Registration No.: .....

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Question Paper

School of General Education

1st Semester, 2nd 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)

Q.1 Fill in the blanks with the appropriate degree of comparison.:

(a) Ravi is the _____ boy in the class. (tallest/ taller)

(b) An airplane flies_____ than birds. (faster/more fast)

Q 2. Complete the following sentences using the correct form of the verb given in the brackets:

(a) He _____ fast and won the race. (run)

(b) The sun_____ in the east. (rise)

Q.3 Fill in the blanks with the correct form of the verb:

(a) She usually _____ white clothes. (wears/is wearing)

(b) They_____ a house in Delhi two months ago. (have bought/bought)

Q.4 Fill in the blanks:

(a) Mowgli grew up in the _____. (house/jungle)

(b) Mowgli did not trust _____. (wolves/men)

Q.5 Write the comparative degree for the following:

(a) Bright

(b) Beautiful

Section- B (2*3=6)

Q.6 What did Mowgli do when he felt hot and dirty?

Q.7 Explain with reference to the context.

"Come along, little brother."

Q.8 Change the given sentences by using superlative degree:

(a) Iron is more useful than any other metal.

(b) The giraffe is taller than any other animal.

Section- C (3*3=9)

Q.9 Write the summary of 'Mowgli'.

Q.10 Write about your daily routine in about ten lines.

Q.11 Make meaningful sentences with the following words:

(a) Brother

(b) Jungle

(c) Dirty

(d) Beautiful

(e) Stare

(f) Honey

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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 the appropriate degree of comparison.:

a) Ravi is the **tallest** boy in the class. (tallest/ taller)
b) An airplane flies **faster** than birds. (faster/more fast)

Q 2. Complete the following sentences using the correct form of the verb given in the brackets:

(a) He ran fast and won the race. (run)
(b) The sun **rises** in the east. (rise)

Q3. Fill in the blanks with the correct form of the verb:

(a) She usually **wears** white clothes. (wears/is wearing)
(b) They **bought** a house in Delhi two months ago.. (have bought/bought)

Q 4. Fill in the blanks:

(a) Mowgli grew up in the **jungle.** (house/jungle)
(b) Mowgli did not trust **men**. (wolves/men)

Q 5. Write the comparative degree for the following:

(a) Bright- **Brighter**
(b) Beautiful- **More beautiful**

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

Q 6. What did Mowgli do when he felt hot and dirty?

Ans. Mowgli swam in forest pools when he felt hot and dirty.

Q 7. Explain with reference to the context.

"Come along, little brother."

Ans. The above lines have been taken from the story, "Mowgli".Bagheera said these lines to Mowgli as he wanted him to climb up the trees.

Q 8. Change the given sentences by using superlative degree:

(a) Iron is more useful than any other metal.

Ans. (a) Iron is **the most useful** metal. (Superlative)

(b) The giraffe is taller than any other animal.

Ans. (b) The giraffe is **the tallest** animal. (Superlative)

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

Q 9. Write the summary of 'Mowgli'.

Ans. 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 10. Write about your daily routine.

Ans. I am a student of B.Voc.. I have a daily routine of work. I get up early in the morning. I brush my teeth and wash my hands and mouth. Then I say my prayer and take my breakfast. I go to my reading room and prepare my lessons. At 9 a.m. I get ready and go to college. I stay at college up to 5.p.m. After college, I return home. I wash my hands and face and take my meals. Then I go to play. Before sunset, I come back home and say my evening prayers. Then I go to my reading room and prepare my lessons. I study there till 10 p.m. At 10 p.m, I take my supper and go to bed.

Q 11. Make meaningful sentences with the following words:

(i) Brother- Maya has one **brother**.
(ii) Jungle- Lion lives in the **jungle.**
(iii) Dirty- Pool water is **dirty.**
(iv) Beautiful- Megha is a **beautiful** girl.
(v) Stare- He continued to **stare** at the beggar.
(vi) Honey- Bees provide us with **honey**.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Question Paper

School of General Education

1st Semester, 2nd 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

$05 \times 01 = 05$ Marks

Q1. $\frac{d}{dx}(x^n) =$

(a) $2nx^{n-1}$ (c) x^{n-1}

(b) nx^{n-1} (d) 1

Q2. $\frac{d}{dx}(2ab) =$

(a) 2 (c) 2ab

(b) ab (d) 0

Q3. G.M between 27 and 243 is

(a) 27 (c) 91

(b) 81 (d) 148.5

Q4. How many kilometers are there in 1 meter?

(a) 1000 (c) 0.01

(b) 0.001 (d) 0.1

Q5. Convert 13 meters 54 cm into centimeter

(a) 1355 (c) 1354

(b) 13.54 (d) 13540

Section – B

$03 \times 02 = 06$ Marks

Q6. If $(k\text{-}1)$ is the GM between $(k\text{-}2)$ and $(k+1)$, then find the value of k.

Q7. Find the sum of the followings:

(i) 32 meters and 56 cm

(ii) 25 cm 05 mm and 16 cm 03 mm

Q8. If $y = (x^2 + 2ax)\log x$, then find the derivative $\frac{dy}{dx}$.

Section – C

$03 \times 03 = 09$ Marks

Q9. Insert five GM between 1/3 and 243.

Q10. If $y = \frac{ax^2 - \cos x}{e^x}$, then find the derivative $\frac{dy}{dx}$.

Q11. Ram travelled 5 Km 124 meters by car, 6 Km 345 meters by train and remaining by bus. Total distance travelled by him is 35 Km, calculate how much distance is travel by him by bus.

