

## Fundamentals of Accounting

No. of Pages: 03

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Double accounting principles.
2. Define accounting. Differences between trade discount & cash discount.
3. Write importance of petty cash book.
4. Define 'Contra Entry'. In what conditions contra entry(passed) appears.
5. Explain the methods for preparing trail balance.
6. What is an error? What is meant by rectification of error?
7. Discuss the importance of B.R.S.
8. Write only five advantages of preparing final accounts.

Section B

Answer the following:

5 x 10 = 50M

9. a) Write any ten accounting concepts.

or

- b) Journalise the following transactions:

- 2008 Aug 1 Krishna commenced business with cash of Rs.50,000  
 Aug 2 Deposited with bank Rs.10,000  
 Aug 15 Paid telephone bill Rs.500  
 Aug 16 Bought furniture and paid by cheque Rs.12,000  
 Aug 19 Received a first and final divided of 60 paise in the rupee from the official receiver of Mr.Rajesh, who owed in Rs.10,000.  
 Aug 25 Interest received from Nagesh Rs.200  
 Aug 27 Cash received from Lal Rs.200  
 Aug 29 Purchased goods from Ramu for cash Rs.1,200  
 Aug 29 Rs.3,650 cash paid to Rajiv in full settlement of his account for Rs.3,700(Discount received Rs.50)  
 Aug 30 Received cash from Kiran Rs.14,600 in full settlement of his account from Rs.15,000(Discount allowed Rs.400)

10. a) Write the importance of subsidiary books and explain the different types of subsidiary books.

or

Contd...(2)

## Fundamentals of Accounting

b) From the following particulars prepare three column cash book for January 2013. Balance the cash book on 31<sup>st</sup> January 2013:

- Jan 1 Cash in hand Rs.500; credit balance with Canara bank Rs.1,000
- Jan 5 Sale proceeds of household furniture Rs.7,000 was deposited with the bank
- Jan 9 A cheque of Rs.10,000 was given to M.Petal on account
- Jan 12 Received a cheque of Rs.300 in full settlement from Khanna & Co.
- Jan 13 The above cheque was deposited in the bank
- Jan 16 The bank returned the cheque of Khanna & Co. as dishonored
- Jan 18 Cash sales Rs.2,500
- Jan 20 Cash advance Rs.1,000 for traveling given to the salesmen
- Jan 25 Received cash Rs.2,500 from Rao Bros. in full settlement of Rs.2,600 due from them.
- Jan 28 Paid cash Rs.1,500 to Cheri & Co. in full settlement of Rs.1,650
- Jan 29 Drew for office use Rs.3,000 from bank.
- Jan 30 Paid salaries Rs.2,300, rent Rs.1,000 and sundry expenses Rs.700 by cash.

11. a) What do you mean by trial balance? Discuss main objectives and limitations of trial balance.

or

b) Pass the rectification entries and show the suspense account for the following errors detected after the preparation of the trial balance:

- i) A cheque for Rs.220 received from a tenant for rent has been entered in the cash book, but the double entry has not been completed.
- ii) The account of Rama Rao a debtor for Rs.160 had been written off as bad, but the entry has been made only in the personal account.
- iii) The discount column on the debit side of the cash book Rs.200 had been posted to the credit of discount received account.
- iv) The sales day book is under cost by Rs.3,150.
- v) Rs.95 received for commission is not posted to commission account.
- vi) Goods returned Rs.27, to R.K and company, though entered in the return book, is left unposted.

12. a) What is the Bank Reconciliation Statement? Explain the various reasons for preparation of bank reconciliation statement.

or

Contd...(3)

## Fundamentals of Accounting

- b) On 31-12-2012 year pass book showed a credit balance of Rs.5,000. Before that date you had issued cheques worth Rs.1,000 of which cheques worth Rs.300 were not yet cashed. On 26<sup>th</sup> December, you deposited a cheque for Rs.150 in the bank but you did not enter in the cash book. The pass book showed a credit of Rs.40 for interest and a debit of Rs.10 for bank charges and the cash book had no corresponding entries for them. A cheque for Rs.1,200 deposited in your account No.2 was wrongly credited by the bank to this account. Dishonoured bill was deposited in the pass book only Rs.500. cheques for Rs.700 paid into the bank were not yet credited in the pass book.

A wrong debit of Rs.100 appears in the pass book. A cheque of Rs.150 received from a customer was entered in the cash book in December, 2012 but the same was omitted to be paid into the bank. Determine the balance as per cash book as on that date.

