
- (d) None of these

**5. Two spherical conductors each of capacity  $C$  are charged to potential  $V$  and  $-V$ . These are then connected by means of a fine wire. The loss of energy is**

- (a) zero
- (b)  $\frac{1}{2} CV^2$
- (c)  $CV^2$
- (d)  $2 CV^2$

## CHEMISTRY

**1. Oxidation is a process which involves**

- (a) addition of oxygen
- (b) addition of hydrogen
- (c) removal of oxygen
- (d) removal of hydrogen

**2. Which of the following is not a crystalline solid?**

- A. Potassium Chloride
- B. Cesium chloride
- C. Glass
- D. Rhombic Sulphur

**3. An example of fossil fuel is**

- A. Coal
- B. Animal waste
- C. Wood
- D. All of these

**4. An electrolyte**

- A a metal
- B. a solution
- C. a liquid that conducts current
- D. all of above

**5. The process of transferring charge from charged body to earth is called:**

- A. Transferring
- B. Processing
- C. Charging
- D. Earthing

## MATHEMATICS

1. Which of the following is not irrational?

- (a)  $(2 - \sqrt{3})^2$
- (b)  $(\sqrt{2} + \sqrt{3})^2$
- (c)  $(\sqrt{2} - \sqrt{3})(\sqrt{2} + \sqrt{3})$
- (d)  $27\sqrt{7}$

2. If  $\sin\theta = x$  and  $\sec\theta = y$ , then  $\tan\theta$  is

- (a)  $xy$
- (b)  $x/y$
- (c)  $y/x$
- (d)  $1/xy$

3. LCM of  $2^3 \times 3^2$  and  $2^2 \times 3^3$  is

- (a)  $2^3$
- (b)  $3^3$
- (c)  $2^3 \times 3^3$
- (d)  $2^2 \times 3^2$

4. Find the value of  $64^{-2} \div \sqrt{4}$ .

- (a) 18
- (b) 12
- (c) 8
- (d) 164

5.  $\sqrt{9}$  is \_\_\_\_\_ number.

- a. A rational
- b. An irrational
- c. Neither rational nor irrational
- d. None of the above

## ENGLISH

**1. He is very good.....making stories.**

- (a) In
- (b) about
- (C) At
- (d) for

**2. Jofra Archer, the England fast bowler, is..... than accurate**

- (a) More fast
- (b) faster
- (c) Less fast
- (d) More faster

**3. Which of the following words is plural?**

- (a) Index
- (b) Analysis
- (c) Crisis
- (d) Criteria

**4. I do not think you know the case well enough to have opinions. Having said that, I agree with your other point.**

What does the phrase "having said that" mean in the given text?

- (a) as opposed to what I have said
- (b) despite what I Have said
- (c) in addition to what I have said
- (d) contrary to what I have said

**5. After Rajendra Chola returned from his voyage to Indonesia, he..... to visit the temple in Thanjavur.**

- (a) Was wishing
- (b) Is wishing
- (c) Wished
- (d) Had wished

**6. Which of the above underlined part of the sentence is grammatically incorrect?**

**The professor (I) ordered to (II) the students to go (III) out of the class. (IV)**

- (a) I
- (b) II
- (c) III
- (d) IV

**7. Which of the following options is the closest in meaning to the phrase underlined in the sentence below?**

**It is fascinating to see life forms cope with varied environmental conditions.**

- (a) adopt to
- (b) adapt to
- (c) adept in
- (d) accept with

**8. Please, don't laugh..... Those beggars.**

- (a) for
- (b) against
- (c) at
- (d) from

**9. Please, stop..... so many mistakes.**

- (a) to make
- (b) make
- (c) making
- (d) makes

**10. Choose the word most similar in meaning to the given word:**

- (a) Exert
- (b) Educate
- (c) Extract
- (d) Extend

**11. The policeman asked the victim of a theft, "What did you.....?"**

- (a) loose
- (b) lose
- (c) Loss
- (d) louse

**12. This book, including all its chapters,.....interesting. The students as well as the instructor..... in agreement about it.**

