



## SSC CGL 30 August 2015 Tier 1

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## General Awareness

### Instructions

For the following questions answer them individually

### Question 1

Meanders are the features formed by

- A glaciers
- B rivers
- C winds
- D ocean waters

Answer: B

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### Question 2

Linseed is obtained from

- A Castor
- B Flax
- C Groundnut
- D Sesame

Answer: B

### Question 3

If 20% or more area of the country suffers from rain deficits during monsoon season, it is termed as

- A flood year
- B drought year
- C famine year
- D self sufficient year

Answer: B

### Question 4

Rajasthan canal receives water from which river?

- A Yamuna
- B Jhelum
- C Ravi
- D Sutlej

Answer: D

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### Question 5

Uneven distribution of Insolation on the earth is mainly due to the

- A spherical shape of the earth
- B distribution of land and water
- C direction of the winds
- D presence of pressure belts

Answer: A

### Question 6

The radiation that can penetrate deepest in our body

- A UV-radiation
- B Alpha-particles
- C 13-particles
- D Gamma-particles

Answer: D

### Question 7

Which organism possesses characteristics of a plant and an animal?

- A Euglena
- B Mycoplasma
- C Paramecium
- D Chlorella

Answer: A

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### Question 8

Match the following :

I	II
A. Anabaena	1. Bacteria
B. Mucor	2. Gymnosperm
C. Pseudomonas	3. Fungi
D. Ephedra	4. Blue green algae

- A A-4, B-2, C-3, D-1

B A-4, B-3, C-1, D-2

C A-3, B-4, C-1, D-2

D A-2, B-1, C-4, D-3

**Answer: B**

**Question 9**

**Tachycardia is a condition characterized by**

A heart-rate decreases from the normal

B heart- rate increases from the normal

C heartbeat stops

D heart fails to pump

**Answer: B**

**Question 10**

**Oxyntic cell is meant for the secretion of**

A Pepsin

B Enterokinase

C Hydrochloric acid

D Lactic acid

**Answer: C**

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**Question 11**

**Sound is heard over longer distances on rainy days because**

A sound travels slowly in moist air

B sound travels faster in moist air

C moist air does not absorb sound

D moist air absorbs sound

**Answer: B**

**Question 12**

**What kind of rays are X-rays?**

A positively charged particles

B negatively charged particles

C neutral particles

D None of these

Answer: C

**Question 13**

What is the example of vestigial organ ?

A Eye-brow

B Collar-bone

C Wisdom-teeth

D Nails

Answer: C

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**Question 14**

Railway tracks are banked on curves so that :

A the train may not fall down inwards.

B the weight of the train may be reduced.

C necessary centripetal force may be obtained from the horizontal component of the normal reaction due to track.

D no frictional force may be produced between the wheels and the track.

Answer: C

**Question 15**

After 'PROM' is programmed, we can only \_ the information.

A read

B write

C read and write

D remove

Answer: A

**Question 16**

We feel cool when we sit near the fan, this is because

A fan gives cool air.

B fan cools surrounding air.

C air evaporates the sweat on our body.

D we feel cool when air touches the body.

Answer: C

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### Question 17

Water flows off the wings of birds and insects due- to the presence of

- A Waxes
- B Sugars
- C Proteins
- D Minerals

**Answer: A**

### Question 18

Which chemical is associated with muscle fatigue?

- A Uric acid
- B Acetic acid
- C Pyruvic acid
- D Lactic acid

**Answer: D**

### Question 19

Which one of the following does not contain silver ?

