Registration No.....

Bhartiya Skill Development University

School of General Education

I In- Semester Examination- Sep, 2018

Summer Semester, Sem-I (2018-19): B.Voc. Program

English Language & Comprehension

Course Code: GEN-1101

Time: 1 Hour
Max. Marks: 20

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

Section A (1*5=5)

Q 1. Select the suitable article and fill in the blanks (a, an, the):
a) Jaipur is_____ small town.
b) Ravi is_____ honest boy.

Q 2. Copy the following sentences, and underline the pronouns:
a) Ramesh is a doctor and he lives in Delhi.
b) The baby is crying because it is hungry.

Q 3. State whether the following statements are True or False:
a) Mowgli trusted men because Bagheera had shown him a trap.
b) Velu lived in a small house near the jungle.

Q 4. Match the following:
a) Pronoun (i) your.
b) Proper noun (ii) Mowgli.

Q 5. Identify the countable and uncountable nouns in the following words:
a) sand_____
b) sheep _____

Section B (2*3=6)

Q 6. Explain the following lines with reference to the context*: **Oh Velu, why are you throwing the fish into the sea?***

Q 7. What did Mowgli do during the day?

Q 8. Describe the character of Velu.

Section C (3*3=9)

Q 9. Write a short introduction of yourself.

Q 10. Write a summary of the lesson 'Mowgli'.

Q 11. Make sentences of your own using the words given below: -
a) cultivate
b) throw
c) trap
d) black
e) fisherman
f) angry

1st Sem.

Answer Key

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Section-A **(1*5=5)**

Q1. (a) a
(b) an

Q2. (a) Ramesh is a doctor and **he** lives in Delhi.
(b) The baby is crying because **it** is hungry.

Q3. (a) False
(b) False

Q4. (a) Pronoun - yours.
(b) Proper noun – Mowgle.

Q5. (a) sand - uncountable
(b) sheep – countable

Section- B **(2*3=6)**

Q 6. Taken from 'Velu the fisherman said by the other fishermen to Valu, was said because Velu throw all small fish into the sea,

Q 7. Slept, ate, swam, climbed trees. Ate honey and nuts.

Q 8. Greedy and selfish. Not kind and pleasant. At the end he became kind and generous.

Section- C **(3*3=9)**

Q 9. Name, qualifications, hobbies, family, goals, strengths and weaknesses.

Q 10. Mowgle raised by wolfs. Animal taught him ways of the jungle. He went to Council Rock. He went down to the village to look at human beings but did not trust them.

Q 11. (a) The fields were **cultivated**.
(b) Don't **throw** your books.
(c) Hew kept a **trap** for the rats.
(d) She was wearing a **black** dress.
(e) Velu was a **fisherman**.
(f) Hew was very **angry**.

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Question Paper

School of General Education

1st Semester, 1st In-Sem. Examination

B. Voc. Program, Summer 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

$05 \times 01 = 05$ Marks

Q1. Which of the following collection are not set?

(A) The collection of all the days of a week.

(B) The collection of all interesting books.

(C) The collection of all the months of a year beginning with the letter 'J'.

(D) The collection of all students in a class.

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

(A) $A = \{x : x \in Z \text{ and } x < 8\}$

(B) $A = \{x : x \in N \text{ and } x < 8\}$

(C) $A = \{x : x \in N \text{ and } x \leq 8\}$

(D) $A = \{x : x \in N \text{ and } x < 7\}$

Q3. A.M between (a-b) and (a+b) is

(A) a^2

(B) a-b

(C) a+b

(D) a

Q4. The 5^{th} term of $T_n = (-1)^{n-1} \times 2^{n+1}$ is

(A) 128

(B) 64

(C) 32

(D) -64

Q5. If A = {3, 4, 5, 6} and B = {2, 4, 6, 8}, then A-B is

(A) A-B = {3, 4}

(B) $A-B = \phi$

(C) A-B = {2, 8}

(D) A-B = {3, 5}

Section – B

$03 \times 02 = 06$ Marks

Q6. Define disjoint set and intersecting set with suitable examples.

Q7. If U = {a, b, c, d, e}, C = {a, b, c} and D = {b, c, d, e}, then show that

$$(C \cup D)' = (C' \cap D').$$

Q8. Find two numbers whose product is 91 and A.M. is 10.

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Section – C

$03 \times 03 = 09$ Marks

Q9. Write the power set of following sets:

(i) $A = \{-1, 0, 1\}$ (ii) $B = \{1, \{2,3\}, 4\}$

Q10. The first term of G.P. is 1 and the sum of third and fifth term is 90. Find the common ratio of the G.P.

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

Answer Key

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School of General Education

1st Semester, 1st In-Sem. Examination

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

Course Code: GEN 1103 | Time: 1 Hour

Course Name: Applied Mathematics | Max. Marks: 20

Sec. A

Q1 – B

Q2 – B

Q3 – D

Q4 – B

Q5. – D

Sec. B

Q6.

