



SES COLLEGE

SREEKANDAPURAM
EDUCATIONAL
SOCIETY

Affiliated to **Kannur University**
Accredited by NAAC at '**B**' Grade

SREEKANDAPURAM POST,
KANNUR DISTRICT,
KERALA, PIN:670631
PH: 0460 2230293, 2231145




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Criterion 1 – Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.2 The institution adheres to the academic calendar including for the conduct of CIE




Dr. DOMINIC THOMAS
Principal
S.E.S. COLLEGE
SREEKANDAPURAM

Name.....

Roll No.

SES COLLEGE SREEKANDAPURAM

V SEMESTER BBA DEGREE MODEL EXAMINATION, OCTOBER 2015

5B10 BBA (CORE X) : INTERNATIONAL BUSINESS

Time 3hrs

Max WGP 120

Part A

This part contains of two bunches carrying equal weight of one. Each bunch consists of four objective type questions. Answer all questions.

- 1) The International Organisation established with World Bank
(a) UNCTAD (b) IMF (c) UNICEF (d) None of these
- 2) means selling a product in a foreign market at a lower price than in the home country.
(a) Marketing (b) Trade (c) IB (d) Dumping
- 3) World Bank was created in the year
(a) 1956 (b) 1947 (c) 1966 (d) 1944
- 4) market also known as Forex market
(a) Money (b) Financial (c) Capital (d) OTC
(W=4X1=4)
- 5) Act provides guidelines for free flow of foreign exchange in India..
- 6) are financial instruments for hedging risk.
- 7) Expand SAARC
- 8) is an international centre for settlement of investment disputes.
(W=4X1=4)

Part B

Answer any eight questions. Each carries a weightage of one .

- 9) What is IFC?
- 10) What do you mean by political environment in IB ?
- 11) What is current account in BOP ?
- 12) What is global quota ?
- 13) What do you mean by merger ?
- 14) What is dumping ?
- 15) What are international cartels ?
- 16) What is derivatives ?
- 17) What is outsourcing ?
- 18) What is globalisation?
(W=8X1=8)

Part C

Answer any six questions. Each carries a weightage of two.

- 19) What is UNCTAD ?
- 20) What are factors responsible for International trade ?
- 21) Explain the risk involved in Globalisation.
- 22) Explain the major Trade blocs.
- 23) Explain different types of tariffs?
- 24) What are the different types of Import quotas ?
- 25) Explain the role of IT in IB.
- 26) Explain the various documents used in IT.

(W=6X2=12)

Part D

Answer any two. Each carries weightage of four.

- 27) Explain commercial policy instruments.
- 28) Explain BOP and its components.
- 29) What is IB? What are its merits and demerits?

(W=2X4=8)

Name.....

Roll No.

SES COLLEGE SREEKANDAPURAM

I SEMESTER BBA DEGREE INTERNAL EXAMINATION, OCTOBER 2015

1B01 BBA (CORE V) : MANAGEMENT PRINCIPLES

Time 3hrs

Max marks 30

Part A

Answer the four questions. Each question carries ½ mark.

- 1) Expand the word PODSCORB.
- 2) What is fatigue study.
- 3) What is primacy of planning?
- 4) What is motivation?

(4x1/2 =2)

Part - B

Answer any four questions. Each carries one mark.

- 5) What is strategy formulation?
- 6) What is scalar chain?
- 7) What is corporate planning?
- 8) What is a rule?
- 9) What do you mean by a strategy?
- 10) Define planning.

(4x1=4)

Part C

Answer any six questions. Each carries three marks.

- 11) What is Top level management? Explain the functions of top level management.
- 12) What is forecasting? State its limitations.
- 13) "Management is an Art". Do you agree ? Give reasons.
- 14) Describe the decision making process.
- 15) Explain the different levels of management.
- 16) Explain the scope of management.
- 17) What is a plan. What are the different types of plans?
- 18) What is decision making ? Explain the steps in decision making.

(6x3=18)

Part D

Answer any two. Each carries eight marks.

- 19) What is classical theory of management? State any classical theory of management in detail.
- 20) State in detail about the systems theory of management.
- 21) What is planning? Discuss the steps in managerial planning.

(2x8=16)

Name

Roll no.

III SEMESTER BBA DEGREE MODEL EXAMINATION, OCTOBER 2015

3B05BBA CORE COURSE

OPERATIONS MANAGEMENT

Time : 3 Hours

Max. Marks : 30

Part – A

Answer the four questions. Each question carries ½ mark.

1. Define work measurement.
2. What is production control?
3. What is capacity design?
4. What is a histogram?

(4x1/2 =2)

Part - B

Answer any four questions. Each carries one mark.

5. Explain TQM.
6. What is acceptance sampling?
7. Explain Quality control.
8. What is quality at source?
9. What is meant by quality circles?
10. What is batch production?

(4x1=4)

Part – C

Answer any six questions. Each carries three marks.

11. state the factors that determine plant layout.
12. What do you mean by inspection as a quality control technique?
13. Explain the benefits of control charts.
14. What are the basic steps involved in work study?
15. Explain different production systems.
16. Explain the main strategic decisions of operations management.
17. Explain the various levels of a quality circle.
18. Explain SQC.

(6x3=18)

Part – D

Answer any two. Each question carries eight marks.

19. Explain the various types of inventory control techniques.
20. What is plant maintenance. State the areas of plant maintenance.
21. Explain the productivity measurement techniques.

(2x8=16)

Name

Roll no.

III SEMESTER BBA DEGREE MODEL EXAMINATION, OCTOBER 2015

3C04BBA CORE COURSE

LEGAL ASPECTS OF BUSINESS

Time : 3 Hours

Max. Marks : 30

Part – A

Answer the four questions. Each question carries ½ mark.

1. Define a company.
2. What is an unlimited company?
3. Define void agreement.
4. What is meant by separate legal entity? (4x1/2 =2)

Part - B

Answer any four questions. Each carries one mark.

5. What is a foreign company?
6. What is minimum subscription?
7. What is a voidable contract?
8. What is void ab initio?
9. What is underwriting?
10. What is minimum subscription? (4x1=4)

Part – C

Answer any six questions. Each carries three marks.

11. Explain the features of a joint stock company.
12. Explain the different types of companies.
13. Distinguish between a public company and a private company.
14. Types of quasi contract.
15. Explain the remedies for breach of contract to sale.
16. Explain the popularly used negotiable instruments.
17. Explain Articles of Association.
18. Distinguish between shares and stocks. (6x3=18)

Part – D

Answer any two. Each question carries eight marks.

19. Define Prospectus. Explain its contents.
20. Define Memorandum of Association. Explain its contents.
21. Explain the differences between equity shares and preference shares. (2x8=16)

SES COLLEGE SREEKANDAPURAM

I Bsc Model(I Semester) Examination 2015

CHEMISTRY (core)

IB0ICHE : Theoretical and Inorganic Chemistry

Time-3hrs

Max:marks- 40

Section- A

(Answer **all** questions. **Each** question carries 1 mark)

1. Define significant figures.
2. Differentiate between population and samples mean.
3. State Hund's rule.
4. What is mass defect?

[1x4=4]

Section-B

(Answer any **seven** questions . **Each** question carries 2 mark)

5. Differentiate between precision and accuracy.
6. Sketch the shapes of *p* and *d*. orbitals
7. Calculate the wave length of radiation emitted when the electron in the hydrogen atom excited in the third level returns to the second energy level.
8. Define binding energy of a nucleus. How is it related to stability of the nucleus?
9. Differentiate between nuclear fission and fusion.
10. Explain VSEPR theory with reference to ammonia molecule.,
11. What are the rules for rounding a number ?
12. State and explain Heisenberg's uncertainty principle.

