SSC CGL

TEST SERIES

DATE- __/__/__

DAY- _____

INSTRUCTION FOR CANDIDATE

TEST SERIES NO.

SG Set 08

QUESTION- 100　　**MARKS- 200**　　**NEGATIVE MARK- 0.50**　　**DURATION- 60 MIN.**

1. Use only ball pens with black or blue ink

2. As soon as the examination starts, you must check this question booklet and if there is any unprinted, mutilated or partially printed page or question in it, then replace it with the correct question booklet through the examiner.

3. There are a total of 100 questions in this question booklet.

4. This is an objective test, in which four options are given for the answer to each question, you have to choose only one option with the correct answer out of these four options.

5. Answers to all questions are to be written on separate answer sheets.

6. Instructions for filling the answer sheet are written on the back side of the answer sheet, read them carefully before filling the answer sheet.

7. Blank pages are available in this question booklet for rough work.

8. Candidates cannot leave the room before the end of the examination.

9. After the examination is over, you can go out only with his permission after submitting the ORIGINAL COPY of the answer sheet to the invigilator.

10. After the completion of the examination, the candidate is allowed to take the question booklet and answer sheet with him/her.

11. 2 marks will be given for each correct answer and 0.50 marks will be deducted for each wrong answer.

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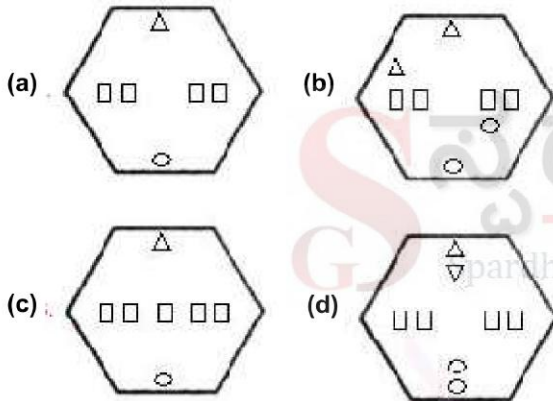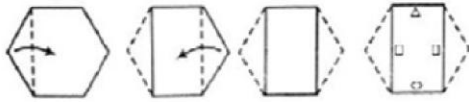**HELPLINE** 90711 54445, 90711 64446, 90711 74447

10 Years of Excellence

Total: 100 Que.	SSC CGL | Tier I | Mock Test 08	Time: 60 Min.

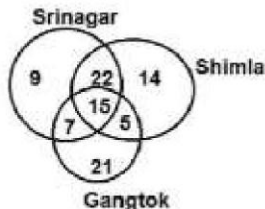## General Intelligence & Reasoning

1). The sequence of folding a piece of paper and manner in which the folded paper has been cut is shown in the following figure. How would this paper look when unfolded?

(a)   **(b)**

(c)   **(d)**

2). The following Venn diagram shows the number of families who have visited different places (Srinagar, Shimla, Gangtok).

Which is the number of families who have visited at least two of the places of Srinagar, Shimla and Gangtok?

(a) 15   **(b)** 27   **(c)** 34   **(d)** 49

3). Select the number from among the given options that can replace the question mark(?) in the following series.

37, 52, 74, 104, 143, ?

(a) 176   **(b)** 168   **(c)** 202   **(d)** 192

4). Select the option that is related to the third number in the same way as the second number is related to the first number.

21 : 445 : : 24 : ?

(a) 495   **(b)** 505   **(c)** 523   **(d)** 580

5). Select the correct combination of mathematical signs that can sequentially replace the * signs and balance the equation.

36 * 14 * 63 *9* 11 * (6 * 3) *90

(a) +, ÷, x, =, -, +   **(b)** -, +, ÷, x, -, +, =
(c) -, +, x, ÷, -, +, =   **(d)** -, +, ÷, x, =, -, +

6). In a certain code language, 'AND' is written as 'C-LP-F' and 'NOR' is coded as 'P-MQ-T'. How will 'BUT' be written in that language?

(a) C-SU-V   **(b)** D-SW-V   **(c)** C-TV-W
(d) D-SW-U

7). Select the option that is related to the third word in the same way as the second word is related to the first word.
Awful : Nice : : Nomadic : ?

