ಮೊದಲನೇ ಸೆಮಿಸ್ಟರ್ ಬಿ.ಸಿ.ಎ. / ಬಿ.ಸಿ.ಎ. (ಡಿಎಸ್) ಪದವಿ ಪರೀಕ್ಷೆ, ಜನವರಿ 2025

(SEP) (Freshers)

ಕನ್ನಡ

ಕನ್ನಡ ಧಾರೆ – I

Time : 3 Hours

Max. Marks : 80

I. ಅ) ಭಾವಾರ್ಥ ಬರೆಯಿರಿ. **(1×6=6)**

ಬನದ ಕರಡಿಗೆ ನಿಮ್ಮ ಭಗವದ್ಗೀತೆ ಬೇಡ;

ನನ್ನವ್ವ ಬದುಕಿದ್ದು

ಕಾಲು ಕಡ್ಡಿಗೆ, ದುಡಿತಕ್ಕೆ, ಮಕ್ಕಳಿಗೆ;

ಮೇಲೊಂದು ಸೂರು, ಅನ್ನ, ರೊಟ್ಟಿ ಹಚಡಕ್ಕೆ;

ಸರೀಕರ ಎದುರು ತಲೆಯೆತ್ತಿ ನಡೆಯಲಿಕ್ಕೆ.

ಆ) ಎರಡಕ್ಕೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ : **(2×2=4)**

1) ಪು. ತಿ. ನ.

2) ಕುವೆಂಪು

3) ಸೋಮ

4) ಬೆಟ್ಟಯ್ಯ

II. ಆರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. **(6×5=30)**

1) ''ಕಾಣಿಕೆ'' ಕವನದಲ್ಲಿ ಕನ್ನಡ ಪ್ರೀತಿ.

2) ಒಲುಮೆ ಹೊನಲಿಗಿರುವ ಅಡೆತಡೆಗಳು.

3) ಗಂಗಾನದಿಯ ವ್ಯಂಗ್ಯ.

4) ಗೊಡ್ಡು ಪುರಾಣದ ವಿಡಂಬನೆ.

5) ''ಯಾವ ಕಾಲದ ಶಾಸ್ತ್ರವೇನು ಹೇಳಿದರೇನು ?'' ಕವನದ ಆಶಯ.

6) ಪಿ. ಲಂಕೇಶ ಅವರ ಕವಿತೆಯಲ್ಲಿ ''ಅವ್ವ''ನ ದುಡಿಮೆ.

7) ''ಬೆಟ್ಟದ ಭಾಗೀರಥಿ'' ಪ್ರಬಂಧದ ಸ್ವಾರಸ್ಯ.

8) ''ಎಣ್ಣೆ ಚಿಮಣಿ ಎಣ್ಣೆ'' ಕತೆಯಲ್ಲಿನ ಶೋಷಣೆ.

P.T.O.

I Semester B.C.A./B.C.A. (Data Science) Examination, January 2025
(SEP) (Freshers)
ENGLISH
Language English – I
(Resonance – 1)

Time : 3 Hours

Max. Marks : 80

Instructions : 1) Read **all** the instructions **carefully** and answer the question.
2) Write the question numbers **correctly**.

SECTION – A

(Literary Component – 40 Marks)

I. Answer **any five** questions from the following in **one** or **two** sentences : **(5×2=10)**

1) The speaker compares the beloved to a Summer's day in the Sonnet XVIII. True/False.

2) In "Night of the Scorpion," the poet describes the night when his mother was stung by a _____.

3) Why does Framton feel increasingly uncomfortable during his visit ?

4) How does Olga treat Lushkov when he is given the wood-chopping job in the story, "The Beggar" ?

5) What common misconception does Harini Nagendra address about cities and nature, in the essay "When Cities were Nature's Heaven" ?

6) How did Kalpana spend summer nights ?

7) What profound realization did Kalpana have after viewing Earth from space ?

II. Answer **any four** of the following in about **a** page **each** : **(4×5=20)**

1) Analyze the significance of the concluding couplet in Sonnet 18. How does Shakespeare describe summer in Sonnet 18, and what limitations does he associate with it ?

2) Discuss the theme of maternal love as portrayed in the poem, 'Night of the Scorpion". How does the mother's final words reflect her character ?

P.T.O.

3) Why does Framton Nuttel come to the countryside, and how does he hope the visit will benefit him ?