- A Horn silver
- B Ruby silver
- C German silver
- D Lunar caustic

**Answer: C**

## General Science Notes for SSC CGL

### Question 20

The average kinetic energy of the molecules of an ideal gas is directly proportional to

- A Velocity of Molecules
- B Mass of Molecules
- C Absolute temperature of the gas,
- D Temperature of environment

**Answer: C**

**Question 21**

**ROM stands for**

- A Real Office Manager
- B Read Only Memory
- C Read Only Memorandum
- D Role On Memory

**Answer: B**

**Question 22**

**An important green-house gas other than methane being produced from the agricultural fields is**

- A Nitrous oxide
- B Ammonia
- C Sulphur dioxide
- D Arsine

**Answer: A**

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**Question 23**

**Acid rain is caused due to pollution of atmosphere by**

- A oxides of carbon and nitrogen
- B oxides of nitrogen and sulphur
- C oxides of nitrogen and phosphorus
- D None of these

**Answer: B**

**Question 24**

**The land which is not cultivated every year though it is suitable for cultivation :**

- A Waste land
- B Pasture land
- C Fallow land,
- D Cultivable waste land

**Answer: D**

**Question 25**

**Who is the first Indian to swim across English Channel ?**

- A Aarti-Saha
- B Mihir Sen
- C P.K. Bannerji
- D Vikram Merchant

**Answer: B**

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### Question 26

Which chemical is responsible for depletion of ozone layer in the atmosphere?

- A Chlorofluorocarbons
- B Nitrous oxide
- C Sulphur dioxide
- D Carbon dioxide

**Answer: A**

### Question 27

Who has authored the book 'One Life is Not Enough'?

- A V.S. Naipal
- B Natwar Singh
- C K.P.S. Gill
- D Khushwant Singh

**Answer: B**

### Question 28

In the final of the IPL 2015 T-20 Tournament Mumbai Indians defeated

- A Kings XI Punjab
- B Royal Challengers Bangalore
- C Rajasthan Royals
- D Chennai Superkings

**Answer: D**

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### Question 29

Nobel Peace Prize for 2014 has been awarded to



- A Malala Yusufzai (Pakistan)
- B Kailash Satyarthi (India)
- C Both Malala Yusufzai (Pakistan) and Kailash Satyarthi (India)
- D Neither Malala Yusufzai (Pakistan) nor Kailash Satyarthi (India)

**Answer: C**

**Question 30**

**Who was the recipient of the Dada Saheb Phalke Award for 2014?**

- A Shashi Kapoor
- B Shakti Kapoor
- C Shashikant Kapoor
- D Shekhar Kapoor

**Answer: A**

**Question 31**

**Who was the first European to be selected as President of Indian National Congress ?**

- A Annie Besant
- B George Yule
- C A.O. Hume
- D Alfred Webb

**Answer: B**

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**Question 32**

**Palk Strait is situated between**

- A India and Pakistan
- B India and Bangladesh
- C India and Sri Lanka
- D India and Myanmar

**Answer: C**

**Question 33**

**Birmingham in U.K. is famous for**

- A Iron and Steel industry
- B Sugar industry

- C Paper industry
- D Aluminium industry

**Answer: A**

**Question 34**

**Which city has hosted the 2016 Olympic Games ?**

- A Seoul
- B Barcelona
- C Rio-de-Janeiro
- D Los Angeles

**Answer: C**

**Question 35**

**Which famous industry is at Koraput ?**

- A Ship Building
- B Aircrafts Building
- C Iron and Steel
- D Electric Locomotives

**Answer: B**

**Question 36**

**One of the following expenditure is an example of investment expenditure,**

- A an entrepreneur purchasing a computer for domestic use.
- B a firm purchasing raw materials for final production.
- C an entrepreneur buying plane tickets for a family trip,
- D a firm purchasing computer for smooth maintenance of accounts.

**Answer: D**

**Question 37**

**Point out the incorrect pair :**

- A Green Revolution - Agricultural Development
- B White Revolution - Dairy Development
- C Blue Revolution - Development of Fisheries
- D Operation Flood - Irrigation Development

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Answer: D

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### Question 38

Steel sheets used in the production of furnitures is an example of

- A an intermediate good
- B a final good
- C an investment good
- D a consumption good

Answer: A

### Question 39

Which of the following is not an economic activity ?

- A A labourer working in a factory.
- B A CRPF jawan guarding country's borders.
- C A teacher teaching his own son.
- D A farmer tilling his own land.

Answer: C

### Question 40

Which of the following pairs is incorrect ?

