

INDIAN GOVERNMENT AND POLITICS

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Explain the Indian Government Act of 1909.
2. Explain any three Fundamental Rights.
3. Describe the six freedoms of a citizen.
4. Mention any two Emergency Powers of the Indian President.
5. Write briefly the composition of the State Legislative Council.
6. Explain the powers and functions of the Union Council Of Ministers.
7. What do you know about Public Accounts Committee?
8. Write about Judicial Review.

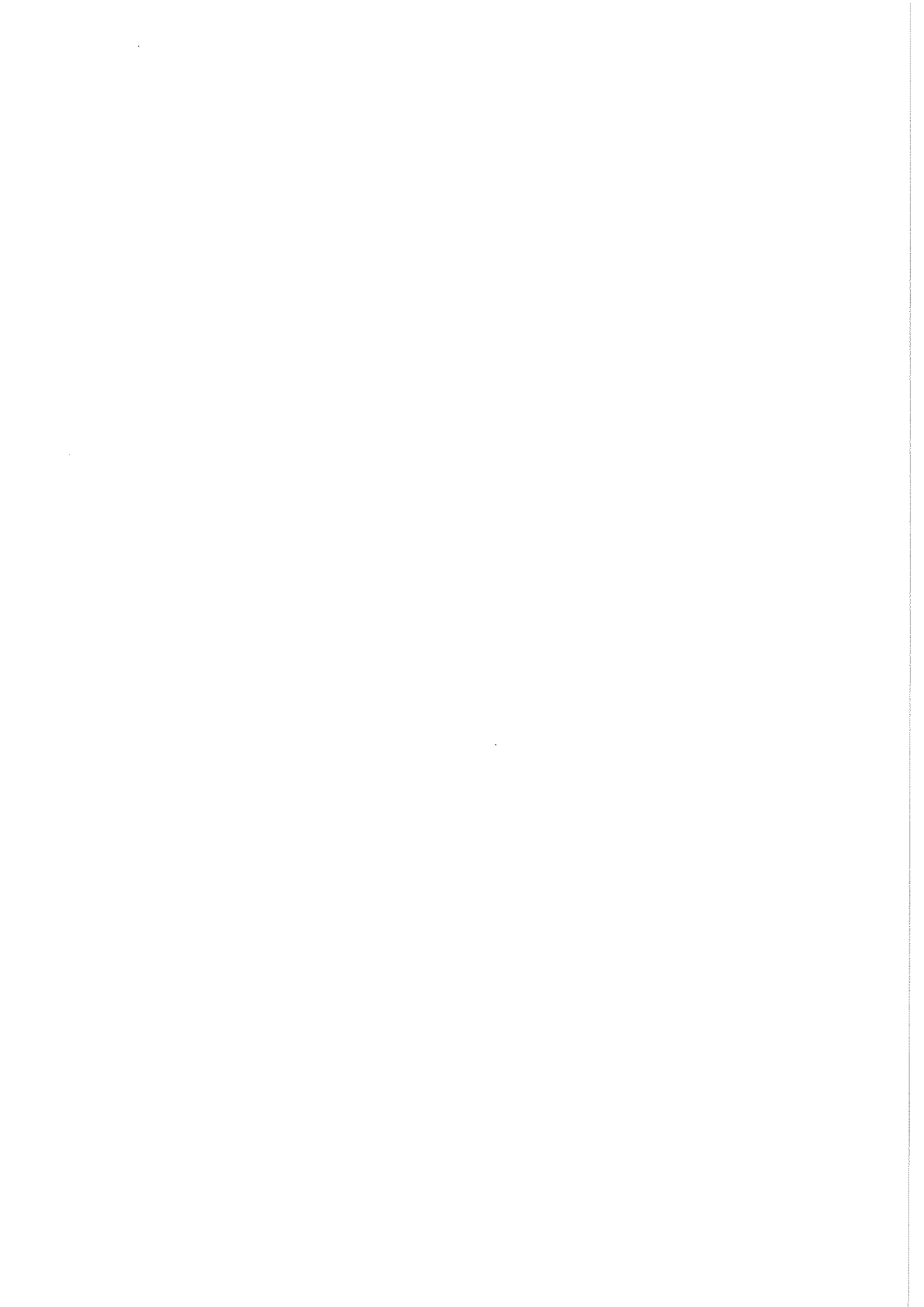
Section B

Answer the following:

5 x 10 = 50M

9. a) What is Constitution? Explain the historical back ground of the Indian Constitution.
or
b) Explain the salient features of Indian Constitution.
10. a) Explain the various types of Directive Principles of State Policy mentioned in Indian Constitution.
or
b) Describe the Fundamental Duties.
11. a) Explain the powers and functions of the Lok-Sabha Speaker.
or
b) Explain the powers and functions of the President of India.
12. a) Discuss the powers and functions of the Governor.
or
b) Explain the powers and functions of the Chief Minister.
13. a) Explain the powers and functions of Supreme Court of India.
or
b) Write the composition, powers and functions of High Court.

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SEE JAN'24

COMT33/25-01-2024

MARKETING

No. of Pages: 1

Time: 3Hrs

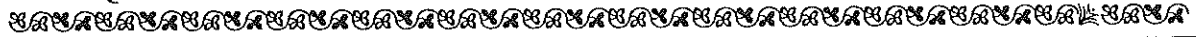
No. of Questions: 13

Roll No:

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Max. Marks: 75M

Pass Min: 30M



SECTION-A

Answer any FIVE of the following questions.

5x5=25Marks

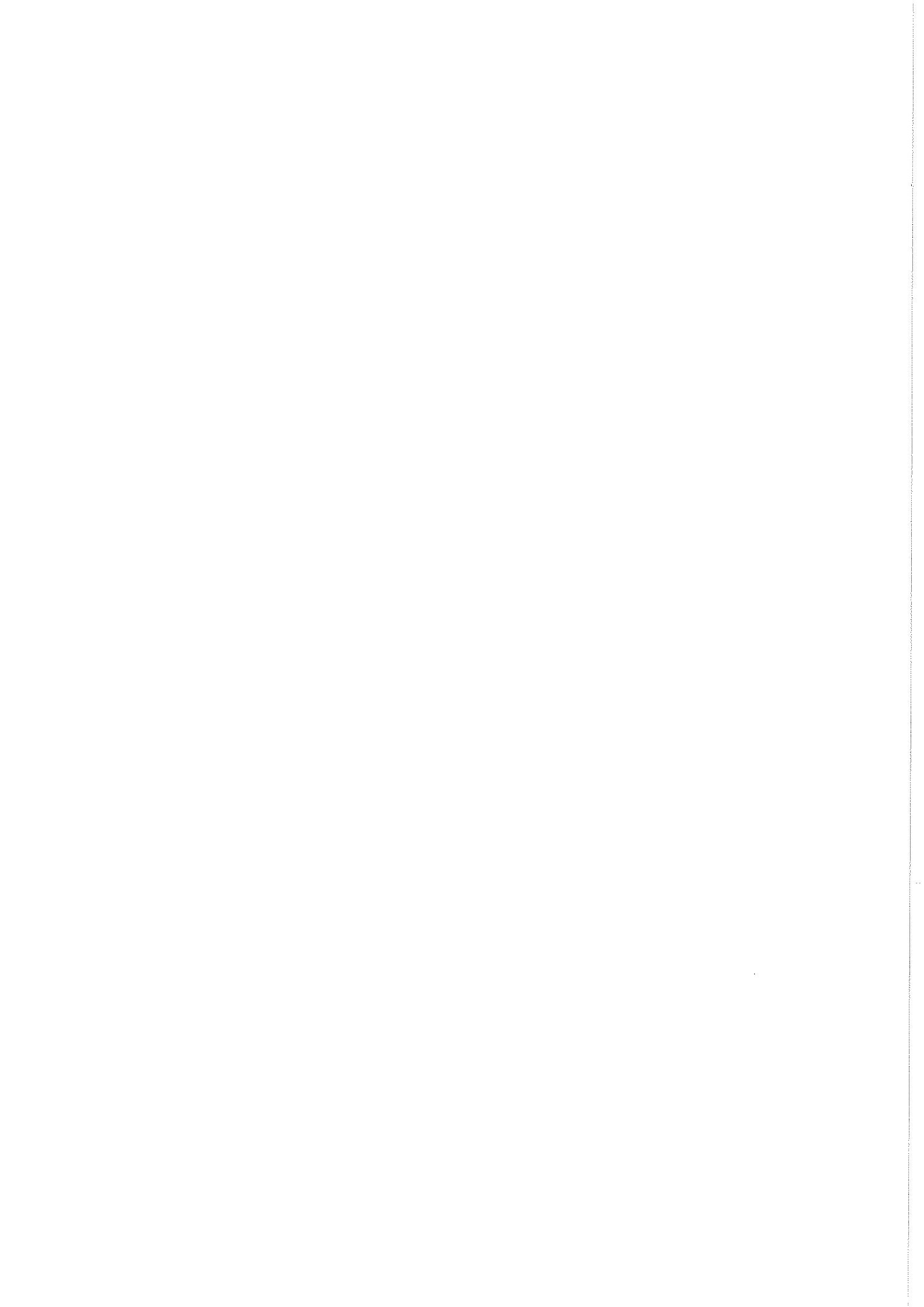
1. Marketing Mix
2. Market Segmentation
3. Consumer Behaviour
4. Product Mix
5. Product Design
6. Skimming Price
7. Public Relations
8. Sales Promotion

SECTION-B

Answer the following questions.

5X10=50 Marks

9. (a) Explain various marketing concepts.
[OR]
9. (b) Discuss about 4 P's of Marketing.
10. (a) What are the advantages of Segmentation.
[OR]
10. (b) Write about stages in buying decision process.
11. (a) Explain different levels of product.
[OR]
11. (b) Describe about Product Life Cycle.
12. (a) Explain about factors influencing price determination.
[OR]
12. (b) Explain various pricing strategies.
13. (a) Write about various channels of distribution.
[OR]
13. (b) Write about online marketing.



SEE JAN'24

CSCT31B/25-01-2024

PROGRAMMING IN C

No. of Pages: 1

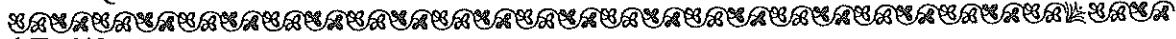
Time: 3Hrs

No. of Questions: 13

Roll No:	
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Max. Marks: 75M

Pass Min: 30M



SECTION-A

ANSWER ANY FIVE QUESTIONS

5×5=25M

1. Write about Flow Chart with example.
2. Explain types of Computers.
3. Explain Structure of C program.
4. Explain Recursive functions with example.
5. Write about NULL Pointers.
6. Explain Bitwise operators in C.
7. Write about One dimensional Arrays in C.
8. Write a C program to perform Matrix Addition.

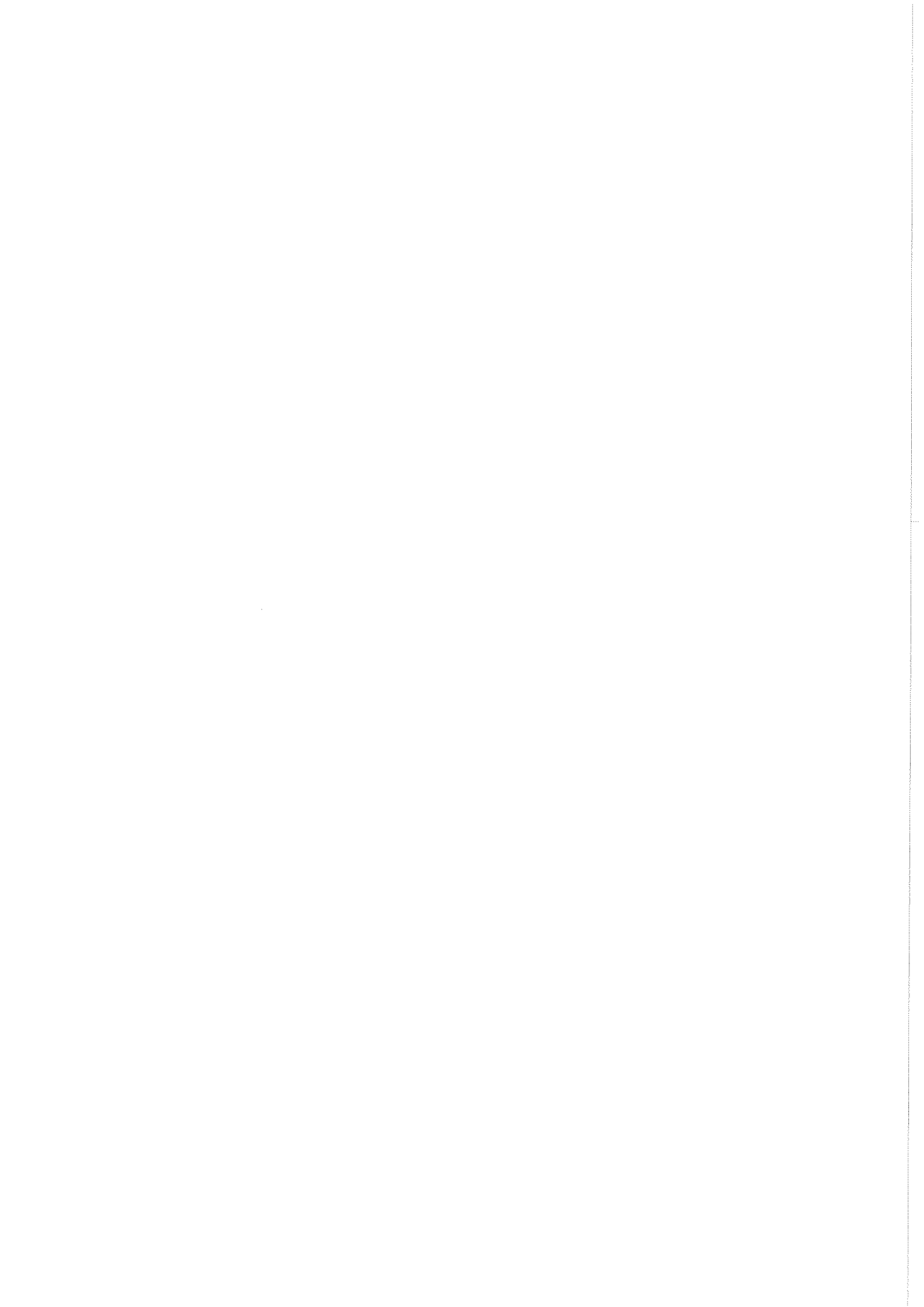
SECTION-B

ANSWER ALL THE QUESTIONS

5×10=50M

9. A) Explain Characteristics and limitations of Computers.
(OR)
B) Explain Generations of Programming Languages.
10. A) Explain Basic Data Types in C.
(OR)
B) Explain Iterative Statements with Examples.
11. A) Explain Operations on ARRAYS with Examples.
(OR)
B) Explain String handling functions with examples.
12. A) Explain Storage Classes with an Examples.
(OR)
B) Explain Array of Structures with an Example.
13. A) Explain Dynamic Memory Allocation in C with examples.
(OR)
B) Explain Error Handling during File Operations.





PROGRAMMING WITH C AND C++

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

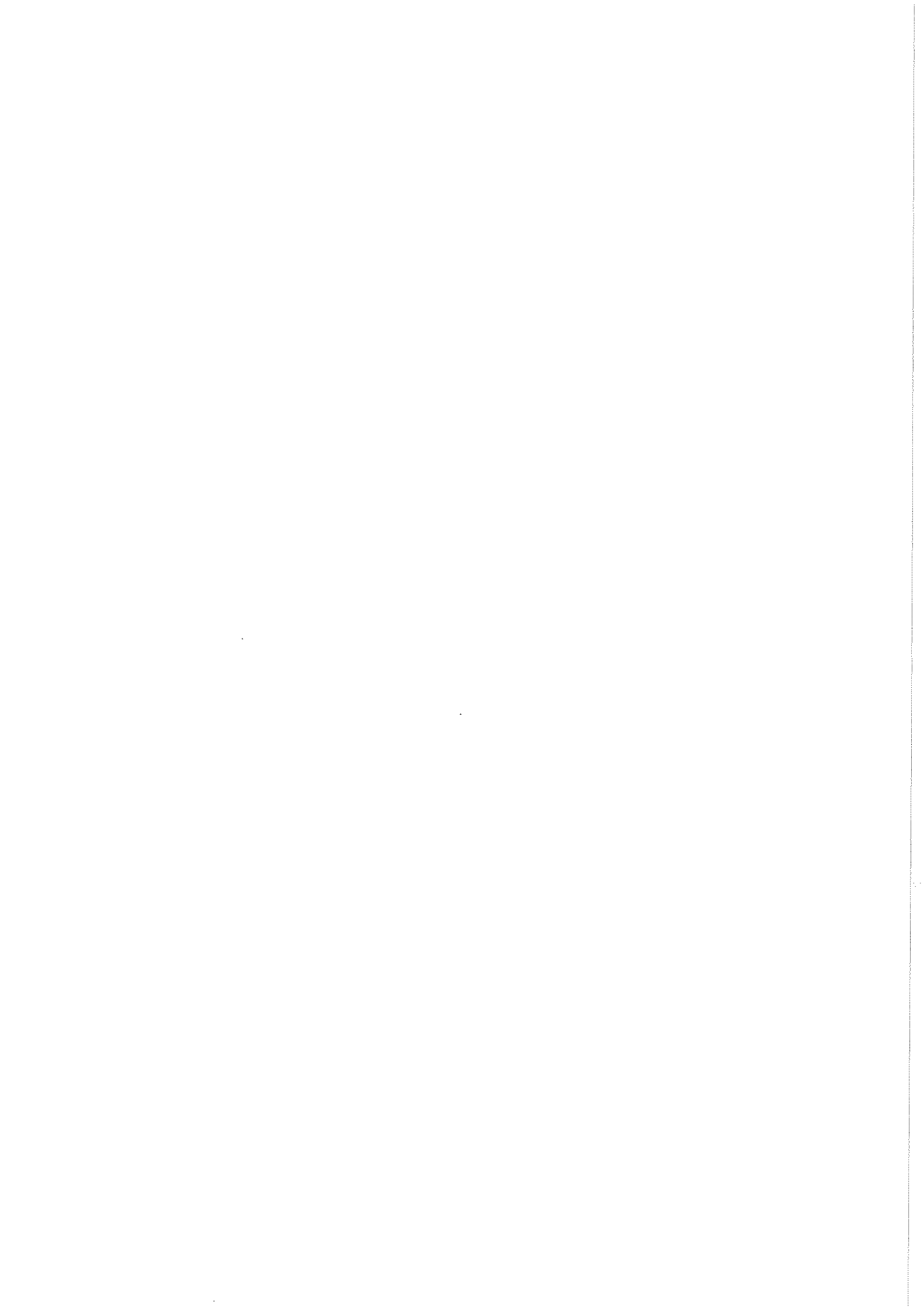
1. Define variable. Explain the rules for constructing variables in C language.
2. Explain any 5 operators used in C language.
3. What is a function? Explain the differences between user defined and library functions.
4. What is structure? Explain the C syntax of structure declaration with example.
5. Define inheritance and explain it with an example.
6. What are the basic data types in C program?
7. Differentiate between while and do-while.
8. Explain with suitable example how to declare and initialize one dimensional array.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the generations of programming languages in detail.
or
b) What is a token? What are the different types of token available in C language?
10. a) Explain with syntax, if, if-else and nested if-else statements in C program.
or
b) Explain switch statement with syntax and example.
11. a) Write a 'C' program to find the largest element in an array.
or
b) Explain function call, function definition and function prototype with examples.
12. a) Explain with syntax and example. Any five string manipulation library functions.
or
b) Differentiate between structure and union along with syntax and examples.
13. a) Describe the object oriented concepts in C++ with examples.
or
b) What is overloading? What are the rules for operator overloading and explain with an example?



SOLID GEOMETRY

No. of Pages: 02

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

- Find the equation to the plane through the points (2,2,1), (9,3,6) and perpendicular to the plane $2x + 6y + 6z = 9$.
- Find the bisecting plane of the acute angle between the planes $3x - 2y - 6z + 2 = 0$ and $2x - y + 2z + 2 = 0$.
- Find the distance of the point (1,-2,3) from the plane $x - y + z = 5$ measured parallel to the line whose d.c's are proportional to 2,3,-6.
- A plane passes through a fixed point (a,b,c). show that the foot of the perpendicular to the plane from the origin lies on the sphere $x^2 + y^2 + z^2 - ax - by - cz = 0$
- Find the equation to the sphere through the circle $x^2 + y^2 + z^2 = 9$, $2x + 3y + 4z = 5$ and the point (1,2,3).
- Find the equation of the cone whose vertex is (1,2,3) and base $y^2 - 4ax, z = 0$.
- Find the equation to the cone which passes through the three coordinate axes as well as the three lines $\frac{x}{2} = \frac{y}{1} = \frac{z}{-1}$, $\frac{x}{1} = \frac{y}{3} = \frac{z}{5}$ and $\frac{x}{8} = \frac{y}{-11} = \frac{z}{5}$
- Find the equation of the quadric cylinder whose generator^s are parallel to z-axis and guiding curve $ax^2 + by^2 + cz^2 = 1$, $lx + my + nz = p$

SECTION - B

Answer the following:

5 X 10 = 50M

- (a) Show that the equation $x^2 + 4y^2 + 4z^2 + 4xy + 8yz + 4zx - 9x - 18y - 18z + 18 = 0$ represents a pair of parallel planes. Hence find the distance between them.
OR
(b) A variable plane is at a constant distance $3p$ from the origin and meets the axes in A,B,C. Show that the locus of the centroid of the ΔABC is $x^{-2} + y^{-2} + z^{-2} = p^{-2}$.
- (a) A variable plane makes intercepts on the axes, the sum of whose squares is k^2 (constant). Show that the locus of the foot of the perpendicular from origin to the plane is $(x^{-2} + y^{-2} + z^{-2})(x^2 + y^2 + z^2)^2 = k^2$.
OR
(b) Prove that the lines $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}$, $\frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5}$ are coplanar. Also find their point of intersection and the plane containing the lines.

Contd...(2)

11. (a) Show that the two circles $x^2 + y^2 + z^2 - y + 2z = 0, x - y + z = 2$ (1),
 $x^2 + y^2 + z^2 + x - 3y + z - 5 = 0, 2x - y + 4z - 1 = 0$ (2) lie on the same sphere and find its equation.

OR

- (b) Find the limiting points of the coaxial system of spheres

$$x^2 + y^2 + z^2 - 20x + 30y - 40z + 29 + \lambda(2x - 3y + 4z) = 0.$$

12. (a) Find the equation of the lines of intersection of the plane $2x + y - z = 0$ and the cone $4x^2 - y^2 + 3z^2 = 0$.

OR

- (b) Find the enveloping cone with vertex at the origin and generators touching the sphere

$$x^2 + y^2 + z^2 - 2x + 4z - 1 = 0$$

13. (a) Find the equation of the cylinder whose generators are parallel to $\frac{x}{1} = \frac{y}{2} = \frac{z}{3}$ and which passes through the curve $x^2 + y^2 = 16, z = 0$

OR

- (b) Find the equation to the right circular cylinder whose guiding circle in

$$x^2 + y^2 + z^2 = 9, x - y + z = 3$$

* * *

2020 batch
2021 batch

SEE January 24

BOTT01 / 25-01-2024

Plant Physiology and Metabolism

No. of Pages:1

Roll No.:

Max. Marks: 75M

Time: 3 Hrs.

No. of Questions: 13

Pass Min. : 30M

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*Note : Draw neat labelled diagrams wherever necessary.*

**SECTION A**

*Answer any FIVE of the following:*

*5 x 5 = 25M*

1. Explain diffusion with examples.
2. State the physical properties of water.
3. Nomenclature and classification of enzymes.
4. Differences between aerobic and anaerobic respiration.
5. Emerson enhancement effect.
6. Describe C<sub>4</sub> cycle.
7. Classification of lipids.
8. Write short notes on Ethylene.

