# SSC CGL

# **TEST SERIES**

DATE- \_\_/\_\_/\_
DAY-\_\_\_\_\_

**INSTRUCTION FOR CANDIDATE** 

TEST SERIES NO.

SG Set 09

**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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Total: 100 Que. SSC CGL | Tier I | Mock Test 09

Time: 60 Min.

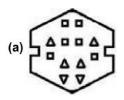
# **General Intelligence & Reasoning**

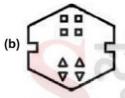
1). The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in thefollowing figures. How would this paper look when unfolded?

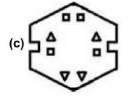


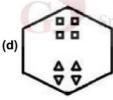










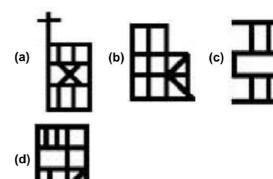


- 2). The monthly income of three cricketers Ankit, Sanjay and Roshan, from different sources, are in the ratio of 12:9:7, and their expenditures are in the ratio 15:9:8. If Ankit saves 25% of his income for future investments, what is the ratio of the savings of Ankit, Sanjay and Roshan?
- (a) 23:18:11 (b) 5:8:7 (c) 15:18:11

(d) 25:16:13

3). Select the option figure that is embedded in the given figure (rotation is NOT allowed).





**4).** Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

JL\_N\_J\_PND\_NP\_DJ\_P\_D

(a) P, D, M, J, N, O, N (b) M, D, N, P, N, J, O

(c) P, M, D, N, J, O, N (d) M, D, P.N, J, N, O

- 5). There are two couples in a family. Komali has two children. Madhurima is the wife of Omprakash, who is the brother of Mani. Pinki is the daughter of Komali. Urmila is thesister of Sanju, who is the son of Omprakash. Tarun is the son of Mani, who is a male. How is Madhurima is related to Komali?
- (a) Aunt (b) Mother (c) Sister (d) Sister-in-law
- 6). Select the correct option that indicates the arrangement of the given words in theorder in which they appear in an English dictionary.
  - 1). Hypodermic
  - 2). Hypocrite
  - 3). Hysterical
  - 4). Hypothermia
  - 5). Hypotenuse
- (a) 1, 2, 3, 4, 5 (b) 3, 5, 1, 2, 4 (c) 2, 1, 5, 4, 3
- (d) 4, 3, 5, 1, 2

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- 7). In a certain code language, 'RAJ' is coded as '87' and 'GITA' is coded as '148'. How will 'VARUN' be coded in that language?
- (a) 234 (b) 380 (c) 403 (d) 176
- Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown.

A p 6 9 D q M t

- Ap69DqMt(a)
- (p) A p 9 6 D q M t
- (c) A p 6 9 D q M t
- Ap96DqMt (b)
- 9). Four number-pairs have been given, out of which three are alike in some manner andone is different. Select the number-pair that is different.
- (a) (812, 121) (b) (546, 225) (c) (547, 258) (d) (723, 144)
- 10). Select the option that is related to the fourth number in the same way as the firstnumber is related to the second number and the fifth number is related to the sixthnumber.

11:81::7:121::8:36

- (a) 12 (b) 10 (c) 18 (d) 13
- 11). Select the number from among the given options that can replace the question mark(?) in the following series.

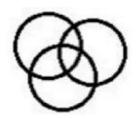
121, 169, 225, 289, ?

- (a) 398 (b) 305 (c) 361 (d) 410
- **12).** Two different positions of the same dice are shown, the faces of which are marked with the letters F, G, H, I, J and K. Select the letter that will be on the face opposite to the face having the letter 'F'.





- (a) H (b) I (c) J (d) G
- **13).** Select the set of classes, the relationship among which is best illustrated by the following Venn diagram.



- (a) Extroverts, Men, Handsome
- (b) Bureaucrats, Men, Women
- (c) Doctors, Fathers, Sisters
- (d) Stationery, Stapler, Erasers
- 14). Four letter-clusters have been given, out of which three are alike in some manner andone is different. Select the letter-cluster that is different.
- (a) MN (b) GT (c) KP (d) QL
- 15). In a certain code language, 'INHALE' is written as 'REEDIH'. How will 'MIGHTY' be written in that language?
- (a) MILCCP (b) MCLICP (c) IMCLCP
- (d) CCILMP
- **16).** Four words have been given, out of which three are alike in some manner and one isdifferent. Select the word that is different.
- (a) Goitre (b) Diarrhoea (c) Anaemia
- (d) Scurvy
- **17).** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

12	34	110 35	
6	13		
9	?	60	

(a) 18 (b) 19 (c) 21 (d) 23



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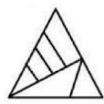
**18).** Select the letter-cluster from among the given options that can replace the questionmark (?) in the following series.