13. a) Write any five types of adjustment entries and how do you treat these items.

or

- b) From the following trial balance of Mr. Madhu as on December 31, 2012 you are requested to prepare his final accounts:

	Dr(Rs.)	Cr(Rs.)
Capital		60,000
General expenses	5,400	
Manufacturing expenses	1,500	
Provision for doubtful debts		1,000
Manufacturing wages	21,500	
Office rent	2,000	
Machinery	28,000	
Furniture	10,000	
Insurance	1,200	
Bills receivable/payable	3,300	4,200
Factory rent	4,000	
Salaries	16,000	
Carriage inwards	1,500	
Carriage outwards	1,700	
Cash at bank	4,700	
Sundry debtors/creditors	23,500	14,300
Purchases/sales	68,000	1,40,500
Stock 1 <sup>st</sup> Jan.2012	20,500	
Drawings	7,200	
	2,20,000	2,20,000

Contd...(4)

Fundamentals of Accounting

Following adjustments are required:

- i) Stock on 31<sup>st</sup> Dec.2012 amounted to Rs.27,000.
- ii) Write off Rs.500 as bad debts and maintain the provision for doubtful debts as Rs.1,150.
- iii) Unexpired insurance amounted to Rs.300.
- iv) Depreciate machinery by 10% and furniture by 5%.

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MATT11A/18-08-2023

DIFFERENTIAL EQUATIONS

No. of Pages: 2

Roll No:

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



Section -A

Answer any Five Questions

5 × 5 = 25 M

1. Solve  $(x^2 + 1) \frac{dy}{dx} + 4xy = \frac{1}{x^2+1}$

2. Solve  $(4x + 3y + 1)dx + (3x + 2y + 1)dy = 0$

3. Find the orthogonal trajectory equation of the family of semi cubical parabolas  $ay^2 = x^3$  where a is the parameter

4. Solve  $xyp^2 + (3x^2 - 2y^2)p - 6xy = 0$

5. Solve  $(D^2 + 4)y = e^x + \sin 2x$

6. Solve  $(D^3 + 2D^2 + D)y = x^2 + x$

7. Solve  $(x^2D^2 - 2xD - 4)y = x^2$

8. Solve  $(x^2D^2 + xD - 4)y = x^3$

Section -B

Answer the following Questions

5 × 10 = 50M

9a) Solve  $x \frac{dy}{dx} + y = y^2 \log x$

OR

9b) Solve  $(x^2y - 2xy^2)dx - (x^3 - 3x^2y)dy = 0$

10a) Show that the family of confocal coaxial parabolas  $v^2 = 4a(x + a)$

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MATT11A/18-08-2023

10b) Solve  $p^2 + 2p \cot x = y^2$

11a) Solve  $(D^2 - 3D + 2)y = \cos 3x \cos 2x$

OR

11b) Solve  $(D^2 - 6D + 13)y = 8e^{3x} \sin 2x$

12a) Solve  $(D^2 - 2D + 1)y = x \sin x$

OR

12b) Solve  $(D^4 + 3D^2 - 4)y = \cos^2 x - \cosh x$

13a) Solve  $\frac{d^2 y}{dx^2} + 4y = 4 \sec^2 2x$  using the method of variation of parameters.

OR

13b) Solve  $(x^2 D^2 - x D - 3)y = x^2 \log x$

== X ==

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BOTT11A/18-08-2023

FUNDAMENTALS OF MICROBES AND NON-VASCULAR PLANTS

No. of Pages: 1

Roll No:

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13

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Note: Draw neat labelled diagrams wherever necessary.

SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

1. Whittaker five kingdom classification.
2. Citrus canker.
3. Actinomycetes.
4. Blast of rice.
5. Sporangiospore.
6. Spirogyra thallus structure.
7. General characters of polysiphonia.
8. Gemma cup.

SECTION – B

Answer the following:

5 X 10 = 50

9. (a) Explain the multiplication of TMV.  
OR  
(b) Significance of viruses in vaccine production.
10. (a) Economic importance of bacteria in agriculture and industry.  
OR  
(b) Explain the reproduction in bacteria.
11. (a) Explain the life history of 'Puccinia'.  
OR  
(b) Write the economic importance of fungi.
12. (a) Explain in brief the Thallus organisation of algae.  
OR  
(b) Write the economic importance of algae.
13. (a) Explain the evolution of sporophyte in bryophyte.  
OR  
(b) Explain the structure of "Funaria Capsule".