(a) Noctumal   **(b)** Careless   **(c)** Hormeless
(d) Settled

8). Pointing to the photograph of a girl, Raghav said, "She is my father's mother's daughter's only brother's daughter". How is Raghav's father related to that girl's mother?

(a) Maternal uncle   **(b)** Son   **(c)** Husband
(d) Father

9). Select the option in which the words share the same relationship as that shared by the given pair of words.

Dentist : Hospital

(a) Engineer : Design **(b)** Doctor : Treatment

(c) Professor : University

(d) Criminal : Police Station

---

10). Select the letter cluster from among the given options that can replace the question mark(?) in the following series.
BOARD, BOARW, BOAIW, ?, BLZIW, YLZIW

(a) BOZIW **(b)** BOZRW **(c)** BOAIW **(d)** BLZRW

---

11). A cube made by folding the given sheet. In the cube so formed, what would be the letter on the face opposite the face showing the letter 'A'?
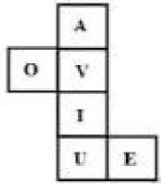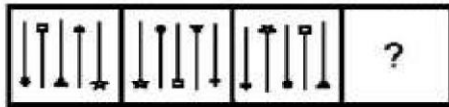

(a) I **(b)** E **(c)** V **(d)** U

---

12). When number X multiplied to its next number, the product 1260 is obtained. When Number X is added to Number Y, a total of 106 is obtained. Find the value of Number Y. (Assume number to be positive)

(a) 77 **(b)** 71 **(c)** 87 **(d)** 61

---

13). Select the figure among the given options that can replace the question mark (?) in the following series.

---

14). Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All dancers are talented.

Some girls are dancers.

Conclusions:

I. Some girls are talented.

II. All talented are girls.

III. All girls are talented.

(a) Only conclusions III follows

(b) Only conclusions II follows

(c) Only conclusions I follows

(d) Both conclusions I and II follow

---

15). Find the number of triangles in the given figure.
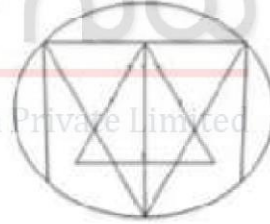
(a) 19 **(b)** 13 **(c)** 17 **(d)** 15

---

16). Select the correct mirror image of the given combination when the mirror is placed at MN as shown.

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(c) ↑b┐kⱴM

(d) M∧ſ k ∟ᑫ┐

---

17). Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1). Success

2). Surreal

3). Succumb

4). Suction

5). Surrogate

6). Surprise

(a) 1, 3, 4, 6, 2, 5   **(b)** 1, 3, 4, 6, 5, 2
(c) 1, 3, 6, 4, 2, 5   **(d)** 1, 4, 3, 6, 2, 5

---

18). Select the option in which the numbers are related in the same way as the numbers of the following set.

(16, 12, 32)

(a) (56, 24, 68)   **(b)** (36, 27, 72)   **(c)** (76, 57, 176)
(d) (20, 15, 42)

---

19). In a certain code language, 'SAFETY' is coded as '95' and 'EXPAND' is coded as '87'. How will 'GATHER' be coded in that language.

(a) 84   **(b)** 86   **(c)** 88   **(d)** 90

---

20). Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different.

(a) Lethargic   **(b)** Sluggish   **(c)** Vivacious
(d) Passive

---

21). Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.
b _ c e _ k b _ c _ f k b b _ e f _ b b c _ f k

(a) b, f, b, e, c, e, k   **(b)** b, e, b, f, c, k, e
(c) b, f, b, e, c, k, e   **(d)** b, f, b, c, e, k, e

---

22). Select the option in which the numbers are NOT related in the same way as are the numbers of the following set.
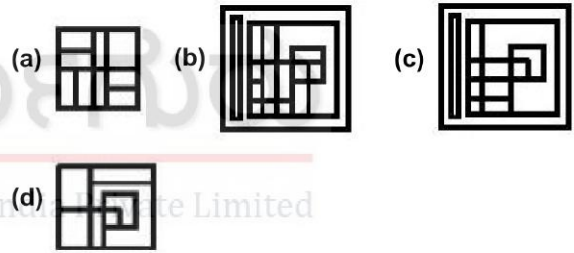
(7, 21, 49)

(a) (9, 27, 72)   **(b)** (8, 24, 64)   **(c)** (5, 15, 25)
(d) (6, 18, 36)

---

23). Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

(a) QTWZ   **(b)** XADG   **(c)** BEHK   **(d)** NPSV

---

24). Select the option in which the given figure is embedded (rotation is not allowed).