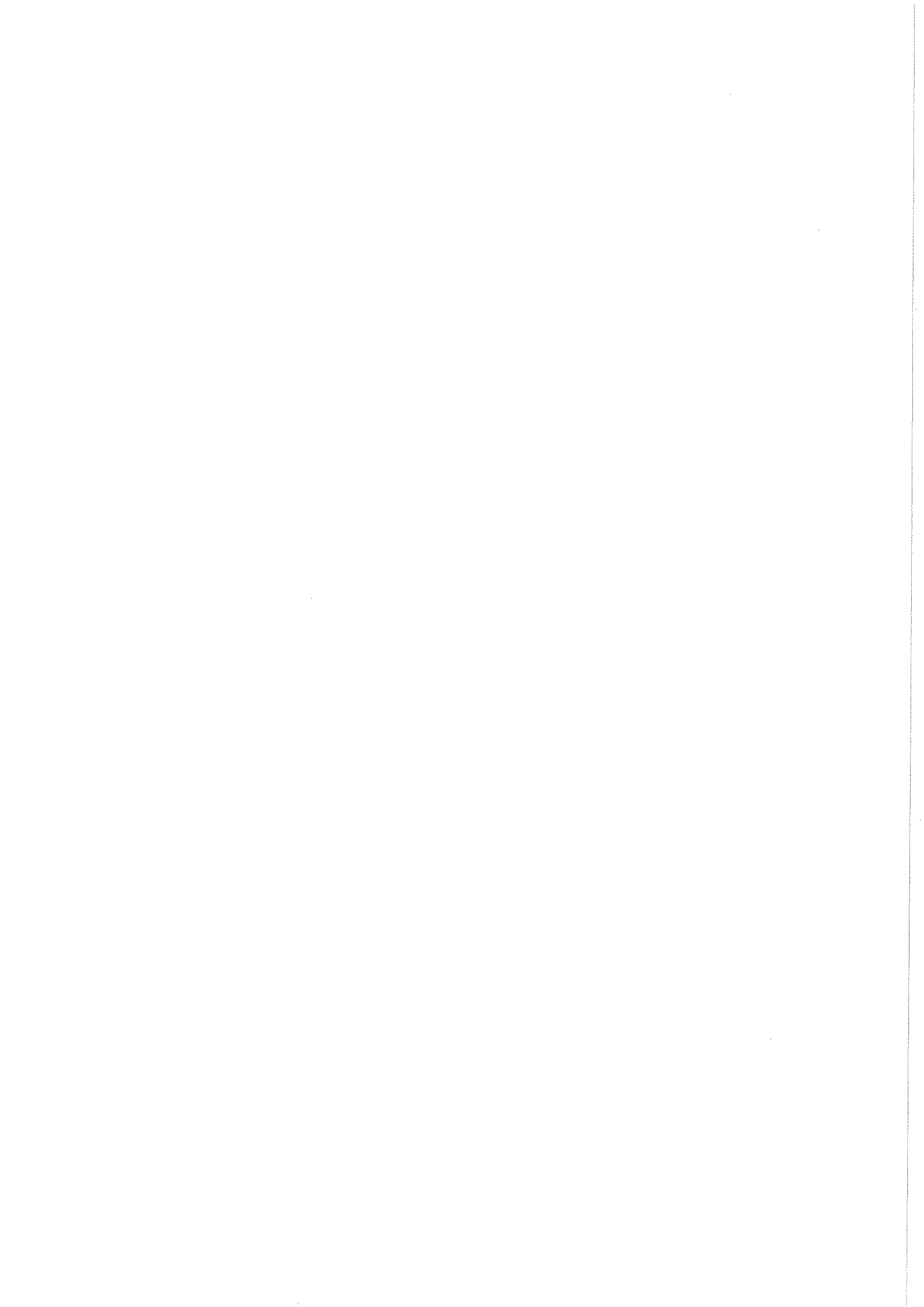
**SECTION B**

*Answer the following:*

*5 x 10 = 50M*

9. a) Describe the mechanism of stomatal opening and closing  
OR  
b) Define and explain ascent of sap.
10. a) Elaborate the role of macro elements and their deficiency symptoms.  
OR  
b) Explain the reactions of Krebs cycle.
11. a) Write an essay on photosynthetic pigments.  
OR  
b) Describe briefly photorespiration.
12. a) Give an account of biological nitrogen fixation.  
OR  
b) Explain  $\beta$  oxidation of fatty acids.
13. a) What are phytohormones? Analyse the physiological effects of auxins .  
OR  
b) What is photoperiodism? Explain the role of phytochrome in physiology of flowering.

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## Statistical Methods for Economics

No. of Pages: 02

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. Briefly explain the merits of statistics
2. Explain the uses of Census method
3. Differences between Schedule and Questionnaire
4. Find the A.M

|   |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|
| X | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
| F | 2  | 5  | 10 | 15 | 12 | 4  | 2  |

5. Find the Mean deviation through mean to the given data  
Heights: 150 152 154 157 160 164 167 170 171 175
6. Explain the uses of Correlation
7. Demand forecasting
8. Explain the uses of Index numbers

Section B

Answer the following question:

5 x 10 = 50M

9. a) Define Statistics and Explain scope and importance of Statistics?

Or

- b) Explain the merits and demerits of Sampling techniques.

10. a) Explain the significance of diagrammatic presentation of data.

Or

- b) Draw percentage bar diagram from the following data

|             |      |            |        |           |         |        |
|-------------|------|------------|--------|-----------|---------|--------|
| items       | Rice | vegetables | Fruits | Furniture | Clothes | others |
| Expenditure | 1250 | 530        | 450    | 2500      | 3000    | 1570   |

11. a) Explain the merits and demerits of Median.

Or

## Statistical Methods for Economics

b) Find the quartile deviation from the following data.

|                 |       |       |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Wages           | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| No. of. workers | 10    | 23    | 26    | 19    | 10    | 8     | 4     |

12. a) Define regression equations and explain the uses of regression equations.

Or

b) Calculate Karal Pearson Coefficient of correlation to the given data

|                  |    |    |    |    |    |    |    |
|------------------|----|----|----|----|----|----|----|
| Economics Marks  | 78 | 89 | 97 | 69 | 59 | 48 | 35 |
| Statistics Marks | 75 | 88 | 95 | 60 | 80 | 70 | 50 |

13. a) Define index numbers and explain the problems in construction of index Numbers

Or

b) From 1999-2000 to 2007-08 yield of sugarcane (M/T) per hectare in India is given in tonnes. Determine the linear trend using the method of least squares based on the data.

|         |           |         |         |         |         |         |         |         |         |
|---------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Year    | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
| Product | 33        | 36      | 39      | 44      | 45      | 48      | 51      | 54      | 57      |

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- 2 -

## Taxation

No. of Pages: 02

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: a) assessee b) Previous year
2. How do you determine residential status of an individual?
3. Write a short note on House Rent Allowance.
4. Explain deductions U/S 16.
5. What is meant by Gross Annual Value?
6. List out any 10 allowable expenses.
7. Define Input Tax credit.
8. Write a short note on scope of GST.

Section B

Answer the following:

5 x 10 = 50M

9. a) Define exempted income. List any 10 exempted incomes.  
or  
b) Following are the incomes of Mr. Suresh Kumar for the previous year 2022-2023.
  - i) Profit for business in Bangalore Rs.10,000.
  - ii) Income accrued in India but received in Japan Rs.4,000.
  - iii) Profit from business in Canada but received in India Rs.5,000.
  - iv) Income from house property in Karachi received in Bombay Rs.4,000.
  - v) Profit from business established in England and deposited there the business being controlled from India Rs.20,000.
  - vi) Income from house property in America and deposited there Rs.2,000.
  - vii) Past untaxed income brought into India during the previous year Rs.10,000.

Compute the total income of Suresh Kumar for the assessment year 2022-2023 if he is 1) Resident 2) NOR 3) Non – Resident.

10. a) Briefly explain types of perquisites taxable under the head income from salary.

or

- b) Basic salary Rs.14,000 p.m.; D.A Rs.7,000(enters into retirement benefits); Commission Rs.5,000; Bonus Rs.12,000; Employer's contribution to RPF 14% of salary House rent allowance Rs.3,000 p.m. Rent paid Rs.2,500 p.m.; Professional tax paid Rs.2,000 From the above information compute income from salary of Mrs. Vanitha.

Contd.....(2)

## Taxation

11. a) Explain, different rental values under income from house property.

or

b) Miss Haasitha owns a house property at Cochin. It consists of 3 independent units and information about the property is given below:  
 Unit – I: Own residence; Unit – II: Let out; Unit – III: Own business  
 MRV Rs.1,20,000 p.a.; FRV Rs.1,32,000 p.a.; Standard rent Rs.1,08,000 p.a.;  
 Rent Rs.3,500 p.m.; Unrealized rent for 3 months; Repairs Rs.10,000;  
 Insurance Rs.2,000; Interest on money borrowed for the construction of  
 property Rs.96,000; Municipal taxes Rs.14,400.  
 Compute her income from house property.

12. a) Define business. Explain any 10 disallowable expenses.

or

b) Following is the profit & Loss Account of Havanesh for the previous year 2022-2023:

## Profit &amp; Loss Account

|                                                         | Rs.    |                                               | Rs.    |
|---------------------------------------------------------|--------|-----------------------------------------------|--------|
| To Salaries                                             | 25,650 | By Gross profit                               | 80,000 |
| To Rent                                                 | 1,000  | By Bank interest                              | 450    |
| To Commission on sales                                  | 100    | By Bad debts recovered<br>(last year allowed) | 2,000  |
| To Income tax                                           | 2,600  | By Rent from house<br>property                | 4,800  |
| To Entertainment expenses                               | 600    | By Interest on<br>commercial securities       | 2,000  |
| To Commission paid to collect<br>interest on securities | 25     |                                               |        |
| To Embezzlement by cashier                              | 1,000  |                                               |        |
| To Municipal tax of H.P                                 | 600    |                                               |        |
| To Bad debts (allowed)                                  | 450    |                                               |        |
| To repairs to house                                     | 1,625  |                                               |        |
| To Office expenses                                      | 9,180  |                                               |        |
| To Depreciation                                         | 5,000  |                                               |        |
| To LIC premium                                          | 1,320  |                                               |        |
| To Net profit                                           | 40,100 |                                               |        |
|                                                         | 89,250 |                                               | 89,250 |

Depreciation on the assets is Rs.4,500

Compute the taxable business income for the assessment year 2023 – 2024.

13. a) Define GST. Explain merits & demerits of GST.

or

b) Explain the salient features of customs.

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## INCOME TAX

No. of Pages: 02

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 person under Section 2(31) of Income Tax Act.
2. House Rent Allowance.
3. Deductions under Section 24.
4. Write about Expenses Expressly Disallowed.
5. What is capital asset? State the assets which are not included in the term capital asset.
6. Incidence of Tax.
7. Explain how can you compute Total Income of an Assessee.
8. What is Previous Year and Assessment Year?

Section B

Answer the following:

5 x 10 = 50M

9. a) Define Agricultural income. Give examples for both agricultural and non-agricultural incomes. And also explain partly agricultural and non agricultural income.

or

- b) Following are the details of Income of Mr. Ravi for the previous year 2022-23.

- i) Income accrued in India but received in Japan Rs.50,000
- ii) Income from agriculture in Srilanka Rs.1,00,000
- iii) Dividend from a co-operative society Rs.40,000
- iv) Past untaxed profits brought to India Rs.60,000
- v) Dividends from a Public company Rs.80,000.

Compute the total income of Mr. Ravi for the Assessment year 2023-24, if

- he is
- i) Resident
  - ii) Ordinary Resident and
  - iii) Not Ordinarily Resident

10. a) Explain the kinds of Provident Fund and its Tax Treatment.

or

- b) On the basis of the following information. Compute the taxable income of Mr. Yadadri under the head salaries for the assessment year 2023-24.

- i) Basic pay (p.m.) Rs.84,000
- ii) Dearness allowance (p.m.) Rs.12,000
- iii) Entertainment allowance (p.m.) Rs.7,500
- iv) Tribal area allowance (p.m.) Rs.3,500
- v) His own contribution towards statutory provident fund (p.m.) Rs.10,000

Contd.....(2)

## INCOME TAX

- vi) Employer's contribution (p.m.) Rs.10,000
- vii) Interest credited to SPF @ 10% per annum Rs.1,30,000
- viii) House Rent allowance (p.m.) Rs.16,000

Mr. Yadadri is an employee of the Government. He is residing in Araku paying Rs.24,000 p.m. as house rent.

11. a) How do you compute income from the let out and self occupied house property?

or

b) Mr. Pradeep furnished the following information in respect of a residential house whose construction is completed 1995 for the Assessment Year 2023-24.

- i) Annual rent Rs.72,000
- ii) Municipal taxes paid Rs.1,800
- iii) Ground rent payable Rs.60
- iv) Insurance Rs.80
- v) Interest on money borrowed for construction Rs.1,000
- vi) Collection charges paid Rs.300
- vii) Mr. Pradeep mortgaged the property for Rs.50,000 which was spent for his daughter's marriage
- viii) He paid Rs.3,600 as interest on the mortgage loan this year.

Compute his income from house property.

12. a) What are the general incomes under the head income from other sources?

or

b) Mr. Nandu owns a residential house at Agra which he acquired in May, 2009 for Rs.2,96,000. He sells the house for Rs.35,00,000 on August 18, 2021. He purchases a residential house at Kanpur on February 14, 2022 for Rs.20,00,000. Find out the amount of capital gains chargeable to tax for the Assessment year 2022-23. The cost of inflation index in 2009-10 and 2021-22 is 148 and 317 respectively.

13. a) Explain the deductions allowed to an individual under the Income Tax Act u/s 80.

or

b) Compute Total Income of Smt. Ramya from following information:

- i) Taxable salary (Net) Rs.75,000
- ii) Income from other sources Rs.20,000
- iii) Agricultural Income Rs.4,000

She deposited in LIC annuity plan Rs.18,000

She paid medical insurance premium by cheque for her dependent blind mother (certified as severe disable person) aged 68 years Rs.20,000.

==X ==X==

## INORGANIC AND PHYSICAL CHEMISTRY

No. of Pages: 02

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 inner and outer orbital complexes.
2. What is trans effect? Explain any one theory of trans effect.
3. Give the biological significance of Sodium and Potassium metals.
4. Define and give examples of congruent and freezing mixtures.
5. Define the terms of specific conductance, equivalent conductance and molar conductance with their units.
6. Explain gas electrode with examples.
7. Define order and molecularity of a reaction and write any one method for determination of order of a reaction.
8. Explain collision theory of bimolecular reactions.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain crystal field stabilization energy and give the 'd' orbital splitting in octahedral complexes.  
or  
b) Explain the following:
  - i) Stereo isomerism in coordination number 4 complexes.
  - ii) John Teller distortion effect.
10. a) What are Labile and inert complexes? Explain SN<sup>1</sup> and SN<sup>2</sup> substitution reactions in square planar complexes.  
or  
b) Write the following:
  - i) Determination of composition of complex by Job's method
  - ii) Applications of chelating agents.
  - iii) Structure of Haemoglobin.
11. a) Draw the phase diagram of water system. Apply phase rule to it and explain.  
or  
b) Write the following:
  - i) State the phase rule and explain the terms involved
  - ii) Phase diagram of Pb-Ag system.

Contd.....(2)

## INORGANIC AND PHYSICAL CHEMISTRY

12. a) Explain Kohlrausch's law and its applications.

or

b) Explain the following:

i) Determination of transport number by Hittorf's method.

ii) Nernst equation

13. a) Derive second order reaction, and give examples. Give the effect of temperature, pressure and catalyst on reaction rate.

or

b) Write the following:

i) Enzyme catalysis

ii) Derivation of Michaelis-Mentene equation.

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SEE-JANUARY-2024

22POLSDT02 /27 -01-2024

SOCIAL WORK

No. of Pages: 01

Roll No:

Max. Marks: 35M

Time: 2 Hrs

No. of Questions: 09

Pass Min.: 14M

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Section A

Answer any THREE of the following:

3 x 5 = 15M

1. Social Welfare services.
2. Discuss about values of social work.
3. Principles of group work.
4. Types of field work.
5. Explain the objectives of field work.

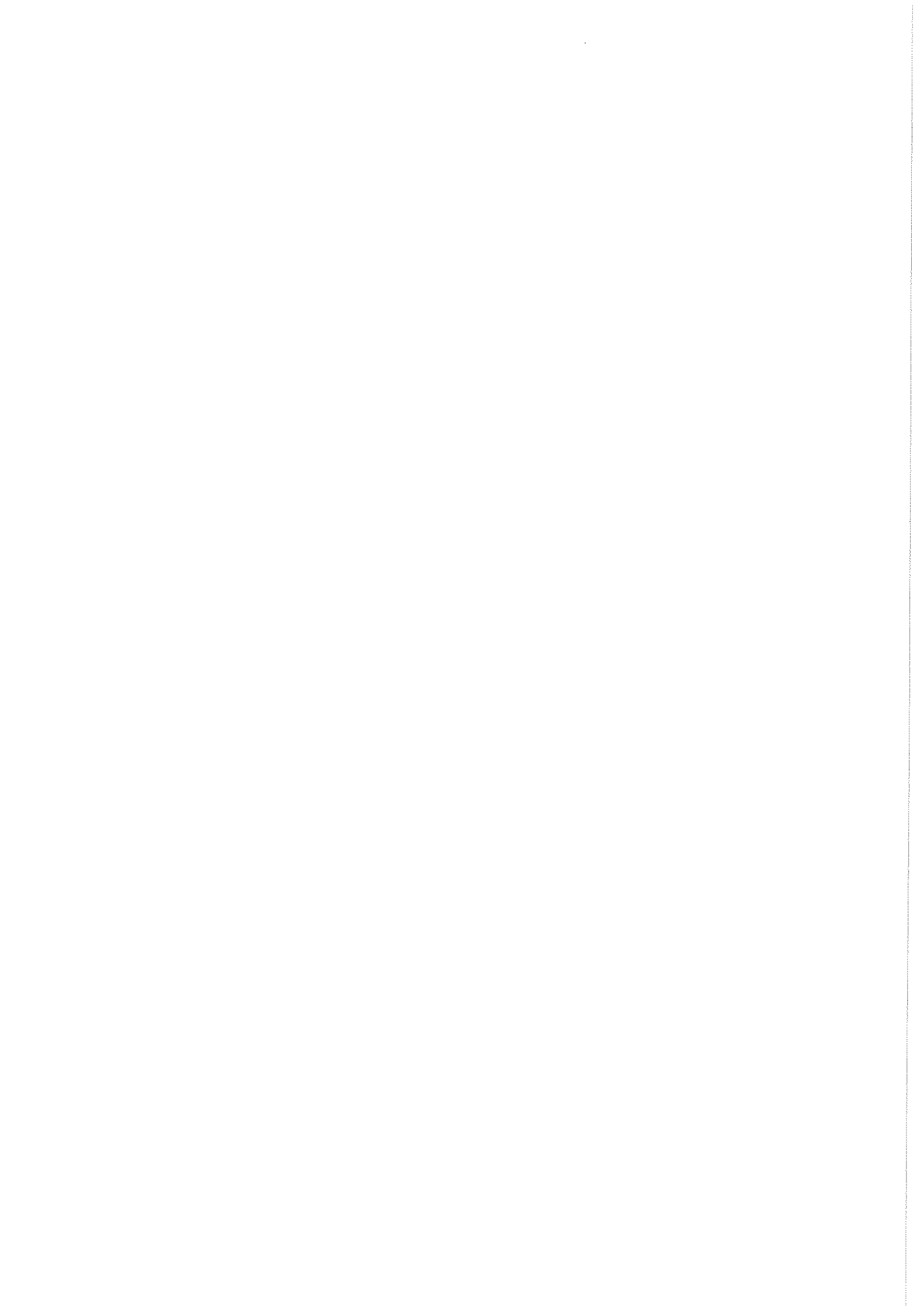
Section B

Answer any TWO of the following:

2 x 10 = 20M

6. Explain the scope, objectives and functions of social work.
7. Explain the major social problems in India.
8. Define social case work. What are the objectives of social case work?
9. What do you mean by field work? Write the nature of field work.

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2022 Batch

22ZOOSDT01/27-01-2024

SEE JAN'24

**POULTRY FARMING**

No. of Pages: 1

Time: 2Hrs

No. of Questions: 09

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

Max. Marks: 35M

Pass Min: 14M

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Note: Draw neat labelled diagrams wherever necessary.

SECTION – A

Answer any **THREE** of the following:

3 X 5 = 15M

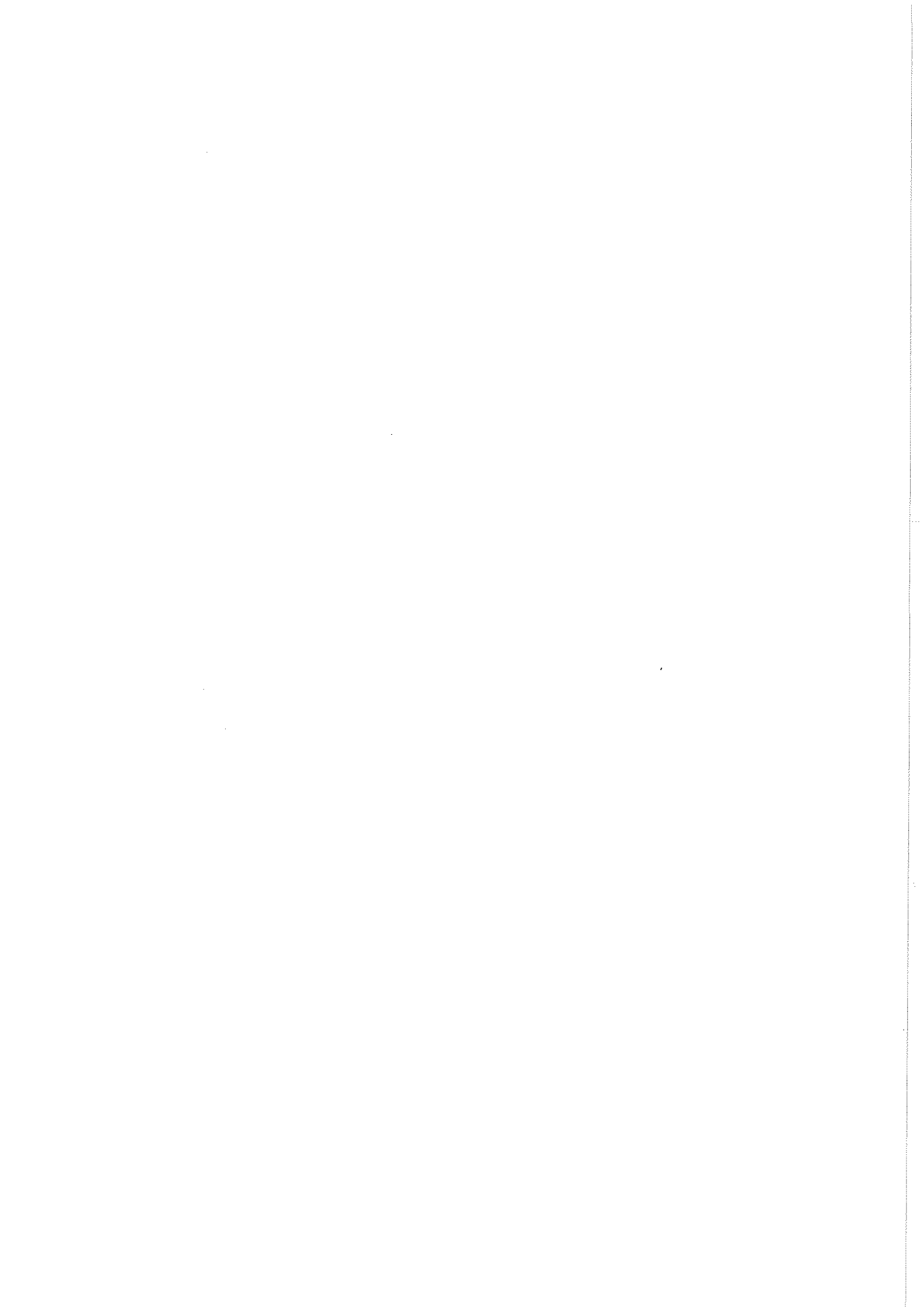
1. Definition of Poultry.
2. Growers.
3. Any two viral diseases.
4. Egg testing.
5. Recycling of Poultry waste.

SECTION – B

Answer any **TWO** of the following:

2 X 10 = 20M

6. State the principles of Poultry housing and explain the systems of Poultry farming.
7. Write an essay on two each of bacterial and parasitic diseases of Poultry.
8. Explain feed formulation and add a note on methods of feeding.
9. Write an essay on selection, handling and hatching of eggs.



ENVIRONMENTAL AUDIT

No. of Pages: 01
Time: 2 Hrs

Roll No:
No. of Questions: 09

Max. Marks: 35M
Pass Min.: 14M

SECTION-A

Answer any **THREE** Questions. Each question carries 5 marks. 3X5=15M

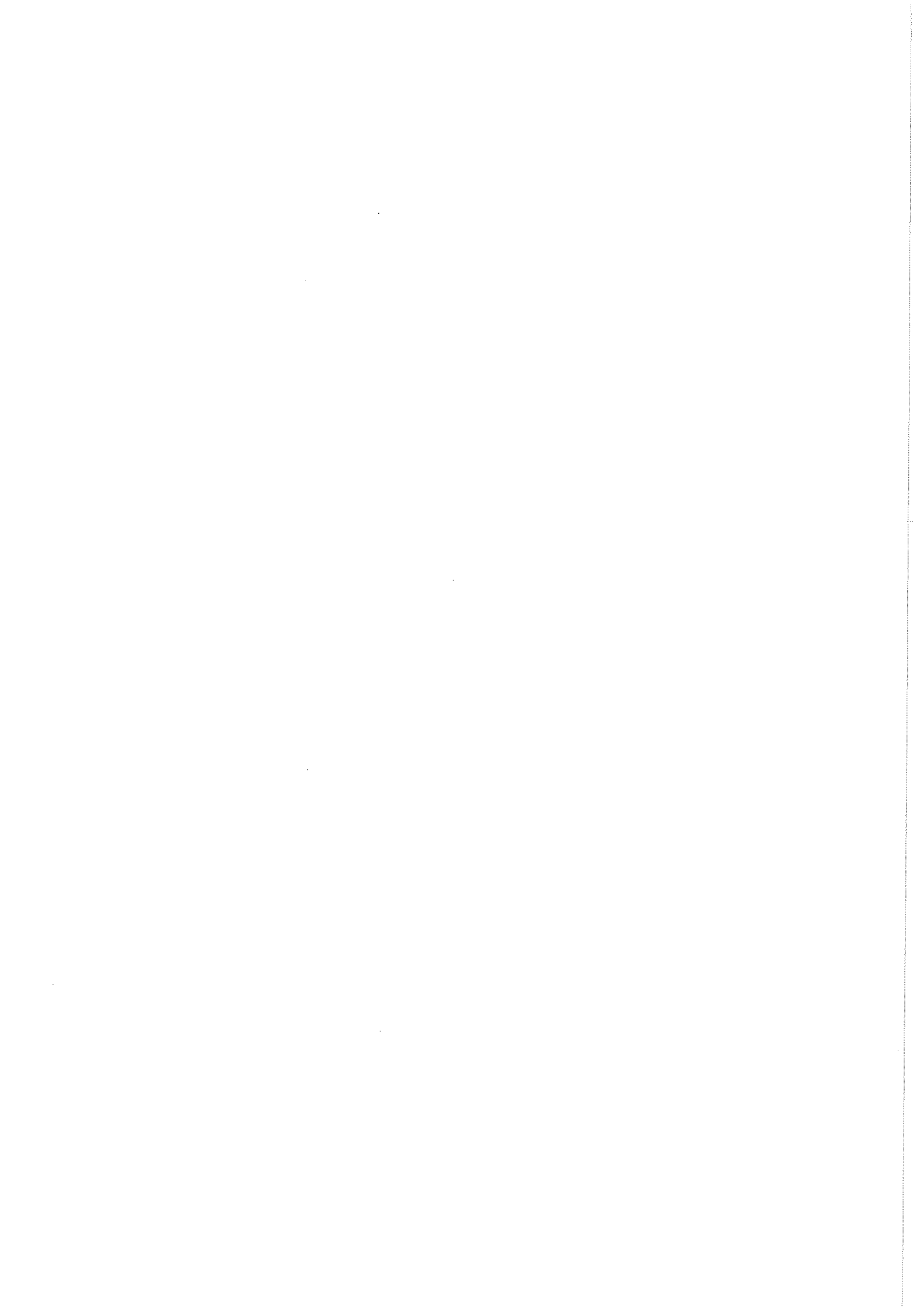
1. Write a note on sources of water pollution.
2. Write a note on water quality parameters.
3. Write a note on environmental protection act (1986).
4. Define environmental audit and write the objectives of audit.
5. Write the benefits of audit to industry.