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## DEVELOPMENT ECONOMICS

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Differences between economic growth and economic development.
2. Simon Kuznet's six characteristics of modern economic growth.
3. Richardian theory of economic growth.
4. Labour intensive technique.
5. Types of economic planning.
6. Role of infrastructure in economic development.
7. Joan Robinson's golden age of economic growth.
8. World Bank classification of countries.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the indicators of economic development.  
or  
b) What is meant by economic development? How do you measure it?
10. a) India is a developing economy. Explain briefly.  
or  
b) What is meant by poverty vicious circles? Explain the causes for poverty in developing countries.
11. a) Critically examine Harrod-Domar growth model  
or  
b) Critically examine Marxian theory of economic development.
12. a) Critically examine unbalanced growth theory.  
or  
b) Explain the relationship between agriculture and industry.
13. a) Explain the importance of public sector in Economic development.  
or  
b) Explain the role of IBRD (or) World Bank in economic development.



## DATA BASE MANAGEMENT SYSTEMS

No. of Pages: 02

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section - AAnswer any FIVE Questions

5x5M

1. Write a short note on degree of data abstraction.
2. Compare Data vs Information
3. Briefly describe about entity super types.
4. Explain specialization and generalization.
5. Write a note on Codd's relational database rules
6. Explain Integrity rules.
7. Explain Group By feature with HAVING Clause with an example
8. Write a note on Triggers

Section - B

Answer the following Questions

5x10M

9 a) What are basic building blocks to construct data model?

(OR)

b) Explain the role and advantages of DBMS?

10 a) Explain Entity relationship model in detail and give an example

(OR)

b) Describe various keys in relational model. Explain in detail.

11 a) What are relational set operators? Explain with example

(OR)

b) What is normalization and discuss all normal forms with example

DATA BASE MANAGEMENT SYSTEMS

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12 a) Explain Data Manipulation Commands with syntax and examples

Unit

(OR)

b) Explain various Data Definition Commands in detail with syntax.

Unit

13 a) Explain procedures and functions in PL/SQL.

Un

(OR)

b) Explain various iterative control statements in PL/SQL with syntax and give example

Un

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## INTRODUCTION TO POLITICAL SCIENCE

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Explain the importance of political science.
2. Traditional approach.
3. Divine theory.
4. Concept of Modern State.
5. Features of Liberty.
6. What is legitimacy?
7. Natural rights.
8. Concept of liberalism.

Section B

Answer the following:

5 x 10 = 50M

9. a) What is political Science? Explain the scope of political science.  
or  
b) Explain the normative approach to the study of political science.
10. a) Define state and explain its features.  
or  
b) Critically examine the Rousseau social contract theory.
11. a) Explain the concept of equality and write about different types of equality.  
or  
b) What is authority and discuss important elements of legitimacy?
12. a) "Rights and duties are head and tail for a single coin". Explain.  
or  
b) Analyse the different theories of rights.
13. a) Discuss the Individualism.  
or  
b) Critically examine the theory of communism.

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COM T12A/19-08-2023

**Business Organization and Management**

No. of Pages: 1

Time: 3Hrs

No. of Questions: 13

|          |  |
|----------|--|
| Roll No: |  |
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Max. Marks: 75M

Pass Min: 30M



**SECTION – A**

*Answer any FIVE of the following:*

*5 X 5 = 25M*

1. Types of Trade.
2. Aids to trades.
3. Sole trading business.
4. Prospectus.
5. Levels of Management.
6. Management and Administration.
7. Importance of Planning.
8. PSEs.

**SECTION – B**

*Answer the following:*

*5 X 10 = 50M*

9. (a) Distinguish between Trade, Commerce and Industry.  
OR  
(b) What are the features of Business?
10. (a) Define Private and Public Companies. Distinguish between Private and Public Company.  
OR  
(b) What is a company form of organisation? Discuss its features.
11. (a) Define Memorandum of Association. What are its contents?  
OR  
(b) What is Articles of Association?
12. (a) Define Management. Explain its characteristics.  
OR  
(b) Explain Fayol's principles of management.
13. (a) Write about Line & Staff organisation.  
OR  
(b) Define Planning. What are its merits and demerits?

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## MECHANICS, WAVES AND OSCILLATIONS

No. of Pages: 02

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 14

Pass Min.: 30M

Section A

Answer the following:

5 x 10 = 50M

1. a) What is Rutherford scattering? Obtain an expression for number of particles scattered per unit area.  
Or
- b) Write about:
  - i) Euler equations
  - ii) Gyroscope
2. a) What is central force? Derive the equation of motion of a particle under central force.  
Or
- b) State Kepler's laws of planetary motion. Derive the second and third law of planetary motion.
3. a) Describe the Michelson-Morley experiment and explain the physical significance of negative result.  
Or
- b) State the postulates of special theory of relativity. Derive Lorentz transformation equations.
4. a) What are forced oscillations? Derive the equation of motion of a driven harmonic oscillator and find its solution.  
Or
- b) State Fourier theorem and evaluate Fourier coefficients.
5. a) What are transverse waves? Derive the equation for the velocity of transverse waves in stretched string.  
Or
- b) What are ultrasonics? Describe piezo electric method of producing ultrasonics.