(a)   **(b)**   **(c)**

(d)

---

25). Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different.

(a) 5237 : 4003   **(b)** 3527 : 2293   **(c)** 2347 : 1113
(d) 4327 : 2003

General Awareness

1). Recently which state's Ninna Lego has won the Entrepreneur Challenge 2022-23?

(a) Assam   **(b)** Odisha   **(c)** Arunachal Pradesh
(d) Kerala

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2). Who among the following is an Indian Paralympic swimmer?

(a) Sharath M Gayakwad   **(b)** Gaurav Khanna
(c) Pramod Bhagat   **(d)** Sukant Kadam

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3). In which of the following years did the revolt in the countryside of the Bombay Deccan occur?

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(a) 1890   **(b)** 1875   **(c)** 1905   **(d)** 1790

4). What do you call the effect of the splitting of a spectral line into several components in the presence of a static magnetic field?

(a) Askaryan effect   **(b)** Domino effect

(c) Bezold effect   **(d)** Zeeman effect

5). Recently which state has been declared as natural disaster affected area?

(a) Uttarakhand   **(b)** Himachal Pradesh

(c) Jammu and Kashmir   **(d)** Uttar Pradesh

6). Who is the currently Lok Sabha Speaker?

(a) Rajnath Singh   **(b)** Om Birla   **(c)** JP Nadda

(d) Nitin Gadkari

7). What is the abbreviated form of the IPL franchise cricket team from Chennai?

(a) CSK   **(b)** GCW   **(c)** CA   **(d)** CL

8). Swasthya Sathi' scheme is the health insurance scheme that covers the entire population of which of the following states?

(a) Meghalaya   **(b)** West Bengal   **(c)** Assam

(d) Bihar

9). When is the statehood day of Tripura observed?

(a) 3 October   **(b)** 21 January   **(c)** 12 March

(d) 21 February

10). Article 21A of the Constitution of India provides the Right to _____.

(a) Equality   **(b)** Work   **(c)** Education   **(d)** Privacy

11). In which of the following states is Anchar Lake located?

(a) Jammu and Kashmir   **(b)** Bihar   **(c)** Meghalaya

(d) Assam

12). Topaz is a _____ of fluorine and aluminium.

(a) carbonate   **(b)** sulphate   **(c)** phosphate

(d) silicate

13). Which medal has been won by Rana Pratap in the 49th Junior Aquatic Championship recently?

(a) Silver   **(b)** bronze   **(c)** Gold   **(d)** none of these

14). 'Jadopatiya' is a form of _____ popular in the state of Jharkhand.

(a) Painting   **(b)** Sculpture   **(c)** Dance   **(d)** Music

15). Who launched the global initiative on digital health recently?

(a) Narendra Modi   **(b)** Mansukh Mandaviya

(c) Rajnath Singh   **(d)** Amit Shah

16). Who among the following was one of the leaders who were instrumental in convincing Mahatma Gandhi about the need to start a non-cooperation movement in support of The Khilafat?

(a) Maulana Abul Kalam Azad

(b) Abdul Ghaffar Khan   **(c)** Shaukat Ali

(d) Mohammad Ali Jinnah

17). Which of the following organs secretes hydrochloric acid that helps our body in killing pathogenic bacteria?

(a) Heart   **(b)** Stomach   **(c)** Kidney   **(d)** Brain

18). SHG promotes thrift in small proportion by a minimum contribution from each member of the group. What does 'H' stand for in SHG?

(a) Harvest   **(b)** Heavy   **(c)** Help   **(d)** Habitat

19). Which of the following is NOT in Karnataka?

(a) Mysore Palace   **(b)** Bannerghatta National Park

(c) Hampi   **(d)** Duduma Waterfall

20). Who among the following laid the functions of the Indian National Movement by founding the Indian Association at Calcutta in 1876?