- A Comrade - Mohammed Ali
- B Indian Sociologist - Lala Har Dayal
- C Young India - Lala Lajpat Rai
- D Common Weal - Annie Besant

Answer: C

### Explanation:

Young India was a weekly paper published by MOHANDAS KARAMCHAND GANHI from 1919 to 1931

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### Question 41

Indian economy is an example of a mixed economy because,

- A urban sector coexists with vast rural sector
- B traditional subsistence economy coexists with modern economy
- C private sector coexists with public sector enterprises

D monopoly elements coexist with competitive elements

**Answer: C**

**Question 42**

**Who administers the oath of office to the President?**

- A Chief Justice of India
- B Speaker of Lok Sabha
- C Vice-President
- D Prime Minister

**Answer: A**

**Question 43**

**The President of India can be removed from his office by the**

- A Chief Justice of India
- B Parliament
- C Lok Sabha
- D Prime Minister

**Answer: B**

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**Question 44**

**With which conspiracy case Aurobindo Ghosh's name is connected ?**

- A Kakori Conspiracy Case
- B Lahore Conspiracy Case
- C Meerut Conspiracy Case
- D Alipore Conspiracy Case

**Answer: D**

**Question 45**

**Which states are involved with Cauvery River dispute ?**

- A The Central Government and Karnataka
- B The Central Government and Tamil Nadu
- C Karnataka and Tamil Nadu
- D Karnataka, Tamil Nadu, Kerala and Puduchery

**Answer: C**

**Question 46**

**Who was the founder of Swatantra Party ?**

- A B.G.Tilak
- B Dadabhai Naoroji
- C Gopal Krishna Gokhale
- D C. Rajagopalachari

**Answer: D**

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**Question 47**

**Arrange in chronological order :**

- 1: Cabinet Mission
- 2: Cripps Mission
- 3: Montague-Chelmsford Reforms
- 4: Minto-Marley Reforms

- A 3, 2, 4, 1
- B 1, 2, 3, 4
- C 4, 3, 2, 1
- D 2, 3, 4, 1

**Answer: C**

**Question 48**

**The Political Guru of Mahatma Gandhi was**

- A Dadabhai Naoroji
- B Gopal Krishna Gokhale
- C Mahadev Govind Ranade
- D Bal Gangadhar Tilak

**Answer: B**

**Question 49**

**Who is known as the 'Napoleon of India' ?**

- A Chandragupta
- B Samudragupta
- C Harshavardhana
- D Ashoka

**Answer: B**

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Question 50

Which famous Indus Valley sites is in Pakistan?

- A Lothal
- B Kalibangan
- C Alamgirpur
- D Harappa

Answer: D

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### English

#### Instructions

In the following questions, a sentence/ part of the sentence is printed in bold. Below are given alternatives to the bold sentence/part of the sentence which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is 'No Improvement'.

Question 51

He parts his hair **in the centre**.

- A at the' centre
- B near the centre
- C in the middle
- D No improvement

Answer: C

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Question 52

I can't allow to make jokes **in the class**.

- A cut
- B crack
- C break
- D No improvement

Answer: B

Question 53

Shut the window; it is **fairly** cold.

- A quiet
- B quite
- C rather
- D No improvement

**Answer: C**

**Question 54**

**She is the lady who will inaugurate the exhibition.**

- A declare the exhibition open
- B start the exhibition ,
- C begin the exhibition
- D No improvement

**Answer: D**

**Explanation:**

The given construction is correct.

The sentence is in simple future tense

Inaugurate the exhibition - means launch the exhibition.

## SSC CGL Important Questions PDF

**Question 55**

**He avoids to speak to me.**

- A to talk
- B speaking
- C speech
- D No improvement

**Answer: B**

**Explanation:**

Option B is the correct answer.

Some Infinite verbs always followed by a gerund (example -to avoid doing) and not by a to-infinitive.

So the answer should be speaking.

**Question 56**

**A major water pollutant due to the growth of large cities is the sewages.**

- A a sewage
- B a sewages
- C the sewage

D No improvement

**Answer: C**

**Explanation:**

Option C is the correct answer.

sewage means A suspension of water and solid waste, transported by sewers to be disposed of or processed. Here 'the' article should be used and sewages is not the correct form of usage.