4) How does Lushkov react to the job given by Skvortsov, and what role does Olga play in this situation ?

5) Describe the historical efforts to "green" Bangalore and explain how this practice contributed to its climate and reputation.

6) What were some of Kalpana Chawla's major achievements as an astronaut ?

III. Answer **any one** of the following in about **two** pages **each** :   **(1×10=10)**

1) Analyze the symbolic significance of the scorpion in the poem. What does it represent in the context of the mother's suffering and the villagers' reactions ?

2) Describe the traditional relationship between Bangalore's early residents and nature, especially regarding water sources. How did this relationship shape the city's initial development ?

3) Narrate the educational journey of Kalpana Chawla and analyze how it helped her achieve her dream of becoming an astronaut.

SECTION – B
(Grammar – 40 Marks)

IV. A) Answer **any three** of the following :   **(3×1=3)**

1) What is listening ?

2) In effective listening the speaker and listener should be open minded. True/ False.

3) Write any one purpose of listening.

4) Maintaining _____ with the speaker will improve listening skills.
   a) Eye contact
   b) Physical contact
   c) Telephone contact
   d) Letter correspondence

B) Answer **any two** of the following :   (2×2=4)

1) How would you respond to Mrs. Priya's request in a telephone conversation if she says, 'Can I speak to Dr. Sharma ?' and you know the doctor is on leave ?

2) Write a telephone conversation between a customer and a support representative to report a technical issue with a product.

3) Read the given telephone conversation and organize the message in the format given below :

   Caller : Hello, this is Meena from City Library. May I speak to Mr. Amit ?

   Receiver : Hello. Mr. Amit is currently out of the office. Would you like to leave a message for him ?

   Caller : Yes, please inform him that his reserved book is available for collection, and he can call me at 123-45678. Thank you.

   Receiver : I will pass on the message. Thank you.

   Message for : _____

   Message from : _____

   Subject : _____

   Call him/her on : _____

C) Do as directed :   (6×1=6)

1) Write an expression that you would use to greet your friend, Suman, when you meet her in the evening.

2) As a student of Government First Grade College, Chikkaballapur, introduce yourself to a guest speaker at an event.

3) Write a formal request to your principal asking for permission to arrange a guest lecture at your college.

4) Write a sentence offering help to a student who is struggling with their college assignments.

5) Rewrite the following sentence to ask for permission: "I want to take a day off from college".

6) Rewrite the following sentence using a formal way of granting permission: "You may submit the report tomorrow".

D) 1) Read the following passage and identify the topic sentence.   2

It is, however, true that the increase of scientific knowledge does reduce superstition and also baseless guessing and use-less arguments and practices. Civilized people do not argue and get angry about what water is composed of; the composition of water is known, and there is no argument about it. They may be frightened at a volcanic eruption or an outbreak of plague; but they do not try to calm the anger of mysterious powers to stop eruption, or blame the plague on the sins of their enemies or on the plotting or witchcraft.

2) Read the following passage and answer the questions given.   5

Too many parents these days can't say no. As a result, they find themselves raising 'children' who respond greedily to the advertisements aimed right at them. Even getting what they want doesn't satisfy some kids; they only want more. Now, a growing number of psychologists, educators and parents think it's time to stop the madness and start teaching kids about what's really important: values like hardwork, contentment, honesty and compassion. The struggle to set limits has never been tougher and the stakes have never been higher. One recent study of adults who were overindulged as children, paints a discouraging picture of their future: when given too much too soon, they grow up to be adults who have difficulty coping with life's disappointments. They also have distorted sense of entitlement that gets in the way of success in the work place and in relationships.

Psychologists say that parents who overindulge their kids, set them up to be more vulnerable to future anxiety and depression. Today's parents themselves raised on values of thrift and self-sacrifice, grew up in a culture where no was a household word. Today's kids want much more, partly because there is so much more to want. The oldest

members of this generation were born in the late 1980s, just as PCs and video games were making their assault on the family room. They think of MP3 players and flat screen TV as essential utilities, and they have developed strategies to get them. One survey of teenagers found that when they crave for something new, most expect to ask nine times before their parents give in. By every measure, parents are shelling out record amounts. In the heat of this buying blitz, even parents who desperately need to say no find themselves reaching for their credit cards.

