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No.

**B.Sc. (Entrepreneurship) (Semester - I) (New) (CBCS)  
Examination Oct/Nov-2019  
English (Compulsory)  
GOLDEN PETAL**

Day & Date: Thursday, 07-11-2019  
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing the correct alternatives.****08**

- 1) She liked \_\_\_\_\_ books you gave her.
  - a) A
  - b) An
  - c) The
  - d) no article
- 2) Charlie Chaplin's first film was titled as \_\_\_\_\_.
  - a) The Little Tramp
  - b) Making a Living
  - c) The Kid Auto Races
  - d) The Tramp
- 3) Nachiketa's father chose only the \_\_\_\_\_ cows to give away.
  - a) Young
  - b) Old
  - c) Expensive
  - d) Beautiful
- 4) As a matter of compensation \_\_\_\_\_ of Shanti Tigga was offered job with the police.
  - a) Son
  - b) Daughter
  - c) Broker
  - d) Sister
- 5) How are the 'Strains of triumph' described?
  - a) Distant
  - b) Near
  - c) Loud
  - d) Soft
- 6) This is the pilot who saved Japan in the II world war. The underlined word is \_\_\_\_\_ pronoun.
  - a) Distributive
  - b) Reflexive
  - c) Relative
  - d) Demonstrative
- 7) Sir Thomas Wyatt was born in \_\_\_\_\_.
  - a) 1501
  - b) 1502
  - c) 1503
  - d) 1504
- 8) Not one of all the \_\_\_\_\_ Host.
  - a) Red
  - b) Yellow
  - c) Purple
  - d) Blue

**Q.2 Answer the following questions briefly. (Any Four)****12**

- 1) How did the New York writer describe Charlie in his review after release of the first film?
- 2) Which wing of army did Shanti Tigga join? At what age?
- 3) What is the structure of the poem 'I Find No Peace'?
- 4) What made Nachiketa feel troubled?
- 5) What was the reaction of adivasi groups on Shanti Tigga's death?
- 6) What was Nachiketa's third boon? What was the reaction of Yama to Nachiketa's request?

**Q.3 Answer the following questions. (Any One)**

1) What are the points that you need to keep in mind when you are encoding a message?

**OR**

2) Write a message to the principal of your college, explaining to him why you are unable to pay all the fee in one installment. Use proper vocabulary, language and specify the medium.

**Q.4 'Discuss the three 'M' approaches to make effective communication.**

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**B.Sc. (Entrepreneurship) (Semester - I) (Old) (CBCS)  
Examination Oct/Nov-2019  
English (Compulsory)  
GOLDEN PETAL**

Day & Date: Thursday, 07-11-2019  
Time: 03:00 PM To 05:30 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternative given below. 14**

- 1) Charlie Chaplin was of \_\_\_\_\_ years old, when he entered in the film industry.
  - a) 31
  - b) 29
  - c) 35
  - d) 25
- 2) Charlie Chaplin was signed with \_\_\_\_\_ dollars a week by the keystone production company.
  - a) 160
  - b) 150
  - c) 170
  - d) 151
- 3) Charlie Chaplin was born in \_\_\_\_\_.
  - a) 1924
  - b) 1915
  - c) 1914
  - d) 1920
- 4) Shanti Tigga joined the Territorial Army at the age of \_\_\_\_\_.
  - a) 27
  - b) 35
  - c) 28
  - d) 31
- 5) Shanti Tigga was awarded by \_\_\_\_\_ for her extra ordinary achievements.
  - a) Smt. Indira Gandhi
  - b) Smt. Pratibha Patil
  - c) Smt. Sushama Swaraj
  - d) Smt. Sonia Gandhi
- 6) Shanti Tigga was kidnapped on May 29 \_\_\_\_\_.
  - a) 2011
  - b) 2010
  - c) 2012
  - d) 2013
- 7) When the \_\_\_\_\_ dies our soul continues to exists.
  - a) heart
  - b) body
  - c) mind
  - d) voice
- 8) Nachiketa waited at the gates of Yama for \_\_\_\_\_ days without food or water.
  - a) 4
  - b) 2
  - c) 5
  - d) 3
- 9) Vajasrawas told Nachiketa to go to Yama out of \_\_\_\_\_.
  - a) anger and annoyance
  - b) sadness and melancholy
  - c) love and affection
  - d) strength and admiration
- 10) The poem I Find No Peace is written by \_\_\_\_\_.
  - a) Sir Charles
  - b) Sir Thomas Wyatt
  - c) Sir Alfred Wyatt
  - d) Sir Thomas Kyd



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**B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship (Paper – I)**  
**ENTREPRENEURSHIP & THE WORLD OF BUSINESS**

Day & Date: Friday, 08-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) The most suitable type of entrepreneur for a developing economy like India is \_\_\_\_\_.  
 a) Innovating    b) Drone  
 c) Fabian    d) Imitative
- 2) The entrepreneurs who undertake agricultural pursuit are called \_\_\_\_\_ entrepreneurs.  
 a) Social    b) Agricultural  
 c) Retail    d) None of these
- 3) Projects includes \_\_\_\_\_.  
 a) Financial planning                                      b) Reporting  
 c) Materiality    d) None of these
- 4) Entrepreneurship can best be described as \_\_\_\_\_.  
 a) A process that requires setting up a business  
 b) Taking a significant risk in a business context  
 c) Having a strong vision  
 d) A process involving innovation, new product or services, and value creation
- 5) \_\_\_\_\_ show psycho-social barriers to women entrepreneur.  
 a) Inadequate motivation                                b) Faulty socialization  
 c) Discriminating treatment                              d) All of above
- 6) \_\_\_\_\_ is the next stage to the Concept Stage of Product Planning and Development Process.  
 a) Idea stage    b) Product planning stage  
 c) Product Development                                 d) Test Marketing Stage
- 7) Business activity requires \_\_\_\_\_.  
 a) Marine insurance                                        b) Fire insurance  
 c) Employee Group Insurance                          d) All the above
- 8) Entrepreneurship is \_\_\_\_\_ process.  
 a) Creative process                                         b) Imaginative process  
 c) Real process    d) None of these
- 9) A person who managed large project was termed as the entrepreneur in the \_\_\_\_\_.  
 a) Earliest period    b) Middle age  
 c) 17<sup>th</sup> century     d) 19<sup>th</sup> and 20<sup>th</sup> century

- 10) Which of the following is the reason for business failure \_\_\_\_\_?  
a) Lack of market research                      b) Poor management  
c) Poor financial control                         d) All the above
- 11) \_\_\_\_\_ is function of entrepreneur.  
a) Risk taking                                        b) Innovation  
c) Project Planning                                d) All of above
- 12) The oldest form of business organization is \_\_\_\_\_.  
a) Partnership                                        b) Sole proprietorship  
c) Joint stock company                         d) Undertaking
- 13) Entrepreneurs are high in \_\_\_\_\_.  
a) Need achievement                              b) Leadership  
c) Quality    d) Motivation
- 14) Business means \_\_\_\_\_.  
a) Commerce                                        b) Industry and commerce  
c) Trade and commerce                         d) Telling and buying of goods

- Q.2 A) Define and explain any four of the following. 08**
- 1) HUF
  - 2) Comment on agents/brokers in business
  - 3) Public sector
  - 4) Define entrepreneur
  - 5) Define entrepreneurial motivation
- B) Write short Notes. (Any Two) 06**
- 1) Explain creativity
  - 2) Characteristics of entrepreneur
  - 3) Transportation
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Entrepreneur VS entrepreneurship.
  - 2) Comment on choice of business line.
  - 3) Comment on concept of Multinational company.
- B) Answer the following questions. (Any One) 06**
- 1) Program supporting to women entrepreneurship.
  - 2) Entrepreneur VS Manager.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Types of entrepreneurs.
  - 2) Factors influencing to entrepreneurship.
  - 3) Comment on location of business.
- B) Answer the following questions. (Any One) 04**
- 1) Comment on importance of banking in commerce.
  - 2) Comment on partnership firm.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Explain influence of background factors on behavioral orientation.
  - b) Explain barriers to entrepreneurship.
  - c) Explain concept of business ethics with its importance.

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**B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship (Paper – II)**  
**ECONOMICS FOR MANAGER AND MANAGERIAL ACCOUNTING**

Day & Date: Saturday, 09-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat and labeled diagram and give equations wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives. 14**

- 1) \_\_\_\_\_ is known as the "father of economics".  
 a) Adam smith    b) J. B. Say  
 c) Keynes    d) Dr. Marshall.
- 2) Resources of an economy is \_\_\_\_\_.  
 a) Land    b) Labour  
 c) Capital    d) All the above
- 3) Generally demand curve have \_\_\_\_\_ slope.  
 a) Negative    b) Positive  
 c) A & B    d) None of the above
- 4) Economic problem occurs due to \_\_\_\_\_.  
 a) Unlimited wants    b) Unlimited resources  
 c) Limited wants    d) Alternative use of resources
- 5) If the change in demand is greater than change in price, the elasticity of demand is called \_\_\_\_\_.  
 a) Elastic demand    b) Inelastic demand  
 c) Cross elastic demand                                        d) None of these
- 6) The functional relationship between input and output is called as \_\_\_\_\_.  
 a) production function    b) demand function  
 c) cost function    d) none of these
- 7) Homogeneous product is the feature of \_\_\_\_\_ market.  
 a) perfect competition    b) oligopoly  
 c) monopolistic competition                                    d) none of these
- 8) A group of few producers is called \_\_\_\_\_ market.  
 a) Oligopoly    b) Monopolistic  
 c) Monopoly     d) None of these
- 9) Salaries paid to staff will be debited to \_\_\_\_\_ A/c.  
 a) Salary A/c    b) Cash A/c  
 c) Staff A/c     d) Expense A/c
- 10) A commodity in which a trader deals is known as \_\_\_\_\_.  
 a) Property    b) Goods  
 c) Assets    d) Investment
- 11) Money value or the reputation of business is known as \_\_\_\_\_.  
 a) Copyright    b) Goodwill  
 c) Patents    d) Trademark

- 12) \_\_\_\_\_ is a certificate is issued by the company to acknowledge its debt.  
a) Share  
b) Debenture  
c) Bonds  
d) Public Deposits
- 13) \_\_\_\_\_ is known as life blood of any organization.  
a) Management  
b) Marketing  
c) Finance  
d) Customer
- 14) \_\_\_\_\_ refers to unsecured deposits invited from the public by a company.  
a) Bond  
b) Debenture  
c) Public deposits  
d) None of the above

**Q.2 A) Define and explain any four of the following. 08**

- 1) What is debtor?
- 2) What is monopoly market?
- 3) Explain law of demand.
- 4) What is balance sheet?
- 5) What is elasticity of demand?

**B) Write short notes on any two of the following. 06**

- 1) What is business finance?
- 2) What is objective of accountancy?
- 3) Write golden rules of accounting?

**Q.3 A) Attempt any two of the following. 08**

- 1) Explain importance of accounting.
- 2) Explain in brief production function.
- 3) Explain branches of Accounting.

**B) Attempt any one of the following. 06**

- 1) Explain sources of business finance.
- 2) Explain features of perfect competition market.

**Q.4 A) Attempt any two of the following. 10**

- 1) Explain accounting concepts.
- 2) Explain features of monopoly market.
- 3) Explain income elasticity of demand.

**B) Attempt any one of the following. 04**

- 1) What are external sources of economies of scale?
- 2) Find out gross profit from following information.

Sr. No.	Particulars	Amount (Rs.)
1	Opening stock	30000
2	Closing stock	45000
3	Purchase	70000
4	Sales	90000
5	Carriage	5000
6	Wages	15000
7	Octroi Duty	2000

**Q.5 Attempt any two of the following. 14**

- a) What are the internal economies of Scale?
- b) Explain types of price elasticity of demand.



c) Journalise the following transactions in the books of Mr. Laxmipati.

<b>Sr. No.</b>	<b>Date</b>	<b>Particulars</b>	<b>Amount (Rs.)</b>
1	01/06/2017	Business started with cash	120,000
2	03/06/2017	Purchase goods for cash	40,000
3	05/06/2017	Sold goods to Cash	50,000
4	09/06/2017	Purchased furniture from Vikas on credit	30,000
5	10/06/2017	Purchased goods from Akshata	25,000
6	29/06/2017	Paid Salary	5,000
7	29/06/2017	Cash deposited in to Bank of India	35,000

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**B.Sc. (Semester – I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper – I)**  
**FUNDAMENTALS OF INORGANIC CHEMISTRY**

Day & Date: Monday, 11-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labelled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) In the formation of \_\_\_\_\_ bond electron Pair is shared between two atoms.
 

a) covalent	b) ionic
c) co-ordinate	d) metallic
- 2) Bonding molecular orbitals are at \_\_\_\_\_ energy level.
 

a) higher	b) lower
c) same	d) none of these
- 3) The geometry of  $\text{BF}_3$  is \_\_\_\_\_.
 

a) square planer	b) triangular planer
c) linear	d) pyramidal
- 4) \_\_\_\_\_ gas is responsible for acid rain.
 

a) CO	b) $\text{H}_2\text{S}$
c) $\text{H}_2\text{O}$	d) $\text{SO}_2$
- 5) The optimum dissolved oxygen in natural water is \_\_\_\_\_ ppm.
 

a) 1-2	b) 4-6
c) 2-3	d) 8-10
- 6) The crystal structure of CsCl is \_\_\_\_\_.
 

a) Bcc	b) Fcc
c) Cubic	d) Hexagonal
- 7) Sound intensity is measured in \_\_\_\_\_.
 

a) calories	b) joules
c) dB	d) Kelvin
- 8) The Bond order in nitrogen molecule is \_\_\_\_\_.
 

a) Two	b) Three
c) Four	d) Five
- 9) The bond in H-F is \_\_\_\_\_.
 

a) Non –polar	b) Dative
c) Polar	d) Co-ordinate
- 10) The geometry of water molecule is \_\_\_\_\_.
 

a) V shaped	b) Octahedral
c) Linear	d) T shaped



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**B.Sc. (Semester – I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper – II)**  
**FUNDAMENTALS OF ORGANIC CHEMISTRY**

Day & Date: Wednesday, 13-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw a neat labeled diagram wherever necessary.

**Q.1 Fill in the blanks by choosing the correct alternatives given below. 14**

- 1) Baeyer's reagent is \_\_\_\_\_.  
 a) alk.  $\text{KMnO}_4$  solution                      b) Acidic  $\text{KMnO}_4$  solution  
 c) Neutral  $\text{KMnO}_4$  solution                      d) Aq.  $\text{Br}_2$  solution
- 2) In Combustion method, an organic compound is heated with \_\_\_\_\_.  
 a)  $\text{CuO}$     b)  $\text{FeSO}_4$   
 c)  $\text{Na}$     d)  $\text{CuSO}_4$
- 3) Drugs used to lower body temperature are called \_\_\_\_\_.  
 a) Antidiabetic    b) Antipyretics  
 c) Antibiotics    d) None of these
- 4) Which of the following is not an Chromogen?  
 a) Benzene    b) Nitrobenzene  
 c)  $\beta$ -Carotene    d) Retinol
- 5) Ethanol on heating with cone.  $\text{H}_2\text{SO}_4$  \_\_\_\_\_.  
 a)  $\text{CH}_3\text{COOC}_2\text{H}_5$     b)  $\text{C}_2\text{H}_6$   
 c)  $\text{C}_2\text{H}_4$     d)  $\text{C}_2\text{H}_2$
- 6) Aromaticity is explained by the rule \_\_\_\_\_.  
 a) Huckel's rule    b) Hund's rule  
 c) Phase rule    d) None of these
- 7) In Kjeldah's method, the nitrogen in the organic compound is converted to \_\_\_\_\_.  
 a) Ammonium sulphate    b) Nitric acid  
 c) Nitrogen    d)  $\text{NaNO}_2$
- 8) Pyridine is an \_\_\_\_\_ compound.  
 a) Alicyclic    b) Aliphatic  
 c) Aromatic    d) Antiaromatic
- 9) In Benzene, Carbon-Carbon bond distance is \_\_\_\_\_.  
 a)  $120^\circ$     b)  $3.40 \text{ \AA}$   
 c)  $180^\circ$     d)  $1.39 \text{ \AA}$
- 10) Saturated hydrocarbon mainly undergoes \_\_\_\_\_ reaction.  
 a) Substitution    b) Addition  
 c) Elimination    d) Polymerization
- 11) Congored is an example of \_\_\_\_\_ Dye.  
 a) Nitroso    b) Nitro  
 c) Azo    d) Bisazo

- 12) Cardiac drugs are those used to treat \_\_\_\_\_ disorder.
- a) Respiratory                      b) Lung  
c) Heart                                d) Bodyache
- 13) Empirical formula of an organic compound having molecular weight 60 is  $\text{CH}_2\text{O}$ . What is its molecular formula?
- a)  $\text{C}_6\text{H}_{12}\text{O}_6$                       b)  $\text{C}_4\text{H}_8\text{O}_4$   
c)  $\text{C}_3\text{H}_6\text{O}_3$                         d)  $\text{C}_2\text{H}_4\text{O}_2$
- 14) Which of the following is aliphatic saturated hydrocarbon?
- a)  $\text{C}_6\text{H}_6$                                 b)  $\text{C}_6\text{H}_{10}$   
c)  $\text{C}_4\text{H}_{14}$                               d) None of the above

**Q.2 A) Define and explain the following questions. (Any Four) 08**

- 1) State and explain Kolbe reaction for the preparation of alkane.
- 2) Draw resonating structure of Benzene.
- 3) How will you prepare filtrate in Lassaigne's test?
- 4) What is meant by Vat dye?
- 5) Define CNS drug with example.

**B) Write short notes. (Any Two) 06**

- 1) Explain Chlorination of Methane with mechanism.
- 2) Explain estimation of Sulphur by Carius method.
- 3) Friedel Craft's Acylation and Alkylation.

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) What are Diene? Describe the various types of dienes.
- 2) Write the classification of drug based on therapeutical action.
- 3) Write the qualities of good dye.

**B) Answer the following questions. (Any One) 06**

- 1) What is meant by Qualitative and Quantitative analysis? Explain titration method for determination of molecular weight.
- 2) Explain the mechanism involved in halogenations of Benzene.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) What are Alkynes? Explain its Acidity.
- 2) Define the term the Chemotherapeutic agent? Enlist the sub classification of Chemotherapeutic agent.
- 3) Draw the Kekule's structure of Benzene and define the following term.  
i) Aromatic                              ii) Non-aromatic  
iii) Anti-aromatic                      iv) Pseudo-aromatic

**B) Answer the following questions. (Any One) 04**

- 1) Explain Platinic chloride method for the determination of Molecular weight of base.
- 2) Explain the classification of dyes based on constitution.

**Q.5 Answer the following questions. (Any Two) 14**

- a) What are the electrophilic substitution reactions? Why benzene undergoes electrophilic substitution reaction? Explain Nitration of benzene with mechanism.
- b) What are Cycloalkanes? Explain its methods of formation as well as physical and Chemical properties of cycloalkanes.
- c) Explain Kjeldahl's method used for the quantitative analysis of Nitrogen with schematic diagram.

**Solve the problem:** In a Kjeldahl's estimation, the ammonia evolved from  $0.279 \times 10^{-3}$  kg of an organic compound was absorbed in  $50 \times 10^{-3}$  dm<sup>3</sup> of 0.1 N exact neutralization. Calculate % of Nitrogen in the compound.

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**B.Sc. (Semester-I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology –I**  
**FUNDAMENTALS OF MICROBIOLOGY**

Day & Date: Thursday, 14-11-2019  
Time: 03:00 PM To 05:30 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw a neat labeled diagram wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) \_\_\_\_\_ discovered causative agent of anthrax and tuberculosis.  
 a) Robert Hook    b) Louis Pasteur  
 c) Robert Koch    d) John Tyndall
- 2) \_\_\_\_\_ disproved theory of spontaneous generation by swan necked flask.  
 a) Robert Hook    b) Louis Pasteur  
 c) Robert Koch    d) John Tyndall
- 3) The study of causative agent of diseases their identification and prevention is concerned by \_\_\_\_\_ branch of microbiology.  
 a) Medical    b) Dairy  
 c) Environmental    d) Soil
- 4) The arrangement of eight cocci in cuboidal manner in regular pattern is called as \_\_\_\_\_.  
 a) Diplococci    b) Streptococci  
 c) Staphylococci    d) Sarcina
- 5) The inward folding or invasion of plasma membrane filled with clusters of vesicles is called as \_\_\_\_\_.  
 a) Cell wall    b) Mesosomes  
 c) Ribosome    d) Capsule
- 6) \_\_\_\_\_ is a major locomotory organelle of bacteria.  
 a) Pili    b) Flagella  
 c) Ribosomes    d) Capsule
- 7) The prokaryotic microorganism contains \_\_\_\_\_.  
 a) Nucleus    b) Nucleoid  
 c) Mitochondria    d) Nuclear pore
- 8) \_\_\_\_\_ is present in the cell wall of Gram positive bacteria.  
 a) Phospholipids    b) Teichoic acid  
 c) Protein    d) Lipopolysacchride
- 9) \_\_\_\_\_ is the system assigning names to microorganism on the basis of information collected concern of microorganisms.  
 a) Classification    b) Identification  
 c) Nomenclature    d) Screening

- 10) \_\_\_\_\_ is the basic unit of taxonomy which is group of closely related strains which have maximum similarities.
  - a) Species
  - b) Genus
  - c) Class
  - d) Orders
- 11) The organism which use CO<sub>2</sub> as carbon source and light as an energy source called as \_\_\_\_\_.
  - a) Photoautotroph
  - b) Chemoautotroph
  - c) Photoheterotrophs
  - d) Chemoheterotrophs
- 12) Microbial population maintained in \_\_\_\_\_ phase for long time using continuous culture system.
  - a) lag
  - b) log
  - c) stationary
  - d) death
- 13) \_\_\_\_\_ is gaseous sterilization agent used to sterilize heat sensitive items.
  - a) Copper
  - b) Alcohol
  - c) Ethylene oxides
  - d) Phenol
- 14) The pharmaceutical products and heat sensitive culture media sterilized by \_\_\_\_\_.
  - a) Filtration
  - b) Autoclaving
  - c) Chemicals
  - d) Hot air oven

**Q.2 A) Answer the following questions.(Any Four) 08**

- 1) Define dairy microbiology.
- 2) Functions of pili.
- 3) Define intermittent sterilization.
- 4) Define cold sterilization.
- 5) Contributions of Antony Van Leeuwenhoek.

