

**BHARTIYA SKILL DEVELOPMENT UNIVERSITY****Question Paper****School of General Education****1st Semester, 1st In-Sem. Examination****B. Voc. Program, Winter Semester (2018-19)****Course Code: GEN 1103****Time: 1 Hour****Course Name: Applied Mathematics****Max. Marks: 20****Instruction:**

1. All questions are compulsory.
2. Missing data if any can be suitably assumed.
3. Calculator is not permitted.

Section – A

05×01 = 05 Marks

Q1. Which one of the following collections is not a set?

- (a) The collection of all the days of a month.
- (b) The collection of all best movies.
- (c) The collection of all the months of a year beginning with the letter 'M'.
- (d) The collection of all players in a team.

Q2. If $A = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$, then which one is true?

- | | |
|--|---|
| (a) $A = \{x : x \in \mathbb{Z} \text{ and } x < 10\}$ | (c) $A = \{x : x \in \mathbb{N} \text{ and } x \leq 10\}$ |
| (b) $A = \{x : x \in \mathbb{N} \text{ and } x < 10\}$ | (d) $A = \{x : x \in \mathbb{C} \text{ and } x < 10\}$ |

Q3. A.M between 10 and 6 is

- | | |
|-------|--------|
| (a) 8 | (c) 16 |
| (b) 0 | (d) 10 |

Q4. The 4th term of $T_n = (1)^{n-1} \times 3^n$ is

- | | |
|---------|---------|
| (a) 128 | (c) 81 |
| (b) 64 | (d) -64 |

Q5. If $A = \{a, b, c, d\}$ and $B = \{b, c, d, e\}$, then $A-B$ is

- | | |
|----------------------------|-------------------|
| (a) $A-B = \{a, b, c, d\}$ | (c) $A-B = \{a\}$ |
| (b) $A-B = \phi$ | (d) $A-B = \{e\}$ |

Section – B

03×02 = 06 Marks

Q6. Write the set $A = \{3, 9, 27, \dots\}$ in set-builder form.Q7. If $U = \{1, 2, 3, 4, 5, 6, 7, 8\}$, $A = \{1, 2, 3\}$ and $B = \{2, 3, 4, 5\}$, then find

- (i) $(A \cup B)'$ (ii) $A' \cap B'$

Q8. Find the common difference and write the next four terms of the AP $-1, \frac{1}{4}, \frac{3}{2}, \dots$

Section – C

03×03 = 09 Marks

Q9. Write the power set for the following sets:

(i) $A = \{-2, 0, 2\}$

(ii) $B = \{a, \{b, c\}, d\}$

Q10. Define subset with a suitable example.

Q11. Determine the sum of the first 35 terms of an A.P., if its second term is 2 and seventh term is 22.

**BHARTIYA SKILL DEVELOPMENT UNIVERSITY****Answer Key****School of General Education****1st Semester, 1st In-Sem. Examination****B. Voc. Program, Winter Semester (2018-19)****Course Code: GEN 1103****Time: 1 Hour****Course Name: Applied Mathematics****Max. Marks: 20****Section – A**

05 × 01 = 05 Marks

Q1. (b)

Q2. (b)

Q3. (a)

Q4. (c)

Q5. (c)

Section – B

03 × 02 = 06 Marks

Q6. Write the set $A = \{3, 9, 27, \dots\}$ in set-builder form.Sol. $A = \{x: x = 3^n, n \in \mathbb{N}\}$ Q7. If $U = \{1, 2, 3, 4, 5, 6, 7, 8\}$, $A = \{1, 2, 3\}$ and $B = \{2, 3, 4, 5\}$, then find(i) $(A \cup B)'$ Sol. $(A \cup B) = \{1, 2, 3, 4, 5\}$

$$(A \cup B)' = U - (A \cup B) = \{6, 7, 8\}$$

(ii) $A' \cap B'$

$$A' = U - A = \{4, 5, 6, 7, 8\}$$

$$B' = U - B = \{1, 6, 7, 8\}$$

$$A' \cap B' = \{6, 7, 8\}$$

Q8. Find the common difference and write the next four terms of the AP $-1, \frac{1}{4}, \frac{3}{2}, \dots$ Sol. We have $a = -1$ and $d = \frac{1}{4} - (-1) = \frac{5}{4}$ Now we know that the general term of an AP is $T_n = a + (n-1)d$

