

## Combined Graduate level Examination 2023 Tier I

Roll Number	
Candidate Name	
Venue Name	
Exam Date	14/07/2023
Exam Time	2:30 PM - 3:30 PM
Subject	Combined Graduate Level Examination Tier I 2023

### Section : General Intelligence and Reasoning

**Q.1** Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /Subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(3, 9, 30)

(10, 3, 33)

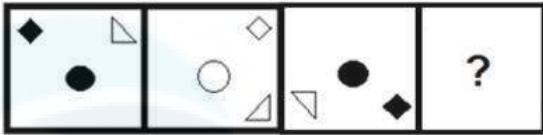
- Ans
- 1. (6, 9, 40)
  - 2. (8, 8, 74)
  - 3. (12, 3, 39)
  - 4. (9, 7, 98)

Question ID : 26433089582

Status : Answered

Chosen Option : 3

Q.2 Select the figure that will replace the question mark (?) in the following figure series.



Ans

- 1.
- 2.
- 3.
- 4.

Question ID : 26433057018  
Status : Answered  
Chosen Option : 4

Q.3 Which of the following terms will replace the question mark (?) in the given series?  
PGLT, RHNU, TIPV, VJRW, ?

- Ans
- 1. WKUX
  - 2. XLTX
  - 3. WXKT
  - 4. XKTX

Question ID : 26433083094  
Status : Answered  
Chosen Option : 4

**Q.4** Select the option that represents the letters that, when sequentially placed from left to right in the blanks below, will complete the letter series.

R \_ \_ ODRMN \_ \_ \_ MN \_ DR \_ NO \_

Ans  1. MNODROMD

2. MNODRODM

3. NMODROMD

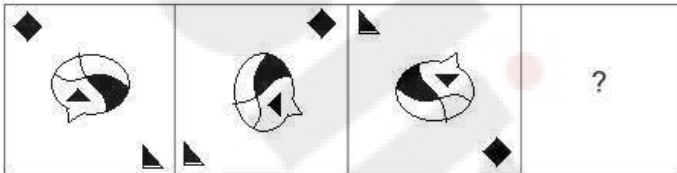
4. MNDOROMD

Question ID : 26433090002

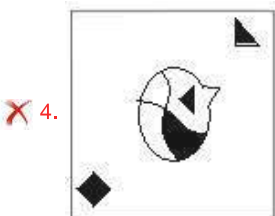
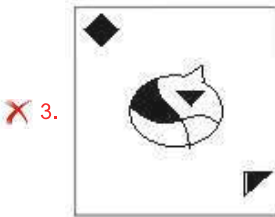
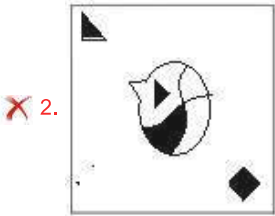
Status : Answered

Chosen Option : 1

**Q.5** Select the figure that will replace the question mark (?) in the following figure series.



Ans



Question ID : 26433070431

Status : Answered

Chosen Option : 1

**Q.6** Select the set in which the numbers are related in the same way as are the numbers of the following set.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding /Subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(12 , 8 , 80)  
(16 , 10 , 131)

- Ans
- 1. (11, 5, 55)
  - 2. (13, 4, 160)
  - 3. (14, 12, 126)
  - 4. (9, 6, 54)

Question ID : 26433092724

Status : **Not Attempted and Marked For Review**

Chosen Option : --

**Q.7** Select the option that represents the correct order of the given words as they would appear in an English dictionary.

1. Pancakes
2. Pandemic
3. Panicked
4. Pancreas
5. Panorama
6. Panther

- Ans
- 1. 1, 4, 2, 3, 5, 6
  - 2. 4, 1, 2, 3, 5, 6
  - 3. 1, 4, 2, 3, 6, 5
  - 4. 2, 1, 4, 3, 6, 5

Question ID : 264330132173

Status : **Answered**

Chosen Option : 1

**Q.8** Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)

Anklet : Ankle :: Bracelet : ?

- Ans
- 1. Ear
  - 2. Wrist
  - 3. Waist
  - 4. Neck

Question ID : 26433067810

Status : **Answered**

Chosen Option : 2

**Q.9** Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

864 : 12 :: 1372 : 14 :: 2048 : ?

Ans  1. 16

2. 12

3. 18

4. 14

Question ID : 26433085814

Status : Answered

Chosen Option : 1

**Q.10** Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

MOC: MKW :: SEL: GUN :: DKR: ?

Ans  1. VOH

2. VOG

3. VNH

4. VNG

Question ID : 264330104102

Status : Answered

Chosen Option : 1

**Q.11** Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.

C94BdW2N



Ans  1. N2WbB40C

2. N5WbB49C

3. N5WbB40C

4. N5WbB40C

Question ID : 264330103139

Status : Answered

Chosen Option : 3

**Q.12** Three of the following four letter-clusters are alike in a certain way and one is different. Select the one that is different.

Ans  1. DFJL

2. KMOQ

3. ACGI

4. HJNP

Question ID : 264330120688

Status : Answered

Chosen Option : 2

Q.13 In a certain code language, 'PLANT' is written as 'NRDVP' and 'SCORE' is written as 'EURGT'. How will 'GRIND' be written in that language?

