

Exam. Code : 117901
Subject Code : 101868

Bachelor of Computer Application (BCA) (Hons.)

1st Semester (Batch 2024-28) (CBGS)

COMMUNICATION SKILLS IN ENGLISH-I

Paper : ENL-121

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. What are the tactics and strategies to enhance your reading skills ? Discuss in detail.
2. What is involved in reading for meaning ? What are the different purposes of Reading ?

SECTION—B

3. The railroad was not the first institution to impose regularity on society, or to draw attention to the importance of precise time keeping. For as long as merchants have set out their wares at daybreak and communal festivities have been celebrated, people have been in rough agreement with their neighbours as to the time to day. The value of this tradition is today more apparent than ever. Were it not for

public acceptance of a single yardstick of time social life would be unbearably chaotic: the massive transfer of goods, services, and information would proceed in fits and starts; the very fabric of modern society would begin to ravel.

- (1) What is the main idea of the passage ?
 - (a) In society, we must make more time for our neighbours
 - (b) The traditions of society are timeless
 - (c) An accepted way of measuring time is essential for the smooth functioning of the society
 - (d) Society judges people by the times in which they conduct certain activities
- (2) The word 'draw' in the first sentence can best be replaced by :
 - (a) Bring
 - (b) Infer
 - (c) Formulated
 - (d) Sketch
- (3) The phrase "this tradition" in the third sentence refers to answer :
 - (a) The practice of starting the business day at dawn
 - (b) Cordial relations between neighbours
 - (c) The railroad's reliance on time schedules
 - (d) People's agreement on the measurement of time.

- (4) The author implies that which of the following is a consequence of the greater complexity of today's society ?
- (a) Agreement on the measurement of time is more important
 - (b) The role of railroad has become very vital
 - (c) People agree about time more readily
 - (d) The traditional values are of greater importance to the well being of the society
- (5) What did the paragraph preceding the passage most probably discuss ?
- (a) The times at which religious services used to be held
 - (b) The regulatory effect of the railroad on the society
 - (c) The need to regulate the railroads
 - (d) The sale of clocks and time pieces by merchants

4. Read the following passage carefully and answer the questions that follow :

Computers are gadgets that have an astonishing ability to calculate, multiply, add, and subtract big and complex figures in a matter of seconds. Computers serve many other purposes. They can keep records of things or data we want to preserve and use later. They are also used to design, plan, and construct new projects. Computers not only save us time but also help us to think quickly and work out problems

which otherwise would take a long time. Computers ensure faster progress, better efficiency, and quicker decisions. Scientists are thinking of building a space city. The journeys in space are already controlled and guided by computers. Today, computers are being installed in banks, offices, and factories to cope with the increasing load of work and increase efficiency. Computerization in offices and factories today has become almost imperative. It has been said that the use of computers would lead to unemployment. But computerization does not mean the end of manual jobs. Actually, the two go together and hand in hand.

Questions :

- (1) What functions do gadgets perform ?
- (2) What other purposes do computers serve ?
- (3) How are computers useful to us ?
- (4) Will computerization lead to unemployment ?

SECTION—C

5. What are the different guidelines for effective writing ?
6. Write a letter to Unique Books Private Ltd., New Delhi, to supply you the books you need for your college library.

SECTION—D

7. Prepare a resume for the post of production manager in a firm.
8. You are the President of a computer club. Write a notice for the students to join a workshop by your professor of computer in your department.

Exam. Code : 117901

Subject Code : 107087

Bachelor of Computer Application (BCA)

1st Semester (Batch 2023-26) (CBGS) (Old Sylb.)

**INTRODUCTION TO COMPUTERS AND
INFORMATION TECHNOLOGY**

Paper : BCA01002T

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. Explain how does a computer work using block diagram.
2. What are the applications of computers ?

SECTION—B

3. What is mouse ? How does it work ?
4. What is voice response unit ? What are the hardware and software requirements for this ?

