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FOUR YEAR B.Sc. HONOURS DEGREE EXAMINATION**APRIL/MAY-2025****CHOICE BASED CREDIT SYSTEM****SECOND SEMESTER -MINOR****PART - II : ELECTRONICS****PAPER - 3 : FUNDAMENTALS OF ELECTRICITY AND ELECTRONICS***(Under CBCS New Regulation w.e.f. the academic year 2023-24)***Time : 3 Hours****Max. Marks : 75****SECTION - A****Answer any Five of the following questions. Each question carries equal marks.****(5×5=25)**

1. Obtain the relation between Electric field intensity and Electric potential.
2. State and Explain Coulomb's law.
3. Obtain an expression for the energy stored in a charged capacitor.
4. Explain the measurement of dielectric constant using Kelvin's attracted disc electrometer.
5. Derive an expression for the force on a conductor carrying current placed in a magnetic field.
6. Explain the measurement of figure of merit of B.G.
7. Explain the working of Clipper and Clamper circuits using diodes.
8. Explain the V-I characteristics of a Zener diode.
9. Explain the operation of current flow in a NPN transistor.
10. Give the construction of AND gate using diodes and transistors.

SECTION - B

Answer All the questions. Each question carries equal marks.

(5×10=50)

11. a) Derive an expression for the Electric field intensity due to a uniformly charged sphere at a point outside, on and inside the solid sphere using Gauss's law.

(OR)

- b) Obtain an expression for the intensity and potential due to a dipole.

12. a) Derive an expression for the capacitance of a parallel plate capacitor with dielectric.

(OR)

- b) What is a Kelvin's attracted disc electrometer? with a neat diagram, Explain the measurement of potential using it.

13. a) Explain the calibration of low range ammeter using the potentiometer.

(OR)

- b) Using Carey Foster's Bridge, Explain the determination of specific resistance.

14. a) What is a rectifier? obtain an Expression for Efficiency and ripple factor using a full wave rectifier.

(OR)

- b) Explain the construction of Regulated power supply using Zener diode.

15. a) What are h-parameters of a transistor? Explain the determination of h-parameters from Static characteristics in CE configuration.

(OR)

- b) Explain the frequency response of RC-coupled amplifier with a neat Circuit diagram.

SECTION - B

Answer any Five of the Following questions. Each question carries equal marks.

(5×12=60)

11. What are the distinguishing characteristics and applications of various types of computers?
 12. Define and differentiate between primary, Secondary and cache memory. Elucidating their roles in computer systems.
 13. Explain the objectives, functions, and types of operating systems, including real-time and distributed systems.
 14. Discuss the features and command structures of DOS and Microsoft Windows emphasizing their contributions to computer operations.
 15. Define artificial intelligence and its underlying assumptions, along with key techniques and criteria for success.
 16. Explore the concepts of problem spaces and search methodologies, highlighting their significance in AI problem-solving.
 17. Discuss heuristic search techniques such as hill climbing and problem reduction emphasizing their applications in AI.
 18. Explain problem-solving agents and various search strategies, including breadth-first and depth-limited search, illustrating their effectiveness in tackling diverse problems.
 19. How do problem-solving agents operate in solving both toy and real-world problems?
 20. Explain the significance of search strategies like breadth-first, uniform cost depth-first, and depth-limited search in problem-solving processes.
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FOUR YEAR HONOURS B.C.A. (ARTIFICIAL INTELLIGENCE)

DEGREE EXAMINATION, APRIL/MAY-2025

CHOICE BASED CREDIT SYSTEM

SECOND SEMESTER - MAJOR

PART-II

**PAPER-3: FUNDAMENTALS OF COMPUTERS AND BASICS OF
ARTIFICIAL INTELLIGENCE**

(Under CBCS New Regulation w.e.f. the Academic year 2023-2024)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the Following questions. Each question carries equal marks.

(5×3=15)

1. Differentiate between input devices and output devices.
2. Discuss the features and functions of DOS.
3. Describe the types of software, focusing on system software and application software.
4. How does multitasking work in operating systems?
5. What are the criteria for the success of an AI model?
6. How can AI techniques be applied to solve real-world problems?
7. Describe means-ends analysis as a problem-solving technique in artificial intelligence.
8. What are the advantages and limitations of heuristic search techniques?
9. Describe how uniform cost search works and when it is used.
10. What are the advantages and disadvantages of depth-first search?