**B) Write notes. (Any Two) 06**

- 1) Characteristics of Viruses.
- 2) Differentiate between Capsule and slime layer.
- 3) What is oligodynamic action? Give an example.

**Q.3 A) Answer the following questions.(Any Two) 08**

- 1) Describe in detail contributions of Louis Pasteur.
- 2) Describe in detail cell wall of gram positive bacteria.
- 3) Describe in detail sterilization by membrane filtration.

**B) Answer the following questions. (Any One) 06**

- 1) Give a detailed account on difference between prokaryotic and eukaryotic cells.
- 2) Discuss in brief volutin granules.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) What is nutrition? Discuss in detail nutritional classification of bacteria.
- 2) Give a detailed account on sterilization by moist heat.
- 3) Discuss in detail characteristics of fungi.

**B) Answer the following questions.(Any One) 04**

- 1) Discuss in detail fluid-mosaic model of cell membrane.
- 2) Define synchronous growth. Discuss in detail methods of synchronous growth.

**Q.5 Answer the following questions.(Any Two) 14**

- 1) Describe in detail approaches to bacterial taxonomy.
- 2) Define growth. Describe in brief growth phases Of bacteria
- 3) Discuss in detail ultrastructure of flagella.

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**B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology – I**  
**BASIC TECHNIQUES IN MICROBIOLOGY**

Day & Date: Friday, 15-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) The condenser on a light microscope used for \_\_\_\_\_.  
 a) To focus the light source                      b) To diffuse the light source  
 c) To provide the light source                    d) To control the light source
- 2) Nigrosin is example of \_\_\_\_\_ stain.  
 a) Basic    b) Acidic and Basic  
 c) Acidic     d) Neutral
- 3) \_\_\_\_\_ is used for cell enumeration.  
 a) Calibrator    b) Neubauers Chamber  
 c) Chromatographic chamber                    d) Refractometer
- 4) All the following are components of compound microscope expect \_\_\_\_\_.  
 a) Stage clips    b) fine adjustment  
 c) electron gun     d) binocular eye piece
- 5) \_\_\_\_\_ is decolorizing agent used in Gram staining.  
 a) Oil    b) Alcohol  
 c) Water    d) Antibiotic
- 6) Cell lines are the example of \_\_\_\_\_ media.  
 a) Synthetic media                                    b) Non-living media  
 c) Semi-synthetic media                            d) Living media
- 7) Endospores can be stained with \_\_\_\_\_.  
 a) Safranine    b) Crystal violet  
 c) ZNCF    d) Methylene blue
- 8) Cell size and cell number can measure by using \_\_\_\_\_.  
 a) Coulter counter                                    b) Streak plate  
 c) Hemocytometer                                    d) None of these
- 9) The process of obtaining microorganism in pure culture from mixed culture is called as \_\_\_\_\_.  
 a) Cultivation    b) Isolation  
 c) Inhibition     d) Activation
- 10) \_\_\_\_\_ is used to visualize the internal structure of microorganism.  
 a) TEM     b) SEM  
 c) Compound    d) Dark field





Seat  
No.

**B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology (Paper - I)**  
**CELL BIOLOGY**

Day & Date: Saturday, 16-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) DNA is 'mainly' found in \_\_\_\_\_.  
 a) Nucleus and cytoplasm                      b) Nucleus only  
 c) Lysosome    d) Cytoplasm
- 2) During meiosis chiasmata are observed at \_\_\_\_\_.  
 a) Pachytene    b) Diplotene  
 c) Leptotene    d) Diakinesis
- 3) The programmed cell death of a cell is also known as \_\_\_\_\_.  
 a) Apoptosis    b) Osmosis  
 c) Cancer    d) Mitosis
- 4) Prokaryotic genetic system has \_\_\_\_\_.  
 a) DNA but no histones                      b) Both DNA and histones  
 c) Neither DNA nor histones                      d) Either DNA or histones
- 5) Mitochondria was first seen by \_\_\_\_\_.  
 a) Robert Hooke    b) Robert Brown  
 c) Lipmann    d) Altmann
- 6) \_\_\_\_\_ helps in protein synthesis.  
 a) Ribosomes    b) Nucleus  
 c) Mitochondria    d) Endoplasmic reticulum
- 7) DNA replication occurs in \_\_\_\_\_.  
 a) S phase    b) G phase  
 c) G2 phase    d) M phase
- 8) Cell sap is a \_\_\_\_\_.  
 a) Living content of the cell  
 b) Non living content of the vacuole  
 c) Non-living content of the protoplasm  
 d) Living content of the cytoplasm
- 9) The Cell wall of plants mainly contain \_\_\_\_\_.  
 a) Starch    b) Lipids  
 c) Cellulose    d) Glucose
- 10) Vesicles that fuse to form a cell plate during cytokinesis in plant cells come from the \_\_\_\_\_.  
 a) Golgi apparatus    b) Mitochondrion  
 c) None of these    d) nucleus

- 11) The type of cell division that occurs in Germ cell is \_\_\_\_\_.
  - a) Meiosis
  - b) Mitosis
  - c) Equal
  - d) Endocytosis
- 12) Tightly packed form of DNA is called \_\_\_\_\_.
  - a) supercoiling
  - b) compressed state
  - c) euchromatin
  - d) heterochromatin
- 13) Golgi bodies are related with \_\_\_\_\_.
  - a) Excretion
  - b) Energy liberation
  - c) Pinocytosis
  - d) Secretion
- 14) The \_\_\_\_\_ is genetically an active chromatin with genes.
  - a) Heterochromatin
  - b) Euchromatin
  - c) Plasmid
  - d) Chromosome arm

- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) Define Apoptosis and explain in short how programmed cell death occurs.
  - 2) Draw a neat and labeled diagram of Mitochondria.
  - 3) Explain functions of heterochromatin and Euchromatin.
  - 4) Define Pinocytosis with suitable example.
  - 5) Define Active transport and give a suitable example of it.
- B) Answer the following questions. (Any Two) 06**
- 1) Enlist functions of Lysosome.
  - 2) Enlist in detail, characteristics of Eukaryotic cell.
  - 3) Describe in brief about Ribosomes.
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Explain Structure and functions of DNA.
  - 2) Add a note on lipid bilayer membrane.
  - 3) Define Phagocytosis with suitable example.
- B) Answer the following questions. (Any One) 06**
- 1) Explain the Ultra structure and types of cell membrane.
  - 2) Add a note on Biochemical composition of cell.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Write a detail account on Endoplasmic Reticulum.
  - 2) Describe Meiosis in detail.
  - 3) Add a detailed note cell differentiation.
- B) Answer the following questions. (Any One) 04**
- 1) Define Chromosome and Explain types of chromosomes based on centromere.
  - 2) Write a detail note on Lysosome.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Explain structure and function of Golgi complex.
  - b) Describe Mitosis in detail and add a note on its significance.
  - c) Explain Cell theory and add a note on Significant event in Cell Biology.

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**B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology (Paper – II)**  
**ANIMAL AND PLANT PHYSIOLOGY**

Day & Date: Monday, 18-11-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) \_\_\_\_\_ is organ of taste and speech.
  - a) Mouth
  - b) Tooth
  - c) Tongue
  - d) Skin
- 2) The esophagus is a long tube of \_\_\_\_\_ cm.
  - a) 24-25
  - b) 23-25
  - c) 21-23
  - d) 25-30
- 3) Upper part of the stomach is called \_\_\_\_\_.
  - a) Cardiac region
  - b) Fundic region
  - c) Pylogic region
  - d) All of these
- 4) Surface Sterilizing agent used in plant tissue culture is for surface cleaning is \_\_\_\_\_.
  - a) Autoclave
  - b) Laminar air flow
  - c) Ethanol
  - d) All of these
- 5) \_\_\_\_\_ organelle is that are only found in plant cell.
  - a) Chloroplast
  - b) mitochondria
  - c) Cell wall
  - d) cytoplasm
- 6) The scientific study of life supporting properties, functions, and process of animal and their parts is called \_\_\_\_\_.
  - a) Plant physiology
  - b) Animal physiology
  - c) Cytology
  - d) Biology
- 7) The weight of pituitary gland is \_\_\_\_\_ gm.
  - a) 0.1
  - b) 0.2
  - c) 0.4
  - d) 0.5
- 8) The reaction system of photo system - I is designated as \_\_\_\_\_.
  - a) P700
  - b) P500
  - c) P450
  - d) P660
- 9) \_\_\_\_\_ is water soluble vitamin.
  - a) Vitamin A
  - b) Vitamin B
  - c) Vitamin C
  - d) Vitamin D
- 10) Nervous tissue is composed of \_\_\_\_\_.
  - a) Neurons
  - b) Nerve cells
  - c) Neurological cells
  - d) All of these

- 11) Detoxification of toxic material carried by \_\_\_\_\_.
  - a) Lung
  - b) Liver
  - c) Heart
  - d) Pancreas
- 12) The gastric juice contains \_\_\_\_\_.
  - a) Ptyalin
  - b) Bile
  - c)  $H_2SO_4$
  - d) HCl
- 13) The light reaction of photosynthesis occurs in \_\_\_\_\_.
  - a) Stroma
  - b) Granna
  - c) Cytoplasm
  - d) Nucleus
- 14) Kupffer cells are characteristics of \_\_\_\_\_.
  - a) Stomach
  - b) Intestine
  - c) Liver
  - d) Pancreas

- Q.2 A) Attempt any four of the following questions. 08**
- 1) What is tissue culture?
  - 2) Draw a labeled diagram of cardiac tissue.
  - 3) What is origin and location of epithelium tissue?
  - 4) Draw a labeled diagram vertical section of tooth.
  - 5) State the names of photosynthetic pigment.
- B) Write short notes. (Any Two) 06**
- 1) Photosynthesis and overall reaction of photosynthesis
  - 2) Animal tissue culture
  - 3) Location and function of muscular tissue.
- Q.3 A) Attempt any two of the following questions. 08**
- 1) Explain Emerson enhancement effect.
  - 2) Explain structure and function of kidney.
  - 3) Write structure and location of nervous tissue.
- B) Attempt any one of the following questions. 06**
- 1) Explain structure of pancreas.
  - 2) Non cyclic Electron transfer pathway.
- Q.4 A) Attempt any two of the following questions. 10**
- 1) Describe the structure and functions of tongue.
  - 2) Crassulacianm acid metabolism (CAM).
  - 3) Describe in detail the structure and function of testis.
- B) Attempt any one of the following questions. 04**
- 1) Explain structure of ovary.
  - 2) Explain Calvin cycle.
- Q.5 Attempt any two of the following questions. 14**
- a) Explain  $C_4$  Cycle.
  - b) Describe in detail basic elements of growth.
  - c) Explain non cyclic photophosphorylation





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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019  
Entrepreneurship (Paper - I)  
ENTREPRENEURSHIP AND THE WORLD OF BUSINESS**

Day & Date: Friday, 08-11-2019  
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) The project life cycle consists of \_\_\_\_\_.  
 a) Understanding the scope of the project  
 b) Objectives of the project  
 c) Formulation and planning various activities  
 d) All of the above
- 2) A \_\_\_\_\_ Is a set of activities which are networked in an order and aimed towards achieving the goals of a project?  
 a) Project  
 b) Process  
 c) Project management  
 d) Project cycle
- 3) Resources refers to \_\_\_\_\_.  
 a) Manpower  
 b) Materials  
 c) Machinery  
 d) All of the above
- 4) Project performance consist of \_\_\_\_\_.  
 a) Time  
 b) Cost  
 c) Quality  
 d) All of the above
- 5) An entrepreneurial behavior includes \_\_\_\_\_.  
 a) Solving problems  
 b) Taking initiatives  
 c) Taking responsibility  
 d) All of above
- 6) \_\_\_\_\_ is / are the responsibility of the project manager.  
 a) Budgeting and cost control  
 b) Allocating resources  
 c) Tracking project expenditure  
 d) All of the above
- 7) \_\_\_\_\_ is another name for contingency planning.  
 a) Synergy planning  
 b) Ad hoc planning  
 c) Business level planning  
 d) Scenario
- 8) Entrepreneurs attributes includes \_\_\_\_\_.  
 a) Preservence  
 b) Hard working  
 c) Determination  
 d) All of above

**Q.2 Answer the following questions. (Any Four) 08**

- 1) Define planning.
- 2) Define rural entrepreneurship.
- 3) Define business plan.
- 4) Define socio-economic development.
- 5) Define financial plan.
- 6) Define woman entrepreneurship.



- Q.3 Answer the following questions. (Any Two) 08**
- 1) Define women entrepreneurship. Explain problems of women entrepreneurs.
  - 2) Explain role & function of DIC.
  - 3) Define partnership firm.
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Explain Function of Entrepreneur.
  - 2) Define proprietorship firm.
  - 3) Explain nature of co-operative society.
- Q.5 Answer the following questions. (Any One) 08**
- 1) Explain industrial policy of India.
  - 2) Define Entrepreneurship. Explain functions & types of Entrepreneurship.





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Set P

**B.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship Science (Paper – II)**  
**COST ACCOUNTING AND PROJECT MANAGEMENT**

Day & Date: Wednesday, 09-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) \_\_\_\_\_ is an extension of job costing.
  - a) Process Costing
  - b) Batch Costing
  - c) Contract Costing
  - d) Operation Costing
- 2) Cost Accounting has been developed because of limitations of \_\_\_\_\_.
  - a) Management Accounting
  - b) Financial Accounting
  - c) Historical Accounting
  - d) Human Resource Accounting
- 3) \_\_\_\_\_ costing is used in transport undertakings.
  - a) Process
  - b) Standard
  - c) Operating
  - d) Job
- 4) The total of all direct expenses is known as \_\_\_\_\_.
  - a) Total Cost
  - b) Overhead
  - c) Work Cost
  - d) Prime Cost
- 5) Batch costing method is used in \_\_\_\_\_.
  - a) Transport services
  - b) Automobile company
  - c) Printing Press
  - d) Biscuit manufacturing
- 6) Indirect material used in production is classified as \_\_\_\_\_.
  - a) Office overhead
  - b) Selling overhead
  - c) Factory overhead
  - d) Distribution overhead
- 7) \_\_\_\_\_ is not considered for preparation of cost sheet.
  - a) Direct cost
  - b) Indirect Cost
  - c) Selling cost
  - d) Goodwill written off
- 8) Investment in plant and machinery in manufacturing sector for small scale unit does not exceed \_\_\_\_\_.
  - a) 1 crore
  - b) 2 crores
  - c) 3 crores
  - d) 5 crores
- 9) Investment in equipment service sector in small scale does not exceed \_\_\_\_\_.
  - a) 1 crore
  - b) 2 crores
  - c) 3 crores
  - d) 5 crores
- 10) MSME act came into force in year \_\_\_\_\_.
  - a) 2000
  - b) 2002
  - c) 2004
  - d) 2006
- 11) To create more employment opportunity is the objective of \_\_\_\_\_.
  - a) Large Scale Industries
  - b) Partnership Firm
  - c) Small Scale Industries
  - d) All the above



Seat  
No.

**B.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper - I)**  
**FUNDAMENTALS OF PHYSICAL CHEMISTRY**

Day & Date: Thursday, 10-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) The half-life period of \_\_\_\_\_ order reaction is independent of the Initial concentration of the reactant.
  - a) Zero
  - b) First
  - c) Second
  - d) Third
- 2) Molecularity never be \_\_\_\_\_.
  - a) Zero
  - b) Negative
  - c) Infinity
  - d) All of these
- 3) Reaction rates can change with \_\_\_\_\_ as temperature.
  - a) Temperature
  - b) The addition of catalyst
  - c) Reactant concentration
  - d) All of these
- 4)  $A+B \longrightarrow$  Product is \_\_\_\_\_.
  - a) unimolecular
  - b) bimolecular
  - c) termolecular
  - d) tetramolecular
- 5) The SI unit of gas constant R is \_\_\_\_\_.
  - a) eng/k/mole
  - b) J/k/mole
  - c) erg
  - d) J
- 6) Vander Waals equation explain the behaviour of \_\_\_\_\_.
  - a) mixture of gases
  - b) real gas
  - c) ideal gas
  - d) none of the above
- 7) The compressibility factor Z for an ideal gas is \_\_\_\_\_.
  - a) zero
  - b) less than one
  - c) more than one
  - d) equal to one
- 8) The ratio of weight of solute to the weight of solution is called as \_\_\_\_\_.
  - a) Weight fraction of solute
  - b) Wt fraction of solvent
  - c) % composition by weight
  - d) % composition by volume
- 9) A solution in which the solute is present in a very small quantity as compared with solvent is called a \_\_\_\_\_ solution.
  - a) dilute
  - b) concentrated
  - c) normal
  - d) molar
- 10) The parachor is \_\_\_\_\_ property.
  - a) Additive
  - b) Constitutive
  - c) both additive & constitutive
  - d) None of these









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**B.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology - I**  
**FUNDAMENTALS OF INDUSTRIAL MICROBIOLOGY**

Day & Date: Saturday, 12-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) AISI 316 grade steel contains \_\_\_\_\_ % chromium.
  - a) 10
  - b) 11
  - c) 02
  - d) 18
- 2) Industrial microbiology mainly depends on the phenomenon \_\_\_\_\_.
  - a) Vaccination
  - b) Fermentation
  - c) Purification
  - d) Pasteurization
- 3) In amylase production \_\_\_\_\_ is mainly used as carbon source.
  - a) Starch
  - b) Lactose
  - c) Citric acid
  - d) Maltose
- 4) In fermenter sparger is used to provide \_\_\_\_\_.
  - a) Nutrient
  - b) Antifoam foam
  - c) Sterile air
  - d) Inoculum
- 5) \_\_\_\_\_ of the following is not a product of fermentation.
  - a) Oxygen
  - b) Ethanol
  - c) Beer
  - d) Wine
- 6) Crowded plate technique is used for screening of \_\_\_\_\_ producers.
  - a) Citric acid
  - b) Antibiotic
  - c) Alcohol
  - d) Vitamin
- 7) \_\_\_\_\_ is used as a precursor during vitamin B12 production.
  - a) NaCl
  - b) HCL
  - c) COCl<sub>2</sub>
  - d) NaOH
- 8) Alcoholic fermentation is carried by yeast known as \_\_\_\_\_.
  - a) *Lactobacillus*
  - b) *Bacillus*
  - c) *Saccharomyces Cerevisiae*
  - d) *E. coli*
- 9) Antifoams are surface active agents that \_\_\_\_\_.
  - a) Reduce the surface tension
  - b) Increase the surface tension
  - c) Stabilize the surface tension
  - d) Neutral the surface tension
- 10) Industrial scale fermenter has \_\_\_\_\_ liter capacity.
  - a) 10-20
  - b) 100-200
  - c) 1-2
  - d) Above 10000
- 11) Cryopreservation is \_\_\_\_\_.
  - a) preservation at low temperature
  - b) preservation at high temperature
  - c) preservation with dehydration
  - d) preservation in mineral oil

- 12) \_\_\_\_\_ of the following organism is used as design organism for sterilization program.  
a) *B. amyloaqueficiens*                      b) *B. anthrax*  
c) *B Stearotherompilus*                      d) *T. aquaticus*
- 13) \_\_\_\_\_ is the best suitable method for sterilization of fermentor and pipe works.  
a) Filter Sterilization                      b) Heat Sterilization  
c) Chemical sterilization                      d) All of the above
- 14) \_\_\_\_\_ method is widely used for the preservation of microbes.  
a) Drying in vacuum                      b) Lyophilization  
c) Storage in sterile soil                      d) Storing organism in saline

- Q.2 A) Answer the following questions. (Any Four)                      08**  
1) Antifoam agent  
2) Industrial Microbiology  
3) Pasteurization  
4) Precursors  
5) Lyophilization
- B) Write short notes. (Any Two)                      06**  
1) Scope of Industrial Microbiology.  
2) Write in detail Screening procedure for organic acid producer.  
3) Describe in brief types of fermenter.
- Q.3 A) Answer the following questions. (Any Two)                      08**  
1) Discuss in detail sterilization of fermenter.  
2) Write in detail about the isolation of microorganisms.  
3) Write in detail Screening procedure for growth factor producer.
- B) Answer the following questions. (Any One)                      06**  
1) Write in detail history of Industrial microbiology.  
2) Write in detail Screening procedure for antibiotic producer.
- Q.4 A) Answer the following questions. (Any Two)                      10**  
1) Explain in detail design of fermenter.  
2) Describe in detail carbon source in fermentation media.  
3) Write in detail about preservation of industrially important microorganisms.
- B) Answer the following questions. (Any One)                      04**  
1) Explain in detail factors involved in fermenter design.  
2) Describe in detail nitrogen source in fermentation media.
- Q.5 Answer the following questions. (Any Two)                      14**  
a) Explain in detail factors affecting fermentation process.  
b) Write in detail secondary screening techniques and add a note on its significance.  
c) Discuss in detail sterilization of fermentation media.