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(a) Womesh Chandra Banerjee

(b) Dadabhai Naroji   **(c)** Surendranath Banerjee

(d) Aurobindo Ghose

21). Recently which place Matty Banana has got GI tag?

(a) Bangladesh   **(b)** new zealand

(c) Kanyakumari   **(d)** Indonesia

22). In which of the following states was the International Paragliding Festival organised by the Adventure Sports and Sustainable Tourism Academy (ASSTA) in 2023?

(a) Assam   **(b)** Uttarakhand   **(c)** Tripura

(d) Kerala

23). Who among the following rulers is called the 'Napoleon of India'?

(a) Chandragupta I   **(b)** Bindusara   **(c)** Ashoka

(d) Samudragupta

24). In the periodic table, the highly electronegative halogens and the highly electropositive alkali metals are separated by:

(a) Rare earth elements   **(b)** Noble metals

(c) Alkaline earth metals   **(d)** Noble gases

25). Desert, rain forests, coral reefs and mangroves are features of _____ diversity.

(a) Genetic   **(b)** Cultural   **(c)** Species

(d) Ecological

English Comprehension

1). Select the most appropriate synonym of the given word

Slack

(a) Careless   **(b)** Keen   **(c)** Lively   **(d)** Active

2). Select the most appropriate ANTONYM of the given word.

Magnificent

(a) Opulent   **(b)** Grandiose   **(c)** Mighty

(d) Modest

3). Sentence of a paragraph are given below in jumbled order. Arrange the sentence in the right order to form a meaningful and coherent paragraph.

a) Whichever soonest made a traveller take off his cloak should be accounted the more powerful.

b) They arranged to put the point to test.

c) A dispute once arose between the wind and the sun to decide which was the stronger of the two.

d) The wind began, and blew with all his might and sent a blast, cold and fierce as a storm.

(a) CBAD   **(b)** ACDB   **(c)** BCDA   **(d)** CDBA

4). Sentence of a paragraph are given below in jumbled order. Arrange the sentence in the right order to form a meaningful and coherent paragraph.

a) I was shocked to find my house unlocked.

b) To my astonishment, I found that my son, who had a spare key, had come in my absence.

c) Last Sunday, I returned home late at night.

d) I ran inside in fear that my house has been robbed.

(a) CDAB   **(b)** BCDA   **(c)** CADB   **(d)** ABCD

5). Select the INCORRECTLY spelt word.

(a) Boundary   **(b)** Photgraph   **(c)** Processing

(d) Competency

6). The following sentence has been divided into parts. One of them contains an error. Select the part that contains the error from the given options.

Raman putted the vegetables/ in the frying pan/ and after adding some water, / closed the lid.

(a) closed the lid   **(b)** Raman putted the vegetables

(c) and after adding some water

(d) in the frying pen

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7). Select the option that expresses the given sentence in reported speech.

"Is the door closed?" Alka asked Tarun.

(a) Alka asked Tarun whether she closed the door.

(b) Alka asked Tarun is the door close.

(c) Alka asked Tarun if the door is closed.

(d) Alka asked Tarun whether the door was closed.

8). Select the option that expresses the given sentence in passive voice.

Help the needy people.

(a) Let the needy people being helped

(b) Let the needy people be helped.

(c) The needy people are been helped.

(d) The needy people are helping.

9). Select the most appropriate meaning of the given idiom.

At the eleventh hour

(a) At 11 : 00 p.m.   **(b)** One hour before midnight

(c) At the very last minute   **(d)** At 11 : 00 a.m

10). Select the INCORRECTLY spelt word.

(a) Professional   **(b)** Perpetuate   **(c)** Dillemma

(d) Electronics

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

A group of stars

(a) Astronomy   **(b)** Planets   **(c)** Congregation

(d) Constellation

12). Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select 'No substitution required'.

I asked Rahul that how far was his office from his home.

(a) No substitution required

(b) how far his office was

(c) then how far was his offices

(d) that how far his office is

13). Select the option that can be used as a one-word substitute for the given group of words.

A place in a large institution, for the care of those who are ill

(a) Dormitory   **(b)** Hostel   **(c)** Hangar

(d) Infirmary

14). Select the most appropriate meaning of the given idiom.