MCN, NCO, OCP, PCQ, ?

- (a) QCR (b) PCS (c) POR (d) OCQ
- **19).** Select the option in which the numbers are related in the same way as are the numbers of the following set.

(12, 121, 169)

- (a) (11, 144, 196) (b) (17, 256, 324)
- (c) (14, 196, 225) (d) (16, 161, 256)
- **20).** How many triangles are there in the given figure?



- (a) 10 (b) 9 (c) 7 (d) 8
- 21). 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 follows from the statements.

#### Statements:

All lockets are chains.

100% medals are lockets.

Some rings are chains.

#### Conclusions:

- I. All chains are medals.
- II. All medals being rings is a possibility.
- (a) Neither conclusion I nor II follows
- (b) Both conclusions I and II follow
- (c) Only conclusion II follows
- (d) Only conclusion I follows
- **22).** Select the option that is related to the third word in the same way as the second wordis

related to the first word.

Varanasi: Ganga:: Mathura:?

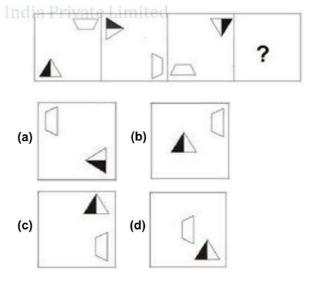
- (a) Godavari (b) Ganga (c) Yamuna
- (d) Narmada
- 23). Select the option in which the words share the same relationship as that shared by the given pair of words.

Pulmonologist : Lungs

(a) Nephrologist : Nerves (b) Bones : Orthopaedic

(c) Endocrinologist : Glands(d) Ophthalmologist : Ears

- 24). Select the correct combination of mathematical signs that can sequentially replace the signs and make the equation correct. 45 × 24 × 72 × 20 × 12 × 7
- (a) =,  $\times$ , +,  $\div$ , (b)  $\times$ ,  $\div$ , =, -, + (c)  $\div$ ,  $\times$ , +, -, =
- (d) +,  $\div$ , -, =,  $\times$
- **25).** Select the figure from among the given options that can replace the question mark () in the following series.



#### **General Awareness**

- 1). The problem of choice between relatively scarce commodities due to limited productive resources with the society can be illustrated with the help of a \_\_\_\_\_.
- (a) Marginal utility curve (b) Demand curve
- (c) Budget line (d) Production possibility curve
- 2). The scientific study of birds is called



