

<b>Date of Examination</b>



<b>No of Questions</b>
<b>No. of Pages</b>

**GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY**  
SELECTION TEST FOR THE ENROLLMENT OF DAY SCHOLARS FOR INTAKE 38  
**BSc in Applied Data Science Communication**  
SUBJECT KNOWLEDGE, GENERAL KNOWLEDGE, AND IQ TEST  
(MODEL PAPER)

Call up No: .....

NIC No: .....

**General Instructions:**

**Duration:**

Answer *all questions* in this paper itself.

**01** mark for each correct answer.

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**Section A - Subject Knowledge**

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**Question 1**

What is 8% of Rs 600?

**A:** Rs 580

**B:** Rs 480

**C:** Rs 48

**D:** Rs 58

**E:** None of these

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**Question 2**

Which is the longest distance?

**A:** 3500cm

**B:** 65.5m

**C:** 75000mm

**D:** 15.5m

**E:** 0.1km

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**Question 3**

If  $2\frac{1}{3} : 4\frac{1}{3}$  then  $7 : \square = \square$

**A:** 12

**B:** 13

**C:**  $8\frac{2}{3}$

**D:**  $6\frac{1}{3}$

**E:** None of these

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### Question 4

Which inequation shows the following statement?

**x is 6 or less and more than - 5**

**A:**  $-5 < x \leq 6$

**B:**  $-5 > x \leq 6$

**C:**  $-5 \leq x \leq 6$

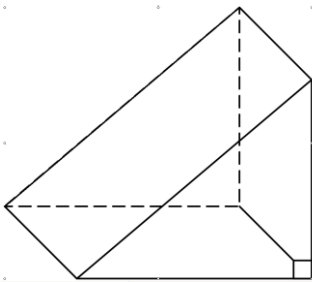
**D:**  $-5 < x < 6$

**E:**  $-5 \leq x < 6$

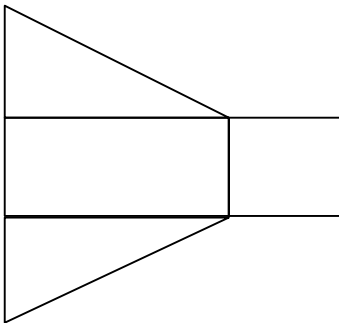
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### Question 5

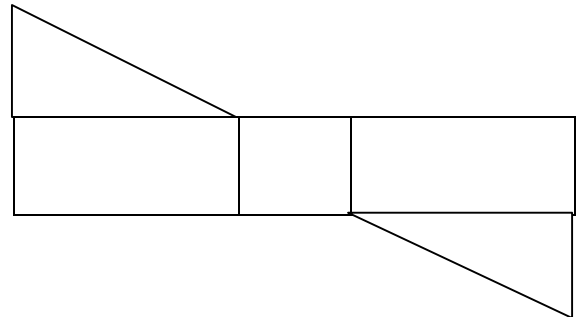
Which option would make this solid?



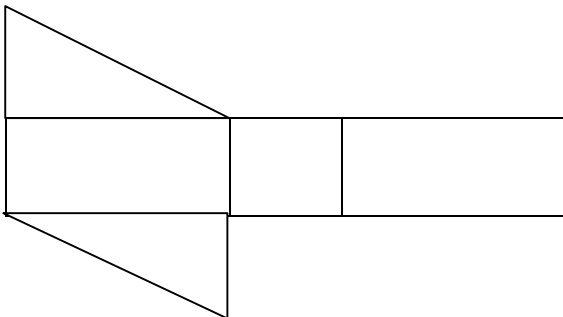
**A:**



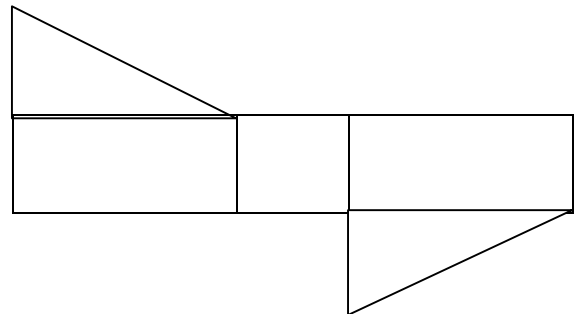
**B:**



**C:**



**D:**



**E:** None of the nets would make the solid

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**Question 6**

Simplify the surd  $3\sqrt{56}$  completely.