A storm in a teacup

(a) A sudden storm during teatime

(b) Lot of fuss that will soon be forgotten

(c) Unnecessary tension

(d) Disarranging the cutlery

15). Select the most appropriate option to fill in the blank.

We _____ the marks of the students on different subjects and compared their performance for the year.

(a) questioned   **(b)** analysed   **(c)** inspected

(d) probed

16). Select the most appropriate ANTONYM of the given word

Hazard

(a) Safely   **(b)** Peril   **(c)** Gamble   **(d)** Risk

17). The following sentence has been divided into parts. One of the contains an error. Select the part that contains the error from the given options.

The recruiters / were pleased / to John's / domain knowledge and personality.

(a) to John's

(b) domain knowledge and personality

(c) were pleased   **(d)** The recruiters

18). Select the most appropriate option to fill in the blank.

My New Year's _____ is to think positive always.

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(a) repetition   **(b)** resolution   **(c)** confession

(d) celebration

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19). Select the most appropriate synonym of the given word.

Adjust

(a) Adapt   **(b)** Shift   **(c)** Change   **(d)** Move

---

20). Select the option that will substitute the underlined part of the given sentence. In case no substitution is needed, 'No substitution required'.

Among applied sciences, medicine is one which have given man some power over death.

(a) is the one which gave

(b) is one which has given

(c) No substitution required

(d) are one which gave

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

"Everything in Bhutan is chemical-free, all fruits and vegetables are (1)_____ organically, so whatever you buy is (2) _____ farm produced as the (3) _____ of the population indulge in farming for (4) _____," says my taxi driver Karma Chime. "We use turmeric on wounds, also to dye (5) _____ and it is added extensively in our cooking. Also, many believe it is anti-cancer and can treat tumours."

21).
Select the most appropriate option to fill in the blank number 1

(a) grew   **(b)** grow   **(c)** grown   **(d)** grows

---

22). Select the most appropriate option to fill in the blank number 2

(a) Closely   **(b)** Locally   **(c)** Nearly   **(d)** Nearby

---

23). Select the most appropriate option to fill in the blank number 3

(a) Majority   **(b)** Community   **(c)** Mass

(d) Common

---

24). Select the most appropriate option to fill in the blank number 4

(a) Nutrition   **(b)** Provision   **(c)** Sustenance

(d) Conservation

---

25). Select the most appropriate option to fill in the blank number 5

(a) Attires   **(b)** fashions   **(c)** garments

(d) covering

Quantitative Aptitude

1). The value of 4
$$(\sin^4 30° + \cos^4 30°) - 3(\sin^2 45° - 2\cos^2 45°)$$
is:

(a) 0   **(b)** 2   **(c)** 1   **(d)** 4

---

2). Sumit and Puneet can complete the same work in 10 days and 15 days respectively. The work was assigned for Rs.4500. After working together for 3 days Samir and Puneet involved Ashok. The work was completed in total in 5 days. What amount (in Rs.) was paid to Ashok?

(a) 1071   **(b)** 750   **(c)** 800   **(d)** 1500

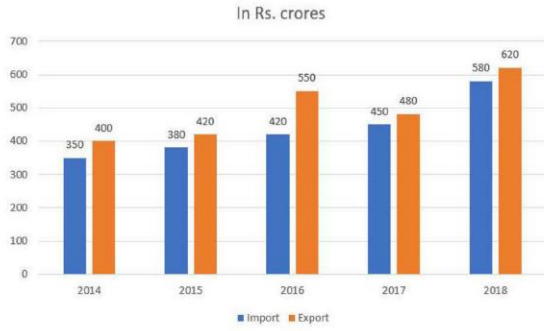**3).** Fourth proportion to 12, 18 and 6 is same as the third proportion to k and 6. What is value of K?

(a)	**(b)**	**(c)**	**(d)**
13.5	3	$\sqrt{6}$	4

---

4). The given bar graph shows the imports and exports (in crore Rs.) of steel for 5 years from 2014 to 2018.

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In Rs. crores

What is the ratio of average exports to average import over the five years?

(a) 218:247   (b) 247:218   (c) 247:109

(d) 109:247

5). In ∆ABC, DE II AB, Where D and E are the points on side AC and BC, respectively. If AD = x - 3, AC = 2x, BE = x - 2 and BC = 2x + 3, then what is the value of x?