**FOUR YEAR B.C.A. (HONOURS) (DATA SCIENCE/ARTIFICIAL
INTELLIGENCE/BIG DATA/CLOUD COMPUTING/CLOUD COMPUTING/
GENERAL) DEGREE EXAMINATION, APRIL/MAY-2025**

CHOICE BASED CREDIT SYSTEM

SECOND SEMESTER - MAJOR

PART-II

PAPER-4: PROGRAMMING IN C

(Under CBCS New Regulation w.e.f. the academic year 2023-24)

Time : 3 Hours

Max. Marks : 75

SECTION - A

Answer any Five of the Following questions. Each question carries equal marks.

(5×3=15)

1. What are the programming methodologies?
2. What are tokens in programming?
3. Discuss the process of storing values in an array.
4. Explain the process of function declaration/prototype.
5. Define a union in C programming.
6. What are the different generations of programming languages.
7. What are variables and how are they declared and used in C?
8. What are the values are stored in an array.
9. Discuss the concept of an array of structures.
10. What are the advantages of Arrays in C?

SECTION - B

Answer any Five of the following questions. Each question carries equal marks.

(5×12=60)

11. Explain in detail about the characteristics of each generation of programming languages.
 12. Explain the structure of a C program with examples.
 13. What are the different types of operators in C.
 14. Explain in detail about the basic data types in C with example.
 15. Compare and contrast one-dimensional, two-dimensional, and multidimensional arrays.
 16. Define an array and explain its significance in programming.
 17. What is a function definition and how is it different from declaration?
 18. Describe different storage classes in C and their significance.
 19. What are the difference between Structure and Unions.
 20. Describe various methods for accessing structure members.
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**FOUR YEAR B.A./B.Com./B.Sc./B.C.A./B.B.A./B.Music/B.Dance/B.A(OL)/
B.H.M./B.VOCATIONAL IN DAIRYING AND ANIMAL**

HUSBANDRY/B.VOCATIONAL IN HORTICULTURE

(ALL GROUPS) DEGREE EXAMINATION, APRIL/MAY-2025

CHOICE BASED CREDIT SYSTEM

SECOND SEMESTER

PART - I(C): LIFE SKILL COURSE

PAPER - III: MARKETING SKILLS

(Under CBCS New Regulation w.e.f. The academic year 2023-24)

Time : 1 ½ Hours

Max. Marks : 50

Answer any Five questions. Each answer carries equal marks.

(5×10=50)

1. Explain the Various Components of Holistic marketing.
2. Explain the Marketing Environment.
3. What are the steps involved in marketing Research?
4. What is Market Segmentation? Explain its types.
5. What are the 7 Ps of service marketing?
6. Define Product Life cycle and its phases.
7. What is Advertising? Explain different types of Advertising?
8. Explain various functions of Selling.
9. What are good qualities of a Sales Person?
10. What are the Advantages and Disadvantages of Selling Concept?

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FOUR YEAR B.A./B.Com./B.Sc./B.C.A./B.B.A./B.Music/B.Dance/B.A.(OL)
B.H.M./B.VOCATIONAL IN DAIRYING AND ANIMAL
HUSBANDRY/B.VOCATIONAL IN HORTICULTURE (ALL GROUPS)
DEGREE EXAMINATION, APRIL/MAY - 2025
CHOICE BASED CREDIT SYSTEM
SECOND SEMESTER
PART - I (C): LIFE SKILL COURSE
PAPER - III : INVESTMENT PLANNING
(Under CBCS New Regulation w.e.f. the academic year 2023-24)

Time : 1 ½ Hours**Max. Marks : 50****Answer any Five questions. Each question carries equal marks.****(5×10=50)**

1. Define Investment. Explain in detail the different types of Investment avenues.
2. Describe the features of good Investment.
3. Elaborate in detail the attributes of Investment.
4. Define Risk. Illustrate the types of Security Risk.
5. Distinguish between systematic and Non-systematic risk.
6. Explain the different methods of valuation of Bonds.
7. Discuss the different approaches in construction of Investment Options.
8. What is Portfolio management? Describe the Characteristics of a Portfolio management.
9. Elucidate the different types of Portfolio Management Strategies.
10. Describe the investor protection guidelines of SEBI.