Ans  1. TILFP

2. SHLGQ

3. UJKEO

4. ITLPP

Question ID : 264330131613

Status : Answered

Chosen Option : 1

Q.14 Study the given pattern carefully and select the number that can replace the question mark (?) in it.

First row- 8, 28, 53

Second row- 7, 25, 47

Third row- 13, 43, ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed)

Ans  1. 93

2. 85

3. 95

4. 83

Question ID : 264330143710

Status : Answered

Chosen Option : 4

Q.15 The second number in the given number-pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) is/are followed in all the number-pairs, except one. Find that odd number-pair.

(NOTE: The relation should be found without breaking down the numbers into its constituent digits)

Ans  1. 6286 : 1965

2. 6571 : 2448

3. 8247 : 3926

4. 6903 : 2582

Question ID : 264330143672

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.16 In a certain code language, 'ZEAL' is coded as '9476' and 'LAME' is coded as '8694'. What is the code for 'M' in the given code language?

Ans  1. 4

2. 8

3. 6

4. 9

Question ID : 264330126016

Status : Answered

Chosen Option : 2

Q.17 Select the option that represents the letters that, when placed from left to right in the following blanks, will complete the letter-series.

L T K \_ H L \_ \_ J H \_ V \_ J H L \_ K \_ H

Ans  1. J U K L K W J

2. I U K L K W J

3. I U K M K W J

4. J U K L K X J

Question ID : 264330143745

Status : Answered

Chosen Option : 1

Q.18 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed)

(82, 35, 78)

(18, 27, 30)

Ans  1. (21, 27, 24)

2. (15, 36, 38)

3. (27, 33, 40)

4. (20, 25, 32)

Question ID : 26433089795

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.19 If,

'C @ S' means 'C is the father of S',

'C \* S' means 'C is the brother of S',

'C # S' means 'C is the sister of S',

'C \$ S' means 'C is the daughter of S',

'C = S' means 'C is the mother of S',

then how is Z related to Q in the following expression?

Q \$ R @ S \* T \$ Z

Ans  1. Brother's wife

2. Mother

3. Sister

4. Daughter

Question ID : 264330142940

Status : Answered

Chosen Option : 2

Q.20 If '+' means 'subtraction', '-' means 'multiplication', '+' means 'addition' and 'x' means 'division', then what is the value of the following expression?

$$11 - 14 + 9 \times 3 \div 104$$

Ans  1. 269

2. 255

3. 245

4. 271

Question ID : 264330133145

Status : Answered

Chosen Option : 2

Q.21 Select the correct combination of mathematical signs to sequentially replace the \* signs and balance the given equation.

$$86 * 54 * 34 * 68 * 2 * 33$$

Ans  1. -, +, ÷, ×, =

2. ÷, -, +, ×, =

3. ×, ÷, ×, -, =

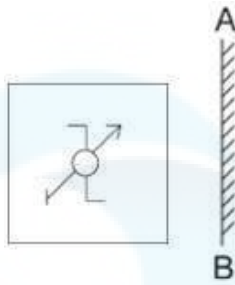
4. +, ÷, ×, -, =

Question ID : 26433068675

Status : Answered

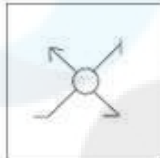
Chosen Option : 3

Q.22 Select the correct mirror image of the given figure when the mirror is placed at AB.

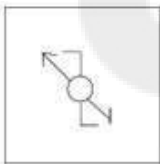


Ans

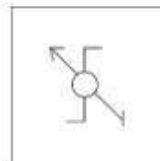
X 1.



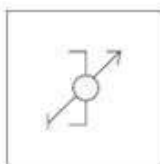
X 2.



✓ 3.



X 4.



Question ID : 264330106449

Status : Answered

Chosen Option : 3

Q.23 In this question, three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follows/follow from the statements.

Statements:

All balls are flowers.  
All flowers are plates.  
Some plates are cups.

Conclusions:

I. Some flowers are balls.  
II. Some plates are flowers.  
III. All cups are plates.

Ans ✓ 1. Only conclusions I and II follow.

X 2. Only conclusion III follows.

X 3. Only conclusion II follows.

X 4. Only conclusion I follows.

Question ID : 264330114231

Status : Answered

Chosen Option : 1

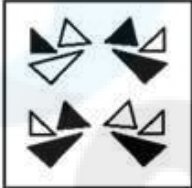
Q.24 Which of the answer figures is the exact mirror image of the given problem figure when the mirror is held at the right side?

Problem figure:

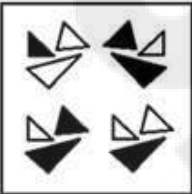


Ans

✓ 1.



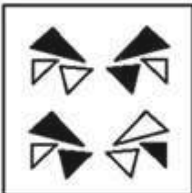
✗ 2.



✗ 3.

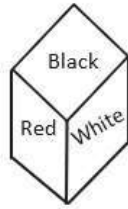
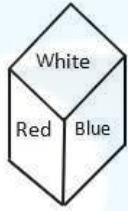


✗ 4.



Question ID : 26433067406  
Status : Answered  
Chosen Option : 1

**Q.25** Two different positions of the same dice have different colours - White, Red, Blue, Yellow, Green and Black - written on it. Identify the colour on the face opposite the face showing 'Blue'.