(a) 10   (b) 12   (c) 9   (d) 8

6). The value of 25 ÷ 15 of 4× [4 ÷ 5 x (9-7)] – (20 ÷5 of 9) is:

(a) $\dfrac{2}{9}$ (b) $\dfrac{2}{3}$ (c) $\dfrac{4}{9}$ (d) $\dfrac{1}{3}$

7). A certain sum amounts to Rs.291600 in 2 years and to Rs.314928 in 3 years on compound interest compounded annually. Hou much will be the simple interest (in Rs.) on Rs.40000 at the same rate for 2 years?

(a) 8000   (b) 6400   (c) 7500   (d) 9600

8). A boat goes 27 km upstream and 33 km downstream in 6 hours. In the same time it can go 36 km upstream and 22 km downstream. How much time it will take to 36 kmupstream and 44 km downstream?

(a) 8 h 10 m   (b) 8 h 30 m   (c) 7 h 50 m   (d) 8 h

9). The average height of some students in a group is 156 cm. If 5 students of average height 160 cm join the group, then the average height of all the students in the group increases by 0.8 cm. What is the number of students in the group initially?

(a) 25   (b) 15   (c) 20   (d) 10

10). A trader bought two articles for Rs.490. He sold one at a loss of 20% and the other at a profit of 16%. If the selling price of both article is same, then the cost price (in Rs.) of the article sold at 20% loss is:

(a) 310   (b) 300   (c) 290   (d) 280

11). The value of
$$\frac{\tan^2 30° + \sin^2 90° + \cot^2 60° + \sin^2 30° \cdot \cos^2 45°}{\sin 60° \cdot \cos 30° - \cos 60° \cdot \sin 30°}$$
is:

(a) $\dfrac{47}{12}$ (b) $\dfrac{25}{12}$ (c) $\dfrac{43}{12}$ (d) $\dfrac{37}{12}$

12). If $p - 2p = 3$ and $pq = 5$, then what is the value of $(p^3 - 8p^3)$?

(a) 27   (b) -63   (c) 72   (d) 117

13). In a factory, there are 39 workers who have been categorized into five groups (A, B, C, D, E) on the basis of the range of their daily wages (in multiples of Rs.100). If is ensured that the daily wage of worker is an multiple of Rs.100. The distribution is presented through the given histogram.
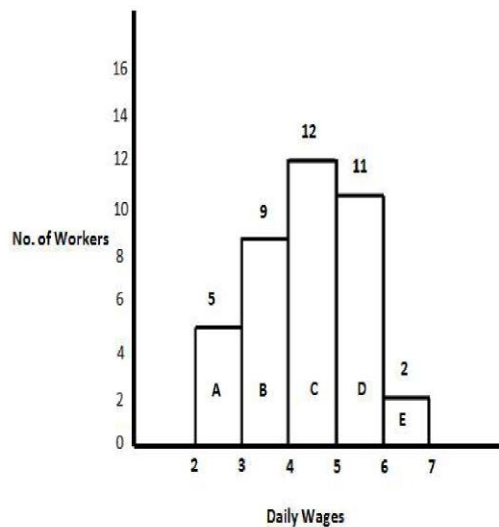
Daily Wages

If two Managers are engaged in to supervise the workers with daily wages ranging between Rs.700 and Rs.800, then what will be the average daily wage (nearest to a Rs.1) of all members of staff of the factory?

(a) Rs.467   (b) Rs.400   (c) Rs.445   (d) Rs.455

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14). △ABC is inscribed in a circle with centre O, such that ∠ACB = 115°. O is joined to A. What is the measure of ∠OAB?

(a) 20°   **(b)** 35°   **(c)** 25°   **(d)** 30°

15). If $x + y = 2$ and $\frac{1}{x} + \frac{1}{y} = \frac{18}{5}$, then the value of $(x^3 + y^3)$ is:

(a) $4\frac{2}{3}$ **(b)** $3\frac{1}{3}$ **(c)** $4\frac{3}{5}$ **(d)** $3\frac{1}{5}$

16). The area of a square shaped field is 1764 m^2. The breadth of a rectangular park is $\frac{1}{3}rd$ the side of the square field and its length is two times its breadth. What is the cost (in Rs.) of travelling the park at Rs.15 per m^2?