(a) Barium (b) Copper (c) Sodium (d) Zinc

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<ul><li>(a) pomology (b) ornithology (c) gerontology</li><li>(d) Ichthyology</li></ul>	11). Who among the following was the founder and the first Chairman and Commissioner of the Indian Premier League (1PL)?	
	(a) Jagmohan Dalmiya (b) Lalit Modi	
3). At which of the following places did Lord Buddha give his first sermon on the Four Noble Truths?	(c) Raj Singh Dungarpur (d) Sandeep Patil	
(a) Lumbini (b) Bodh Gaya (c) Sarnath (d) Rajgir	<ol> <li>Padavali Kirtan refers to songs composed in the medieval period of West Bengal (15th to 17th century) in praise of</li> </ol>	
	(a) Brahma (b) Vishnu (c) Shiva (d) Shakti	
<b>4).</b> Which Indian state had the highest number of large dams as of the year 2023?		
<ul><li>(a) Maharashtra</li><li>(b) Tamil Nadu</li><li>(c) Gujarat</li><li>(d) Rajasthan</li></ul>	13). Where will the 4th G20 Trade and Investment Ministerial Meeting begin recently?	
(u) Najasiliali	(a) Mumbai (b) Delhi (c) Jaipur (d) Bhopal	
<ul><li>5). Which of the following is the largest sea bird with the longest wingspan?</li><li>(a) Wandering Albatross (b) Frigatebird (c) Auk</li></ul>	<b>14).</b> include/s glycogen, poly-β-hydroxybutyrate granules, sulphur granules and gas vesicles.	
(d) Booby	(a) cytoplasm (b) Flagella (c) Plasma membrane	
	(d) Mesosomes	
6). In which of the following states is the 'Eco	(a) moscocine	
Retreat' festival held every year? Spandhaguru	15). A type of court called 'Kantakasodhana' was	
(a) Bihar (b) Odisha (c) Assam (d) Tamil Nadu	prevalent in the Empire	
	(a) Kushana (b) Mauryan (c) Rashtrakuta	
7). When has 'World Mosquito Day' been celebrated recently?	(d) Chola	
(a) 18 august (b) 20 august (c) 19 august (d) 21 august	16). What is the boiling point at standard atmospheric pressure at sea level and 45° latitude of water on the Celsius Scale?	
	(a) 50°C (b) 100°C (c) 200°C (d) 150°C	
<ul> <li>8). In which of the following states does the Governor have special responsibility under Article 371H of the Constitution with respect to law and order and in the discharge of his functions in relation thereto?</li> <li>(a) Mizoram (b) Sikkim (c) Nagaland</li> <li>(d) Arunachal Pradesh</li> </ul>	<ul><li>17). Recently, the Chief Minister of which state conferred the government's first 'Udyog Ratna' award to Ratan Tata?</li><li>(a) Odisha (b) Maharashtra (c) Haryana</li><li>(d) Uttar Pradesh</li></ul>	
O) Missis of the fall with a fall of the f		
9). Which of the following rivers empties into the Gulf of Cambay of the Arabian Sea, in the state of Gujarat?	18). C Rajagopalachari led the Salt Satyagraha in which of the following states?	
(a) Krishna (b) Godavari (c) Tapti (d) Cauvery	(a) Gujarat (b) Rajasthan (c) Tamil Nadu (d) Maharashtra	
10). Which of the following minerals produces		
green colour in fireworks?  (a) Barium (b) Copper (c) Sodium (d) Zinc	<b>19).</b> Which of the following movies has been selected as India's official entry for the	

### ನ್ನ ರ್ಧಾಗುರು Spardhaguru India Private Limited 10 Years of Excellence

given idiom.

Tide someone over

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'International Feature Film' category at the 93rd Academy Awards?  (a) The Sky Is Pink (b) Ek Hazarachi Note  (c) Gulabo Sitabo (d) Jallikattu	<ul><li>(a) Get a boat ready to cross a river or water body</li><li>(b) Ask someone for financial assistance</li><li>(c) Complete a voyage successfully</li><li>(d) Give temporary help, usually financial</li></ul>
<ul><li>20). Who has become the new MD &amp; CEO of South Indian Bank recently?</li><li>(a) Parminder Chopra (b) Amarjit Singh</li><li>(c) PR Seshadri (d) Sumit Sharma</li></ul>	<ul><li>2). Select the most appropriate synonym of the given word</li><li>Tag (n)</li><li>(a) Syphon (b) Pump (c) Label (d) Drain</li></ul>
<ul><li>21). Who has recently become the first Indian wrestler to win back-to-back U20 world titles?</li><li>(a) Savita (b) Antim panghal (c) Priya Malik</li><li>(d) Shikha Singh</li></ul>	<ul> <li>3). Select the most appropriate option to fill in the blank.</li> <li>Credit card has increased in recent years.</li> <li>(a) fluke (b) flake (c) fraud (d) Freed</li> </ul>
22). Who was the first and last woman ruler of the Delhi Sultanate?  (a) Sultana Chand Bibi (b) Razia Sultana  (c) Nur Jahan (d) Rani Durgavati  Spardhagur  23). Which of the following states was awarded by the Union Government for being the best state in the fisheries sector amongst hilly and northeastern states?	4). Select the most appropriate ANTONYM of the given word.  Anxiety  (a) Restlessness (b) Nervousness (c) Certainty (d) Panic  5). Select the INCORRECTLY spelt word (a) Cadre (b) Carnivorous (c) Commit
(a) Assam (b) Mizoram (c) Tripura (d) Sikkim	(d) Calender
<ul> <li>24). Who among the following is the Chairman of the Planning Commission and National Integration Council of India?</li> <li>(a) The Vice President (b) The President</li> <li>(c) The Prime Minister (d) The Attorney General</li> <li>25). In which of the following states is the headquarters of IDBI (Industrial Development Bank of India) located?</li> <li>(a) Haryana (b) Karnataka (c) Maharashtra</li> </ul>	<ul> <li>6). 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 there is no error, select 'No error'.  Modern science have / broken many myths / about our food and diet.</li> <li>(a) about our food and diet</li> <li>(b) Modern science have (c) broken many myths</li> <li>(d) No error</li> </ul>
(d) West Bengal	7) Select the most appropriate option to fill in the
English Comprehension  1). Select the most appropriate meaning of the	<ul> <li>7). Select the most appropriate option to fill in the blank.</li> <li>My neighbor was admitted to the hospital when he developed an allergic to some medicine he took.</li> </ul>

(a) retort (b) result (c) rejoinder (d) reaction



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**8).** Select the most appropriate synonym of the given word.