$$\text{Hence } T_4 = -1 + (4-1)\frac{5}{4} = \frac{11}{4}$$

$$T_5 = 4; T_6 = \frac{21}{4}; T_7 = \frac{26}{4}$$

Section – C

03 × 03 = 09 Marks

Q9. Write the power set for the following sets:

(i) $A = \{-2, 0, 2\}$ (ii) $B = \{a, \{b, c\}, d\}$

Sol. (i) $A = \{-2, 0, 2\}$

$p(A) = \{\{\}, \{-2\}, \{0\}, \{2\}, \{-2,0\}, \{-2,2\}, \{0,2\}, \{-2, 0, 2\}\}$

{ii} $B = \{a, \{b, c\}, d\}$

$p(B) = \{\{\}, \{a\}, \{\{b, c\}\}, \{d\}, \{a, \{b, c\}\}, \{a, d\}, \{\{b, c\}, d\}, \{a, \{b, c\}, d\}\}$

Q10. Define subset with a suitable example.

Sol. Subset: A set A is said to be a subset of a set B if every element of A is also an element of B.

In other words, $A \subset B$ if whenever $a \in A$, then $a \in B$.

Example: If $A = \{2, 3, 5\}$ and $B = \{1, 2, 3, 4, 5\}$, then A is called the subset of set B.

Q11. Determine the sum of the first 35 terms of an A.P., if its second term is 2 and seventh term is 22.

Sol. Given that $n = 35$ terms

$$a + d = 2 \quad \dots(1)$$

$$a + 6d = 22 \quad \dots(2)$$

from equations (1) and (2), we have $a = -2, d = 4$.

Hence the sum of first 35 terms are

$$S_{35} = \frac{35}{2} [2(-2) + (35-1)4]$$

$$S_{35} = \frac{35}{2} [-4 + 136] = 2310$$



Registration No.:

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Question Paper

School of General Education

1st Semester, 1st In-Sem. Examination

B. Voc. Program, Winter Semester (2018-19)

Course Code: GEN1101

Time: 1 Hour

Course Name: English Language & Comprehension

Max. Marks: 20

Instructions: The question paper comprises three sections A, B & C. Marks allotted are mentioned against each section.

Section-A

(1*5=5)

Q1. Fill in the blanks with suitable nouns:

- (a) She bought a _____ of bananas from the market. (few/ bunch)
- (b) Kashmir is known for its _____. (beautiful/ beauty)

Q 2. Choose the correct answer:

- (a) Who said, 'I don't want your help, go away'?
 - (i) Velu's wife
 - (ii) Velu's son
 - (iii) Fisherman
 - (iv) Velu

(b) Helen Keller was:

- (i) Deaf and dumb
- (ii) Dumb and blind
- (iii) Blind and deaf
- (iv) Deaf only

Q3. Fill in the blanks with suitable pronouns:

- (a) This pen is _____. (my/mine)
- (b) Meena is the girl _____ is liked by all. (whom/who)

Q 4. Fill in the blanks with suitable articles (a, an, the):

- (a) Velu was ___ fisherman.
- (b) She is not ___ ugly girl.

Q 5. Write the correct homophones for the following sentences:

- (a) The homophone for the word 'won' is _____. (one/two)
- (b) The homophone for the word 'hour' is _____. (our/your)

Section- B

(2*3=6)

- Q 6. Describe the nature of Velu in the story, 'Velu: A Fisherman'.
- Q 7. Explain with reference to the context.
"Give the poor child what she wants."
- Q 8. What kind of a teacher was Miss Sullivan?

