Registration No.: .....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of General Education

Session: 2020-21(Summer Semester)

B. Voc. Program, 1st Semester

2nd In-Sem. Examination

Course Code: GEN1101 **Time: 1 Hour**

Course Name: English Language and Comprehension **Max. Marks: 20**

Instructions:

1. All questions are compulsory.
2. The question paper comprises three sections A, B & C. Marks allotted are mentioned against each section.

Section-A (1*5=5)

Q1. The poet of the poem *Stopping by Woods on a Snowy Evening* is:

(A) Robert Browning (B) Robert Frost

(C) William Shakespeare (D) William Wordsworth

Q2. Comparative form of the adjective ***busy*** is:

(A) More busy (B) Busies

(C) Busier (D) Busiest

Q3. Who told Mowgli that honey was pleasant to eat:

(A) Bagheera (B) Father Wolf

(C) Black Owl (D) Baloo

Q4. *'Stopping by Woods on a Snowy Evening'*. The word **Snowy** is a/an:

(A) Adjective (B) Verb

(C) Noun (D) Pronoun

Q5. My brother lives in..... USA. The suitable article in the blank is:

(A) a (B) an

(C) the (D) zero

Section-B (2*3=6)

Q6. Fill in the blank with appropriate articles (a, an, the or zero):

(A) I like .... milk.

(B) ..... Guru Shikhar is the highest point of .... Aravali Range.

(C) She is..... Lata Mangeshkar of our concert.

Q7. Why did Mowgli not trust men?

Q8. What is the significance of 'Sleep' in the poem, *Stopping by Woods on a Snowy Evening*?

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

Q9. What message does the poet want to give through the poem '*Stopping by Woods on a Snowy Evening*? Explain it.

Q10. Write a summary of the story, Mowgli.

Q11. Arrange the following jumbled words to make sentences:

(a) have/you/any/pen/do/good/?
(b) friends/books/our/best/are
(c) scenery/this/a/beautiful/is

*****

School of General Education

Session: 2020-21(Summer Semester)

B. Voc. Program, 1st Semester,

2nd In-Sem. Examination

Set-1

Course Code: GEN1101 **Time: 1 Hour**

Course Name: English Language and Comprehension **Max. Marks: 20**

ANSWER KEY

Section-A

Q.1 B. Robert Frost

Q.2 C. Busier

Q.3 D. Baloo

Q.4 A. Adjective

Q.5 C. The

Section-B

Q.6 A. Zero **B.** Zero…the **C.** A

Q.7 Mowgli did not have faith on men because Bagheera had informed him about the traps men lay in the form of square boxes with drop gates to catch the animals.

Q.8

In this very last line the word "sleep" may refer to death. We, in our real life, have many things to look at with awe, many things to enjoy, but in most cases we cannot simply because we have other things to do in our short lifespan, so we have to move on.

Section-C

Q.9

It might also suggest a sense of adventure and attraction to danger - the 'darkness' and 'depth' of the woods. Perhaps the speaker wants to experience new things and places, but his responsibilities - his work, his family, his community-keep him from going off on dark and dangerous adventures. A simple interpretation is that work must come before pleasure seeking and fun loving activities.

Q.10

The story is about a young boy named Mowgli who grew up with animals. Father wolf taught him about the ways of living in Jungle. As he grew up in jungle he understood all the happenings of the jungle including every rustle of grass, the hooting of owls, roosting of the bats and the fish's splash in the water. He would bathe in the rivers and eat honey and raw meat when he felt hungry as taught by Baloo, the shaggy bear. Bagheera, the black panther taught him to jump from one branch to other. Mowgli stared into the eyes of wolves for fun as he

understood that if he stared hard at any wolf it would drop its eyes. He would help the bears by removing the long thorns and burrs from their fur. He would look curiously at the cultivated lands and the huts of the villagers. Mowgli did not have faith on men because Bagheera had informed him about the traps men lay in the form of square boxes with drop gates to catch the animals.