SECTION-B

Answer any **TWO** Questions. Each question carries 10 Marks. 2X10=20M

6. Write a note on soil conservation.
7. Write a note on the Water (prevention & control of pollution) act 1974.
8. Write a note on the Air (prevention & control of pollution) act 1981.
9. Write the GOI notification on environmental audit.

————— X —————



SEE-JAN-2024

22PHYSDT02/ 27-01-2024

SOLAR ENERGY

No. of Pages: 01

Roll No:

Max. Marks: 35M

Time: 2 Hrs

No. of Questions: 09

Pass Min.: 14M

SECTION – A

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

(3 x 5 = 15 M)

1. Explain the construction and working of a Sun Shine Recorder.
2. Write a short note on Solar Pond.
3. Explain the process of Solar Distillation with a neat diagram.
4. Explain the principle of Solar Photovoltaic Cell.
5. Write a short note on Water Pumping.

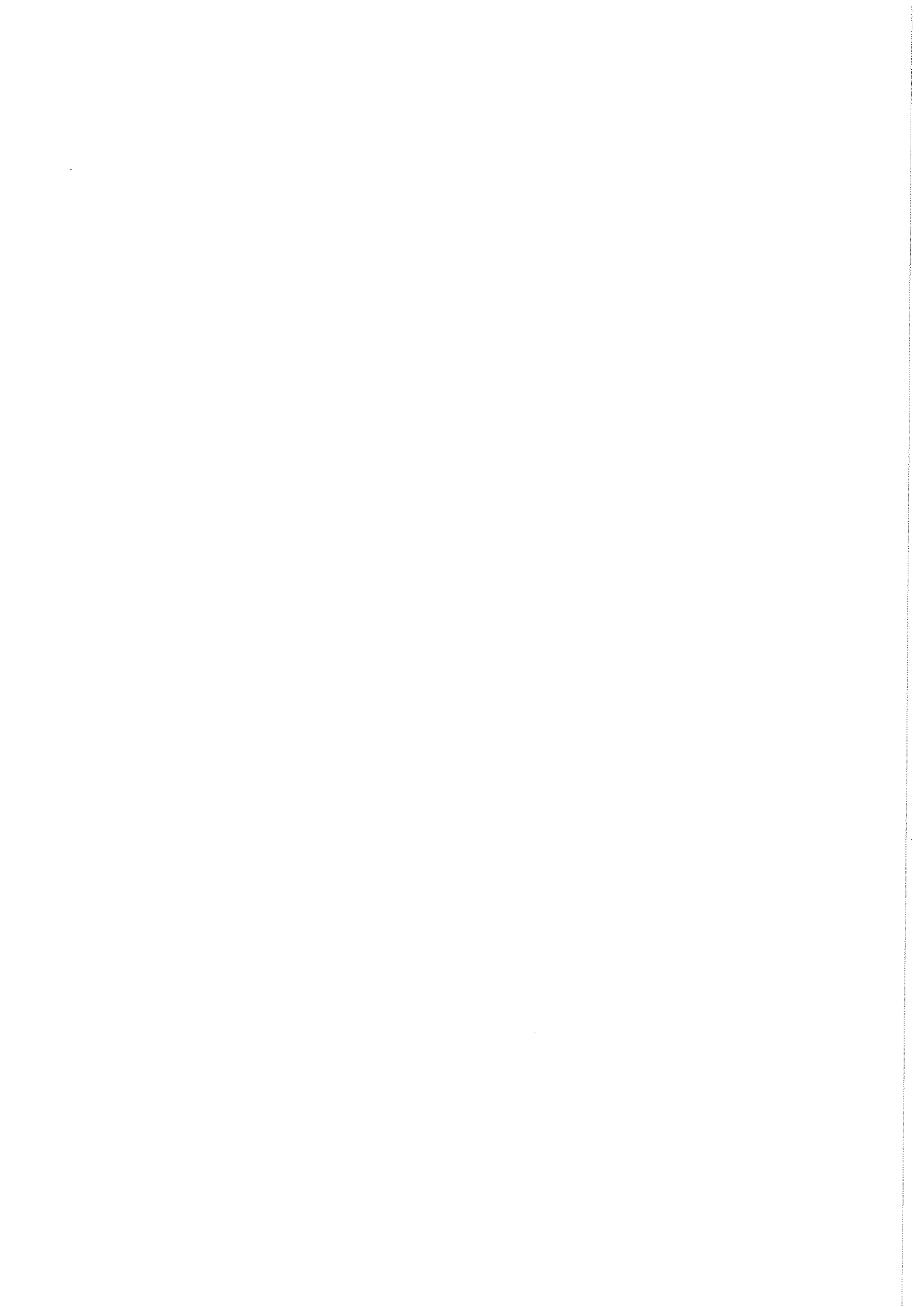
SECTION – B

Answer any **Two** questions. Each question carries 10 marks

(2 x 10 = 20 M)

6. Explain the principle, construction & working of a Pyroheliometer.
7. Explain the construction and working of Flat Plate collectors and Concentrating collectors.
8. Discuss in detail about the principle, construction and working of a Solar Cookers.
9. Explain the series and parallel combination of Solar cells.

= x =



POLT42

SEE JAN 2024

POLT32 / 27-01-2024

Western Political Thought

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

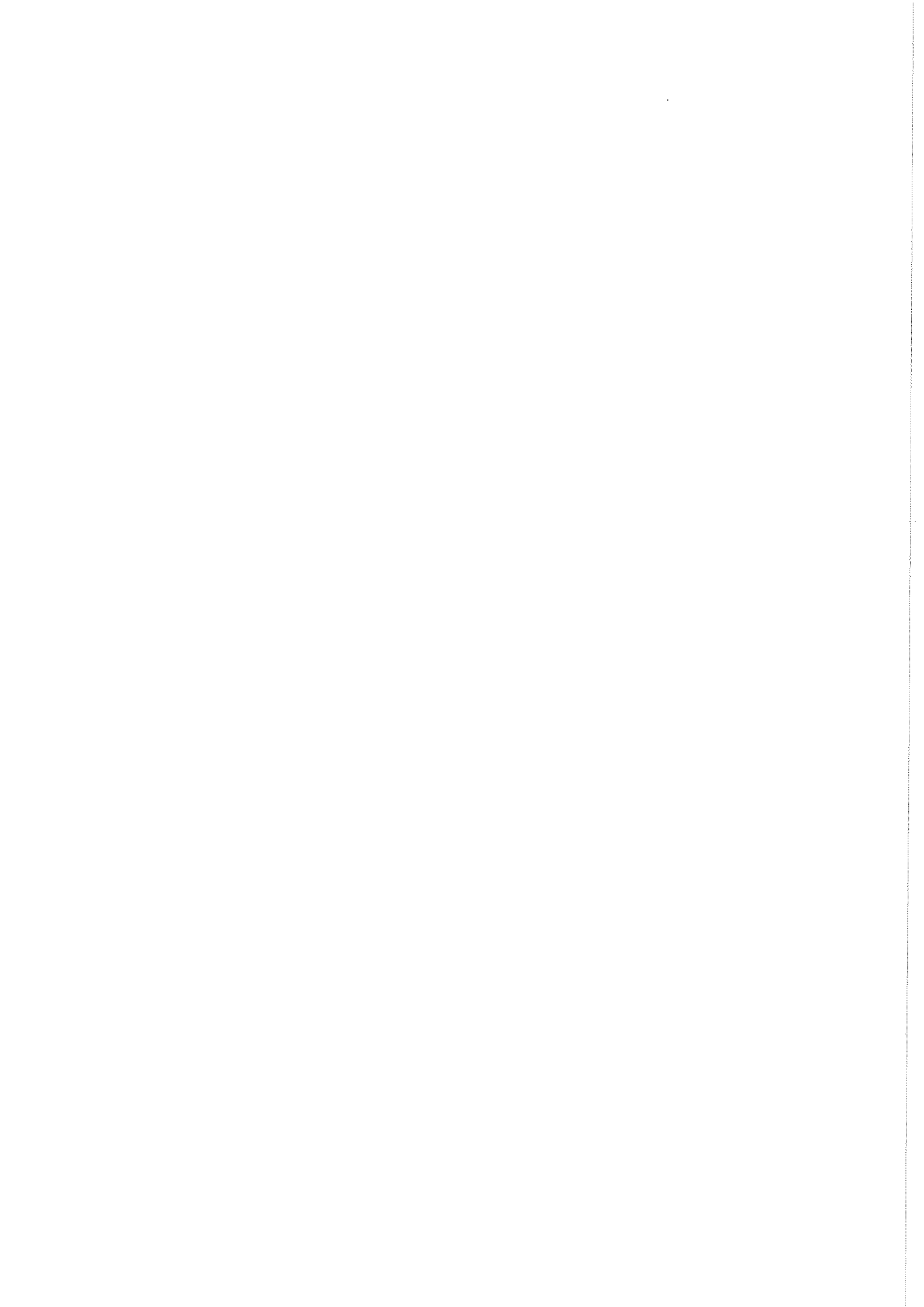
1. Aristotle classification of Governments.
2. Plato's theory of Ideal state.
3. The prince.
4. City of God.
5. Natural Rights theory of Hobbes.
6. Communist manifesto.
7. The theory of surplus value.
8. General will of Rousseau.

Section B

Answer the following:

5 x 10 = 50M

9. a) State and discuss Aristotle's views on justice and education.
or
b) Discuss Plato's theory of justice.
10. a) Why Machiavelli's is regarded as the first modern political thinker?
or
b) What are the qualities of a prince suggested by Machiavelli?
11. a) Explain the Rousseau's theory of General Will.
or
b) Discuss the social contract theory of Hobbes.
12. a) Explain Bentham's theory of utility.
or
b) What are the J.S. Mill's views on liberty?
13. a) State the basic tenets of Marxian Communism.
or
b) Explain the Hegemony theory of Antonio Gramsci.



Modern Physics

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) Describe Stern and Gerlach experiment and indicate the importance of the results obtained.
or
b) What are Stokes and anti Stokes lines? Explain in detail the Quantum theory of Raman effect.
2. a) What is de – Broglie hypothesis? Describe the Davisson and Germer experiment to prove that material particles possess wave characteristics.
or
b) What is Heisenberg's uncertainty principle? Obtain time – energy uncertainty with the help of position – momentum uncertainty. Does uncertainty principle apply for both microscope and macroscopic bodies?
3. a) Deduce Schrodinger time independent wave equation.
or
b) Derive an expression for the energy levels of a particle enclosed within infinite potential well.
4. a) Explain the properties of nucleus briefly with reference to size, radius, density, mass and charge.
or
b) Give a brief account of elementary particles and mention the properties of Leptons and Baryons.
5. a) Derive Laue's equation for X – ray diffraction in crystals.
or
b) What is superconductivity? Give the properties of superconductors.

Section B

Answer any THREE of the following:

3 x 5 = 15M

6. Explain spatial quantization.
7. Define group velocity and phase velocity.
8. What are Eigen functions and Eigen values?
9. Write an account of the characteristic features of nuclear forces.
10. Discuss about type I and type II superconductors.

Contd.....(2)

Modern Physics
Section C

Answer any TWO of the following:

2 x 5 = 10M

11. Calculate the glancing angles at which the first and second order diffraction maxima will be observed when X – rays of $\lambda = 1.92A^0$ are reflected from a cleavage of calcite with inter planar distance $d = 3.029A^0$.
12. Estimate the density of nuclear matter in kg/m^3 given that the nuclear radius $r=1.3XA^{1/3}$ fermi. Take the mass of the nucleus as A amu where A is mass number and $1 \text{ amu} = 1.66 \times 10^{-27} \text{ kg}$ and $1 \text{ fermi} = 10^{-15} \text{ M}$.
13. An electron has a speed of $3 \times 10^2 \text{ m/sec}$ accounts to 0.01%. With what fundamental accuracy can we locate the position of the election.
14. What is the lowest energy that a neutron(mass $1.67 \times 10^{-27} \text{ kg}$) can wave if confined to move along the edge of an impenetiable box of length 10^{-14} metre.

* * *

Applied Statistics

No. of Pages: 02

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Explain uses of index numbers.
2. Calculate cost of living index number for the following data commodity units weights prices(Rs.) in

Commodity	Index number	Weights
Food	250	50
Fuel and lighting	280	70
Clothing	360	20
House rent	180	18
Miscellaneous	160	25

3. Explain $3 - \sigma$ limits.
4. Define SQC and write its uses.
5. What are the applications of C – Chart?
6. Define vital statistics & uses of vital statistics.
7. Explain the construction of life table.
8. Explain scaling methods.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the criteria for good index number.
or
b) Write methods of index numbers and demerits of index number.
10. a) Fill in the blanks of the following table which are marked with:

Age	l_x	dx	qx	px	L_x	T_x	e^0x
20	93832	1293	?	?	?	3699301	30.42
21	?	1210	--	--	--	--	0

or

- b) Explain measurements of Mortality.
11. a) Explain the statistical basis of SQC.
or
b) Explain the construction of range and mean chart.
12. a) Explain the construction of P & C charts.
or
b) Explain any sampling inspection plans.

Contd.....(2)

Applied Statistics

13. a) Define reliability and validity test.

or

b) Letter grades A,B,C,D and E are assigned by two teachers X and Y to the students of class for honesty. The table gives the distribution of the proportion of individuals in each rating.

Teacher	A	B	C	D	E
X	0.10	0.15	0.50	0.20	0.05
Y	0.20	0.40	0.20	0.10	0.10

* * *

SEE JAN'24

ZOOT02/27-01-2024

IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY

No. of Pages: 1

Roll No:

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13

Note: Draw neat labelled diagrams wherever necessary.

SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

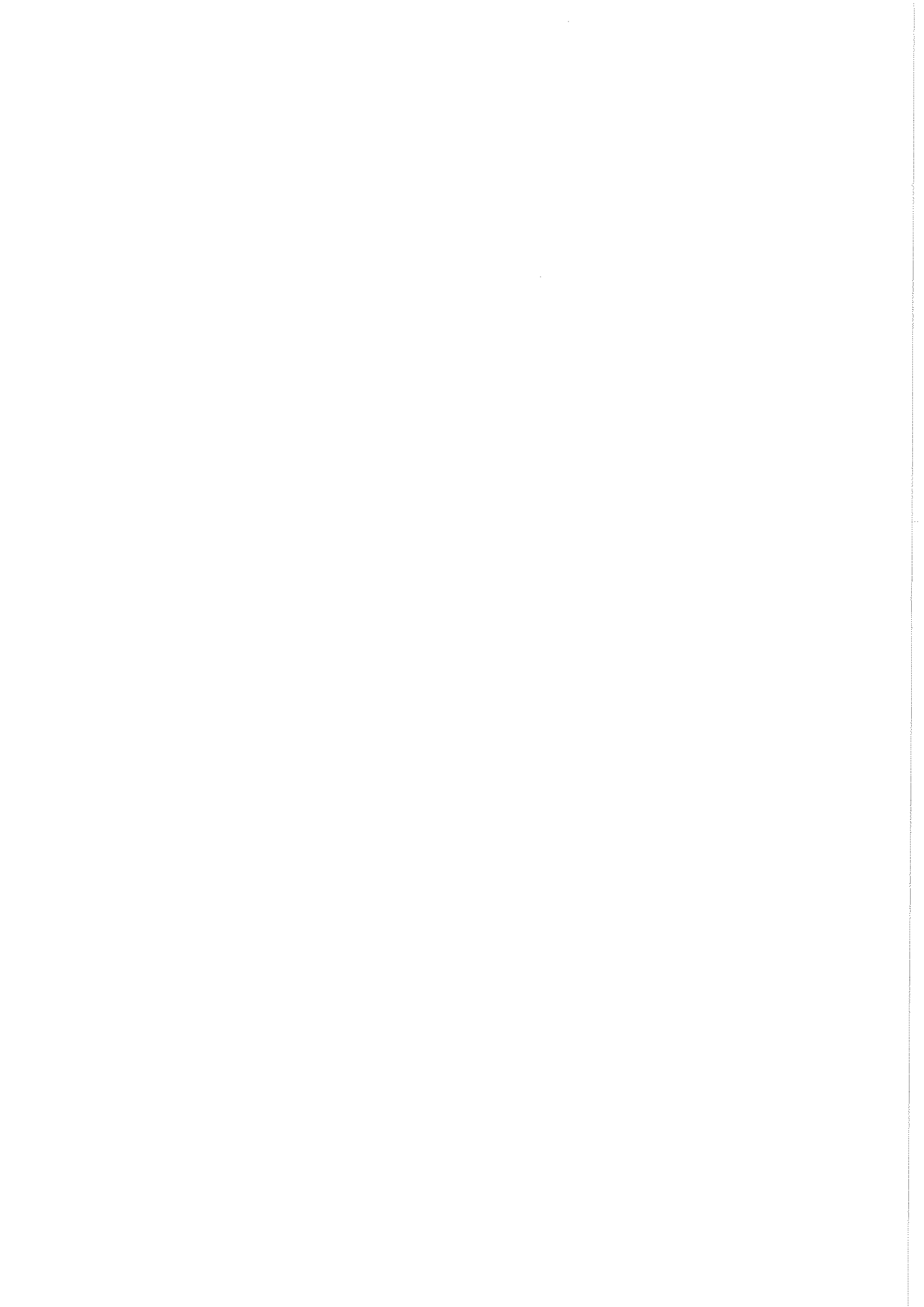
1. Describe the structure and functions of Thymus gland.
2. Role of T cells in immune system.
3. Illustrate the exogenous pathway of antigen presentation.
4. List out the functions of cytokines.
5. Explain the procedure of PCR.
6. HeLa cells usage in research.
7. Illustrate the cryopreservation of cultures.
8. Explain how the transgenic sheep is produced.

SECTION – B

Answer the following:

5 X 10 = 50M

9. (a) Elaborate the role of organs of immune system.
OR
(b) Enumerate the factors affecting innate immunity.
10. (a) Write about different types of antibodies and their functions.
OR
(b) Describe the functions of major histocompatibility complexes.
11. (a) Write an essay on Type II restriction endonucleases.
OR
(b) Compare the blotting techniques.
12. (a) What is hybridoma? How are the hybridomas established for production of monoclonal antibodies? Write any four applications of monoclonal antibodies.
OR
(b) Enumerate different types of stem cells and their applications.
13. (a) Write an essay on embryo transfer.
OR
(b) Give the outline of down stream processing.



SEE JAN 2024

POLT41 / 27-01-2024

Indian Political Process

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Write a short note on Sarkaria Commission recommendations.
2. Write about voting behaviour in India.
3. Powers and functions of the Grama Panchayathi.
4. Discuss the 74th Amendment Act.
5. Analyse the role of regionalism in Indian Politics.
6. Explain the powers and functions of Comptroller and Auditor General of India(CAG).
7. Explain the Lokpal and Lokayatta.
8. Write a short note on criminalization of Politics.

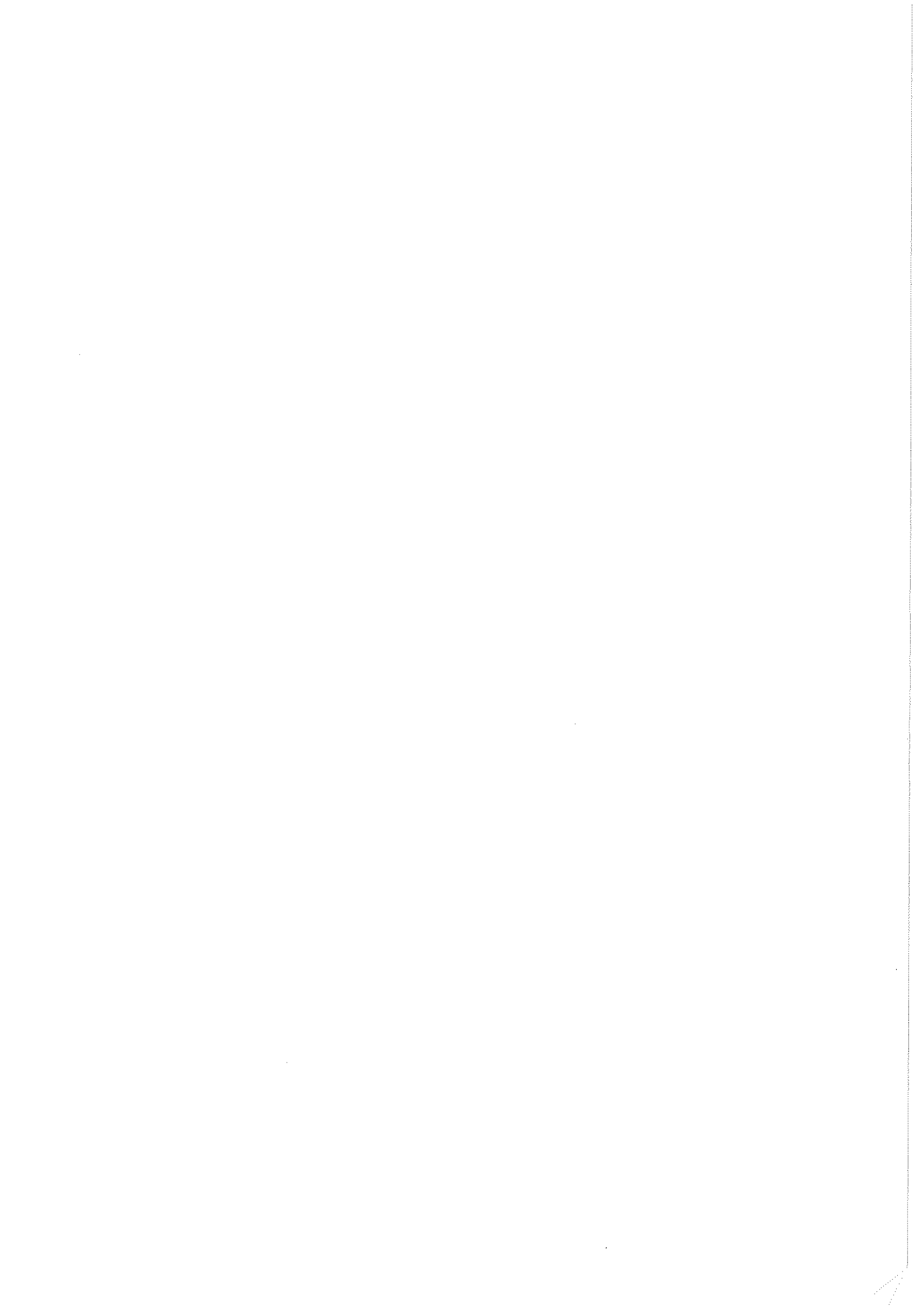
Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the features of Indian Federal System.
or
b) Describe the Central – State Relations between Legislative, Administrative and Financial Relations.
10. a) Explain the powers and functions of Election Commission of India.
or
b) An essay on Electoral Reform.
11. a) Write an essay on 73rd Amendment Act.
or
b) Explain the importance of Democratic Decentralization.
12. a) Describe the role of Caste, Religion and Language in Indian Politics.
or
b) How the politics of reservation and internal threats are challenges to Indian Political System?
13. a) Explain the powers and functions of NITI AYOJ.
or
b) Explain the powers and functions of Central Information Commission.

* * *



DATA BASE MANAGEMENT SYSTEMS

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. What are the advantages of DBMS?
2. Explain about specialization.
3. Explain Generalisation.
4. What is de-normalisation?
5. Explain select command in SQL.
6. Explain Data types in SQL.
7. Explain structure of PL / SQL block.
8. What are the advantages of SQL triggers?

