

Seat No.:

# Ganpat University

M. Sc: Semester-II Examination May 2014

Paper: CHE 201 MAT-Modern Analytical Techniques

Time: 3 Hrs

Sub: CHEMISTRY

Max. Marks: 70

Instruction:

1. Attempt any three questions from each section including Q:4 & Q:8, which are compulsory
2. Answer and tie both section separately
3. Figure on right side indicates marks

## SECTION-I

- Q-1: Write a note on instrumentation of UV visible spectrophotometer 14
- Q-2: Discuss types of molecular vibrations. Write working principle of FTIR instrumentation with diagram and write its advantages over isocratic IR. 14
- Q-3: What is diamagnetic anisotropy? Discuss factors affecting position of chemical shift(PPM) for different types of protons in NMR. Write working of FTNMR 14
- Q-4: Answer the following 07
- a. Define  $\lambda$ -max
  - b. What is the function of monochromator?
  - c. Define chromophore.
  - d. What is resonance in NMR?
  - e. Name the internal standard used in NMR
  - f. Write significance of hydrogen deficiency index
  - g. Write minimum criteria for organic compounds to absorb IR

## SECTION-II

- Q-5: Discuss principle and limitation of flame photometry. Discuss various interferences of flame photometry. 14
- Q-6: Discuss different ion analyzer used in MS and discuss in details applications of MS 14
- Q-7: 07
- a. Write a detail note on hollow cathode lamp 07
  - b. Discuss various factors affecting fluorescence intensity. 07
- Q-8: Answer the following 07
- a. Enlist components of flame photometer.
  - b. Enlist components of Atomic Emission Spectrophotometer.
  - c. Define Quenching.
  - d. Enlist types of fluorescence.
  - e. Describe functions of Argon in Hollow Cathod Lamp.
  - f. Write in brief the basic principle of MS.
  - g. Enlist ionization techniques used in MS.

Good Luck

**GANPAT UNIVERSITY**

M.Sc. Second semester Examination (C.B.C.S) April-May, 2014

Subject: **Chemistry (Analytical)**

Paper: **CHE 202 AOI**

Time: 3 hours

Total Marks: 70

Instructions:

- (1) Attempt any three questions from each section, which question No. 4 and 8 are Compulsory
- (2) Answer each section in separate answer book.

**Section: I**

**Que.-1**

**14 mark**

- (1) Explain Sodium fusion test for Nitrogen and Sulphur.
- (2) Write a note on pyrolytic reduction.

**Que.-2**

**14 mark**

- (1) Write a note on determination of carbonyl compounds by Oximation.
- (2) Discuss Acetylation methods for estimation of Alcohol.

**Que.-3**

**14 mark**

- (1) Write a note on methods for determination of Amino functional group.
- (2) Explain catalytic hydrogenation of unsaturated compounds.

**Que.-4** Reply short answer.

**07 mark**

- (1) Write a Beilstein test.
- (2) Give a uses of Gravimetric methods.
- (3) What is Esterification?
- (4) Write a equation of Bromination of phenol.
- (5) What is Saponification?

- (6) Give a formula of the percentage of amine group.  
(7) What is Diazotization?

## Section: II

**Que.- 5**

**14 mark**

- (1) Discuss Interpretation of Infra-Red spectra.  
(2) Explain structural elucidation of organic compounds by Mass spectra.

**Que.- 6**

**14 mark**

- (1) Explain determination of Ascorbic acid concentration.  
(2) Discuss ELISA method.

**Que.- 7**

**14 mark**

- (1) Discuss factors affecting selection of analytical method.  
(2) Write a note on liquid-liquid extraction in sample preparation in Bio-analysis.

**Que.- 8** Reply short answer.

**07 mark**

- (1) What is the purpose of TMS in NMR?  
(2)  $2.5 \mu$  convert in  $\text{Cm}^{-1}$ .  
(3) Write equation of Aspirin from Salicylic acid.  
(4) Which metal ion presence in Vitamin  $\text{B}_{12}$ ?  
(5) How will you detect Chlorine in the presence of Iodine?  
(6) Write a Beer-Lambert law.  
(7) Give a classification of analytes.

