BITSAT 2016 QUESTIONS

NOTE: BITSAT Exams are taken online only. Questions below are an account of what the students who gave the exam remembered after giving the exam. As a consequence, most of the questions do not have options and there is no maths section as well. Still we at 10YearsQuestionPaper.com think that this resource will be helpful to many as BITSAT questions are often repeated.

Chemistry

1) Which of the following hydrides does not exist (PH5, LaH3, EuH2, PH3)

2) What is the shape of ClF3 (Ans: T-Shaped)?

3) What is the colour of CuSO4?

4) What is the formula of Zinc Blende?

5) What is Aluthane?

6) Determining the stability of some given Carbo Cations
7) A reaction is given. The forward rate constant and the backward rate constant. And another reaction with another forward rate constant. Represent concentration of one reactant in terms of all these rate constants and some active masses.

8) Nomenclature of some organic compounds which are fairly simple.

9) N2 amount and O2 amount was given, partial pressure of N2 was given we have to find partial pressure of O2

10) Acidity order HClO4, HClO3, HClO2, HClO?

11) What is Zeolite? options were like metal, semiconductor etc.

12) Ionisation order for group 1 and 2 elements

13) Who won the Nobel prize for the discovery of Penicillin?

14) What is the diameter of lacto-bacellie bacteria?

15) Kb for water is 0.52 K/m. Then 0.1m solution of NaCl will boil approximately at- (All options were close to 100 and 101, the question required precise answer)

16) The number of unpaired electron in nickel carbonyl is

17) A reaction was given and its name was asked (Options included Reimer Tiemann, Leader Manase, Dakin and one more)

18) Questions regarding knocking and petroleum were encountered by most of the students.

19) A list of ketonic organic compounds was given and it was asked which one of them will not respond to Iodoform test.

20) Cellulose is a polymer of which molecule?

21) The relation between H, S and T at high temperature (Options had different formulas of which one was correct)

22) Formula of Tollens Reagent

23) What percentage of earth is destroyed by humans (Yes many vague questions like this were present in 2016)

24) Out of the given elements which does not form compound with EDTA

25) You have to identify Wolff Keishner reaction from the list of given reactions.

26) Two compounds were given and it was how they were related to each other in terms of Stereoisomers.

27) The wavelengths of electron waves in two orbits is 3:5. The ratio of kinetic energy of electrons will be ?

28) What are the different types of bonds present in the compound sulphuric anhydride (Options included 3/2 sigma bonds and p pi - d pi p pi - pi bonds combinations)?

29) What is the formula of Asbestos?

30) A reaction was given and it was asked whether is was a nucleophilic reaction or elimination or electrophilic addition or nucleophilic addition followed by elimination.

Physics

1. A projectile is fired such that the gravitational field changes according to height. What will be the trajectory?

2. Dimension of plank's constant matches which of the following (4 options were given ans. was Angular Momentum)

3. A neutron with velocity v strikes a stationary deuterium atom, by what factor would its KE change?

4. If the gas is heated under constant pressure, what is the amount of heat supplied to it if its temperature has to be increased by T?

5. How is the width of the AC resonance curve peak related to the quality factor Q?

6. What is the unit of resistivity in terms of SI unit?

7. If a, b, c are three vectors of magnitude L such that a+b+c=0, then what is the value of 2a+2b+c?

8. To find De-Broglie wavelength of a moving car whose required parameters were given.

9. There is a mass fired from a canon. It has to go to a distance R. At maximum height. it splits into two equal masses. One mass goes back to the canon. Where does the second mass go?

10. A rod of length is held vertically stationary with its lower end located at a point P, on the horizontal plane. When the rod is released to topple about P, the velocity of the upper end of the rod with which it hits the ground is ?

11. Acceleration and velocity both act in a straight line. Acceleration is sometimes against and sometimes along velocity. This is true for? (Suitable options were given)

12. A tension T1 gives an expansion of L1. T2 gives L2. Wire is same. Find original length in terms of all 4 variables.

13. The capacitance of 2 hollow cylinders one inside the other? (Their radii were given nothing else)

14. The cyclotron frequency of an electron in a magnetic field of i T is approximately how much ?

15. Which of the following cannot be represented on PV graph? (Options were isobaric and quasi, isochoric and quasi, isothermal and adiabatic , cyclic and quasi.)

16. Cylinder, cone and sphere was given with radius given we have to find which has max resistance, resistivity was equal for all of them

17. Two radioactive materials X1 and X2 have decay constants 10LAMDA and A respectively. If initially they have the same number of nuclei, then the ratio of the number of nuclei of X1 to that of X2 will be 1/e after a time (All the options had only lambda as a variable)

18. Lenz's law of electromagnetic induction corresponds to which law (Options included confusing choices like law of conservation of energy, law of conservation of charge, LCLM and LCAM)

19. What is used for slowing down fast neutrons?

20. Question with two 4 pulleys in which 2 pulleys were connected to one of the pulley on higher level (constraint equation question)

21. If a given liquid does not wet glass its angle of contact is (options were zero acute obtuse and right angle)