SECTION—C

5. Explain how is data stored on a magnetic storage device.
6. Write the steps to create the following table :

Hello	12	13
Hello	12	Where
Hello	12	13

SECTION—D

7. Create a slide to introduce your friend in your class.
8. Write the steps to create a pie chart of your choice.

Exam. Code : 117901
Subject Code : 101873

Bachelor of Computer Application (BCA) (Hons.)

1st Sem. (Batch 2024-28) (CBGS)

PRINCIPLES OF DIGITAL ELECTRONICS

Paper—BCA01002T

Time Allowed—3 Hours]

[Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. What is 1's complement ? Why and how do we use it ?
2. Explain how floating point representation is done.

SECTION—B

3. What is Karnaugh map ? How is it used ?
4. What are don't care conditions ? How are they used ?

SECTION—C

5. Explain the working of a multiplexer.
6. What is a counter ? Give and explain design of a counter.

SECTION—D

7. What is address selection logic ? How does it work ?
8. Describe PROMS and EPROMS.

Exam. Code : 117901
Subject Code : 101872

Bachelor of Computer Application (BCA) (Hons.)
1st Semester (Batch 2024-28) (CBGS)
COMPUTER FUNDAMENTALS & PC SOFTWARE
Paper-BCA01001T

Time Allowed—3 Hours] [Maximum Marks—100

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. How has computer memory evolved across the different generations of computers ? What innovations are associated with the fifth generation of computers ?
20
2. (a) Explain the role of a monitor as an output device.
10
(b) Explain the concept of resolution in monitors and how it affects display quality.
10

SECTION—B

3. Explain the working of following in brief :
 - (a) Touch Screen, Bar Code Reader
 - (b) Non-Impact Printer. 2×10=20

4. (a) What is Primary Storage ? How it is different from Secondary Storage ? 10

(b) What are the main differences between Hard Disk Drive (HDD) and Solid State Drive (SSD) ? 10

SECTION—C

5. (a) What are the main types of Operating Systems and how do they differ ? 10

(b) Describe the process of copying and moving files within File Explorer. 10

6. (a) How can you add a Header and Footer to a Document ? 10

(b) How do you use the 'Find and Replace' feature in Word ? 10

SECTION—D

7. How can you create a new slide in PowerPoint ? How can you add animations to objects in a PowerPoint Presentation ? 20

8. (a) How do you create a chart from a set of data in Excel ? 10

(b) What is a Pivot Table and how can it be used to analyse data ? 10

Exam. Code : 117901
Subject Code : 101872

Bachelor of Computer Application (BCA) (Hons.)
1st Semester (Batch 2024-28) (CBGS)
COMPUTER FUNDAMENTALS & PC SOFTWARE
Paper-BCA01001T

Time Allowed—3 Hours] [Maximum Marks—100

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. How has computer memory evolved across the different generations of computers ? What innovations are associated with the fifth generation of computers ?
20
2. (a) Explain the role of a monitor as an output device.
10
(b) Explain the concept of resolution in monitors and how it affects display quality.
10

SECTION—B

3. Explain the working of following in brief :
(a) Touch Screen, Bar Code Reader
(b) Non-Impact Printer. 2×10=20

4. (a) What is Primary Storage ? How it is different from Secondary Storage ? 10

(b) What are the main differences between Hard Disk Drive (HDD) and Solid State Drive (SSD) ? 10

SECTION—C

5. (a) What are the main types of Operating Systems and how do they differ ? 10

(b) Describe the process of copying and moving files within File Explorer. 10

6. (a) How can you add a Header and Footer to a Document ? 10

(b) How do you use the 'Find and Replace' feature in Word ? 10

SECTION—D

7. How can you create a new slide in PowerPoint ? How can you add animations to objects in a PowerPoint Presentation ? 20

8. (a) How do you create a chart from a set of data in Excel ? 10

(b) What is a Pivot Table and how can it be used to analyse data ? 10

Exam. Code : 117901
Subject Code : 101867

Bachelor of Computer Application (BCA) (Hons.)