Seat No.	
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Set P

**B.Sc. (Semester – II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology (Paper – II)**  
**BASICS TECHNIQUES IN INDUSTRIAL MICROBIOLOGY**

Day & Date: Monday, 14-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Neat and labeled diagrams must be drawn wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) \_\_\_\_\_ is alkylating agent commonly used in laboratory mutagenesis of cells.
  - a) Citric acid
  - b) Ethyl methane sulphonate
  - c) Methanol
  - d) Alcohol
- 2) Deamination of cytosine results in replacement of C-G pairing to \_\_\_\_\_ pairing.
  - a) U-A
  - b) A-A
  - c) A-C
  - d) G-C
- 3) Recovery of Baker's yeast can be obtained by using \_\_\_\_\_.
  - a) solvent extraction
  - b) Crystallization
  - c) distillation
  - d) filtration
- 4) Recoveries of Bio-fertilizers are obtained using \_\_\_\_\_.
  - a) distillation
  - b) solvent extraction
  - c) centrifugation
  - d) Crystallization
- 5) Recovery of alcohols is mostly carried out using \_\_\_\_\_.
  - a) distillation
  - b) filtration
  - c) precipitation
  - d) solvent extraction
- 6) Valves of hot and cold water reservoirs are regulated by the computer, using data obtained from \_\_\_\_\_.
  - a) DO probe
  - b) pH electrode
  - c) Pressure gauges
  - d) thermometer
- 7) Determination of qualitative or quantitative measures of fermented products is \_\_\_\_\_.
  - a) Assay
  - b) Growth
  - c) Nutrient
  - d) Enzyme
- 8) Determination of evolved CO<sub>2</sub> is followed in \_\_\_\_\_ assay.
  - a) Antibiotic
  - b) Vitamin
  - c) Diffusion
  - d) Metabolic response
- 9) Preparation of healthy, active logarithmic microbial culture suitable for the final industrial production is known as \_\_\_\_\_.
  - a) media optimization
  - b) mutation
  - c) Inoculums preparation
  - d) scale down

- 10) Pyrimidine dimer formation in DNA caused by \_\_\_\_\_.
  - a) UV rays
  - b) Ethyl methane sulfonate
  - c) Ethidium bromide
  - d) Gamma rays
- 11) Gradual process of enhancing lab fermentations to industrial level is known as \_\_\_\_\_.
  - a) Up stream
  - b) Down stream
  - c) Scale up
  - d) Scale down
- 12) Speed of agitation is measured using \_\_\_\_\_ unit.
  - a) RTM
  - b) RPM
  - c) RSM
  - d) RAM
- 13) End point assay is practiced for determination of \_\_\_\_\_.
  - a) Vitamin
  - b) Citric acid
  - c) Growth factor
  - d) Antibiotic
- 14) The recovery and purification of fermentation products refers \_\_\_\_\_.
  - a) upstream processing
  - b) downstream processing
  - c) Incubation
  - d) Inoculation

- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) Induced mutation
  - 2) Heterotroph
  - 3) Downstream processing
  - 4) Thermostat
  - 5) Process control
- B) Write Short Notes. (Any Two) 06**
- 1) Chemical mutagenesis for strain improvement
  - 2) Metabolic response assay
  - 3) Precipitation
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Explain site directed mutagenesis for strain improvement.
  - 2) Describe in brief Turbidometric assay.
  - 3) Write in detail downstream processing using crystallization.
- B) Answer the following question. (Any One) 06**
- 1) Describe gene manipulations for strain improvement.
  - 2) Explain Enzymatic assay with example.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Write in detail downstream processing using Solvent extraction.
  - 2) Describe UV mutagenesis for strain improvement.
  - 3) Write in detail downstream processing using Distillation.
- B) Answer the following question. (Any One) 04**
- 1) Write in detail downstream processing using Filtration.
  - 2) Explain in brief Scale up of fermentation process.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Write in detail downstream processing using Centrifugation.
  - b) Write an essay on Computer Applications in fermentation technology.
  - c) Describe in detail Development of inoculums.

Seat No.	
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**B.Sc. (Semester - II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology (Paper - I)**  
**BASICS OF BIOMOLECULES**

Day & Date: Tuesday, 15-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) \_\_\_\_\_ is an imino acid.
 

a) Histidine	b) Glycine
c) Proline	d) Cystine
- 2) Cholesterol is an \_\_\_\_\_.
 

a) Diglyceride	b) Saturated fat
c) Unsaturated fat	d) Steroid.
- 3) Coenzymes can function \_\_\_\_\_.
 

a) In associate with apoenzyme	b) Independently of the apoenzyme
c) In association with vitamin	d) In association with protein
- 4) Vitamins was discovered by \_\_\_\_\_.
 

a) Jenner	b) Funk
c) Calvin	d) Morgan
- 5) Fats are abundantly found in \_\_\_\_\_.
 

a) Reproductive tissue	b) Vegetative tissue
c) Germinal cells	d) Epithelial Cells
- 6) The chain of amino acids are \_\_\_\_\_.
 

a) Lipids	b) Proteins
c) Cellulose	d) Nucleic acids
- 7) \_\_\_\_\_ is a polysaccharide.
 

a) Glucose	b) Glycogen
c) Maltose	d) Lactose
- 8) \_\_\_\_\_ is an example of monounsaturated fatty acids.
 

a) Oleic acid	b) Arachidonic acid
c) Palmitic acid	d) Linolenic acid
- 9) Most of the vitamins functions as \_\_\_\_\_.
 

a) Holoenzymes	b) Enzymes
c) Hormones	d) Co-enzymes
- 10) Lactose is disaccharide of \_\_\_\_\_.
 

a) Glucose + Galactose	b) Glucose + Glucose
c) Galactose + Fructose	d) Fructose + Glucose
- 11) Scurvy is caused due to deficiency of \_\_\_\_\_.
 

a) Vitamin A	b) Vitamin C
c) Vitamin D	d) Vitamin E

- 12) Enzymes are the polymers of \_\_\_\_\_.
- a) Fatty acids                                  b) Amino acids  
c) Hexose sugar                                d) Inorganic phosphate
- 13) \_\_\_\_\_ is the ultimate purpose of hormones.
- a) To maintain growth                        b) To keep the brain functioning  
c) To stimulate metabolism                d) To maintain body temperature
- 14) \_\_\_\_\_ is sulphur containing amino acid.
- a) Methionine                                  b) Alanine  
c) Lysine    d) Glycine

- Q.2 A) Define and explain any four of the following questions.                                  08**
- 1) What are Monosaccharides?  
2) Define Enzymes.  
3) Draw chemical structure of Cysteine.  
4) Explain Isozymes.  
5) What is  $\alpha$  - helix?
- B) Write Notes. (Any Two)    06**
- 1) Discuss in detail Ramchandran plot.  
2) Explain functions of hormones.  
3) Define Endoenzymes and Explain Immobilization of enzymes.
- Q.3 A) Answer the following questions. (Any Two)    08**
- 1) Describe in detail secondary structure of protein.  
2) Explain source and functions of Fat soluble vitamins.  
3) Write a detail account on Lipids.
- B) Answer the following questions. (Any One)    06**
- 1) Describe in brief factors affecting on enzyme activity.  
2) Explain in detail structure and classification of proteins.
- Q.4 A) Answer the following questions. (Any Two)    10**
- 1) Write a note on protein stabilizing forces.  
2) Define polysaccharide. Describe in detail Homo and Heteropolysaccharide.  
3) Write a note on specific cleavage and sequence differentiation of proteins.
- B) Answer the following questions. (Any One)    04**
- 1) Write a note on types of Enzymes.  
2) Write a detail note on cholesterol.
- Q.5 Answer the following questions. (Any Two)    14**
- a) What are Hormones? Describe in detail animal hormones.  
b) Explain in detail classification of amino acids.  
c) Define vitamins and discuss in detail fat soluble vitamins.

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**B.Sc.(Semester - II) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology (Paper - II)**  
**BASICS OF METABOLISM**

Day & Date: Wednesday, 16-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat and labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) The photosynthetic bacteria are also known as \_\_\_\_\_.  
 a) Chemoorganotrophs                      b) Autotrophs  
 c) Chemolithotrophs                      d) Phototrophs
- 2) The enzymes of glycolysis are located in \_\_\_\_\_.  
 a) Nucleus                                      b) Mitochondria  
 c) Lysosomes                                    d) Cytoplasm
- 3) The first substance produced in the citric acid cycle is \_\_\_\_\_.  
 a) Acetyl CoA                                b) ATP  
 c) Oxaloacetate                              d) Citrate
- 4) \_\_\_\_\_ type of metabolite is used for generating glucose under severe starvation condition.  
 a) Amino acids                                b) Fats  
 c) Glycogen                                    d) Starch
- 5) Movements oxidized in electron transport chain are \_\_\_\_\_.  
 a) Diffusion                                    b) Osmosis  
 c) Repulsion                                  d) Force of attraction
- 6) Molecules oxidized in electron transport chain are \_\_\_\_\_.  
 a) Carbon                                      b) FMN  
 c) NADH                                        d) ADP
- 7) Cytochrome were described by \_\_\_\_\_.  
 a) Darwin                                      b) MacMunn  
 c) Crick                                         d) Mendel
- 8) The carbon dioxide is primary a product of \_\_\_\_\_.  
 a) Glycolysis  
 b) Electron transport phosphorylation  
 c) Krebs cycle  
 d) Lactate fermentation
- 9) Na<sup>+</sup> glucose transporter is an example of \_\_\_\_\_.  
 a) Facilitate diffusion                      b) Symport  
 c) ATP driven active transport            d) Antiport
- 10) Oxidation of a molecule involves \_\_\_\_\_.  
 a) Gain of electron                            b) Gain of proton  
 c) Loss of electron                            d) Loss of proton



- 11) The main enzyme responsible for activation of xenobiotic is \_\_\_\_\_.  
 a) Gluthione S – transferase  
 b) Cytochrome P – 450  
 c) NADPH cytochrome P – 450 reductase  
 d) Glucuronly transferase
- 12) In anabolism, cellular size \_\_\_\_\_.  
 a) Remains same  
 b) Decreases  
 c) Increases  
 d) Becomes zero
- 13) End product of Krebs cycle / Citric acid cycle is \_\_\_\_\_.  
 a) Citric acid  
 b) Pyruvic acid.  
 c) Lactic acid  
 d) Carbon dioxide and water.
- 14) Glycolysis is the name given to the pathway involving the conversion of \_\_\_\_\_.  
 a) Glycogen to glucose-6-phosphate.  
 b) Glycogen or glucose to pyruvate or lactate  
 c) Glucose or fatty acids to pyruvate or acetyl CoA  
 d) Glycogen or glucose to fructose

- Q.2 A) Answer the following questions. (Any Four) 08**  
 1) Define Autotrophs.  
 2) Draw a neat labelled structure of mitochondria.  
 3) LC50  
 4) Catabolism.  
 5) Explain role of enzyme in biotransformation.
- B) Write short notes (Any Two) 06**  
 1) Explain structure of biological membrane.  
 2) Write a note on inhibitors of electron transport chain.  
 3) Describe anabolism.
- Q.3 A) Answer the following questions. (Any Two) 08**  
 1) What are transporters? Add a detailed note on its classification.  
 2) Give a brief account on biotransformation.  
 3) Explain Glyoxilate cycle.
- B) Answer the following questions. (Any One) 06**  
 1) Explain cyclic electron transport chain.  
 2) Write a detailed note on glycolysis.
- Q.4 A) Answer the following questions. (Any Two) 10**  
 1) Discuss in detail Biotransformation of Xenobiotics.  
 2) Write a note on Inhibitors of Oxidative phosphorylation.  
 3) Explain non - cyclic electron transport chain.
- B) Answer the following questions. (Any One) 04**  
 1) Explain HMP pathway.  
 2) Discuss energy transfer between photosystem.
- Q.5 Answer the following questions. (Any Two) 14**  
 1) Explain Ion gated channel with example.  
 2) Discuss in brief Active transport.  
 3) Define transporters and briefly explain its classification.

Seat No.	
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**B.Sc. (Semester - III) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship (Paper –V)**  
**PRINCIPLES OF BUSINESS MANAGEMENT & BUSINESS ORGANIZATION**

Day & Date: Saturday, 05-10-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) Leadership is a process of \_\_\_\_\_ & \_\_\_\_\_ others to work enthusiastically towards achieving objectives.
  - a) influencing & supporting
  - b) incentives and power
  - c) supporting & demotivating
  - d) Power and politics
- 2) Leadership style can be categorized into three type \_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_.
  - a) Autocratic, consultative & free-rein
  - b) consultative, free-rein & grid
  - c) Participative , free-rein & grid
  - d) None of these
- 3) Motivation depends on \_\_\_\_\_ & \_\_\_\_\_.
  - a) motives & motivator
  - b) owner & manager
  - c) motives & manager
  - d) None of these
- 4) Organizing is consist of \_\_\_\_\_.
  - a) Process
  - b) groups of people
  - c) goal oriented
  - d) All of above
- 5) \_\_\_\_\_ Control involves evaluation of inputs & taking corrective action before particular sequences of operation is completed.
  - a) Feed forward
  - b) Concurrent
  - c) Backward
  - d) None of these
- 6) Authority flows from \_\_\_\_\_.
  - a) bottom to top
  - b) top to bottom
  - c) horizontal
  - d) Vertical
- 7) A person is motivated in \_\_\_\_\_.
  - a) Half
  - b) 50%
  - c) Totality
  - d) All of these
- 8) Staffing is affected by \_\_\_\_\_ & \_\_\_\_\_ factors.
  - a) Internal & external
  - b) Internal & international
  - c) technical & political
  - d) None of these
- 9) Management is \_\_\_\_\_ in nature.
  - a) single disciplinary
  - b) Multidisciplinary
  - c) two disciplinary
  - d) None of these

- 10) Theory Z is stated by \_\_\_\_\_.  
 a) Ouchi    b) Lawrence Appalex  
 c) Stanely vance    d) Henry Fayol
- 11) \_\_\_\_\_ is example of Control techniques.  
 a) Journal    b) Balance sheet  
 c) Budget    d) All of these
- 12) The leader of an organization performs \_\_\_\_\_.  
 a) An Interpersonal role    b) An Informational role  
 c) A Decisional role    d) All of the given options
- 13) In the pyramid levels of management, non-managerial staff is placed at/in: \_\_\_\_\_.  
 a) Top    b) Middle  
 c) Bottom    d) None of these
- 14) Someone who works with and through other people by coordinating their work activities to accomplish organizational goals is called: \_\_\_\_\_.  
 a) Very intelligent: Individual    b) Supervisor of Production  
 c) A Manager    d) An operation Supervisor

- Q.2 A) Define & explain any four of the following.    08**
- 1) Define Leadership.  
 2) Define Organization.  
 3) Define staffing.  
 4) Define Controlling.  
 5) Define motivation.
- B) Write Short Notes (Any Two).    06**
- 1) Explain types of Planning.  
 2) Explain importance of management.  
 3) Explain financial incentives in motivation.
- Q.3 A) Attempt any two of the following questions.    08**
- 1) Write down features of planning.  
 2) Explain autocratic leadership.  
 3) Explain types controlling techniques.
- B) Attempt any one of the following questions.    06**
- 1) Explain theory Y of motivation.  
 2) Explain role of manager.
- Q.4 A) Attempt any two of the following questions.    10**
- 1) Explain process controlling.  
 2) Explain contribution of F.W. Taylor to scientific management.  
 3) Explain functions of management.
- B) Attempt any one of the following questions.    04**
- 1) Explain concept of training.  
 2) Explain qualities of leader.
- Q.5 Attempt any two of the following questions.    14**
- a) Explain Herzberg two factor theory of motivation.  
 b) Explain types of organization in detail.  
 c) Explain appraisal system in staffing.

Seat No.	
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Set **P**

**B.Sc. (Semester - III) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship (Paper – VI)**  
**ADVANCED ACCOUNTANCY & AUDITING**

Day & Date: Monday, 07-10-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) \_\_\_\_\_ shortcut key is used for Select Company in Tally.
  - a) F1
  - b) Alt + F1
  - c) F3
  - d) Alt + F3
- 2) \_\_\_\_\_ menu is used to create new ledgers, groups and voucher types in Tally.
  - a) Reports
  - b) Import
  - c) Transactions
  - d) Masters
- 3) Favorable balance of cash book implies that \_\_\_\_\_.
  - a) Bank overdraft
  - b) Credit balance of cash book
  - c) Debit balance of cash book
  - d) None of the above
- 4) A cash deposit made by a business, appears on bank statement as \_\_\_\_\_ balance.
  - a) Debit
  - b) Credit
  - c) Income
  - d) Expenditure
- 5) Check issued but not presented for payment will \_\_\_\_\_ in case of overdraft as per pass book.
  - a) Increase
  - b) Decrease
  - c) No effect
  - d) None of the above
- 6) The copy of customers account with the bank is called \_\_\_\_\_.
  - a) Cash book
  - b) Receipt & payment account
  - c) Bank pass book
  - d) All the above
- 7) Excess of Current assets over current liabilities is called \_\_\_\_\_.
  - a) Net profit
  - b) Gross profit
  - c) Net loss
  - d) Working Capital
- 8) \_\_\_\_\_ is a source of funds.
  - a) Issue of share
  - b) Raising long term loan
  - c) Sale of fixed assets
  - d) All the above
- 9) \_\_\_\_\_ audit is conducted generally between two annual audit.
  - a) Internal audit
  - b) interim audit
  - c) final audit
  - d) Continuous audit
- 10) A Voucher is a \_\_\_\_\_.
  - a) document is support of an entry made in books of accounts
  - b) invoice received from suppliers
  - c) receipt issued to a customer for cash
  - d) dispatch receipt

- 11) The audit that is made compulsory by law is called \_\_\_\_\_.
  - a) Statutory audit
  - b) Partial audit
  - c) Complete audit
  - d) Continuous audit
- 12) Special Audit can be ordered by \_\_\_\_\_.
  - a) Central Government
  - b) State Government
  - c) Municipal Corporation
  - d) Gram Panchayat
- 13) Internal audit is \_\_\_\_\_.
  - a) Review of records and systems continuously within the organization by staff
  - b) Review of accounts by auditor
  - c) Review of systems periodically
  - d) Review of records by the outside experts
- 14) \_\_\_\_\_ enables the auditor to detect errors & frauds.
  - a) Vouching
  - b) Verification
  - c) Auditing
  - d) All the above

**Q.2 A) Answer the following questions. (Any Four) 08**

- 1) Why Profit & Loss Account is prepared?
- 2) What is long form of VAT & GST?
- 3) What is vouching?
- 4) What is working capital?
- 5) What is funds flow statement?

**B) Write the short notes on (Any Two) 06**

- 1) Draw gateway of Tally.
- 2) Explain need of internal check.
- 3) Explain objective of auditing.

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) Explain importance of auditing.
- 2) What is continuous audit? Explain its advantages.
- 3) Explain qualities required for an auditor.

**B) Answer the following questions. (Any One) 06**

- 1) Explain types of errors.
- 2) Prepare Balance Sheet as on 31.3.2017 from the following information.

<b>Debit Balance</b>	<b>Rs.</b>	<b>Credit Balance</b>	<b>Rs.</b>
Furniture	8,500	Capital	35,500
Machinery	30,000	Bills Payable	5,000
Cash in hand	1,200	Creditors	15,000
Closing Stock	32,000		
Debtors	7,500		
Bills Receivable	2,500		

**Additional Information:**

- i) Net profit during the year is Rs. 27,000.
- ii) Drawing is amounted to Rs. 800.

**Q.4 A) Answer the following questions. (Any Two)**

- 1) Explain advantages of vouching.
- 2) Find out Gross Profit /Loss from the following information of Sunshine Co. Pvt. Ltd. for the year ended 31st march 2017.

	Amount		Amount
Opening	15000	Purchase Returns	1200
Closing Stock	10000	Wages	4500
Purchase	48200	Octroi Duty	500
Sales	95400	Carriage Inward	1000
Sales Return	1400		

- 3) From the following information prepare Bank reconciliation statement for the year ending 31st march 2017.
  - i) Bank balance as per cash book Rs. 10,500.
  - ii) Cheque of Rs. 3,500 deposited into bank but not credited by bank.
  - iii) Bank debited bank charges Rs. 200 not recorded in cash book.
  - iv) Cheques of Rs. 4,000 issued but not presented for payment.
  - v) Bank paid electricity charges as per our standing instruction Rs. 1,500 but not recorded in cash book.
  - vi) Bank collected dividend on our behalf Rs. 1,000 but not recorded in the cash book.

**B) Answer the following questions. (Any One)**

- 1) Explain features of Tally Software.
- 2) Find out Net Profit/Loss from the following information of Mr. Sachin for the year ended 31<sup>st</sup> March 2017.

	Rs.		Rs.
Gross Profit	67,000	Bad Debts	300
Advertisement	1,200	Commission Paid	1,500
Salaries	12,800	Stationery	200
Rent & Taxes	4,200	Discount Received	500
Insurance	1,800		

**Q.5 Answer the following questions. (Any Two)**

- a) Explain types of auditing.
- b) A fire occurred on 15th December, 2011 in the premises of Pandurang Co. Ltd. From the following figures, calculate the amount of claim to be lodged with the insurance company for loss of stock:

Trader provides you the following additional information:

Cost of stock on 1 <sup>st</sup> April, 2010	2,00,000
Cost of stock on 31 <sup>st</sup> March, 2011	3,00,000
Purchases during the year ended 31 <sup>st</sup> March, 2011	4,00,000
Purchase from 1 <sup>st</sup> April, 2011 to the date of fire	8,80,000
Sales for the year ended 31 <sup>st</sup> March 2011	6,00,000
Sales from 1 <sup>st</sup> April, 2015 to the date of fire	10,50,000

During accounting year 2011-12, cost of purchase raise by 10% above the previous year level's while selling price went up by 5%.

The value of stock salvaged was 20,000.

Calculate the amount of the claim will be admitted by the insurance company.

- c) From the following information prepare funds flow statement of Dattatray Pvt. Ltd. 07

<b>Liabilities</b>	<b>2003</b>	<b>2004</b>	<b>Assets</b>	<b>2003</b>	<b>2004</b>
Share Capital	5,00,000	7,00,000	Land & Building	80,000	1,20,000
Profit & Loss	1,00,000	1,60,000	Plant & Machinery	5,00,000	8,00,000
General Reserve	50,000	70,000	Stock	1,00,000	75,000
Sundry Creditors	1,53,000	1,90,000	Debtors	1,50,000	1,60,000
Bills Payable	40,000	50,000	Cash	20,000	20,000
o/s Expenses	7,000	5,000			
	<b>8,50,000</b>	<b>11,75,000</b>		<b>8,50,000</b>	<b>11,75,000</b>

- i) Rs. 50,000 depreciation has been charged on plant & machinery during 2004.
- ii) A piece of machinery was sold for Rs. 8,000 during the year 2004. It had cost Rs. 12,000 and depreciation of Rs. 7,000 had been provided on it.