Q.11

A. Do you have any good pen?

B. Books are our best friends.

C. This is a beautiful scenery.

Set-1

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Computing Skill
Session: 2020-21 (Summer Semester)
B. Voc. Program, I Semester,
2nd In-Sem. Examination

Name: ..... School:..... Registration No.: .....

Course Code: GEN1102 Time: 1Hour
Course Name: Office Software Tools Max. Marks: 20
Instruction: write answers (calc formula) in the sheet as well as implement them.

Sec - A 5*2 = 10

Q1. Implement following Questions using Libre Calc Formula as given the Table 1-

1. Find out Total Marks of each student using the Libre calc formula.

Ans:

2. Find out Maximum of each student from their subject using the Libre calc formula.

Ans:

3. Find out Minimum Marks of each student using Libre calc formula.

Ans:

4. Find out Average Marks of each student using Libre calc formula.

Ans:

5. Find out the total percentage of each student using the libre calc formula.

Ans:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4		Name	Math	English	Hindi	Total Marks	Max marks	Min Marks	Average Marks
5		Anu	65	79	89				
6		Deepak	56	68	76				
7		Nidhi	67	86	89				
8		Rajesh	61	87	63				
9		Priyanka	90	89	83				
10		Sonu	76	65	82				
11		Teena	67	78	61				
12									
13									

Table 1

Sec B 5*2

Q1. Implement following Questions using Libre Calc Formula -

1. Find out the length of the word "University" using libre calc.

Ans:

2. Implement following table 2 using libre calc-

a) Find out the total price using libre calc?

Ans:

b) Find out the maximum price of the product?

Ans:

c) Using the count formula, find out the total number of products given?

Ans:

d) Find out the minimum price of the product?

Ans:

	A	B	C	D	E
1					
2					
3		Product	Cost per unit	Total unit	Total price
4		Table	2000	40	
5		Chair	3000	45	
6		Almirah	3500	40	
7		Window	3500	30	
8		Door	4000	25	
9					
10					
11					
12					

Table 2

Set-2

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Computing Skill
Session: 2020-21 (Summer Semester)
B. Voc. Program, I Semester,
2nd In-Sem. Examination

Name: ..... School:..... Registration No.: .....

Course Code: GEN1102 Time: 1Hour
Course Name: Office Software Tools Max. Marks: 20
Instruction: write answers (calc formula) in the sheet as well as implement them.

Sec - A 5*2 =10

Q1. Implement following Questions using Libre Calc Formula as given the Table 1-

1. Find out Total Marks of each student using the Libre calc formula.

Ans:

2. Find out Maximum of each student from their subject using the Libre calc formula.

Ans:

3. Find out Minimum Marks of each student using Libre calc formula.

Ans:

4. Find out Average Marks of each student using Libre calc formula.

Ans:

5. Find out the total percentage of each student using the libre calc formula.

Ans:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4		Name	Math	English	Hindi	Total Marks	Max marks	Min Marks	Average Marks
5		Ankit	65	79	89				
6		Deepa	56	68	76				
7		Geeta	67	86	89				
8		Raghav	61	87	63				
9		Priya	90	89	83				
10		Sunita	76	65	82				
11		Soni	67	78	61				
12									
13									
14									
15									

Table 1

Sec B 5*2

Q1. Implement following Questions using Libre Calc Formula -

1. Find out the length of the word "Bhartiya" using libre calc.

Ans:

2. Implement following table 2 using libre calc-

a) Find out the total price using libre calc?

Ans:

b) Find out the maximum price of the product?

Ans:

c) Using the count formula, find out the total number of products given?

Ans:

d) Find out the Average price of the product?

Ans:

	A	B	C	D	E
1					
2					
3		Product	Cost per unit	Total unit	Total price
4		Chocolate	20	45	
5		Toffee	3	55	
6		Biscuit	35	40	
7		Namkeen	25	35	
8		Chips	20	25	
9					
10					
11					

Table 2

Set - 3

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Computing Skill
Session: 2020-21 (Summer Semester)
B. Voc. Program, I Semester,
2nd In-Sem. Examination

Name: ..... School..... Registration No.: .....