- Ans
- 1. White
  - 2. Black
  - 3. Green
  - 4. Yellow

Question ID : 26433097479  
Status : Answered  
Chosen Option : 1

Section : General Awareness

**Q.1** Ambubachi Mela (Fair) is held in which of the temples of North-East India?

- Ans
- 1. Dakshineswar Kali
  - 2. Bhuvaneswari
  - 3. Billeswar
  - 4. Kamakhya

Question ID : 264330110464  
Status : Answered  
Chosen Option : 4

**Q.2** Which of the following groups of states recorded very high population growth rate during 2001-2011 Census of India?

- Ans
- 1. Bihar, Rajasthan, Sikkim
  - 2. West Bengal, Meghalaya, Bihar
  - 3. Bihar, Haryana, Meghalaya
  - 4. Meghalaya, Arunachal Pradesh, Bihar

Question ID : 264330132746  
Status : Answered  
Chosen Option : 3

**Q.3** A wealthy person in the early Vedic period was known as \_\_\_\_\_.

- Ans
- 1. Duhitri
  - 2. Gaveshna
  - 3. Gomat
  - 4. Ravi

Question ID : 264330114804  
Status : Not Answered  
Chosen Option : --

**Q.4** India has been ranked \_\_\_\_\_ in the Medical Tourism Index (MTI) for 2020-21 out of 46 destinations by the Medical Tourism Association.

- Ans  1. 10<sup>th</sup>  
 2. 15<sup>th</sup>  
 3. 20<sup>th</sup>  
 4. 5<sup>th</sup>

Question ID : 26433081869  
Status : Not Answered  
Chosen Option : --

**Q.5** The Japfu range, which is 3,014 meters high, is located in which state?

- Ans  1. Assam  
 2. Arunachal Pradesh  
 3. Meghalaya  
 4. Nagaland

Question ID : 264330111332  
Status : Answered  
Chosen Option : 2

**Q.6** Who among the following performing artists bagged the best actress award for Meena Gurjari in 1975?

- Ans  1. Sonal Masingh  
 2. Sitara Devi  
 3. Shovana Narayana  
 4. Mallika Sarabhai

Question ID : 26433064259  
Status : Not Answered  
Chosen Option : --

**Q.7** Urmila Satyanarayanan is an exponent of which Indian classical dance form?

- Ans  1. Bharatanatyam  
 2. Kathak  
 3. Manipuri  
 4. Sattriya

Question ID : 264330109597  
Status : Not Answered  
Chosen Option : --

**Q.8** When was the Secretary of State for India made responsible for the Government of British India by bringing about changes in the Home Government?

Ans  1. 1858

2. 1833

3. 1857

4. 1813

Question ID : 264330132664  
Status : Answered  
Chosen Option : 1

**Q.9** Which waterway provides connectivity with mainland India through the India-Bangladesh Protocol route?

Ans  1. NW-10

2. NW-15

3. NW-2

4. NW-83

Question ID : 264330111322  
Status : Not Answered  
Chosen Option : --

**Q.10** In 2021, the Indian men's cricket team defeated Australia at the Gabba stadium in a Test match becoming the only cricket team to defeat Australia in Brisbane since \_\_\_\_\_.

Ans  1. 1996

2. 1992

3. 1990

4. 1988

Question ID : 26433086891  
Status : Not Answered  
Chosen Option : --

**Q.11** The Fundamental Duties were added to the Constitution of India by the \_\_\_\_\_ Amendment.

Ans  1. 73<sup>rd</sup>

2. 42<sup>nd</sup>

3. 34<sup>th</sup>

4. 44<sup>th</sup>

Question ID : 264330110769  
Status : Answered  
Chosen Option : 2

Q.12 \_\_\_\_\_ announced the bifurcation of the British Indian Empire into a secular India and Islamic Pakistan.

- Ans
- 1. Lord Ripon
  - 2. Lord Dalhousie
  - 3. Lord Louis Mountbatten
  - 4. Lord Curzon

Question ID : 264330110214  
Status : Answered  
Chosen Option : 3

Q.13 Which of the following cells are found in the liver of mammals?

- Ans
- 1. Purkinje cells
  - 2. Microglial cells
  - 3. Kupffer cells
  - 4. Sensory cells

Question ID : 26433059115  
Status : Not Answered  
Chosen Option : --

Q.14 Who is the first law officer of India?

- Ans
- 1. Advocate General of State
  - 2. Chief Justice of India
  - 3. Attorney General of India
  - 4. Minister of law

Question ID : 264330112789  
Status : Answered  
Chosen Option : 3

Q.15 The Shailendra kings who founded their empire in South-east Asia in the 8th Century AD were the followers of \_\_\_\_\_.

- Ans
- 1. Buddhism
  - 2. Shaivism
  - 3. Jainism
  - 4. Hinduism

Question ID : 264330114823  
Status : Not Answered  
Chosen Option : --

Q.16 Which Vitamin D analogue is used to treat hypoparathyroidism, refractory rickets and familial hypophosphatemia?

- Ans
- 1. Tacalcitol
  - 2. Tocopherol
  - 3. Ergocalciferol
  - 4. Retinol

Question ID : 264330110076  
Status : Answered  
Chosen Option : 3

Q.17 Which of the following is NOT a type of rock?