13. Explain f-test and t-test.

14. Explain the hybridization in BeF_2

[2x7=14]

Section-C

(Answer any 4 questions. Each question carries 3 mark)

15. What is packing fraction? Calculate the packing fraction and mass defect of ${}_{18}\text{Ar}^{40}$ atom.

Isotopic mass of Argon is 39.96238

16. List all possible sub levels and orbitals present in the fourth shell.

17. Write a short note on radioactive tracers.

18. Discuss the shapes of NH_4^+ and H_3O^+

19. What are nuclear reactors? How are they classified? Explain the working of a fast breeder reactor.

20. State Fajans rules

[4x3=12]

Section-D

Answer any 2 questions . Each question carries 5 marks

21. What are the postulates of Quantum mechanics?

22. a) Molecular theory explains bonding in O_2 molecule better than

Valence bond theory. Explain?

b) What are the criteria for the formation of molecular orbitals from atomic orbitals?

23. What are various type of errors? How can they be minimized?

24. a) Derive an equation for energy of an electron in hydrogen atom.

b) Explain the hydrogen spectrum.

[5x2=10]

SES College Sreekandapuram

IV Semester II Bsc Model Examination 2016

CHEMISTRY (core)

4B06:CHE : ORGANIC CHEMISTRY II

Time: 3 hours

Max.marks : 40

SECTION A

(1x4 = 4)

Answer **all** questions. **Each** question carries **one** mark

1. What is meant by optical isomerism ?
2. Explain geometrical isomerism ?
3. What is racemization ?
4. Give any two examples of monosaccharides.

SECTION B

(2x7 = 14)

Answer **any seven** questions. **Each** question carries **2** marks.

5. What are monosaccharides and disaccharides?
6. Draw the Fischer and Haworth structure of glucose and fructose.
7. Write a note on geometrical isomers of maleic and fumaric acids.
8. Write a note on optical activity in Biphenyls.
9. What is polysaccharides ? Write any two example of it.
10. Write any two elements of symmetry in methane molecule.
11. Draw the four configurations of aldopentoses.
12. Write a short note on reducing action of glucose.
13. Write the condensation reaction of fructose with phenyl hydrazine.
14. Write any two industrial uses of cellulose.

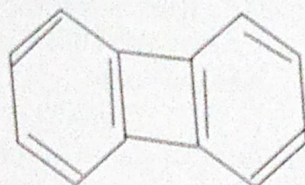
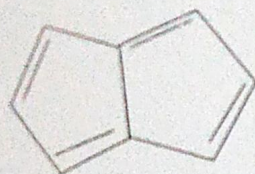
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SECTION C

(3x4 = 12)

Answer **any 4** questions. **Each** questions carries **3** marks.

15. Write a note on syn – anti notation in isomerism.
16. Illustrate the Killani synthesis for lengthening of carbon chain in aldoses.
17. Predict whether these compounds are aromatic or anti aromatic. Explain.



18. Write a note on mutarotation with example.
19. Write the reaction of fructose with
 - a) conc.HNO₃
 - b) Na / Hg
 - c) HCN
20. Illustrate the Wohl's method for descending the aldose series.

SECTION D

(5x2 = 10)

Answer **any 2** questions. **Each** question carries **5** marks.

21. What is resolution ? Explain different methods for resolution.
22. Write a note on open chain and ring structure of glucose with structure elucidation.
23. Give an account of aromatic nucleophilic substitution by benzyne mechanism.
24. a) Explain the mechanism of aromatic electrophilic substitution reaction with 1 example.
b) Explain the structure of benzene using MOT

SES COLLEGE SREEKANDAPURAM

I Bsc Model(I Semester) Examination 2015

CHEMISTRY (core)

IB0ICHE : Theoretical and Inorganic Chemistry

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[1x4=4]

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(Answer any **seven** questions . **Each** question carries **2** mark)

5. Differentiate between precision and accuracy.
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7. Calculate the wave length of radiation emitted when the electron in the hydrogen atom excited in the third level returns to the second energy level.
8. Define binding energy of a nucleus. How is it related to stability of the nucleus?
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[2x7=14]

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19. What are nuclear reactors? How are they classified? Explain the working of a fast breeder reactor.

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[4x3=12]

Section-D

Answer any 2 questions . Each question carries 5 marks

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[5x2=10]

SES College Sreekandapuram

IV Semester II Bsc Model Examination 2016

CHEMISTRY (core)

4B06:CHE : ORGANIC CHEMISTRY II

Time: 3 hours

Max.marks : 40

SECTION A

(1x4 = 4)

Answer **all** questions. **Each** question carries **one** mark

1. What is meant by optical isomerism ?
2. Explain geometrical isomerism ?
3. What is racemization ?
4. Give any two examples of monosaccharides.

SECTION B

(2x7 = 14)

Answer **any seven** questions. **Each** question carries **2** marks.

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6. Draw the Fischer and Haworth structure of glucose and fructose.
7. Write a note on geometrical isomers of maleic and fumaric acids.
8. Write a note on optical activity in Biphenyls.
9. What is polysaccharides ? Write any two example of it.
10. Write any two elements of symmetry in methane molecule.
11. Draw the four configurations of aldopentoses.
12. Write a short note on reducing action of glucose.
13. Write the condensation reaction of fructose with phenyl hydrazine.
14. Write any two industrial uses of cellulose.

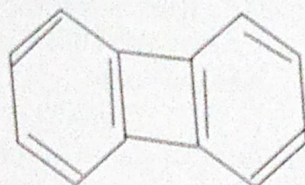
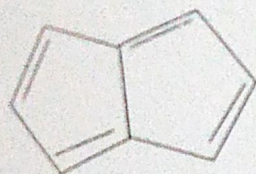
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SECTION C

(3x4 = 12)

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17. Predict whether these compounds are aromatic or anti aromatic. Explain.



18. Write a note on mutarotation with example.
19. Write the reaction of fructose with
 - a) conc.HNO₃
 - b) Na / Hg
 - c) HCN
20. Illustrate the Wohl's method for descending the aldose series.

SECTION D

(5x2 = 10)

Answer **any 2** questions. **Each** question carries **5** marks.

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22. Write a note on open chain and ring structure of glucose with structure elucidation.
23. Give an account of aromatic nucleophilic substitution by benzyne mechanism.
24. a) Explain the mechanism of aromatic electrophilic substitution reaction with 1 example.
b) Explain the structure of benzene using MOT

V SEMESTER BSC-DEGREE MODEL EXAMINATION-OCTOBER 2016
S. E. S COLLEGE SREEKANDAPURAM
5B07 CHE INORGANIC CHEMISTRY-1

Time 3hrs

Max Marks:40

SECTION -A

Answer all questions .Each carries 1 mark.

1. He and Ne do not form clathrates because.....
 2. Ordinary hydrogen is an equilibrium mixture of....
 3. An example for pseudohalide is
 4. An organometallic compound with pi bonded ligands
- [1 x 4 = 4]

SECTION B

Answer any 7 questions .Each carries 2 marks.

5. Explain inert pair effect with examples
6. What are clathrates? Give one example
7. Mention the characteristics of metal solution in liquid NH_3 .
8. Give one method for the extraction of any one of the alkali metal
9. Name the different isotopes of hydrogen
10. Why do transition elements show variable valency?
11. Give the preparation of B_4H_{10} .
12. Show that Fe atom in $\text{Fe}(\text{CO})_5$ confirms to the 18 e- rule.
13. All alkali metal give characteristic colouration - Explain.
14. Explain any one method to calculate the electronegativity of an element.

[2 x 7 = 14]

SECTION C

Answer any 4 questions .Each carries 3 marks.

15. Name the various types of organometallic compounds. Give one example for each
16. Define electronegativity and ionization energy. Discuss the periodic trends and factors affecting them.
17. Explain the structure of XeF_4 , XeOF_2 and XeF_6 .
18. What are fluorocarbons? Explain its uses.
19. Give an account of diagonal relationship.
20. What are refractories. Explain the classification.

[3 x 4 = 12]

SECTION D

Answer any 2 questions .Each carries 5 marks.