Seat No.	
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Set P

**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship (Paper - II)**  
**ECONOMICS FOR MANAGER AND MANAGERIAL ACCOUNTING**

Day & Date: Saturday, 09-11-2019  
 Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) Building and Machinery is shown on \_\_\_\_\_.  
 a) Liabilities side of Balance Sheet      b) Asset side of Balance Sheet  
 c) Debit side of Profit and loss a/c      d) Credit side of Profit and loss a/c
- 2) \_\_\_\_\_ shows that the book keeping system is free from errors.  
 a) Journal      b) Narration  
 c) Ledger      d) Trial balance
- 3) Trading account is a \_\_\_\_\_.  
 a) Personal account      b) Real account  
 c) Nominal account      d) Statement
- 4) True & fair profit or loss of a company know by \_\_\_\_\_.  
 a) Trading and Profit and loss a/c      b) Balance sheet  
 c) Trail balance      d) Journal entry
- 5) Concept which provides a link between present and future is known as \_\_\_\_\_.  
 a) Dual aspect      b) Going concern  
 c) Cost concept      d) Business entity concept
- 6) Journal Entries are known as book of \_\_\_\_\_ Entry.  
 a) Original      b) Duplicate  
 c) Personal      d) Nominal
- 7) Financial statement is prepared at the end of \_\_\_\_\_ year.  
 a) Calendar      b) Financial year  
 c) Every      d) None of the above
- 8) A trial balance is a \_\_\_\_\_.  
 a) Personal Account      b) Real Account  
 c) Nominal Account      d) None of the above

**Q.2 Answer the following questions. (Any Four) 08**

- 1) What is transaction?
- 2) Define fixed assets.
- 3) State the various source of documents.
- 4) What is cost accounting?
- 5) Define creditors.
- 6) Define going concern concept.

**Q.3 Answer the following questions. (Any Two) 08**

- 1) Explain internal economies of scale.



- 2) From the following information prepare Trading A/C of Mr. Ajun for the year ended 31<sup>st</sup> March, 2019.

Particular	Amount (Rs.)	Particular	Amount (Rs.)
Opening Stock	42,000	Purchases	1,05,000
Sales	2,15,000	Wages	8,000
Octroi Duty	1,000	Carriage inward	2,000

Adjustment:

1. Closing Profit was valued Rs. 9,500
- 3) Explain importance of final accounts.

**Q.4 Answer the following questions. (Any Two)**

**08**

- 1) Explain price elasticity of demand.
- 2) Explain branches of accounting.
- 3) Journalise the following transactions in the books of Mr. Pravin.

Sr. No.	Date	Particulars	Amount (Rs.)
1	07/09/2018	Purchase goods for cash	45,000
2	09/09/2018	Sold goods to cash	40,000
3	10/09/2018	Cash deposited in to bank	12,000
4	29/09/2018	Paid rent	5,000

**Q.5 Answer the following questions. (Any One)**

**08**

- 1) Explain types of elasticity of demand.
- 2) Explain in detail law of return to scale.



- 12) Self stifling \_\_\_\_\_ corrosion.
- |              |                 |
|--------------|-----------------|
| a) Prevent   | b) Promotes     |
| c) Decreases | d) All of these |
- 13) Contact process is developed by \_\_\_\_\_.
- |            |                       |
|------------|-----------------------|
| a) Philips | b) Carl Bosch & Haber |
| c) Solvay  | d) Ostwald            |
- 14) Particle size of the crystalline precipitate is \_\_\_\_\_.
- |                          |                       |
|--------------------------|-----------------------|
| a) 0.1 to 1 micron       | b) 0.02 to 0.1 micron |
| c) Less than 0.02 micron | d) None of these      |

- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) What is mean by co-precipitation?
  - 2) Mention various methods for production of ammonia on large scale.
  - 3) Define chemical passivity.
  - 4) Give the P<sup>H</sup> range of methyl orange.
  - 5) What is negative catalysis? '
- B) Write Short Notes on (Any Two) 06**
- 1) Post Precipitation
  - 2) Quinoid theory
  - 3) Heavy chemicals
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Explain adsorption theory of catalysis.
  - 2) Explain colour – change interval of acid-base indicator.
  - 3) Write condition for good precipitation.
- B) Answer the following questions. (Any One) 06**
- 1) Explain manufacture plant & process for contact process.
  - 2) Write application of catalysis in industrial process.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Explain electrochemical theory of corrosion.
  - 2) Write characteristics of catalyst.
  - 3) Draw neat labeled diagram for manufacture for ammonia.
- B) Answer the following questions. (Any One) 04**
- 1) Write application of passivity.
  - 2) Draw structural rearrangement of pholphthalein.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Discuss the method for protection of metal from corrosion.
  - b) Discuss the mechanism of precipitate formation.
  - c) With the help of neutralization curve, explain the choice of indicator for the titration of weak acid with strong base.

Seat No.	
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**B.Sc. (Semester - III) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**

**Industrial Chemistry (Paper – VI)**

**ANALYTICAL & INDUSTRIAL ASPECTS OF ORGANIC CHEMISTRY**

Day & Date: Thursday, 10-10-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) Hard Soap are formed by \_\_\_\_\_.  
 a) grease  
 b) tallow  
 c) linseed oil  
 d) antibacterial
- 2) \_\_\_\_\_ is used as saponifying alkali.  
 a) KOH  
 b)  $\text{Na}_2\text{CO}_3$   
 c)  $\text{NH}_4\text{OH}$   
 d) ethanolamine
- 3) The density scale used to measure sugar concentration is \_\_\_\_\_.  
 a) trix  
 b) brix  
 c) grams  
 d) litre
- 4) The Semisolid mass containing crystals of sugar and molasses is called as \_\_\_\_\_.  
 a) bagasse  
 b) Black syrup  
 c) Sugar Juice  
 d) Masecuite
- 5) \_\_\_\_\_ of following is an Anti-diabetic drug.  
 a) Tolbutamide  
 b) isoniazid  
 c) Phenobarbital  
 d) Chloromycetin
- 6) Antipyretic is a drug used to \_\_\_\_\_.  
 a) Control sleep  
 b) Induce sleep  
 c) Lower body temperature  
 d) Elevate body temperature
- 7) Deriphat is \_\_\_\_\_ Detergent.  
 a) cationic  
 b) anionic  
 c) ampholytic  
 d) none of these
- 8) \_\_\_\_\_ imparts flexibility and smoothness to the wrap threads.  
 a) lubricants  
 b) Brighteners  
 c) Starch  
 d) Adhesive
- 9) Decolourisation of cane juice is done by \_\_\_\_\_.  
 a) Activated carbon process  
 b) Ion exchange process  
 c) Sulphitation process  
 d) None of these
- 10) Cotton and Jute are examples of \_\_\_\_\_ fibre.  
 a) Synthetic  
 b) Natural  
 c) Semi synthetic  
 d) Inorganic
- 11) The pesticide used to control rodents is called as \_\_\_\_\_.  
 a) insecticide  
 b) herbicide  
 c) bacteriocide  
 d) Rodenticide

- 12) IAA is used as \_\_\_\_\_.  
 a) herbicide                                      b) Plant growth hormone  
 c) micronutrient                                 d) bactericide
- 13) During fermentation the P<sup>H</sup> is kept at \_\_\_\_\_.  
 a) 10     b) 7  
 c) 3-4    d) 14
- 14) An ideal drug must not induce \_\_\_\_\_ in the body.  
 a) resistance                                        b) hunger  
 c) Curative action                                d) All of these

**Q.2 A) Answer the following questions. (Any Four) 08**

- Define the terms:
  - Hydrophobic
  - Hydrophilic
- Write list of important raw materials needed for alcohol industry.
- What are reactive dye?
- What do you mean by antimalarial drug?
- Write the uses of Carbaryl.

**B) Write Notes (Any Two) 06**

- Raw materials used in soap industry
- General idea of process of Sizing
- Extraction of juice

**Q.3 A) Answer the following questions. (Any Two) 08**

- Explain the types of detergents with suitable examples.
- Write the Synthesis and uses Of Phenobarbitone.
- What are the meant by refining of sugar? Discuss the various steps involved in refining.

**B) Answer the following questions. (Any One) 06**

- Define Fibers. Give the Classification of fibers in details.
- Explain in details the manufacturing of soap by hot process.

**Q.4 A) Answer the following questions. (Any Two) 10**

- What are the agrochemicals? Give the general idea about agrochemicals.
- Explain the utilization of byproducts of sugar industry.
- Draw the block diagram for manufacture process of alcohol in industry.

**B) Answer the following questions. (Any One) 04**

- Give the synthesis and uses of Ethambutol.
- Write a short note on types of soap.

**Q.5 Answer the following questions. (Any Two) 14**

- Explain the process of dyeing and bleaching process in textile industry.
- Distinguish between Soap and detergent.
- Write Synthesis and application of following agrochemicals.
  - Ethophon
  - Monochrotophos

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**B.Sc. (Semester - III) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Microbial Biotechnology (Paper - V)**  
**GENETICS**

Day & Date: Friday, 11-10-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) First generation after the cross is called \_\_\_\_\_.  
 a) First filial generation                      b) Second filial generation  
 c) F1 cross    d) F1 link
- 2) \_\_\_\_\_ acts as an intercalating agent.  
 a) Acridine orange                                      b) Ethidium Bromide  
 c) Proflavin    d) Alkaliting agents.
- 3) \_\_\_\_\_ is most likely to disrupt the normal linking pattern of genes.  
 a) Crossing over  
 b) Allergic response pattern in the cell membrane  
 c) Unlinking  
 d) Linkage
- 4) When \_\_\_\_\_ cross was made with F<sub>1</sub>, then 1:1:1:1:1:1:1:1 is obtained.  
 a) Back cross    b) Test cross  
 c) Two-way cross    d) Three-way cross
- 5) In heredity, the genes are obtained from \_\_\_\_\_.  
 a) Father    b) mother  
 c) Both    d) brother
- 6) Separation of chromosomes from centromere towards the end is known as \_\_\_\_\_.  
 a) Terminalization    b) Transcription  
 c) Translation    d) Transformation
- 7) Mendel did not propose \_\_\_\_\_.  
 a) Segregation    b) independent assortment  
 c) dominance    d) Incomplete dominance
- 8) \_\_\_\_\_ is the example of ABO blood type represents.  
 a) Complete dominance    b) Co-dominance  
 c) Blending    d) Incomplete dominance
- 9) The word chromosome was given by \_\_\_\_\_.  
 a) Bateson (1906)    b) Mendel (1909)  
 c) Waldeyer (1888)    d) Watson (1878)
- 10) Ultraviolet radiation causes DNA damage by formation of \_\_\_\_\_.  
 a) cytidine dimer    b) guanine dimer  
 c) adenine dimer    d) thymine dimer

- 11) \_\_\_\_\_ is condition if the child is born with an extra chromosome in each of its cells.
- a) Non-disjunction
  - b) Segregation
  - c) Recombination
  - d) Translocation
- 12) Mendel performed experiments on \_\_\_\_\_.
- a) Pigeon Pea
  - b) Garden Pea
  - c) Cow pea
  - d) Chick pea
- 13) Tautomerism is one of the causes of \_\_\_\_\_ mutation.
- a) Spontaneous
  - b) Induced
  - c) Missense
  - d) Silent
- 14) \_\_\_\_\_ genotype represents a homozygous recessive condition.
- a) Bb
  - b) BC
  - c) bb
  - d) bc

**Q.2 A) Answer the following questions. (Any Four) 08**

- 1) Define and Explain Null hypothesis.
- 2) Fate of exogenote
- 3) Genotypic ratio
- 4) Factors affecting crossing over
- 5) Spontaneous mutation

**B) Write short notes. (Any Two) 06**

- 1) Describe chi - square test with suitable example.
- 2) Prove law of dominance with suitable example.
- 3) Define Chromosome and Explain its types based on centromere.

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) Explain in detail transposable elements.
- 2) What is crossing over? Explain in different theories of crossing over.
- 3) Write a note on linkage and explain its types.

**B) Answer the following questions. (Any One) 06**

- 1) Explain modifications of Mendelian ratios with suitable example.
- 2) Write a detail on Mendel's experiment.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) Explain Complementary Epistasis.
- 2) Write a detailed note on Recombination.
- 3) Define mutation and add a note on mutagenic agents.

**B) Answer the following questions. (Any One) 04**

- 1) Describe process of transformation with suitable example.
- 2) Explain types of chromosomal abbreviation.

**Q.5 Answer the following questions. (Any Two) 14**

- a) Define Linkage? Explain its significance.
- b) Explain Law of Independent assortment.
- c) Describe process of conjugation with suitable example.

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**B.Sc. (Semester - III) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Microbial Biotechnology (Paper - VI)**  
**FERMENTATION TECHNOLOGY**

Day & Date: Saturday, 12-10-2019  
 Time: 03:00 PM To 05:30 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) Starchy substrate mainly used in the production of \_\_\_\_\_.
  - a) Penicillin
  - b) Amylase
  - c) Wine
  - d) Biofertilizer
- 2) *Aspergillus niger* is used generally for the production of \_\_\_\_\_.
  - a) Penicillin
  - b) L-Lysine
  - c) Vit. B12
  - d) Citric acid
- 3) Ethanol recovery and purification is mainly carried out by using \_\_\_\_\_ technique.
  - a) Drying
  - b) Precipitation
  - c) Distillation
  - d) Solvent extraction
- 4) \_\_\_\_\_ is an example of beta lactam antibiotic.
  - a) Chloramphenicol
  - b) Penicillin
  - c) Gentamicin
  - d) Griseofulvin
- 5) \_\_\_\_\_ is mainly used as a raw material during ethanol fermentation.
  - a) Meat Extract
  - b) Molasses
  - c) Peptone
  - d) Beef extract
- 6) PHB stands for \_\_\_\_\_.
  - a) Polyhydrogen
  - b) Polyhydroxy alkonate
  - c) Polyhydroxy butyrate
  - d) None of these
- 7) Cobalt chloride precursor used \_\_\_\_\_ in production.
  - a) L-Lysine
  - b) Amylase
  - c) Penicillin
  - d) vitamin B12
- 8) \_\_\_\_\_ is the example of symbiotic nitrogen fixing organism.
  - a) *Azotobacter*
  - b) *Rhizobium*
  - c) *Pseudomonas*
  - d) *Bacillus*
- 9) \_\_\_\_\_ is raw material used during beer production.
  - a) Barley
  - b) Sorghum
  - c) Wheat
  - d) Maize
- 10) The purification and recovery of the production after fermentation is called as \_\_\_\_\_ process.
  - a) Upstream
  - b) Fermentation
  - c) Downstream
  - d) none of these



- 11) \_\_\_\_\_ organism mainly used in the production of bioinsecticide.  
 a) *Bacillus subtilis*                                  b) *Bacillus thuringiensis*  
 c) *Pseudomonas aeruginosa*                              d) *Staphylococcus species*
- 12) \_\_\_\_\_ is the dried biomass of single species which is rich in protein.  
 a) SCP    b) RTD  
 c) SPC    d) MPN
- 13) In penicillin G production \_\_\_\_\_ is the precursor used.  
 a) Acetate    b) Acetic acid  
 c) Phenyl acetic acid    d) Methoxy acetic acid
- 14) Fortified wine consist \_\_\_\_\_ % alcohol.  
 a) 50    b) 60  
 c) 80    d) 20
- Q.2 A) Define and explain any four of the following** **08**
- 1) Application of L-Lysine
  - 2) Beta lactam antibiotic
  - 3) Enlist types of wine
  - 4) Define Biofertilizer
  - 5) PHB
- B) Write short notes (Any Two)** **06**
- 1) Applications of citric acid
  - 2) Biochemistry of biogas
  - 3) Malt
- Q.3 A) Answer the following questions. (Any Two)** **08**
- 1) Uses of amylase
  - 2) Write in detail SCP production
  - 3) Flowchart for beer production
- B) Answer the following questions. (Any One)** **06**
- 1) Describe in detail industrial production of Penicillin.
  - 2) Describe in detail Biofertilizer production.
- Q.4 A) Answer the following questions. (Any Two)** **10**
- 1) Describe in brief treatment and recycling of industrial waste.
  - 2) Give a detailed account on ethanol production.
  - 3) Write in detail Vitamin B12 production
- B) Answer the following questions. (Any One)** **04**
- 1) Discuss in detail Biogas production.
  - 2) Define Fermentation & Explain in detail Amylase production.
- Q.5 Answer the following questions. (Any Two)** **14**
- a) Explain in detail Micro-organisms involved, media & product recovery of Streptomycin.
  - b) Give a detailed account on Wine production.
  - c) Describe in detail L-Lysine production.

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**B.Sc. (Semester - IV) (CBCS) Examination Oct/Nov 2019  
Entrepreneurship (Paper - VII)  
CORPORATE ACCOUNTING & PROFESSIONAL ETHICS**

Day & Date: Saturday, 19-10-2019  
Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) If share are issued at their face value, it is called as issued at \_\_\_\_\_.
 

a) Premium	b) Par
c) Discount	d) Market
  
- 2) When company receives applications for shares more than those actually issued by the company then it is called \_\_\_\_\_.
 

a) Over subscription	b) Under subscription
c) Normal subscription	d) None of the above
  
- 3) \_\_\_\_\_ means the direct sale of shares by a company to a limited number of sophisticated investors.
 

a) Public placement of share	b) Private placement of share
c) Rights issue of shares	d) Bonus issue of shares
  
- 4) Liquidation without intervention of the court is known as \_\_\_\_\_.
 

a) Compulsory winding up	b) Compulsory liquidation
c) Winding up by order of court	d) Voluntary liquidation
  
- 5) There is one liquidation and one formation in the case of \_\_\_\_\_.
 

a) Amalgamation	b) Absorption
c) Internal reconstruction	d) All the above
  
- 6) Dividend declared in between two annual general meeting are called \_\_\_\_\_.
 

a) Final dividend	b) Half dividend
c) Interim dividend	d) Full dividend
  
- 7) Debtors is a \_\_\_\_\_.
 

a) Current liability	b) Fixed asset
c) Current asset	d) Long term liability
  
- 8) On liquidation of company, the preferential payment in respect of salary or wages is restricted to \_\_\_\_\_.
 

a) Rs. 10,000	b) Rs. 20,000
c) Rs. 30,000	d) Rs. 40,000
  
- 9) Declared dividend should be classified in the Balance sheet as a \_\_\_\_\_.
 

a) Provision	b) Current liability
c) Reserve	d) Current assets
  
- 10) Application money cannot be less than \_\_\_\_\_ of the face value of shares.
 

a) 5%	b) 10%
c) 15%	d) 25%

- 11) The amount set apart from profit for future is known as \_\_\_\_\_.
  - a) Provision
  - b) Reserve
  - c) Capital A/c
  - d) Cash in hand
- 12) \_\_\_\_\_ is the system by which business corporations are directed and controlled.
  - a) Culture
  - b) Values
  - c) Corporate governance
  - d) Business ethics
- 13) A set of characteristics that sets one group of people apart from another is called as \_\_\_\_\_.
  - a) Values
  - b) Ethics
  - c) Culture
  - d) Rules
- 14) The market price of a share of common stock is mainly determined by \_\_\_\_\_.
  - a) The board of directors
  - b) The stock exchange on which the stock is listed
  - c) Government
  - d) Individuals buying & selling the stock

**Q.2 A) Define and explain any four of the following questions. 08**

- 1) Define authorized share capital.
- 2) Define subsidiary company.
- 3) Define liquidation of a company.
- 4) What is code of conduct?
- 5) Define globalization.

**B) Write Short Notes. (Any Two) 06**

- 1) Explain in brief business ethics.
- 2) Explain factors influencing valuation of share.
- 3) Define liquidator's final statement of account.

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) Distinguish between amalgamation & absorption.
- 2) Write note on corporate social responsibility.
- 3) Explain need & importance of valuation of share.

**B) Answer the following questions. (Any One) 06**

- 1) Explain role & responsibilities of liquidator in event of liquidation.
- 2) Prepare a balance sheet of Bharati Communication Ltd., as at 31 March, 2018 as per the provisions of Schedule VI of the Companies Act, 1956 from the following information:

Particulars	Rs.	Particulars	Rs.
General reserve	3,000	10% Debenture	3,000
Profit & loss a/c (Cr.)	1,200	Machinery	9,000
Debtors	1,500	Cash in hand	1,000
Preliminary Expenses	300	6% Preference Share	5,000
Bills Receivables	3,100	Cash at bank	3,000
500 Equity shares of Rs. 10 each	5,000	Creditors	700

**Q.4 A) Answer the following questions. (Any Two)**

- 1) Explain importance of corporate governance.
- 2) Explain Role of MNC's in globalization.
- 3) From the information given below and the balance sheet of Makhantal Ltd. on 31<sup>st</sup> March, 2018, find the value of shares by Intrinsic value method.

Particulars	Rs.	Particulars	Rs.
Issued and subscribed 40,000 equity share capital of Rs. 10 each fully paid	4,00,000	Goodwill	42,000
Reserves	2,02,000	Buildings	2,70,000
Profit & loss a/c	1,08,000	Machinery	2,10,000
7% Debentures	1,00,000	Furniture & Fixtures	18,000
Creditors	90,000	Debtors	2,75,000
Bills Payables	50,000	Stock	1,05,000
		Cash at hand	20,000
		Preliminary Expenses	10,000

Additional Information:

Assets were valued as follows:

Buildings	Rs. 1,95,000
Machinery	Rs. 1,35,000
Furniture & Fixtures	Rs. 20,000
Goodwill	Rs. 50,000
Stock	Rs. 1,05,000

**B) Answer the following questions. (Any One)**

04

- 1) State the order of payment in liquidation of company.
- 2) Explain advantages of holding company.

**Q.5 Answer the following questions. (Any Two)**

14

- a) Explain ethical issues in functional areas of business.
- b) Vijay Co. Ltd. issued for public subscription of 20,000 equity shares of Rs. 100 each payable as under:

With Application Rs. 25 per share

On allotment Rs. 30 per share

On First call Rs. 20 per share

On Second and Final call Rs. 25 per share

Applications were received for 25,000 shares. Excess money on application was refunded. All money was duly received except the final call on 100 share.