**Question 57**

**I have just taken my meals.**

A I have just had my food

B I am done with my meals

C I finished my meals

D No improvement

**Answer: A**

**Explanation:**

Option A is the correct answer.

This sentence is in present perfect tense and had in this sentence means finished. It's the simple past form of have.

I have just had my food is grammatically correct sentence and it means Just now ate the food.

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**Question 58**

**I stayed at Henry house for a week.**

A Henry's home

B Henry's

C Henry home

D No improvement

**Answer: A**

**Explanation:**

The correct choice is A.

To show belonging or possession we use apostrophe `s'.

So Henry's house is correct answer.

**Question 59**

**The warden told the boys to quickly clean their rooms.**

A clean their rooms hastily

B clean their rooms quickly

C cleanse their rooms quickly

D No improvement



**Answer: B**

**Explanation:**

Option B is the correct answer.

In the given sentence 'to' should be followed by V1, called infinite form of verb. Adverb should be used independently.

So the correct form is to clean their rooms quickly

**Question 60**

**I needn't get up early tomorrow, shouldn't I?**

- A don't I
- B do I
- C need I
- D No improvement

**Answer: B**

**Explanation:**

correct answer is option B.

In the given sentence, need not get up is simple present tense. So the question tag should be don't I or do I.

Since the sentence has 'not', 'do I?' should be used.

## General Science Notes for SSC CGL

**Instructions**

In the following questions, out of the four alternatives, choose the one which can be substituted for the given words/sentences.

**Question 61**

**Something that is difficult to understand**

- A incomplete
- B inconclusive
- C inconceivable
- D incomprehensible

**Answer: D**

**Question 62**

**That which is arranged by conferring or discussing**

- A meeting
- B seminar
- C debate
- D negotiation

**Answer: B**

**Question 63**

**A mournful poem or a song**

- A comedy
- B tragedy
- C elegy
- D ode

**Answer: C**

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**Question 64**

**An image without objective reality**

- A shadow
- B utopia
- C sensation
- D hallucination

**Answer: D**

**Question 65**

**The branch of medical science which deals with the problems of the old**

- A oncology
- B obstetrics
- C paediatrics
- D geriatrics

**Answer: D**

**Question 66**

**A child secretly changed for another in infancy**

- A nipper
- B changeling
- C tiddler
- D tyke

**Answer: B**

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**Question 67**

One who suffers for one's faith

- A prophet
- B mystic
- C seer
- D martyr

**Answer: D**

**Instructions**

In the following questions, four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word as your answer.

**Question 68**

- A Diploreable
- B Deploreable
- C Deplorable
- D Diplorable

**Answer: C**

**Question 69**

- A Surreptious
- B Surreptitious
- C Surreptituous
- D Surrepititious

**Answer: B**

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**Instructions**

In the following questions, read the passage carefully and choose the best answer to each question out of the four alternatives.

Half a century ago, a person was far More likely to die from heart disease. Now, cancer is the No. 1 cause of death. Troubling as this sounds, the comparison is unfair. Cancer is, by far the harder problem a condition deeply ingrained in the nature of multicellular life. Given these obstacles, cancer researchers are fighting and even winning smaller battles : reducing the death toll from childhood cancers and preventing and sometimes even curing cancers that strike people in their prime. But when it comes to diseases of the elderly, there can be no decisive victory.

The diseases that one killed earlier in life bubonic plague, smallpox, influenza, tuberculosis were easier obstacles. Each had a precise cause that could be confronted. The toll of heart diseases has been pushed into the future, with diet, exercise and medicine that help control blood pressure and cholesterol. Because of these interventions people between 55 and 84 are increasingly more likely to die from cancer than from heart disease.

**Question 70**

The author believes that heart disease is no longer a leading killer disease because

- A people between the ages of 55 to 84 are not affected by it.
- B the factors that lead to heart disease do not exist any longer.
- C the factors that lead to heart disease have been brought under control through medical intervention.
- D people live a healthier and fulfilling life today.