Course Code: GEN1102 Time: 1Hour
Course Name: Office Software Tools Max. Marks: 20
Instruction: write answers (calc formula) in the sheet as well as implement them.

Sec - A 5*2 =10

Q1. Implement following Questions using Libre Calc Formula as given the Table 1-

1 . Find out Total Marks of each student using the Libre calc formula.

Ans:

2. Find out Maximum of each student from their subject using the Libre calc formula.

Ans:

3.Find out Minimum Marks of each student using Libre calc formula.

Ans:

4.Find out Average Marks of each student using Libre calc formula.

Ans:

5. Find out the total percentage of each student using the libre calc formula.

Ans:

	A	B	C	D	E	F	G	H
1								
2		Bhartiya Skill Development University						
3								
4	Name	Math	English	Hindi	Total Marks	Max marks	Min Marks	Average Marks
5	Alisha	56	78	98				
6	Aman	56	78	76				
7	Dolly	34	56	89				
8	Raman	66	87	56				
9	Suman	89	76	76				
10	Teena	67	89	65				
11	Yogesh	89	78	74				
12								
13								
14								
15								
16								

Table 1

Sec B 5*2

Q1. Implement following Questions using Libre Calc Formula -

1. Find out the length of the word "Library" using libre calc.

Ans:

2. Implement following table 2 using libre calc-

a) Find out the total price using libre calc?

Ans:

b) Find out the maximum price of the product?

Ans:

c) Using the count formula, find out the total number of products given?

Ans:

d) Find out the Average price of the product?

Ans:

	A	B	C	D	E
1					
2					
3		Product	Cost per unit	Total unit	Total price
4		Trouser	200	5	
5		shirt	300	10	
6		Jacket	2500	4	
7		Shawl	300	20	
8		Cap	150	5	
9					
10					
11					

Table 2

Set - 4

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Computing Skill
Session: 2020-21 (Summer Semester)
B. Voc. Program, I Semester,
2nd In-Sem. Examination

Name: ..... School:..... Registration No.: .....

Course Code: GEN1102 Time: 1Hour
Course Name: Office Software Tools Max. Marks: 20
Instruction: write answers (calc formula) in the sheet as well as implement them.

Sec - A 5*2 =10

Q1. Implement following Questions using Libre Calc Formula as given the Table 1-

1 . Find out Total Marks of each student using the Libre calc formula.

Ans:

2. Find out Maximum of each student from their subject using the Libre calc formula.

Ans:

3. Find out Minimum Marks of each student using Libre calc formula.

Ans:

4. Find out Average Marks of each student using Libre calc formula.

Ans:

5. Find out the total percentage of each student using the libre calc formula.

Ans:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4		Name	Math	English	Hindi	Total Marks	Max marks	Min Marks	Average Marks
5		Anita	56	79	89				
6		Dinesh	56	68	76				
7		Meena	57	56	89				
8		Raju	66	87	89				
9		Sanjay	89	76	76				
10		Sandeep	76	65	65				
11		Suman	89	78	87				
12									
13									
14									
15									

Table 1

Sec B 5*2

Q1. Implement following Questions using Libre Calc Formula -

1. Find out the length of the word "School" using libre calc.

Ans:

2. Implement following table 2 using libre calc-

a) Find out the total price using libre calc?

Ans:

b) Find out the maximum price of the product?

Ans:

c) Using the count formula, find out the total number of products given?

Ans:

d) Find out the average price of the product?

Ans:

	A	B	C	D	E
1			Electronics Product		
2					
3		Product	Cost per unit	Total unit	Total price
4		Mobile	300	5	
5		Laptop	250	25	
6		Charger	100	20	
7		pendrive	50	10	
8		TV	500	7	
9					
10					
11					

Table 2

6ef-5

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Computing Skill
Session: 2020-21 (Summer Semester)
B. Voc. Program, I Semester,
2nd In-Sem. Examination

Name: ..... School:..... Registration No.: .....

