|  |
| --- |
| Vivekanand Shikshan Sanstha’s  **Vivekanand Arts, Sardar Dalipsingh Commerce & Science College, Aurangabad** |

|  |
| --- |
| **Course Outcome Attainment Evaluation Test** |

**Department of Chemistry**

|  |  |
| --- | --- |
| Name of Student: | Signature of Student: |
| Academic Year: **2018-19** | Class: **B.Sc. F.Y.** |
| Paper No : I**V** | Paper Name: **Physical Chemistry** |
| Name of Teacher: **Adhyapak M.S.** | Signature of Teacher: |
| Marks Obtained: | Marks in %: |

(Each question carries one mark)

|  |
| --- |
| **At the Completion of the course, the student is expected to attain following Course Outcomes**  **CO1:** Differentiate colloids, liquid crystals and properties of solid, liquid and gas  **CO2**: Derive differential equations related to order of reactions  **CO3:** Explain and correlate various laws with respect to gaseous state  **CO4:** Categorize catalysis on the basis of phases  **CO5:** Identify areas of applications of colloids, enzyme catalysts in day to day life |

**CO1: Differentiate colloids, liquid crystals and properties of solid, liquid and gas**

Have you understood types of colloids, types of liquid crystal? Yes/No: ........

If yes, then answer the following questions

**i)** **The dispersion medium in Emulsion is**

**(a)** Solid **(b)** Liquid (**c)** Gas **(d)** All of these

**ii)** **Thread like arrangement is found in**

**(a)** Smectic Liquid crystal **(b)** Nematic **(c)** Cholesteryl **(d)** All of these

**iii) Strongest bond is observed in**

**(a)** Solid (**b)** Liquid (**c)** Gas (**d)** Plasma

**CO2: Derive differential equations related to order of reactions**

Can you derive differential equations related to order of reactions? Yes/No: .....

If yes, then answer the following questions

**i)**  **K = 2.303/T x log a/a-x is rate law equation for**

**(a)** Zero order Reaction **(b)** First order (**c)** Second order **(d)** Pseudo order

**ii)** **Throughout the second order reaction, K remains**

**(a)** Constant  **(b)** Unchanged  **(c)** Single valued (**d)** All of these

**iii) H2 + I2 = 2 HI is an example of**

**(a)** Zero order Reaction **(b)** First order (**c)** Second order **(d)** Pseudo order

**CO3: Explain and correlate various laws with respect to gaseous state**

Have you understood various Gas laws? Yes/No: ........

If yes, then answer the following questions

**i)** **According to Boyle’s law**

**(a)** P = VT**(b)** P = K/V(**c)** V = PT**(d)** T = PV

**ii)** **According to Avogadro’s law, two gases having same T, P and V will have**

**(a)** Same number of molecules**(b)** Same number of particles (**c)** Same number of atoms **(d)** None of the above

**CO4: Categorize catalysis on the basis of phases**

Do you know types of catalysis? Yes/No: .....

If yes, then answer the following questions

**i)** **In Homogeneous catalysis, Reactants and catalysts are in**

**(a)** Same phase  **(b)** Different phase (**c)** No phase **(d)** None of the above

**ii)** **The catalyst which decreases the rate of reaction is called as**

**(a)** Positive catalyst  **(b)** Negative catalyst **(c)** Auto-catalyst (**d)** Destructor

**iii) The substance which increases efficiency of catalyst is called as**

**(a)** Positive catalyst **(b)** Promoter **(c)** Additional catalyst (**d)** Protector

**CO5: Identify areas of applications of colloids, enzyme catalysts in day to day life**

Do you know applications of colloids and enzyme catalysts? Yes/No: ........

If yes, then answer the following questions

**i)**  **Alloys is an example of**

**(a)** Solid + Gas  **(b)** Gas + Liquid (**c)** Liquid + Solid **(d)** Solid + Solid

**ii) Generally, Enzyme acts as catalyst in**

**(a)** Chemical Reactions **(b)** Physical reactions (**c)** Biochemical reactions

**(d)** None of these