- Ans
- 1. Igneous rock
  - 2. Trace rock
  - 3. Metamorphic rock
  - 4. Sedimentary rock

Question ID : 264330109949  
Status : Answered  
Chosen Option : 2

Q.18 Whom among the following players is associated with Javelin throw?

- Ans
- 1. Neeraj Chopra
  - 2. Pankaj Advani
  - 3. Saurabh Chaudhary
  - 4. Manika Batra

Question ID : 264330109674  
Status : Answered  
Chosen Option : 1

Q.19 From which Latin word is the s block element calcium derived?

- Ans
- 1. Calx
  - 2. Calum
  - 3. Coleus
  - 4. Calcio

Question ID : 264330141691  
Status : Answered  
Chosen Option : 2

**Q.20** Arrange the following Development Financial Institutions (DFI) in the correct chronological order, according to the year they were set up.

- (i) Industrial Credit and Investment Corporation of India (ICICI)
- (ii) Industrial Development Bank of India (IDBI)
- (iii) Industrial Finance Corporation of India (IFCI)

- Ans
- 1. (i)-(iii)-(ii)
  - 2. (iii)-(i)-(ii)
  - 3. (ii)-(i)-(iii)
  - 4. (i)-(ii)-(iii)

Question ID : 264330112898  
Status : Not Answered  
Chosen Option : --

**Q.21** Who among the following was the chief guest at India's 74<sup>th</sup> Republic Day celebrations?

- Ans
- 1. François Hollande
  - 2. Cyril Ramaphosa
  - 3. Abdel Fattah El-Sisi
  - 4. Jair Bolsonaro

Question ID : 264330133009  
Status : Answered  
Chosen Option : 3

**Q.22** Which of the following sitar players was awarded the Bharat Ratna in the year 1999?

- Ans
- 1. Pandit Bhimsen Joshi
  - 2. Pandit Ravishankar
  - 3. Hariprasad Chourasia
  - 4. Bhupen Hazarika

Question ID : 26433074118  
Status : Not Answered  
Chosen Option : --

**Q.23** MUDRA is a financial institution set up by the Government of India for the development and refinancing of micro unit enterprises. The full form of MUDRA is:

- Ans
- 1. Micro Urban Development & Refinance Agency
  - 2. Micro Units Development & Refinance Agency
  - 3. Micro Finance Usage Development & Refinance Agent
  - 4. Medium Units Development & Refinance Agency

Question ID : 264330109081  
Status : Answered  
Chosen Option : 1

Q.24 The first Paralympic games were held in which year?

Ans  1. 1962

2. 1960

3. 1964

4. 1961

Question ID : 264330109681  
Status : Not Answered  
Chosen Option : --

Q.25 The suitability of post tensioning is good for:

Ans  1. long spans

2. end spans

3. break spans

4. edge spans

Question ID : 26433064410  
Status : Not Answered  
Chosen Option : --

Section : Quantitative Aptitude

Q.1 Virat can complete a work in 30 days and Daniel is 60% more efficient than Virat to complete the same work. Find the total time taken by Daniel to complete the work.

Ans  1.  $16\frac{3}{5}$  days

2.  $18\frac{3}{4}$  days

3.  $19\frac{5}{3}$  days

4.  $17\frac{5}{3}$  days

Question ID : 26433066323  
Status : Answered  
Chosen Option : 2

Q.2 The average of 36 numbers was found to be 45. Later, it was detected that 84 was misread as 48. Find the correct average of the given numbers.

Ans  1. 58

2. 48

3. 46

4. 56

Question ID : 264330130067  
Status : Answered  
Chosen Option : 3

Q.3 If  $\sin 23^\circ = \frac{a}{b}$ , then the value of  $\sec 23^\circ - \sin 67^\circ$  is \_\_\_\_\_.

Ans

1.  $\frac{a^2}{\sqrt{b^2 - a^2}}$

2.  $\frac{b^2 - a^2}{ab}$

3.  $\frac{a^2}{b\sqrt{b^2 + a^2}}$

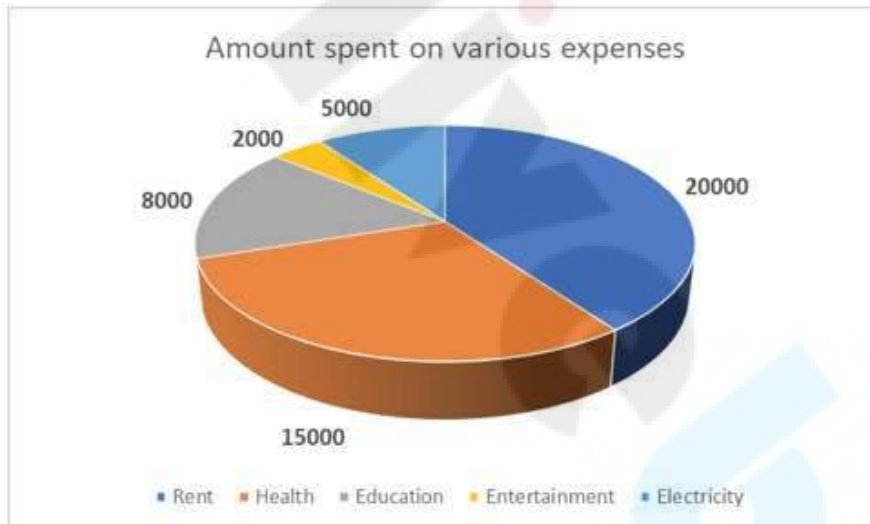
4.  $\frac{a^2}{b\sqrt{b^2 - a^2}}$

Question ID : 26433083080

Status : Answered

Chosen Option : 3

Q.4 What is the central angle corresponding to the sector indicating the expenses incurred on Health?