Detrimental

(a) Friendly (b) Friendly (c) Intellectual

(d) Harmful

- Sentences of a paragraph are given below in jumbled order. Arrange The sentence in the right order to form a meaningful and coherent paragraph.
  - According to his hypothesis, now known as the neuron theory, each nerve cell communicates with others through contiguity rather than continuity.
  - 2) The watershed of all studies of the nervous system was an observation made in 1889 by Spanish scientist Santiago Ramón y Cajal.
  - 3) It has since been proved that Cajal's theory is not universally true, but his central idea has remained an accurate guiding principle for all further study.
  - 4) That is, communication between adjacent but separate cells must take place across the space and barriers separating them.
- (a) 3412 (b) 2143 (c) 2341 (d) 1432
- **10).** Select the option that expresses the given sentence in passive voice.

You can solve this problem.

- (a) This problem ought to be solved by you.
- (b) This problem ought to be solved by you.
- (c) This problem can be solved by you
- (d) This problem can be solved by you
- **11).** Select the most appropriate meaning of the given idiom.

A bad egg

- (a) Someone who doesn't like eggs
- (b) Someone who likes to break eggs
- (c) Someone who regularly makes mistakes
- (d) Someone who is dishonest and unreliable
- **12).** Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the right order to form a meaningful and coherent paragraph.

1) Dad: "Yes, tell me."

2) Laxmi: "Dad, I need to speak to you."

3) Dad: "I think you are still too young for it."

4) Laxmi: "Please buy me a scooter."

(a) 2143 (b) 2341 (c) 1243 (d) 4321

**13).** Select the most appropriate ANTONYM of the given word.

Blemish

- (a) Discolouration (b) Stain (c) Perfection
- (d) Damage
- **14).** Select the option that can be used as a oneword substitute for the given group of words

One who does not believe in the existence of God.

- (a) Egotist (b) Atheist (c) Cynic (d) Anarchist
- **15).** Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select 'No substitution'.

The apple a day keeps the doctor away.

- (a) A apple a day (b) The apples a day
- (c) An apple a day (d) No substitution
- **16).** Select the option that expresses the given sentence in indirect speech.

The professor said to the media persons, "From our research we have come to the conclusion that there is life on that planet."

- (a) The professor said to the media persons from our research you had come to the conclusion that there was life on that planet
- **(b)** The professor told to the media persons that from your research you have come to the conclusion that there is life on that planet.
- (c) The professor said to the media persons that from their research they had come to the conclusion that there was life on that planet.
- (d) The professor informed the media persons that from our research we have come to the conclusion that there had been life on that planet.
- 17). Select the option that can be used as a oneword substitute for the given group of words