21. Give the preparation, properties and structure of borazine (borazole). Why it is called inorganic benzene.
22. A) Write any four dissimilarities between boron and aluminium .
B) Name the important oxyacids of chlorine and give their molecular formula.
23. Make a comparative study of 3d,4d and 5d transition series.
24. Give an account of iron carbonyls.

[5 x 2 = 10]

S.E.S College Sreekandapuram
V Semester BSc Degree Model Examination

October -2016

5 B08 CHE Inorganic Chemistry II

Time : 3 Hours

Max .Marks : 40

Section A

Answer all questions. Each carries 1 mark. (1x4=4)

1. Sulphide ores are concentrated by _____
2. The most common oxidation state of actinide is _____
3. Bauxite is an ore of _____
4. The number of ions produced by $K_4[Fe(CN)_6]$ in solution is _____

Section B

Answer any 7 questions. Each carries 2 marks

5. Give 2 examples of transactinides. Write their symbols.
6. Explain the principle of froth floatation
7. What is hydrometallurgy ?
8. Though Ti (IV) is a transition metal ion, it is colourless. Why ?
9. Name any two ores of aluminum. Give its chemical formula.
10. Give the IUPAC names of (i) $Li[A1H_4]$ and (ii) $[Cr(NH_3)_6]Cl_3$
11. Explain the principle of thermite process.
12. Among the lanthanide hydroxides, $Ce(OH)_3$ is the most basic and $Lu(OH)_3$ is the least basic. Why?
13. What are chelates ? Explain with example. (2x7=14)
14. Explain the biological fixation of Nitrogen.

Section C

Answer any 4 questions. Each carries 3 marks

15. Explain sodium – potassium pump.
16. Explain the extraction and separation of lanthanides by ion exchange chromatography.
17. Write a note on the theories of corrosion.
18. Name any three alloys of steel give their composition and applications.
19. Explain the isomerism in complexes. (3x4=12)
20. Comment on the factors affecting the stability of complexes.

Section D

Answer any 2 questions each carries 5 Marks

21. Compare the crystal field splitting of 'd' orbitals in octahedral and tetrahedral fields. (5x2=10)
22. Discuss the magnetic properties of lanthanides.
23. Explain the structural aspects and function of hemoglobin.
24. Explain the extraction of Cu from its ore .

MODEL EXAMINATION MARCH 2017
II Semester B.COM
2B04 COM-Human Resource Management

Time: 3 Hours

Max. Marks: 40

SECTION – A

Answer **all** questions. Each question carries $\frac{1}{2}$ **marks**

1. Define the term 'Human resource'
2. HRP refers to
3. What is Induction?
4. Define wage

(4x1/2 =2)

SECTION- B

Answer **any four** questions. **Each** question carries **1** mark:

5. List out the role of HRM?
6. What is meant by job description
7. Discuss time rate wage system
8. What do you mean by MBO?
9. What do you mean by compensation
10. Define performance appraisal

(4x1=4)

SECTION- C

Answer **any six** questions. **Each** question carries **3** marks:

11. Discuss various on the job training methods
12. Discuss piece rate wage system in detail
13. What are the objectives of compensation planning?
14. What are the sources of recruitment in organizations
15. What are the objectives of job evaluation
16. Discuss various incentive plans with theories.
17. Differentiate between job description and job specification
18. explain the functions of HRM

(6x3=18)

SECTION D

Answer **any two** questions. **Each** question carries **eight** marks.

19. Discuss recruitment process ; what are the sources and factors affecting recruitment process
20. Explain the scope and importance of HRM
21. Explain various performance appraisal methods in detail

(2x8=16)

VI SEMESTER B.Com MODEL EXAMINATION FEBRUARY 2017

6B18COM: FINANCIAL MARKETS AND SERVICES

TIME : 3 HOURS

MAX.MARKS : 40

PART A

Answer all questions

1. CARE stands for
2. The market regulator of Indian money market is
3. The middle man who guarantees minimum subscription to companies
4. is suitable method where small companies issue shares. (4 x ½ = 2)

PART B

Answer any 4 questions

5. What is REPO Rate?
6. Who is a depository participant?
7. What do you mean by forward market?
8. What do you mean by Kite bill?
9. What is rematerialisation?
10. What are non cleared securities? (4 x 1 = 4)

PART C

Answer any 6 questions

11. Discuss the steps in book building?
12. Explain the long term financial instruments.
13. What are the recent trends in Indian money market?
14. What are the benefits and services of stock exchange?
15. Difference between money market and capital market.
16. What are the defects of Indian capital market?
17. How are securities dematerialized?
18. Explain the role and importance of financial system in economic development (6 x 3 = 18)

PART D

Answer any two questions.

19. Explain the structure of Indian financial system.
20. Explain the role of SEBI in regulating capital market
21. Explain the various money market instruments and state the features of each. (2X8=16)

MODEL EXAMINATION OCTOBER 2017
III Semester B.Com
3C03: BASICS OF RESEARCH METHODOLOGY

Time: 3 Hours

Max. Marks: 40

SECTION – A

Answer **all** questions. Each question carries $\frac{1}{2}$ **marks** **(4x1/2 =2)**

1. includes all references to related materials which furnishes a clue to the quality of the research report.
2. The final step in research study is
3. Research design could be constructed either to test a or to give a cause effect relationship to a situation.
4. Research is a careful or critical inquiry or examination in seeking

SECTION- B

Answer **any four** questions. **Each** question carries **1** mark: **(4x1=4)**

5. What are the contents of a research report?
6. What is pure research?
7. Name three primary sources of data collection?
8. Give two objectives of social science research?
9. What is a research design?
10. What are the characteristics of a good sampling?

SECTION- C

Answer **any six** questions. **Each** question carries **3** marks:

11. Briefly explain important characteristics of hypothesis.
12. State the main features of sampling techniques.
13. Distinguish between quantitative and qualitative data.
14. What is a questionnaire?
15. Mention the main objects of a schedule.
16. What is the purpose of a research report?
17. Give a brief note on secondary or documentary sources of data.
18. Enumerate the steps in a research procedure. **(6x3=18)**

SECTION D

Answer **any two** questions. **Each** question carries **eight** marks. **(2x8=16)**

19. What are the sources of a problem of research? What questions should be considered in selection of a problem?
20. What is sampling? Discuss the relative merits of different types of sampling.
21. Discuss the importance and limitations of the questionnaire method.

Roll No.

Name.....

SES COLLEGE SREEKANDAPURAM

VI SEMESTER BBA DEGREE MODEL EXAMINATION, MARCH 2018

6B18 BBA (CORE XVIII) : INTERNATIONAL BUSINESS

Time 3hrs

Max Marks 40

Section A

Answer the 4 questions. Each question carries ½ mark

1. World Bank was organised in
2. market also known as Forex market.
3. BOP is a system.
4. Headquarters of IMF is in

Section B

Answer any Four questions. Each question carries 1 mark

5. What is international trade?
6. What is licensing?
7. What is UNCTAD?
8. What is joint venture?
9. Define globalisation.
10. What do you mean by bill of lading?

Section C

Answer any Six questions. Each question carries 3 marks.

11. State the importance of SEZ.
12. What are the four basic entry decisions of IB?
13. Explain different types of tariffs?
14. What are the functions and role of WTO?
15. What are the various forms of economic integration?
16. Explain the different types of forex risk?
17. What are import quotas? what are its types?
18. Explain about theory of absolute advantage.

Section D

Answer any Two questions. Each question carries 8 marks.

19. Explain BOP and its components.
20. Explain the different sources of finance in IB.
21. Explain about international trading environment.

VI SEMESTER BBA DEGREE MODEL EXAMINATION, MARCH 2018

6B19 BBA (CORE XIX) : EVENT MANAGEMENT

Time 3hrs

Max Marks 40

Section A

Answer the 4 questions. Each question carries ½ mark

1. What is an event?
2. What is venue?
3. What is staging?
4. What is experimental marketing?

Section B

Answer the 4 questions. Each question carries 1mark.