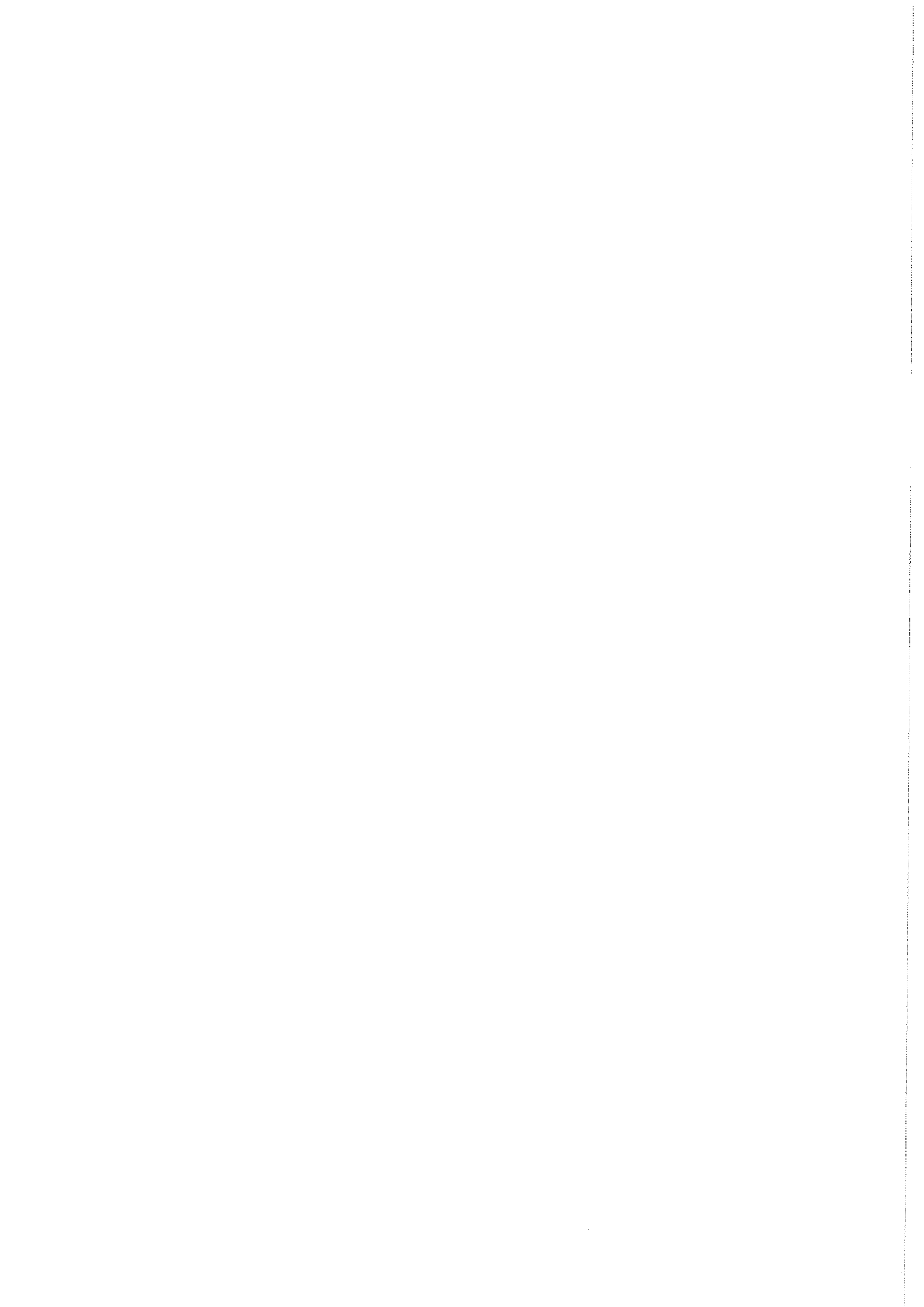
Section B

Answer the following:

5 x 10 = 50M

9. a) What are the types of Data models? Explain.
or
b) Write about drawbacks of file system.
10. a) Explain about relational set operators.
or
b) Draw and explain ER-diagram for library management system.
11. a) Explain first, second normal forms.
or
b) Explain third normal form, boyce-codd normal form.
12. a) Explain joins in SQL.
or
b) Explain DML commands.
13. a) Write about triggers.
or
b) Explain stored procedure.

* * *



SEE JAN'24

CABT41B/27-01-2024

DATABASE MANAGEMENT SYSTEMS

No. of Pages: 1

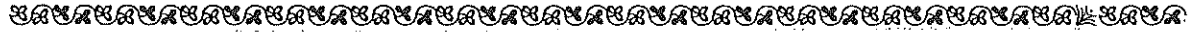
Roll No:

Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



Section - A

Answer any Five questions:

5x5=25

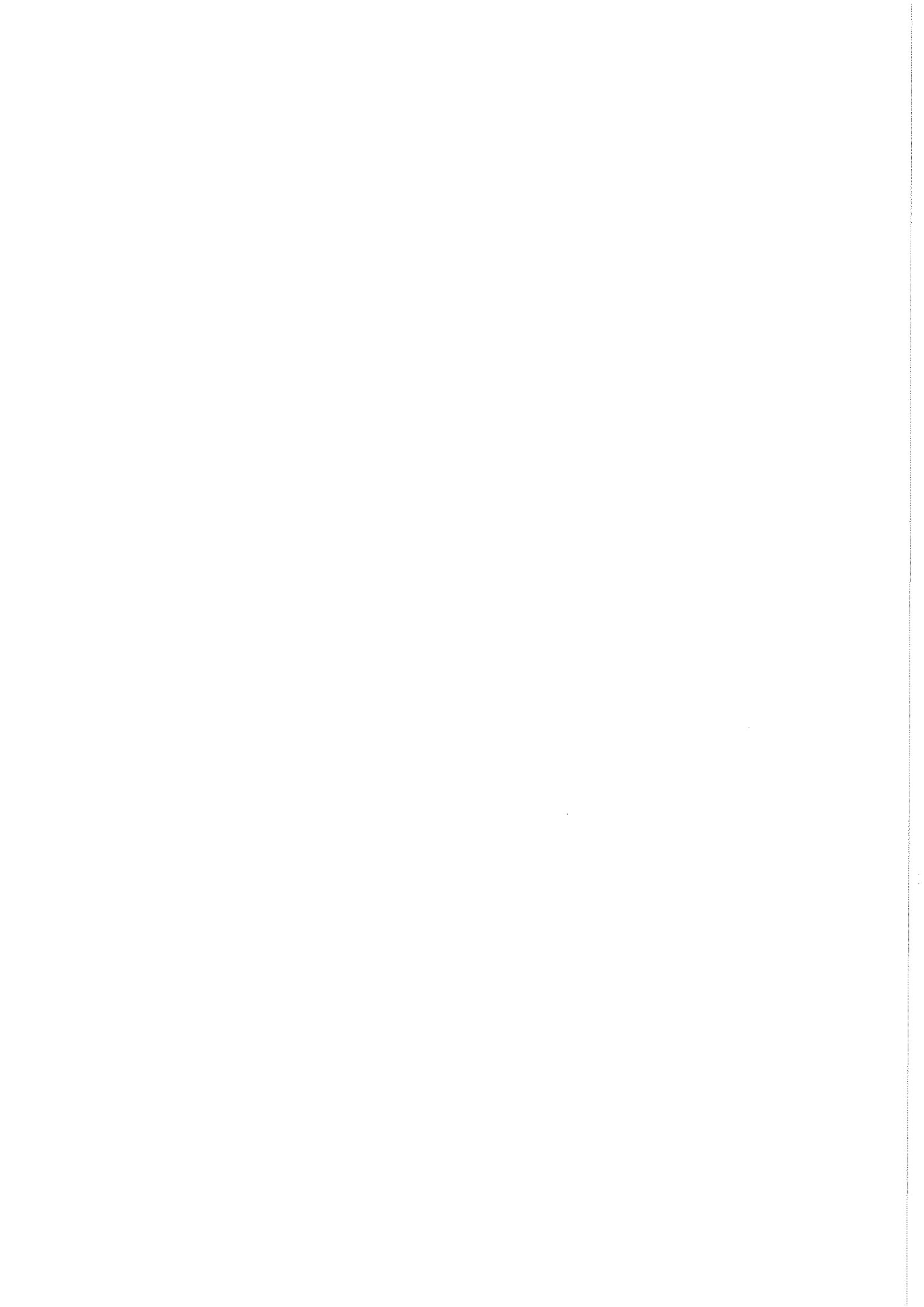
1. Write the characteristics of database approach (CO1,L2)
2. Discuss about data abstraction (CO1,L2)
3. Differentiate between file processing system and database system (CO2,L3)
4. Explain data independence (CO2,L2)
5. Write about the entity types and entity sets. (CO3,L3)
6. Discuss about aggregation and association. (CO4,L2)
7. Explain tuples and relations. (CO4,L3)
8. Write about SQL data types and constraints. (CO5,L3)

Section – B

Answer the following questions

5x10=50

9. a) Define data and information. Explain the insulation between programs and data. (CO1,L2)
(or)
- b) Explain the evolution of database system (CO1,L2)
10. a) Define data models, schema and instances. Explain categorization of data models. (CO2,L2)
(or)
- b) Explain three schema architecture for database development. (CO2,L2)
11. a) Draw ER diagram for any real time system and identify the different types of attributes and relationships in the diagram. (CO3,L3)
(or)
- b) Explain Relationship degree, recursive relationships, constraints on relationship types, and Attributes of relationship types. (CO3,L3)
12. a) Discuss in detail about the specialization and generalization (CO4,L2)
(or)
- b) Explain Relational Constraints and Relational Database Schemas. (CO4,L2)
13. a) Explain create and drop commands with an example. (CO5,L3)
(or)
- b) Explain aggregate and grouping functions with examples. (CO5,L3)



No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Explain hapticity of organic ligands.
2. Explain about mutarotation.
3. Explain about Zwitter ion.
4. Explain about Diels-Alder reaction of Furan.
5. Write the distinction between primary, secondary and tertiary amines.
6. Write the Grothus – Draper's law.
7. Explain about Fluorescence.
8. Write the definition of internal energy and enthalpy.

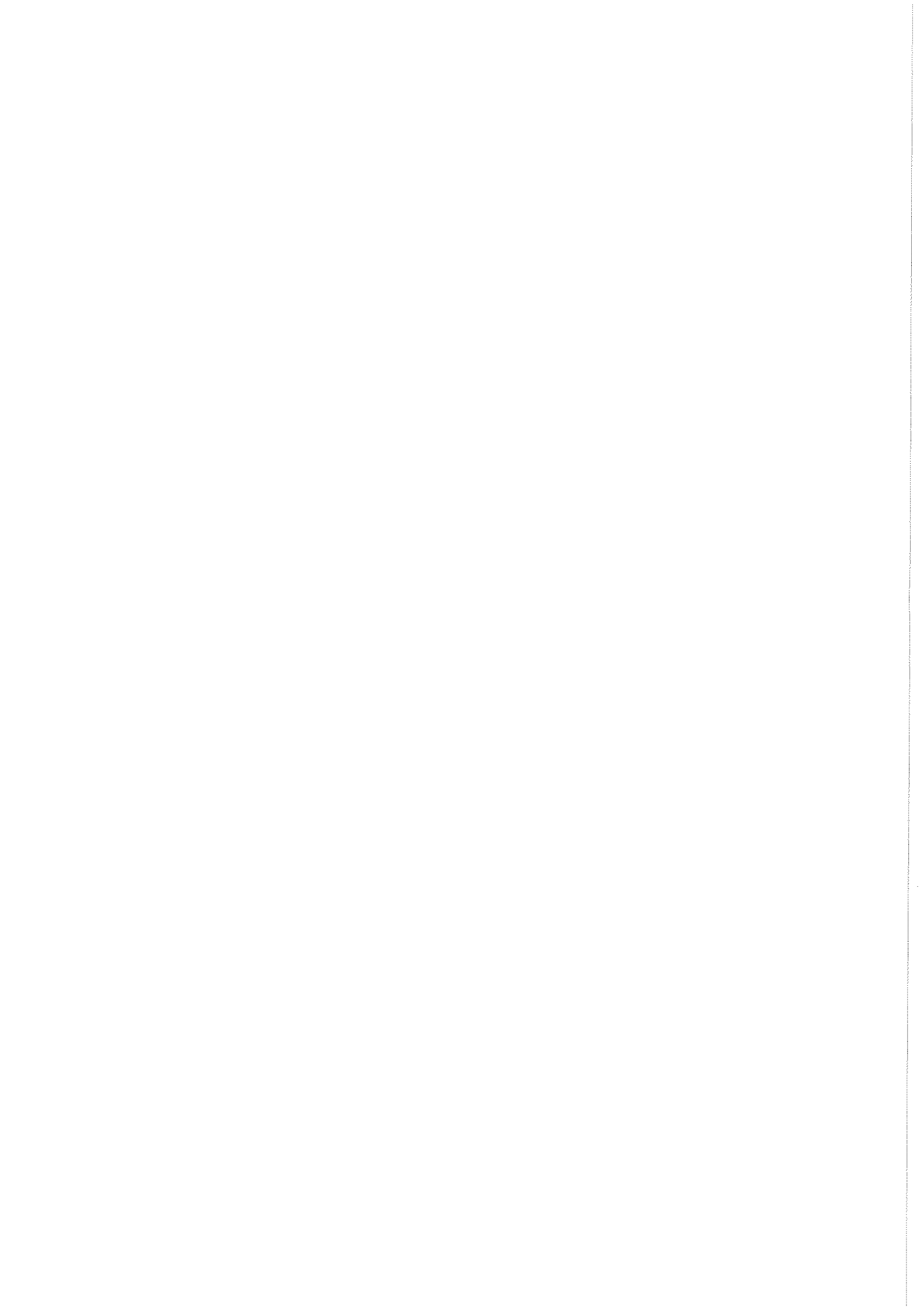
Section B

Answer the following:

5 x 10 = 50M

9. a) What are organo metallic compounds? Discuss their classification with suitable examples.
or
b) Write the general preparation methods of metal carbonyls.
10. a) Explain the structure of Glucose.
or
b) Explain about
 - i) Killiani Fisher synthesis
 - ii) Ruff's degradation.
11. a) Write any three methods of preparation of amino acids.
or
b) Write the preparations and Aromaticity of pyridine
12. a) Explain about
 - i) Nef reaction
 - ii) Mannich reaction
or
b) Write about:
 - i) Gabriel Pthalamide synthesis
 - ii) Hoffmann-Bromamide reaction.
13. a) Explain the laws of photo chemistry.
or
b) Write about Carnot cycle.

* * *



Goods and Services Tax

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. GST council.
2. Single vs dual GST.
3. Bill of supply.
4. Value of supply.
5. Records maintained under GST.
6. Taxation of services.
7. Reverse charge mechanism.
8. GSTR – 9.

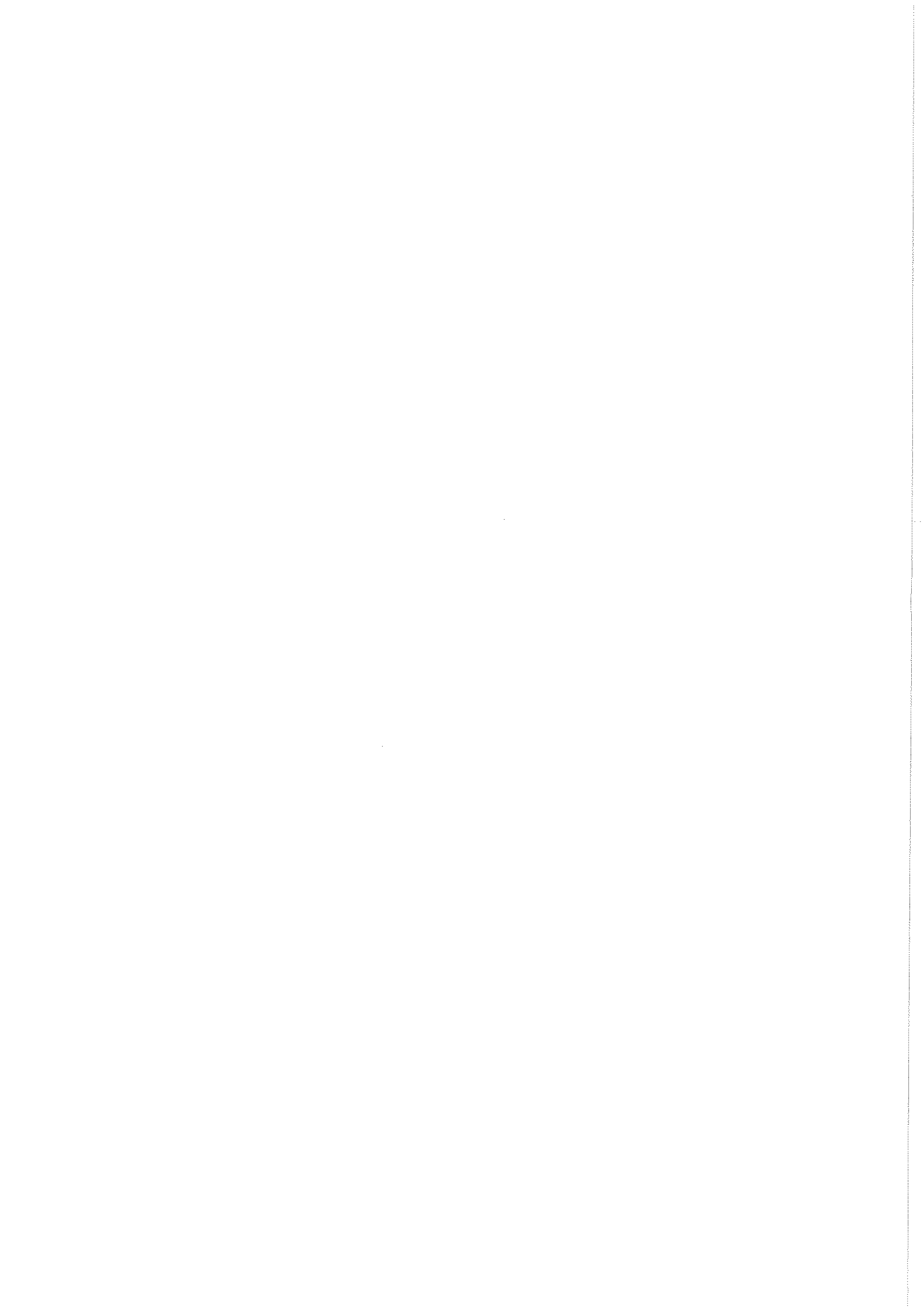
Section B

Answer the following:

5 x 10 = 50M

9. a) What is GST? Explain the advantages and limitations of GST.
or
b) Describe the procedure for registration under GST.
10. a) Discuss about the recommendations of Vijay Kelkar Shah Committee on GST.
or
b) Explain the taxes exempted under GST.
11. a) Write about the composition levy scheme under the GST Act.
or
b) Discuss about composite supply and mixed supply.
12. a) Explain about cross utilization of input tax credit under GST.
or
b) What is ITC? Explain about the availability of input tax credit under special circumstances under Section 18 of the CGST Act.
13. a) Explain various forms used for filing returns under GST.
or
b) Explain the procedure to file the returns under GST.

* * *



OBJECT ORIENTED PROGRAMMING USING JAVA

No. of Pages: 01

Roll No:

Max. Marks: 70M

Time: 3 Hrs

No. of Questions: 10

Pass Min.: 28M

Section A

Answer the following:

5 x 4 = 20M

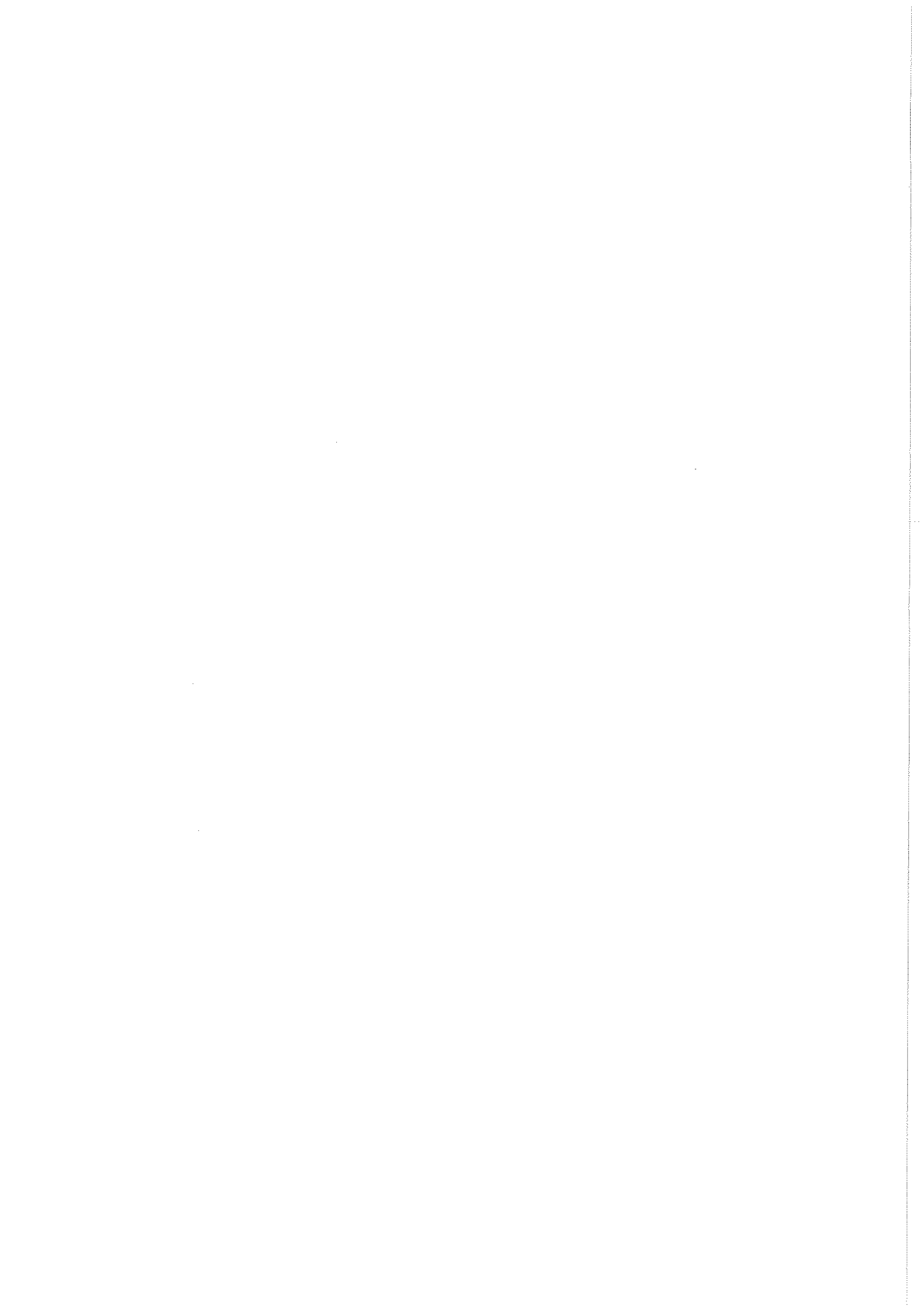
1. a) Discuss about structure of java program.
or
b) Discuss about JVM.
2. a) Discuss about class and objects in Java with examples.
or
b) Explain constructors in Java with example.
3. a) Illustrate any five string handling methods in Java.
or
b) Illustrate implementing Abstract methods and classes.
4. a) Define Thread. Discuss about Thread priority.
or
b) Discuss about Java API packages.
5. a) Explain character stream classes in Java.
or
b) Explain Applet creation with an example program.

Section B

Answer the following:

5 x 10 = 50M

6. a) Explain in detail about basic concepts of OOP's.
or
b) Discuss Java Buzz words.
7. a) Explain about decision making and branching statements in Java with examples.
or
b) Describe method overloading with an example program.
8. a) Define inheritance. Explain different types of inheritances in Java with examples.
or
b) Describe multiple inheritance by using interfaces with an example program.
9. a) Explain life cycle of a thread with a neat diagram.
or
b) Define a package. Explain about creating and accessing a package with an example.
10. a) Explain life cycle of an Applet with neat diagram.
or
b) List out different stages in JDBC program with an example.



OBJECT ORIENTED PROGRAMMING USING JAVA

No. of Pages: 01
Time: 3 Hrs

Roll No:
No. of Questions: 13

Max. Marks: 75M
Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Explain object oriented paradigm and applications of OOP.
2. Explain type casting with example.
3. Write short notes on constructors with example.
4. Why interface concept is used?
5. Differentiate compile and run time errors.
6. What is package? How to create and access a package?
7. Explain local and remote applets.
8. Explain character stream classes.