**A:**  $12\sqrt{14}$

**B:**  $5\sqrt{14}$

**C:**  $6\sqrt{4}$

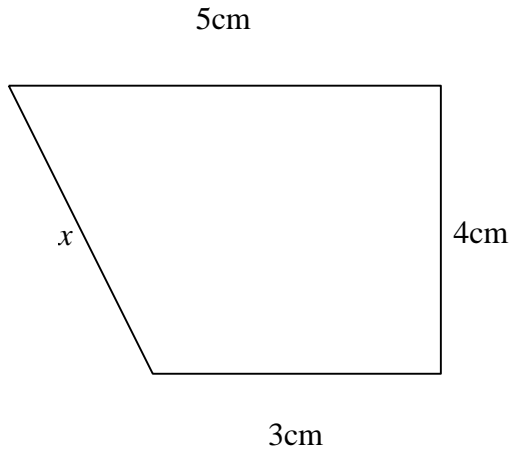
**D:**  $6\sqrt{28}$

**E:** None of these

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**Question 7**

The length of  $x$  equals



**A:** 6cm

**B:**  $\sqrt{6}cm$

**C:**  $5\sqrt{2}cm$

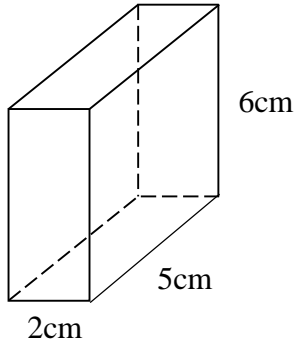
**D:**  $2\sqrt{5}cm$

**E:** None of these

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### Question 8

If Density = Mass  $\div$  Volume, what is the Mass of the solid in the diagram if its Density is  $1.2\text{gm} / \text{cm}^3$ ?



- A: 50gm
- B: 60gm
- C: 72gm**
- D: 38.4gm
- E: None of these

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### Question 9

What is the speed in m/s of a car that travels 30km in 20 minutes?

- A: 1500 m/s
- B: 150 m/s
- C: 90 m/s
- D: 540 m/s
- E: None of these**

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### Question 10

If  $R = \frac{(S + T)P}{3}$  then  $T$  equals

- A:  $\frac{3R - S}{P}$
- B:  $\frac{PR}{3} - S$
- C:  $\frac{3R}{P} + S$
- D:  $\frac{3R + S}{P}$
- E:  $\frac{3R}{P} - S$**

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### Question 11

Solve the inequation for  $x$

$$\frac{5(9 - x)}{3} + 1 < 11$$

- A:  $x < 3$
- B:  $x > 3$**
- C:  $x > -3$
- D:  $x > 1^{4/5}$
- E: None of these

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### Question 12

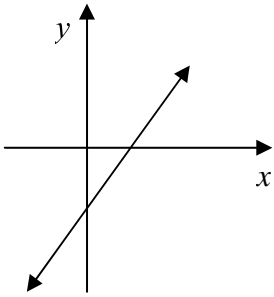
Solve for  $x$

$$\frac{4x - 3}{5} - \frac{2x - 3}{2} = -2$$

- A:  $x = 1 \frac{11}{18}$
- B:  $x = 5 \frac{1}{2}$
- C:  $x = -5 \frac{1}{2}$
- D:  $x = 14 \frac{1}{2}$**
- E:  $x = -14 \frac{1}{2}$

### Question 13

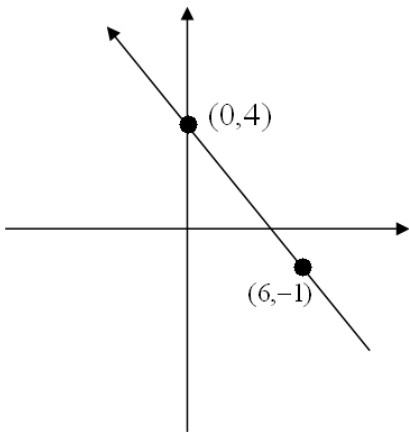
Which equation could only be the equation of the graph?