Ans  1.  $72^\circ$

2.  $54^\circ$

3.  $110^\circ$

4.  $108^\circ$

Question ID : 264330130033

Status : Answered

Chosen Option : 4

**Q.5** In an election between three candidates, Arjun, Bhaskar and Saral contested for a post. Arjun got 50% votes more than Saral, and Saral got 2% votes less than Bhaskar. The difference between the votes of Bhaskar and Saral is 1296. What is the half of the difference between the votes of Arjun and Bhaskar?

- Ans
- 1. 3888
  - 2. 13988
  - 3. 7766
  - 4. 15228

Question ID : 264330130298  
Status : Answered  
Chosen Option : 4

**Q.6** Solve the following expression.  
[7 + 30 ÷ 6 - (6 + 6) + 7]

- Ans
- 1. 6
  - 2. 7
  - 3. 5
  - 4. 4

Question ID : 26433066350  
Status : Answered  
Chosen Option : 2

**Q.7** In an office, a typing work can be finished by Monika in 6 hours, Anita in 8 hours and Manju in 5 hours if they work alone. How much time (in hours) will they take if they work together?

- Ans
- 1.  $3\frac{3}{59}$
  - 2.  $2\frac{2}{59}$
  - 3.  $2\frac{2}{5}$
  - 4.  $2\frac{2}{57}$

Question ID : 264330130021  
Status : Answered  
Chosen Option : 2

**Q.8** Which of the following statements is INCORRECT?

- Ans
- 1. If a chord is extended outside the circle on both ends then it is called secant.
  - 2. Tangent is perpendicular to the radius of the circle at the point of contact.
  - 3. A line which intersects two distinct points of a circle is called tangent.
  - 4. Tangent is a line touching only one point of the circle.

Question ID : 26433082522  
Status : Answered  
Chosen Option : 3

Q.9 A's efficiency is twice that of B's. A can work only for 8 hours a day while B can work for 12 hours a day. If A can finish a work in 12 days, in how many days can B finish the same work?

- Ans
- 1. 8
  - 2. 10
  - 3. 16
  - 4. 12

Question ID : 264330112117  
Status : Answered  
Chosen Option : 3

Q.10 Two friends P and Q simultaneously start running from same point around a circular track. They run in the same direction. P runs at 6 m/sec and Q runs at b m/sec. If they cross each other at exactly two points on the circular track and b is a natural number less than 6, then how many values can b take?

- Ans
- 1. 2
  - 2. 1
  - 3. 4
  - 4. 3

Question ID : 26433081604  
Status : Not Answered  
Chosen Option : --

Q.11 A dealer professing to sell his goods at cost price uses 950 grams weight for 1 kg. His gain percentage is: (rounded off to two decimal places)

- Ans
- 1. 5.35%
  - 2. 5.26%
  - 3. 5.86%
  - 4. 5.96%

Question ID : 26433082378  
Status : Answered  
Chosen Option : 2

Q.12 A trader allows a 20% trade discount and a 30% cash discount. If the list price is ₹1,200, then the selling price (in ₹) is:

- Ans
- 1. 627
  - 2. 720
  - 3. 762
  - 4. 672

Question ID : 264330104251  
Status : Answered  
Chosen Option : 4

Q.13

If  $x + \frac{1}{x} = 7$ , then the value of  $x^6 + \frac{1}{x^6}$  is:

- Ans
- 1. 113682
  - 2. 103682
  - 3. 103882
  - 4. 103862

Question ID : 26433074499  
Status : Answered  
Chosen Option : 2

Q.14 The current ages of Sudhir and Ashish are in the ratio 5 : 7. Twelve years ago, the ratio of their ages was 1 : 2. What will be the age of Sudhir after five years from now?

- Ans
- 1. 20 years
  - 2. 25 years
  - 3. 33 years
  - 4. 28 years

Question ID : 264330131495  
Status : Answered  
Chosen Option : 2

Q.15 A man invests a total sum of ₹10,000 in a company. A part of the sum was invested at 10% simple interest per annum and the remaining part at 15% simple interest per annum. If the total interest accrued to him in two years equals ₹2,400, the sum invested at 15% simple interest per annum is:

- Ans
- 1. ₹8,000
  - 2. ₹4,000
  - 3. ₹6,000
  - 4. ₹5,000

Question ID : 264330112802  
Status : Answered  
Chosen Option : 2

Q.16 AB is the diameter of a circle with centre O. P be a point on it. If  $\angle AOP = 95^\circ$ , then  $\angle OBP =$  \_\_\_\_\_.