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FOUR YEAR B.A./B.Com./B.Sc./B.C.A./B.B.A./B.Music/B.Dance/B.A.(O.L.)/
B.H.M./B.A.(O.L)(ALL GROUPS) DEGREE EXAMINATION,

APRIL/MAY - 2025

CHOICE BASED CREDIT SYSTEM

SECOND SEMESTER

PART-I(A) : SANSKRIT

PAPER - II : POETRY, PROSE AND GRAMMAR-II

(Under CBCS New Regulation w.e.f. the academic year 2023-24)

Time : 3 Hours

Max. Marks : 75

सूचना: द्वितीय-तृतीय-चतुर्थ-पञ्चम-दशम-प्रश्नाः संस्कृत भाषायांमेव समाधेयाः।

Q.No: 2,3,4,5,10 should be answered in sanskrit only.

प्रथमभागः

(25)

I. द्वौ श्लोकौ पूरयित्वा भावं च लिखत।

(2×3=6)

- 1) ता राघवं प्रविष्टा।
- 2) हस्तेन प्रतिपल्लवेन॥
- 3) अपामार्गस्तु वान्तिकृत्॥
- 4) मरुवः नाशनः॥

II. द्वयोः सम्पूर्ण शब्दरूपाणि लिखत।

(2×3=6)

- 1) तनु
- 2) वधू
- 3) वन
- 4) वारि

III. द्वयोः धात्वोः निर्दिष्ट लकारे सर्वाणि रूपाणि लिखत।

(2×2½=5)

- 1) इच्छतु
- 2) चोरयेत
- 3) वन्दिष्यते
- 4) अयुध्यत

IV. चतुर्णामनिर्देश पूर्वकं संधत्त।

(4×1=4)

- | | |
|----------------|---------------|
| 1) तत्+लयः | 2) अच्+अन्तः |
| 3) सुगुण+ईशः | 4) शिवः+अहम् |
| 5) नरा+इमे | 6) गुरोः+आज्ञ |
| 7) गुरो+भाषणम् | 8) हरिः+चरति |

V. चतुर्णामनिर्देश पूर्वकं संधत्त।

(4×1=4)

- | | |
|------------|---------------|
| 1) अधिहिर | 2) अतिनिद्रम् |
| 3) अनुरूपं | 4) यथाविधि |
| 5) ऊढकरः | 6) चक्रपाणिः |
| 7) सकलाः | 8) उपदशाः |

द्वितीयो भागः

(50)

VI. द्वयोः आन्धभाषायां आङ्गलभाषायां वा अनुवदत।

(2×3=6)

- 1) महाश्वेता तु गते केयुरके चन्द्रपीडामुवाच-राजपूत्र रमणीयो हेमकूटः
चित्रा चित्ररथराजधानी। सरलहृदया महानुभावा च कादम्बरी॥
- 2) अथैकदा मधुमासदिवसेषु अम्बया सममिदमच्छोदं सरः स्नातुमभ्यागमम्।
एकस्मिन् प्रदेशे वनानिलेनोपनीतम्, अनाघ्रातपूर्वं कुसूमगन्धमभ्यजिघ्रम॥
- 3) वृन्दा- अद्य प्रातः चोरः इव गोष्ठम् प्रविष्टः। स सर्वान् अपि वत्सान् रज्जुविहीनान् कृत्वा क्षीरं पायितवान्।
दोहनार्थं यदा गच्छामि धेनव पदेन मां प्रहरन्ति।
नन्दः- ततः किम् कृतं भवत्या.....?
- 4) यशोदा- एवं वा?
नीला- मम गृहे अद्य निष्पादितं दधि तेन निश्शेषं समापितम्।
यशोदा- हू.....। (साश्चर्यम्) किम् वदन्ति भवत्यः मम पुत्रः अत्रैव अस्ति खलु।
कुत्रापि न गतवान् एव सः।

VII. 1) पाणिग्रहणम् इति पाठ्यभागस्य सारांशं लिखत।

(1×8=8)

(अथवा)

- 2) गणेशाय एकविंशति पत्रार्चनं समर्थयत।

VIII. 1) कथं पन्ना राणावंशपरित्राणं चक्रे।

(1×8=8)

(अथवा)

- 2) कीदृशं सत्पुमांसं भजेत। विशदयत।

IX. 1) अमोघदर्शनं इति पाठ्यभागस्य सारांशंलिखत।

(1×8=8)

(अथवा)

2) को जानीते को जानीते परमपुरुष तव महिमानम्? विशदयत।

X. चतुर्णां लघु समाधानानि लिखत।

(4×2=8)

1) विवाह समये वरः कीदृश आसीत्? कुमारी कीदृशी बभूव?