**Answer: C**

**Question 71**

**Which of the following statements is UNTRUE (with reference to the given passage)?**

- A Killer diseases like the plague were easier to deal with compared to cancer.
- B Cancer researchers have managed to reduce the number of deaths among children suffering from cancer.
- C The greatest problem faced by cancer researchers is in the complex condition and nature of multicellular life.
- D Cancer researchers have achieved the greatest victory by containing this disease among the elderly.

**Answer: D**

**Question 72**

**"The toll of heart disease has been pushed into the future" means that**

- A There is less chance for people to die of cancer in the present moment.
- B The number of people affected by heart disease has increased.
- C The number of people killed by heart disease will increase in future.
- D People suffering from heart disease today are less likely to die from it immediately.

**Answer: D**

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**Question 73**

**"Cancer is by far the harder problem". (Improve the sentence)**

- A a tougher problem
- B a more difficult problem
- C a firmer problem
- D the most complex problem

**Answer: B**

**Question 74**

**According to the writer, why is cancer more difficult to deal with than heart disease?**

- A Because more people lost their lives to heart diseases 50 years ago.
- B Cancer does not have a precise cause and is more complex in nature.
- C Cancer defies detection at an early stage and therefore is not curable.
- D Fewer people suffer from heart disease than cancer.

**Answer: B**

### Instructions

In the following questions, read the passage carefully and choose the best answer to each question out of the four alternatives.

It is strange that, according to his position in life, an extravagant man is admired or despised. A successful businessman does nothing to increase his popularity by being careful with his money. He is expected to display his success, to have a smart car, an expensive life, and to be lavish with his hospitality. If he is not so, he is considered mean and his reputation in business may even suffer in consequence.

The paradox remains that if he had not been careful with his money in the first place, he would never have achieved his present wealth. Among the two income groups, a different set of values exists. The young clerk who makes his wife a present of a new dress when he hadn't paid his house rent, is condemned as extravagant. Carefulness with money to the point of meanness is applauded as a virtue. Nothing in his life is considered more worthy than paying his bills. The ideal wife for such a man separates her housekeeping money into joyless little piles, and she is able to face the milkman with equanimity and never knows the guilt of buying something she can't really afford.

### Question 75

The phrase 'lavish with his hospitality' here means :

- A miserliness in dealing with his friends.
- B considerateness in spending on guests and strang-
- C extravagance in entertaining guests.
- D Indifference in treating his friends and relatives.

**Answer: C**

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### Question 76

We understand from the passage that

- A all mean people are wealthy.
- B wealthy people are invariably successful
- C carefulness generally leads to failure.
- D being thrifty may lead to success.

**Answer: D**

### Question 77

How does the housewife, according to the writer, feel when she saves money?

- A She feels she needs to be thrifty

- B Wishes life is less burdensome
- C She is troubled by a sense of guilt
- D Wishes she could sometimes be extravagant

**Answer: B**

**Question 78**

**The statement 'she is able to face the milkman with equanimity' implies that**

- A She is not upset as she has been paying the milkman his dues regularly.
- B She loses her nerve at the sight of the milkman who always demands his dues.
- C She manages to keep cool when she confronts the milkman
- D She remains composed and confident as she knows that she can handle the milkman.

**Answer: A**

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**Question 79**

**In the opinion of the writer, a successful businessman**

- A is more popular if he appears to be doing nothing
- B should not bother about his popularity.
- C must be extravagant before achieving success.
- D is expected to have expensive taste.

**Answer: B**

**Instructions**

In the following questions, some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error. The number of that part is the answer. If a sentence is free from error, your answer is (4) i.e. No error.

**Question 80**

**After he was caught cheating he was disqualified to appear at the examination.**

- A After he was caught cheating
- B he was disqualified
- C to appear at the examination
- D No error

**Answer: C**

**Explanation:**

Part C is having error in it.

Instead of 'at', 'in' should be used.

At is used to denote the place. It is used wrongly in the sentence.

**Question 81**

**She stopped singing as soon as the telephone rings from across the hall.**

- A She stopped singing
- B as soon as the telephone
- C rings from across the hall
- D No error

**Answer: C**

**Explanation:**

Part C is having error in it.