Disjoint sets:

Two sets A and B are said to be disjoint set if $A \cap B = \phi$.

For example: $A = \{1, 3, 5, 7, 9\}$

$B = \{2, 4, 6, 8\}$

then $A \cap B = \phi$

Intersecting sets:

Two sets A and B are said to be intersecting set if $A \cap B \neq \phi$.

For example: $A = \{1, 3, 5, 7, 9\}$

$B = \{2, 3, 5, 7, 11\}$

$A \cap B \neq \phi$

Q7. We have

$$U = \{a, b, c, d, e\}$$

$$C = \{a, b, c\}$$

$$D = \{b, c, d, e\}$$

we have to prove that

$$(C \cup D)' = (C' \cap D') \quad \text{— (1)}$$

L.H.S.

$$C \cup D = \{a, b, c, d, e\}$$

$$(C \cup D)' = U - (C \cup D)$$

$$= \{a, b, c, d, e\} - \{a, b, c, d, e\}$$

$$(C \cup D)' = \phi$$

R.H.S.

$$C' = U - C$$

$$= \{a, b, c, d, e\} - \{a, b, c\}$$

$$= \{d, e\}$$

$$D' = U - D$$

$$= \{a, b, c, d, e\} - \{b, c, d, e\}$$

$$= \{a\}$$

$$(C' \cap D') = \{d, e\} \cap \{a\}$$

$$(C' \cap D') = \phi$$

$$= \text{L.H.S.}$$

Hence proved

Q.8 given that

Let these two numbers are a and b.

given $ab = 91$ — (1)

$$\frac{a+b}{2} = 10 \quad \text{— (2)}$$

from eq. (2) we have

$$a+b = 20 \Rightarrow a = 20-b$$

putting the value of "a" into eq. (1), then

$$(20-b)b = 91$$

$$20b - b^2 = 91$$

$$b^2 - 20b + 91 = 0$$

$$b^2 - 13b - 7b + 91 = 0$$

$$b(b-13) - 7(b-13) = 0$$

$$(b-13)(b-7) = 0$$

$$b = 13 \text{ or } b = 7$$

when $b = 13 \Rightarrow a \times 13 = 91 \Rightarrow a = 7$

when $b = 7 \Rightarrow a \times 7 = 91 \Rightarrow a = 13$

sec c

Q.9 (i) given $A = \{-1, 0, 1\}$

maximum possible subsets of set A are $= 2^3 = 8$.

Subsets of A are $= \phi, \{-1\}, \{0\}, \{1\}, \{-1, 0\}$

$\{0, 1\}, \{-1, 1\}, \{-1, 0, 1\}$

Hence. $P(A) = \{\phi, \{-1\}, \{0\}, \{1\}, \{-1, 0\}, \{0, 1\}, \{-1, 1\},$

$\{-1, 0, 1\}\}$

(ii) given $B = \{1, \{2,3\}, 4\}$

maximum possible subsets of B are $= 2^3 = 8$

subsets of B are

$= \phi, \{1\}, \{\{2,3\}\}, \{4\}, \{1, \{2,3\}\}, \{1,4\},$

$\{\{2,3\}, 4\}, \{1, \{2,3\}, 4\}$.

Hence power set of B is

$P(B) = \{\phi, \{1\}, \{\{2,3\}\}, \{4\}, \{1, \{2,3\}\}, \{1,4\},$

$\{\{2,3\}, 4\}, \{1, \{2,3\}, 4\}\}$

Q10 given that

$a = 1$, $r = ?$

Third term of G.P. is

$T_3 = ar^2 = 1 \times r^2 = r^2$ — (1)

fifth term of G.P. is

$T_5 = ar^4 = 1 \times r^4 = r^4$ — (2)

given $T_3 + T_5 = 90$

$r^2 + r^4 = 90$

$r^4 + r^2 - 90 = 0$

$r^4 + 10r^2 - 9r^2 - 90 = 0$

$r^2(r^2+10) - 9(r^2+10) = 0$

$(r^2-9)(r^2+10) = 0$

$r^2 = 9$ $\quad \{ r^2 + 10 \neq 0$

$r = \pm 3$ (common ratio)

Q 11. given that

$n = 35$, $S_n = ?$

second term of an A.P.

$T_2 = a + d = 2$ — ①

seventh term of an A.P.

$T_7 = a + 6d = 22$ — ②

eq.② − eq.①, we have

$a + 6d - a - d = 22 - 2$

$5d = 20$

$d = \frac{20}{5} = 4$ — ③

from eq.③ and eq.①, we have,

$a + 4 = 2$

$a = -2$

We know that sum of n-terms in an A.P is

$$S_n = \frac{n}{2}[2a + (n-1)d]$$

$n = 35, a = -2, d = 4$

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

$$= \frac{35}{2}[-4 + 136] = \frac{35}{2} \times 132$$

$$= 35 \times 66 = \underline{2310}$$