(a) 4200   **(b)** 5880   **(c)** 4320   **(d)** 4290

17). If $x^2 + 4y^2 = 53$ and $x - 2y = 5$, then what is the value of $x^3 - 8y^3$?

(a) 85   **(b)** 155   **(c)** -85   **(d)** 335

18). The following Bar Graph representing the Production of Fertilizers by Company A and Company B (in 10000 tonnes) Over the years from 2005 to 2010. The X-axis represents the years, and the Y-axis represents the Production of Fertilizers (in 10000 tonnes).

(Note: The data shows below is only for mathematical exercise. They do not represent the actual figure of the companies)
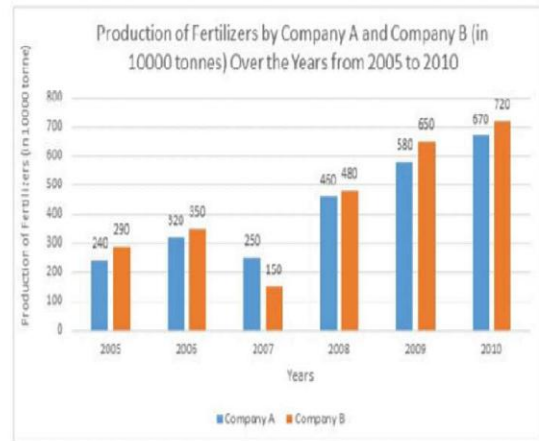
What is the average production (in 10000 tonnes) of fertilizers in 2008, 2009 and 2010 of Company A?

(a) 600   **(b)** 590   **(c)** 620   **(d)** 570

19). If a number is first increased by 15%, then reduced by 15%, it results in 782. If the same number is first reduced by 25%, then increased by 25% and again reduced by 20%, then what will be the resulting number?

(a) 600   **(b)** 712   **(c)** 750   **(d)** 150

20). The data given in the table shows the number of boys and girls enrolled in three in different streams in a school over 5 years.

years	Arts		Science		Commerce	
	Boys	Girls	Boys	Girls	Boys	Girls
2012	48	36	40	35	35	45
2014	42	43	42	32	32	42
2016	45	42	38	30	36	38
2018	39	46	41	23	28	34
2020	36	43	39	30	39	41

By what percent is the total number of boys in Arts stream more than the total number of boys in Science stream in the years 2012 to 2020?

(a) 0   **(b)** 5   **(c)** $2\frac{18}{41}$ **(d)** $4\frac{16}{21}$

21). In ABC, D is the mid-point of side AC and E is a point on side AB such that EC bisects BD at F. If AE = 30 cm, then the length of EB is:

(a) 18 cm   **(b)** 15 cm   **(c)** 10 cm   **(d)** 20 cm

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22). If $\sin\left(\frac{2A+B}{2}\right) = \cos\left(\frac{2A-B}{2}\right) = \frac{\sqrt{3}}{2}, 0 < 90°$ and $0° \frac{2A+B}{2} < 90°$ then find the value of

$$\sin 3(A - B).$$

(a) 1   **(b)** $\dfrac{1}{\sqrt{2}}$ **(c)** $\dfrac{1}{2}$ **(d)** $\dfrac{\sqrt{3}}{2}$

23). Find the different between squares of the greatest value and the smallest value of P if the number 5306P2 is divisible by 3

(a) 36   **(b)** 60   **(c)** 6   **(d)** 68

24). In a circle with centre O, AB and CD are two parallel chords on the same side of the diameter.

If AB = 12 cm, and CD = 18 cm and the distance between the chords AB and CD is 3 cm, then find the radius of the circle (in cm).

(a)   **(b)**   **(c)**   **(d)**

9     $3\sqrt{13}$ 15   12

25). A shopkeeper allows 16% discount on every item. Even after giving the discount, he makes a profit 8%. If he gives 8% discount instead of 16% on an item marked for ₹1800, then what will be his profit percent? (correct to 2 decimal places)

(a) 18.31   **(b)** 19   **(c)** 18.29   **(d)** 18