- Ans
- 1.  $57.5^\circ$
  - 2.  $45.5^\circ$
  - 3.  $47.5^\circ$
  - 4.  $55.5^\circ$

Question ID : 264330143558  
Status : Answered  
Chosen Option : 3

Q.17 If  $\frac{\cos \beta}{\sec \alpha} = 15$  and  $\frac{\sin \beta}{\sec \alpha} = 16$ , then the value of  $\sin^2 \beta$  is \_\_\_\_\_.

- Ans
- ✓ 1.  $\frac{256}{481}$
  - ✗ 2.  $-\frac{256}{481}$
  - ✗ 3.  $\frac{481}{256}$
  - ✗ 4.  $-\frac{481}{256}$

Question ID : 264330143550  
Status : Answered  
Chosen Option : 1

Q.18 What is the value of  $\sin 30^\circ + \cos 30^\circ + \tan 30^\circ$

- Ans
- ✓ 1.  $\frac{5 + \sqrt{3}}{2\sqrt{3}}$
  - ✗ 2.  $\frac{5 - \sqrt{3}}{2\sqrt{3}}$
  - ✗ 3.  $\frac{5 + \sqrt{3}}{\sqrt{3}}$
  - ✗ 4.  $\frac{5 - \sqrt{3}}{\sqrt{3}}$

Question ID : 264330123997  
Status : Answered  
Chosen Option : 1

Q.19 If  $\sec^2 \theta + \tan^2 \theta = \frac{25}{18}$ , then the value of  $\sec^4 \theta - \tan^4 \theta$  is:

- Ans
- 1.  $\frac{18}{25}$
  - 2.  $\frac{25}{12}$
  - 3.  $\frac{25}{9}$
  - 4.  $\frac{25}{18}$

Question ID : 264330143573  
Status : Answered  
Chosen Option : 4

Q.20 The volume of a cone is  $73920 \text{ cm}^3$ . If the height of the cone is 160cm, then find the diameter of its base.

- Ans
- 1. 21cm
  - 2. 40cm
  - 3. 22cm
  - 4. 42cm

Question ID : 264330103435  
Status : Answered  
Chosen Option : 4

Q.21 A and B have some toffees. If A gives one toffee to B, then they have equal number of toffees. If B gives one toffee to A, then the toffees with A are double with B. The total number of toffees with A and B are \_\_\_\_\_.

- Ans
- 1. 12
  - 2. 10
  - 3. 14
  - 4. 15

Question ID : 264330145542  
Status : Answered  
Chosen Option : 1

**Q.22** Study the given table carefully and answer the following question.

The table shows the percentage of students of four departments – Mechanical, Civil, Computer Science and Applied – with each student being in only one department. The table also shows the number of students of these four departments in five different colleges, with the total number of students being 2080.

College	Number of Students	Mechanical	Civil	Computer Science	Applied
IIT Delhi	430	–	20%	–	10 %
IIT Kanpur	350	20%	–	25%	–
IIT Bombay	–	20%	18%	–	32%
IIT Madras	–	–	25%	18%	35%
IIT Guwahati	400	20%	22%	–	20%

If the number of students in IIT Bombay is 20% less than the number of students in IIT Madras, then the number of students in IIT Bombay is:

- Ans
- 1. 300
  - 2. 500
  - 3. 200
  - 4. 400

Question ID : 264330122421  
Status : Answered  
Chosen Option : 4

**Q.23** Simplify the following expression.

$$\left[ \frac{85}{34} \times \frac{1}{18} - \left\{ \left( \frac{46}{69} \div \frac{27}{135} \right) - \left( \frac{86}{129} \times \frac{91}{14} \right) \right\} \text{ of } \frac{112}{36} \right]$$

- Ans
- 1.  $3\frac{1}{5}$
  - 2.  $3\frac{3}{4}$
  - 3.  $3\frac{1}{2}$
  - 4.  $3\frac{1}{4}$

Question ID : 264330143474  
Status : Not Attempted and Marked For Review  
Chosen Option : --

**Q.24** An inlet pipe can fill an empty tank in 140 hours while an outlet pipe drains a completely-filled tank in 63 hours. If 8 inlet pipes and  $y$  outlet pipes are opened simultaneously, when the tank is empty, then the tank gets completely filled in 105 hours. Find the value of  $y$ .

- Ans
- 1. 1
  - 2. 4
  - 3. 2
  - 4. 3

Question ID : 264330131194  
Status : Answered  
Chosen Option : 4

**Q.25** Jehangir had to cover a distance of 90 km in an hour. During the first 25 minutes he travelled at a speed of 15.2 metres per second. How many metres did Jehangir cover per second during the remaining period to reach his destination just on time?

- Ans
- 1. 30.8
  - 2. 32.5
  - 3. 32
  - 4. 31.2

Question ID : 264330131188  
Status : Not Answered  
Chosen Option : --

Section : English Comprehension

**Q.1** Select the option that expresses the given sentence in passive voice.

The little boy called up his best friend on his birthday.

- Ans
- 1. His best friend has been called up by the little boy on his birthday.
  - 2. His best friend was called up by the little boy on his birthday.
  - 3. His best friend is called up by the little boy on his birthday.
  - 4. His best friend was being called up by the little boy on his birthday.