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An arrangement of flowers that is usually given as a present.  (a) Bouquet (b) Bouquet (c) Basket  (d) Boutique	<ul><li>22). Select the most appropriate option to fill in blank number 2</li><li>(a) Happiness (b) Anger (c) Sadness (d) Smell</li></ul>		
Select the most appropriate option to substitute the underlined segment in the given	<ul> <li>23). Select the most appropriate option to fill in blank number 3</li> <li>(a) Required (b) Retained (c) Reminded</li> <li>(d) Referred</li> <li>24). Select the most appropriate option to fill in blank number 4</li> <li>(a) On (b) In (c) Of (d) At</li> <li>25). Select the most appropriate option to fill in blank number 5</li> <li>(a) geological (b) geographical (c) botanical (d) physical</li> </ul>		
sentence. If no substitution is required, select 'No substitution'.			
After the old building was pulled out, the building contractor surveyed the progress of the work.			
(a) was pulled down (b) No substitution			
(c) was pulled over (d) was pulled up			
19). Select the INCORRECTLY spelt word			
(a) Colossal (b) Magnificent (c) Articulate			
(d) Concensus			
<b>20).</b> 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.	Quantitative Aptitude		
	1). In a circle with centre O and radius 13 cm, a chord AB is drawn. Tangents at A and B intersect		
as he was busy / shooting / for a film / in Maldives.	at P such that $\angle APB = 60^{\circ}$ . If distance of AB from the centre O is 5 cm, then what is the		
as he was busy / shooting / for a film / in	at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?		
as he was busy / shooting / for a film / in Maldives.	at P such that $\angle APB = 60^{\circ}$ . If distance of AB from the centre O is 5 cm, then what is the		
as he was busy / shooting / for a film / in Maldives.  (a) as he was busy (b) for a film  (c) to the award ceremony	at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?		
as he was busy / shooting / for a film / in Maldives.  (a) as he was busy (b) for a film  (c) to the award ceremony  (d) Ranbir could not went  In the following passage, some words have been deleted. Fill in the blanks with the help of	<ul> <li>at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?</li> <li>(a) 22 (b) 12 (c) 24 (d) 11</li> <li>2). What is the value of k such that number</li> </ul>		
as he was busy / shooting / for a film / in Maldives.  (a) as he was busy (b) for a film (c) to the award ceremony (d) Ranbir could not went  In the following passage, some words have	<ul> <li>at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?</li> <li>(a) 22 (b) 12 (c) 24 (d) 11</li> <li>2). What is the value of k such that number 72k460k is divisible by 6?</li> </ul>		
as he was busy / shooting / for a film / in Maldives.  (a) as he was busy (b) for a film (c) to the award ceremony (d) Ranbir could not went  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.  The five senses (1) sight,	<ul> <li>at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?</li> <li>(a) 22 (b) 12 (c) 24 (d) 11</li> <li>2). What is the value of k such that number 72k460k is divisible by 6?</li> <li>(a) 7 (b) 29 (c) 8 (d) 4</li> <li>3). If sec(5α -15°) = cosec(15° - 2α), then the value of cosα + sin2α + tan(1.5α) is:</li> <li>(a) (b) (c) (d)</li> </ul>		
as he was busy / shooting / for a film / in Maldives.  (a) as he was busy (b) for a film (c) to the award ceremony (d) Ranbir could not went  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.	<ul> <li>at P such that ∠APB = 60°. If distance of AB from the centre O is 5 cm, then what is the length (in cm) of AP?</li> <li>(a) 22 (b) 12 (c) 24 (d) 11</li> <li>2). What is the value of k such that number 72k460k is divisible by 6?</li> <li>(a) 7 (b) 29 (c) 8 (d) 4</li> <li>3). If sec(5α –15°) = cosec(15° – 2α), then the value of cosα + sin2α + tan(1.5α) is:</li> </ul>		

**4).** Bar graph shows the number of males and females in five organizations A, B, C, D and E.

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

(a) Of (b) Are (c) In (d) Is

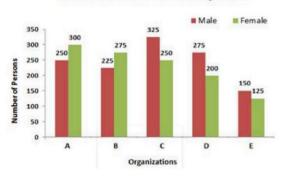


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Number of Male and Female in different Organisations



For which organisation, difference between the number of males and the average number of females of all the organisations is minimum?

- (a) D (b) A (c) B (d) C
- 5). The data given in the table shows the number or students studying in four different disciplines in 5 institutes. Study the table and answer the question.

Institutes	Arts	Science	Commerce	Computer Science
A	36	48	59	57
В	45	54	55	48
C	55	36	56	51
D	45	48	55	53 Spardh
E	48	44	52	55

Number of students studying Computer Science in the institutes A and C taken together is what percent of the number of students studying Arts in the institutes B and D taken together?

- (a) 120 (b) 200 (c) 108 (d) 83.3
- 6). The average of squares of five consecutive odd natural numbers is 233. What is the average of the largest number and the smallest number?
- (a) 15 (b) 11 (c) 17 (d) 13
- 7). Simplify the following expression:

$$3 \times 8 \div 9$$
 of  $6 - 2 \div 3 \times (5 - 2) \times 2 + 18 \div 3$  of  $3$ 

- (a)
- (c) (d
- $-1\frac{5}{9}$  (b) -4  $2\frac{12}{13}$   $2\frac{1}{3}$

**8).** Find the value of tan 35° cot 40° tan 45° cot 50° tan 55°.

(a) -1 (b) 1 (c) 
$$\frac{1}{2}$$
 (d)  $\frac{1}{\sqrt{2}}$ 

- 9). In a circle, chords AB and CD intersect internally, at E . If CD = 16 cm, DE = 6 cm, AE = 12 cm, and BE = x cm then the value of x is:
- (a) 6 (b) 17 (c) 5 (d) 9
- **10).** A sold an article to B at a profit of 25%. B sold it to C at a profit of 15%. The profit made by B is Rs.40 less than the profit made by A . What is the cost price (in Rs.) of the article for A?
- (a) 546 (b) 240 (c) 400 (d) 640

11). If 
$$\left(2a + \frac{3}{a} - 1\right) = 11$$
, what is the value of  $\left(4a^2 + \frac{9}{a^2}\right)$ ?