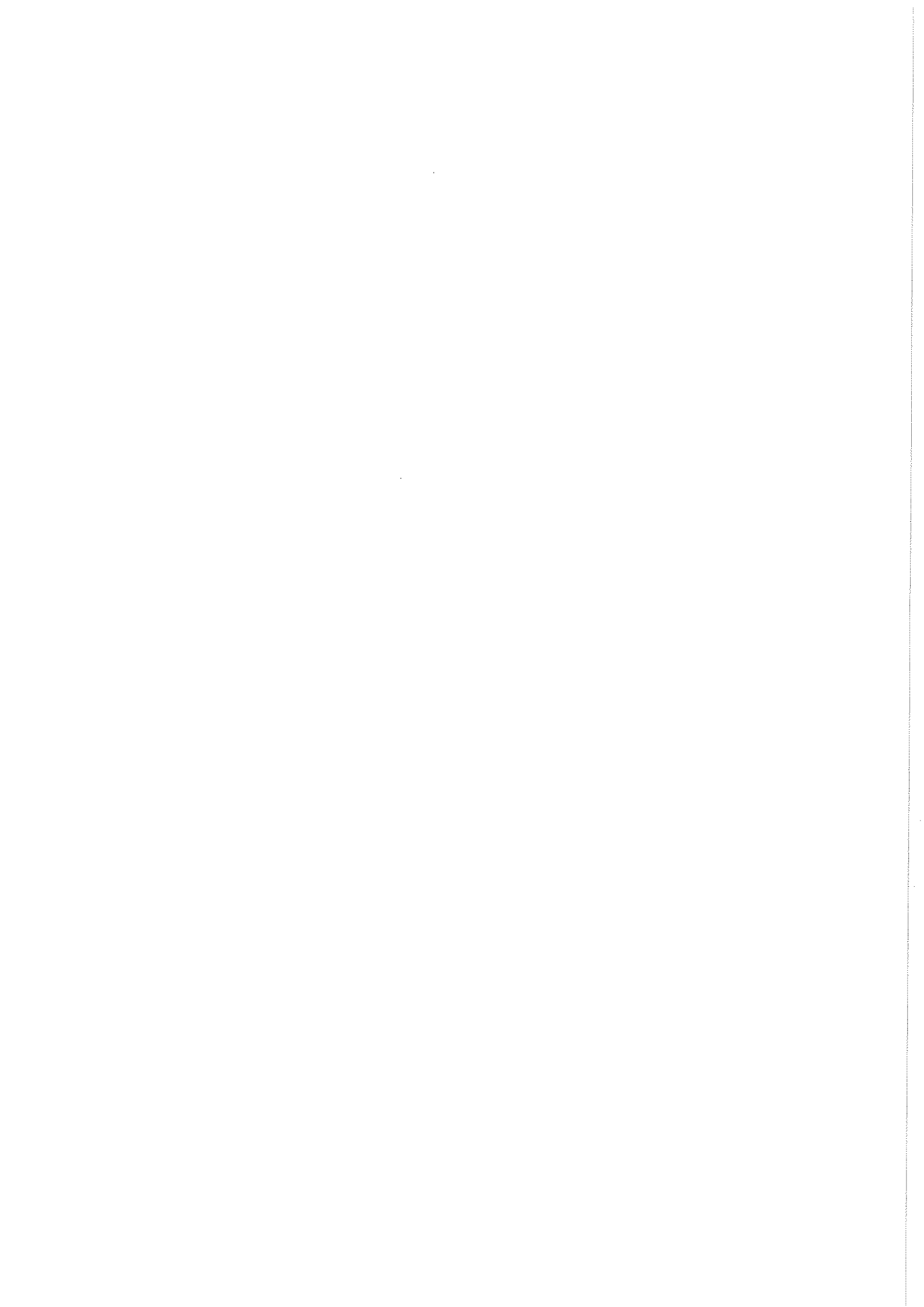
Section B

Answer the following:

5 x 10 = 50M

9. a) Write short notes on:
i) Command line arguments ii) Data types
or
b) Define operator. Explain types of operators with examples.
10. a) Define decision making statements. Write an example for each decision making statement.
or
b) i) What is class and object? How to create object and accessing class members.
ii) Explain the concept of static members.
11. a) Write a Java program to perform multiplication of two machines.
or
b) Write a short notes on:
i) Abstract methods and classes ii) Wrapper classes.
12. a) What is thread? Explain life cycle of thread.
or
b) Explain exception handling mechanism with example.
13. a) Explain different stages in JDBC program with example.
or
b) What is Applet? Explain life cycle of an Applet.

* * *



OBJECT ORIENTED PROGRAMMING USING JAVA

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. What are the benefits and applications of OOP?
2. Write about JVM.
3. Explain structure of Java program.
4. Explain break and continue statements with example programs.
5. Write about switch statement with example program.
6. With an example explain constructor.
7. Explain method overriding with example.
8. Write about Vector class and its methods with example program.

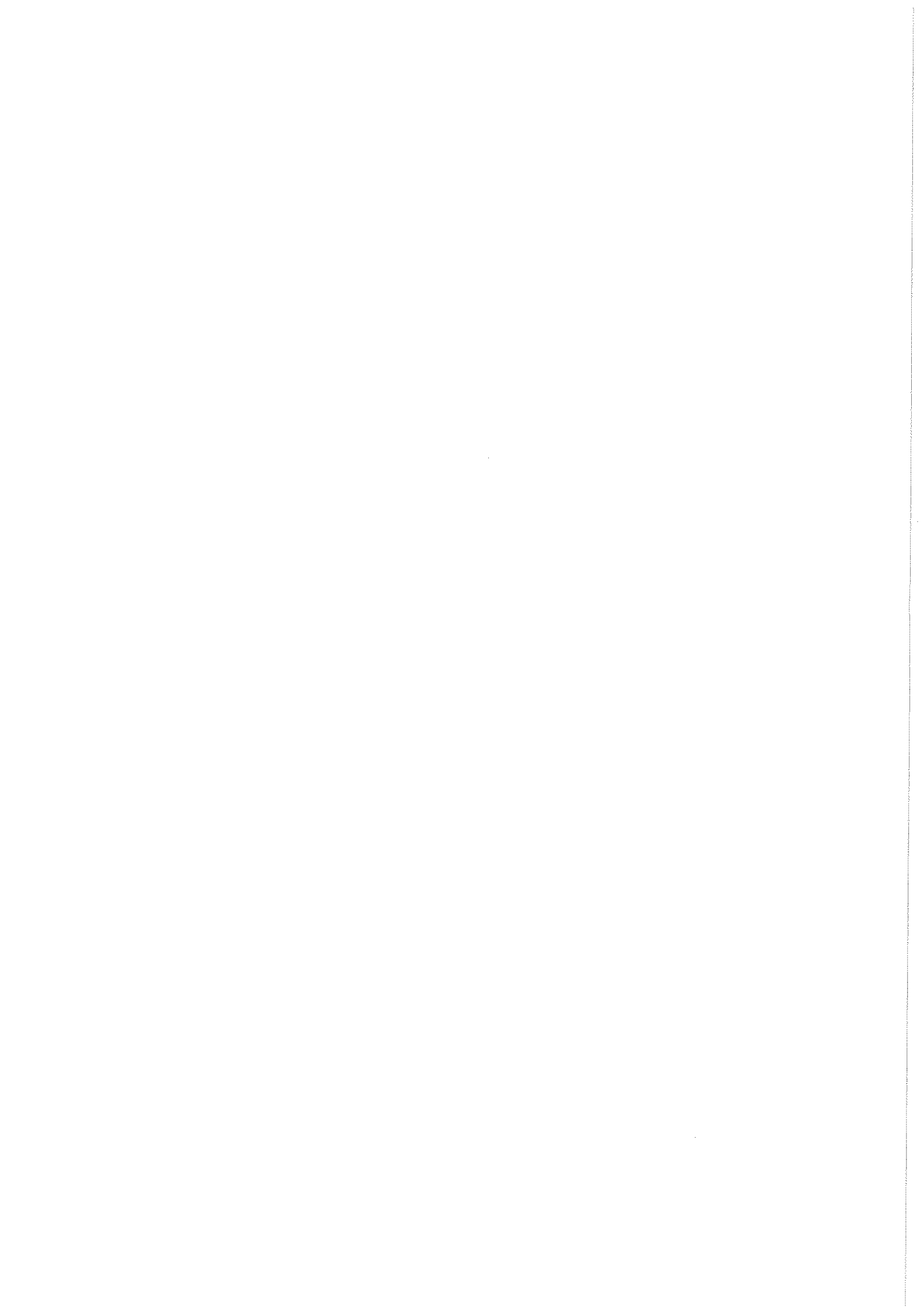
Section B

Answer the following:

5 x 10 = 50M

9. a) Write the features of Java.
or
b) Explain features of OOP.
10. a) Explain primitive and non-primitive data types in Java.
or
b) Write about operators with proper syntax and example.
11. a) Explain decision making statements with syntax and example.
or
b) Write about looping statements with syntax and example.
12. a) What is inheritance? Explain types of inheritance.
or
b) Explain about static keyword with respective variables, methods, blocks and nested classes.
13. a) What is an Array? Explain different types of arrays with syntax and example.
or
b) What is string? Explain string handling methods in Java.

* * *



SEE JAN 2024

HISSET01 / 30-01-2024

Tourism and Hospitality Services

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Distinguish between tourist and excursionist.
2. What is domestic tourism?
3. Write about the ancient monuments in AP.
4. Amaravathi (ancient sites).
5. Hotel manager.
6. Define the front office.
7. What do you mean by motel?
8. Write about the hospitality management.

Section B

Answer the following:

5 x 10 = 50M

9. a) Write an essay on the nature and scope of tourism.
or
b) What are the advantages of tourism?
10. a) Discuss the resources of tourism in AP.
or
b) Write about the history of tourism in AP.
11. a) What are the components of hospitality industry? Explain.
or
b) What are the classifications of hotels in India?
12. a) Write about the housekeeping operations.
or
b) Explain about the hospitality and its service nature.
13. a) Explain the common challenges in hotel industry and their solutions.
or
b) What is the difference between a banquet and catering?

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. This section also touches upon the legal implications of failing to maintain such records, which can lead to severe consequences for individuals and organizations alike.

2. The second part of the document delves into the specific requirements for record-keeping, including the types of documents that must be retained and the duration for which they should be kept. It provides a detailed overview of the various categories of records, such as financial statements, contracts, and correspondence, and outlines the best practices for organizing and storing these documents to ensure they are easily accessible and secure.

3. The third part of the document addresses the challenges associated with record-keeping, particularly in the context of digital information. It discusses the risks of data loss, corruption, and unauthorized access, and offers strategies to mitigate these risks. This includes the use of secure storage solutions, regular backups, and access controls to protect sensitive information.

4. The fourth part of the document focuses on the importance of regular audits and reviews of records. It explains how audits can help identify discrepancies, errors, and areas for improvement, and provides guidance on how to conduct effective audits. This section also discusses the role of external auditors and the importance of maintaining a clear audit trail.

5. The fifth part of the document discusses the impact of record-keeping on decision-making and strategic planning. It highlights how accurate records provide valuable insights into organizational performance, trends, and risks, which can be used to inform key decisions and drive long-term success. This section also touches upon the importance of data security and privacy in the context of record-keeping.

6. The sixth part of the document provides a summary of the key points discussed and offers final thoughts on the importance of record-keeping. It reiterates that maintaining accurate records is not just a legal obligation, but a fundamental practice that underpins the success and integrity of any organization. The document concludes by encouraging readers to take proactive steps to ensure their records are up-to-date, accurate, and secure.

SOFTWARE SOLUTIONS TO ACCOUNTING

No. of Pages: 01

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. Golden rules of accounts.
2. Sample data.
3. Steps in deleting a company.
4. Company configuration.
5. How to create a sub group in tally?
6. Procedure for creating a voucher.
7. Explain the concept of default groups.
8. Display report.

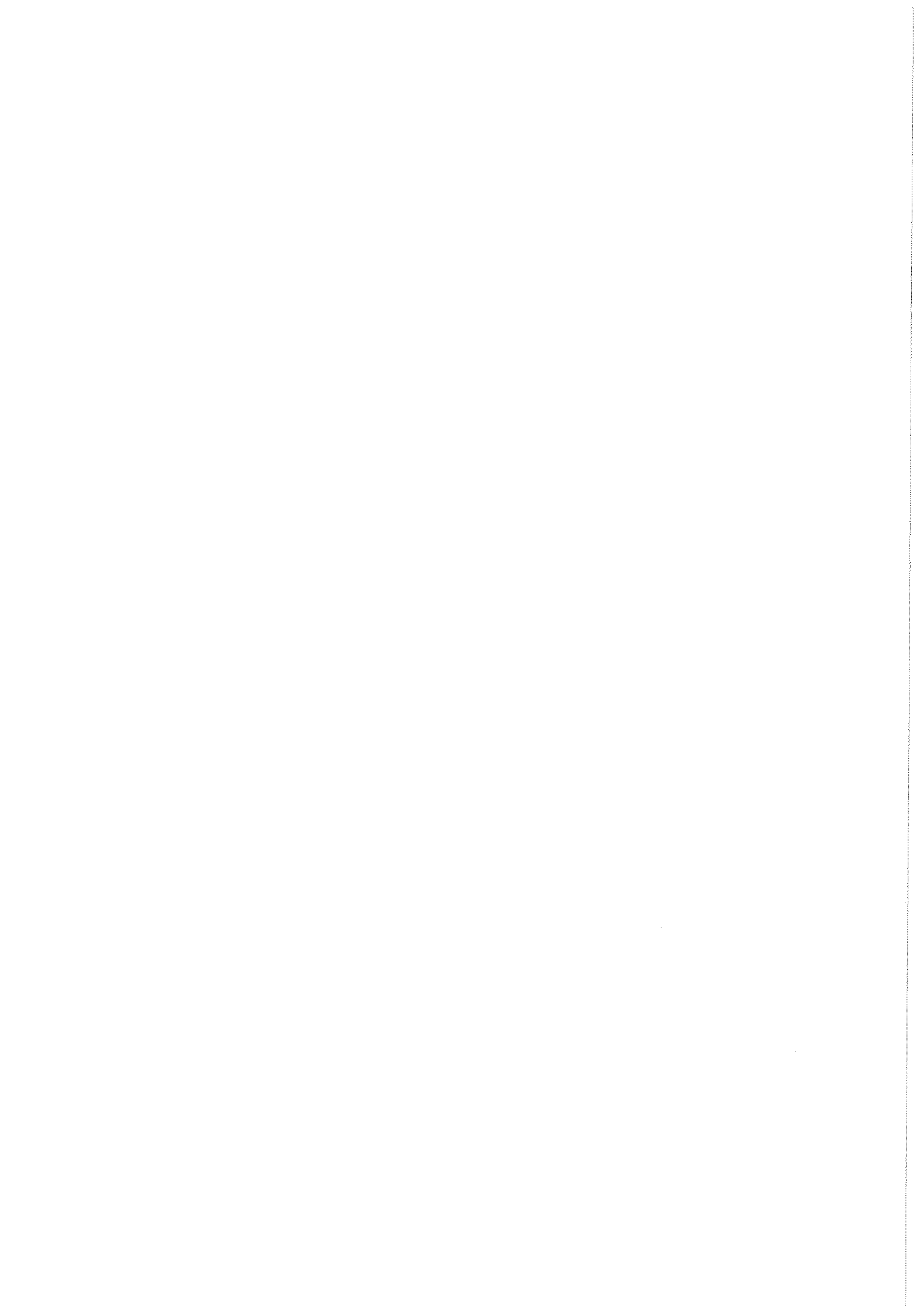
Section B

Answer the following:

5 x 10 = 50M

9. a) What are the accounting principles & concepts?
or
b) Explain the types of accounting.
10. a) Explain the features of Gate Way of Tally.
or
b) Explain the creation of company and modification for existing company in Tally.
11. a) How to create groups in Tally.
or
b) Define Ledger. Explain the Alteration and deleting of ledger.
12. a) Explain the types of Vouchers in Tally.
or
b) Explain the displaying and altering vouchers.
13. a) Explain the procedure for preparation of Financial Statements in Tally.
or
b) Define the steps for generating reports in Tally.

* * *



MULTIPLE INTEGRALS AND APPLICATIONS OF VECTOR CALCULUS

No. of Pages: 2

Roll No:

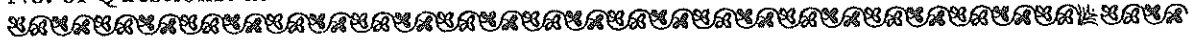
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Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13

SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

1. Evaluate $\int_0^1 \int_0^x e^{x+y} dy dx$.

2. Evaluate $\int_0^1 \int_0^{\sqrt{1-x^2}} \int_0^{\sqrt{1-x^2-y^2}} xyz dz dy dx$.

3. Find the directional derivative of $\phi = xy^2 + yz^2$ at the point (2,-1,1) in the direction of the vector $\vec{i} + 2\vec{j} + 2\vec{k}$.

4. Show that the vector $(x^2 - yz)\vec{i} + (y^2 - zx)\vec{j} + (z^2 - xy)\vec{k}$ is irrotational and find its scalar potential.

5. Find the work done in moving a particle in the force field $\vec{F} = 3x^2\vec{i} + (2xz - y)\vec{j} + z\vec{k}$ along the straight line from (0,0,0) to (2,1,3).

6. Evaluate $\int_S \vec{F} \cdot \vec{n} dS$ where $\vec{F} = 18z\vec{i} - 12\vec{j} + 3y\vec{k}$ and S is the part of the surface of the plane $2x + 3y + 6z = 12$ located in the first octant.

7. Evaluate by using Gauss Divergence theorem $\int_S \vec{u} \cdot \vec{n} dS$ where $\vec{u} = x\vec{i} + y\vec{j} + z\vec{k}$ and S is the surface of the sphere $x^2 + y^2 + z^2 = 9$.

8. Using Green's theorem, evaluate $\int_C (2xy - x^2)dx + (x^2 + y^2)dy$, where C is closed curve in xy plane bounded by the curves $y = x^2$ and $y^2 = x$.

Contd..(2)

SECTION - B

Answer the following:

5 X 10 = 50M

9. (a) Change the order of integration and solve $\int_0^a \int_{x^2/a}^{2a-x} xy^2 dy dx$.

OR

(b) Evaluate $\iint_R r^3 dr d\theta$ over the area included between the circles $r = 28m\theta$ and $r = 48m\theta$.

10. (a) Using double integral, find the area of the cardioid $r = a(1 - \cos\theta)$.

OR

(b) Find the volume bounded by the cylinders $x^2 + y^2 = 4$, $y + z = 4$ and $z = 0$.

11. (a) Prove that $\nabla^2(r^n) = n(n+1)r^{n-2}$.

OR

(b) Prove that $\nabla \times \left(\frac{\vec{A} \times \vec{r}}{r^n} \right) = \frac{(2-n)\vec{A}}{r^n} + \frac{n(\vec{r} \cdot \vec{A})\vec{r}}{r^{n+2}}$.

12. (a) Evaluate the line integral $\int_C (x^2 + xy)dx + (x^2 + y^2)dy$ where C is the square formed by the lines $x = \pm 1$ and $y = \pm 1$.

OR

(b) Evaluate $\int_S \vec{F} \cdot \vec{n} dS$ where $\vec{F} = z\vec{i} + x\vec{j} - 3y^2z\vec{k}$ and S is the surface $x^2 + y^2 = 16$ included in the first octant between $z = 0$ and $z = 5$.

13. (a) Verify Stoke's theorem for $\vec{F} = (2x - y)\vec{i} - yz^2\vec{j} - y^2z\vec{k}$ over the upper half surface of the sphere $x^2 + y^2 + z^2 = 1$ bounded by the projection of the xy-plane.

OR

(b) Verify Green's theorem for $\int_C (xy + y^2)dx + x^2 dy$ where C is bounded by $y = x$ and $y = x^2$.

SEE JAN'24

BOTSET01/30-01-2024

PLANT TISSUE CULTURE

No. of Pages: 1

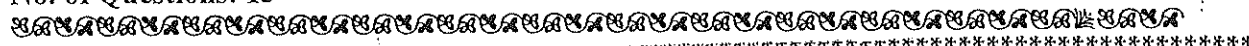
Time: 3Hrs

No. of Questions: 13

Roll No:	
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Max. Marks: 75M

Pass Min: 30M



Draw diagrams wherever necessary:

Section A

Answer any FIVE of the following:

5 x 5 = 25M

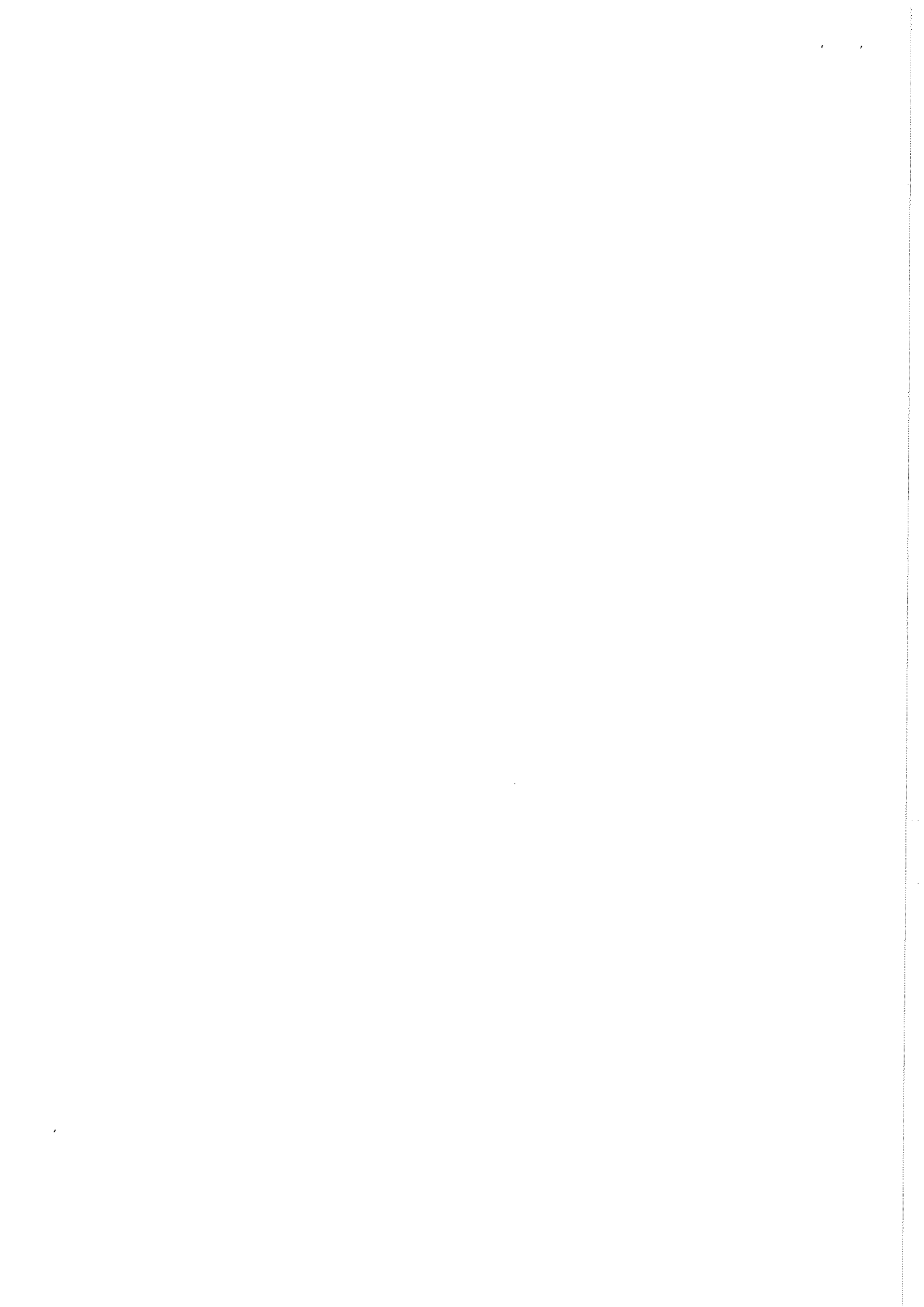
1. Differentiation and dedifferentiation.
2. Dry sterilization.
3. Surface sterilization agents.
4. Cybrids.
5. Golden rice.
6. Synthetic seeds.
7. Role of PGP's in plant tissue culture.
8. Cryoprotectants.

Section B

Answer the following:

5 x 10 = 50M

9. a) Describe different types of cultures.
or
b) Explain various equipments required to establish a tissue culture laboratory.
10. a) Discuss the composition and preparation of Murashige and Skoog culture medium.
or
b) Explain different types of nutrient media.
11. a) Illustrate various steps in Callus Culture with explanation.
or
b) Explain Somaclonal variations.
12. a) Describe protoplast culture.
or
b) Give an account of direct and indirect morphogenesis.
13. a) Explain various gene transfer methods.
or
b) Discuss various steps in r-DNA technology.



No. of Pages : 02

Question Paper

No. of Questions : 21

Course Code (s) : 11, 51

SEM - III

DD/MM/YY :

3	0	0	1	2	0	2	4
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Subject : ENGLISH

Paper Code : ENG - 301

Min Marks : 28

Title of the Paper : English Praxis Course - III

Time : 3:00 Hrs.

Regd. No :

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Max Marks : 70

SECTION - A

Answer any **FIVE** of the following questions.

5x5=25M

1. What was the pledge that Jawaharlal Nehru wanted every citizen of India to take?
2. What does Barack Obama say about his victory in the American presidential election?
3. How did Steve Jobs keep himself going after getting fired from Apple?
4. Why do you think did Jawaharlal Nehru describe the achievements of freedom as fateful moment for the India and for the world.
5. What was message given by Steve Jobs in his speech "You have Got to find what you love"?
6. What are the Major changes in India, Business that were noticed by J.R.D Tata?

Answer any **FIVE** of the following questions.

5x2=10M

7. What was lesson about leadership that A.P.J Kalam learnt from Prof. Satish Dhawan?
8. Why did Nelson Mandela say that prison was not the waste and he used the time?
9. How does Dr. A.P.J Abdul Kalm Plan for an energy independent India?
10. What was J.R.D Tata opinion about G.D. Birla?
11. Why did Steve Jobs become interested in Calligraphy?
12. What does freedom and power bring according to Nelson Mandela?
13. You have some difficulty with explain grammar, make a request to you english teacher asking him/ her to help you

1x4=4M

14. Rajesh from TCS, Hyderabad goes to the office at Hyderabad to meet the Company's Finance manager on his prior appointment . Rajesh introduces him self to the Finance manager's secretary, explain. Who is he, Where he is from, construct a dialogue, between Rajesh and Secretary.