Question ID : 264330141542  
Status : Answered  
Chosen Option : 2

**Q.2** Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- A. Through a subtle analysis, Woolf raises certain concerns regarding discrimination against women in a male-dominated society.
- B. It's also against the need for freedom of expression in women, and the right to human dignity and equality.
- C. In 'Shakespeare's Sister', Virginia Woolf explores the plight of women in society in England during the 15th and 16th centuries.
- D. It is against the denial of education to the girl-child and violence against women.

- Ans
- 1. BACD
  - 2. DCBA
  - 3. ADBC
  - 4. CADB

Question ID : 26433096932  
Status : Answered  
Chosen Option : 4

**Q.3** Select the option that can be used as a one-word substitute for the given group of words.

A person who hates and avoids other people

- Ans
- 1. Masochist
  - 2. Pervert
  - 3. Hermit
  - 4. Misanthrope

Question ID : 26433088200  
Status : Answered  
Chosen Option : 4

**Q.4** Select the option that expresses the given sentence in passive voice.  
Who stole my tickets?

- Ans
- 1. My tickets was stolen by whom?
  - 2. My tickets got stolen by who?
  - 3. By whom were my tickets stolen?
  - 4. My tickets were stolen by who?

Question ID : 264330137196  
Status : Answered  
Chosen Option : 3

**Q.5** Select the most appropriate ANTONYM of the word given in brackets to fill in the blank.

The gradual \_\_\_\_\_ (curtail) in the expenditures made them tensed.

- Ans
- 1. indent
  - 2. innate
  - 3. increase
  - 4. insinuate

Question ID : 264330141149  
Status : Answered  
Chosen Option : 1

**Q.6** Select the most appropriate synonym of the given word.  
Insidious

- Ans  1. Protected  
 2. Secure  
 3. Safe  
 4. Harmful

Question ID : 26433096220  
Status : Answered  
Chosen Option : 4

**Q.7** Select the most appropriate ANTONYM of the underlined word in the given sentence.

The thief was caught with a spurious Picasso painting.

- Ans  1. Fake  
 2. Stolen  
 3. Splendid  
 4. Authentic

Question ID : 26433087924  
Status : Answered  
Chosen Option : 4

**Q.8** Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

The frog adopts itself to live both in water and on land.

- Ans  1. frog adepts itself  
 2. frog alters itself  
 3. No substitution  
 4. frog adapts itself

Question ID : 26433073257  
Status : Answered  
Chosen Option : 1

**Q.9** The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

Darshan wished he hadn't / went to the theme park / in the first place.

- Ans  1. Darshan wished he hadn't  
 2. in the first place  
 3. went to the theme park  
 4. No error

Question ID : 26433084571  
Status : Answered  
Chosen Option : 1

**Q.10** Select the most appropriate option to fill in the blank.  
Kiran had a short \_\_\_\_\_ as a writer.

- Ans  1. caress  
 2. career  
 3. carer  
 4. carrier

Question ID : 26433099000  
Status : Answered  
Chosen Option : 2

**Q.11** Select the option that can be used as a one-word substitute for the given group of words.

A place where coins, medals, or tokens are made

- Ans  1. Hutch  
 2. Hangar  
 3. Mint  
 4. Monastery

Question ID : 26433073683  
Status : Answered  
Chosen Option : 3

**Q.12** Select the most appropriate meaning of the given idiom.  
To bell the cat

- Ans  1. To feed pets  
 2. To play with kids  
 3. To love cats  
 4. To face risk

Question ID : 264330135965  
Status : Answered  
Chosen Option : 4

**Q.13** Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

We all should help each other.

- Ans  1. help mutually  
 2. help one another  
 3. help each one  
 4. No substitution

Question ID : 26433073253  
Status : Answered  
Chosen Option : 4

**Q.14** Parts of the following sentence have been given as options. Select the option that contains an error.

An lion is the most ferocious of all animals.

- Ans
- 1. ferocious of
  - 2. all animals.
  - 3. An lion
  - 4. is the most

Question ID : 26433072528  
Status : Answered  
Chosen Option : 3

**Q.15** Select the appropriate idiom to fill in the blank.

The police have not yet been able to solve the case; it seems to be \_\_\_\_\_.

- Ans
- 1. in a nutshell
  - 2. turning over a new leaf
  - 3. a hard nut to crack
  - 4. in a pink

Question ID : 264330101280  
Status : Answered  
Chosen Option : 3

**Q.16** Select the most appropriate ANTONYM of the underlined word in the given sentence.

Israel has been a staunch ally of the United States.

- Ans
- 1. Resolute
  - 2. Careless
  - 3. Confused
  - 4. Unsteady

Question ID : 26433087925  
Status : Answered  
Chosen Option : 4

**Q.17** Identify the option that rectifies the underlined spelling error in the given sentence.

The boys of our class have reported that considerable progress in the implimentation of their policies has been made.