Section B

Answer any THREE of the following:

3 x 5 = 15M

6. What is variable mass system? Derive its equation of motion.
7. Write characteristics of central force.
8. Explain length contraction.
9. Explain Q-factor and relaxation time.
10. Explain overtones and harmonics.

## MECHANICS, WAVES AND OSCILLATIONS

Section C

Answer any TWO of the following:

2 x 5 = 10M

11. A rocket of mass 20 kg has 300 kg fuel. The exhaust velocity of the fuel is 2.0 km/sec. Find the minimum rate of consumption of fuel so that the rocket may rise from the ground.
12. If the radius of the earth around the sun is doubled, find the new time period.
13. A steel wire of 150 cm length has mass 5 kg. It is stretched with a tension of 1200 N. Find the velocity of transverse wave travelling in the string.
14. An ultrasonic source of 0.09 MHz sends down a pulse towards the sea bed which returns after 0.55 sec. The velocity of sound in water is 1800 m/s. Calculate the depth of the sea and wavelength of the pulse.

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STAT11B/19-08-2023

DESCRIPTIVE STATISTICS AND THEORY OF PROBABILITY

No. of Pages: 2

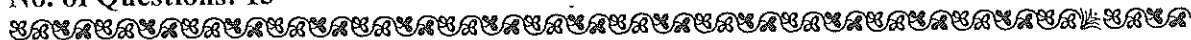
Time: 3Hrs

No. of Questions: 13

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| Roll No: |  |
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Max. Marks: 75M

Pass Min: 30M



SECTION - A

Answer any FIVE of the following:

5 X 5 = 25M

1. Explain Sheppard's correction for moments and its uses.
2. Define skewness and explain the methods of measuring skewness.
3. What is the probability that a leap year contains 53 Sundays?
4. State and prove Baye's theorem.
5. Define discret and continuous random variables with examples.
6. Define probability mass function and probability density function.
7. If  $X$  and  $Y$  are two random variables such that  $X \leq Y$  then prove that  $E(X) \leq E(Y)$ .
8. State and prove Cauchy-Schwartz inequality.

SECTION - B

Answer the following:

5 X 10 = 50M

9. (a) Explain central and non-central moments and also explain central moments in terms of non-central moments.

OR

- (b) Calculate Karl Pearson's coefficient of skewness from the following data:

|                |         |         |         |         |         |
|----------------|---------|---------|---------|---------|---------|
| Wages (Rs.)    | 70-80   | 80-90   | 90-100  | 100-110 | 110-120 |
| No. of Persons | 12      | 18      | 35      | 42      | 50      |
| Wages (Rs.)    | 120-130 | 130-140 | 140-150 |         |         |
| No. of Persons | 45      | 20      | 8       |         |         |

10. (a) Define (i) Random experiment (ii) Sample space (iii) Mutually exclusive events (iv) Axiomatic definition of probability

OR

- (b) State and prove addition theorem of probability for n events.

11. (a) State and prove multiplication theorem of probability for n events.

OR

- (b) The contents of urns I, II and III are as follows:

|         |         |         |             |
|---------|---------|---------|-------------|
| Urn-I   | 1 white | 2 black | 3 red balls |
| Urn-II  | 2 white | 1 black | 1 red ball  |
| Urn-III | 4 white | 5 black | 3 red balls |

One urn is chosen at random and two balls are drawn they happen to be white and red. Find the probability that they come from Urns I, II and III.

12. (a) Define distribution function of a random variable and mention its properties.

OR

- (b) The joint probability density function of X and Y is given by

$$f(x, y) = \frac{1}{8}(6 - x - y); 0 < x < 2, 2 < y < 4$$

Find (i)  $P(x < 1 \cap y < 3)$

(ii)  $P(x + y < 3)$

(iii)  $P(x < 1 / y < 3)$

13. (a) Define M.G.F. of a random variable. State and prove its properties.

OR

- (b) State and prove Chebychev's inequality.

