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SUBJECT CODE NO:- B-2141
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y (Sem-II) Examination OCT/NOV 2019
Chemistry Paper-IV
(Physical Chemistry)

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B i) Attempt all questions
 ii) Illustrate your answer with suitable diagram

Q.1 Explain deviation of gas from ideal behavior by vander waal equation of state. 20

OR

Explain law of symmetry derive Bragg's equation.

Q.2 Explain the factors affecting the rate of reaction. 20
 Derive rate equation of zero order reaction

OR

Write short notes on any four

a) Calculate the distance between two points lying on the straight line

i) (6,2) and (4,3)

ii) (4,-2) and (6,3)

b) Using logarithms solve

i) 540×325

ii) $1250 \div 150$

c) Hydrogen bonding.

d) Distinguish between solids and liquids.

e) Explain Tyndall effect.

f) Explain gels in detail.

Q.3 Multiple choice questions. 10

1) The change of solids to liquids is _____

a) Fusion b) freezing c) sublimation d) condensation

2) plastic is an example of _____ substance.

a) Amorphous b) Crystalline

c) Mesomorphous d) none

3) Rate of reaction _____ with temperature.

a) Decreases b) Increases

c) Remain constant d) a) and c)

4) Half life of second order reaction is

- a) $t_{1/2} = \frac{1.5}{k.a^2}$ b) $t_{1/2} = \frac{a}{2k}$
c) $t_{1/2} = \frac{1}{k.a}$ d) $t_{1/2} = \frac{0.693}{k}$

5) Thread like crystals are _____

- a) Nematic b) cholesteryl
c) colloids d) b and c

6) Boyle's law can be represented as

- a) $V \propto \frac{1}{p}$ b) $VP = k$ c) $V = \frac{k}{p}$ d) All of these

7) Brownian movement is due to

- a) straight line motion
b) Zigzag motion
c) Circular motion
d) None of these

8) Cheese is an example of _____

- a) sols b) Emulsion c) gel d) none

9) log of 20 is

- a) 0.3010 b) $\bar{1}.3010$ c) 1.1030 d) 1.3010

10) slope of straight line is

- a) $x = my + c$
b) $y = m + xc$
c) $y = mx + c$
d) $x = mc + y$