Course Code: GEN1102 Time: 1Hour
Course Name: Office Software Tools Max. Marks: 20
Instruction: write answers (calc formula) in the sheet as well as implement them.

Sec - A 5*2 =10

Q1. Implement following Questions using Libre Calc Formula as given the Table 1-

1 . Find out Total Marks of each student using the Libre calc formula.

Ans:

2. Find out Maximum of each student from their subject using the Libre calc formula.

Ans:

3.Find out Minimum Marks of each student using Libre calc formula.

Ans:

4.Find out Average Marks of each student using Libre calc formula.

Ans:

5. Find out the total percentage of each student using the libre calc formula.

Ans:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4		Name	Math	English	Hindi	Total Marks	Max marks	Min Marks	Average Marks
5		Anisha	56	78	98				
6		Ali	56	78	76				
7		Meenu	34	56	89				
8		Raju	66	87	56				
9		Surya	89	76	76				
10		Tripti	67	89	65				
11		Yagesh	89	78	74				
12									
13									
14									
15									

Table 1

Sec B 5*2

Q1. Implement following Questions using Libre Calc Formula -

1. Find out the length of the word "College" using libre calc.

Ans:

2. Implement following table 2 using libre calc-

a) Find out the total price using libre calc?

Ans:

b) Find out the maximum price of the product?

Ans:

c) Using the count formula, find out the total number of products given?

Ans:

d) Find out the Minimum price of the product?

Ans:

	A	B	C	D	E
1			Toys		
2					
3		Product	Cost per unit	Total unit	Total price
4		Car	300	15	
5		Bus	250	15	
6		Scooty	150	14	
7		van	300	17	
8		Cycle	100	10	
9					
10					
11					
12					

Table 2

Registration No.: .....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

A-

School of General Education

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester

2nd In-Sem. Examination

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 is the derivate of $y = ax^3 + 3x$:

(a) $\frac{dy}{dx} = ax^3 + 3x$

(b) $\frac{dy}{dx} = 3x^2 + 3$

(c) $\frac{dy}{dx} = 3x^2 a + 3$

(d) $\frac{dy}{dx} = 3x^3 a + 3$

Q2. Given $y = 3e^{4x}$, then $\frac{dy}{dx}$ is

(a) 3

(b) $3e^{4x}$

(c) $12e^{x}$

(d) $12e^{4x}$

Q3. If we differentiate $y = 2x^4 - \sin x$ with respect to x, then

(a) $\frac{dy}{dx} = 8x$

(b) $\frac{dy}{dx} = 8x + \sin x$

(c) $\frac{dy}{dx} = 8x^3 - \cos x$

(d) $\frac{dy}{dx} = 8x - \sin x$

Q4. $\lim_{x \to 3} 3x(x+1) =$

(a) 4

(b) 36

(c) 46

(d) 50

Q5. $\lim_{x \to 1} 2x^3 + 3x + 10 =$

(a) 12

(b) 64

(c) 15

(d) -16

Section – B

$03 \times 02 = 06$ Marks

Q6. If $y = \dfrac{a^2 e^x \sin x}{\log x}$, then find $\dfrac{dy}{dx}$.

Q7. Evaluate $\lim\limits_{x \to 2} \dfrac{x^2 - 3x + 2}{x^2 - 6x + 8}$

Q8. Evaluate:

(a) If $y = \dfrac{ax^2 + bx + c}{a^x \log x}$, then find $\dfrac{dy}{dx}$.

(b) $\lim\limits_{x \to 4} \dfrac{x^2 - 16}{x - 4}$

Section – C

$03 \times 03 = 09$ Marks

Q9. If $y = \dfrac{(x-3)(x^2+4)}{3x^2 + 4x + 5}$ then find $\dfrac{dy}{dx}$.