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COMT33/19-08-2023

MARKETING

No. of Pages: 1

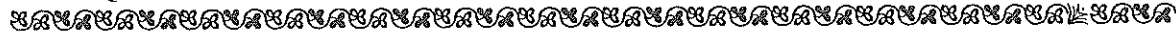
Time: 3Hrs

No. of Questions: 13

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| Roll No: |  |
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Max. Marks: 75M

Pass Min: 30M



SECTION – A

*Answer any FIVE of the following:*

5 X 5 = 25M

1. Nature of marketing.
2. Explain the psychological factors.
3. Product life cycle.
4. Pricing of a new product.
5. Global marketing.
6. Marketing mix.
7. Market segmentation.
8. Promotional activities.

SECTION – B

*Answer the following:*

5 X 10 = 50

9. (a) Explain the functions of marketing.  
OR  
(b) Explain the different marketing concepts.
10. (a) Explain the significance of Buyer Behaviour in marketing.  
OR  
(b) Explain the buying behaviour models.
11. (a) Define product. Explain its characteristics.  
OR  
(b) Explain the functions of packaging.
12. (a) Explain the major objectives of pricing.  
OR  
(b) What is price skimming policy?
13. (a) Explain the objectives and functions of advertising.  
OR  
(b) What are the differences between personal selling and direct marketing?

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CABT31A/19-08-2023

PROGRAMMING WITH C & C++

No. of Pages: 1

Time: 3Hrs

No. of Questions: 13

|          |  |
|----------|--|
| Roll No: |  |
|----------|--|

Max. Marks: 75M

Pass Min: 30M



SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

1. What are the basic data types in C program?
2. What is the purpose of printf() and scanf() statements? Illustrate with C program.
3. Explain the conditional operator in C.
4. Differentiate between continue and break statement.
5. What is a function? How you declare function? Explain the different types of functions in C program.
6. Develop a C program to search an element in a given array.
7. Explain the concept of nested structures with examples.
8. Explain constructor with example.

SECTION – B

Answer the following:

5 X 10 = 50M

9. (a) What are the C tokens? Explain each concept with example in C.  
OR  
(b) Explain the generations of programming languages in detail.
10. (a) Explain conditional statements in C with example programs.  
OR  
(b) Prepare a list of operators in C combine arithmetic operators, relational operators and produce a C program.
11. (a) What is recursion? Develop a C program to find factorial of n.  
OR  
(b) What are the different types of array? Develop a C program to matrix addition.
12. (a) List out the string handling functions with syntaxes and example programs.  
OR  
(b) (i) Explain the concept of structures.  
(ii) Differentiate between structures and unions.
13. (a) Write in detail about object oriented concepts in C++ with examples.  
OR  
(b) What is operator overloading? What are rules for operator overloading?  
Explain with an example.





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CSCT31B/19-08-2023

PROGRAMMING IN C

No. of Pages: 1

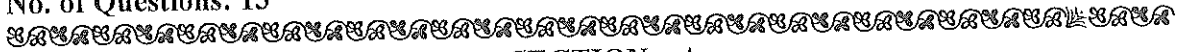
Time: 3Hrs

No. of Questions: 13

|          |  |
|----------|--|
| Roll No: |  |
|----------|--|

Max. Marks: 75M

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SECTION – A

5 X 5 = 25M

Answer any FIVE of the following:

1. Define algorithm. Explain the key features of algorithm.
2. Explain the applications of computers.
3. Write a structure of C program.
4. Explain how to declare an Array.
5. Explain the variables.
6. What is character handling?
7. Define function. How to use functions in C?
8. Define pointers. Explain the drawbacks of pointers.

SECTION – B

5 X 10 = 50M

Answer the following:

9. (a) Explain various generations in computer.  
OR  
(b) Write a few generations of programming language.
10. (a) Explain various data types available in C.  
OR  
(b) Differentiate between conditional branching statements and iterative statements with examples.
11. (a) Explain briefly about arrays and write suitable example program.  
OR  
(b) Define string. Explain various string methods available in C.
12. (a) Define structures and explain arrays of structures and functions.  
OR  
(b) Define union. Write about enumerated data types in C.
13. (a) Explain the following:  
(i) Declaring pointer variables.  
(ii) Passing an arguments to functions using pointer.  
OR  
(b) Explain the following:  
(i) Error handling during file operation.



