

# Savitribai Phule Pune University

## M. Sc. II Chemistry Practical- Pattern of Examination

### 1- M.Sc. II Physical Chemistry

#### I- Internal Practical Examination of each course

##### **A. Internal Practical Examination pattern for CHP-315 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **B. Internal Practical Examination pattern for CHP-316 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **C. Internal Practical Examination pattern for CHP- 415 (50 Marks)**

#### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

## **II. External Practical Examination of each course**

### **A. External Practical Examination pattern for CHP-315 (50 Marks)**

- Q.1. One Long experiment -- 40 Marks  
Q.2. Oral -- 10 Marks
- OR**
- Q.1. Two short experiments -- 40 Marks  
Q.2. Oral -- 10 Marks

### **B. External Practical Examination pattern for CHP-316 (50 Marks)**

- Q.1. One Long experiment -- 40 Marks  
Q.2. Oral -- 10 Marks
- OR**
- Q.1. Two short experiments -- 40 Marks  
Q.2. Oral -- 10 Marks

### **C. External Practical Examination pattern for CHP-415 (50 Marks)**

#### **(For Non-Project work)**

- Q.1. One Long experiment -- 40 Marks  
Q.2. Oral -- 10 Marks
- OR**
- Q.1. Two short experiments -- 40 Marks  
Q.2. Oral -- 10 Marks

#### **(For Project work)**

Project Assessment --50 Marks

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## **2- M.Sc. II Inorganic Chemistry**

### **I- Internal Practical Examination of each course**

#### **A. Internal Practical Examination pattern for CHI- 387 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **B. Internal Practical Examination pattern for CHI- 388 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **C. Internal Practical Examination pattern for CHI- 488 (50 Marks)**

##### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

## **II. External Practical Examination of each course**

### **A. External Practical Examination pattern for CHI-387 (50 Marks)**

- Q.1. Analysis of two components from ore/alloy -- 30 Marks
- Q.2. Short experiment with one component analysis -- 15 Marks
- Q.3. Oral -- 05 Marks

### **B. External Practical Examination pattern for CHI-388 (50 Marks)**

- Q.1. Major Experiment -- 30 Marks
- Q.2. Minor Experiment -- 15 Marks
- Q.3. Oral -- 05 Marks

### **C. External Practical Examination pattern for CHI-488 (50 Marks)**

#### **(For Non-Project work)**

- Q.1. Preparation of two complexes and purity determination -- 40 Marks
- Q.2. Oral -- 10 Marks

#### **(For Project work)**

Project Assessment --50 marks

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### **3- M.Sc. II Organic Chemistry**

#### **I- Internal Practical Examination of each course**

##### **A. Internal Practical Examination pattern for CHO- 347 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **B. Internal Practical Examination pattern for CHO- 447 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **C. Internal Practical Examination pattern for CHO- 448 (50 Marks)**

###### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

###### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

## **II. External Practical Examination of each course**

### **A. External Practical Examination pattern for CHO- 347 (50 Marks)**

- Q.1. Single Stage Preparation -- 20 Marks  
Q.2. Single Stage Preparation/ Isolation of Natural Product -- 20 Marks  
Q.3. Oral --10 Marks

### **B. External Practical Examination pattern for CHO- 447 (50 Marks)**

- Q.1. Stage one of two stage preparation -- 20 Marks  
Q.2. Stage two of two stage preparation -- 20 Marks  
Q.3. Oral --10 Marks

### **C. External Practical Examination pattern for CHO- 448 (50 Marks)**

#### **(For Non-Project work)**

- Q.1. Single stage preparation by Green synthesis -- 20 Marks  
Q.2. Single stage preparation by Green synthesis -- 20 Marks  
Q.3. Oral --10 Marks

#### **(For Project work)**

- Q.1. Single stage preparation by Green synthesis -- 20 Marks  
Q.2. Presentation of Project -- 10 Marks  
Q.3. Oral on Project work --20 Marks
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## **4- M.Sc. II Analytical Chemistry**

### **I- Internal Practical Examination of each course**

#### **A. Internal Practical Examination pattern for CHA- 387 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **B. Internal Practical Examination pattern for CHA- 487 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **C. Internal Practical Examination pattern for CHA- 488 (50 Marks)**

##### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

## **II. External Practical Examination of each course**

### **A. External Practical Examination pattern for CHA-387 (50 Marks)**

- Q.1. Analysis of two components ore/alloy/pigment -- 30 Marks  
Q.2. Short experiment with one component analysis -- 15 Marks  
Q.3. Oral -- 05Marks

### **B. External Practical Examination pattern for CHA-487 (50 Marks)**

- Q.1. One experiment from following techniques  
a. Conductometry,                      b. Colorimetry  
c. Potentiometry                      d. Polarimetry -- 20 Marks  
Q.2. One experiment from following techniques  
a. Flame Photometry,                      b. Fluorimetry  
c. Nephelometry/ Turbidimetry                      d. Polarography -- 20 Marks  
Q.3. Oral -- 10Marks

### **C. External Practical Examination pattern for CHA-488 (50 Marks)**

#### **(For Non-Project work)**

- Q.1. One experiment based on instrumental analysis -- 20 Marks  
Q.1. One experiment based on non-instrumental analysis -- 20 Marks  
Q.3. Oral -- 10Marks

#### **(For Project work)**

Project Assessment --50 marks

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## **5- M.Sc. II Polymer Chemistry**

### **I- Internal Practical Examination of each course**

#### **A. Internal Practical Examination pattern for PSP- 317 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **B. Internal Practical Examination pattern for PSP- 417 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **C. Internal Practical Examination pattern for PSP- 418 (50 Marks)**

##### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

## **II. External Practical Examination of each course**

### **A. External Practical Examination pattern for PSP-317 (50 Marks)**

- |      |                  |             |
|------|------------------|-------------|
| Q.1. | Long Experiment  | -- 25 Marks |
| Q.2. | Short experiment | -- 15 Marks |
| Q.3. | Oral             | -- 10Marks  |

### **B. External Practical Examination pattern for PSP-417 (50 Marks)**

- |      |                  |             |
|------|------------------|-------------|
| Q.1. | Long Experiment  | -- 25 Marks |
| Q.2. | Short experiment | -- 15 Marks |
| Q.3. | Oral             | -- 10Marks  |

### **C. External Practical Examination pattern for PSP-418 (50 Marks)**

#### **(For Non-Project work)**

- |      |                  |             |
|------|------------------|-------------|
| Q.1. | Long Experiment  | -- 25 Marks |
| Q.2. | Short experiment | -- 15 Marks |
| Q.3. | Oral             | -- 10Marks  |

#### **(For Project work)**

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|--------------------|------------|
| Project Assessment | --50 marks |
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## **6- M.Sc. II Drug Chemistry**

### **I- Internal Practical Examination of each course**

#### **A. Internal Practical Examination pattern for CH- 367 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **B. Internal Practical Examination pattern for CH- 468 (50 Marks)**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

#### **C. Internal Practical Examination pattern for CH- 469 (50 Marks)**

##### **# For Practical Course**

- a. One major experiment --20 Marks
  - b. Oral and Journal --10 Marks
  - c. Spectral Analysis based on the Instrumental Techniques studied in the theory courses during the academic year (any two techniques) --10 Marks
  - d. Seminar on Research paper
- OR
- Presentation on one experiment performed during the academic year --10 Marks

##### **# For Project Work**

- a. Continuous Assessment by Guide --30 Marks
- b. Presentation of project to be assessed by Head of the Department , Guide and one senior faculty of the Department --20 Marks

**II. External Practical Examination of each course**

**A. External Practical Examination pattern for CH- 367 (50 Marks)**

- Q.1. Two Single Stage Preparation -- 40 Marks  
OR
- Q.1. One two stage Preparation -- 40 Marks
- Q.2. Oral --10 Marks

**B. External Practical Examination pattern for CH- 468(50 Marks)**

- Q.1. Microbiology Experiment with Oral -- 25 Marks
- Q.2. Biochemistry Experiment with Oral -- 25 Marks

**C. External Practical Examination pattern for CH- 469 (50 Marks)**

**(For Non-Project work)**

- Q.1. Two Single Stage Preparation -- 40 Marks  
OR
- Q.1. One Two Stage Preparation -- 40 Marks
- Q.2. Oral --10 Marks

**(For Project work)**

- Project assessment --50 Marks