Q10. Evaluate $\lim\limits_{x \to 0} \dfrac{\sqrt{a^2 + x^2} - \sqrt{a^2 - x^2}}{x^2}$.

Q11. If $y = \dfrac{ad - bc}{(cx + d)^2}$ then find $\dfrac{dy}{dx}$.

*****

Answer key

MEN 1103 (A)

2nd In-sem examination.

Q1 (c)

Q2 (d)

Q3 (c)

Q4 (b)

Q5 (c)

Q6 $y = \dfrac{a^2 e^x \sin x}{\log x}$

$$\frac{dy}{dx} = \frac{a^2 \log x \left[e^x \frac{d}{dx}\sin x - \sin x \frac{d}{dx} e^x\right] - a^2 e^x \sin x \frac{d}{dx}\log x}{(\log x)^2}$$

$$= \frac{a^2 \log x \left(e^x \cos x - \sin x e^x\right) - \frac{a^2 e^x \sin x}{x}}{(\log x)^2}$$

Q7 given $\lim_{x \to 2} \dfrac{x^2 - 3x + 2}{x^2 - 6x + 8}$

$$\Rightarrow \lim_{x \to 2} \frac{x^2 - 2x - x + 2}{x^2 - 4x - 2x + 8}$$

$$\Rightarrow \lim_{x \to 2} \frac{x(x-2) - 1(x-2)}{x(x-4) - 2(x-4)}$$

$$\Rightarrow \lim_{x \to 2} \frac{(x-2)(x-1)}{(x-2)(x-4)} = \frac{2-1}{2-4} = \frac{-1}{2}$$

Q8 (a) $y = \dfrac{ax^2 + bx + c}{a^x \log x}$

Soln $\dfrac{dy}{dx} = \dfrac{a^x \log x \left(\frac{d}{dx}(ax^2 + bx + c)\right) - (ax^2 + bx + c)\frac{d}{dx} a^x \log x}{(a^x \log x)^2}$

$$\frac{dy}{dx} = \frac{a^x \log x (2ax+b) - (ax^2+bx+c)\left(a^x \frac{1}{x} + \log x \cdot a^x \log a\right)}{(a^x \log x)^2}$$

Q8 (b) $\lim_{x \to 4} \frac{x^2-16}{x-4}$

$$\Rightarrow \lim_{x \to 4} \frac{(x-4)(x+4)}{(x-4)} = 4+4 = 8$$

Q9 $y = \frac{(x-3)(x^2+4)}{3x^2+4x+5}$

$$\frac{dy}{dx} = \frac{(3x^2+4x+5)\frac{d}{dx}[(x-3)(x^2+4)] - (x-3)(x^2+4)\frac{d}{dx}(3x^2+4x+5)}{(3x^2+4x+5)^2}$$

$$= \frac{(3x^2+4x+5)[(x-3)(2x)+(x^2+4)] - (x-3)(x^2+4)(6x+4)}{(3x^2+4x+5)^2}$$

Q10 $\lim_{x \to 0} \frac{\sqrt{a^2+x^2} - \sqrt{a^2-x^2}}{x^2}$

$$\lim_{x \to 0} \frac{\sqrt{a^2+x^2} - \sqrt{a^2-x^2}}{x^2} \times \frac{\sqrt{a^2+x^2} + \sqrt{a^2-x^2}}{\sqrt{a^2+x^2} + \sqrt{a^2-x^2}}$$

$$\Rightarrow \lim_{x \to 0} \frac{(a^2+x^2) - (a^2-x^2)}{x^2\left[\sqrt{a^2+x^2} + \sqrt{a^2-x^2}\right]}$$

$$\Rightarrow \lim_{x \to 0} \frac{2x^2}{x^2\left[\sqrt{a^2+x^2} + \sqrt{a^2-x^2}\right]}$$

$$= \frac{2}{\sqrt{a^2}+\sqrt{a^2}} = \frac{2}{2a} = \frac{1}{a}$$

Q11 $y = \frac{ad-bc}{(cx+d)^2}$

$$\frac{dy}{dx} = \frac{(cx+d)^2 \frac{d}{dx}(ad-bc) - (ad-bc)\frac{d}{dx}(cx+d)^2}{(cx+d)^4}$$

$$= \frac{-(ad-bc)\,2(cx+d).c}{(cx+d)^4}$$

$$\frac{dy}{dx} = \frac{-2c(ad-bc)}{(cx+d)^3}$$

Ans

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

A

Registration No.: .....