5. Define event management.
6. Describe the elements of event marketing.
7. What is positioning?
8. What is event marketing?
9. What is event coordination?
10. What is conceptualisation?

Section C

Answer any Six questions. Each question carries 3 marks.

11. What are the different types of events.
12. What are the 5 C's of an event?
13. What are advantages of an event management?
14. Explain pre-event chart.
15. Explain EMIS.
16. How an event can be critically evaluated?
17. What are criteria for choosing an event site?
18. Explain the arrangement of catering in an event.

Section D

Answer any Two questions. Each question carries 8 marks.

19. Explain the functions of event management.
20. Explain the process of evaluation in event management.
21. How to design an event?

Roll No.

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SES COLLEGE SREEKANDAPURAM

IV SEMESTER BBA DEGREE MODEL EXAMINATION, MARCH 2018

4B07 BBA (CORE VII) : MARKETING MANAGEMENT

Time 3hrs

Max Marks 40

Section A

Answer the 4 questions. Each question carries ½ mark

1. What is brand equity?
2. What is direct marketing?
3. What is future market?
4. What is zone pricing?

Section B

Answer the 4 questions. Each question carries 1mark

5. Define personal selling.
6. What is promotion mix?
7. What is dual pricing?
8. What is service marketing?
9. What is coupons?
10. What is brand loyalty?

Section C

Answer any Six questions. Each question carries 3 marks.

11. Define super markets? What are its features?
12. Explain the selling process.
13. List the advantages of branding to the producer.
14. What are the objectives of pricing policy?
15. How channel decisions are taken?
16. What is electronic retailing? What are its forms?
17. Explain the sales promotion schemes aimed at dealers.
18. Explain the various elements of promotion mix.

Section D

Answer any Two questions. Each question carries 8 marks.

19. What are retail formats? Explain any three retail formats.
20. What is E-commerce? State its benefits.
21. What is market segmentation? State its importance.

Roll No.

Name.....

SES COLLEGE SREEKANDAPURAM

II SEMESTER BBA DEGREE MODEL EXAMINATION, MARCH 2018

2B03 BBA (CORE III) : BUSINESS COMMUNICATION

Time 3hrs

Max Marks 40

Section A

Answer the 4 questions. Each question carries ½ mark

1. What is quorum?
2. What is encoding?
3. What is body language?
4. What is feedback?

Section B

Answer the 4 questions. Each question carries 1mark

5. What is semantic barrier?
6. What is proxemics?
7. What is teleconference?
8. What is annual report?
9. What is gesture?
10. What is para language?

Section C

Answer any Six questions. Each question carries 3 marks.

11. Explain the process of listening.
12. Explain the important C's of communication.
13. How listening could be more effective?
14. What are the malfunctions of communication?
15. State the characteristics of non verbal communication.
16. Explain the various parts of a business letter.
17. Write the essentials of a good report.
18. Explain the barriers to communication.

Section D

Answer any Two questions. Each question carries 8 marks.

19. What is business letters? Explain the layout of a business letter in modified block form.
20. Explain the principles of effective communication.
21. Explain the different types of communication.

VI Semester BSc Degree Model Examination March 2018

6B15 CHE: PHYSICAL CHEMISTRY III

Time:3 hours

Max Marks:40

SECTION – A

(Answer all questions .Each carries 1 mark)

1. What is the electrode potential of standard hydrogen electrode?
2. What is transport number of an ion?
3. What is the unit of the rate constant for a first order reaction?
4. What is Grotthus-Draper law?

(1 x 4 = 4)

SECTION – B

(Answer any 7 questions .Each carries 2 marks)

5. Explain Lowry-Bronsted concept of acids and bases.
6. Define: a) Activity b) Mean ionic activity
7. Calculate the ionic strength of the solution prepared by mixing 50 ml of 0.2 M KNO_3 , 20 ml of 0.15 M K_2SO_4 and 30 ml of 0.05 M $\text{Cu}(\text{NO}_3)_2$.
8. State Kohlrausch's law.
9. Calculate solubility product of AgBr in water at 25°C from the cell:
 $\text{Ag}, \text{Ag}^+\text{Br}^-(\text{satd. soln}) \mid \text{AgBr}_{(s)}, \text{Ag}.$
The standard potentials are $E^\circ_{\text{AgBr}, \text{Ag}} = 0.07 \text{ V}$; $E^\circ_{\text{Ag}^+, \text{Ag}} = 0.80 \text{ V}$
10. Derive the integrated rate law for a first order reaction.
11. Rate constant for a second order reaction has a value of $5.7 \times 10^{-5} \text{ L mol}^{-1}$ at 298 K and a value of $1.64 \times 10^{-4} \text{ L mol}^{-1}$ at 313 K. Calculate Arrhenius parameters.
12. Why is quantum yield of $\text{H}_2\text{-Cl}_2$ reaction very high?
13. Explain the term photosensitization.
14. What are buffer solutions? Give one application.

(2 x 7 = 14)

SECTION – C

(Answer any 4 questions .Each carries 3 marks)

15. Explain Lindemann's theory of unimolecular reactions.
16. Write a note on chemiluminescence and phosphorescence.
17. What is liquid junction potential? How can it be eliminated?
18. What are fuel cells? Give the working of hydrocarbon-oxygen fuel cell.

SES COLLEGE SREEKANDAPURAM

VI Semester BSc Degree

Model Examination March 2018

6B17 CHE : Environmental Chemistry

Time : 3 hours

Max. Marks : 40

Section - A

Answer all questions. Each question carries one marks.

1. What are the standards advocated for drinking water?
2. Suggest two important sources of thermal pollution.
3. List the four environmental segments.
4. What is meant by green house effect?

(1x4=4)

Section - B

Answer any seven questions. Each question carries 2 marks.

5. Write a note on Chernobyl tragedy.
6. How can sewage, Detergents and Heavy metals cause pollution of water.
7. What are the natural and human sources of CO? What are its toxic effects?
8. Describe the experimental determination of Dissolved Oxygen in water.
9. What are the constituents of photo chemical smog? How is it formed?
10. Distinguish between COD and BOD.
11. What are the factors responsible for micronutrient deficiency of soil?
12. What are the physiological effects of mercury poisoning?
13. How can we monitor oxides of nitrogen in air?
14. How can we control soil pollution?

(2x7=14)

Section - C

Answer any 4 questions. Each question carries 3 marks.

15. What is acid rain ? Discuss its formation and harmful effects.
16. Discuss the factors responsible for ozone layer depletion.
17. Write a short note on hydrological cycle.
18. Discuss the composition of sea water and river water.
19. What are the regions of atmosphere? Discuss its characteristics?
20. Write a short note on various types of water pollution.

(3x4 = 12)

Section - D

Answer any 2 questions. Each question carries 5 marks.

21. Give a brief account of noise pollution explaining its biological effects and control.
22. Discuss the problem of urban waste management.
23. What are the natural and human source of H₂S gas? What are the adverse effects of this gas on environment?
24. What is meant by thermal pollution? List the major source of thermal pollution. Give different methods for preventing thermal pollution?

(2x5 = 10)

VI Semester BSc Degree Model Examination March 2018

6B15 CHE: PHYSICAL CHEMISTRY III

Time: 3 hours

Max Marks: 40

SECTION – A

(Answer all questions .Each carries 1 mark)

1. What is the electrode potential of standard hydrogen electrode?
2. What is transport number of an ion?
3. What is the unit of the rate constant for a first order reaction?
4. What is Grotthus-Draper law?