- (a) is, was
- (b) are, are
- (c) is, are
- (d) were, was

**13. The man who is now Municipal Commissioner worked as**

- (a) the security guard at a university
- (b) a security guard at the university
- (c) a security guard at university
- (d) the security guard at the university

**14. In the following sentence, certain parts are marked in bold and marked P,Q and R. One of the parts may contain certain error or may not be acceptable is standard written communications. Select the part containing an error.**

**Choose 4 as your answer if there is no error.**

**The student corrected all the errors (P) that the instructor marked(Q) on the answer book. (R)**

- (a) P
- (b) Q
- (c) R
- (d) No error

**15. The bacteria in milk are destroyed when it..... Heated to 80 degree Celsius.**

- (a) would be
- (b) will be

- (c) is
- (d) was

## REASONING

**1. Water : Dam :: Trade:?**

- (a) Commerce
- (b) Economy
- (c) Goods
- (d) Trade Policy

**2. Float : Sink :: Boat:?**

- (a) Ship
- (b) War
- (c) Submarine
- (d) Missile

**3. Choose the word which is different from the rest.**

- (a) Chicken
- (b) snake
- (c) Swan
- (d) Crocodile

**4. 6 : 72 :: 8 :?**

- (a) 94
- (b) 96
- (c) 74
- (d) 92

**5. 384 : ? :: 216 : 63**

- (a) 128
- (b) 124
- (c) 112
- (d) 192

**6. The day before yesterday was Saturday. What will be the day after tomorrow?**

- (a) Thursday
- (b). Friday
- (c) Wednesday
- (d).Monday

**7. Choose the word which is different from the rest**

- (a) Dagger
- (b) Knif
- (c).Hammer
- (d) Sword

**8. Choose the word which is different from the rest**

- (a) Kiwi
- (b) Eagle
- (c).Emu
- (d) Ostrich

**9. A and B are brother, C and D are sister, A's son is D's brother. How is B related to C ?**

- (a) Father
- (b) Brother
- (c) Uncle
- (d).Grand father

**10. Pointing to a woman, a man said, "Her father is the only son of my father." How is the man related to the woman?**

- (a) Grandfather
- (b) Father
- (c) Son
- (d) None of these

## APTITUDE

**1. If A and B together can complete a piece of work in 15 days and B alone in 20 days, in how many days can A alone complete the work?**

- (a) 60 (b) 45  
(c) 40 (d) 30

**2. A can complete a piece of work in 18 days, B in 20 days and C in 30 days, B and C together start the work and forced to leave after 2 days. The time taken by A alone to complete the remaining work is:**

- (a) 10 days (b) 12 days  
(c) 15 days (d) 16 days

**3. Find the simple interest on Rs. 5200 for 2 years at 6% per annum.**

- (a) Rs. 450 (b) Rs. 524  
(c) Rs. 600 (d) Rs. 624

**4. How many terms are there in 20, 25, 30..... 140?**

- (a) 22 (b) 25  
(c) 23 (d) 24

**5. How many terms are there in the GP 5, 20, 80, 320 ..... 20480?**

- (a) 5 (b) 6  
(c) 8 (d) 7

**6. What is the place value of 7 in the numeral 2734?**

- (a) 70 (b) 700  
(c) 7 (d) 7.00

**7. Ten years ago, P was half of Q's age. If the ratio of their present ages is 3:4, what will be the total of their present ages?**

- (a) 45 (b) 40  
(c) 30 (d) 35

**8. Find the number, when 15 is subtracted from 7 times the number, the result is 10 more than twice of the number**

- (a) 5 (b) 15  
(c) 7.5 (d) 4

**9. The side of a cube is 15 m, find its surface area?**

- (a) 1350 m<sup>2</sup> (b) 1250 m<sup>2</sup>  
(c) 1300 m<sup>2</sup> (d) 1450 m<sup>2</sup>

**10. Sachin is younger than Rahul by 4 years. If their ages are in the respective ratio of 7:9, how old is Sachin?**

- (a) 16 years (b) 18 years  
(c) 28 years (d) None of these