- A:  $y = 3x + 2$
- B:  $y = -3x - 2$
- C:  $y = 3x - 2$
- D:  $y = -3 + 2$
- E:  $y = -x - 2$

### Question 14

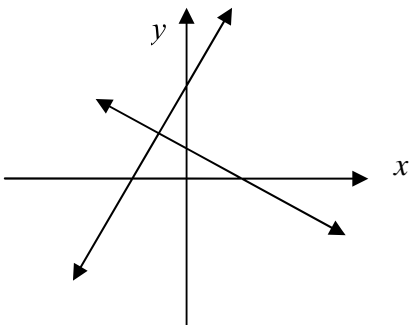
The equation of this graph is:



- A:  $y = -\frac{6x}{5} + 4$
- B:  $y = \frac{5x}{6} + 4$
- C:  $y = 5x + 4$
- D:  $y = -\frac{5x}{6} + 4$
- E:  $y = \frac{-5x}{6} - 4$

### Question 15

The coordinates of the point of intersection for the two graphs could only be:



- A:  $(-1, 2)$
- B:  $(-1, -2)$
- C:  $(1, 2)$
- D:  $(1, -2)$
- E:  $(2, -1)$

### Question 16

Expand the brackets and simplify

$$(2\sqrt{5} - \sqrt{2})^2$$

**A:**  $4\sqrt{5} + 2\sqrt{2}$

**B:**  $12 - 4\sqrt{10}$

**C:**  $8 - 4\sqrt{10}$

**D:**  $2\sqrt{10} - 2$

**E:** None of these

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### Question 17

Rationalise & simplify  $\frac{4\sqrt{5}}{\sqrt{3}}$

**A:**  $\sqrt{2}$

**B:**  $3\sqrt{6}$

**C:**  $\sqrt{6}$

**D:**  $\frac{\sqrt{6}}{3}$

**E:** None of these

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### Question 18

$$-96 \div -6 \div 8 =$$

**A:** 2

**B:**  
12

**C:** -  
12

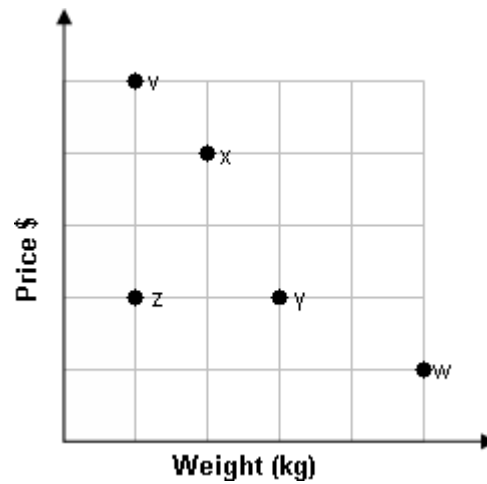
**D:** -  
2

**E:** None of these

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### Use the graph to answer questions 19, 20 & 21

The graph shows the price paid and weight for bags of sugar bought at different shops.



#### Question 19

Which shop gave the worst value for money?

- A:** Shop z      **B:** Shop y      **C:** Shop x      **D:** Shop w      **E:** Shop v
- 

#### Question 20

Which two shops charged the same price per kilogram?

- A:** Shops z & x      **B:** Shops z & v      **C:** Shops y & z      **D:** Shops v & w      **E:** Shops x & y
- 

#### Question 21

At which shop would you get three times the amount of sugar for the same price as shop z?