(1 x 4 = 4)

SECTION – B

(Answer any 7 questions .Each carries 2 marks)

5. Explain Lowry-Bronsted concept of acids and bases.
6. Define: a) Activity b) Mean ionic activity
7. Calculate the ionic strength of the solution prepared by mixing 50 ml of 0.2 M KNO_3 , 20 ml of 0.15 M K_2SO_4 and 30 ml of 0.05 M $\text{Cu}(\text{NO}_3)_2$.
8. State Kohlrausch's law.
9. Calculate solubility product of AgBr in water at 25°C from the cell:
 $\text{Ag}, \text{Ag}^+\text{Br}^-(\text{satd. soln}) \mid \text{AgBr}_{(s)}, \text{Ag}$.
The standard potentials are $E^\circ_{\text{AgBr}, \text{Ag}} = 0.07 \text{ V}$; $E^\circ_{\text{Ag}^+, \text{Ag}} = 0.80 \text{ V}$
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12. Why is quantum yield of $\text{H}_2\text{-Cl}_2$ reaction very high?
13. Explain the term photosensitization.
14. What are buffer solutions? Give one application.

(2 x 7 = 14)

SECTION – C

(Answer any 4 questions .Each carries 3 marks)

15. Explain Lindemann's theory of unimolecular reactions.
16. Write a note on chemiluminescence and phosphorescence.
17. What is liquid junction potential? How can it be eliminated?
18. What are fuel cells? Give the working of hydrocarbon-oxygen fuel cell.

SES COLLEGE SREEKANDAPURAM

VI Semester BSc Degree

Model Examination March 2018

6B17 CHE : Environmental Chemistry

Time : 3 hours

Max. Marks : 40

Section - A

Answer all questions. Each question carries one marks.

1. What are the standards advocated for drinking water?
2. Suggest two important sources of thermal pollution.
3. List the four environmental segments.
4. What is meant by green house effect?

(1x4=4)

Section - B

Answer any seven questions. Each question carries 2 marks.

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6. How can sewage, Detergents and Heavy metals cause pollution of water.
7. What are the natural and human sources of CO? What are its toxic effects?
8. Describe the experimental determination of Dissolved Oxygen in water.
9. What are the constituents of photo chemical smog? How is it formed?
10. Distinguish between COD and BOD.
11. What are the factors responsible for micronutrient deficiency of soil?
12. What are the physiological effects of mercury poisoning?
13. How can we monitor oxides of nitrogen in air?
14. How can we control soil pollution?

(2x7=14)

Section - C

Answer any 4 questions. Each question carries 3 marks.

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16. Discuss the factors responsible for ozone layer depletion.
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18. Discuss the composition of sea water and river water.
19. What are the regions of atmosphere? Discuss its characteristics?
20. Write a short note on various types of water pollution.

(3x4 = 12)

Section - D

Answer any 2 questions. Each question carries 5 marks.

21. Give a brief account of noise pollution explaining its biological effects and control.
22. Discuss the problem of urban waste management.
23. What are the natural and human source of H₂S gas? What are the adverse effects of this gas on environment?
24. What is meant by thermal pollution? List the major source of thermal pollution. Give different methods for preventing thermal pollution?

(2x5 = 10)

MODEL EXAMINATION OCTOBER 2018
III Semester B.Com
3A11: IT IN BUSINESS

Time: 2 Hours

Max. Marks: 30

SECTION – A

Answer **all** questions. Each question carries $\frac{1}{2}$ **marks** **(4x1/2 =2)**

1. What is B2C?
2. What is e-commerce?
3. Give an example for prepaid systems?
4. Mention any two internet security protocols?

SECTION- B

Answer **any four** questions. **Each** question carries **1** mark: **(4x1=4)**

5. Mention the characteristics of a good network security system?
6. What is phishing?
7. What is a biometric system?
8. What are worms?
9. What is a firewall?
10. Mention the various internet security standards?

SECTION- C

Answer **any four** questions. **Each** question carries **4** marks:

11. What is the difference between traditional commerce and e-commerce?
12. What do you understand by network security? What are the threats to a network security?
13. Explain the different e-commerce models.
14. What do you mean by MIS? What are the characteristics of MIS
15. Give an account of informational systems from a functional point of view?
16. What is cryptography? What are its parts?

(4x4=16)

SECTION D

Answer **any one** question. **Each** question carries **eight** marks. **(1x8=8)**

17. Explain the major types of information systems prevailing in organizations
18. Explain the different types of e-payments.

**IV SEMESTER BCOM DEGREE MODEL EXAMINATION –MARCH 2019
4CO5COM(COMPL-V): CORPORATE LAW AND BUSINESS REGULATION**

Time: Three hours

Maximum marks: 40

Part – A

(Answer *all* questions. Each carries ½ mark)

- 1) Latest Companies Act was enacted in the year.....?
- 2) The Model of Articles of Association is given in....
- 3) A Statutory Company is incorporated under.....
- 4) Quorum of meeting of Private Company is (4x½=2)

Part – B

(Answer any *four* questions. Each carries 1 marks)

- 5) What are the twin objective of SEBI ?
- 6) What is Ordinary Resolution?
- 7) What is One Person Company?
- 8) Define Promotor.
- 9) What is Corporate Veil?
- 10) What is pre-incorporation contract?

(4x1=4)

Part – C

(Answer any *six* questions. Each carries 3 marks)

- 11) What are essentials of valid meeting?
- 12) What is Doctrine of Idoor Mnagement –explain the exceptions of these Doctrine?
- 13) What are powers of SEBI?.
- 14) What are the difference between Private Company and Public Company?
- 15). What are methods of voting?
- 16) Explains the importance of AAs.
- 17) What is Annual general meeting?
- 18) What are difference between ordinary resolution and Special resolution?

(6x3=18)

Part – D

(Answer any *two* questions. Each carries 8 marks)

- 19) Define meeting of company? What are the essentials of meeting?
- 20) Explain the Sailent features of Companies Act 2013.?
- 21) What is Memorandum of Association What are its Clause?

(2x8=16)

IV SEMESTER BBA DEGREE MODEL EXAMINATION – MARCH 2019
4BO9 BBA (CORE-IX): FINANCIAL MANAGEMENT

Time: Three hours

Maximum marks: 40

Part – A

(Answer all questions. Each carries 1/2 mark)

- 1) In Traditional approach Financial Management means
- 2) Wealth maximization means Maximisation means
- 3) ARR stands for
- 4) Capitalisation means

(4x1/2=2).

Part – B

(Answer any four questions. Each carries 1 marks)

- 5) What is Trading on Equity?
- 6) What is Fixed working Capital?
- 7) Explain optimum cash balance?
- 8) What is EOQ?
- 9) Define Capital budgeting?
- 10) Define Capital structure?

(4x1=4)

Part – C

(Answer any six questions. Each carries 3 marks)

- 11). What are the objectives of financial management?
- 12) What is Cost of Capital? What are the different methods of calculating cost of capital?
- 13) Explain the factors influencing Capital structure.
- 14) A company issued 1000 7% preference shares of Rs.100 each at a premium of 10% redeemable after 5 years .compute cost of preference capital?
- 15). Explain the procedures of calculating NPV?
- 16) Explain the features of financial management ?
- 17) Explain the difference between Capitalisation and Capital structure.
- 18) Explain the importance of financial management.

(6x3=18)

Part – D

(Answer any two questions. Each question carries 8 marks)

- 19) What is Capitalisation? What are the causes and remedies of under capitalization?
- 20) Explain the scope of financial management.

21) From the following capital structure find out WAAC based on book value weights and market value weights .

Types of capital	Book Value	Market value	Specific cost
Preference share capital	150000	175000	13%
Equity shares	300000	1400000	18%
Retained earnings	200000	0	0
Debt	100000	120000	11%

II SEMESTER B.Sc DEGREE MODEL EXAMINATION – MARCH 2019
SES COLLEGE SREEKANDAPURAM
2B03 CHE : ANALYTICAL CHEMISTRY

Time: 3hrs

Total marks: 40

SECTION A

(Answer all questions each carries 1 mark)

(1×4=4)

1. State Lowry Bronsted Concept.
2. Give 2 metallochromic indicators.
3. What is meant by the term 'normality'?
4. Give the autoionisation of HF?