School of General Education

Session: 2020-21 (Summer Semester)

B. Voc. Program, First Semester,

2nd In-Sem. Examination

Course Code: GEN1104 **Time: 1 Hour**

Course Name: Elementary Mathematics **Max. Marks: 20**

Section – A

05X01 = 05 Marks

1. Find the area of a square whose side is 30 m.
   a. 30cm
   b. 900 m^2
   c. 900 cm^3
   d.900 cm^2
2. Find the perimeter of a triangle with two equal sides of 5 cm and one side of 10 cm.
   a. 50 cm
   b. 20 cm
   c. 50 cm^2
   d. 15 cm
3. If the length and breadth of a rectangle are 15cm and 10cm, respectively, then its area is:
   a. 100 sq.cm
   b. 150 sq.cm
   c. 115 sq.cm
   d. 200 sq.cm
4. If a cuboidal box has height, length and width as 20 cm, 15 cm and 10 cm respectively. Then its total surface area is:
   a. 1100 cm^2
   b. 1200 cm^2
   c. 1300 cm^2
   d. 1400 cm^2
5. Find the volume of cube whose side is 25 cm
   a. 625 cm^2
   b. 625 cm^3
   c. 15625 cm^2
   d. 15625 cm^3

Section – B

03X02 = 06 Marks

6. Calculate the height of a cuboid which has a base area of 180 cm^2 and volume is 900 cm^3.
7. A square and a rectangle have the same perimeter. Calculate the area of the rectangle if the side of the square is 60 cm and the length of the rectangle is 80 cm.
8. A lawnmower takes 750 complete revolutions to cut grass on a field. Calculate the area of the field if the diameter of the lawnmower is 84 cm and length is 1 m.

Section – C

03X03 = 09 Marks

9. A cuboidal box of dimensions 1 m × 2 m × 1.5 m is to be painted except its bottom. Calculate how much area of the box has to be painted.

10. Find the height of the cylinder whose volume is 1.54 m^3 and diameter of the base is 140 cm. Also, calculate the total surface area of cylinder.

11. **a)** A suitcase with measures 80 cm × 48 cm × 24 cm is to be covered with a tarpaulin cloth. How many metres of tarpaulin of width 96 cm is required to cover 100 such suitcases?

    b) Find the side of a cube whose surface area is 600 cm^2.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of General Education Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, First Semester,

2nd In-Sem. Examination

Course Code: GEN1104 **Time: 1 Hour**

Course Name: Elementary Mathematics **Max. Marks: 20**

ANSWER KEY(SET-A)

Section – A

05X01 = 05 Marks

1. **Find the area of a square whose side is 30 m.**
   a. 30cm
   c. 900 cm^3
   b. **900 m^2**
   d.900 cm^2
2. **Find the perimeter of a triangle with two equal sides of 5 cm and one side of 10 cm.**
   a. 50 cm
   c. 50 cm^2
   b. 20 cm
   d. 15 cm
3. **If the length and breadth of a rectangle are 15cm and 10cm, respectively, then its area is:**
   a. 100 sq.cm
   c. 115 sq.cm
   b. **150 sq.cm**
   d. 200 sq.cm
4. **If a cuboidal box has height, length and width as 20 cm, 15 cm and 10 cm respectively. Then its total surface area is:**
   a. 1100 cm^2
   c. **1300 cm^2**
   b. 1200 cm^2
   d. 1400 cm^2
5. **Find the volume of cube whose side is 25 cm**
   a. 625 cm^2
   c. 15625 cm^2
   b. 625 cm^3
   d. **15625 cm^3**

