16U218 (Pages: 2) Name: .....
Reg. No.....

SECOND SEMESTER BSc DEGREE EXAMINATION, MAY-2017
(Regular/Supplementary/Improvement)
(CUCBCSS – UG)
CC15 U CHE 2 C02 – PHYSICAL CHEMISTRY
(Complementary Course: Chemistry)
(2015 Admission Onwards)

Time: 3 Hrs Maximum: 64 Marks

Section - A
(Answer all questions. Each question carries 1 Mark)

1. A process in which the..... of the system is kept constant is called an Isobaric process.
2. Among pressure, viscosity, surface area and surface tension, the extensive property of the system is.....
3. RMS velocity of N_2 is..... than that of CO_2 at the same temperature.
4. A crystalline solid possesses..... range order.
5. Number of atoms present in the body centered cubic unit cell is.....
6. Vapour pressure of a liquid.....with increase in temperature.
7. SI Unit of co-efficient of viscosity is.....
8. pH of 0.1 N sodium hydroxide solution is.....
9. The molar conductance of an electrolyte solution.....with increase in dilution.
10. Cell reaction is spontaneous when ΔG is.....

(10 x 1 = 10 Marks)

Section - B
(Answer any seven questions. Each question carries 2 marks)

11. Define path function. Give an example.
12. State the second law of thermodynamics in terms of entropy.
13. A system absorbs 7.5 KJ of heat and performs 2500 J of work. Calculate the internal energy change produced in the system.
14. Calculate the temperature at which the RMS velocity of hydrogen equals that of oxygen at 320 K.
15. What are the causes for the deviations of real gases from ideal behaviour?
16. Explain reverse osmosis.
17. Why an increase in temperature does cause a decrease in surface tension?
18. What is a fuel cell? Give an example.
19. Define ionic product of water. What is its value at 298K?
20. Why an aqueous solution of ferric chloride is acidic, while an aqueous solution of ammonium acetate is almost neutral.

(7 x 2 = 14 Marks)

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