SECTION B

(Answer any 7 questions. Each carries 2 marks)

(2×7=14)

5. Solutions of alkali metals in NH_3 is blue. Explain
6. Explain solvent system concept.
7. Explain different types of Lewis acids?
8. Differentiate between ppm and ppb.
9. Draw the titration curve for a redox titration between Ce^{4+} and Fe^{2+} .
10. Explain the theory of redox indicators?
11. Explain the utility of solubility product in group analysis?
12. What are the desirable properties of a precipitant in gravimetry.
13. What is common ion effect?
14. You are provide with 100ml 0.05 M solution of KMnO_4 . How would you prepare 50ml of 0.002 M solution of KMnO_4 .

SECTION C

(Answer any 4 questions. Each question carries 3 marks)

(3×4=12)

15. Distinguish between Leveling effect and differentiating solvent.
16. Discuss the principles of iodometric and iodimetric titration.
17. Explain the basis for hard-hard-soft soft interactions?
18. What are the steps involved in gravimetric analysis?
19. Explain the effect of polarity and substitution in relative strength of acids and bases.
20. What are the errors that can occur during gravimetric analysis.

SECTION D

(Answer any 2 questions. Each question carries 5marks)

(5×2=10)

21. Explain HSAB principle. What are its application?
22. Briefly explain non aqous solvents .
a) Liquid NH_3 b) liquid H_2SO_4 c) Liquid HF
23. A) Explain the theory of complexometric titration
B) What are the different types of EDTA titration.
24. Write a note on titration curve of
a) Sodium carbonate Vs HCl b) Weak acid Vs strong base.

S.E.S COLLEGE SREEKANDAPURAM
I SEMESTER BSC DEGREE MODEL EXAMINATION OCTOBER 2018

1B01 CHE : THEORETICAL AND INORGANIC CHEMISTRY

Time: 3hrs

Max Marks:40

SECTION- A

(Answer all questions. Each carries 1 mark)

1. What are magic numbers?
2. State Heisenberg's uncertainty principle.
3. What is meant by eigen function?
4. What are radioactive tracers?

(1x4=4)

SECTION- B

(Answer any 7 questions. Each carries 2 marks)

5. Explain the term packing fraction.
6. What are confidence limits? What is its significance?
7. A particle of mass 6.6×10^{-24} gm has a kinetic energy of 8×10^{-5} erg. Find the wavelength of the particle.
8. Calculate the binding energy per nucleon of ${}^4\text{He}_2$ if the mass of proton and neutron are 1.007784 U and 1.008312 U respectively and the mass of helium atom is 4.00321 U.
9. Correlate N/P ratio and nuclear stability.
10. How does Bohr's atomic model explain the spectra of hydrogen..
11. Define orbital. What are the differences between 2p and 3p orbital.
12. Explain the term sample mean and population mean.
13. What are the factors favouring the formation of ionic bond..
14. Explain LCAO method.

(2x7=14)

SECTION -C

(Answer any 4 questions. Each carries 3 marks)

15. State Fajan's rule.
16. Give an outline of VSEPR theory and explain its use in the prediction of shapes of XeF_6 and NH_3 .
17. What are the postulates of quantum mechanics.
18. Find out the standard deviation for the following data obtained in an experiment
15.67, 15.69, 16.03.

19. What are the limitations of Bohr theory? Derive an expression for energy of an electron in hydrogen atom.
20. Explain the working of Gieger Muller counter.

(4X3=12)

SECTION -D

(Answer any 2 questions. Each question carry 5 marks)

21. Derive Born-Landé equation. Explain how Born-Haber cycle can be applied to determine lattice energy of NaCl?
22. (a) Sketch the radial distribution curves of 1s, 2s, 2p, 3s and 3d orbitals.
- (b) Write a note on quantum numbers.
23. Describe the different types of errors we encounter in chemical analysis. How can they be minimised?
24. (a) Give an account of MO theory.
- (b) What are the differences between valence bond theory and MO theory.

(2X5=10)

IV SEMESTER BCOM DEGREE MODEL EXAMINATION MARCH-2020
4B09 COM (CORE –IX Optional A: CO-OPERATION- II)
MANAGEMENT OF CO-OPERATIVES

TIME: 3 HOURS

MAX MARKS: 40

PART A

Answer all questions each carries 1/2 mark

1. The present KSCB was formerly known as -----
2. Expand NAFED -----
3. Name two non agricultural credit societies.
4. Subsidiary state partnership fund is maintained by----- (4x1/2=2)

PART B

Answer any four questions. Each carries one mark.

5. What is MARKETFED ?
6. What is principal state partnership?
7. What is Kisan credit card?
8. What is farmers service society?
9. What is ACLS?
10. What is crop loan system?
11. What is a rural debenture? (4x1=4)

PART C

Answer any six questions (not exceeding one page) each carries three marks

11. Mention the objectives of primary co-operative consumer store
12. What are the different types of farming societies?
13. Explain the workings of Primary Agricultural Credit Societies.
14. What is a credit card? What is the need for credit card?
15. Explain the functions of primary co-operative marketing and processing societies
16. What are the different types of housing co-operatives?
17. What are major objectives of Kerala co-operative Agricultural and Rural Development Bank?
18. What are the essential features of a large sized society? (6x3=18)

PART D

Answer any two questions each carries eight marks

19. Explain co-op credit societies and overdues.
20. Illustrate the origin and working of Kerala State Co-operative Bank.
21. Discuss different types of marketing societies in Kerala (2x8=16)

MODEL EXAMINATION SEPTEMBER 2019
III SEMESTER BCOM DEGREE EXAMINATION
3B06 COM (CORE-VI Optional A: CO-OPERATION -1)
CO-OPERATIVE PRINCIPLES

TIME: 3 HOURS

MAX MARKS: 40

PART A

Answer all question each carries ½ marks

1. Give the expansion of CRAFICARD
2. In which year ICA appointed a committee to frame the principles of co-operation
3. Which country is known as dairy farm of Europe.
4. Who is known as the father of co-operative movement?

(4x½ =2)

PART B

Answer any four questions. Each carries one mark

5. What is labour artels?
6. Who were Rochdale pioneers?
7. Define co-operation.
8. What is ICA?
9. What is crop loan?
10. What is Lrbrand?

(4x1=4)

PART C

Answer any six questions.(not exceeding one page). Each carries three marks.

11. Explain the objectives and functions of ICA
12. Point out the features of co-operative movement in Great Britain.
13. Describe the Dairy co-operatives in Denmark.
14. Explain the significance and importance of co-operation
15. State the recommendation of Sivaraman committee.
16. Distinguish between socialism and co-opertion.
17. Write a note on the Rochdale society of equitable pioneers
18. Distinguish between Raifeisen societies and Schulze Delitzch societies.

(6x3=18)

PART D

Answer any two questions each carries eight marks

19. Draft an essay on the principles of Co-operation.
20. Draft an essay on the co-operative movement in USA and USSR
21. What are the recommendations of All India Rural Credit Survey Committee?

(8x2=16)

III SEMESTER BSC-DEGREE MODEL EXAMINATION-SEPTEMBER 2019
S. E .S COLLEGE SREEKANDAPURAM
3BO4 CHE ORGANIC CHEMISTRY-I

Time 3hrs

Max Marks: 40

SECTION -A

Answer all questions .Each carries 1 mark.

1. Give the IUPAC names of the following
 - a) $\text{CH}_3\text{CH}_2\text{COCH}_2\text{COOH}$
 - b) $\text{CH}_3\text{CH}(\text{C}_3\text{H}_7)\text{CH}_3$.
2. Write the structural formula of the following
 - a) 5-chloropent-1-yne
 - b) pent-4-en-1-ol.
3. What are nitrenes?
4. What is the product obtained when glycerol is treated with KHSO_4 ?

[1 x 4 = 4]

SECTION B

Answer any 7 questions .Each carries 2 marks.