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CHET31A/19-08-2023

ORGANIC CHEMISTRY & SPECTROSCOPY

No. of Pages: 2

|          |  |
|----------|--|
| Roll No: |  |
|----------|--|

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



PART - A

Answer any FIVE of the following:

5 X 5 = 25M

1. Chlorobenzene is less reactive than ethylchloride towards nucleophilic substitution reaction. Explain.
2. Explain the mechanism of Pinacol-Pinacolone rearrangement.
3. Explain the following reactions:
  - (i) Wittig reaction.
  - (ii) Clemmensen reduction.
  - (iii) Wolf-Kishner reduction.
4. Write a short note on acidity of Carboxylic acids.
5. Give an account of the following:
  - (i) Arnd-Eistert synthesis.
  - (ii) Hunsdiecker reaction.
6. Explain the various types of molecular spectra.
7. Write a note on equivalent and non-equivalent protons.
8. State and explain Beer-Lambert's law.

PART - B

Answer the following:

5 X 10 = 50M

9. (a) Explain the mechanism and stereochemistry of  $SN^1$  and  $SN^2$  reactions of alkylhalides with suitable examples.

OR

(b) Explain the following reactions with mechanism:
  - (i) Riemer-Tiemann reaction.
  - (ii) Kolbe's-Schmidt reaction.
10. (a) Elucidate the following reactions with mechanism:
  - (i) Aldol condensation.
  - (ii) Benzoin condensation.

OR

(b) Write the preparation and four synthetic applications of acetoacetic ester (or) ethyl acetoacetate.

11. (a) Elaborate the following reactions with mechanism:

- (i) Esterification in carboxylic acids.
- (ii) Claisen condensation.

OR

(b) Write any two methods of preparation of Carboxylic acids. Discuss the effect of substituents on acidic strength of mono carboxylic acids.

12. (a) (i) Explain modes of vibrations for polyatomic molecules.

- (ii) Write a short note on overtones and hot bands.

OR

(b) Explain the various types of electronic transitions in U.V. spectroscopy with suitable examples.

13. (a) Discuss Wood Ward – Fieser rules for calculating  $\lambda_{\max}$  of conjugated dienes and  $\alpha, \beta$  - unsaturated Carbonyl compounds with one example for each.

OR

(b) (i) Explain the types of molecular vibrations with examples.

- (ii) Write the IR spectral data for Aldehyde and Ketone.

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CHET01/21-08-2023

INORGANIC, ORGANIC AND PHYSICAL CHEMISTRY

No. of Pages: 1

Roll No:

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

1. Discuss 18 electron rule in metal carbonyls.
2. Explain mutarotation.
3. Describe the structure of maltose and sucrose.
4. Write about zwitter ion and isoelectric point.
5. Explain basic nature of pyridine.
6. Explain tautomerism of nitro alkanes.
7. State and explain laws of photo chemistry.
8. State and explain Joule-Thomson effect.

SECTION – B

Answer the following:

5 X 10 = 50M

9. (a) What are organometallic compounds?  
Write the classification on the basis of bond type with suitable examples.  
OR  
(b) Explain the general preparation methods of metal carbonyls.
10. (a) Explain the cyclic structure of Glucose.  
OR  
(b) Write notes on: (i) Epimerisation (ii) Killiani-Fisher synthesis.
11. (a) What are amino acids?  
Write preparation of amino acids by Strecker synthesis and malonic ester synthesis.  
OR  
(b) Write about Paul-Knorr synthesis.  
Explain the aromatic character of pyrrole and furan.
12. (a) Write notes on (i) Nef reaction (ii) Michael addition.  
OR  
(b) Write about: (i) Hoffmann bromamide reaction (ii) Hinsberg method.
13. (a) Define quantum yield.  
Explain low and high quantum yield with suitable example for each.  
OR  
(b) Derive an expression for the efficiency of reversible heat engine using Carnot cycle.



No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Welfare definition.
2. Production possibility curve.
3. Determinates of demand.
4. Budget line.
5. Cobb – Douglas production function.
6. Returns to scale.
7. Kinky demand curve.
8. Dynamic theory of profit.

Section B

Answer the following:

5 x 10 = 50M

9. a) Discuss the scarcity definition of economics.  
or  
b) Explain the deductive and in deductive methods.
10. a) Explain the law of demand and exceptions.  
or  
b) Discuss methods to measure price elasticity of demand.
11. a) Explain the law of variable propositions.  
or  
b) Explain the economics of large scale production.
12. a) Explain the classification of markets.  
or  
b) Discuss price determination under perfect competition market.
13. a) Discuss marginal productivity theory of distribution.  
or  
b) Explain Ricardian theory of rent.