- (a) 110 (b) 148 (c) 132 (d) 121
  - 12). Triangle ABC is an equilateral triangle. D and E are points on AB and AC respectively such that DE is parallel to BC and is equal to half the length of BC . If AD + CE + BC = 30 cm, then find the perimeter (in cm) of the quadrilateral BCED .
  - (a) 45 (b) 37.5 (c) 25 (d) 35

13). If 
$$a^2 + b^2 + c^2 + 216 = 12(a + b - 2c)$$
, then  $\sqrt{ab - bc - ca}$  is:

(a) 
$$3\sqrt{5}$$
 (b)  $4\sqrt{5}$  (c)  $6\sqrt{5}$ 

$$^{(d)}8\sqrt{5}$$

The area of a quadrant of a circle is  $\frac{\pi}{9}$ m<sup>2</sup>. Its

radius (in metres) is equal to:

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



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**15).** Weight of A is 20% more than weight of B, whose weight is 30% more than weight of C . By how much percent weight of A is more than weight of C?

- (a) 56 (b) 44 (c) 35.89 (d) 69
- **16).** Fourteen persons can do a work in 18 days. After 5 days of work, 6 workers left the work and joined back on the last day of the work. In how many days the work got completed?
- (a) 27 (b) 24 (c) 12 (d) 21
- **17).** The ratio of two numbers A and B is 5 : 8 . If 5 is added to each of A and B, then the ratio becomes 2 : 3 . The difference in A and B is.
- (a) 10 (b) 12 (c) 20 (d) 15
- **18).** The table shows the daily income of 50 persons.

Study the table and answer the question.

Income (₹)	No. of persons	
less than 200	12 Spardh	
less than 250	26	
less than 300	34	
less than 350	40	
less than 400	50	

What is the ratio of the number of persons earning less than Rs.200 to the number of persons earning Rs.300 or more?

- (a) 3:10 (b) 3:4 (c) 6:5 (d) 6:17
- **19).** An article is marked 27% above its cost price. If x% discount is allowed on the marked price and still there is a profit of 6.68%, then what is the value of x?
- (a) 12.5 (b) 15 (c) 20 (d) 16
- **20).** Ina 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). The distribution is presented through a Histogram shown below:



What is the ratio of the number of employees whose daily wages are Rs.200 or more but less than Rs.400 to that of the number of employees whose daily wages are Rs.400 or more but less than Rs.600?

- (a) 14:23 (b) 41:23 (c) 23:41 (d) 23:14
- 21). In ΔABC, D is point on side AB Such that BD = 3 cm and DA = 4 cm. E is a point on BC such that DE || AC . Then Area of ΔBDE : Area of trapezium ACED =
- (a) 16:33 (b) 9:40 (c) 33:16 (d) 40:9
- **22).** A certain sum amounts to Rs.81840 in 3 years and to Rs.92400 in 5 years at x% p.a under simple interest. If the rate of interest is becomes (x + 2)%, then in how many years will the same sum double itself?
- (a) 8 (b) 20 (c)  $12\frac{1}{2}$  (d) 10
- 23). A takes 2 hours more than B to cover a distance of 40 km. If A doubles his speed, he takes hour more than B to cover 80 km. To cover a distance of 120 km, how much time (in hours) will B take travelling at his same speed?
- (a) 1(1/2) hours (b) 1(1/3) hours (c) 1(1/5) hours
- (d) 1(1/4) hours
- **24).** Simplify  $(x y + z)^2 (x y z)^2$ .
- (a) 4xz + 4yz (b) 4yz 4xz (c) 2xz + 2yz
- (d) 4xz 4yz



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**25).** If  $\sin(20 + x)^\circ = \cos 60^\circ$ ,  $0 \le (20 + x) \le 90$ , then find the value of  $2\sin^2(3x + 15)^\circ - \csc^2(2x + 10)^\circ$ .

(a) 
$$-\frac{1}{3}$$
 (b) -3 (c) 3 (d) -2