5. Which is more stable 1-butene or 2-butene.why?
6. Explain saytzeff rule with example?
7. What is Freund's reaction
8. What are the products of ozonolysis of 1-propene?
9. Differentiate between singlet and triplet carbenes.
10. How can you prepare chloroform from acetone?
11. How tertiary butyl alcohol is prepared using Grignard reagent?
12. Give one method for the preparation of anisole and phenetole?
13. How anthracene prepared from benzyl chloride?
14. Explain the term electrophile and nucleophile with examples?

[2 x 7 = 14]

SECTION C

Answer any 4 questions .Each carries 3 marks.

15. How are ethylene dichloride and ethylidene chloride prepared?
16. Write a note on addition reactions of alkenes.
17. Discuss the methods to distinguish primary, secondary and tertiary alcohols.
18. What are the products formed in the following reaction
 - a) Acetylene treated with water in presence of sulphuric acids and mercurous sulphate
 - b) 1, 2-dichloroethane treated with aq.KOH
19. Elaborate on the E_1 and E_2 elimination with suitable example
20. Write a note on the structure and stability of carbonium ion

[3 x 4 = 12]

SECTION D

Answer any 2 questions .Each carries 5 marks.

21. Explain the electron displacement effect in organic molecules.
22. Discuss the mechanism and stereochemistry of SN^1 and SN^2 reaction of alkyl halides

23. Explain the following

- a) Pinacol-pinacolone rearrangement
- b) Claisen rearrangement
- c) Fries rearrangement

24. a) outline Haworth synthesis of naphthalene

- b) Discuss 1, 2 and 1,4 addition to 1,3-butadiene
- c) Explain the mechanism of dehydration of alcohols

[5 x 2 = 10]

IV SEMESTER B Sc. DEGREE MODEL EXAMINATION

February 2020

IVB06CHE-Organic Chemistry-II

Time 3 Hours

Total marks 40

Section A

Answer all questions.

Each carries 1 mark.

1. Which is the electrophile in aromatic sulphonation?
2. Represent the Haworth structure of β -D glucose.
3. What are elastomers?
4. Give the structure of two condensed heterocyclic compounds.

Section B

Answer any 7 questions.

Each carries 2 marks

5. Give the mechanism of nitration of benzene.
6. How do you convert Glucose into Fructose?
7. Compare the basicity of pyrrole, pyridine and piperidine.
8. Explain benzyne mechanism. Write two evidences for the same.
9. Differentiate between racemization and resolution of optical compounds with suitable examples.
10. Give two methods for the synthesis of indole.
11. What are thermoplastics? How do they differ from thermosets?
12. Pyridine does not undergo Friedel Craft reaction. Why?
13. How does pyrimidine react with hydrazine?
14. Mention any two industrial uses of cellulose.

Section C

Answer any 4 questions.

Each carries 3 marks

15. Draw the Fischer projection and Haworth structure of glucose and fructose.
16. Outline Hoffmann exhaustive methylation.
17. Explain three methods of resolution.
18. Which position in pyridine is likely to undergo electrophilic attack? Why?
19. Discuss Skraup synthesis of quinoline.
20. What is the structural difference between starch and cellulose?

Section D

Answer any 2 two questions.

Each carries 5 marks.

- 21.a) Differentiate between chain and step polymerisation. Give one example for each with method of synthesis and application.
 - b) What are biodegradable polymers? Mention one use of the same.
22. Write a detailed note on nonbenzenoid aromatics with reference to cyclopropenyl cation, cyclopentadienyl anion, ferrocene, tropylium cation and azulene.
- 23.a) Explain orientation and reactivity of mono substituted benzene with one example.
 - b) What is meant by S_NAr mechanism?
- 24) What are conformers? Discuss the conformational isomerism of cyclohexane with energy diagram and explain the relative stability of conformers.

III SEMESTER BSC-DEGREE MODEL EXAMINATION-SEPTEMBER 2019
S. E .S COLLEGE SREEKANDAPURAM
3BO4 CHE ORGANIC CHEMISTRY-I

Time 3hrs

Max Marks: 40

SECTION -A

Answer all questions .Each carries 1 mark.

1. Give the IUPAC names of the following
 - a) $\text{CH}_3\text{CH}_2\text{COCH}_2\text{COOH}$
 - b) $\text{CH}_3\text{CH}(\text{C}_3\text{H}_7)\text{CH}_3$.
2. Write the structural formula of the following
 - a) 5-chloropent-1-yne
 - b) pent-4-en-1-ol.
3. What are nitrenes?
4. What is the product obtained when glycerol is treated with KHSO_4 ?

[1 x 4 = 4]

SECTION B

Answer any 7 questions .Each carries 2 marks.

5. Which is more stable 1-butene or 2-butene.why?
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7. What is Freund's reaction
8. What are the products of ozonolysis of 1-propene?
9. Differentiate between singlet and triplet carbenes.
10. How can you prepare chloroform from acetone?
11. How tertiary butyl alcohol is prepared using Grignard reagent?
12. Give one method for the preparation of anisole and phenetole?
13. How anthracene prepared from benzyl chloride?
14. Explain the term electrophile and nucleophile with examples?

[2 x 7 = 14]

SECTION C

Answer any 4 questions .Each carries 3 marks.

15. How are ethylene dichloride and ethylidene chloride prepared?
16. Write a note on addition reactions of alkenes.
17. Discuss the methods to distinguish primary, secondary and tertiary alcohols.
18. What are the products formed in the following reaction
 - a) Acetylene treated with water in presence of sulphuric acids and mercurous sulphate
 - b) 1, 2-dichloroethane treated with aq.KOH
19. Elaborate on the E_1 and E_2 elimination with suitable example
20. Write a note on the structure and stability of carbonium ion

[3 x 4 = 12]

SECTION D

Answer any 2 questions .Each carries 5 marks.

21. Explain the electron displacement effect in organic molecules.
22. Discuss the mechanism and stereochemistry of SN^1 and SN^2 reaction of alkyl halides

23. Explain the following

- a) Pinacol-pinacolone rearrangement
- b) Claisen rearrangement
- c) Fries rearrangement

24. a) outline Haworth synthesis of naphthalene

- b) Discuss 1, 2 and 1,4 addition to 1,3-butadiene
- c) Explain the mechanism of dehydration of alcohols

[5 x 2 = 10]

IV SEMESTER B Sc. DEGREE MODEL EXAMINATION

February 2020

IVB06CHE-Organic Chemistry-II

Time 3 Hours

Total marks 40

Section A

Answer all questions.

Each carries 1 mark.

1. Which is the electrophile in aromatic sulphonation?
2. Represent the Haworth structure of β -D glucose.
3. What are elastomers?
4. Give the structure of two condensed heterocyclic compounds.

Section B

Answer any 7 questions.

Each carries 2 marks

5. Give the mechanism of nitration of benzene.
6. How do you convert Glucose into Fructose?
7. Compare the basicity of pyrrole, pyridine and piperidine.
8. Explain benzyne mechanism. Write two evidences for the same.
9. Differentiate between racemization and resolution of optical compounds with suitable examples.
10. Give two methods for the synthesis of indole.
11. What are thermoplastics? How do they differ from thermosets?
12. Pyridine does not undergo Friedel Craft reaction. Why?
13. How does pyrimidine react with hydrazine?
14. Mention any two industrial uses of cellulose.

Section C

Answer any 4 questions.

Each carries 3 marks

15. Draw the Fischer projection and Haworth structure of glucose and fructose.
16. Outline Hoffmann exhaustive methylation.
17. Explain three methods of resolution.
18. Which position in pyridine is likely to undergo electrophilic attack? Why?
19. Discuss Skraup synthesis of quinoline.
20. What is the structural difference between starch and cellulose?

Section D

Answer any 2 two questions.

Each carries 5 marks.