1x4=4M

15. List any five debate points on the topic given below. 1x4=4M
"Plastic covers should be banned by the Government"
16. Build up a conversation based on the hints given below. 1x4=4M
Good morning - New to this place - in the Air Force - What do you do? - how fortunate! Need to enroll my daughter in a school - tell me about good schools in Vijayawada - thank you,
17. Ramesh is a new student in the college. He asks for directions to the main office give some directions. 1x4=4M
18. Sarika asks her friend Jaya to get her college admission from the college. Write a dialogue of request. 1x4=4M
19. Construct a dialogue between the customer and book shop keeper seeking information about the Inter books price. 1x4=4M
20. Your parents insist that you should cut down on using your cell phone in order to focus on your studies. Construct a dialogue either agreeing or disagreeing with your parents. 1x4=4M
21. Plan a role play between a principal and a parent asking him/ her to take care of his/her child's studies. 1x3=3M

2023 Batch

23ENLAL111/30-01-2024

SEE JAN'24

ENGLISH PRAXIS-I

No. of Pages: 2

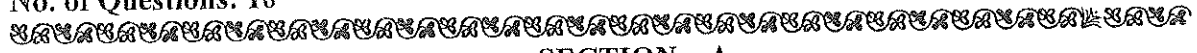
Time: 3Hrs

No. of Questions: 10

Roll No:	
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Max. Marks: 70M

Pass Min: 28M



SECTION – A

Answer the following:

5 X 10 = 50M

1. (a) (i) Explain the salient features of effective listening.
(ii) Write a note on the importance of listening.
OR
(b) (i) What are the various types of listening? Explain any four in detail.
(ii) How many vowel sounds are present in English Language? What are they?
2. (a) (i) Describe the two important strategies of reading.
(ii) What are the things that the child sees on his way to the fair?
How does he respond to this?
OR
(b) (i) What is the central idea of the poem 'The Seven Ages of Man'?
(ii) How have the lost child's anxiety and fear been described?
3. (a) (i) Write a note on benefits of reading.
(ii) How important is reading skill to a student? Explain.
OR
(b) (i) Your friends have made a plan to go on a tour to Lambasingi without your consent. They wanted you to join them in the last minute. Express your disagreement politely. (Write a conversation)
(ii) What are the ways to develop interpersonal skills?
4. (a) (i) Who is Anna Nixon Cooper? Why did Obama refer her in his speech?
(ii) Explain in your own words, Dr. A.P.J. Kalam's goal for energy independence for India.
OR
(b) (i) From where does Obama say, his campaign drew strength from?
(ii) What are the six leadership traits that Dr. A.P.J. Kalam talks about?
5. (a) (i) Explain in detail the importance of SWOT analysis for student.
(ii) What are the characteristic features of emotional intelligence? Explain.
OR
(b) (i) What are the ways to develop positive attitude? Explain.
(ii) What is the importance of Netiquette?

Contd...(2)

SECTION – B

Note: Answer all the questions in this section at one place in the Answer Book in the order given in the Question Paper.

Answer the following as directed.

20 X 1 = 20M

6. Choose the correct answer in which the subject and verb agree. 4 X 1 = 4M

- (i) Neither of the books _____ (is / are) good.
- (ii) My spectacles _____ (is / are) in my pocket.
- (iii) All our family _____ (has / have) arrived.
- (iv) Slow and steady _____ (win / wins) the race.

7. Fill in the blanks with suitable articles. 4 X 1 = 4M

- (i) Mr. Prasad is _____ Industrialist. (a, an, the)
- (ii) _____ Nile is the longest river. (a, an, the)
- (iii) Dr. Rao is _____ professor. (a, an, the)
- (iv) _____ idea can change your life. (a, an, the)

8. Fill in the blanks with suitable prepositions. 4 X 1 = 4M

- (i) I live _____ my parents. (at, with)
- (ii) Raju asked me to meet him _____ 9 a.m. (at, on)
- (iii) She will attend a conference _____ Monday. (in, on)
- (iv) Many foods _____ milk contain calcium. (beside, besides)

9. Fill in the blanks with suitable verb forms given in brackets. 4 X 1 = 4M

- (i) My baby _____ (eat) an Apple every day.
- (ii) It _____ (rain) yesterday.
- (iii) He _____ (go) to Delhi tomorrow.
- (iv) She _____ (wait) since 2 p.m.

10. Add a question tags for the following statements. 4 X 1 = 4M

- (i) Kavitha sings well, _____?
- (ii) They are celebrating their victory, _____?
- (iii) I am a singer, _____?
- (iv) She saw an accident, _____?

Roll No.							
In Figures							
In words							

2022 BATCH
Course Code
22ENGT11

For Office use only

Marks Max.: 70M Pass Min: 28M

- (i) Answer Section-A in the space provided in the first 1 hour and submit the same to the Invigilator.
(ii) Answer Section-B, C and D in the main answer book.
(iii) At the end of examination, fasten Section-A to the main answer book and submit to the Invigilator.

For Office use only

Marks Scored			
Section: A		Total	
Section: B,C&D			

SECTION – A

No. of Pages: 3 Time: 1Hr. No. of Questions: 30 Max. Marks: 30M

Answer the following:

30 X 1 = 30M

A. Choose a suitable word in agreement with its subject from those given in brackets:

1. My brothers or my sister (is/are) _____ arriving by flight today.
2. A car and a bike _____ (is/are) my means of transportation.
3. Neither of them _____ (is/are) available to speak.
4. Each of the boys _____ (play/plays) well.
5. Fifty percent of the laddus _____ (has/have) disappeared.

B. Fill in the blanks with the most appropriate word from those in brackets:

6. You _____ visit your dentist at least once a year (should/would).
7. _____ I borrow your book, please ? (could / would)

C. Fill in the blanks with words that will make it convey the meaning in brackets:

8. You really _____ stop over spending. (obligation)
9. We _____ (should / must) practice regularly. (compulsion)
10. Kavya _____ (will be / shall be) at home in 10 minutes. (certainty)

D. Fill in the blanks with correct verb form:

11. My brother _____ (work / works) in a factory.
12. Sheila _____ (went / has gone) to a movie yesterday.
13. They _____ (play) in the ground now.
14. They _____ (live) in Mumbai since 2010.
15. She _____ (go) on a vacation every summer.

E. Fill in the blanks with appropriate articles/prepositions:

16. Her mother is _____ Asian and her father _____ European. (a, an, the)
17. _____ Bhagavadgita is a holy book. (a, an, the)
18. Her sister is _____ NCC officer. (a, an, the)
19. He is accused _____ murder. (of, off, with)
20. It is raining, _____? (doesn't it / isn't it)

F. Answer the following as directed:

21. Where are you going asked Gita. (Punctuation marks)

22. I'm going to DMart replied Sita. (Punctuation marks)

23. Neighbour (correct the spelling)

24. Grammer. (correct the spelling)

25. Begining. (correct the spelling)

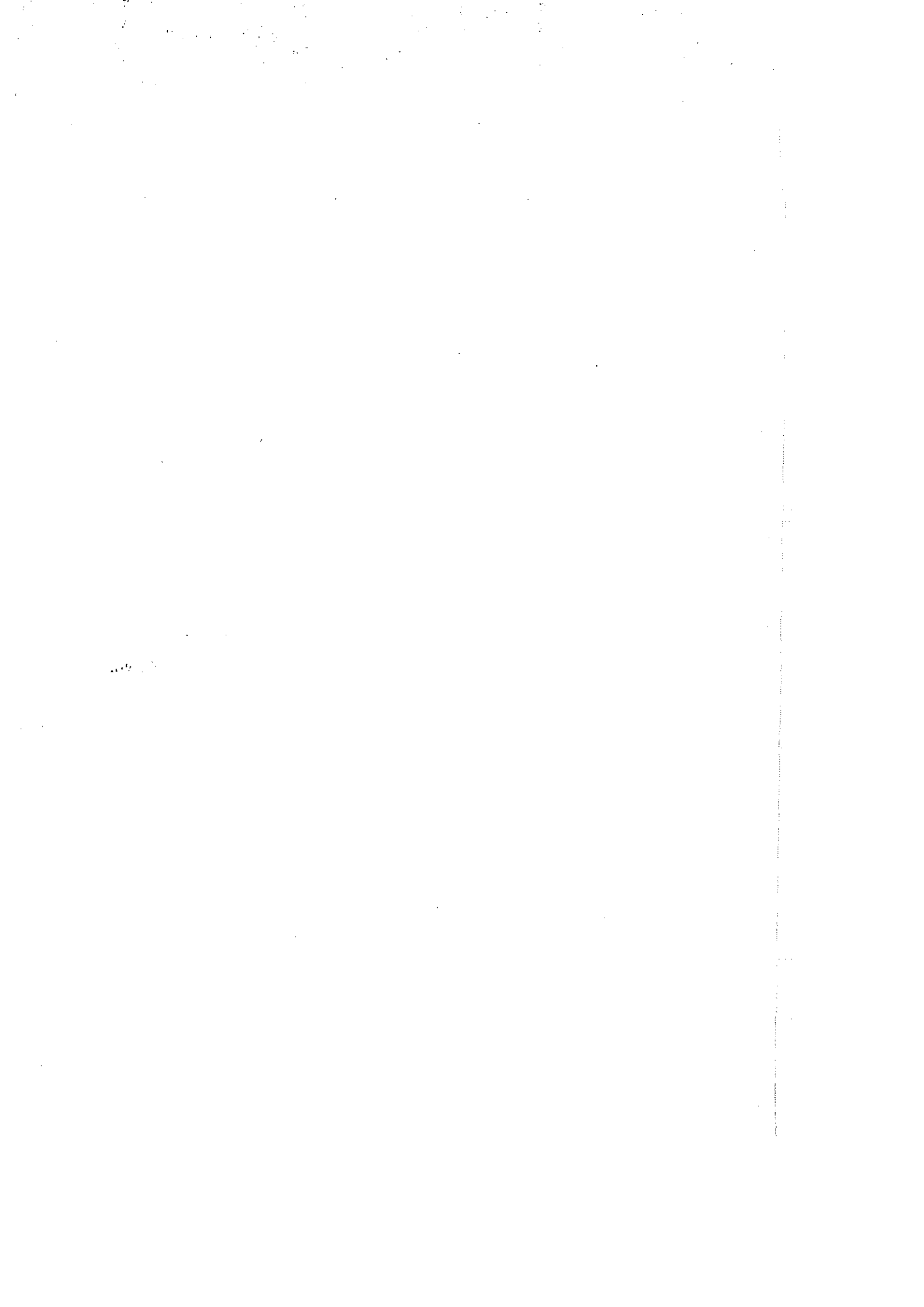
26. She has finished the painting. (change into passive voice)

27. Let the door be shut. (change into active voice)

28. Raj said, "Can you do this work for me?" (change into indirect speech)

29. Gold is the most precious metal. (change into positive degree)

30. They told to him to hurry up. (correct the sentence)



2022BATCH

SEJAN-24

22ENGT11/30/01/2024

SECTION – B, C & D

No. of Pages: 1

Roll No.:

Max. Marks: 40M

Time: 2 Hrs.

No. of Questions: 08

Answer the following:

8 X 5 = 40M

SECTION – B

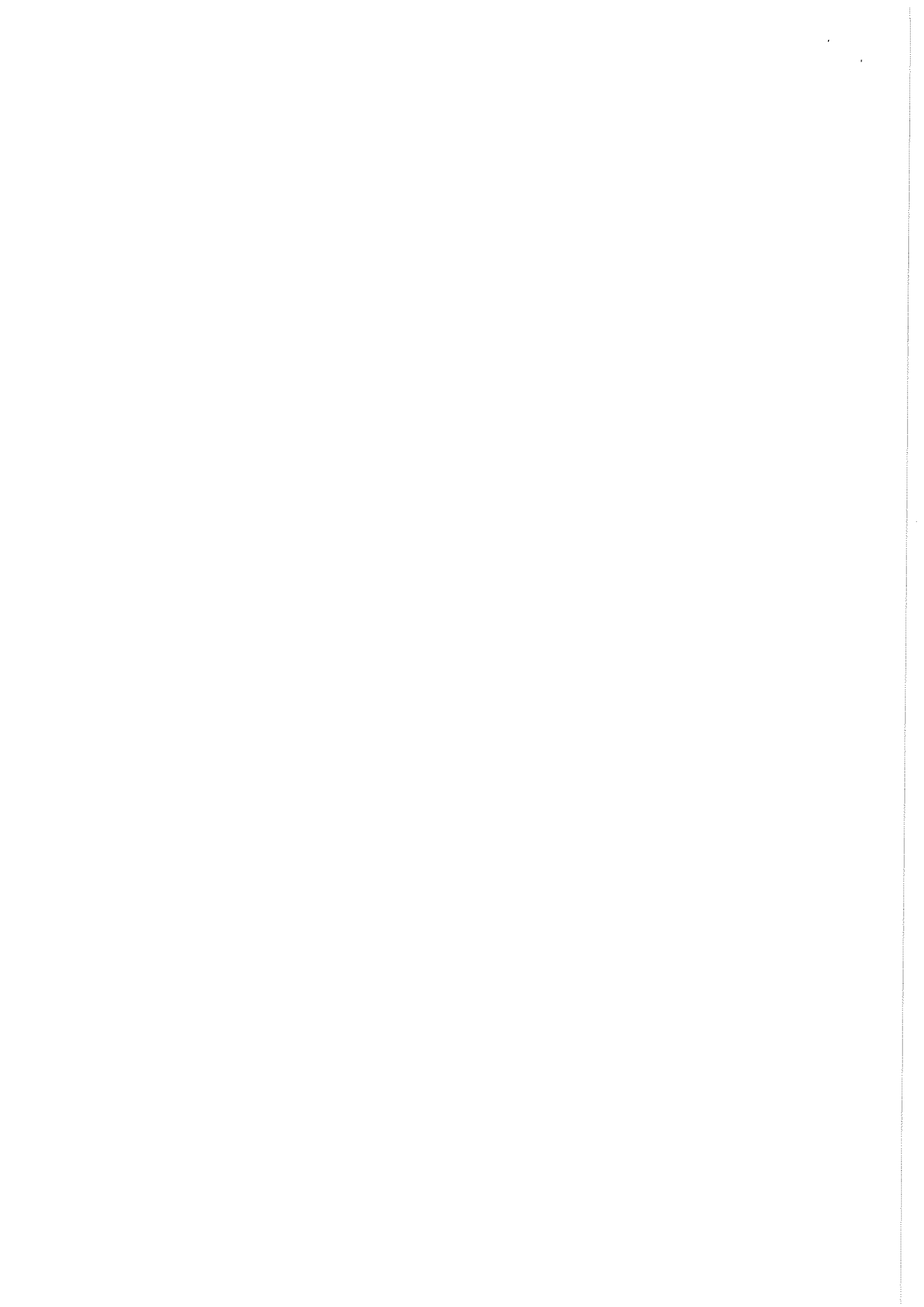
1. (a) Describe in brief the different types of listening.
OR
(b) Write about the main barriers of listening.
2. (a) How many consonant sounds are there in English language? What are they?
OR
(b) Write about the vowel sounds with examples.
3. (a) What are the essential features of a good paragraph?
OR
(b) Write a paragraph on your favourite festival.

SECTION – C

4. (a) Write about the difference between listening and hearing.
OR
(b) Describe the process of listening.
5. (a) Write about the tips to be used in effective listening.
OR
(b) How many types of intonations are there in English? What are they?

SECTION – D

6. (a) How does SWOC/T analysis help in analysing an individual?
OR
(b) Discuss the characteristic features of emotional intelligence.
7. (a) How to develop positive attitude?
OR
(b) What are the 'dos' and 'don'ts' in cell phone etiquette? /
8. (a) What are interpersonal skills and how do we develop them?
OR
(b) Write briefly about the factors that influence 'Attitude formation'.



Roll No.										
In Figures										
In words										

Course Code
ENGT11B

For Office use only

Marks Max.: 75M Pass Min: 30M

- (i) Answer Section-A in the space provided in the first 1 hour and submit the same to the Invigilator.
(ii) Answer Section-B and Section-C in the main answer book.
(iii) At the end of examination, fasten Section-A to the main answer book and submit to the Invigilator.

For Office use only

Marks Scored			
Section: A		Total	
Section: B&C			

SECTION - A

No. of Pages: 4 Time: 1Hr. No. of Questions: XI Max. Marks: 35M

I Fill in the blanks with suitable articles:

6 X ½ = 3M

The bus fell into (1) _____ deep gorge. All of the passengers were on (2) _____ journey to (3) _____ pilgrimage of (4) _____ holy shrine. Luckily none of (5) _____ passengers were wounded. Among them were (6) _____ old couple in their 80's.

II Fill in the blanks with suitable prepositions:

6 X ½ = 3M

- She is learning French (1) _____ Telugu.
- Her friend stays (2) _____ the mall (3) _____ a white coloured building.
- She was angry (4) _____ her sister for breaking her guitar.
- The minister is leaving (5) _____ Delhi (6) _____ 10 p.m. today.

III Fill in the blanks with the correct verb form.

5 X 1 = 5M

- Sita _____ (learn) Italian for the past five years.

2. Hari _____ (go) on a tour last month.
3. I _____ (study) when the lights went out.
4. The weaver birds _____ (build) the most artistic of nests.
5. When I reached the bus station, my bus _____ (leave) already.

IV Fill in the blanks with the correct concord choosing one of the alternative:

6 X ½ = 3M

1. She and her brother _____ (have, has) a large collection of stamps.
2. The minister as well as his party workers _____ (is, are) on a tour.
3. A number of girls _____ (was, were) absent due to the rains.
4. Either of the boys _____ (have, has) taken the money.
5. Two dozen mangoes _____ (was, were) in the basket.
6. Girls _____ (play/plays) in the park.

V Complete the following with suitable question tags:

3 X 1 = 3M

1. Shakeera sings well _____ ?
2. He is not an Englishman _____ ?
3. The butterfly has beautiful wings _____ ?

VI Fill in the blanks with suitable modal verbs:

4 X ½ = 2M

1. _____ the students have their books?
2. _____ I come in?
3. Ravi _____ playing the guitar since he was a child.
4. _____ it raining?

VII Write the correct spelling of the following words:

4 X ½ = 2M

1. recieve _____
2. embarras _____
3. akward _____
4. independant _____

VIII Punctuate the following sentences:

2 X 1 = 2M

1. He said please wait for me.

2. The girl said is the train going to come.

IX Rewrite the following sentences as directed:

5 X 1 = 5M

1. They opened a shop in the centre. (Change into Passive voice)

2. Sita gave a long lecture. (Change into Passive voice)

3. Meher said, "Alas! I lost my hand bag!" (Change into Indirect speech)

4. The traffic constable said, "Where is your driver's licence"?
(Change into Indirect speech)

5. Delhi is hotter than many other cities in India.
(Change into Superlative degree)

X Correct the following sentences:

2 X 1 = 2M

1. He is having many doubts.

2. She enjoyed during the holidays.

XI Write a paragraph on any ONE of the following:

5M

1. Post COVID world

2. Smart watches

Ans:

SEE JAN'24

ENGT11B / 30-01-2024

ENGLISH PRAXIS-I

SECTION – B & C

No. of Pages: 1

Roll No.:

Max. Marks: 40M

Time: 2 Hrs.

