Unit 12 - Week 9 - Temperature and Pressure Effects

Course outline:
How to study for the exam:

Week 1:
- Week 1. Reading of the Assignment

Week 2:
- Week 2. Reading of the Assignment
- Week 2. Reading of the Assignment

Week 3:
- Week 3. Reading of the Assignment
- Week 3. Reading of the Assignment

Week 4:
- Week 4. Reading of the Assignment
- Week 4. Reading of the Assignment

Week 5:
- Week 5. Reading of the Assignment
- Week 5. Reading of the Assignment

Week 6:
- Week 6. Reading of the Assignment
- Week 6. Reading of the Assignment

Week 7:
- Week 7. Reading of the Assignment
- Week 7. Reading of the Assignment

Week 8:
- Week 8. Reading of the Assignment
- Week 8. Reading of the Assignment

Week 9:
- Week 9. Reading of the Assignment

Assignment 9:

Due on: 2019-10-02, 23:59:59 GMT

1. An exothermic reaction proceeds at a rate of 10^-4 m^3/s at 200°C. If the temperature is increased by 100°C, calculate the new rate of reaction. 

2. Calculate the rate of reaction for the reaction 2A + B → C at 400°C if the rate constant is 5 × 10^-3 s^-1.

3. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

4. Consider the following chemical reaction: A + B → C. The rate law is rate = k[A]^2[B]. If the concentration of A is doubled and the concentration of B is halved, how does the rate of reaction change?

5. A reaction is second-order with respect to A and first-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

6. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

7. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

8. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

9. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

10. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

11. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

12. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

13. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

14. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

15. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

16. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

17. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

18. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

19. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

20. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

21. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

22. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

23. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

24. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

25. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

26. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

27. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

28. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

29. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

30. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.

31. A reaction is first-order with respect to A and second-order with respect to B. If the initial concentrations of A and B are 0.5 M and 0.1 M, respectively, calculate the half-life of the reaction.