- 21.a) Differentiate between chain and step polymerisation. Give one example for each with method of synthesis and application.
 - b) What are biodegradable polymers? Mention one use of the same.
22. Write a detailed note on nonbenzenoid aromatics with reference to cyclopropenyl cation, cyclopentadienyl anion, ferrocene, tropylium cation and azulene.
- 23.a) Explain orientation and reactivity of mono substituted benzene with one example.
 - b) What is meant by S_NAr mechanism?
- 24) What are conformers? Discuss the conformational isomerism of cyclohexane with energy diagram and explain the relative stability of conformers.

SES COLLEGE SREEKANDAPURAM
MODEL EXAMINATION MARCH 2016
2CO2 PHY ELECTRICITY THERMODYNAMICS AND MAGNETISM
COMPLIMENTARY COURSE IN PHYSICS
TIME: 3 hrs

MAX MARKS: 32

SECTION A

(ANSWER ALL. EACH CARRIES MARK 1)

- 1) The principle of caey foster bridge is.....
- 2) Example for engine working on clausius statement.....
- 3) Lorents force law relates
- 4) Internal energy of ideal gas depends only upon.....

SECTION B

(ANSWER ANY 4. EACH CARRIES MARKS 2)

- 6) State and explain biot savot law .?
- 7) Explain entropy of thermodynamic system
- 8) State and explain first law of thermodynamics ?
- 9) Distingush between Isochoric and isobaric process?
- 10) What you mean by decrement of B.G?
- 11) State second law of thermodynamics ?

SECTION C

(ANSWER ANY 3 , SHORT ESSAY OR PROBLEM TYPE. EACH CARRIES MARK OF 3)

- 12) Derive the expression for work done in adiabatic process?
- 13) Obtain expression for groth of current in L-R circuit
- 14) A-carnot engine-whose source temperature is 400 K takes 2000 J of heat and rejects 1600J of heat to the sink .Find the temperature of the sink and the efficiency of the engine.?
- 15) What is carnot theorm. Distingush the working of heat engine and refrigerator?
- 16) What is zeroth law of thermodynamics .Distingush between isothermal and adiabatic process with graph?

SECTION -D

(ANSWER ANY 2, LONG ESSAY TYPE. EACH ONE CARRIES 5 MARKS)

- 17) Explain the working of carnot engine .Obtain the efficiency ?
- 18) Explain the working of ballistic galvanometer. Obtain the expression for charge?
- 19) Obtain the expression for growth of current in C-R circuit?
- 20) Obtain the expression for resistance using Caey foster bridge.Explain the working

1CO1PHY
TIME: 3 hrs

SES COLLEGE SREEKANDAPURAM
MODEL EXAMINATION OCTOBER 2015
MECHANICS COMPLIMENTRY COURSE IN PHYSICS
MAX MARKS: 32

SECTION A
(ANSWER ALL. EACH CARRIES MARK 1)

- 1) In SHM the acceleration of a particle is zero when velocity is.....
- 2) Uncertainty principle was introduced by.....
- 3) Moment of inertia is a property ofbody
- 4) Ratio of stress and strain
- 5) Rigidity modulus is a property of

SECTION B
(ANSWER ANY 4. EACH CARRIES MARKS 2)

- 6) Sketch energy distribution of harmonic oscillator?
- 7) Write down difference between progressive and stationary waves?
- 8) What is Q- factor of an oscillator?
- 9) Explain moment of inertia of a body?
- 10) State and principle uncertainty principle?
- 11) Obtain expression for work done in torsion?

SECTION C
(ANSWER ANY 3 , SHORT ESSAY OR PROBLEM TYPE. EACH CARRIES MARK OF 3)

- 12) Find the wavelength associated with 10 keV electron?
- 13) State and prove perpendicular axis theorem?
- 14) Obtain expression for period of simple pendulum?
- 15) Obtain expression for velocity of transverse wave in stretched string?
- 16) Explain damped harmonic oscillator?

SECTION D
(ANSWER ANY 2, LONG ESSAY TYPE. EACH ONE CARRIES 5 MARKS)

- 17) Derive expression for bending moment of a beam?
- 18) Obtain expression for velocity of longitudinal waves in gases?
- 19) Obtain expression for forced harmonic oscillator?
- 20) Obtain expression for moment of inertia of a solid cylinder?

SES COLLEGE SREEKANDAPURAM
VI Semester BSc Degree Model Examination, March 2017
6B14 PHY: ELECTRONICS II

Time: 3 hrs.

• Total Marks: 40

SECTION-A

(Answer all questions each carry 1 mark)

1. For normal operation of BJT, its ----- junction should be forward biased.
2. The phase difference between o/p and i/p voltages of a CE amplifier is -----
3. Voltage gain of ----- circuit using op-amp is unity.
4. If G_1 , G_2 & G_3 are the individual gains of a 3- stage amplifier, the expression for total gain is -----

(4x1=4)

SECTION-B

(Answer 7 questions each carry 2 marks)

5. What do you mean by feedback in amplifiers?
6. What happens to the gain when negative feedback is introduced?
7. What is open loop gain?
8. Give Barkhausen criterion for oscillators.
9. Which are the standard forms of Boolean expressions, explain with example.
10. Sketch the model of dc load line and show the Q point, saturation point and cut off point.
11. Sketch the circuit of an op-amp integrator.
12. Explain series voltage negative feedback.
13. Explain voltage offset nulling.
14. What is meant by cell adjacency in a K-Map

(7x2=14)

P.T.O

SECTION-C

(Answer 4 questions each carry 3 marks)

15. Write the standard SOP form of $ABC+AB+ABCD$
16. Map the following standard SOP expression on a K map
 $ABCD + ABCD + ABCD + ABCD + ABCD + ABCD + ABCD$
17. Explain cross over distortion in power amplifiers.
18. Design a Colpitts oscillator to produce 40 kHz output frequency. Use a 100 mH inductor and an Op-amp with 10V power supply.
19. A difference amplifier is to be designed to amplify the difference between two voltages by a factor of 10. The inputs each approximately equal 1V. Determine suitable resistor values for the circuit using a 741 Op-amp.
20. From the truth table, determine the standard SOP & POS expressions.
A: 0 0 0 0 1 1 1 1
B: 0 0 1 1 0 0 1 1
C: 0 1 0 1 0 1 0 1
X: 0 0 0 1 1 0 1 1

(4x3=12)

SECTION-D

(Answer 2 questions each carry 5 marks)

21. What is a Karnaugh map? Explain various types with examples.
22. Explain various parameters of an op-amp.
23. Explain capacitor coupled two stage CE amplifier.
24. Explain Class C power amplifiers.

(2x5=10)

Model Examinations March 2017 BSc (Physics)
6B15 PHY (Elective) E. Materials Science

Time : 3 Hours

Max Marks : 40

Write answers in English only

Section A

1. The unit of diffusion coefficient is.....
 2. The malleability is property of metal
 3. Write the expression for concentration gradient in the case of diffusion couple.
 4. The linear disturbances of atomic arrangement is called
- (4x1 = 4)

Section B

5. Define Frenkel's defect.
 6. What are different type of mechanism of diffusion ?
 7. What are ferrites?
 8. Compare edge and screw dislocation.
 9. Define vulcanization.
 10. Define dielectric loss of a material.
 11. What are composites? Give the classification of composites.
 12. Write a paragraph about the biomaterials.
 13. Write a short note on natural rubber and synthetic rubber.
 14. What are ferroelectric materials? Give example.
- (7x2 = 14)

Section C

15. What are the general considerations of selecting the material??
 16. Briefly explain any four mechanical properties of materials.
 17. What is polymerization? What are the different strengthening mechanisms of polymers?
 18. What is a semiconducting material? Give the significance.
 19. Briefly explain addition to polymers. Give example.
 20. Explain magnetic hysteresis.
- (4x3 = 12)

Section D

21. Explain Fick's laws of diffusion. Give uses.
 22. Write an essay about crystal imperfections
 23. Discuss the classification of magnetic materials
 24. Briefly describe the different types of organic compounds
- (2x5 = 10)