- c) The Hopeless Co. Ltd went in to voluntary liquidation on 31<sup>st</sup> March, 2018.  
Its balance sheet as follows:

<b>Particulars</b>	<b>Rs.</b>	<b>Particular</b>	<b>Rs.</b>
Issued and paid up 19,500 shares of Rs. 10 each	1,95,000	Freehold property	98,000
Loan secured by freehold property	55,000	Plant & Machinery	65,000
Preferential Creditors	24,300	Stock	55,400
Unsecured Creditors	1,12,000	Sundry debtors	64,000
		Cash	3,900
		Profit & loss A/c	1,00,000
	<b><u>3,86,300</u></b>		<b><u>3,86,300</u></b>

The liquidator realized the assets as follows :

Leasehold property Rs. 95,000

Plant and machinery Rs. 51,000

Stock Rs. 39,000

Debtors Rs. 58,500

The expenses of liquidation amounted to Rs. 2,000 and remuneration to liquidator was agreed at 2.5% on the amount realized including cash and 2% on the amount paid to unsecured creditors including preference creditors.

Prepare Liquidators Final statement of Account.

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**B.Sc. (Semester - IV) (CBCS) Examination Oct/Nov-2019  
Entrepreneurship (Paper - VIII)  
INTERNATIONAL MARKETING & MARKETING DECISION**

Day & Date: Saturday, 02-11-2019  
Time: 11:30 AM To 02:00 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) The concept of marketing mix was developed by \_\_\_\_\_.  
a) N. H. Bordan                      b) Philips Kotler  
c) Stamen                              d) W. Anderson
- 2) "Many people want BMW, only few are able to buy" this is example of \_\_\_\_\_.  
a) Need                              b) Want  
c) Demand                              d) Status
- 3) It's combination of quality, service and price.  
a) Marketing Triad                      b) customer Value triad  
c) Customer satisfaction Triad      d) Service quality Triad
- 4) \_\_\_\_\_ is the father of Modern Marketing.  
a) Peter Ducker                      b) Philips Kotler  
c) Lester Wunderman              d) Abraham Maslow
- 5) \_\_\_\_\_ buy products and \_\_\_\_\_ use product.  
a) Consumer & Customer              b) Customers & consumer  
c) Buyers & Sellers                      d) Buyers & Customer
- 6) Inside sales is known as \_\_\_\_\_.  
a) Direct Marketing                      b) Social Marketing  
c) Tele-Marketing                      d) Viral Marketing
- 7) International Marketing strategy according to which company uses separate marketing mix for each international target market is classified as \_\_\_\_\_.  
a) Straight Product Marketing      b) Product Adaptation Marketing  
c) Standardized Global Marketing      d) Adapted Global Marketing
- 8) A market survey is required for \_\_\_\_\_.  
a) Deciding Marketing Strategies      b) Deciding Product Strategies  
c) Deciding Pricing Strategies      d) All of the above
- 9) Market Information means \_\_\_\_\_.  
a) Knowledge of Industries              b) Knowledge of House Hold  
c) Knowledge of Customer Testes      d) All of the above
- 10) Digital Marketing is similar to \_\_\_\_\_.  
a) Online Marketing                      b) Cold Calling  
c) Web Designing                      d) Market fore-cast
- 11) Innovation means \_\_\_\_\_.  
a) Product Desiging                      b) New Ideas  
c) Motivation                              d) None of these

- 12) Service Marketing is the same as \_\_\_\_\_.
  - a) Transaction Marketing
  - b) Relationship Marketing
  - c) Internal Marketing
  - d) None of these
- 13) EDI stands for \_\_\_\_\_.
  - a) Electronic Data Interchange
  - b) Easy Data Interface
  - c) Early Data Interchange
  - d) Essential Data Interchange
- 14) GM stands for \_\_\_\_\_.
  - a) Goal Marketing
  - b) Global Marketing
  - c) Global Message
  - d) Good Marketing

- Q.2 A) Answer any four of the following questions. 08**
  - 1) Define Design.
  - 2) What is mean by product?
  - 3) What is mean by Idea?
  - 4) What is mean by Market?
  - 5) Define Foreign Trade?
- B) Write Short Notes. (Any Two) 06**
  - 1) Customer Service
  - 2) International Market
  - 3) Business Strategy
- Q.3 A) Answer any two of the following question. 08**
  - 1) Write down types of Distribution Channel.
  - 2) Difference between Traditional commerce and E-commerce.
  - 3) Write down concept of product idea & its process.
- B) Answer the following questions. (Any One) 06**
  - 1) Write short note on "Technology Environment".
  - 2) Explain the advantages of E-marketing.
- Q.4 A) Answer the following questions. (Any Two) 10**
  - 1) Describe Product Life Cycle & types of Product.
  - 2) What is Global Marketing? Use of website in Marketing?
  - 3) What Consumer Behavior? Explain need & model of Behavior.
- B) Answer the following questions. (Any One) 04**
  - 1) Explain the concept of Multinational Company.
  - 2) Write down Advertising strategy in Competitive Market.
- Q.5 Answer the following questions. (Any Two) 14**
  - a) Define Wholeseller. Explain the types and function of whole Sellers.
  - b) Explain the advantages of E-commerce.
  - c) What is Retailer? Explain Super Market & Hyper Market.

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**B.Sc. (Semester - IV) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper - VII)**

**ANALYTICAL & INDUSTRIAL ASPECTS OF PHYSICAL CHEMISTRY**

Day &amp; Date: Monday, 04-11-2019

Max. Marks: 70

Time: 11:30 AM To 02:00 PM

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

14

- 1) Opacity is defined as reciprocal of \_\_\_\_\_.  
 a) Absorbance  
 b) Transmittance  
 c) Reflection  
 d) None of these
- 2) Glass electrode is the \_\_\_\_\_.  
 a) Indicator  
 b) Reference  
 c) Platinum  
 d) Hydrogen
- 3) For flame photometry \_\_\_\_\_.  
 a) only solid sample can be used  
 b) only liquid sample can be used  
 c) both solid and liquid sample can be used  
 d) no sample is necessary
- 4) In conductivity cells, the electrode used are made up of \_\_\_\_\_.  
 a) Gold  
 b) Silver  
 c) Platinum  
 d) Lead
- 5) The relation  $E_G = E_G^0 + 0.0591 p^H$  gives the potential of \_\_\_\_\_ electrode.  
 a) Hydrogen  
 b) Calomel  
 c) Quinhydrone  
 d) Glass
- 6) The temperature of the flame is controlled by \_\_\_\_\_ factor.  
 a) type of fuel-oxidant  
 b) type of burner  
 c) type of solvent  
 d) all of these
- 7)  $\text{Ohm}^{-1} \text{ Cm}^{-1}$  is the unit of \_\_\_\_\_ conductance.  
 a) Specific  
 b) Molecular  
 c) Equivalent  
 d) Observed
- 8) The equation  $I_t = I_0 10^{-\epsilon c t}$  represents \_\_\_\_\_.  
 a) Lambert's law  
 b) Carotthw law  
 c) Beer's law  
 d) Einstein law
- 9) Titration in which end-points determined by e.m.f. measurements are called \_\_\_\_\_ titration.  
 a) acid-base  
 b) redox  
 c) precipitation  
 d) potentiometric
- 10) In total consumption burner \_\_\_\_\_ of sample is used.  
 a) 100%  
 b) 50%  
 c) 95%  
 d) 5%



- 11) The conductance of the solution depends on \_\_\_\_\_.  
a) number of ions  
b) speed of ions  
c) mobility of ions  
d) all of these
- 12) One faraday is equal to \_\_\_\_\_.  
a) 96.50 C  
b) 96500 C  
c) 9.5000 C  
d) 96.500 C
- 13) If transport number of cation is 0.5, then that of anion is \_\_\_\_\_.  
a) 1.5  
b) 0.5  
c) 0.05  
d) 0.00
- 14) \_\_\_\_\_ electrode is reference electrode.  
a) Hydrogen  
b) Glass  
c) Platinum  
d) Quinhydrone

- Q.2 A) Answer any four of the following. 08**  
1) What is mean by  $P^H$  and  $P^{OH}$ .  
2) State Beer's law.  
3) Write advantage of glass electrode.  
4) Give the block diagram of a flame photometer.  
5) Why KCl is used to determine the cell constant.
- B) Write short notes. (Any Two) 06**  
1) Quinhydrone electrode  
2) Deviation from Beer's law  
3) Types of conductors.
- Q.3 A) Answer the following questions. (Any Two) 08**  
1) What is mean by buffer solution? Write Henderson's equation for acidic and basic buffer.  
2) Explain any one method of locating end point of potentiometric titration.  
3) State and explain Lambert's law.
- B) Answer the following questions. (Any One) 06**  
1) Describe any three factors influencing transport number.  
2) Explain in detailed total consumption burner.
- Q.4 A) Answer the following questions. (Any Two) 10**  
1) Explain the term transmittance and optical density. How they are related?  
2) What is precipitation titration? Explain in detail.  
3) What are the characteristics of burners detail in flame photometry?
- B) Answer the following questions. (Any One) 04**  
1) During electrolysis of  $CuSO_4$  solution between platinum electrode the fall in concentration around the anode was  $0.29 \times 10^{-3}$  Kg of  $CuSO_4$  per  $0.1 \text{ dm}^3$  and the corresponding fall in concentration around the cathode was  $0.24 \times 10^{-3}$  Kg. Calculate the transport numbers of  $Cu^{++}$  and  $SO_4^{--}$  ions.  
2) Describe the construction & working of photovoltaic cells.
- Q.5 Answer the following questions. (Any Two) 14**  
a) Explain conductometric titration between strong acid and strong base.  
b) Explain in detail Hittorf's rule.  
c) Describe the photoelectric photometer in detail.

Seat No.	
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**B.Sc. (Semester - IV) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper - VIII)**  
**INDUSTRIAL ASPECTS OF APPLIED CHEMISTRY**

Day & Date: Wednesday, 23-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) For the reduction of iron \_\_\_\_\_ is used as reducing agent.
  - a) Sodium
  - b) Potassium
  - c) Calcium
  - d) Carbon
- 2) Another mineral other than ammonia essential for plants is \_\_\_\_\_.
  - a) Potassium
  - b) Sodium
  - c) Phosphorus
  - d) Uranium
- 3) Clay, feldspar and sand are the three main raw materials used in making \_\_\_\_\_.
  - a) Ceramics
  - b) Cement
  - c) glass
  - d) Fertilizers
- 4) In bright nickel plating along with nickel salt \_\_\_\_\_ metal salt is also added.
  - a) Lead
  - b) Nickel
  - c) Chromium
  - d) Cobalt
- 5) \_\_\_\_\_ is added to slow down the rate of setting of cement.
  - a) Silicates
  - b) Aluminates
  - c) Gypsum
  - d) Phosphates
- 6) For the purple color of glass \_\_\_\_\_ is used.
  - a) Chromium oxide
  - b) Manganese oxide
  - c) Nickel oxide
  - d) Ferric oxide
- 7) \_\_\_\_\_ metal is preferred for anodic oxidation.
  - a) Aluminium
  - b) Nickel
  - c) Silver
  - d) Lead
- 8) In the manufacture of glass, sand is used in the form of \_\_\_\_\_ with uniform particle size.
  - a) Oxide
  - b) Silicates
  - c) Quartz
  - d) Aluminates
- 9) Ceramic also known as \_\_\_\_\_.
  - a) Glass
  - b) Polymer
  - c) Chelate
  - d) Keromos
- 10) \_\_\_\_\_ is coated with a coating agent in order to reduce the absorption of moisture.
  - a) Nitro phosphate
  - b) Potassium Phosphate
  - c) Potassium sulphate
  - d) Ammonium sulphate

- 11) If cathode efficiency is greater than anode efficiency then the electrolytic bath becomes \_\_\_\_\_ in the metal content.
 

a) Poor	b) Rich
c) Equal	d) Same
- 12) Superphosphate and triple superphosphate are \_\_\_\_\_ fertilizers.
 

a) Organic	b) Inorganic
c) Physical	d) None of these
- 13) The easily fusible product formed due to action of flux on gangue is \_\_\_\_\_.
 

a) Matrix	b) Slag
c) Culletts	d) None of these
- 14) In optical glass \_\_\_\_\_ used for absorbing ultraviolet light.
 

a) $MnO_2$	b) SnO
c) SeO	d) $Fe_2O_3$

**Q.2 A) Answer the following questions. (Any Four) 08**

- 1) Define Native ore and Oxidized ore.
- 2) What are colored glasses?
- 3) Write the formula of cathode efficiency and anode efficiency.
- 4) Enlist the steps involved in metallurgical process.
- 5) Write the factors which affects on the fertility of soil.

**B) Answer the following questions. (Any Two) 06**

- 1) Explain the basic principles of electroplating.
- 2) Write the properties of ceramics.
- 3) Define Cement and draw a neat labeled diagram of rotary kiln for manufacturing of cement.

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) Write the qualities of an ideal fertilizer.
- 2) Describe electroplating of Chromium.
- 3) Describe the raw material used for the preparation of glass.

**B) Answer the following questions. (Any One) 06**

- 1) Distinction between calcinations and roasting.
- 2) Write short note on Anodizing.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) Explain Heat treatment on steel.
- 2) Define Electrolysis? Explain the Faradays First and Second laws of Electrolysis.
- 3) Explain the Triple super phosphate as fertilizers.

**B) Answer the following questions. (Any One) 04**

- 1) Explain in deal froth flotation method.
- 2) Explain the different types of glass according to their uses in various field.

**Q.5 Answer the following questions. (Any Two) 14**

- a) Give the classification of fertilizers according to their mode of operation on soil with example.
- b) Define Metallurgy and explain gravity separation method of ore with schematic diagram.
- c) Manufacture of glass by pot furnace with suitable diagram.

Seat No.	
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**B.Sc. (Semester – IV) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Microbial Biotechnology ( Paper – VII)**  
**MOLECULAR BIOLOGY**

Day & Date: Thursday, 24-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Neat diagrams must be drawn wherever necessary.

**Q.1 Fill in the blanks by choosing the correct alternatives given below: 14**

- 1) The 3' end of mature tRNA has \_\_\_\_\_ sequence.
  - a) 5'CCA 3'
  - b) 5'CGA 3'
  - c) 5'CAC 3'
  - d) 5'GCC 3'
- 2) \_\_\_\_\_ is the common mode of DNA replication.
  - a) Conservative
  - b) Semiconservative
  - c) Dispersive
  - d) Degradative
- 3) In *E. Coli* \_\_\_\_\_ protein provides primase activity.
  - a) DNA C
  - b) DNA G
  - c) Pri A
  - d) Pri B
- 4) \_\_\_\_\_ is known as Kornberg enzyme.
  - a) DNA polymerase III
  - b) DNA polymerase I
  - c) DNA polymerase II
  - d) RNA polymerase
- 5) In clover leaf model of tRNA \_\_\_\_\_ is the closest to the anticodon loop.
  - a) Amino acid acceptor region
  - b) Variable region.
  - c) DHU loop.
  - d) Thymine loop.
- 6) Full expression of the lac operon requires \_\_\_\_\_.
  - a) lactose and cAMP
  - b) allolactose and cAMP
  - c) cAMP
  - d) Lactose
- 7) Mut S, Mut H and Mut L is present in \_\_\_\_\_ system.
  - a) Mismatch repair
  - b) SOS repair
  - c) Nucleotide excision repair
  - d) Base excision repair
- 8) The term Z DNA was coined by \_\_\_\_\_.
  - a) Davidson
  - b) Wang et al.
  - c) Britten
  - d) Circk
- 9) DNA polymerase is \_\_\_\_\_.
  - a) DNA dependent DNA polymerase
  - b) RNA dependent RNA polymerase
  - c) RNA dependent DNA polymerase
  - d) DNA dependent RNA polymerase
- 10) In bacterial promoters, \_\_\_\_\_ describes the 'Pribnow box'.
  - a) The 5' untranslated region
  - b) The - 10 box
  - c) The - 35 box
  - d) The termination sequence

- 11) An enzyme that induces double strand breaks in DNA and rejoins them is called \_\_\_\_\_.
- a) Restriction Endonuclease                      b) DNA gyrase  
c) DNA ligase    d) DNA polymerase
- 12) \_\_\_\_\_ is the chief function of -10 sequence of *E.coli* promoter.
- a) DNA melting    b) Promoter recognition  
c) Promoter efficiency                                      d) Affinity of polymerase
- 13) During translation initiation, an aminocayl tRNA first attaches to \_\_\_\_\_ site of ribosome.
- a) Site A    b) Site P  
c) Site E    d) EF-Tu binding site
- 14) \_\_\_\_\_ transcription factors contains TATA binding proteins.
- a) TFIIA    b) TFIIB  
c) TFIID    d) TFIIF

**Q.2 A) Define and explain any four of the following.    08**

- 1) Transcription unit
- 2) Central dogma
- 3) Define Splicosomes
- 4) Silencers.
- 5) Topoisomerase

**B) Write short note on any two of the following.    06**

- 1) Explain structure of 70S Ribosome.
- 2) Describe process of Prokaryotic replication.
- 3) Explain the process of DNA damage.

**Q.3 A) Answer any two of the following.    08**

- 1) Add a note on rolling circle model of DNA replication.
- 2) Write a note on Excision repair system.
- 3) Explain silent features of DNA.

**B) Answer any one of the following.    06**

- 1) Define Genetic code and explain its properties.
- 2) Enlist enzymes involved in Prokaryotic replication.

**Q.4 A) Answer any two of the following.    10**

- 1) Enlist enzymes involved in replication of Eukaryotes.
- 2) Add a note on Eukaryotic DNA polymerase.
- 3) Add a note on structure of DNA

**B) Answer any one of the following.    04**

- 1) Explain SOS repair system.
- 2) Explain forms of DNA.

**Q.5 Answer any two of the following.    14**

- a) Describe Nucleotide Excision repair system.
- b) Give a brief account on Lac Operon.
- c) Explain in detail Post transcriptional modification.

Seat No.	
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**B.Sc. (Semester - IV) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Microbial Biotechnology (Paper - VIII)**  
**FOOD & DAIRY TECHNOLOGY**

Day & Date: Friday, 25-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**14**

- 1) Reduction of Methylene blue within two hours indicates \_\_\_\_\_ quality of milk.
  - a) Good
  - b) Poor
  - c) Fair
  - d) Excellent
- 2) Temperature of the food is \_\_\_\_\_ type of factor involved in microbial growth.
  - a) Intrinsic
  - b) Microbial
  - c) Extrinsic
  - d) Environmental
- 3) In LTH method of Pasteurization, \_\_\_\_\_ °C temperature is used.
  - a) 71.1
  - b) 62.8
  - c) 100
  - d) 121
- 4) In cheese making \_\_\_\_\_ enzyme is involved.
  - a) Pepsin
  - b) Amylase
  - c) Trypsin
  - d) Rennin
- 5) The primary milk carbohydrate is \_\_\_\_\_.
  - a) glucose
  - b) galactose
  - c) lactose
  - d) maltose
- 6) Legal butter must contain at least \_\_\_\_\_ % of fat.
  - a) 70
  - b) 80
  - c) 90
  - d) 100
- 7) Food value of ice cream depends to a large extent on its \_\_\_\_\_.
  - a) volume
  - b) taste
  - c) flavor
  - d) composition
- 8) Green rot in egg is caused by \_\_\_\_\_.
  - a) *Pseudomonas fluorescens*
  - b) *Acinetobacter spp.*
  - c) *Proteus melanovogenes*
  - d) *Serratia spp.*
- 9) Solid portion of cow milk contains approximately \_\_\_\_\_ % solid-not-fat.
  - a) 6
  - b) 7
  - c) 8
  - d) 9
- 10) Pickles are preserved due to \_\_\_\_\_ content.
  - a) high pH
  - b) high salt
  - c) high sugar
  - d) high pressure



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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry Paper – I**  
**FUNDAMENTAL OF INORGANIC CHEMISTRY**

Day & Date: Monday, 11-11-2019  
 Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) The bond formed by sharing of unpaired electrons is called as \_\_\_\_\_.  
 a) Metallic    b) Ionic  
 c) Covalent    d) Co-ordinate
- 2) Hydrogen bond is \_\_\_\_\_ than Van der Waal's forces.  
 a) Stronger    b) Weaker  
 c) Highly polar    d) All of these
- 3) In  $\text{BeCl}_2$ , the bond angle is \_\_\_\_\_.  
 a)  $120^\circ$     b)  $90^\circ$   
 c)  $72^\circ$     d)  $180^\circ$
- 4) \_\_\_\_\_ has highest threshold limit value.  
 a)  $\text{CO}_2$     b) CO  
 c) NO    d) Be
- 5) The part of atmosphere, surrounding the earth is called \_\_\_\_\_.  
 a) Troposphere    b) Stratosphere  
 c) Ionosphere    d) Exosphere
- 6) The shape of  $\text{BF}_3$  molecule is \_\_\_\_\_.  
 a) Trigonal planer    b) Linear  
 c) Hexagonal    d) Tetrahedral
- 7) The strength of covalent bond depends upon \_\_\_\_\_.  
 a) Number of electrons  
 b) The extent of overlapping of atomic orbitals  
 c) Types of orbitals  
 d) Types of hybridization
- 8) Highest electron affinity shown by \_\_\_\_\_ element.  
 a) Fluorine    b) Chlorine  
 c) Bromine    d) Oxygen

**Q.2 Answer the following questions. (Any Four) 08**

- 1) Give the health effect of  $\text{NO}_x$ .
- 2) Define the term COD
- 3) Define Atomic & Molecular orbitals
- 4) Draw molecular orbital diagram of  $\text{Li}_2$  molecule
- 5) Define the term Water Pollution
- 6) Define co-valent bond with suitable example



- Q.3 Answer the following questions. (Any Two) 08**
- 1) Give the condition for successful overlap
  - 2) Discuss the health effect of carbon monoxide in details
  - 3) Write a note on Valence bond theory
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Write a note on electron affinity
  - 2) Discuss the types of water pollutant
  - 3) Write a note on S-Px type of overlap.
- Q.5 Answer the following questions. (Any One) 08**
- 1) Write a note on lattice energy & Co-ordination number.
  - 2) Give the chemical methods for removal of suspended matter.