1. According to the passage, what values do psychologists and educators believe should be taught to children ?

   a) Wealth and status

   b) Popularity and beauty

   c) Hardwork, contentment, honesty and compassion

   d) Power and control

2. Parents today are spending less money on their children than previous generations. True/False.

3. When children want something, they are expected to ask _____ times before their parents give in.

4. What negative effects may result from overindulging children, according to psychologists ?

5. The oldest members of the generation described in the passage were born in which decade ?

   a) 1970s

   b) 1980s

   c) 1990s

   d) 2000s

E) The inauguration of "Sowrabha", the cultural fest, will be held at your college on December 15th. You have been asked to give a welcome speech. How would you draft the welcome speech ? 4

F) 1) Do as directed : 4

  a) Identify the correct form of "do" in the following sentence :

  She _____ not like to eat spicy food.

  b) Choose the correct form of "be" to complete this sentence :

  They _____ going to the park today.

  c) Fill in the blank with the correct form of "have" :

  He _____ finished his homework already.

  d) Rewrite this sentence in negative form :

  She has a pet cat.

2) a) Fill in the blanks with the correct article : 2

  i) I saw _____ elephant at the zoo.

  ii) She is _____ best student in the class.

  b) Fill in the blanks with the correct preposition : 2

  i) The book is _____ the table.

  ii) She arrived _____ the airport early in the morning.

3) a) Add the correct derivatives to the word in brackets to complete the sentence : (2×1=2)

  i) The manager praised the team for their _____ in completing the project ahead of time. (efficient)

  ii) The _____ of the new law was debated in the committee meeting. (effect)

b) Fill in the blanks by choosing appropriate linkers :

(because, although, unless, therefore) **2**

   i) He failed the exam _____ he didn't study properly.

   ii) _____ she was tired, she continued working without any complaints.

4) a) Do as directed : **(2×1=2)**

   i) Identify the type of question used in the following sentence :

     When is your semester examination scheduled to begin ?

   ii) Convert the following statement into a yes/no question :

     Today I am not going to the college.

b) Complete the sentence with the correct question tag : **(2×1=2)**

   i) She won't mind if I borrow this _____

   ii) You've finished your homework, _____

_____

I Semester B.C.A./B.C.A.(DS) Degree Examination, January 2025
(SEP Scheme) (Freshers)
COMPUTER APPLICATIONS
Fundamentals of Computers

Time : 3 Hours   Max. Marks : 80

Instruction : *Answer **all** the Sections.*

SECTION – A

I. Answer **any 10** questions. **Each** question carries **2** marks.   (10×2=20)

1) Define Computer.

2) What is system software ? Give an example.

3) Define an algorithm and a flowchart.

4) List the types of printers.

5) What is a memory cell ?

6) What are universal gates ?

7) What is binary number system ?

8) Abbreviate ASCII and BCD.

9) What is a search engine ?

10) Mention any two features of MS-Word.

11) What is sorting in MS-Excel ?

12) Give any two advantages of using a PowerPoint.

SECTION – B

II. Answer **any 6** questions. **Each** question carries **5** marks.   (6×5=30)

13) Write a note on Evolution and History of Computers.

14) Briefly explain the types of computers based on size and speed.

15) Explain any five input devices.

16) Write a note on primary memory.

17) Convert the following :
   i) $(EC2)_{16} = (\ ?\ )_2$
   ii) $(3A5)_{16} = (\ ?\ )_8$

P.T.O.

18) What is internet ? Explain the features of internet.

19) Explain the applications of MS-Office.

20) Explain the different types of graphs in MS-Excel.

SECTION – C

III. Answer **any 3** questions. **Each** question carries **10** marks.   **(3×10=30)**

21) a) Explain the basic organization of digital computer with a neat diagram.

   5

   b) What is a Translator ? Explain the different types of Translator.   5

22) a) Discuss in detail the different types of printers.   6

   b) Explain basic gates with a neat diagram.   4

23) a) Convert the following hexadecimal numbers to octal numbers.

   i) $(1BC)_{16} = (?)_8$

   ii) $(D1)_{16} = (?)_8$

   b) Write a note on E-mail operations.   5

24) a) Discuss in detail Mail Merge in MS Word.   5

   b) How do you password protect a PowerPoint presentation ?   6

   4

I Semester B.C.A./B.C.A. (DS) Examination, January 2025
(SEP Scheme) (Freshers)
COMPUTER APPLICATIONS
Computational Discrete Mathematics

Time : 3 Hours   Max. Marks : 80

Instruction : *Answer **all** Sections.*

SECTION – A

I. Answer **any 10** questions. **Each** question carries **2** marks.   **(2×10=20)**

 1) Define converse and inverse of an implication with an example.