1st Semester (Batch 2024-28) (CBGS)

APPLIED & DISCRETE MATHEMATICS

Paper : BCA01003T

Time Allowed—3 Hours]

[Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks. Symbols and notations used have their usual meanings.

SECTION—A

1. (a) If $A = \{1, 2, 3, 4, 5\}$, $B = \{2, 3, 5, 7, 9\}$ and $C = \{3, 4, 6, 8, 10\}$, then prove that :

$$A \cap (B \cup C) = (A \cap B) \cup (A \cap C) \quad 10$$

- (b) Consider $A = \{1, 2, 3, 4, 5, 6\}$ and $B_1 = \{1, 3, 5\}$, $B_2 = \{1, 2, 3\}$. Obtain all possible minsets of A generated by B_1 and B_2 . 10

2. Give an example of each of the relation which is :
- (a) Both symmetric and antisymmetric. 5
 - (b) Both reflexive and symmetric. 5
 - (c) Each reflexive, symmetric and transitive. 5
 - (d) Reflexive but not symmetric. 5

SECTION—B

3. (a) Determine whether $p \leftrightarrow q$ logically implies $p \rightarrow q$. 7
- (b) Determine whether $p \wedge q$ logically implies $p \leftrightarrow q$. 7
- (c) Consider the following propositions $\sim p \vee \sim q$ and $\sim (p \wedge q)$. Are they logically equivalent ?
- here \sim , \wedge and \vee represents the negation, conjunction and disjunction, respectively. 6
4. (a) Prove the associative laws :
- (i) $(p \wedge q) \wedge r \equiv p \wedge (q \wedge r)$. 7
 - (ii) $(p \vee q) \vee r \equiv p \vee (q \vee r)$. 7
- (b) Define various types of quantifiers. 6

SECTION—C

5. Determine whether or not each of the following subsets of $D_{70} = \{1, 2, 5, 7, 10, 14, 35, 70\}$, is a sub-algebra ?

(a) $A = \{1, 5, 10, 70\}$

(b) $B = \{1, 2, 35, 70\}$

Here D_{70} is a Boolean algebra under the operations '+', '.' and '' defined by $a + b = \text{l.c.m.}(a, b)$, $a \cdot b = \text{g.c.d.}(a, b)$ and $a' = \frac{70}{a}$, where 1 is a zero element and 70 is a unit element. 10,10

6. Use Karnaugh maps to find the prime implicants and minimal form of the following Boolean expressions :

(a) $f_1(x, y, z) = xyz + xyz' + x'yz' + x'y'z.$ 10

(b) $f_2(x, y, z) = xyz + xyz' + xy'z + x'yz + x'y'z.$

10

SECTION—D

7. If $A = \begin{bmatrix} 1 & 1 & -1 \\ 2 & 0 & 3 \\ 3 & -1 & 2 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 3 \\ 0 & 2 \\ -1 & 4 \end{bmatrix}$ and

$$C = \begin{bmatrix} 1 & 2 & 3 & -4 \\ 2 & 0 & -2 & 1 \end{bmatrix}$$

- (a) Evaluate A^3 . 6
- (b) Show that $(AB)C = A(BC)$. 14
8. Find the eigen values and eigen vectors of the

matrix $\begin{bmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 3 \end{bmatrix}$. 20

Exam. Code : 117901
Subject Code : 101869

Bachelor of Computer Application (BCA) (Hons.)
1st Sem. (Batch 2024-28) (CBGS)
PUNJABI COMPULSORY-I
Paper : PBL-601

Time Allowed—3 Hours] [Maximum Marks—100

ਨੋਟ :— ਹਰੇਕ ਭਾਗ ਵਿੱਚੋਂ ਘੱਟੋ-ਘੱਟ ਇੱਕ ਪ੍ਰਸ਼ਨ ਦੀ ਚੋਣ ਕਰਦੇ ਹੋਏ, ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰੋ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ। ਸਾਰੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਅੰਕ ਬਰਾਬਰ ਹਨ।