## BUSINESS ENVIRONMENT

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Define business environment.
2. National Development Council.
3. Explain Competition Act 2002.
4. What is demonetization? Write the impact of demonetization on Indian Economy.
5. Explain the advantages of Globalization.
6. Explain BRICS.
7. What is New Economic Policy?
8. Explain the objectives of five year plans in India.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the macro dimensions of business environment.  
or  
b) What is environmental analysis? Explain need and factors to be considered for environmental analysis.
10. a) What is economic environment? Explain the nature and structure of economy.  
or  
b) What is NITI AAYOG? Explain structure and functions of NITI AAYOG.
11. a) Explain the objectives and merits of Industrial Policy 1991.  
or  
b) Explain the objectives and limitations of Fiscal Policy.
12. a) Explain the social responsibility of business towards stakeholders.  
or  
b) What is GST? Explain positive and negative impact of GST.
13. a) What is WTO? Explain objectives and functions of WTO.  
or  
b) Define IBRD. Write objectives and functions of IBRD.



No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Write the difference between RAM, ROM, EPROM and PROM.
2. Give a short note on role of the CPU in computer.
3. Explain the term booting in OS.
4. Write the syntax of internal or external DOS commands.
5. Differentiate programming languages vs scripting languages.
6. List the functional features of application software.
7. What are the limitations of internet?
8. Give the importance of artificial intelligence and business intelligence analyzing big data.

Section B

Answer the following:

5 x 10 = 50M

9. a) Illustrate the memory hierarchy with a neat diagram.  
or  
b) Draw the functional representation of computer and explain the generations of computer.
10. a) Give a short note on the following terms used in windows accessories:  
i) Backup ii) Disk cleanup iii) Disk defragmenter  
or  
b) Define operating system. List the different types of operating systems.
11. a) List the different types of application software and explain them.  
or  
b) Give a short note on the following terms used in programming languages.  
i) Compiler ii) Interpreter iii) Assembler
12. a) Describe communication media channel cables. Explain it's advantages and disadvantages of different cables used in telecommunications.  
or  
b) List and explain different types of networks in data communication.
13. a) Define data mining. Explain the process of knowledge discovery in database.  
or  
b) List the different data models for data warehouse and explain any two



SEE AUG'23

CECT11A/21-08-2023

E-COMMERCE AND WEB DESIGNING

No. of Pages: 1

Roll No:

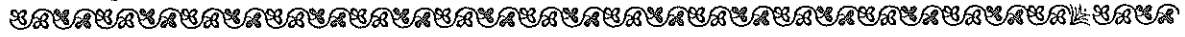
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Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

1. Explain WWW.
2. Explain basic HTML tags.
3. Explain image tags in HTML.
4. Define forms in HTML.
5. Explain EDI.
6. Explain the characteristics of E-SCM.
7. Elucidate the structure of HTML.
8. Write about payment security.

SECTION – B

Answer the following:

5 X 10 = 50M

9. (a) Define network. What are different types of network topologies?  
OR  
(b) Explain the concept of formatting HTML tags.
10. (a) Define lists. Write about different types of lists.  
OR  
(b) Demonstrate table creation with their attributes.
11. (a) Explain frame creation with a suitable example.  
OR  
(b) What is CSS? Explain different types of CSS.
12. (a) Define E-Commerce. What are the advantages and disadvantages of e-commerce?  
OR  
(b) What are the various business models for e-commerce?
13. (a) Illustrate E-CRM architectural components.  
OR  
(b) Define EPS. What are the steps of electronic payment?

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SEE AUG 2023

CSCT11B=CGST11 / 21-08-2023

Problem Solving in 'C'

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Write about applications of computers.
2. What are characteristics and limitations of computer?
3. Explain the structure of "C" program.
4. Write about nested loops.
5. Explain different types of arrays.
6. How to store in an array? Explain.
7. Discuss scope of variables.
8. Write short note on pointers.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain about various generations of programming languages.  
or  
b) Draw the block diagram of a computer and explain each part.
10. a) Explain about various data types in C.  
or  
b) Explain branching statements in C.
11. a) Define array and write about two dimensional array operations.  
or  
b) What are the string handling functions explain in detail?
12. a) Define function and explain how to pass parameters to function.  
or  
b) Briefly discusses on structures.
13. a) Define pointer and how to passing arguments to functions using pointer.  
or  
b) What is a file and what are the different operations performed on a file.

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SEE AUG 2023

CHET41A / 22-08-2023

Inorganic & Physical Chemistry

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Describe the structural isomerism in coordination compounds.
2. Write a note on inner and outer complexes.
3. Describe Job's method for determination of composition of complex.
4. Define Gibbs phase rule and explain the terms in it.
5. Describe strong and weak electrolytes with examples.
6. Derive Nernst equation.
7. Write any three differences between order and molecularity of a reaction.
8. Derive Michaelis – Menter equation.

