**Enrollment No: _____ Exam Seat No:_____**

# C. U. SHAH UNIVERSITY

## Winter Examination 2021

**Subject Name : Pharmaceutical Analysis-II (Theory)**

**Subject Code : 4PS05PHA2 Branch:**

**Semester :** 5 **Date : / / Time : 00:00 To 00:00 Marks : 70**

Instructions:

(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

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| **Q-1** | | **Attempt the following questions:** (MCQ/Short Type of Questions=1 mark*14=14 marks) | **(14)** |
| | **a)** | Define Specific conductance. | |
| | **b)** | In which type of chromatography, the stationary phase held in a narrow tube and the mobile phase is forced through it under pressure? | |
| | **c)** | In Hydrogen electrode, the electrode is placed in a solution of ____ M HCl. Fill in the blank. | |
| | **d)** | Define Rf value | |
| | **e)** | If hydrogen electrode acts as cathode, hydrogen is reduced. The statement is True or False. | |
| | **f)** | Define half wave potential. | |
| | **g)** | Define Kohlrausch's law. | |
| | **h)** | Define validation. | |
| | **i)** | Write Ilkovic equation. | |
| | **j)** | Give difference between Oxidation and oxidizing agent. | |
| | **k)** | Define supercritical fluid. | |
| | **l)** | Name the reference electrode used in Polarography. | |
| | **m)** | Define diffusion current. | |
| | **n)** | Define retention time. | |
| **Attempt any four questions from Q-2 to Q-8** | | | |
| **Q-2** | | **Attempt all questions** | **(14)** |
| | **(a)** | Describe advantages and limitation of instrumental method of analysis. | |
| | **(b)** | Discuss basics of electroanalytical methods. | |
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| **Q-3** | | **Attempt all questions** | **(14)** |

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| | **(a)** | Explain principle and instrumentation of polarimetry. | |
| | **(b)** | Write a note on Dropping mercury electrode. | |
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| **Q-4** | | **Attempt all questions** | **(14)** |
| | **(a)** | Explain chromatography on the basis of their principle of separation. | |
| | **(b)** | Write a note on paper chromatography. | |
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| **Q-5** | | **Attempt all questions** | **(14)** |
| | **(a)** | Write note on Karl Fischer titration. | |
| | **(b)** | Define Extraction. Discuss the applications of supercritical fluid extraction. | |
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| **Q-6** | | **Attempt all questions** | **(14)** |
| | **(a)** | Describe potentiometer. Write the qualitative and quantitative applications of it. | |
| | **(b)** | Describe the oxygen combustion flask method. | |
| **Q-7** | | **Attempt all questions** | **(14)** |
| | **(a)** | Write a note on Differential Scanning Calorimetry. | |
| | **(b)** | Discuss factors affecting conductance. | |
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| **Q-8** | | **Attempt all questions** | **(14)** |
| | **(a)** | Describe separation efficiency, methodology and pharmacopoeial applications of Thin Layer Chromatography. | |
| | **(b)** | Write a note on application of conductometry. | |
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