2) ज्वरहारिणी का।

3) सर्वान्तः पूरदीपकः कः।

4) महाश्वेतायाः तपः कारणम् किम्।

5) अजालोकनतत्पराणां पुर सुन्दरीणां विचेष्टितानि कीदृशानि बभूवुः।

6) रक्तमांस बलप्रदम् किम्।

7) कस्य संस्थाने पन्नादायी कर्मचारिणी आसीत्।

8) चन्द्रपीडः कीदृशी महाश्वेताम् ददर्श।

XI. चतुर्णां ससन्दर्भम् व्याख्यात।

(4×3=12)

1) तथा हि शेषेन्द्रीयवृत्तिरासां सर्वात्मना चक्षुरिवप्रविष्टा।

2) गतेयमात्मप्रतिरूपामेवा मनो हि जन्मान्तरसङ्गतिज्ञाम्।

3) श्वासहृद्रोगनाशिनी।

4) चक्षुष्यः कुष्ठकण्डूघ्नः प्रलोपाद्विषमन्यथा।

5) राष्ट्रनिष्ठा सदाचारा पुत्रत्यागेन मानिनी।

6) भगवान्! गृहाण तवायमात्मजः।

7) अहो तस्य अविनयः वर्णयितुमेव अशक्यः।

8) चोरचेष्टितानि। किम् कृतवान् मम पुत्रः तादृशं कार्यम्?

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**FOUR YEAR B.A./B.Com./B.Sc./B.C.A./B.B.A./B.Music/B.Dance/B.A.(O.L)/
B.H.M/B.VOCATIONAL IN DAIRYING AND ANIMAL
HUSBANDRY/B.VOCATIONAL IN HORTICULTURE**

(ALL GROUPS) DEGREE EXAMINATION, APRIL/MAY - 2025

CHOICE BASED CREDIT SYSTEM

SECOND SEMESTER

PART - I(A): GENERAL ENGLISH

PAPER - I : A COURSE IN READING AND WRITING SKILLS

(Under CBCS New Regulation w.e.f the academic year 2023-24)

Time : 3 Hours

Max. Marks : 75

I. Answer any THREE of the following questions.

(3×5=15)

- a) How does Tennyson's 'Ulysses' explore the theme of longing for adventure and the pursuit of purpose in life?
- b) **Write Noun forms for the following words by adding a Suffix:**
 - i) Advertise
 - ii) Honest
 - iii) Kind
 - iv) Wise
 - v) Brave
- c) **Write One Word Substitutes for the following.**
 - i) One who does not consume alcoholic drinks.
 - ii) One who looks on the bright side of things.
 - iii) Supposed cure for all diseases or problems.
 - iv) One who believes in God
 - v) A person who cannot read or write.

d) Match the following into appropriate collocations.

A

B

- | | | |
|------------|-----|--------------|
| i) High | () | a) break |
| ii) Hard | () | b) transport |
| iii) Junk | () | c) chocolate |
| iv) Public | () | d) work |
| v) Short | () | e) food |

e) Explain : I cannot rest from travel : "I will drink Life to the lees"

II. Answer any THREE of the following questions.

(3×5=15)

- Discuss the significance of the narrator's decision to invest in the young boy's future in "The Best Investment I Ever Made," and how it reflects broader themes of altruism and empathy.
- Discuss the impact of Florence Nightingale's nursing practices and reforms on modern healthcare systems, emphasizing her contributions to sanitation, hygiene, and patient care standards.
- How did Florence Nightingale's experiences during the Crimean War shape her views on healthcare and nursing, and what lasting influence did she have on the profession?
- Compare and contrast Skimming and Scanning.
- How do Skimming and Scanning help in an effective reading comprehension?