 2) Define tautology and contradiction.

 3) Define identity matrix with an example.

 4) Define pigeonhole principle.

 5) What is $^8C_2$?

 6) Define the principle of inclusion and exclusion.

 7) Define strong induction and weak induction.

 8) Define relation and function.

 9) Write any two types of functions.

 10) What is a graph ?

 11) What is graph isomorphism ?

 12) Define Euler path.

SECTION – B

II. Answer **any 6** questions. **Each** question carries **5** marks.   **(6×5=30)**

 13) Prove that $\sim[p \rightarrow (q \vee r)] \equiv p \wedge (\sim q \wedge \sim r)$.

 14) Find the inverse of the matrix $\begin{bmatrix} 1 & 2 & 1 \\ 5 & 2 & 3 \\ 1 & 1 & 2 \end{bmatrix}$.

15) In how many ways a committee consisting of 4 men and 2 women, can be chosen from 6 men and 5 women ?

16) Find the coefficient of x^6y^3 in the expansion of $(x + y)^9$.

17) Show that $1 + 3 + 5 + ... + (2n – 1) = n^2$ by mathematical induction.

18) Let $f(x) = x + 2$ and $g(x) = 2x + 1$, find $(f \circ g)(x)$ and $(g \circ f)(x)$.

19) Explain any 2 types of graphs with an example.

20) Draw the digraph corresponding to the matrix $\begin{bmatrix} 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 1 \\ 0 & 2 & 0 & 0 \end{bmatrix}$.

SECTION – C

III. Answer **any 3** questions. **Each** question carries **10** marks.   (3×10=30)

21) a) Let A = {1, 2, 3, 4, 5} and B = {0, 3, 6}. Find

    i) $A \cup B$

    ii) $A \cap B$

    iii) $A – B$

    iv) $B – A$.   5

   b) Solve the following system of linear equation by Cramer's rule.   5

    $x + y + z = 8$, $x – y + 2z = 6$, $3x + 5y – 7z = 14$

22) a) In how many ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together ?   5
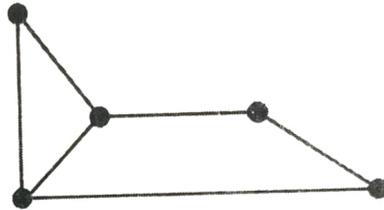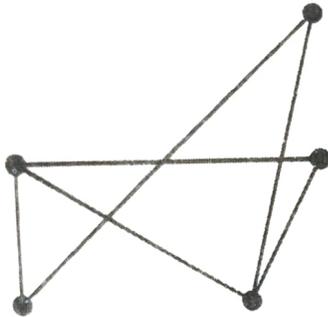
   b) Among a group of students, 49 study Physics, 37 study English and 21 study Biology. If 9 of these student's study Maths, Physics and English, 5 study English and Biology, 4 study Physics and Biology and 3 study Physics, English and Biology. Find the number of students in the group.   5

23) a) Show that for all integers $n \geq 1 : 1^3 + 2^3 + 3^3 + \ldots + n^3 = \left(\dfrac{n(n+1)}{2} \right)^2$ by mathematical induction. **5**

b) Prove that a function $f : R \rightarrow R$ defined by $f(x) = 2x - 3$ is a bijective function. **5**

24) a) Explain about the adjacency matrix representation of graphs. Illustrate with an example. **5**

b) Show that the two graphs shown below are isomorphic. **5**

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I Semester B.C.A./B.C.A. (DS) Degree Examination, January 2025
(SEP) (Freshers)
COMPUTER APPLICATIONS
Programming in C

Time : 3 Hours

Max. Marks : 80

Instruction : *Answer all the Sections.*

SECTION – A

I. Answer **any 10** questions. **Each** question carries **2** marks.　　(10×2=20)

1) What are keywords ? Give an example.

2) What is constant ? Give an example.

3) Write the usage of gets() function.

4) Write the usage of continue statement in C.

5) What are if statements ?

6) What are nested functions ?

7) What is an array ? Mention its types.

8) What is a string ? Give an example.

9) Define union.