ਭਾਗ—ੳ

1. ਹੇਠ ਲਿਖੀਆਂ ਕਾਵਿ-ਸਤਰਾਂ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ ਕਰੋ :

ਸਾਵੀ ਬੋਲੀ ਸਭ ਰੁੱਖਾਂ ਦੀ
ਦਿਲ ਕਰਦਾ ਲਿਖ ਜਾਵਾਂ
ਮੇਰਾ ਵੀ ਇਹ ਦਿਲ ਕਰਦਾ ਏ
ਰੁੱਖ ਦੀ ਜੂਨੇ ਆਵਾਂ
ਜੇ ਤੁਸਾਂ ਮੇਰਾ ਗੀਤ ਹੈ ਸੁਣਨਾ
ਮੈਂ ਰੁੱਖਾਂ ਵਿਚ ਗਾਵਾਂ
ਰੁੱਖ ਤਾਂ ਮੇਰੀ ਮਾਂ ਵਰਗੇ ਨੇ
ਜਿਉਣ ਰੁੱਖਾਂ ਦੀਆਂ ਛਾਵਾਂ।

2. 'ਉਦੋਂ ਵਾਰਿਸ ਸ਼ਾਹ ਨੂੰ ਵੰਡਿਆ ਸੀ' ਕਵਿਤਾ ਦਾ ਸਾਰ ਲਿਖੋ।

ਭਾਗ—ਅ

3. 'ਦੂਜਾ ਵਿਆਹ' ਇਕਾਂਗੀ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਲਿਖੋ।
4. 'ਕੁੱਤਾ ਤੇ ਮਨੁੱਖ' ਇਕਾਂਗੀ ਦਾ ਪਾਤਰ ਚਿਤਰਨ ਦੇ ਪੱਖ 'ਤੇ ਨੋਟ ਲਿਖੋ।

ਭਾਗ—ਬ

5. ਹੇਠ ਲਿਖਿਆਂ ਵਿਚੋਂ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ 'ਤੇ ਪੈਰ੍ਹਾ ਰਚਨਾ ਕਰੋ :

(ੳ) ਦਹੇਜ ਇਕ ਲਾਹਨਤ

(ਅ) ਇੰਟਰਨੈੱਟ ਦੇ ਲਾਭ ਅਤੇ ਹਾਨੀਆਂ।

6. ਹੇਠ ਲਿਖੇ ਪੈਰ੍ਹੇ ਨੂੰ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦਿਓ :

ਵਿਦਿਆਰਥੀ ਜੀਵਨ, ਜੀਵਨ ਦਾ ਇੱਕ ਬੜਾ ਕੀਮਤੀ ਭਾਗ ਹੈ। ਇਹ ਉਹ ਅਵਸਰ/ਬੁਨਿਆਦ ਹੈ ਜਿਸ ਉੱਪਰ ਆਉਣ ਵਾਲੀ ਜ਼ਿੰਦਗੀ ਦਾ ਮਾਹੌਲ ਉਸਾਰਿਆ ਜਾਂਦਾ ਹੈ। ਜਿੰਨਾ ਕੋਈ ਇਸ ਨੀਂਹ ਨੂੰ ਪੱਕਾ ਕਰ ਲੈਂਦਾ ਹੈ, ਉਨੀ ਹੀ ਉਹ ਆਪਣੀ ਜ਼ਿੰਦਗੀ ਸਵਾਰ ਲੈਂਦਾ ਹੈ। ਇਸ ਪ੍ਰਤੀ ਲਾਪਰਵਾਹੀ ਕਰਨ ਵਾਲੇ ਨੂੰ ਬਾਅਦ ਵਿੱਚ ਪਛਤਾਉਣਾ ਪੈਂਦਾ ਹੈ। ਵਿਦਿਆਰਥੀ ਦਾ ਸਭ ਤੋਂ ਵੱਡਾ ਫ਼ਰਜ਼ ਵਿੱਦਿਆ ਪ੍ਰਾਪਤ ਕਰਨਾ ਹੈ। ਪੜ੍ਹਾਈ ਦਾ ਅਰਥ ਸਿਰਫ਼ ਦਿਮਾਗੀ ਵਿਕਾਸ ਹੀ ਨਹੀਂ ਸਗੋਂ ਮਨੁੱਖ ਦਾ ਸਮੁੱਚਾ ਵਿਕਾਸ ਹੈ। ਜਿੰਨਾ ਕੋਈ ਵਿਦਿਆਰਥੀ ਇਸ ਸਮੇਂ ਵਿੱਚ ਆਪਣੀ ਸ਼ਖਸੀਅਤ ਨੂੰ ਨਿਖਾਰ ਲਵੇਗਾ, ਉਨਾ ਹੀ ਵੱਧ ਸਤਿਕਾਰ ਸਮਾਜ ਵਿੱਚ ਪਾਵੇਗਾ।