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2nd In sem
B.Voc. 1st sem

Answer key

MEN 1103
Applied Mathematics

Sec A

Q1 (b) Q2 (a) Q3 (b) Q4 (b) Q5 (c)

Sec B

Q.6 given $(K-1) = \sqrt{(K-2)(K+1)}$

$$(K-1)^2 = (K-2)(K+1)$$

$$K^2+1-2K = K^2+K-2K-2$$

$$K = 3$$

Q.7 (i) $3200 + 56 = 3256$ cm

(ii) 41 cm 08 mm

Q.8 $y = (x^2+2ax)\log x$

$$\frac{dy}{dx} = (x^2+2ax)\frac{d}{dx}\log x + \log x \frac{d}{dx}(x^2+2ax)$$

$$= \frac{(x^2+2ax)}{x} + \log x (2x+2a)$$

Sec C

Q.9 Let $\frac{1}{3}, u_1, u_2, u_3, u_4, u_5, 243$

$$a = \frac{1}{3}, \quad T_6 = 243$$

$$T_7 = ar^{7-1} \Rightarrow 243 = \frac{1}{3} r^{7-1}$$

$$r^6 = 729$$

$$r = 3$$

$n_1 = ar = \frac{1}{3} \times 3 = 1$

$n_2 = 3$

$n_3 = 9$

$n_4 = 27$

$n_5 = 81$

Q.10 $y = \dfrac{ax^2 - \cos x}{e^x}$

$$\frac{dy}{dx} = \frac{e^x(2ax + \sin x) - (ax^2 - \cos x)e^x}{e^{2x}}$$

Q.11. Total distance = 11 km 469 m

Travel by bus = 35 − 11 km 469 m

~~bus drive~~ = 23 km 531 m

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Question Paper

School of General Education

1st Semester, 2nd In-Sem. Examination

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

Course Code: GEN 1104 **Time: 1 Hour**

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

Instruction:

1. All questions are compulsory.
2. Missing data if any can be suitably assumed.

Section – A

$05 \times 01 = 05$ Marks

Q1. How many millimetre are there in 1 m?

(A) 100 (C) 0.1

(B) 1000 (D) 10

Q2. The measure of straight line is:

(A) 90 ° (C) 360 °

(B) 100 ° (D) 180 °

Q3. $(10)_{10}$ in binary number is written as:

(A) $(1010)_2$ (C) $(10)_2$

(B) $(0101)_2$ (D) $(100)_2$

Q4. Convert 13m 25cm = _____ cm

(A) 13025cm (C) 1325 cm

(B) 13.25cm (D) 1.325 cm

Q5. Total surface area of the cube with side 4 cm is:

(A) 16 cm^2 (C) 96 cm^3

(B) 96 cm^2 (D) 64 cm^2

Section – B

$03 \times 02 = 06$ Marks

Q6. Convert binary numbers into decimal numbers:

(i) $(100)_2$

(ii) $(1111)_2$

Q7. Find the volume and curved surface area of a cylinder whose radius and height are 7cm and 13 cm respectively.

Q8. A ladder 13 m long is placed on the ground in such a way that it touches the top of a vertical wall 12 m high. Find the distance of the foot of the ladder from the bottom of the wall.

Section – C

$03 \times 03 = 09$ Marks

Q9. Find the height of cylinder whose radius is 7cm and total surface area is 968 cm^2. Also, determine its volume.

Q10. Convert decimal to hexadecimal:

(i) $(23)_{10}$

(ii) $(65)_{10}$

Q11. Two poles of height 6m and 11 m stand vertically on the plane ground. If the distance between the poles is 12m, find the distance between their tops.

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SCHOOL OF GENERAL EDUCATION

ELEMENTARY MATHEMATICS

2nd In-Sem Answer Key

Section - A

1.) B

2.) D

3.) A

4.) 1325cm C

5.) B

Section - B

6.) i) 4

ii) 15

7.) Volume of cylinder = $\pi r^2 h$

$= \frac{22}{7} \times 7 \times 7 \times 13$

$= 154 \times 13$

$= 2002 \text{ cm}^3$

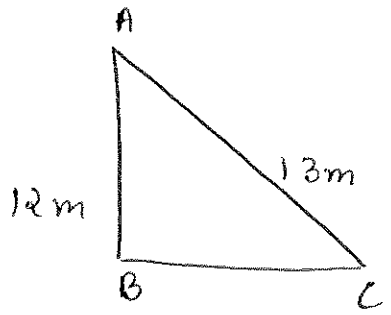
Curved surface area = $2\pi r h$

$= 2 \times \frac{22}{7} \times 7 \times 13$

$= 44 \times 13$

$= 572 \text{ cm}^2$

8.)



$(AC)^2 = (AB)^2 + (BC)^2$

$(13)^2 = (12)^2 + (BC)^2$

$169 - 144 = (BC)^2$

$25\,m = (BC)^2$

$\sqrt{25} = BC$

$5m = BC$

Section-C

9.) $T.S.A = 2\pi r\,[r+h]$

$968 = 2 \times \frac{22}{7} \times 7\,[7+h]$

$\frac{968}{44} = 7+h$

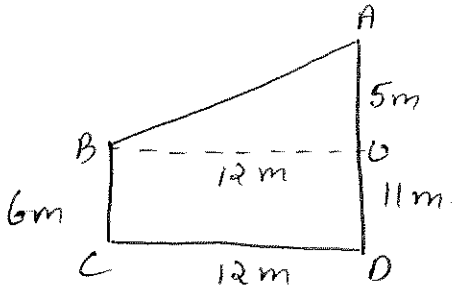
$22 - 7 = h$

$\Rightarrow h = 15\,cm$

10.) i) $(17)_{16}$

ii) $(41)_{16}$

11.)



$(AB)^2 = (AO)^2 + (BO)^2$

$= (5)^2 + (12)^2$

$= 25 + 144$

$= 169\,m$

$AB = \sqrt{169}$

$= 13\,m$