10) Write any two advantages of pointers.

11) What is a file ?

12) What are pre-processor directives ?

SDCCA – 102

SECTION – B

II. Answer **any 6** questions. **Each** question carries **5** marks.   **(6×5=30)**

13) What is type conversion ? Explain its types with example.

14) Explain formatted input and output statement in C.

15) What is looping ? Explain while loop with syntax and example.

16) Write a program to check a number for prime by defining isprime( ) function.

17) Explain two dimensional arrays with an example.

18) Explain any five string handling functions with example.

19) What is call by reference ? Explain with example.

20) What are command line arguments ? Explain with example.

SECTION – C

III. Answer **any 3** questions. **Each** question carries **10** marks.   **(3×10=30)**

21) a) Explain relational operators with an example.   5

    b) Write a note on data types in C.   5

22) a) Explain switch statement with syntax and example.   5

    b) What is recursive function ? Explain with example.   5

23) Write a C program to perform addition and subtraction of matrices.   10

24) a) Explain any two memory allocation functions.   5

    b) Explain with example reading and writing data to text file.   5

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I Semester All U.G. Courses Examination, January 2025
(SEP) (Freshers)
ENVIRONMENTAL STUDIES (CC/CV)

Time : 1½ Hours

Max. Marks : 40

Instruction : *Answer all Sections.*

SECTION – A

Short answer questions. **All** questions are **compulsory**.　　　　**(5×2=10)**

1. a) Food chain.
   ಆಹಾರದ ಸರಪಳಿ.

   b) Renewable energy resource.
   ನವೀಕರಿಸಲ್ಪಡುವ ಶಕ್ತಿ ಸಂಪನ್ಮೂಲಗಳು.

   c) Deforestation.
   ಅರಣ್ಯ ನಾಶ.

   d) Biodiversity.
   ಜೈವಿಕ ವೈವಿಧ್ಯತೆ.

   e) Climate change.
   ಹವಾಮಾನ ಬದಲಾವಣೆ.

SECTION – B

Medium answer questions. Answer **any four** questions.　　　　**(4×5=20)**

2. What is environment ? Write the scope and importance of environment.
   ಪರಿಸರ ಎಂದರೇನು ? ಪರಿಸರದ ವ್ಯಾಪ್ತಿ ಮತ್ತು ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು ವಿವರಿಸಿ.

3. Explain the causes for land degradation.
   ಭೂಮಿಯ ಅವನತಿಗೆ ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿ.

4. Explain the causes, effects and control measures of air pollution.
   ವಾಯು ಮಾಲಿನ್ಯದ ಕಾರಣಗಳು, ಪರಿಣಾಮಗಳು ಮತ್ತು ನಿಯಂತ್ರಣ ಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.

5. Explain the biogeographic zones of India.
   ಭಾರತದ ಜೀವಭೌಗೋಳಿಕ ವಲಯಗಳನ್ನು ವಿವರಿಸಿ.

P.T.O.

6. Explain the Wildlife Protection Act.

   ವನ್ಯಜೀವಿ ಸಂರಕ್ಷಣಾ ಕಾಯ್ದೆಯನ್ನು ವಿವರಿಸಿ.

7. Explain the role of Indian culture in environmental conservation.

   ಪರಿಸರ ಸಂರಕ್ಷಣೆಯಲ್ಲಿ ಭಾರತೀಯ ಸಂಸ್ಕೃತಿಯ ಪಾತ್ರವನ್ನು ವಿವರಿಸಿ.

SECTION – C

Long answer questions. Answer **any one** question. (1×10=10)

8. What is ecosystem ? Write the structure and functions of ecosystem.

   ಜೀವಿ ಪರಿಸರ ವ್ಯವಸ್ಥೆ ಎಂದರೇನು ? ಜೀವಿ ಪರಿಸರದ ರಚನೆ ಮತ್ತು ಕಾರ್ಯಗಳನ್ನು ಬರೆಯಿರಿ.

9. What is Green house effect ? Explain causes, effects and control measures of Green House effects.

   ಹಸಿರು ಮನೆ ಪರಿಣಾಮ ಎಂದರೇನು ? ಹಸಿರು ಮನೆ ಪರಿಣಾಮದ ಕಾರಣಗಳು, ಪರಿಣಾಮಗಳು ಮತ್ತು ನಿಯಂತ್ರಣ ಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.

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