III. Answer any THREE of the following questions:

(3×5=15)

- Explore the significance of the title "Night Train at Deoli"
- "How does Ruskin Bond's 'Night Train at Deoli' explore themes of longing, nostalgia/ and human connection? Discuss with examples from the story."
- Explore the significance of the poem's final lines, "And miles to go before I sleep, / And miles to go before I sleep," and how they resonate with the themes of responsibility and duty.
- Read the following passage and answer the questions that follow.

Subhas Chandra Bose, also known as Netaji, emerged as a prominent leader in India's fight for independence from British rule. During World War II, Bose identified an opportunity to advance India's cause by aligning with Axis powers such as Germany and Japan, who were adversaries of the British Empire. In 1942, Bose established the

Indian National Army (INA) in Singapore, recruiting Indian prisoners of war and civilians living in Southeast Asia. Despite facing challenges, including resource shortages and equipment deficits, Bose's leadership inspired thousands to join the INA's ranks. Their most significant military engagement occurred during the Burma Campaign in 1944, where they fought alongside Japanese forces against the British Indian Army. Although the campaign ended in defeat for the INA and its allies, Bose's determination and the sacrifices of INA soldiers left an indelible mark on India's struggle for independence. Bose's establishment of the INA and his unwavering commitment to liberating India from British colonial rule exemplify his bold and decisive leadership.

1. Where did Bose establish the Indian National Army (INA), and who joined it?
2. What challenges did Bose and the INA face, and how did they handle them?
3. What was the significant event during the Burma Campaign?
4. During World War II, Subhas Chandra Bose aligned with which powers to advance India's cause for independence? (Choose the correct option)
 - a) Allied powers such as the United States and Britain
 - b) Axis powers such as Germany and Japan
 - c) Neutral powers such as Switzerland and Sweden
 - d) None of the above
5. What exemplified Bose's bold and decisive leadership?

e. Make Notes on the following passage.

Plastic pollution has emerged as a pressing environmental issue with far-reaching consequences. Each year, millions of tons of plastic waste end up in oceans, rivers, and landfills, posing serious threats to marine life, ecosystems, and human health. Plastics take hundreds of years to decompose, and their widespread use and disposal have led to the accumulation of vast plastic islands in the ocean. These floating masses of debris endanger marine animals through ingestion and entanglement, leading to injury and death. Additionally, plastics break down into microplastics, which are ingested by marine organisms and can enter the food chain, ultimately reaching humans. Furthermore, plastic pollution has detrimental effects on terrestrial ecosystems and wildlife. Animals often mistake plastic debris for food, leading to digestive blockages and starvation. Plastic pollution also harms soil health and disrupts natural habitats, threatening biodiversity, and ecosystem stability. Addressing plastic pollution requires concerted efforts at local, national, and global levels. Measures such as reducing single-use plastics, implementing waste management strategies, and promoting

Recycling and circular economy initiatives are essential steps towards mitigating this crisis. Urgent action is needed to curb plastic pollution and protect the health of our planet and its inhabitants.

IV. Answer any THREE of the following questions.

(3×5=15)

- a) Write the summary of the poem, "Night of the Scorpion" in your own words.
- b) *All that glitters is not gold.* Expand the idea.
- c) Sketch the character of the narrator's mother in the poem, "Night of the Scorpion"
- d) What is the importance of minutes in a program, and what are the key components to include in minutes?
- e) Imagine that you have been the student convener of the sports club of your college. Prepare a notice inviting students to participate in the competitions in connection with Independence Day Celebrations of your college.

V. Answer any THREE of the following questions.

(3×5=15)

- a) Justify the title "An Astrologer's Day" in relation to the events and themes depicted in the story, considering the role of astrology and fortune-telling in the protagonist's life.
 - b) Prepare a CV for the job you want.
 - c) Write a letter to the editor of the newspaper about the nuisance caused by loud speakers during local festivals and how it causes inconvenience to the students preparing for the examinations,
 - d) How does E-Correspondence provide significant advantages over traditional correspondence, and what makes it a preferred choice in modern communication?
 - e) Draft an email to the employer acknowledging receipt of the appointment order and expressing your readiness to join the job within a week
-