Seat  
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**B.Sc. (Semester - V) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**English**  
**LITERARY QUEST**

Day & Date: Saturday, 05-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below.**

**08**

- 1) World's Parliament of Religious was held in the \_\_\_\_\_ year.
  - a) 1893
  - b) 1891
  - c) 1890
  - d) 1896
- 2) A 'Sister' according to Mother Teresa must give up all her \_\_\_\_\_.
  - a) education
  - b) life
  - c) possessions
  - d) job
- 3) \_\_\_\_\_ when our mind is tranquil says Grenville Kleiser.
  - a) You feel insults keenly
  - b) I'll thoughts cease
  - c) Become Selfish
  - d) Become unhappy
- 4) A man feels a real \_\_\_\_\_ if he hands out a ten pound note.
  - a) tremor
  - b) sad
  - c) bad
  - d) happy
- 5) Science is addressed as \_\_\_\_\_.
  - a) daughter of Old Times
  - b) enemy of Old Times
  - c) wife of Old Times
  - d) herald of New Times
- 6) T. Ramalingam \_\_\_\_\_ (speak: simple present) Marathi fluently.
  - a) Speaks
  - b) Spoke
  - c) Speaking
  - d) Speak
- 7) Vishal is \_\_\_\_\_ (strong: use comparative) than Dinesh.
  - a) Strongest
  - b) Strong
  - c) Strongest
  - d) Stronger
- 8) \_\_\_\_\_ said, "Father! you come again."
  - a) Sick man's wife
  - b) Sick man's son
  - c) Sick man
  - d) Sick man's daughter
- 9) \_\_\_\_\_ is the best message conveyed by the Parliament of Religions.
  - a) Holiness and purity are not exclusive to any one religion
  - b) Assimilation, and not destruction
  - c) All religions have produced men and women of exalted character
  - d) None of the above.
- 10) \_\_\_\_\_ has made man cruel.
  - a) Gold
  - b) Money
  - c) Silver
  - d) Position

- 11) Father Gilligan is humbled by the experience because \_\_\_\_\_.
  - a) he realizes God takes care of everyone
  - b) he feels that the dying man waited for him
  - c) he feels nature soothed him because he was so tired
  - d) God could show his concern for his community
- 12) The priest has understood that God has sent one of his \_\_\_\_\_ to help him.
  - a) Priest
  - b) Father
  - c) Angel
  - d) Adam
- 13) The comparative form of strange is \_\_\_\_\_.
  - a) Strangerly
  - b) Stranger
  - c) More Strange
  - d) Most strange
- 14) The Superlative form of ill is \_\_\_\_\_.
  - a) more ill
  - b) worse
  - c) worst
  - d) most ill

**Q.2 Attempt any four of the following questions.**

**16**

- 1) What does one gain from being clam according to the poet Grenville Kleiser?
- 2) How has money made the individual nervous, afraid and insecure? What are its long term effects?
- 3) What has science taken away from humans?
- 4) Why is Father Gilligan so weary? Why is he so struck by Grief and Guilt?
- 5) Why does the poet not support the cause of science? Describe in your own words the reasons he gives for this.
- 6) Why does Lawrence say that the present attitude towards money is all wrong? What are the changes he wants to see in society?

**Q.3 Attempt any two of the following questions.**

**12**

- 1) What are the evils that prevent the advancement of society according to Swami Vivekananda?
- 2) What do we learn from Mothers Teresa's life?
- 3) Write the dialogues for the situations:  
Rajesh goes to his friend Ramesh's Birthday Party where in he introduces himself to Ramesh's elder brother.
- 4) Write the dialogue for the situation:  
Smita and Sita are good childhood friends, After a long gap, they meet in a Reception.

**Q.4 Attempt any one of the following question.**

**14**

Write an argumentation speech on 'Ban of Polythene'.

**OR**

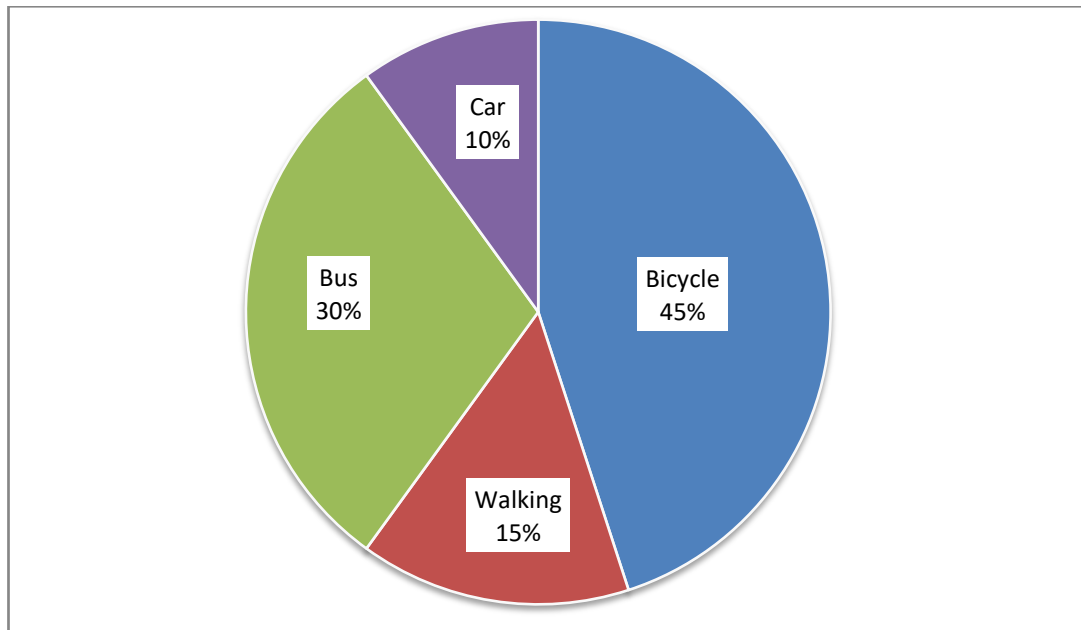
Write a debate on 'Should Students Study ethics in colleges'?

**Q.5 Read the following passage and summarize it.**

**14**

The pie chart below shows the percentages of types of transportation used by 800 students to come to college.

Study the pie chart and answer the questions :



- 1) How many students come to the college by bicycles?
- 2) How many students do not walk to college?
- 3) How many students come to college by bus or car?
- 4) Write in brief, your observation and analyze the pie chart.

Seat No.	
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**B.Sc. (Semester - V) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**BUSINESS FINANCE**

Day & Date: Monday, 07-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) IMF stands for \_\_\_\_\_.
  - a) International Monetary Fund
  - b) Interest Monetary Fund
  - c) Include Monetary Fund
  - d) International Money fund
- 2) Which is an example of ethical codes?
  - a) We believe in more product
  - b) We believe in Assets
  - c) We believe in money
  - d) None of these
- 3) Corporate planning consists \_\_\_\_\_.
  - a) Automation
  - b) Defamation
  - c) Financial
  - d) Strategic Plan
- 4) Business ethics is dynamic \_\_\_\_\_.
  - a) Philosophy
  - b) Rules & regulation
  - c) Concept
  - d) Principle
- 5) Over all strategic planning is done by the \_\_\_\_\_.
  - a) Top Management
  - b) Middle Management
  - c) Lower Management
  - d) None of these
- 6) Financial planning deal with \_\_\_\_\_.
  - a) Preparation of financial statement
  - b) Planning for a capital issue
  - c) Preparing budget
  - d) All of the above
- 7) FE stands for \_\_\_\_\_.
  - a) Fast Exchange
  - b) Foreign Exchange
  - c) For Exchange
  - d) First Exchange
- 8) Saving in respect of a cost is treated in Capital budgeting as \_\_\_\_\_.
  - a) An Inflow
  - b) An Outflow
  - c) Nil
  - d) None of these
- 9) Good marketing is no accident but a result a careful planning and \_\_\_\_\_.
  - a) Execution
  - b) Selling
  - c) strategic
  - d) research
- 10) The promotion "P" of marketing is also known as \_\_\_\_\_.
  - a) Product
  - b) Distribution
  - c) Cost
  - d) Marketing Communication
- 11) Which of the following is a part of Capital Account?
  - a) Private Capital
  - b) Banking Capital
  - c) Official Capital
  - d) all of the above

- 12) The investment arm of the world bank is \_\_\_\_\_.  
 a) IDA    b) IFC  
 c) IBRD    d) MIGA
- 13) Which of the following cities does not have a formal stock exchange?  
 a) Frankfurt    b) London  
 c) Monte Carlo    d) Hong Kong
- 14) ATM stands for \_\_\_\_\_.  
 a) Any Time Money    b) Automated Teller Machine  
 c) Automated teller money    d) None of these
- Q.2 A) Answer the following questions. (Any Four)    08**  
 1) Define Business.  
 2) Long form of IBRD and IFC  
 3) What is mean by security?  
 4) What is Capital Budget?  
 5) Long form of BSE and NSE
- B) Write Notes on (Any Two)    06**  
 1) E-banking  
 2) Lease Finance  
 3) International finance
- Q.3 A) Answer the following questions. (Any Two)    08**  
 1) Explain the types of lease financing.  
 2) Describe of concept of Business finance.  
 3) Write down objective of financial planning.
- B) Answer the following question. (Any One)    06**  
 1) What is mean by Share? Write down types of share?  
 2) Explain the Foreign Exchange
- Q.4 A) Answer the following questions. (Any Two)    10**  
 1) Explain the types and steps of financial planning.  
 2) Describe function of stock exchange of India.  
 3) Write down objective and importance of Business finance.
- B) Answer the following question (Any One)    04**  
 1) Describe the Venture Capital.  
 2) Write down objective of International finance.
- Q.5 Answer the following (Any two)    14**  
 a) Explain the International Financial Institutions.  
 b) Explain the problems and prospects of leasing in India.  
 c) Describe sources of Working Capital finance.

Seat  
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**B.Sc. (Semester - V) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**HUMAN RESOURCE MANAGEMENT**

Day & Date: Wednesday, 09-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) External sources of recruitment consists \_\_\_\_\_.  
 a) Recommendations of Existing employees  
 b) Private Employment Agencies  
 c) Through Employment Exchange  
 d) All of the above
- 2) The Human Resource System covers \_\_\_\_\_.  
 a) Training and development  
 b) Recruit and Select  
 c) Job design and evaluation  
 d) All of the above
- 3) \_\_\_\_\_ is not a type of interview.  
 a) Depth Interview  
 b) Interview Rating Firm  
 c) Panel Interview  
 d) Productive Interview
- 4) Job description involves \_\_\_\_\_.  
 a) Condition of work  
 b) Machine tools  
 c) Accident hazards  
 d) All of the above
- 5) \_\_\_\_\_ is the internal sources of recruitment.  
 a) Promotion  
 b) Trainees  
 c) Transfer  
 d) All of these
- 6) Off the Job Training Method consists of \_\_\_\_\_.  
 a) Role Playing Method  
 b) Case Study Method  
 c) Programmed Training  
 d) All of the above
- 7) A \_\_\_\_\_ is a collection of duties, tasks and responsibilities which are assigned to an individual and which is different from the assignment.  
 a) Job  
 b) Human Resource Planning  
 c) Industrial Relations  
 d) Responsibility
- 8) Performance appraisal means evaluating an employees performance relative to \_\_\_\_\_.  
 a) Establishing goods  
 b) Fellow employees  
 c) Job description requirements  
 d) Performance standards
- 9) Which one of the following does not include under the functions of human resource management?  
 a) Planning  
 b) Profitability  
 c) Organizing  
 d) Recruitment
- 10) Which of the following includes under techniques of Training?  
 a) On the job Training Method  
 b) Informal Training  
 c) Role Playing Method  
 d) All of the above

- 11) Arrange the following in order:  
 i) Promotion  
 ii) Performance appraisal  
 iii) Recruitment  
 iv) Training and Development  
 a) III, IV, II, I  
 b) II, III, IV, I  
 c) I, II, III, IV  
 d) IV, II, III, I
- 12) The \_\_\_\_\_ programme once installed must be continued on a permanent basis.  
 a) Job evaluation  
 b) Training & Development  
 c) Recruitment  
 d) All of the above
- 13) The basic managerial skill(s) is (are) \_\_\_\_\_.  
 a) To supervise  
 b) To stimulate  
 c) To motivate  
 d) All of the above
- 14) \_\_\_\_\_ is first step in staffing procedure.  
 a) Determining sources of personnel supply  
 b) Preparing personnel specifications  
 c) Selection of personnel  
 d) Determining Personnel Characteristics

- Q.2 A) Define and explain any four of the following questions. 08**  
 1) HRM  
 2) Job description  
 3) Recruitment  
 4) Training  
 5) Selection
- B) Write the Notes on (Any Two) 06**  
 1) Explain job satisfaction  
 2) Explain convenience allowance  
 3) Types of transfer
- Q.3 A) Answer the following questions. (Any Two) 08**  
 1) Functions of Human Resource Planning  
 2) Importance of training.  
 3) Essential of selection procedure.
- B) Answer the following questions. (Any One) 06**  
 1) Explain principles of development.  
 2) Explain the concept Employee health & safety.
- Q.4 A) Answer the following questions. (Any Two) 10**  
 1) Explain role & functions of HRM.  
 2) Explain concept of gratuity.  
 3) Job design
- B) Answer the following questions. (Any One) 04**  
 1) Explain need for performance appraisal in organization.  
 2) Explain concept of E.S.I.
- Q.5 Answer the following questions. (Any Two) 14**  
 a) Explain sources of recruitment.  
 b) Explain training method in detail.  
 c) Explain external mobility in detail.



Seat No.	
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**B.Sc. (Semester - V) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**SPECTROSCOPIC METHODS**

Day & Date: Thursday, 10-10-2019  
Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Neat diagrams must be drawn wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- The wavelength range for UV region of the electromagnetic radiation is \_\_\_\_\_.  
a) 100-400 nm                                      b) 400-800 nm  
c) Above 800 nm                                    d) None of these
- The characteristic frequency range of the carbonyl group is \_\_\_\_\_.  
a)  $\sim 3080\text{ cm}^{-1}$                                     b)  $1700\text{ cm}^{-1}$   
c)  $\sim 3300\text{ cm}^{-1}$                                     d)  $950\text{ cm}^{-1}$
- The nuclei having spin \_\_\_\_\_ is known as magnetic nuclei.  
a)  $I = 0$     b)  $I > 0$   
c)  $I < 0$     d)  $I = 2$
- smaller  $\delta$  values implies \_\_\_\_\_.  
a) Upfield    b) downfield  
c) resonance    d) flipping
- Absorption maxima shift to longer wavelength due to presence of \_\_\_\_\_.  
a) Cyclic structure                                    b) Conjugation  
c) Saturated group                                    d) Acyclic structure
- The absorption of IR radiation by organic molecule is accompanied by \_\_\_\_\_.  
a) Electronic level change                        b) Vibrational level change  
c) Nuclear spin change                            d) None of these
- The methylene proton in case of impure ethanol gives the splitted peak having \_\_\_\_\_ multiplicity.  
a) singlet    b) doublet  
c) triplet    d) quartet
- In mass spectroscopy, cations are separated according to \_\_\_\_\_.  
a) mass    b) charge  
c)  $m/e$     d)  $e/m$
- Shift of absorption maxima to shorter wavelength is known as \_\_\_\_\_ shift.  
a) Hypsochromic                                      b) Bathochromic  
c) Hyperchromic                                      d) Hypochromic
- In case of amides, the amide-I band is due to \_\_\_\_\_.  
a)  $>C=O$  str.                                        b) N-H def.  
c) N-H str.    d) C-N str.

- 11) Molecular ions peak is not generally visible in case of \_\_\_\_\_.  
 a) halides                                  b) alcohols  
 c) aldehydes                                d) ketones
- 12) The homocyclic diene absorbs at \_\_\_\_\_ Wavelength than heterocyclic diene.  
 a) Shorter                                    b) Longer  
 c) Equal                                        d) Zero
- 13) A typical example of Chromophore is \_\_\_\_\_.  
 a)  $-NH_2$                                     b)  $>C=O$   
 c)  $-OH$                                         d)  $-Cl$
- 14) Molecule does not absorb IR radiations, if it fails to change in \_\_\_\_\_.  
 a) Bond length                                b) Bond angle  
 c) Dipole moment                             d) None of these

**Q.2 A) Answer the following questions. (Any Four) 08**

- 1) Define Chromophore and Auxochrome.
- 2) What is the meaning of Inductive effect and Mesomeric effect?
- 3) Why TMS used as internal reference?
- 4) State Nitrogen rule for the determination of structure of the compound.
- 5) Calculate the modes of vibration in non linear  $C_2H_6$  molecule.

**B) Write Short Notes (Any Two) 06**

- 1) State and Explain Lambert's- Beer law with mathematical expression.
- 2) How Mass Spectroscopy can be used for the determination of molecular weight?
- 3) What is PMR? Explain principles of PMR Spectroscopy.

**Q.3 A) Answer the following questions. (Any Two) 08**

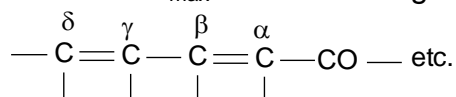
- 1) State Hooke's law. How it is used to calculate the frequency of vibration of diatomic molecule?
- 2) What is chemical Shift? Explain measurement of Chemical Shift by delta scale.
- 3) Distinguish between the Red Shift and Blue Shift with suitable example.

**B) Answer the following question. (Any One) 06**

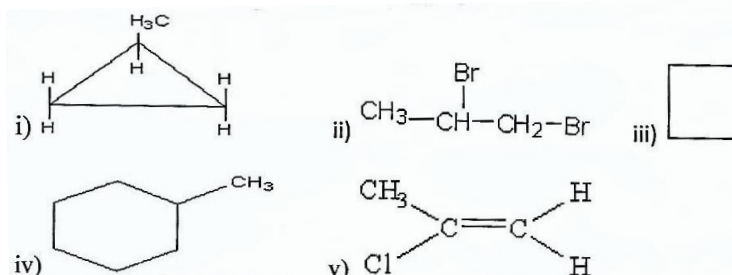
- 1) What are different types of ions generated in mass spectroscopy?
- 2) Write the different basic parts used in  $^1NMR$  spectroscopy with schematic diagram.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) Calculate  $\lambda_{max}$  of the following compound.



- 2) Explain the types of vibration are observed in IR spectroscopy.
- 3) How many numbers of signals are given by following compound?



- B) Answer the following questions. (Any One)** **04**
- 1) Explain the basic principle of Mass Spectroscopy.
  - 2) Discuss the application of UV spectroscopy.

**Q.5 Answer the following questions. (Any two)** **14**

- a) Explain different types of electronic transition in UV spectroscopy along with electronic excitation energy diagram.
- b) Explain Functional group region and Finger print region of IR spectrum.
- c) A compound having molecular formula  $C_5H_{10}O$  exhibits the following spectral data:  
IR = sharp, strong band at  $1735\text{ cm}^{-1}$   
NMR= i) t, 2.32  $\delta$  (2H)  
          ii) s, 2.03  $\delta$  (3H)  
          iii) sextet, 1.56  $\delta$  (2H)  
          iv) triplet, 0.89  $\delta$  (3H)

## Characteristic Infrared Absorptions of Functional Groups

GROUP	FREQUENCY RANGE $\text{cm}^{-1}$	INTENSITY
A. Alkyl		
C - H (stretching)	2853 - 2962	(m - s)
Isopropyl - $\text{CH}(\text{CH}_3)_2$	1380 - 1385	(s)
	and 1365 - 1370	(s)
tert - Butyl - $\text{C}(\text{CH}_3)_3$	1385 - 1395	(m)
	and - 1365	(s)
B. Alkenyl		
C-H (stretching)	3010 - 3095	(m)
C = C (stretching)	1620 - 1680	(v)
R - CH = CH <sub>2</sub>	985 - 1000	(s)
	and 905 - 920	(s)
R <sub>2</sub> C = CH <sub>2</sub> (out of plane C-H bendings)	880 - 900	(s)
cis - RCH = CHR	675 - 730	(s)
trans - RCH = CHR	960 - 975	(s)
C. Alkynyl		
$\equiv$ C - H (stretching)	- 3300	(s)
C $\equiv$ C (stretching)	2100 - 2260	(v)
D. Aromatic		
Ar - H (stretching)	- 3030	(v)
Aromatic substitution type (C-H out-of-plane bendings)		
Monosubstituted	690 - 710	(very s)
	and 730 - 770	(very s)
o - Disubstituted	735 - 770	(s)
m - Disubstituted	680 - 725	(s)
	and 750 - 810	(very s)
p - Disubstituted	800 - 840	(very s)
E. Alcohols, Phenols, Carboxylic Acids		
OH (alcohols, phenols, dilute solutions)	3590 - 3650	(sharp v)
OH (alcohols, phenols, hydrogen bonded)	3200 - 3550	(broad s)
OH (carboxylic acids, hydrogen bonded)	2500 - 3000	(broad v)
F. Aldehydes, Ketones, Esters and Carboxylic Acids		
C = O stretch 1720	1630 - 1780	(s)
aldehydes - 1720 (Stre 2700 - 2900)	1690 - 1740	(s)
ketones	1680 - 1750	(s)
esters	1735 - 1750	(s)
carboxylic acids	1710 - 1780	(s)
amides	1630 - 1690	(s)
G. Amines		
N - H	3300 - 3500	(m)
H. Nitriles		
C $\equiv$ N	2220 - 2260	(m)

TABLE - 2  
Approximate Proton Chemical Shifts in NMR

TYPE OF PROTON	CHEMICAL SHIFT, DELTA, PPM ( $\delta$ )	
1° Alkyl, RCH <sub>3</sub>	0.8 - 1.0	
2° Alkyl, RCH <sub>2</sub> R	1.2 - 1.4	
3° Alkyl R <sub>3</sub> CH	1.4 - 1.7	
Allylic, R <sub>2</sub> C = C - CH <sub>3</sub>   R	1.6 - 1.9	Ester R - C(=O) - O - CH <sub>2</sub> - R 4 to 4.5 N - CH <sub>3</sub> 2.3
Benzylic, ArCH <sub>2</sub>	2.2 - 2.5	
Alkyl chloride RCH <sub>2</sub> Cl	3.6 - 3.8	
Alkyl bromide, RCH <sub>2</sub> Br	3.4 - 3.6	
Alkyl iodide, RCH <sub>2</sub> I	3.1 - 3.3	
Ether, ROCH <sub>2</sub> R	3.3 - 3.9	
Alcohol, HOCH <sub>2</sub> R	3.3 - 4.0	
Ketone, RC(=O)CH <sub>3</sub>	2.1 - 2.6	
Aldehyde, RCH(=O)H	9.5 - 9.6	
Vinylic, R <sub>2</sub> C = CH <sub>2</sub>	4.6 - 5.0	
Vinylic R <sub>2</sub> C = CH   R	5.2 - 5.7	
Aromatic, ArH	6.0 - 9.5	
Acetylenic, RC $\equiv$ CH	2.5 - 3.1	
Alcohol hydroxyl, ROH	0.5 - 6.0 <sup>a</sup>	
Carboxylic, RCO(=O)H	10 - 13 <sup>a</sup>	
Phenolic, ArOH	4.5 - 7.7	
Amino R - NH <sub>2</sub>	1.0 - 5.0	

## Spectroscopic Chart

Woodward's-Fieser's rules for calculating ultraviolet absorption maxima.