- Ans
- 1. Implimentation
  - 2. implimantation
  - 3. Implementation
  - 4. Implemantation

Question ID : 264330122263  
Status : Answered  
Chosen Option : 3

**Q.18** Select the most appropriate synonym of the given word.  
**Abound**

- Ans  1. Increase  
 2. Flourish  
 3. Succeed  
 4. Adequate

Question ID : 26433096991  
Status : Answered  
Chosen Option : 4

**Q.19** Select the INCORRECTLY spelt word.

- Ans  1. Opportunity  
 2. Reliance  
 3. Approach  
 4. Bureau

Question ID : 26433092315  
Status : Answered  
Chosen Option : 3

**Q.20** Select the option that can be used as a one-word substitute for the given group of words.

**A person who abandons religion**

- Ans  1. Egotist  
 2. Priest  
 3. Apostate  
 4. Atheist

Question ID : 26433086325  
Status : Answered  
Chosen Option : 4

**Comprehension:**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Global warming is one of the biggest environmental (1) \_\_\_\_\_ facing the world today. The primary cause of global warming is the (2) \_\_\_\_\_ of greenhouse gases such as carbon dioxide and methane into the atmosphere. These gases trap heat from the sun, causing the Earth's temperature to rise. The (3) \_\_\_\_\_ effects of global warming are widespread and include more frequent and severe weather events, rising sea levels and the loss of biodiversity. Many governments and organisations have implemented (4) \_\_\_\_\_ to reduce greenhouse gas emissions. However, individuals can also play a role in (5) \_\_\_\_\_ global warming by making small changes to their daily habits, such as reducing their energy consumption and driving less.

**SubQuestion No : 21**

**Q.21** Select the most appropriate option to fill in blank no. 1.

- Ans
- 1. consequences
  - 2. opportunities
  - 3. benefits
  - 4. challenges

Question ID : 264330137498

Status : Answered

Chosen Option : 4

**Comprehension:**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Global warming is one of the biggest environmental (1) \_\_\_\_\_ facing the world today. The primary cause of global warming is the (2) \_\_\_\_\_ of greenhouse gases such as carbon dioxide and methane into the atmosphere. These gases trap heat from the sun, causing the Earth's temperature to rise. The (3) \_\_\_\_\_ effects of global warming are widespread and include more frequent and severe weather events, rising sea levels and the loss of biodiversity. Many governments and organisations have implemented (4) \_\_\_\_\_ to reduce greenhouse gas emissions. However, individuals can also play a role in (5) \_\_\_\_\_ global warming by making small changes to their daily habits, such as reducing their energy consumption and driving less.

**SubQuestion No : 22**

**Q.22** Select the most appropriate option to fill in blank no. 2.

- Ans
- 1. emission
  - 2. absorption
  - 3. reflection
  - 4. conduction

Question ID : 264330137499

Status : Answered

Chosen Option : 1

**Comprehension:**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Global warming is one of the biggest environmental (1) \_\_\_\_\_ facing the world today. The primary cause of global warming is the (2) \_\_\_\_\_ of greenhouse gases such as carbon dioxide and methane into the atmosphere. These gases trap heat from the sun, causing the Earth's temperature to rise. The (3) \_\_\_\_\_ effects of global warming are widespread and include more frequent and severe weather events, rising sea levels and the loss of biodiversity. Many governments and organisations have implemented (4) \_\_\_\_\_ to reduce greenhouse gas emissions. However, individuals can also play a role in (5) \_\_\_\_\_ global warming by making small changes to their daily habits, such as reducing their energy consumption and driving less.

**SubQuestion No : 23**

**Q.23** Select the most appropriate option to fill in blank no. 3.

- Ans  1. negative  
 2. positive  
 3. neutral  
 4. negligible

Question ID : 264330137500

Status : Answered

Chosen Option : 1

**Comprehension:**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Global warming is one of the biggest environmental (1) \_\_\_\_\_ facing the world today. The primary cause of global warming is the (2) \_\_\_\_\_ of greenhouse gases such as carbon dioxide and methane into the atmosphere. These gases trap heat from the sun, causing the Earth's temperature to rise. The (3) \_\_\_\_\_ effects of global warming are widespread and include more frequent and severe weather events, rising sea levels and the loss of biodiversity. Many governments and organisations have implemented (4) \_\_\_\_\_ to reduce greenhouse gas emissions. However, individuals can also play a role in (5) \_\_\_\_\_ global warming by making small changes to their daily habits, such as reducing their energy consumption and driving less.

**SubQuestion No : 24**

**Q.24** Select the most appropriate option to fill in blank no. 4.

- Ans  1. sanctions  
 2. subsidies  
 3. restrictions  
 4. policies

Question ID : 264330137501

Status : Answered

Chosen Option : 4

**Comprehension:**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Global warming is one of the biggest environmental (1) \_\_\_\_\_ facing the world today. The primary cause of global warming is the (2) \_\_\_\_\_ of greenhouse gases such as carbon dioxide and methane into the atmosphere. These gases trap heat from the sun, causing the Earth's temperature to rise. The (3) \_\_\_\_\_ effects of global warming are widespread and include more frequent and severe weather events, rising sea levels and the loss of biodiversity. Many governments and organisations have implemented (4) \_\_\_\_\_ to reduce greenhouse gas emissions. However, individuals can also play a role in (5) \_\_\_\_\_ global warming by making small changes to their daily habits, such as reducing their energy consumption and driving less.

**SubQuestion No : 25**

**Q.25 Select the most appropriate option to fill in blank no. 5.**

- Ans  1. exacerbating  
 2. mitigating  
 3. sustaining  
 4. expanding

Question ID : 264330137502

Status : Answered

Chosen Option : 2