Section- C

(3*3=9)

- Q 9. Write the summary of 'Velu: A Fisherman'.
- Q 10. Write your self-introduction.
- Q 11. Make meaningful sentences with the following jumbled words:
- (i) to/Helen/grow/began/wild.
 - (ii) was/fisherman/a/Velu.
 - (iii) friends/books/our/best/are.
 - (iv) have/you/any/pen/do/good?
 - (v) greedy/Velu/selfish/was/and.
 - (vi) Helen/a doll/ Miss Sullivan/gave.

Bhartiya Skill Development University
School of General Education
1st In-Semester Examination- March 2019
Sem-I, B.Voc. Program (Winter Semester 2019-20)

Answer Key

Course Code: GEN1101

Time: 1 Hour

Course Name: English Language & Comprehension

Max. Marks: 20

Section-A

(1*5=5)

Q1. Fill in the blanks with suitable nouns:

- (a) She bought a bunch of bananas from the market. (few/ bunch)
- (b) Kashmir is known for its beauty. (beautiful/ beauty)

Q 2. Choose the correct answer:

(a) Who said, 'I don't want your help, Go away'?

- (i) Velu's wife
- (ii) Velu's son
- (iii) Fisherman
- (iv) Velu**

(b) Helen Keller was:

- (i) Deaf and dumb
- (ii) Dumb and blind
- (iii) Blind and deaf**
- (iv) Deaf only

Q3. Fill in the blanks with suitable pronouns:

(a) This pen is mine . (my/mine)

(b) Meena is the girl who is liked by all. (whom/who)

Q 4. Fill in the blanks with suitable articles (a ,an, the):

(a) Velu was a fisherman.

(b) She is not an ugly girl.

Q 5. Write the correct homophones for the following sentences:

(a)The homophone for the word 'won' is one . (one/two)

(b) The homophone for the word 'hour' is our . (our/your)

Section- B

(2*3=6)

Q 6. Describe the nature of Velu in the story, 'Velu: A Fisherman'.

Ans. Velu was greedy and selfish. He did not give his fish to other fishermen.He was not kind or pleasant. By the end of the story, he became kind and generous due to one incident. Thereafter, he helped other fishermen.

Q 7. Explain with reference to the context.

“Give the poor child what she wants.”

Ans. This sentence has been taken from the story, Helen Keller. This sentence is spoken by Helen’s father to her mother as the child was crying.

Q 8. What kind of a teacher was Miss Sullivan?

Ans. Miss Sullivan was strict but kind.

Section- C

(3*3=9)

Q 9. Write the summary of ‘Velu: A Fisherman’.

Ans. Velu was a fisherman who lived in a small house near the sea. He had good nets and a strong boat for fishing. Velu was greedy and selfish by nature. He was unkind too as he never liked to share his fish with other fishermen.

One day, Velu went fishing to the sea with his fellow fishermen. Velu, being greedy, went a long way into the sea and caught plenty of fish. The fish he caught were small in size. Suddenly, Velu saw many big fish and wanted to catch them. So, he threw away all his small fish and cast his net again to catch the bigger fish. The other fishermen offered to help him, but Velu refused to take their help. Hence, they all went away.

Velu caught a lot of big fish this time in his net. The net became so heavy that Velu could not pull it into his boat alone. The fish broke the net and escaped into the sea, damaging the fishing net. Velu realized his mistake and decided not to be greedy again. At night, Velu and his wife had nothing to eat. His friend fisherman offered them fish for dinner and also promised to help Velu mend his net.

Q 10. Write your self-introduction.

Ans. Name, education, family, aim, hobby, strength and weakness.

Q 11. Make meaningful sentences with the following jumbled words:

- | | | |
|-------|-----------------------------------|---|
| (i) | to/Helen/grow/began/wild. | Helen began to grow wild. |
| (ii) | was/fisherman/a/Velu. | Velu was a fisherman. |
| (iii) | friends/books/our/best/are. | Books are our best friends. |
| (iv) | have/you/any/pen/do/good? | Do you have any good pen? |
| (v) | greedy/Velu/selfish/was/and. | Velu was greedy and selfish. |
| (vi) | Helen/a doll/ Miss Sullivan/gave. | Miss Sullivan gave Helen a doll. |