Section – B

03X02 = 06 Marks

6. **Calculate the height of a cuboid which has a base area of 180 cm^2 and volume is 900 cm^3.**

   Volume of cuboid = base area × height

   900 = 180 × height

   So, height = 900/180 = 5 cm

7. **A square and a rectangle have the same perimeter. Calculate the area of the rectangle if the side of the square is 60 cm and the length of the rectangle is 80 cm.**

Perimeter of square formula = 4 × side of the square

Hence, P (square) = 4 × 60 = 240 cm

Perimeter of rectangle formula = 2 × (Length + Breadth)

Hence, P (rectangle) = 2 (80 + Breadth)

= 160 + 2 × Breadth

According to the given question,
160 + 2 × Breadth = 240 cm
2 × Breadth = 240 – 160
Breadth = 80/2
The breadth of the rectangle = 40 cm

Now, the area of rectangle = Length × Breadth = 80 × 40 = 3200 cm^2

8. **A lawnmower takes 750 complete revolutions to cut grass on a field. Calculate the area of the field if the diameter of the lawnmower is 84 cm and length is 1 m.**

Solution:

Given, length of lawnmower = 1m = 100cm

Its circumference = $\pi \times D = 22/7 \times 84 = 264$ cm

Length of field will be = 264 × 750 = 198000 cm

Here, the width of field = length of the lawnmower i.e. 100 cm

So, area of field = 198000 × 100 = 19,800,000 cm^2

Or, 1980 m^2

Section – C

03X03 = 09 Marks

9. **A cuboidal box of dimensions 1 m × 2 m × 1.5 m is to be painted except its bottom. Calculate how much area of the box has to be painted.**

Given,

Length of the box, l = 2 m,

Breadth of box, b = 1 m

Height of box, h = 1.5 m

We know that the surface area of a cuboid = 2(lb + lh + bh)

But here the bottom part is not to be painted.

So,

Surface area of box to be painted = lb + 2(bh + hl)

= 2 × 1 + 2 (1 × 1.5 + 1.5 × 2)

= 2 + 2 (1.5 + 3.0)

= 2 + 9.0

= 11

Hence, the required surface area of the cuboidal box = 11 m^2

10. **Find the height of the cylinder whose volume is 1.54 m^3 and diameter of the base is 140 cm. Also, calculate the total surface area of cylinder.**

Volume of cylinder is given by

$=\pi r^2 h$

Here $V=1.54\ m^3$

r= 70 cm=.7 m

So

$(22/7)\ (.7)^2\ H= 1.54$

H=1 m

$TSA= 2\pi r(r+h)$

$=2*22/7*0.7(0.7+1)$

$= 44*0.1(1.7)$

$= 4.4*1.7= 7.48\ cm^2$

11. a) **A suitcase with measures 80 cm × 48 cm × 24 cm is to be covered with a tarpaulin cloth. How many meters of tarpaulin of width 96 cm is required to cover 100 such suitcases?**

Total surface area of suitcase = 2[(80) (48) + (48) (24) + (24) (80)]

= 2[3840 + 1152 + 1920]

= 13824 cm^2

Total surface area of 100 suitcases = (13824 × 100) cm^2 = 1382400 cm^2

Required tarpaulin = Length × Breadth

1382400 cm^2 = Length × 96 cm

$\text{Length} = \left(\frac{1382400}{96}\right) \text{cm}$ = 14400 cm = 144 m

Thus, 144 m of tarpaulin is required to cover 100 suitcases.

b. **Find the side of a cube whose surface area is 600 cm^2.**

Given that, surface area of cube = 600 cm^2

Let the length of each side of cube be *l*.

Surface area of cube = 6 $(Side)^2$

600 $cm^2 = 6l^2$

$l^2 = 100\ cm^2$

l = 10 cm