Section B

Answer the following:

5 x 10 = 50M

9. a) Summirise the optical isomerism in coordination compounds.  
or  
b) Explain crystal field splitting in square planer and octa hedrel complex
10. a) Explain trans effect. Explain the theories of trans effect.  
or  
b) i) Write the biological functions of Haemoglobin and Myoglobin. 6M  
ii) Write a note an uses of chelating agent in medicine. 4M
11. a) Explain the phase diagram of Pb – Ag system.  
or  
b) Explain the phase diagram of water system.
12. a) Define transport number. Write experimental method for the determination of transport number by Hittorf method.  
or  
b) Describe Debye Huckel On Sagar's equation for strong electrolytes.
13. a) Derive the rate expression for second order reaction.  
or  
b) Describe collision theory and activated complex theory of bio molecular reactions.



SEE AUG 2023

CHET11A / 22-08-2023

Inorganic and Physical Chemistry

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

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Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Write the preparation and structures of phosphonitrilic halides.
2. What are 'd' – block elements? Write the electronic configuration of 'd' block elements.
3. Explain valance bond theory in metals.
4. Derive Bragg's equation.
5. Explain Joule Thomson effect.
6. State and explain Nernst distribution Law.
7. Write notes on Azeotropes.
8. What is Common Ion effect?

Section B

Answer the following:

5 x 10 = 50M

9. a) What are silicones? Write the preparation and applications of silicones.  
or  
b) Write the classification and structure of inter halogen compounds.
10. a) Explain the following properties of 'd' block elements:  
i) Catalytic properties    ii) Magnetic properties.  
or  
b) What is Lanthanide contraction? What are the consequences of Lanthanide contraction.
11. a) Write a note on Schotky and Frenkel defect of crystals.  
or  
b) Write a note on the following:  
i) Miller Indices    ii) Space lattice    iii) Unit cell
12. a) Derive the relationship between Critical and Vander Waal's constants.  
or  
b) Write the classification and applications of liquid crystals.
13. a) Explain critical solution temperature with respect to phenol – water system and write the effect of impurity on consulate temperature.  
or  
b) What is osmotic pressure? Explain the determination of molecular weight of non-volatile solute by osmotic pressure.



SEE AUG'23

ENGT01A/23-08-2023

ENGLISH PRAXIS-III

No. of Pages: 2

Time: 3Hrs

No. of Questions: XI

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| Roll No: |  |
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Max. Marks: 75M

Pass Min: 30M

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SECTION - A

I. Answer any FIVE of the following

5 X 6 = 30M

1. What was the pledge that Jawaharlal Nehru wanted every citizen of India to take?
2. What are the challenges that the Americans are expected to face?
3. Why does Kalam believe that connectivity is key to bridging the rural-urban divide? Explain.
4. Why did Mandela wanted three weeks before he was released?
5. What according to JRD Tata are the major changes in the Indian Business Scenario from the time that he started his business?
6. What was the first story that Steve Jobs narrated at the commencement?

SECTION - B

II. Answer any FIVE of the following:

5 X 2 = 10M

1. What does Jawaharlal Nehru suggest to give reality to our dreams?
2. Where does Barack Obama say, his campaign drew strength from?
3. Why didn't Mandela hate his white captors?
4. How does Tata describe Birla?
5. Why getting fired from Apple was the best thing that ever happened to Steve Jobs?
6. How does Abdul Kalam describe his spirituality?

SECTION - C

III. Raju and Murali are discussing about the cultural programmes to be conducted on the college anniversary. Write a dialogue between them. 4M

IV. Write a conversation between two strangers at a conference hall who introduce themselves to each other. 4M

V. Write a dialogue between salesman and customer on buying a two-wheeler. 4M

SEE AUG'23

ENGT01A/23-08-2023

- VI.* Write 3 debate points each for and against the topic “Animal testing for beauty products should be banned”. *4M*
- VII.* Your friend believes that the films produced today are inferior to those produced forty years ago. Enact a dialogue on the situation between you and your friend. *4M*
- VIII.* Enact a telephone conversation with your classmate about the class project. *4M*
- IX.* Imagine a situation where you have met a popular movie star. Construct a dialogue of greeting each other and taking leave. *4M*
- X.* Bhavana is at the wedding reception of a friend Jennifer. She has not met Jennifer’s father. So, she introduces herself and tells him about herself. Construct a dialogue between Bhavana and Jennifer’s father. *4M*
- XI.* A stranger comes and asks your help in finding out a post office near you. How do you give directions to the stranger to reach post office? *3M*

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