A) For substituted dienes (Ethanol Solution)

No.	Basic Value	$\lambda_{max}$ (nm)
1)	Acyclic and heteroannular dienes	214
2)	Homannular dienes	253
3)	Addition for each substituent	
	a) - R alkyl (including part of carbocyclic ring)	5
	b) - OR (alkoxy)	6
	c) - Cl, - Br	5
	d) - OCOR (acyloxy)	0
	e) - NR <sub>2</sub> , (N – alkyl)	60
	f) - SR (S-alkyl)	30
	g) - CH = CH – additional conjugation i.e. extending conjugation	30
	h) If one double bond is exocyclic to one ring	5
	i) If exocyclic to two rings simultaneously	10

B) Rules for  $\alpha, \beta$  - Unsaturated Enones (Ethanol Solution)

No.	Basic Value	$\lambda_{max}$ (nm)
1)	Ketones: $\begin{array}{c}   \quad   \\ -C=C-CHO \end{array}$ a) Acyclic or 6 – membered ring b) 5 – membered ring	215  202
2)	Aldehydes $\begin{array}{c}   \quad   \\ -C=C-CHO \end{array}$	207
3)	Extended Conjugation $\begin{array}{ccccccc} & \delta & \gamma & \beta & \alpha & & \\ &   &   &   &   & & \\ - & C & = & C & - & C & = & C & - & CO & - & \text{etc.} \\ &   & &   & &   & &   & & & & \end{array}$	30
4)	Homodiene component	39
5)	a) If one double bond is exocyclic to one ring b) If exocyclic to two rings simultaneously	5  10
6)	Addition for substituent's	

Substituents

Position

		$\alpha$	$\beta$	$\gamma$	$\delta$
a)	-R alkyl (including part of carbocyclic ring)	10	12	18	18
b)	- OR (alkoxy)	35	30	17	31
c)	-OH (hydroxyl)	35	30	-	50
d)	- SR (thioether)	-	85	-	-
e)	- Cl (chloro)	15	12	-	-
f)	- Br (bromo)	25	30	-	-
g)	- OCOR (acyloxy)	6	6	-	6
h)	- NH <sub>2</sub> , - NHR <sub>1</sub> , - NR <sub>2</sub>	-	95	-	-

Solvent correction

	Solvent	
a)	Ethanol	0
b)	Methanol	0
c)	Dioxan	-5
d)	Chloroform	-1
e)	Ether	-7
f)	Water	+8
g)	Hexane	-11
h)	Cyclohexane	-11



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**B.Sc. (Semester - V) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**ADVANCES IN FERMENTATION TECHNOLOGY**

Day & Date: Friday, 11-10-2019  
 Time: 11:30 AM To 02:00 PM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) GLP stands for \_\_\_\_\_.  
 a) Good manufacturing practices      b) Good laboratory practices  
 c) Quality control                              d) All of these
- 2) Dual fermentation of ethanol to acetic acid carried out by Acetic acid bacteria used for the production of \_\_\_\_\_.  
 a) Citric acid                                      b) Vinegar  
 c) Acetic acid                                      d) Ethanol
- 3) A symbol, word, or words legally registered or established by use as representing a company or product is \_\_\_\_\_.  
 a) Copyright                                      b) Trademark  
 c) Secret    d) Patent
- 4) Patent office is situated in \_\_\_\_\_.  
 a) Mumbai                                        b) Chennai  
 c) Kolkata    d) All of the above
- 5) PHA is a \_\_\_\_\_.  
 a) Polysorbate                                      b) Polyhydroxy alkonates  
 c) Polyhydroxide                                      d) Polyhydroxy butyrate
- 6) \_\_\_\_\_ is a system of maintaining standards in manufactured products by testing a sample of the output against the specification.  
 a) Quality control                                      b) Quality assurance  
 c) Quality management                                      d) None
- 7) \_\_\_\_\_ is a edible button mushroom.  
 a) *Zygomycota*                                      b) *Agaricus bisporus*  
 c) *Aspergillus niger*                                      d) *ASpergillus oryzae*
- 8) \_\_\_\_\_ is a chemically modified toxin from a pathogenic microorganism, which is no longer toxic but is still antigenic and can be used as a vaccine.  
 a) Bacteriocin                                      b) Nisin  
 c) Toxin    d) Toxoid
- 9) The sugar metabolism in the blood regulated by \_\_\_\_\_ hormone.  
 a) Nucleic acid                                      b) Interferon  
 c) Somatotrophin                                      d) Insulin
- 10) *Xanthomonas Campetris* is used for commercial production of \_\_\_\_\_.  
 a) Cellular    b) Xanthan Gum  
 c) Dextran    d) Pullulan

- 11) Intellectual Property Rights (IPR) protects the use of information and ideas that are of \_\_\_\_\_.
- a) Ethical value
  - b) Social value
  - c) Moral value
  - d) Commercial value
- 12) The host specific antiviral glycoprotein released by fibroblast in response to viral attack is called as \_\_\_\_\_.
- a) Antibody
  - b) Pyrogen
  - c) Interferon
  - d) Phagocytes
- 13) Vaccines are prepared from heating or chemically killed microbes, they are called as \_\_\_\_\_.
- a) Inactivated (killed) vaccine
  - b) Autogenous vaccine
  - c) Attenuated vaccines
  - d) Toxoids
- 14) A set standards used to regulate own or community activity in relation to biological world is \_\_\_\_\_.
- a) Biopotency
  - b) Bioethics
  - c) Biowar
  - d) Biopiracy

**Q.2 A) Answer the following questions. (Any Four) 08**

- 1) Define Vaccine.
- 2) What is copyright?
- 3) Define Biosafety.
- 4) Application of vinegar
- 5) Define Polysaccharide.

**B) Write short notes (Any Two) 06**

- 1) IPR
- 2) GMP
- 3) Patents

**Q.3 A) Answer the following questions. (Any Two) 08**

- 1) Write in detail GLP and its principles.
- 2) Describe in detail production of acetone - butanol.
- 3) Describe in detail Vinegar production.

**B) Answer the following questions. (Any One) 06**

- 1) Explain in detail microbial biosynthesis of Rubber.
- 2) Describe in detail Glycerol production.

**Q.4 A) Answer the following questions. (Any Two) 10**

- 1) Discuss in detail insulin production by recombinant technology.
- 2) Describe in detail production of Pullulan and add a note on its role.
- 3) Describe in detail natural biopreervative.

**B) Answer the following questions. (Any One) 04**

- 1) Define trademark. Give a brief account on suitable patenting of biological material.
- 2) Describe in detail Bioethics.

**Q.5 Answer the following questions. (Any Two) 14**

- a) Describe in detail account on mushroom cultivation.
- b) Describe in detail PHB production.
- c) Give a detailed account on interferon production.

Seat No.	
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**B.Sc. (Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**English**  
**LITERARY QUEST**

Day & Date: Saturday, 05-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) In the beginning of his speech, Kipling calls himself a \_\_\_\_\_ scholar.
  - a) brilliant
  - b) intelligent
  - c) wondering
  - d) moral
- 2) Kipling advises \_\_\_\_\_ is the only thing we must not take seriously.
  - a) money
  - b) yourselves
  - c) myself
  - d) health
- 3) \_\_\_\_\_ are the simplest and commonest words in any language, according to Shaw.
  - a) "Yes" and "no"
  - b) "Am" and "are"
  - c) "Is" and "was"
  - d) "Shall" and "should"
- 4) According to Shaw we all have \_\_\_\_\_ manners and \_\_\_\_\_ manners.
  - a) speaking, listening
  - b) reading, writing
  - c) company, home
  - d) good, bad
- 5) The speaker in 'My Grandmother's House' has lost his/her way and now begs love at \_\_\_\_\_ doors.
  - a) friends'
  - b) grandmother's
  - c) strangers'
  - d) relatives'
- 6) My captain does not answer; his \_\_\_\_\_ are pale and still.
  - a) hands
  - b) legs
  - c) eyes
  - d) lips
- 7) 'All that is best of \_\_\_\_\_ and \_\_\_\_\_ meet in the woman's aspects and her eyes,' according to Byron.
  - a) day and night
  - b) day and bright
  - c) dark and bright
  - d) dark and night
- 8) The woman, in the poem 'Upagupta', is suffering from the contagious disease called \_\_\_\_\_.
  - a) flu
  - b) cholera
  - c) measles
  - d) small-pox
- 9) \_\_\_\_\_ is the synonym for 'faith'.
  - a) fortunate
  - b) lucky
  - c) unfortunate
  - d) belief
- 10) 'Poetry' is the antonym for \_\_\_\_\_.
  - a) prose
  - b) poem
  - c) lyric
  - d) song

- 11) \_\_\_\_\_ is the antonym for 'untidy'.
- |         |          |
|---------|----------|
| a) neat | b) chaos |
| c) tiny | d) large |
- 12) \_\_\_\_\_ is the synonym for 'filthy'.
- |           |            |
|-----------|------------|
| a) Good   | b) Cunning |
| c) clever | d) dirty   |
- 13) \_\_\_\_\_ is the synonym for 'rude'.
- |           |                |
|-----------|----------------|
| a) polite | b) impolite    |
| c) good   | d) intelligent |
- 14) \_\_\_\_\_ is the antonym for 'despair'.
- |           |             |
|-----------|-------------|
| a) hope   | b) hopeless |
| c) repair | d) pair     |

**Q.2 Attempt any four of the following questions. 16**

- a) Comment on the theme of love in 'My Grandmother's House'.
- b) What does the speaker often think about the grandmother's house in the poem 'My Grandmother's House'?
- c) Why does the speaker ask captain to rise up in the poem 'O Captain! My Captain!'?
- d) Analyze any two metaphors used in the poem 'O Captain! My Captain!'
- e) How does Byron describe the beauty of the woman?
- f) What is the subject matter of the poem 'Upagupta'?

**Q.3 Attempt any two of the following questions. 12**

- a) What will the students, whom Kipling is addressing, do when they go out into "the battle of life"?
- b) Who were the members of the committee formed by the British Broadcasting Corporation and for what purpose it was formed, according to Shaw?
- c) What are Prefixes? Explain any four prefixes with examples.
- d) What are Suffixes? Explain any four suffixes with examples.

**Q.4 Attempt any one of the following question. 14**

- a) What are the characteristics of a good leader?
- OR**
- b) What are the essential qualities required to become an effective team member?

**Q.5 What causes the stress? Write in detail about the ways of coping with the stress. 14**

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**B.Sc. (Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**INTERNATIONAL BUSINESS**

Day & Date: Monday, 07-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) \_\_\_\_\_ firstly propounded comparative cost advantage theory.
 

a) David Ricardo	b) Adam Smith
c) J. S. Mill	d) Heckscher-Ohlin
- 2) The classical theory of international trade proposed by \_\_\_\_\_.
 

a) David Ricardo	b) Adam Smith
c) J. S. Mill	d) Heckscher-Ohlin
- 3) The classical theory of international trade is mainly concerned with \_\_\_\_\_.
 

a) the gains from trade	b) the structure of trade
c) the term of trade	d) all the above
- 4) \_\_\_\_\_ provides the details of number of packages, quantity packed in each of them, the weight and measurement of each package.
 

a) Commercial invoice	b) bill of lading
c) packing list	d) Bill of exchange
- 5) WTO established in year \_\_\_\_\_.
 

a) 1995	b) 1996
c) 1997	d) 1998
- 6) \_\_\_\_\_ is not a foreign trade barrier from given below.
 

a) Custom duty	b) quotas
c) subsidies	d) tariffs
- 7) The \_\_\_\_\_ theory suggests for maintaining favorable balance of trade in form of import of gold for export of goods and services.
 

a) Mercantilism	b) absolute cost advantage
c) comparative cost advantage	d) Heckscher-Ohlin theory
- 8) GATT was replaced by \_\_\_\_\_.
 

a) IBRD	b) IMF
c) NAFTA	d) WTO
- 9) GATT was formed in \_\_\_\_\_.
 

a) 1945	b) 1948
c) 1990	d) 1995
- 10) When goods are loaded on board of ship for transport to their foreign destination, the shipping company issues \_\_\_\_\_ to exporter.
 

a) Commercial invoice	b) bill of lading
c) packing list	d) Bill of exchange

- 11) Once the goods are received on board of ship, the master of the ship issues a document called \_\_\_\_\_.
  - a) Packing list
  - b) Bill of lading
  - c) mate's receipt
  - d) Bill of exchange
- 12) \_\_\_\_\_ is an instrument for payment realization.
  - a) Packing list
  - b) Bill of lading
  - c) mate's receipt
  - d) Bill of exchange
- 13) \_\_\_\_\_ is a written commitment to pay by importer's bank to exporter's bank.
  - a) Bill of exchange
  - b) Letter of credit
  - c) Bill of entry
  - d) Bill of sight
- 14) Current Account includes \_\_\_\_\_.
  - a) Visible imports & exports
  - b) invisible imports & exports
  - c) investment income
  - d) All the above

- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) Define Letter of Credit.
  - 2) What is mate's receipt?
  - 3) What is packing list?
  - 4) What is bill of lading?
  - 5) What is commercial invoice?
- B) Write Short Notes on (Any Two) 06**
- 1) Franchise
  - 2) Turnkey Project
  - 3) Outsourcing
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Comparative cost advantage theory.
  - 2) Advantages & disadvantages of globalization.
  - 3) Explain export documentation.
- B) Answer the following question. (Any One) 06**
- 1) Briefly explain factors contributed for the growth of MNCs.
  - 2) Explain the sales and distribution module.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) What are the advantages of international trade?
  - 2) What is Free Trade Area? Explain NAFTA & SAFTA.
  - 3) What is foreign direct investment? Explain factors influencing FDI.
- B) Answer the following question. (Any One) 04**
- 1) Explain the Foreign Direct Investment.
  - 2) Explain the Human Resource Module.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Explain Export procedure.
  - b) Explain Problems of international trade.
  - c) Explain advantages & disadvantages of MNCs.

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**B.Sc. (Semester - VI) (New) (CBCS) Examination Oct/Nov-2019  
Entrepreneurship  
ORGANIZATIONAL BEHAVIOR**

Day & Date: Wednesday, 09-10-2019  
Time: 08:00 AM To 10:30 AM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) An individual's behavior is caused by \_\_\_\_\_.  
a) Family help    b) Attitudes  
c) Society's response    d) All
- 2) EP stands for \_\_\_\_\_.  
a) Easy Payment    b) Earn Payment  
c) Electronic Payment    d) Era Payment
- 3) What is the key word in understanding organization structure?  
a) Control    b) Change  
c) Process     d) Delegation
- 4) \_\_\_\_\_ advocated that humans are essentially motivated by levels of needs.  
a) Maslow    b) Follet  
c) Elton mayo    d) Ivan Pavlov
- 5) Forces affecting organizational behavior are \_\_\_\_\_.  
a) People    b) Environment  
c) Technology     d) All of these
- 6) EDI stands for \_\_\_\_\_.  
a) Electronic Data Interchange    b) Easy Data Interchange  
c) Effective Data Interchange    d) Era Data Interchange
- 7) \_\_\_\_\_ was a pioneering theorist in the field of Cognitive Psychology.  
a) Edward Tolman    b) B. F. Skinner  
c) Ivan Pavlov     d) Douglas McGregor
- 8) What corrects problems of conflict?  
a) MDs attitude    b) People's attitude  
c) Built in rules of organization    d) Courts of law
- 9) One single factor that mainly contributes to reducing conflict is \_\_\_\_\_.  
a) Money    b) Employee status  
c) Trust     d) Authority
- 10) \_\_\_\_\_ explains internal processes of choice among different behaviors.  
a) Equity Theory    b) Expectancy Theory  
c) Goal Attain Theory    d) Goal Setting Theory
- 11) The least used communication channel in an organization is usually \_\_\_\_\_.  
a) Upward     b) Downward  
c) Diagonal     d) Horizontal

- 12) Group created by managerial decision in order to accomplishment stated goal of the organization are called \_\_\_\_\_.
- Formal Group
  - Informal Group
  - Task Group
  - Interest Group
- 13) \_\_\_\_\_ is the force of action or motivation.
- Behavior
  - Stimulus
  - Perception
  - Attitude
- 14) A process of receiving, selection, organizing, interpreting, checking and reacting to sensory stimuli or data so as to form a meaningful and coherent picture of the worlds is \_\_\_\_\_.
- Attitude
  - Thinking
  - Perception
  - Communication

**Q.2 A) Answer the following questions. (Any Four) 08**

- Define Intelligence.
- What is group?
- Long form of EP.
- Define Motivation.
- E- Commerce.

**B) Write Notes on (Any Two) 06**

- What is Stress?
- What is Individual Behavior?
- Define Group Behavior.

**Q.3 A) Answer the following questions. (Any Two) 08**

- Define learning.
- Work Stress Models.
- Job satisfaction.

**B) Answer the following questions. (Any One) 06**

- What is politics? Explain types and ethics of politics.
- Explain types of group.

**Q.4 A) Answer the following questions. (Any Two) 10**

- Describe in short type of Personality.
- Internet monetary payment and security requirements.
- Explain sources of Stress.

**B) Answer the following questions. (Any One) 04**

- Explain the job satisfaction and time management.
- Describe importance of Motivation.

**Q.5 Answer the following questions. (Any Two) 14**

- What is a perception? Write down perceptions process.
- Explain nature and scope of O.B.
- Explain learning theory.



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Set **P**

**B.Sc. (Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**GENETIC ENGINEERING**

Day & Date: Thursday, 10-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) In the Restriction Endonuclease EcoRI, letter E stands for \_\_\_\_\_.  
 a) order of identification                      b) strain  
 c) species    d) genus
- 2) \_\_\_\_\_ is the vector of mammals.  
 a) Lambda bacteriophage                      b) YAC  
 c) SV40    d) cDNA
- 3) \_\_\_\_\_ can remove phosphate group from DNA molecule.  
 a) RNase A    b) DNA phosphorylase  
 c) Taq DNA polymerase                      d) DNA Ligase
- 4) \_\_\_\_\_ Restriction Endonuclease cuts one strand of DNA only 24-26 downstream of the 3 recognition site.  
 a) Type I    b) Type II  
 c) Type III    d) Type IV
- 5) Southern blotting is used for blotting of \_\_\_\_\_.  
 a) Carbohydrates                                      b) Protein  
 c) RNA     d) DNA
- 6) Polyethylene glycol mediated gene transfer method is example of \_\_\_\_\_ method.  
 a) mechanical    b) physical  
 c) chemical    d) biological
- 7) SDS-PAGE electrophoresis is mostly preferred for \_\_\_\_\_ separation.  
 a) Protein    b) Lipids  
 c) Nucleic acid    d) Carbohydrate
- 8) Generally de-annealing temperature in PCR is \_\_\_\_\_ degrees Celsius.  
 a) 100    b) 94  
 c) 72    d) 53
- 9) \_\_\_\_\_ is the main enzyme component of Sanger DNA sequencing.  
 a) gyrase    b) nuclease  
 c) helicase    d) polymerase
- 10) In Shotgun sequencing small DNA segments are sequenced using \_\_\_\_\_ method.  
 a) chain elongation                                      b) chain synthesis  
 c) chain termination                                      d) chain degradation



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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Chemistry (Paper - II)**  
**FUNDAMENTAL OF ORGANIC CHEMISTRY**

Day & Date: Wednesday, 13-11-2019  
 Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) The catalyst used in Friedel - Crafts reaction is \_\_\_\_\_.
  - a) Ni
  - b) Pt
  - c)  $AlCl_3$
  - d) None of these
- 2) Benzene burns with \_\_\_\_\_.
  - a) Non –sooty flame
  - b) Sooty flame
  - c) Green colour flame
  - d) Blue flame
- 3) Which of the compound is the most stable compound?
  - a) Cyclohexane
  - b) Cyclohexadiene
  - c) Benzene
  - d) Cyclohexene
- 4) Structure of Benzene is \_\_\_\_\_.
  - a) Hexagonal
  - b) Pyramidal
  - c) Tetrahedral
  - d) Linear
- 5) A chromogen is a organic species containing \_\_\_\_\_.
  - a) Auxochrome
  - b) Chromophore
  - c) a & b
  - d) None
- 6) The reactive species in nitration of benzene is \_\_\_\_\_.
  - a)  ${}^{\oplus}NO_3$
  - b)  ${}^{\ominus}NO_2$
  - c)  $HNO_3$
  - d)  ${}^{\oplus}N_2$
- 7) Which of the following alkanes cannot be prepared by Wurtz reaction?
  - a) Methane
  - b) Ethane
  - c) Propane
  - d) Butane
- 8) In Sulphonation of benzene, the electrophile is \_\_\_\_\_.
  - a)  $HSO_4^-$
  - b)  $SO_3$
  - c)  $SO_2$
  - d)  $H_2SO_4$

**Q.2 Answer the following questions. (Any Four) 08**

- 1) Define
  - a) Decarboxylation
  - b) Halogenation
- 2) Define the term
  - a) Antiaromatic Compounds
  - b) Pseudoaromatic Compounds
- 3) What is Huckel's rule of aromaticity?
- 4) What is chemotherapeutic agent? Give one example.
- 5) What is meant by Vat dye?
- 6) Define CNS drug with example.