- A:** Shop v      **B:** Shop x      **C:** Shop w      **D:** Shop y      **E:** None of these
-

**Question 22**

$$5 \times -2 - (8 - 12) + 16 \div -8 =$$

- A:** 6      **B:** -8      **C:** -16      **D:** -6      **E:** None of these
- 

**Question 23**

Sam bought a car valued at \$7700. One year later the car's value had decreased by  $\frac{2}{7}$ . What is the new value of the car?

- A:** \$2200    **B:** \$5500    **C:** \$9900    **D:** \$4400    **E:** None of these
- 

**Question 24**

Concrete is made by mixing screenings cement and sand in the ratio 3:1:15. How much sand would be needed to make 125 tonnes of concrete?

- A:** 27 tonnes      **B:** 33.75 tonnes      **C:** 45 tonnes      **D:** 75 tonnes    **E:** None of these
- 

**Question 25**

Factorise  $ab + b^2 - ac - bc$

- A:**  $(b-c)(a-c)$     **B:**  $(b+a)(b+c)$     **C:**  $(b-c)(a+b)$     **D:**  $(b+c)(a-b)$   
**E:**  $(b-c)(a+c)$
-



## Section B - General Knowledge

1. National sport of Sri Lanka is .....
  - A. Cricket
  - B. Kabaddi
  - C. Volleyball
  - D. Rugby
2. The first female minister of Sri Lanka is .....
  - A. Sirimavo Bandaranaike
  - B. Vimala Wijewardena
  - C. Adelene Molamura
  - D. Chandrika Kumaratunga
3. Who composed music of the national anthem of the Maldives?
  - A. W. D. Amaradewa
  - B. Rabindranath Tagore
  - C. Muhammad Jameel Didi
  - D. Ibrahim Ali Didi
4. How many colours are there in the national flag of Sri Lanka?
  - A. Four
  - B. Five
  - C. Six
  - D. Seven
5. The biggest island in the world is .....
  - A. Australia
  - B. The UK
  - C. Indonesia
  - D. Greenland
6. The largest oil producer in the world is .....
  - A. Saudi Arabia
  - B. USA
  - C. Iran
  - D. Russia

7. Ringgit is the currency of .....
- A. Uzbekistan
  - B. Russia
  - C. Malaysia
  - D. Finland
8. **.com** is a .....
- A. Combination domain
  - B. Commercial domain
  - C. Communication domain
  - D. Computation domain
9. Which river is the second longest river in Sri Lanka?
- A. Malwatu
  - B. Kelani
  - C. Mahaweli
  - D. Kalu
10. What is the smallest country in the world?
- A. Malawi
  - B. Singapore
  - C. Vatican City
  - D. Maldives
11. What is the capital of Brazil?
- A. Rio de Janeiro
  - B. Johannesburg
  - C. Sao Paulo
  - D. Brasilia
12. What is the smallest district in Sri Lanka?
- A. Colombo
  - B. Gampaha
  - C. Nuwaraeliya
  - D. Vavunia
13. Who won the 2019 cricket world cup?
- A. India
  - B. England
  - C. New Zealand
  - D. Australia

14. What is the world's smallest bird?

- A. Verdin
- B. Goldcrest
- C. Weebill
- D. Bee Hummingbird

15. What is the national bird of Sri Lanka?

- A. Junglefowl
- B. Sri Lanka Blue Magpie
- C. Serendib scops owl
- D. Sri Lanka hill myna

## Section C - IQ & Mathematical Skills

1. Choose the word which is different from the rest.

A. Spectacles

C. Goggles

B. Microphone

D. Telescope

2. Find the odd one out.



**a**



**b**



**c**



**d**

A. a

B. b

C. c

D. d

3. FISCAL, SCRIBE, SELECT, INSIDE, MAYHEM, PURIFY, FLANGE

Logically, what word comes next?