No. of Questions: 14

~~~~~

SECTION – B

*I Answer any FIVE of the following in about 150 words each :*

5 X 5 = 25M

1. Write a short essay on English Vowel Sounds and English Consonant Sounds.
2. What is word accent? Give suitable examples.
3. What is intonation? What is its role in speech?
4. What are the features of good telephonic skills?
5. What is SWOC / SWOT? Give examples and explain.
6. What is emotional intelligence? How is it useful?
7. What are the different types of listening?

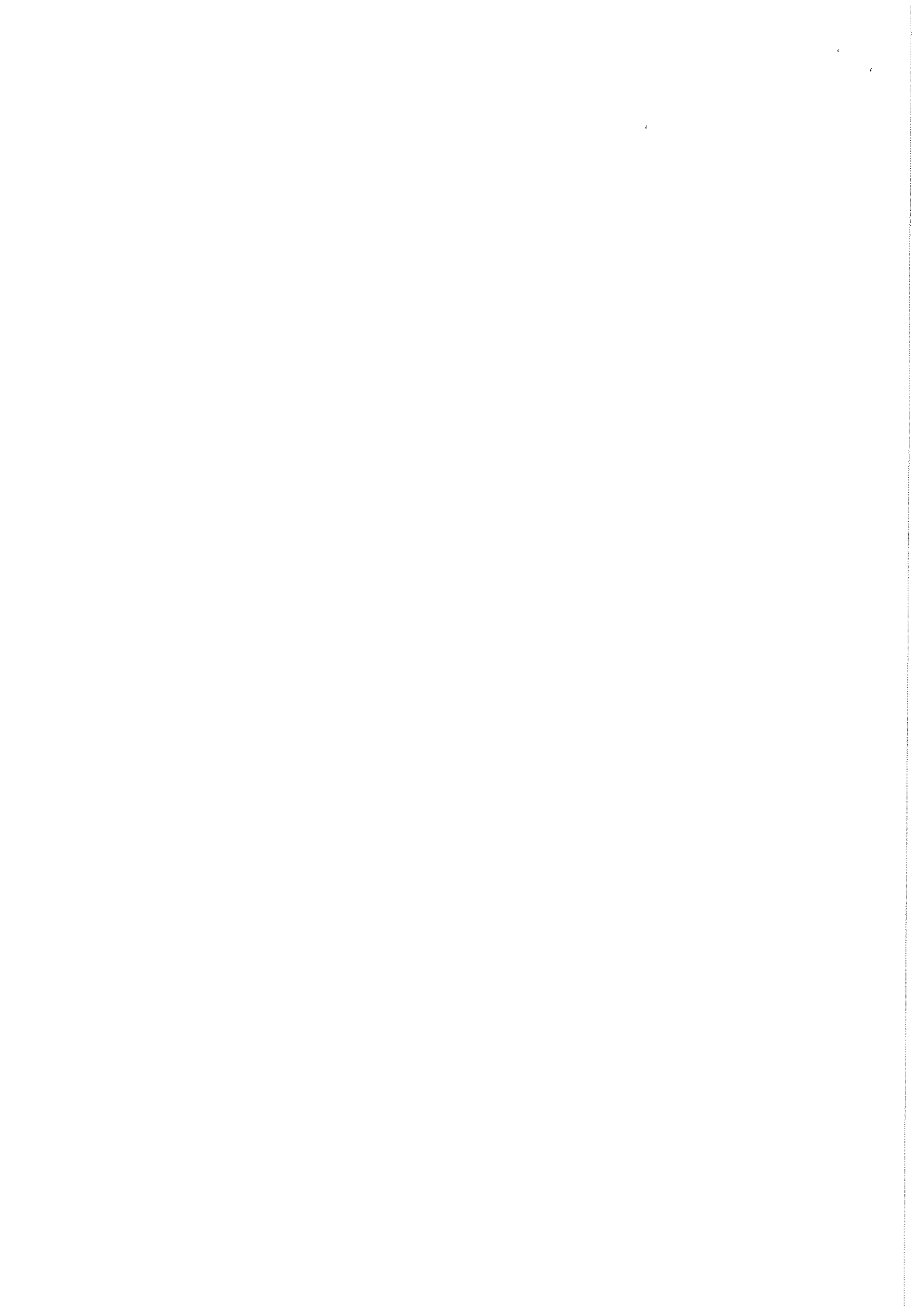
SECTION – C

*II Answer any FIVE of the following in about 75 words each:*

5 X 3 = 15M

8. What are the barriers to listening?
9. What are the two types of attitudes?
10. How to develop positive attitude? Explain with examples.
11. What are the traits of a good listener?
12. Give three examples of three different position of consonant sounds.
13. Write out the SWOC analysis of yourself.
14. How can you improve your inter-personal skills?

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AG & SG Siddhartha Degree College of Arts & Science (AUTONOMOUS)

VUYYURU - 521 165.

No. of Pages : 01

Question Paper (w.e.f. 2020 Batch)

No. of Questions : 16

Course Code (s) : ..... 41 .....

SEM - IV

DD/MM/YY :

3 0 0 1 2 0 2 4

Subject : ..... BOTANY .....

Paper Code : ..... BOT - 401 .....

Min Marks : 28

Title of the Paper : ..... Plant Physiology and Plant Metabolism .....

Time : 3:00 Hrs.

Regd. No :

Max Marks : 70

**SECTION – A**

Answer any **FOUR** of the following questions.

4x5=20M

[Draw diagrams wherever necessary]

1. Structure of Stomata - పత్ర రంధ్రం యొక్క నిర్మాణం
2. Pressure potential - ఒత్తిడి సంభావ్యత
3. Classification of enzymes - ఎంజైమ్ల యొక్క వర్గీకరణ
4. Anaerobic respiration - అవాయు శ్వాసక్రియ
5. Photo synthetic pigments - కిరణజన్య సంయోగ క్రియ వర్ణ ద్రవ్యాలు
6. Biological Nitrogen fixation - జీవ నత్రజని స్థిరీకరణ
7. Cytokinins - సైటోకైనిన్స్
8. Photo periodism - కాంతి పరివర్తనకాలము

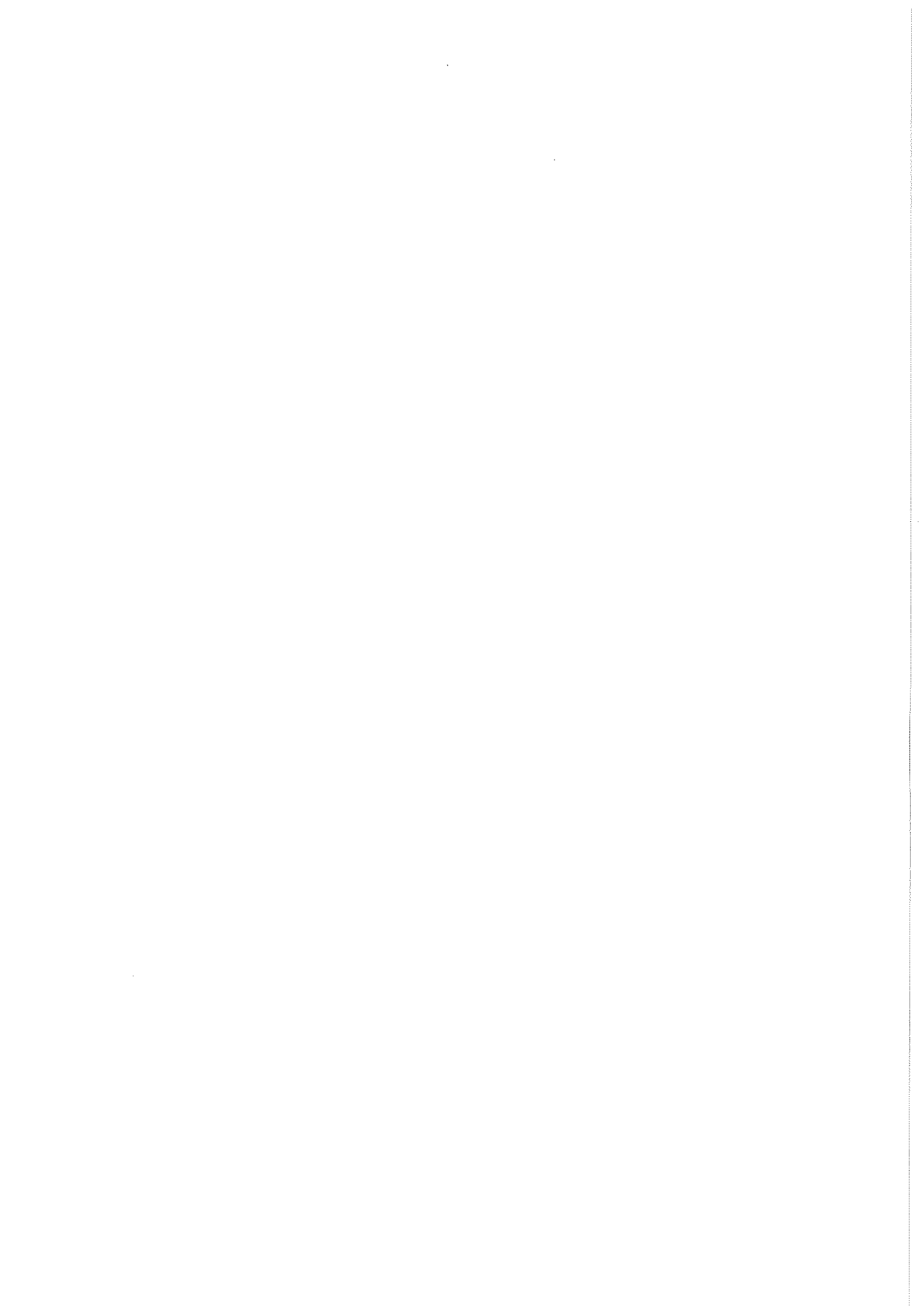
**SECTION – B**

Answer any **FIVE** of the following questions.

5x10=50M

[Draw diagrams wherever necessary]

9. Write an essay on components of water potential.  
నీటి సామర్థ్యం యొక్క భాగాలపై ఒక వ్యాసం వ్రాయండి.
10. Discuss the Mechanism of the stomatal movement.  
పత్ర రంధ్రాల కదలిక యొక్క యంత్రాంగం గురించి చర్చించండి.
11. Explain the Krebs Cycle.  
క్రెబ్స్ వలయం గురించి వివరించండి.
12. Write an essay on Symptoms of mineral deficiency.  
ఖనిజలోపం యొక్క లక్షణాల పై ఒక వ్యాసం వ్రాయండి.
13. Explain the C<sub>4</sub> pathway in C<sub>4</sub> plants.  
C<sub>4</sub> మొక్కలలో C<sub>4</sub> మార్గాన్ని వివరించండి.
14. Discuss about C<sub>3</sub> cycle.  
C<sub>3</sub> వలయం గురించి చర్చించండి.
15. Describe the classification of lipids.  
లిపిడ్ల యొక్క వర్గీకరణను వివరించండి.
16. Discuss the role of phytochrome in flowering.  
పుష్పించడంలో ఫైటోక్రోమ్ యొక్క పాత్ర గురించి చర్చించండి.



No. of Pages : 02

Question Paper (w.e.f. 2019 Batch)

No. of Questions : 16

Course Code (s) : .....53.....

SEM - VI DD/MM/YY : 

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 3 | 0 | 0 | 1 | 2 | 0 | 2 | 4 |
|---|---|---|---|---|---|---|---|

Subject : .....MATHEMATICS.....

Paper Code : .....MAT - 601GE.....

Min Marks : 28

Title of the Paper : .....Numerical Analysis.....

Time : 3:00 Hrs.

Regd. No : 

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Max Marks : 70

**SECTION - A**

Answer any **FOUR** of the following questions.

**4x5=20M**

Choosing atleast ONE question from each part.

**PART - I**

1. The length of an eraser is 35 mm and the measured length is 34.13 mm. Find absolute error, relative error and percentage error.
2. Find the real root of the equation  $x^3 - x - 1$  by iteration method near 1.
3. Find cube root of 24, correct to three decimal places using Newton-Raphson method.
4. Show that  $(\nabla + \Delta)^2(x^2 + x + 1) = 8$  if  $h=1$ .

**PART - II**

5. Estimate the missing term in the following:

|     |   |   |   |   |    |    |     |
|-----|---|---|---|---|----|----|-----|
| x : | 1 | 2 | 3 | 4 | 5  | 6  | 7   |
| y : | 2 | 4 | 8 | ? | 32 | 64 | 128 |

6. Prove that (i)  $\mu\delta = \frac{1}{2}(\Delta + \nabla) = \frac{1}{2}(\Delta E^{-1} + \Delta)$

(ii)  $\sqrt{1 + \delta^2 \mu^2} = 1 + \frac{\delta^2}{2}$

7. Apply Gauss's forward formula to obtain  $f(32)$  given that

$f(25) = 0.2707, f(30) = 0.3027, f(35) = 0.3386, f(40) = 0.3794.$

8. If  $f(x) = \frac{1}{x^2}$ , find the divided differences  $f(a,b), f(a,b,c).$

SECTION – B

Answer any FIVE of the following questions.

5x10=50M

Choosing atleast TWO questions from each part.

PART - I

9. If  $U = \frac{5xy^2}{z^3}$  then find relative maximum error in U, given that  $\Delta x = \Delta y = \Delta z = 0.001$  and  $x = y = z = 1$ .
10. Find the positive real root of the equation  $x^3 - 3x^2 + 1 = 0$  by bisection method correct to 3 places.
11. Solve  $x^3 - 9x + 1 = 0$  for the root lying between 2 and 4 by the method of false position.
12. State and prove Newton-Gregory forward interpolation formula.

PART - II

13. From the following table find the number of students who obtained less than 45 marks.

|                  |       |       |       |       |       |
|------------------|-------|-------|-------|-------|-------|
| Marks:           | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| No. of students: | 31    | 42    | 51    | 35    | 31    |

14. The population of a town in the years of 1931, .... 1971 are as follows

|                           |      |      |      |      |      |
|---------------------------|------|------|------|------|------|
| Year :                    | 1931 | 1941 | 1951 | 1961 | 1971 |
| Population in thousands : | 15   | 20   | 27   | 39   | 52   |

Find the population of the town in 1946 by applying Gauss's backward formula.

15. State and prove Bessel's formula.
16. State and prove Newton's divided difference formula.



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VUYYURU - 521 165.

No. of Pages : 01

Question Paper (w.e.f. 2019 Batch)

No. of Questions : 16

Course Code (s) : .....41.....

SEM - IV

DD/MM/YY :

3 0 0 1 2 0 2 4

Subject : .....BOTANY.....

Paper Code : .....BOT - 401.....

Min Marks : 28

Title of the Paper : .....Plant Embryology and Plant Metabolism.....

Time : 3:00 Hrs.

Regd. No :

Max Marks : 70

**SECTION – A**

Answer any **FOUR** of the following.

4x5=20M

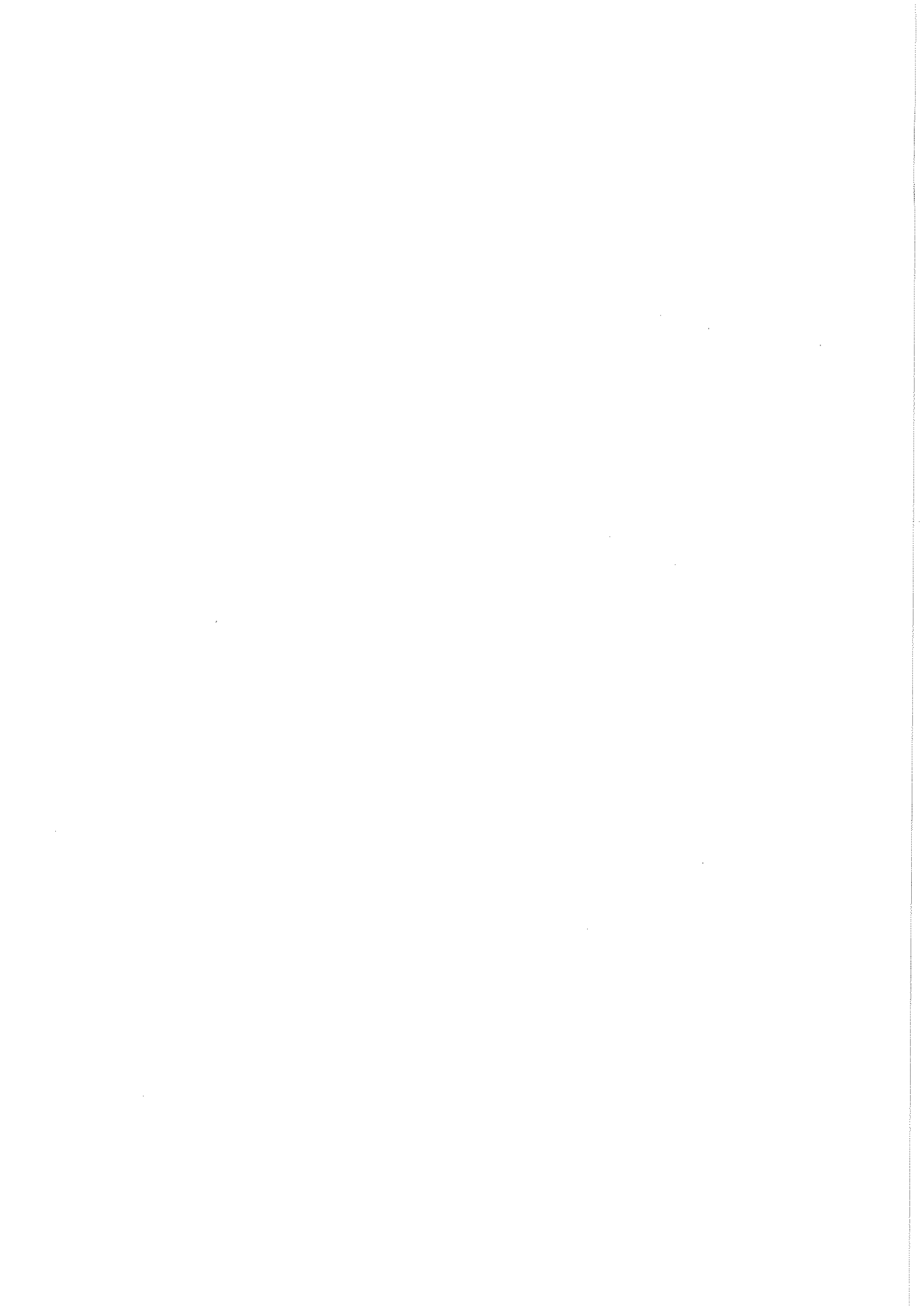
1. Types of Ovules - అండాలు - రకాలు
2. Monospori Embryo Sac types - ఏకసిద్ధ బీజవర్ధక పిండకోశాల రకాలు
3. Applications of Palynology - పాలినాలజీ యొక్క అనువర్తనాలను వ్రాయుము.
4. Emerson enhancement effect - ఎమర్సన్ వృద్ధి ప్రభావము
5. Write the difference between Aerobic and Anaerobic respiration.  
వాయుసహిత, అనాయు శ్వాసక్రియల మధ్య భేదాలు వ్రాయుము.
6. Photoperiodism - కాంతి కాలావధి
7. A B A - A B A
8. Give outline of stress Physiology - స్ట్రెస్ ఫిజియాలజీ గురించి క్లుప్తంగా వ్రాయుము

**SECTION – B**

Answer any **FIVE** of the following.

5x10=50M

9. Explain the Process of Microsporogenesis and development of male gametophyte in Angiosperms.  
మైక్రోస్పోరోజెనిసిస్ ప్రక్రియ మరియు ఆంజియోస్పెర్మ్లలో మగ గేమ్టాఫైట్ అభివృద్ధిని వివరించండి.
10. Give an account on different types of Endosperm development.  
వివిధ రకాల ఎండోస్పెర్మ్ అభివృద్ధి గురించి వ్రాయుము.
11. Give an account on Polyembryony.  
బహుపిండత గురించి వ్రాయుము.
12. Describe Calvin Cycle.  
కాల్విన్ వలయమును వివరింపుము.
13. Write an essay on Source Sink Relationships.  
ఉత్పత్తి మరియు వినియోగ స్థానాల మధ్య ఉన్న సంబంధాలను గురించి వ్రాయుము.
14. Explain the reaction of Krebs Cycle.  
క్రెబ్స్ వలయములోని జీవరసాయన చర్యలను వివరింపుము.
15. Explain Beta-Oxidation  
 $\beta$ -ఆక్సిడేషన్ పథమును వివరింపుము.
16. What are Phytohormones ? Explain the role of Auxins on plant growth & development.  
ఫైటో హోర్మోన్లు అనగానేమి? మొక్కల పెరుగుదల, అభివృద్ధిపై ఆక్సిన్ల పాత్రను విశదీకరించుము.



## TOURISM GUIDANCE AND OPERATING SKILLS

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 meaning of tourist guide.
2. Write about the various types of tour guide.
3. Analyze the guiding techniques.
4. Examine the code of conduct.
5. Write about the guest relationship.
6. Explain the process of conducting tours.
7. Types of tour operations.
8. Travel agency.

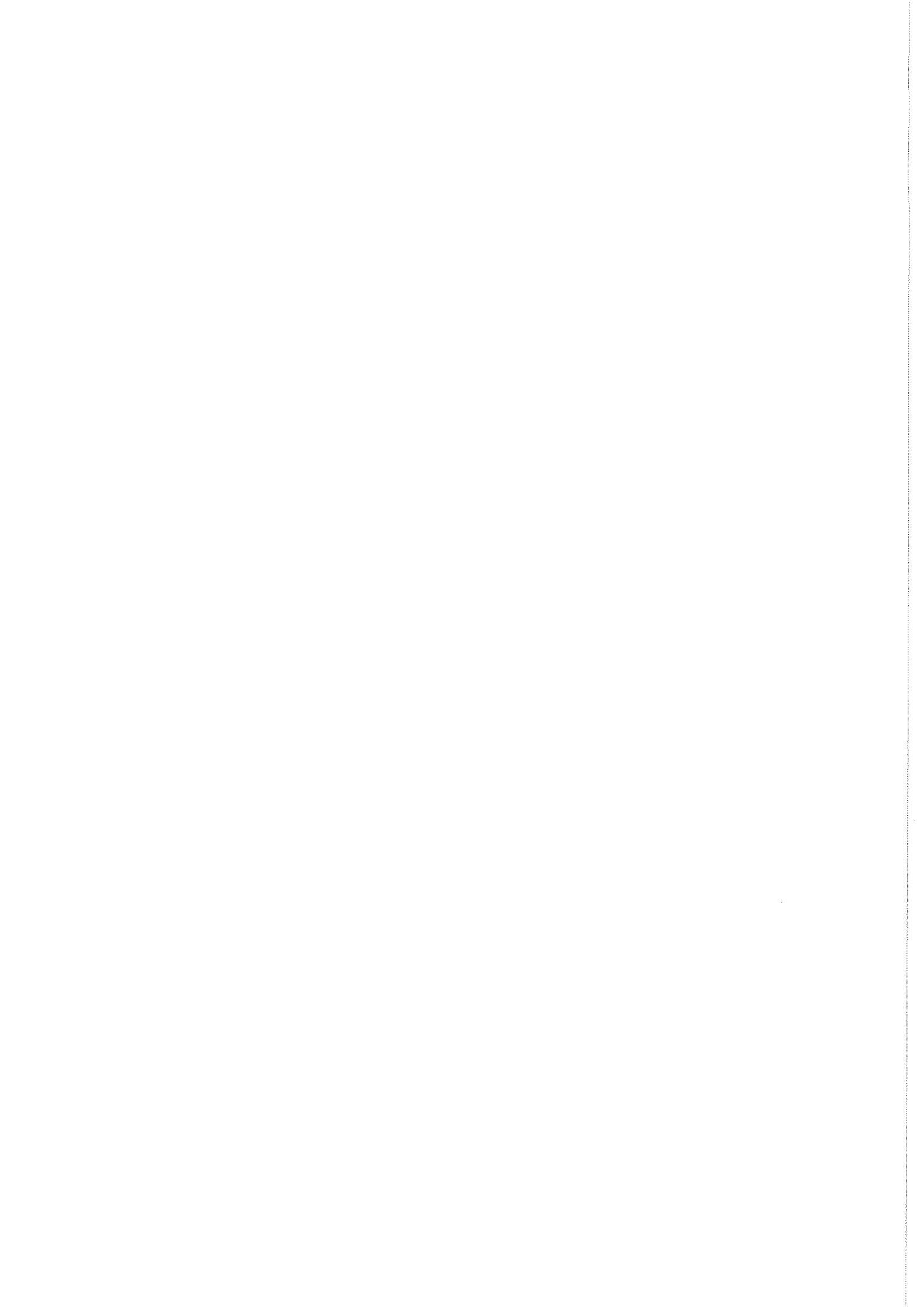
Section B

Answer the following:

5 x 10 = 50M

9. a) Explain the types of tour guide.  
or  
b) Write about the duties and responsibilities of tourist guides.
10. a) Explain the guiding techniques.  
or  
b) Analyze the guides personality skills.
11. a) Write about the guest relationship management.  
or  
b) Explain handling guest with special needs.
12. a) Write about the modes of transportations.  
or  
b) Explain the hospitality institutions.
13. a) Write about the difference between travel agent and tour operator.  
or  
b) Examine the types of tour operations.

\* \* \*



No. of Pages: 04

Roll No:

Max. Marks: 75M

Time: 3 Hrs

No. of Questions: 13

Pass Min.: 30M

\*\*\*\*\*

Section A

Answer any FIVE of the following:

5 x 5 = 25M

1. What is purchase of business?
2. Amalgamation.
3. Purchase Consideration.
4. Holding company Vs Subsidiary company.
5. Receipts and Expenditure on capital account.
6. Minority interest.
7. Consolidated Balance Sheet.
8. The liquidator of a company is entitled to a remuneration of 3% on amount realized (except cash) and at 2% on amount distributed to the unsecured creditors.  
Unsecured creditors Rs.80,000; Debenture holders Rs.1,03,750;  
Cost of liquidation Rs.1,020; Cash in hand Rs.2,000; Assets realized Rs.1,58,000. Find liquidator's remuneration.

Section B

Answer the following:

5 x 10 = 50M

9. a) Explain various methods of calculating purchase consideration.  
or  
b) Calculate purchase consideration from the following:
  - i) Total assets at book value Rs.2,50,000
  - ii) Assets taken over at 10% less than book value.
  - iii) Total liabilities Rs.1,00,000
  - iv) Liabilities not taken over Rs.25,000
  - v) Liquidation expenses of Rs.5,000 is to be borne by the purchasing company.

Contd.....(2)

10. a) Explain the provisions for amalgamation of Companies as per AS-14.

or

- b) M Ltd. acquired the undertaking of N Ltd. on 31-3-2012 for a purchase consideration of Rs.2,60,000 to be paid by fully paid equity shares of Rs.10 each. The Balance Sheets of the two companies on the data of acquisition were as follows:

| Liabilities                                   | M Ltd.<br>Rs.   | N Ltd.<br>Rs.   | Assets                          | M Ltd.<br>Rs.   | N Ltd.<br>Rs.   |
|-----------------------------------------------|-----------------|-----------------|---------------------------------|-----------------|-----------------|
| Equity share capital of Rs.10 each fully paid | 2,50,000        | 1,50,000        | Land & buildings                | 1,20,000        | 80,000          |
| General reserve                               | 1,20,000        | 18,000          | Plant & machinery               | 2,00,000        | 1,80,000        |
| P & L a/c                                     | 10,000          | 53,000          | Furniture & fittings            | 10,000          | 20,000          |
| Development rebate reserve                    | 10,000          | 37,000          | <b>Current assets:</b><br>Stock | 55,000          | 40,000          |
| Workmen compensation fund                     | 15,000          | 24,000          | Debtors                         | 45,000          | 40,000          |
| Current liabilities                           | 45,000          | 95,000          | Bank balance                    | 20,000          | 17,000          |
|                                               | <b>4,50,000</b> | <b>3,77,000</b> |                                 | <b>4,50,000</b> | <b>3,77,000</b> |

Pass the necessary journal entries in the books of N Ltd., when amalgamation is in the nature of Merger. Also prepare the balance sheet of M after amalgamation assuming that the development rebate reserve and workmen compensation fund of N Ltd. are required to be continued in the books of M Ltd.

Contd.....(3)

11.a) What do you mean by Capital Reduction? Explain its main objectives.

or

b) The Balance Sheet of unsuccessful company Ltd. was as following on 31-3-2012.

| Liabilities                                             | Rs.             | Assets                         | Rs.                |
|---------------------------------------------------------|-----------------|--------------------------------|--------------------|
| Share capital 5,000 8%<br>Pref. shares of Rs.10<br>each | 50,000          | Buildings<br>Machinery         | 1,60,000<br>80,000 |
| 30,000 equity shares<br>of Rs.10 each                   | 3,00,000        | Furniture<br>Debtors           | 20,000<br>50,000   |
| Creditors                                               | 50,000          | Discount on<br>issue of shares | 10,000             |
|                                                         |                 | Profit & loss a/c              | 80,000             |
|                                                         | <b>4,00,000</b> |                                | <b>4,00,000</b>    |

On the above date the following scheme of internal reconstruction was accepted.

- i) Rs.10 preference shares be reduced on an equal number of fully paid preference shares of Rs.6 each.
- ii) Rs.10 equity shares be reduced by Rs.6 each through total number of equity shares will remain the same.
- iii) That the remaining amount thus available is apportioned as follows:

To write off Rs.60,000 from buildings Rs.30,000 from machinery, Rs.6,000 from furniture and the balance available from debtors.

Prepare the Balance Sheet of the company after implementation of above scheme.

Contd.....(4)

12.a) Explain how Consolidated balance sheet is prepared.

or

b) Following are the Balance sheets of Major Ltd. and Minor Ltd.  
On 31<sup>st</sup> December 2012 Major Ltd. bought Minor Ltd. shares on  
1<sup>st</sup> July 2012. Prepare Consolidated balance sheet.

| Liabilities                           | Major<br>Rs.    | Minor<br>Rs.    | Assets                          | Major<br>Rs.    | Minor<br>Rs.    |