(ੳ) ਜੀਵਨ ਦਾ ਕੀਮਤੀ ਭਾਗ ਕਿਹੜਾ ਹੈ ?

(ਅ) ਵਿਦਿਆਰਥੀ ਦਾ ਸਭ ਤੋਂ ਵੱਡਾ ਫ਼ਰਜ਼ ਕਿਹੜਾ ਹੈ ?

(ੲ) ਪੜ੍ਹਾਈ ਦਾ ਅਰਥ ਕੀ ਹੈ ?

(ਸ) ਲਕੀਰੇ ਸ਼ਬਦਾਂ ਦੇ ਅਰਥ ਲਿਖੋ।

(ਹ) ਪੈਰ੍ਹੇ ਦਾ ਢੁੱਕਵਾਂ ਸਿਰਲੇਖ ਲਿਖੋ।

ਭਾਗ-ਸ

7. ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ-ਚਿੰਨ੍ਹ ਨਿਰਧਾਰਤ ਕਰੋ।
8. ਭਾਸ਼ਾ ਦੇ ਟਕਸਾਲੀ ਰੂਪ 'ਤੇ ਨੋਟ ਲਿਖੋ।

Exam. Code : 117901
Subject Code : 101870

Bachelor of Computer Application (BCA) (Hons.)

1st Sem. (Batch 2024-28) (CBGS)

MUDHLI PUNJABI-I

(In Lieu of Punjabi Compulsory)

Paper : PBL-611

Time Allowed—3 Hours]

[Maximum Marks—100

ਨੋਟ :— ਹਰੇਕ ਭਾਗ ਵਿੱਚੋਂ ਘੱਟੋ-ਘੱਟ ਇੱਕ ਪ੍ਰਸ਼ਨ ਦੀ ਚੋਣ ਕਰਦੇ ਹੋਏ, ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰੋ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ। ਸਾਰੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਅੰਕ ਬਰਾਬਰ ਹਨ।

ਭਾਗ—ੳ

1. ਪੈਰ ਵਿੱਚ ਪੈਣ ਵਾਲੇ ਕਿਹੜੇ ਵਰਣ ਹਨ ? ਹਰੇਕ ਦੀਆਂ ਤਿੰਨ-ਤਿੰਨ ਉਦਾਹਰਨਾਂ ਦਿਓ। 20
2. ਅੱਧਕ ਵਾਲੇ ਦਸ ਸ਼ਬਦ ਪੇਸ਼ ਕਰੋ। 20

ਭਾਗ—ਅ

3. ਸਵਰ ਤੇ ਵਿਅੰਜਨ ਨੂੰ ਪਰਿਭਾਸ਼ਤ ਕਰਦਿਆਂ ਵਿਅੰਜਨ ਨਾਲ ਮੁਢਲੀ ਜਾਣ-ਪਛਾਣ ਕਰਵਾਓ। 20
4. ਔਂਕੜ ਤੇ ਦੁਲੈਂਕੜ ਦੀ ਪਛਾਣ ਤੇ ਵਰਤੋਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਓ। 20