END OF PAPER

Seat No.:

# Ganpat University

M. Sc: Semester-II Examination may 2014

Paper: CHE 203 PCH Physical chemistry-II

Time: 3 Hrs Sub: CHEMISTRY Max. Marks:70

Instruction:

1. Attempt any three questions from each section including Q:4 & Q:8, which are compulsory
2. Answer and tie both section separately
3. Figure on right side indicates marks

## SECTION-I

- Q-1: Write a note on Rotational and Vibrational spectra of diatomic and poly atomic molecules. 14
- Q-2: Discuss the determination of molecular masses of macromolecules. 14
- Q-3: 07
- a. Write a note on Jablonski Diagram. 07
  - b. Discuss applications of laser in chemistry 07
- Q-4: Answer the following 07
- a. Define spectroscopy
  - b. What is Raman scattering
  - c. Define macromolecules
  - d. Explain polymerization
  - e. What is Zimm Plot
  - f. What is Maser
  - g. Explain Beer's Law

## SECTION-II

- Q-5: Discuss in detail Debye-Huckel Theory 14
- Q-6: Write a note on polarogram and discuss applications of polarography 14
- Q-7: 07
- a. Write a note on over voltage 07
  - b. Write a note on bio electrochemistry 07
- Q-8: Answer the following 07
- a. What is Wien effect
  - b. Write Lippmann's equation
  - c. Write Butler-Volmer equation
  - d. What is Tafel Plot
  - e. Write Ilkovic equation
  - f. What is half wave potential
  - g. Write full form of DME and SCE

Good Luck

Seat No. \_\_\_\_\_

**GANPAT UNIVERSITY**  
**M.Sc. SECOND SEMESTER EXAMINATION(C.B.C.S.)**  
**SUBJECT: CHEMISTRY(Organic/Analytical) - MAY 2014**  
**CHE 204 SCA: Statistics and Computer Applications**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions:**

1. Answer all the questions.
2. Answer each section in separate answer book.
3. Figure to the right indicates marks.

**SECTION-I**

- Q-1.** (1) What is mail merge? Write a short note for preparation of mail merge including the dialogue box. 14
- (2) Explain the various types of chart options available in MS-Excel and mention steps required to create chart.
- Q-2.** (1) Discuss hardware and software of computer. Give applications of computer. 14
- (2) Briefly explain the page layout for MS Word.
- Q-3.** (1) Explain page setup and print preview in MS Word. 14
- (2) Explain steps required to create MS-Power Point presentation.
- Q-4.** **Answer the following questions.** 07
- (1) Differentiate 'Save' and 'Save as' command.
  - (2) Differentiate undo and redo.
  - (3) Write short key for 'Change case' and 'Replace'.
  - (4) Give the Short-cut Key for 'Undo' and 'Go to' in MS-Word.
  - (5) Define term: Protect Document.
  - (6) What is the use of application of 'Chemdraw' in chemistry?
  - (7) Define: Search Engines.

Seat No. \_\_\_\_\_

GANPAT UNIVERSITY  
MASTER OF SCIENCE (Analytical Chemistry)- CBCS  
SEM-II EXAMINATION May 2014

Subject code and Name: CHE 205 EDM-Entrepreneurship Development

Date:

Time: 3 Hours

Total Marks: 70

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Instructions:

- (1) Attempt any three questions from each section, of which Q-4 and Q-8 are compulsory.
- (2) Answer each section in separate answer book.

**SECTION – I**

**Q.1**

- (i) Discuss in detail Qualities and function of Entrepreneurs. 7
- (ii) Discuss Role and Importance of Entrepreneurs in economic growth and Development. 7

**Q.2**

- (i) Discuss History and Entrepreneur Development Programme in India. 7
- (ii) Short note: Government policy for SSI 7

**Q.3**

- (i) Give the Planning and objectives of EDP. 7
- (ii) Write a note on "SIDCO". 7

**Q.4 Attempt all Questions** 7

- (i) Define : Entrepreneurial Traits
- (ii) Give any one example of famous entrepreneur.
- (iii) Define Risk management
- (iv) What do you mean by ideas?
- (v) Define TANSI
- (vi) Benefits of incentives in entrepreneurship.
- (vii) What do you mean by DIC?

## SECTION – II

### Q.5

- (i) Discuss the Entrepreneur behavior and motivation in terms of Innovation & Industrial development. 7
- (ii) Discuss the concept of Financing and Technical assistance required for entrepreneur to entrepreneurship development. 7

### Q.6

- (i) Discuss the objectives of any two Financing Institutions for entrepreneurship development. 7
- (ii) Brief about “Concessions” in any small scale unit for entrepreneurship. 7

### Q.7

- (i) Define subsidies. Give the benefits of it for new entrepreneurs. 7
- (ii) Write a note on “NSIC”. 7

### Q.8 Attempt all Questions 7

- (i) Give purpose of Pre-training work.
- (ii) Give two major objective of entrepreneurship development.
- (iii) Give meaning of Sick unit
- (iv) Define SISI
- (v) Give meaning of Target group in EDP
- (vi) Define the term Working capital
- (vii) Define rebates.

‘END OF PAPER’