- Q.3 Answer the following questions. (Any Two) 08**
- 1) Explain the classification of dyes based on water insoluble readymade dye.
  - 2) What are the chemotherapeutic agents? How these agents are sub classified.
  - 3) What are antimalarial & antidiabetics
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Explain chlorination of methane.
  - 2) Explain the classification of dyes based constitution.
  - 3) How will you detect the presence of nitrogen in an organic compound?
- Q.5 Answer the following questions. (Any One) 08**
- 1) Explain the combustion method for the detection of carbon & hydrogen with suitable figure.
  - 2) What are the cycloalknes? Explain its methods of formation as well as physical & chemical properties of cycloalkanes.

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Set **P**

**B.Sc.(Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**TECHNIQUES IN INDUSTRIAL CHEMISTRY**

Day & Date: Friday, 11-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagram wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) The Zeolite is regenerated by soaking it in \_\_\_\_\_ solution.
 

a) 10% NaCl	b) 10% HCl
c) 10% NaOH	d) 10% H <sub>2</sub> SO <sub>4</sub>
- 2) It is better to \_\_\_\_\_ waste than to treat or clean up waste after it is formed.
 

a) Burn	b) Burry
c) Prevent	d) Dump in sea
- 3) Separation of Volatile Components of the mixture can be done by \_\_\_\_\_ chromatography.
 

a) Gas	b) Column
c) Paper	d) TLC
- 4) According to first law of electrolysis, amount of substance deposited or dissolved at any electrode is directly proportional to the quantity of \_\_\_\_\_ passed through the electrolyte.
 

a) Currents	b) Protons
c) Electrons	d) Electricity
- 5) Biocatalytical reactions are catalysed by \_\_\_\_\_.
 

a) Enzymes	b) Protein
c) Carbohydrates	d) Alcohols
- 6) Titanium and aluminium materials can be classified under which of the following categories?
 

a) A	b) C
c) D	d) B
- 7) Anodised plate has ability to absorb \_\_\_\_\_ which enables to use it in jewellery, Kitchen wares.
 

a) Color	b) Pickling
c) Dye-stuffs	d) Oxide
- 8) Which of the following colors allows you to identify a foam fire extinguisher?
 

a) Blue	b) Red
c) Yellow	d) Cream
- 9) \_\_\_\_\_ is commonly used adsorbent in column chromatography.
 

a) Na <sub>2</sub> CO <sub>3</sub>	b) Na <sub>2</sub> HCO <sub>3</sub>
c) Na <sub>2</sub> C <sub>2</sub> O <sub>3</sub>	d) NaOH



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Set **P**

**B.Sc.(Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**TECHNIQUES IN PLANT TISSUE CULTURE**

Day & Date: Friday, 11-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagrams wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below.****14**

- 1) The German Botanist \_\_\_\_\_ first proposed the importance of plant tissue and cell culture in 1902.
  - a) Guttieb Haberlandt
  - b) Gautheret
  - c) Wienser
  - d) Rechingner
- 2) Plant tissue culture is widely used to produce clones of plant in method is known as \_\_\_\_\_.
  - a) Hardening
  - b) Synchronization
  - c) Totipotency
  - d) Micro Propagation
- 3) Laminar Air flow has a number of small blower motors to blow air which pass through a number of \_\_\_\_\_ filters.
  - a) HPLC
  - b) HP-TLC
  - c) HEPA
  - d) NFT
- 4) Tissue Culture room can be fumigated overnight and sterilized with \_\_\_\_\_.
  - a) 70% ethanol
  - b) Steam
  - c) Oxygen
  - d) Potassium permanganate and formaldehyde
- 5) \_\_\_\_\_ is a polysaccharide derived from certain algae and commonly used as a gelling agent in tissue culture media.
  - a) Sucrose
  - b) Macronutrients
  - c) Micronutrients
  - d) Agar
- 6) A temperature of autoclave for sterilization of media is maintained at \_\_\_\_\_ ° c for 15 min.
  - a) 37<sup>0</sup>c
  - b) 25<sup>0</sup>c
  - c) 121<sup>0</sup>c
  - d) 4<sup>0</sup>c
- 7) \_\_\_\_\_ is used for surface sterilization of explants.
  - a) Sterile water
  - b) Sodium hypochlorite
  - c) Teepol
  - d) Bavistin
- 8) The first attempt of organ culture introduced by \_\_\_\_\_ scientists in 1987.
  - a) Jolly
  - b) Loeb
  - c) Antony Van Leonhoek
  - d) None of these
- 9) The suspension culture can be obtained using \_\_\_\_\_.
  - a) Banimal tissue cultureh culture
  - b) Fed banimal tissue cultureh culture
  - c) Semi continuous culture
  - d) All of these

- 10) In the animal cell culture mostly \_\_\_\_\_ critical gases are required.
  - a) CO<sub>2</sub>
  - b) 4 mM HCO<sup>3-</sup>
  - c) 23 mM HCO<sup>3</sup>
  - d) O<sub>2</sub> & CO<sub>2</sub>
- 11) Chick embryo is most commonly used \_\_\_\_\_.
  - a) Clots
  - b) Biological fluid
  - c) Tissue extract
  - d) None of these
- 12) Freshly isolated- cell culture are called \_\_\_\_\_.
  - a) Primary cell culture
  - b) Secondary cell culture
  - c) Tertiary cell culture
  - d) Quaternary cell culture
- 13) 1983 \_\_\_\_\_ studied the behavior of animal tissue explants immersed in serum, lymph or ascites fluid.
  - a) Jolly
  - b) Hyberlydth
  - c) Loeb
  - d) None of these
- 14) Laminar air flow platform is sterilized by using \_\_\_\_\_.
  - a) 70% ethanol
  - b) 100% ethanol
  - c) 30% ethanol
  - d) 50% ethanol

- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) Physiological properties of media.
  - 2) Cell counting.
  - 3) Complete media.
  - 4) Plant tissue culture.
  - 5) Plant growth regulator.
- B) Write short notes (Any Two) 06**
- 1) Serum free Media
  - 2) Callus culture
  - 3) Synchronization in animal tissue culture
- Q.3 A) Answer the following questions. (Any two) 08**
- 1) Describe in detail characteristics of animal cell in tissue culture.
  - 2) Explain in brief natural media in animal tissue culture.
  - 3) Describe Callus culture and its application in plant tissue culture.
- B) Answer the following questions. (Any One) 06**
- 1) Write a note on types of organs culture.
  - 2) Give explain in details serum containing media.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Give detailed account of anther and pollen culture.
  - 2) Describe instrument used in plant tissue culture.
  - 3) Explain shoot tip and meristern culture.
- B) Answer the following questions. (Any One) 04**
- 1) Give application and limitation of suspension culture.
  - 2) Explain in brief selection and maintenance of cell lines.
- Q.5 Answer the following questions. (Any two) 14**
- a) Describe in details cell separation with mechanical and enzymatic method.
  - b) Discuss the stages of Micropropogation with its application and limitation.
  - c) Explain in brief principle, protocol and factors affecting in root tip culture methodology.



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**B.Sc. (Semester - VI) (Old) (CGPA) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**English**  
**BREAKTHROUGH**

Day & Date: Saturday, 05-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) The ball party that M and Mme Loisel attended took place in the month of \_\_\_\_\_.
  - a) June
  - b) March
  - c) May
  - d) January
- 2) Which of the following statements is not true?
  - a) Pyramus was the handsomest youth.
  - b) Thisbe was the fairest maiden.
  - c) They married against their parents' will.
  - d) Their parents occupied adjoining houses.
- 3) The new diamond necklace that Loisel bought to give it to Mme Forester was priced \_\_\_\_\_.
  - a) Forty five thousand francs
  - b) Thirty six thousand francs
  - c) Thirty-nine thousand francs
  - d) Forty five hundred francs
- 4) Pyramus and Thisbe decided to meet at the foot of a \_\_\_\_\_.
  - a) white mulberry tree
  - b) purple mulberry tree
  - c) green mulberry tree
  - d) pink mulberry tree
- 5) Tom promises Jim to give \_\_\_\_\_ in exchange of whitewashing the fence.
  - a) a jews-harp
  - b) a tin soldier
  - c) a white alley
  - d) a spool cannon
- 6) Which of the following statement is not true?
  - a) Bringing water from the town pump had always been hateful work in Tom's eyes.
  - b) Tom wanted to bring water from the town pump instead of whitewashing the fence.
  - c) Tom was ready to give Jim a mighty gay marvel in exchange of whitewashing the fence.
  - d) Jim accepted the privilege of whitewashing the fence when Tom offered him money.
- 7) Which of the following is not played by the musicians *In the Bazaars of Hyderabad*?
  - a) flute
  - b) Sarangi
  - c) Drum
  - d) Sitar
- 8) Phillis Wheatley asks soul not to sink into \_\_\_\_\_.
  - a) happiness
  - b) despair
  - c) darkness
  - d) optimism

- 9) The speaker in the poem *On Virtue* asks his/her soul to court \_\_\_\_\_ for her promised bliss.  
 a) virtue  
 b) chastity  
 c) Angel  
 d) goddess
- 10) In the poem '*In the Bazaars of Hyderabad*', tunics are sold by \_\_\_\_\_.  
 a) Merchants  
 b) ironsmiths  
 c) Goldsmith  
 d) magicians
- 11) All that glitters is not gold. The underlined clause is \_\_\_\_\_.  
 a) a noun clause  
 b) a relative clause  
 c) an adverbial clause  
 d) a prepositional clause
- 12) 'Who killed Dr. Narendra Dabholkar is still a mystery'. The underlined clause is \_\_\_\_\_.  
 a) an adverbial clause  
 b) an adjectival clause  
 c) a relative clause  
 d) a noun clause
- 13) "What I say and what I do are two different things." This sentence is a \_\_\_\_\_.  
 a) simple sentence  
 b) complex sentence  
 c) compound sentence  
 d) both complex and compound sentence
- 14) The tag question for the sentence "No one is guilty" is \_\_\_\_\_.  
 a) are they?  
 b) isn't it?  
 c) aren't they?  
 d) isn't he?

**Q.2 Attempt any four of the following questions.**

**16**

- a) What is the message of the story *Whitewashing the Fence*?  
 b) Comment on the end of the story *The Necklace*.  
 c) How do you relate the tragic story of Pyramus and Thisbe to the modern age?  
 d) What did Mathilde and Loisel do after the loss of the necklace?  
 e) Why did Thisbe end her life?  
 f) What did Tom's friends do when they saw him painting the fence?

**Q.3 Attempt two of the following questions.**

**12**

- a) What is Phillis Wheatley's attitude to life on earth?  
 b) Comment on the use of imagery in the poem *In the Bazaars of Hyderabad*.  
 c) Make a list of ways in which you usually waste your time and say how you can manage time better.  
 d) You are a college student and addicted to internet, Facebook, and other social media. You are unable to concentrate on your study. How will you come out of the mire of social media and solve the problem.

**Q.4 Attempt any one of the following questions.**

**14**

- a) Describe in detail the great scientist Dr. APJ Abdul Kalam. Give the details of his personality.

**OR**

- b) Describe the south Indian city you visited last year.

**Q.5 Answer the following question**

It is the height of selfishness for men, who fully appreciate in their own case the great advantages of a good education, to deny these advantages to women. There is no valid argument by which the exclusion of the female sex from the privilege of education can be defended. It is argued that women have their domestic duties to perform, and that, if they were educated, they would bury themselves in their books and have little time for attending to the management of their households. Of course it is possible for women, as it is for men, to neglect necessary work in order to spare more time for reading sensational novels. But women are no more liable to this temptation than men, and most women would be able to do their household work all the better for being able to refresh their minds in the intervals of leisure with a little reading. Nay, education would even help them in the performance of the narrowest sphere of womanly duty. For education involves knowledge of the means by which health may be preserved and improved, and enables a mother to consult such modern books as will tell her how to rear up her children into healthy men and women, and skillfully nurse them and her husband when disease attacks her household. Without education she will be not unlikely to listen with fatal results to the advice of superstitious quacks that pretend to work wonders by charms and magic.

But, according to a higher conception of woman's sphere, woman ought to be something more than a household drudge. She ought to be able not merely to nurse her husband in sickness, but also to be his companion in health. For this part of her wifely duty education is necessary, for there cannot well be congenial companionship between an educated man and an uneducated wife, who can converse with her husband on no higher subjects than cookery and servants' wages. Also one of a mother's highest duties is the education of her children at the time when their mind is most amenable to instruction. A child's whole future life, to a large extent, depends on the teaching it receives in early childhood and it needless to say, that this first foundation of education cannot be well laid by an ignorant mother. On all these grounds female education is a vital necessity.

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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology – I**  
**FUNDAMENTALS OF MICROBIOLOGY**

Day & Date: Thursday, 14-11-2019  
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) The size range of viruses is from about \_\_\_\_\_.  
a) 200 to 300 nm                      b) 20 to 1000 nm  
c) 20 to 900 nm                      d) 20 to 700 nm
- 2) Bacteria were first observed by \_\_\_\_\_ in 1676.  
a) Louis Pasteur                      b) Robert Koch  
c) Albert Dannel                      d) Antony van Leeuwenhoek
- 3) The purpose of swan-necked flasks that Louis Pasteur designed to disprove spontaneous generation is to \_\_\_\_\_.  
a) Pasteurize the meat brot  
b) Trap the microbes and prevent them from reaching the broth  
c) Prevent air from entering the flask  
d) None of these
- 4) In Basidiomycota phylum reproduce sexually by forming spores on top of club-shaped structures called \_\_\_\_\_.  
a) Basidia                      b) Xspores  
c) Conidia                      d) Spores
- 5) \_\_\_\_\_ are a large group of aerobic, high G-C percentage Gram-positive bacteria that form branching filaments or hyphae and asexual spores.  
a) Algae                      b) Bacteria  
c) Virus                      d) Actinomycetes
- 6) \_\_\_\_\_ are the golden-brown algae.  
a) Chrysophyta                      b) Rhodophyta  
c) Phaephyta                      d) Xenophyta
- 7) \_\_\_\_\_ infect both humans and arthropods.  
a) Bacillus anthrax                      b) Rhizobium  
c) Azotobacter                      d) Rickettsiae
- 8) \_\_\_\_\_ is the branch of science which deals with the study of algae.  
a) Mycology                      b) Phycology  
c) Virology                      d) Bacteriology

- Q.2 Answer the following questions. (Any Four) 08**
- 1) Function of Flagella
  - 2) Contribution of Whittaker's five kingdom
  - 3) Distribution and occurrence fungi
  - 4) Functions of Bacterial Cell wall.
  - 5) Types of microorganism
  - 6) Contribution of Robert Koch
- Q.3 Answer the following questions. (Any Two) 08**
- 1) Explain establishment of fields of medical microbiology and immunology through the work of Paul Ehrlich.
  - 2) Write in detail diauxic growth.
  - 3) Differences between eubacteria and Archaeobacteria
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Explain the facultative aerobe and facultative anaerobe and give its examples.
  - 2) Write a note on chemicals as sterilizing agents.
  - 3) Explain difference between prokaryotic and eukaryotic microorganisms.
- Q.5 Answer the following questions. (Any One) 08**
- 1) Define growth and explain continuous and batch culture.
  - 2) Define antisepsis and explain Physical agents of sterilization.

Seat  
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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Microbiology – I**  
**BASIC TECHNIQUES IN MICROBIOLOGY**

Day & Date: Friday, 15-11-2019  
 Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) Albert's stain A used for volutin granule staining contain \_\_\_\_\_.  
 a) Toluidine blue 'O' stain                      b) Malachite green  
 c) Iodine    d) both a and b
- 2) Positive staining is also known as \_\_\_\_\_.  
 a) monochrome staining                      b) simple staining  
 c) positive staining                              d) all of these
- 3) Standard plate counting method enumerates only \_\_\_\_\_ microbes.  
 a) killed    b) Live  
 c) killed as well as live                      d) none of these
- 4) \_\_\_\_\_ Indicator used in Mac Conkey's agar.  
 a) Nile blue    b) Methylene blue  
 c) Nile red    d) Neutral red
- 5) \_\_\_\_\_ is rich source of vitamin B.  
 a) Yeast extract                                      b) Peptone  
 c) Beef extract                                      d) Agar – agar
- 6) Wire of nichrome wire loop is made up of \_\_\_\_\_.  
 a) Nickel    b) Chromium  
 c) Crazy    d) Both a and b
- 7)  $\text{FeCl}_3$  of Maneval's stain used for capsule staining act as \_\_\_\_\_.  
 a) cell wall penetrating agent              b) chemical fixative  
 c) Stain    d) acid
- 8) In the Chance method of cell wall staining, \_\_\_\_\_ is act as selective decolorizing agent.  
 a) new fuchsin                                      b) Basic fuchsin  
 c) congo red                                      d) India ink

**Q.2 Answer the following questions. (Any Four)****08**

- 1) Write a short note on living media.
- 2) What is aliquot tube used in serial dilution technique
- 3) Give any two examples of acidic stain
- 4) Significance of chemically defined media.
- 5) Define mordant & give one example
- 6) Draw a labelled diagram of inoculums site in chick egg.

- Q.3 Answer the following questions. (Any Two) 08**
- 1) Explain the Catalase test.
  - 2) Explain the Neubauer chamber used for cell counting
  - 3) Describe monochrome staining.
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Explain differential media with example
  - 2) Explain the Spread plate method for isolation of colonies
  - 3) Difference between scanning electron microscope and transmission electron microscope
- Q.5 Answer the following questions. (Any One) 08**
- 1) Explain the principle and construction of light microscope.
  - 2) Explain in detail Gram Staining.

Seat  
No. 





**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology (Paper - I)**  
**CELL BIOLOGY**

Day & Date: Saturday, 16-11-2019  
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) In 70s ribosomes, 's' stands for \_\_\_\_\_.
  - a) SI unit
  - b) Solubility factor
  - c) Subunit
  - d) Svedberg unit
- 2) The power house of cell is called \_\_\_\_\_.
  - a) Cell wall
  - b) Mitochondria
  - c) Ribosomes
  - d) Nucleus
- 3) \_\_\_\_\_ is the central commanding centre of the cell.
  - a) Nucleus
  - b) Mitochondria
  - c) Endoplasmic Reticulum
  - d) Ribosomes
- 4) Signal transduction is responsible for \_\_\_\_\_.
  - a) Cellular growth
  - b) Cellular activity
  - c) Cell senescence
  - d) Apoptosis
- 5) Signal transduction pathway regulate important function such as \_\_\_\_\_.
  - a) Growth
  - b) Differentiation
  - c) Metabolism
  - d) All of these
- 6) \_\_\_\_\_ organelle control intracellular digestion of macromolecular.
  - a) Plastid
  - b) Actin
  - c) Lysosome
  - d) Mitochondria
- 7) The DNA threads which appear inside the nucleus at the time of cell division is called \_\_\_\_\_.
  - a) Spindle fibres
  - b) Centriols
  - c) Asters
  - d) Chromosomes
- 8) Nuclear membrane is continuous connection with \_\_\_\_\_.
  - a) SER
  - b) RER
  - c) Golgi apparatus
  - d) Lysosome

**Q.2 Answer the following questions. (Any Four) 08**

- 1) Write note on Endoplasmic reticulum.
- 2) Explain membrane transport.
- 3) Explain structure of chloroplast.
- 4) Write short note on microtubules.
- 5) Write a note on Biological membrane.
- 6) Write short note on expression of regulation of receptors.



- Q.3 Answer the following questions. (Any Two) 08**
- 1) Explain in brief Signal transduction.
  - 2) Explain structure of vacuoles with suitable diagram
  - 3) Explain the brief Membrane receptors for extracellular matrix.
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Write a note on microtubule and Intermediate filaments.
  - 2) Functions of protein segregation.
  - 3) Explain the symptoms of carcinoma cancer.
- Q.5 Answer the following questions. (Any One) 08**
- 1) Describe organization of fluid mosaic model with suitable diagram.
  - 2) Define mitochondria. Explain structure and functions of mitochondria.

Seat No.	
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**B.Sc. (Semester - I) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**Industrial Biotechnology Paper-II**  
**ANIMAL AND PLANT PHYSIOLOGY**

Day & Date: Monday, 18-11-2019  
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Select the correct alternatives from the following and rewrite the sentence. 08**

- 1) The percentage of light energy fixed in photosynthesis is around \_\_\_\_\_.  
a) 100%   b) 10%  
c) 1%   d) 0.1%
- 2) A single apical cell constitutes the apical meristem in \_\_\_\_\_.  
a) Dicot   b) Gymno sperms  
c) Pteridophytes   d) Monocot
- 3) The calvin cycle occurs in \_\_\_\_\_.  
a) Thylakoid   b) Stroma  
c) Lumen    d) Mitochondria
- 4) Survival time can be minimized if we remove \_\_\_\_\_ gland.  
a) Adrenal    b) Thyroid  
c) Pituitary gland    d) Pineal gland
- 5) Longest cell of human body is \_\_\_\_\_.  
a) Muscule cell   b) Nerve cell  
c) Osteocyte   d) Lymphocyte
- 6) Haemoglobin molecule is composed of \_\_\_\_\_.  
a) Protein    b) Myosin  
c) Globin    d) None of these
- 7) Gastric juice is strongly \_\_\_\_\_.  
a) Basic    b) Acidic  
c) Neutral   d) None of these
- 8) Nervous tissue is rich in with the \_\_\_\_\_.  
a) Sulpholipid    b) Chlorestrol  
c) Ca<sup>+</sup> ions    d) Phospholipids

**Q.2 Answer the following questions. (Any Four) 08**

- 1) Explain Gastric Juice.
- 2) Explain the Role of Abscisic acid.
- 3) Define photorespiration.
- 4) Definition of Plasmolysis.
- 5) Write short note root apical.
- 6) Write short note on hypo.sereation.

- Q.3 Answer the following questions. (Any Two) 08**
- 1) Write the note on Auxin & Gibberlin.
  - 2) Explain composition of Bile & Saliva.
  - 3) Describe process of photosynthesis.
- Q.4 Answer the following questions. (Any Two) 08**
- 1) Explain in brief blood & plasma protein.
  - 2) Explain physiological role of seed germination?
  - 3) Write a note on gases produced during photosynthesis.
- Q.5 Answer the following questions. (Any One) 08**
- 1) Explain in detailed physical, chemical and electrical events of muscle concentration.
  - 2) Explain stomata with mechanism of their opening & closing.