A. GUILTY

C. RHYTHM

B. OXYGEN

D. THIRST

4. What is the average (arithmetic mean) of all the multiples of ten from 10 to 190 inclusive?

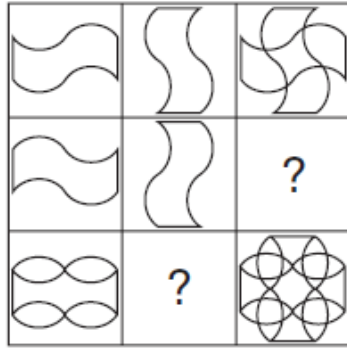
A. 95

B. 100

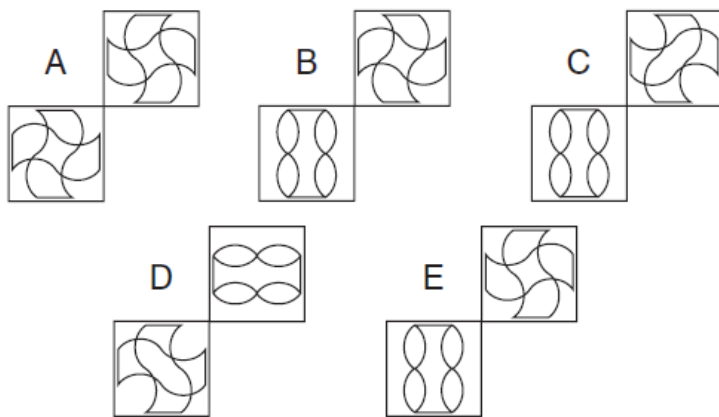
C. 105

D. 110

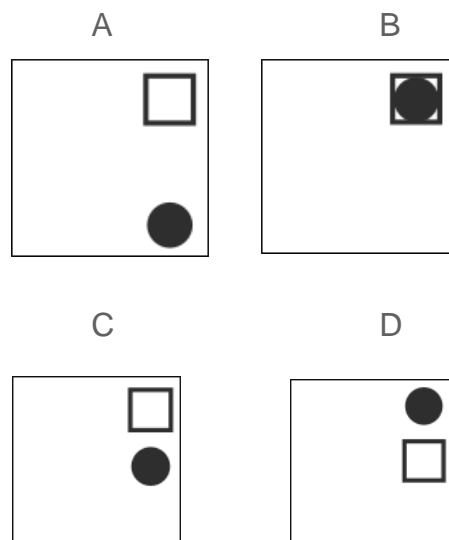
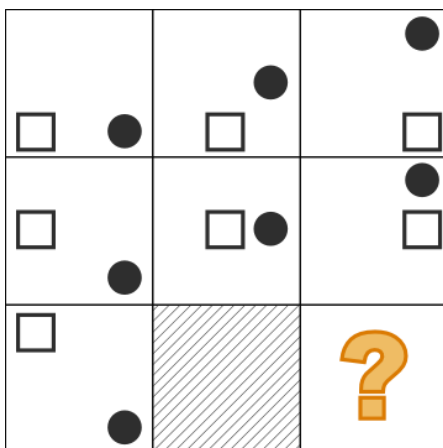
5.



Which two squares are missing?



6. Which figure logically belongs on the spot of the question mark?



7. At a conference, 12 members shook hands with each other before & after the meeting.

How many total number of hand shakes occurred?

- A. 100
- B. 132
- C. 145
- D. 144
- E. 121

8. A fisherman has 5 fishes (namely U, V, X, Y, Z) each having a different weight.

U weighs twice as much as V.

V weighs four and a half times as much as X.

X weighs half as much as Y.

Y weighs half as much as Z.

Z weighs less than U but more than X.

Which of the following is the lightest?

- A. U
- B. V
- C. X
- D. Y

9. 6121135 is to flame as 21215120 is to ?

- A. voice
- B. bald
- C. bloat
- D. castle

10. Mary, who is 16 years old, is four times as old as her brother. How old will Mary be when she is twice as old as her brothers?

- A. 20
- B. 24
- C. 28
- D. 32

**\*\*\*End of the Paper\*\*\***