ਭਾਗ—੮

5. ਮੁਕਤਾ (ਤਿੰਨ ਅਖਰਾਂ ਵਾਲੇ) ਵਾਲੇ 10 ਸ਼ਬਦਾਂ ਦੀਆਂ ਉਦਾਹਰਨਾਂ ਪੇਸ਼ ਕਰੋ। 20
6. ਬਿਹਾਰੀ ਵਾਲੇ 10 ਸ਼ਬਦ ਲਿਖੋ। 20

ਭਾਗ—੯

7. ਲਗਾਖਰ ਤੋਂ ਕੀ ਭਾਵ ਹੈ ? ਬਿੰਦੀ ਵਾਲੇ 10 ਸ਼ਬਦ ਲਿਖੋ। 20
8. ਹੇਠ ਲਿਖੇ ਪੈਰ੍ਹੇ ਵਿੱਚ ਲਿਖੇ ਅਸੁਧ ਸ਼ਬਦਾਂ ਨੂੰ ਸੁਧ ਕਰੋ :
ਘਰ ਵਾਗ ਸਕੁਲ ਵਿਚ ਵੀ ਸਫ਼ਾਈ ਬੜੀ ਜਰੂਰੀ ਹੈ। ਸਕੁਲ ਵਿੱਚ ਕੂਰਾ ਕਰਕਟ ਵਧੇਰੇ ਕਰਕੇ ਪਾਟੇ ਕਾਗਜ਼ ਆਦਿ ਦਾ ਹੀ ਹੁੰਦਾ ਹੈ। ਇਸ ਲਈ ਜੇ ਹਰ ਵਿਦਿਆਰਥੀ ਅਜੇਆ ਕੂਰਾ ਕਰਕਟ ਖਿਲਾਰਣ ਤੋਂ ਸੰਕੋਚ ਕਰੇ ਤਾਂ ਗੰਦਗੀ ਬਹੁਤ ਘਟ ਫੇਲੇਗੀ। ਕੁਜ ਕਿਟੀ-ਘਟਾ ਤੇਜ਼ ਹਵਾ ਚਲਨ ਨਾਲ ਵੀ ਹੁੰਦਾ ਹੈ, ਜਿਸ ਲਈ ਹਰ ਰੋਜ਼ ਸਫ਼ਾਈ ਦੀ ਲੋੜ ਹੈ। ਆਮ ਸਕੂਲਾਂ ਵਿਚ ਵਖ-ਵਖ ਸ਼ਰੇਣੀਆ ਦੇ ਸਫ਼ਾਈ ਮੁਕਾਬਲੇ ਵੀ ਹੁੰਦੇ ਹਨ। 20

Exam. Code : 117901
Subject Code : 101874

Bachelor of Computer Application (B.C.A.) (Hons.)
1st Semester (Batch 2024-28) (CBGS)
INTRODUCTION TO THE INTERNET
Paper—BCA01005T

Time Allowed—3 Hours] [Maximum Marks—50

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. What is network bandwidth ? What is difference between bandwidth and speed ? How network bandwidth is measured ?
2. What is difference between webpage, website, web browser, web client and web server ? Which hardware and software is required to use internet at home ?

SECTION—B

3. (a) What are spam and phishing e-mails ? Give an example of both.
(b) Write the features and tools available in E-mail Service.

4. Write a note on Google Advanced Search. Write the symbol, meaning and use of various search operators.

SECTION—C

5. What are online collaboration and communication tools ? What is their use ? Give examples.
6. What are effective meeting strategies for successful virtual meetings ?

SECTION—D

7. What is a digital footprint ? What is difference between active and passive digital footprints ? How can you protect your digital footprints ?
8. How digital distractions and excessive screen time degrade the performance of a student ? How can these be reduced ?