|---------------------------------------|-----------------|-----------------|---------------------------------|-----------------|-----------------|
| Share capital                         | 5,00,000        | 1,00,000        | Freehold premises               | 4,00,000        | 1,00,000        |
| General reserve                       | 1,00,000        | 10,000          | Sundry assets                   | 3,00,000        | 50,000          |
| Profit & loss a/c balance on 1-1-2012 | 1,00,000        | 10,000          | Debtors                         | 80,000          | 50,000          |
| Profit of the year                    | 1,50,000        | 50,000          | 6,000 shares on Minor Ltd. @ 20 | 1,20,000        |                 |
| Creditors                             | 50,000          | 30,000          |                                 |                 |                 |
|                                       | <b>9,00,000</b> | <b>2,00,000</b> |                                 | <b>9,00,000</b> | <b>2,00,000</b> |

13.a) Name the lists to be attached to statement of affairs.

or

b) A company went into liquidation on 31-3-2002. Prepare liquidator final statement of account liquidator remuneration 2.5% on amount realized and 2% on amount paid to unsecured creditors. Assets realized Rs.1,72,000 (including Rs.70,000 on free hold property) current assets Rs.1,95,000 and cash Rs.5,000, liquidatory expenses Rs.2,000.

**Balance sheet**

| Liabilities                 | Rs.             | Assets                             | Rs.             |
|-----------------------------|-----------------|------------------------------------|-----------------|
| Share capital of Rs.10 each | 3,90,000        | Goodwill and patents               | 1,00,000        |
| Pref. creditors             | 48,400          | Fixed assets (including free hold) | 2,27,000        |
| Partly secured creditors    | 1,10,620        | Current assets                     | 2,43,240        |
| Unsecured creditors         | 2,23,580        | Cash                               | 5,000           |
|                             |                 | P & L a/c                          | 1,97,360        |
|                             | <b>7,72,600</b> |                                    | <b>7,72,600</b> |

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SEE JAN'24

MATSET04/31-01-2024

INTEGRAL TRANSFORMS WITH APPLICATIONS

No. of Pages: 2

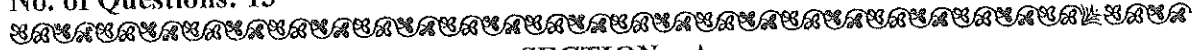
|          |  |
|----------|--|
| Roll No: |  |
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Max. Marks: 75M

Time: 3Hrs

Pass Min: 30M

No. of Questions: 13



SECTION - A

Answer any FIVE of the following:

5 X 5 = 25M

1. Show that  $L(\text{Sin } h \text{ at } \text{Sin } at) = \frac{2a^2 p}{p^4 + 4a^4}$ .

2. If  $L[F(t)] = \frac{1}{p} e^{-\frac{1}{p}}$ , then prove that  $L[e^{-t} F(3t)]^p = \frac{e^{-\frac{3}{p+1}}}{p+1}$ .

3. Find  $L\left\{\int_0^t \frac{e^{t'} \text{Sin } t'}{t'} dt'\right\}$ .

4. Find  $L^{-1}\left\{\frac{p+1}{p^2 + 6p + 25}\right\}$ .

5. Find  $a_0, a_n$  for a Fourier series to represent  $f(x) = x^2$  in the interval  $(0, 2\pi)$ .

6. Find the half range sine series of  $f(x) = 1$  in  $[0, 1]$ .

7. State and prove linear property of Fourier Transform.

8. Find the Fourier Sine Transform of  $2e^{-5x} + 5e^{-2x}$ .

SECTION - B

Answer the following:

5 X 10 = 50M

9. (a) State and prove second shifting theorem.

OR

(b) (i) Find  $L[e^{-t} (3 \text{Sin } h 2t - 5 \text{Cos } h 2t)]$ .

(ii) Find  $L[\text{Sin } 2t \text{Cos } 3t]$ .

10. (a) State and prove initial value theorem.

OR

(b) Let  $F(t)$  be a periodic function with period  $T > 0$ , then show that

$$L[F(t)] = \int_0^T \frac{e^{-pt} F(t) dt}{1 - e^{-pT}}$$

Contd..(2)

11. (a) Find the inverse Laplace transforms of  $\left[ \frac{4p+5}{(p-1)^2(p+2)} \right]$ .

OR

(b) Using convolution theorem, evaluate  $L^{-1} \left[ \frac{p^2}{(p^2+a^2)^2} \right]$ .

12. (a) Find the Fourier to represent  $f(x) = x^2 - 2$ , when  $-2 \leq x \leq 2$ .

OR

(b) Find the Fourier series of  $f(x) = \frac{\pi-x}{2}$  in  $0 < x < 2$ .

13. (a) Find the Fourier transform of  $f(x) = \begin{cases} 1, & \text{if } |x| < a \\ 0, & \text{if } |x| > a \end{cases}$ , hence evaluate  $\int_0^{\infty} \text{Sin } p \, dp$  and

$$\int_{-\infty}^{\infty} \frac{\text{Sin } ap \text{ Cos } px}{p} \, dp.$$

OR

(b) Show that the Fourier transform of  $f(x) = e^{-x^2/2}$  is  $e^{-p^2/2}$ .

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## MUSHROOM CULTIVATION

No. of Pages: 1

Time: 3Hrs

No. of Questions: 13

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

Max. Marks: 75M

Pass Min: 30M

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Note: Draw neat labelled diagrams wherever necessary.

SECTION – A

Answer any FIVE of the following:

5 X 5 = 25M

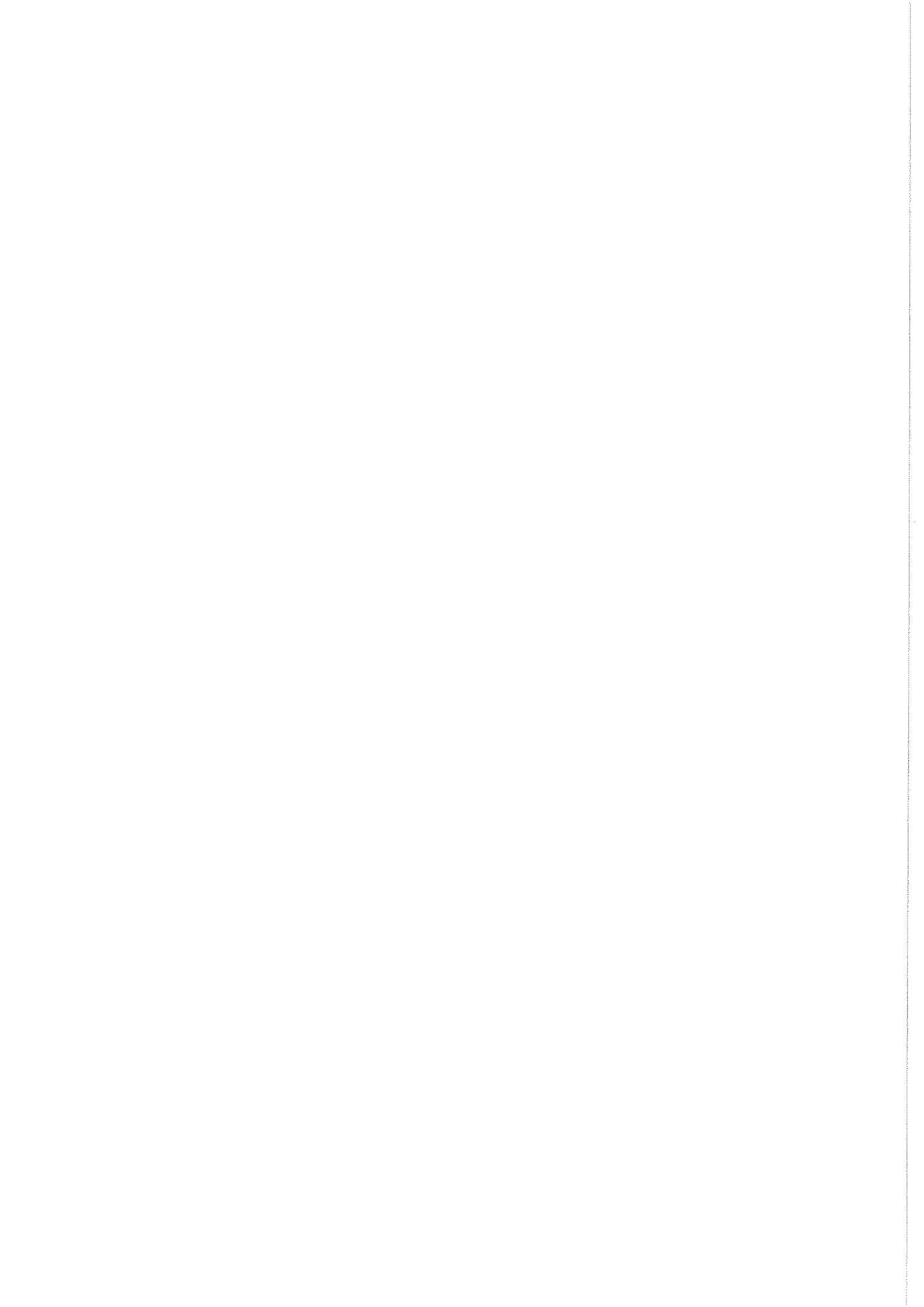
1. Write short notes on *Phellinus*.
2. State the differences between poisonous and edible mushrooms.
3. What are the materials required for compost preparation?
4. Explain the mode of storing mushroom spawn.
5. List out the major diseases of mushrooms.
6. Detail the post harvest handling of fresh milky mushrooms.
7. Illustrate the novel value added products of mushrooms.
8. Explain the preparation of pure culture

SECTION – B

Answer the following:

5 X 10 = 50M

9. (a) Describe the scope and importance of mushroom cultivation.
OR
(b) Write an essay on nutraceutical and medicinal value of mushrooms.
10. (a) Explain the layout of a mushroom farm.
OR
(b) Extend an account on fundamentals of cultivation system and small village unit.
11. (a) Give an account of facilities required for spawn preparation.
OR
(b) What is casing material? Give an account of different types of casing mixtures.
12. (a) Write an essay on the production of button mushrooms.
OR
(b) Summarize the process of cultivation of paddy straw mushrooms.
13. (a) Explain the mode of management of spent substrate and waste disposal of various types of mushrooms.
OR
(b) Explain the quality assurance and entrepreneurship in mushroom cultivation.



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VUYYURU - 521 165.

No. of Pages : 01

Question Paper

No. of Questions : 13

Course Code (s) :51.....

SEM - III

DD/MM/YY :

3 1 0 1 2 0 2 4

Subject : SKILL DEVELOPMENT COURSE

Paper Code : PF - 301

Min Marks : 20

Title of the Paper : Poultry Farming

Time : 2:00 Hrs.

Regd. No :

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Max Marks : 50

SECTION - A

Answer any **FOUR** of the following questions. Each question carries **FIVE** marks.

4x5=20M

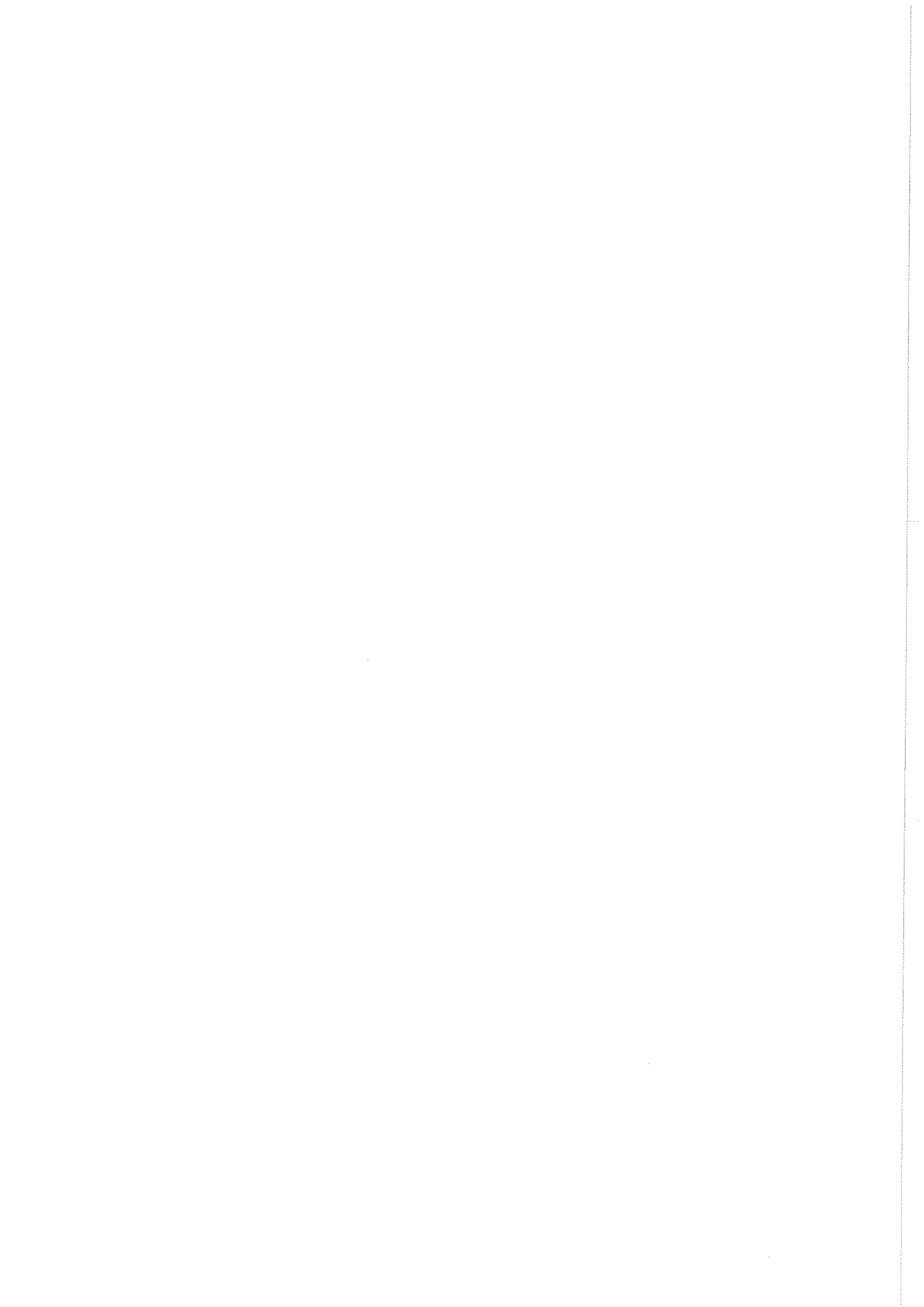
1. Management of Broilers - బ్రాయిలర్ల యాజమాన్యము
2. Banking on poultry industry - కోళ్ళ పరిశ్రమలో బ్యాంకుల యొక్క పాత్ర
3. Write any two bacterial diseases of poultry - కోళ్ళలో ఏవైనా రెండు బ్యాక్టీరియల్ వ్యాధులు
4. Write any two Fungal diseases - కోళ్ళలో ఏవైనా రెండు ఫంగల్ వ్యాధులు
5. Principles of feeding in poultry - కోళ్ళ పరిశ్రమలోని పోషణ పద్ధతులు తెల్పుము.
6. Egg Testing - గ్రుడ్లు పరీక్ష
7. Sexing of chicks - కోడిపిల్లలోని లింగ నిర్ధారణ
8. Recycling of poultry waste - పౌల్ట్రీ వ్యర్థాలను తిరిగి ఉపయోగించుట

SECTION - B

Answer any **THREE** of the following questions. Each question carries **TEN** marks.

3x10=30M

9. Explain about past and present scenario of poultry industry in India.
భారతదేశంలో కోళ్ళ పరిశ్రమ పరిస్థితులు పూర్వము మరియు ప్రస్తుతము ఏవిధముగా ఉన్నవి వివరించండి.
10. Explain principles of poultry housing in detail with examples.
కోళ్ళ పరిశ్రమలో గృహములు నిర్మించడానికి పాటించు పద్ధతులను ఉదాహరణలతో వివరించండి.
(వివిధ రకములైన కోళ్ళ షెడ్లు)
11. Write an essay on bacterial diseases in poultry (any two).
పౌల్ట్రీకోళ్ళకు సోకే ఏవైనా రెండు బ్యాక్టీరియల్ వ్యాధులను గూర్చి వివరంగా వ్రాయండి.
12. Give an account of vaccination programme in poultry farm.
కోళ్ళ పరిశ్రమలో టీకాలు వేయు విధానమును సవివరంగా వివరింపుము.
13. Write an essay on selection, handling and hatching of eggs.
పొదిగే గుడ్ల యొక్క ఎంపిక, సంరక్షణ మరియు నిర్వహణ గూర్చి వ్రాయండి.



SEE January-2024

No. of Pages:2

Roll No.:

Max. Marks: 70M

Time: 3 Hrs.

No. of Questions: 10

Pass Min. : 28M

అనుబంధం

1. ఈ క్రింది పద్యానికి ప్రతిపదార్థ తాత్పర్యమును వ్రాయండి .

8M

అ. “ఉత్తమ మధ్యమాధమ నియోగ్యత బుద్ధినెఱింగి వారి న
యుత్తమ మధ్యమాధమ నియోగములన్ నియమించితే నరేం
ద్రోత్తమ! భృత్యకోటికి సమానముగాఁదగు జీవితంబు లా
యత్తముసేసి యితై దయ సయ్యయి కాలము దప్పకుండఁగన్”
లేదా

ఆ. ముప్పు ఘటించి వీని గలిమిన్ గబళించి దేహమున్
బిప్పి యొనర్చు నీ భరత వీరుని పాదము కందకుండగాఁ
జెప్పులు గుట్టి జీవనము సేయును గాని నిరాకరింప లే
దెప్పుడు నప్పు వడ్డది సుమీ భారతావని వీని సేవకున్

2. ఈ క్రింది వానికి సందర్భ సహిత వ్యాఖ్యలు వ్రాయండి.

2 X 3 = 6M

(i) (అ) పంచితె నీవు వారిదైన నేర్పెఱింగి

లేదా

(ఆ) ఋణము లితై యుత్తమ బుద్ధిన్

(ii) (అ) భాగ్య విహీనుల క్షుత్తు లారునే

లేదా

(ఆ) సత్య వాక్యమునకు చావు లేదు

3. (అ) నారదుడు ధర్మరాజునకు చెప్పిన రాజనీతిని సంగ్రహంగా తెలపండి.

10M

లేదా

(ఆ) గబ్బిలం కావ్యంలో జాషువా పంచముని దుస్థితిని వర్ణించిన విధానాలు వివరించండి.

4. (అ) ‘అలరాస పుట్టిళ్లు’ కథాంశాన్ని తెలపండి.

10M

లేదా

(ఆ) సుబ్బారాయుని మనస్తత్వాన్ని విశ్లేషించండి.

5. (అ) సీతారామారావు జీవయాత్రను వర్ణించండి.

10M

లేదా

(ఆ) రామయ్య తాత సీతా రామారావుకు తెలిపిన జీవితతత్త్వాన్ని వర్ణించండి.

6. (అ) వేమన శతక సాహిత్యం లోని సామాజికతను రాయండి.

10M

లేదా

(ఆ) వేమన జీవిత చరిత్రను సంగ్రహంగా వివరించండి.

7. ఈ క్రింది వానిలో రెండింటిని విడదీసి, సంధి పేరు తెలపండి. 2 X 2 = 4M
(1) క్షుధానలము (2) జితేంద్రియుడు (3) ఇల్లుసేరి (4) శతైక వృద్ధి
8. ఈ క్రింది వానిలో రెండింటికి విగ్రహ వాక్యం రాసి సమాసం పేరు తెలపండి. 2 X 2 = 4M
(1) రాజ పుత్రులు (2) అసాధ్యము (3) ధర్మార్థకామములు (4) సత్య వాక్యము
9. (అ) ఈ క్రింది పద్యములోని అలంకారమును గుర్తించి, లక్ష్య, లక్షణ సమన్వయం చేయండి. 4M
“ఆ అభాగ్యుని రక్తంబు నాహరించి
యినుప గణ్ణెల తల్లి జీవనము సేయుచు
గసరి బుసకొట్టు నాతని గాలి సోక
నాల్గు పడగల హైందవ నాగరాజు”
లేదా
(ఆ) ‘స్వభావోక్తి’ అలంకారాన్ని నిర్వచించి, సోదాహరణంగా వివరించండి.
10. (అ) క్రింది పద్యపాదాన్ని గణవిభజన చేసి యతిప్రాసలు గుర్తించి ఏ పద్య పాదమో తెల్పండి. 4M
కడుఁజనువాఁడ నై పురుష కారీయు దక్షుడు నైన మంత్రి పెం
లేదా
(ఆ) కంద పద్య లక్షణాలను సోదాహరణముగా వివరించండి.



No. of Pages: 2 ✓

Roll No.:

Max. Marks: 70M ✓

Time: 3Hrs. ✓

Pass Min. : 28M ✓

No. of Questions: 10 ✓

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SECTION - A

निम्न लिखित प्रश्नों का उत्तर दीजिए :-

5 X 4 = 20M

1. (अ) भारतीय इतिहास से आदर्श मित्रता के कुछ उदाहरण दीजिए । ✓

अथवा ✓

(आ) साहित्य किसे कहते हैं? इसका शास्त्र से क्या संबंध है ? ✓

2. (अ) मुक्तिधन कहानी के उद्देश्य पर प्रकाश डालिए ? ✓

अथवा ✓

(आ) मधूलिका का चरित्र-चित्रण कीजिए ? ✓

3. (अ) कारक किसे कहते हैं ? तथा उसके कितने प्रकार हैं ? ✓

अथवा ✓

(आ) लिंग किसे कहते हैं ? तथा उसके कितने प्रकार हैं ? ✓

4. (अ) नीचे दिए गए शब्दों का लिंग बदलकर लिखिए ।

(i) लडका (ii) मोर (iii) अध्यापक (iv) पंडित

अथवा ✓

(आ) नीचे दिए गए शब्दों का विलोम शब्द लिखिए ।

(i) प्रत्यक्ष (ii) अनुकूल (iii) कठिन (iv) गरीब

5. (अ) नीचे दिए गए शब्दों का वचन बदलकर लिखिए ।

(i) लडकी (ii) घोडा (iii) भाई (iv) गाय

अथवा ✓

(आ) कारक चिह्नों से रिक्त स्थानों की पूर्ति कीजिए ।

(i) रमेश मुंबई ——— आता है । ✓

(ii) राम ——— भाई लक्ष्मण है ।

(iii) बच्चे ——— गेंद चाहिए ।

(iv) गणेश ——— किताब पढ़ी ।

SECTION - B

निम्न लिखित प्रश्नों का उत्तर दीजिए :-

5 X 10 = 50M

6. (अ) मित्रता पाठ का सारांश लिखिए । -

अथवा -

(आ) बिन्दा पाठ का सारांश लिखिए । -

7. (अ) पुरस्कार कहानी का सारांश लिखिए । -

अथवा -

(आ) 'और वह पढ़ गई' कहानी का सारांश लिखिए । -

8. (अ) आचार्य रामचंद्र शुक्ल के अनुसार हिन्दी साहित्य का काल विभाजन कीजिए ।

अथवा

(आ) हिन्दी साहित्य का इतिहास सामान्य परिचय दीजिए ।

9. (अ) किन्हीं दस शब्दों को अंग्रेजी से हिन्दी में अनुवाद कीजिए ।

(i) Absence (ii) Allotment (iii) Circular (iv) Confidential (v) Duty

(vi) Passport (vii) High court (viii) Order (ix) Deputation (x) Overtime

(xi) Deduction (xii) Fair copy

अथवा

(आ) किन्हीं दस शब्दों को हिन्दी से अंग्रेजी में अनुवाद कीजिए ।

(i) राजदूत (ii) निर्देशक (iii) सचिव (iv) अधिनियम

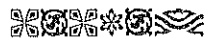
(v) दस्तावेज (vi) लेखाकार (vii) सलाहकार (viii) अध्यक्ष

(ix) राज्यपाल (x) प्रभारी (xi) अनुवादक (xii) करार

10. (अ) बीमारी के कारण छुट्टी के लिए प्रधानाचार्य को पत्र लिखिए ।

अथवा

(आ) परीभ शुल्क माँगते हुए अपने पिताजी के नाम पर पत्र लिखिए ।



V. క్రింది వానిలో మూడింటిని విడదీసి, సంధి కార్యములు వ్రాయండి. 3 X 2 = 6M  
 1. ధర్మార్థములు 2. నరేంద్రోత్తముడు 3. ఇట్లనిరి 4. ఇక్కోమలి 5. అత్యుగ్రము

VI. క్రింది వానిలో మూడింటికి విగ్రహవాక్యాలు వ్రాసి సమాస నామాలు తెల్పండి. 3 X 2 = 6M  
 1. బంధుమిత్రులు 2. త్రిలోకములు 3. రాజపుత్రులు 4. ప్రసన్నచిత్తులు 5. శాంతవచనములు

VII. (అ) క్రింది పద్యపాదాన్ని గణవిభజనచేసి యతిని గుర్తించి ఏ పద్యపాదమో తెల్పండి. 4M  
 “పదలక బుద్ధి సంతరివర్గము నోర్చి జితేంద్రియుండవై”  
 లేదా

(ఆ) క్రింది వానిలో ఒకదానికి లక్ష్య, లక్షణ సమన్వయం చేయండి.  
 1. కందము 2. ముత్యాల సరాలు 3. ఆటవెలది

VIII. క్రింది పద్యంలోని అలంకారాన్ని గుర్తించి లక్ష్య, లక్షణ సమన్వయం చేయండి. 4M  
 వేట కాటు ముట్టి వెనుకొనగా శ్వేత  
 సగము చరకిందారు నెమలి వోలె  
 నభ్ర గజము మీదికా సహస్రాక్షుండు  
 వ్రాచి పాతెఁ బ్రమథరాజి యార్ప

లేదా

(ఆ) క్రింది అలంకారములలో ఒకదానికి లక్ష్య, లక్షణ సమన్వయం చేయండి.  
 (అ). వృత్త్యానుప్రాస (ఆ). ఉత్పేక్ష



No. of Pages:2

Roll No.:

Max. Marks: 70M

Time: 3 Hrs.

No. of Questions: VIII

Pass Min. : 28M

అనుబంధములు

I. క్రింది ప్రధానానికి ప్రతిపదార్థ తాత్పర్యమును వ్రాయండి .

10M

అ) “ఉత్తమ మధ్యమాధమ నియోగ్యత బుద్ధినెఱింగి వారిన  
యుత్తమ మధ్యమాధమ నియోగములన్ నియమించితే నరేం  
ద్రోత్తమ! భృత్యకోటికి సమానముగాఁదగు జీవితంబులా  
యత్తముసేసి యితై దయనయ్యయి కాలము దప్పకుండగన్”  
లేదా

అ) రాజగృహంబుకంటె నభిరామముగా నిలు గట్టఁ గూడ దే  
యోజ సృపాలుఁ డాకృతికి నొప్పగు వేషము లాచరించు నే  
యోజ విహారముల్ సలుప నుల్లమునం గడు వేడ్కసేయునే  
యోజ విదగ్ధుఁడై పలుకు నొడ్డులకుం దగదట్లు చేయఁగన్

II. క్రింది వానిలో రెండింటికి సందర్భ సహిత వ్యాఖ్యలు వ్రాయండి.

2 X 5 = 10M

- (అ) ఋణము లితై యుత్తమ బుద్ధిన్.  
(ఆ) ఎలుక తోడి కోపమున నిల్లేర్చునట్లు  
(ఇ) రాముడేరీతి లంకకు రాగలండు

III. క్రింది వానిలో రెండింటికి సంగ్రహరూప సమాధానాలు వ్రాయండి.

2 X 5 = 10M

- (అ) పరమేశ్వరునితో గణాధిపతులు ఏమని చెప్పారు?  
(ఆ) ధౌమ్యుడు పాండవులకు ధర్మోపదేశం ఎందుకు చేశాడు?  
(ఇ) శ్రీకృష్ణుడు బాల్యసఖుని ఆదరించిన విధానం తెప్పండి.

IV. క్రింది వానికి వ్యాసరూప సమాధానాలు వ్రాయండి.

2 X 10 = 20M

1. (అ) నారదుడు ధర్మరాజునకు చెప్పిన రాజనీతిని సంగ్రహంగా తెలపండి.  
లేదా  
(ఆ) ధౌమ్యుడు పాండవులకు చేసిన ధర్మోపదేశం వివరించండి.
2. (అ) “మధుర స్నేహం” పాఠ్యభాగ సారాంశాన్ని తెల్పండి.  
లేదా  
(ఆ) సీతా రావణ సంవాదాన్ని సంగ్రహంగా రాయండి.

P.T.O.