In this sentence two incidents(stopped singing and call from the hall) happened in the past frequently one after another.

So rang should be used instead of rings.

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**Question 82**

**The old curtains were torn and they flapped in the light breeze.**

- A The old curtains were torn
- B and they flapped
- C in the light breeze
- D No error

**Answer: D**

**Explanation:**

Option D is the correct answer.

Given sentence is not having any error in it.

Sentence is contextually and grammatically correct.

**Question 83**

**I do not know who you consider to be the best dancer.**

- A I do not know
- B who you consider
- C to be the best dancer
- D No error

**Answer: C**

**Explanation:**

The error is in the part C.

Replace `to be' with `as'.

After consider we will use `as' here.

As - if we want to convey the actual meaning/definite things we will use `as'.

**Question 84**

**So hoarse he was that he could not make the speech.**

- A So hoarse he was
- B that he could not make
- C the speech
- D No error

**Answer: A**

**Explanation:**

Part A Contains error.

**Hoarse** means quite harsh voice or husky voice.

He was sounding so hoarse that he could not make the speech.

(The word hoarse is an adjective, and it is used in terms (Of a person's voice)

So correct order should be -

He was so hoarse he could not make the speech.

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**Instructions**

In the following questions, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four as your answer.

**Question 85**

**The crop will fail ..... it rains this week.**

- A unless
- B until
- C till
- D when

**Answer: B**

**Explanation:**

The correct answer is option -B

Until -up to the time of something,before a time,upto the time that (a condition becomes true),before (a condition becoming true).

So usage of `until' is correct.

Unless -It show condition.

Till -up to (the time that),during,as long as.

When- a what time,at or on which (referring to a time or circumstance),after which; and just then (implying suddenness).

As per the context,Until is the option which best fits here.

**Question 86**

**"She decided to..... as the competition was quite stiff."**

- A stand out



- B leave
- C get out
- D stand down

**Answer: D**

**Explanation:**

Option D is the correct answer.

Stand out means To be extraordinary and different or to have features and qualities which make someone or something special.

Stand down means To withdraw or retire from a position or from a team.

Get out means to leave or escape.

So option D best fits the sentence.

**Question 87**

**If she were selected, she..... a good secretary.**

- A would make
- B will .make
- C can make
- D would have made

**Answer: A**

**Explanation:**

Option A is the correct answer.

If in main clause 'were' is present, in subordinate clause 'would' should be used.

So If she were selected, she would make a good secretary is the correct answer.

## SSC CGL Free Mock Test

**Question 88**

**He worked .....of his ability.**

- A at the best
- B with the best
- C in the best
- D to the best

**Answer: D**

**Explanation:**

The correct answer is option -D

To the best of his ability- To the limit of one's skills, resources, or energy; as well as one is able to do.To do as much as you can.

Remaining options are grammatically incorrect.

**Question 89**

**The Chief Mifiister asked her officers to..... the process of procuring food for the poor from the market.**

- A speed up
- B expedite
- C hasten
- D do fast

**Answer: B**

**Explanation:**

The correct answer is option number -B

Expedite- (v)- make happen faster, accelerate.

After preposition `To' **expedite** suits very well here.

Meaning of other options

1)Speed up-(v) -hurry,speed, faster.

2)Hasten-(v)-hurry

3) do fast (v)- hurry.

So contextually,option B suits here.

**Instructions**

In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

**Question 90**

**Bumptious**

- A Uncouth
- B Conceited
- C Rude
- D Shrewd

**Answer: B**

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**Question 91**

**Ostracize**

- A Evacuate
- B Excavate
- C Expel
- D Extradite

**Answer: C**

**Question 92**

**Bane**

- A Challenge

- B Curse
- C Danger
- D Threat

**Answer: B**

**Instructions**

In the following questions, choose the word opposite in meaning to the given word.

**Question 93**

**Arrogant**

- A Favourable
- B Illiterate
- C Kind
- D Humble

**Answer: D**

**SSC CGL Tier-2 Previous Papers PDF**

**Question 94**

**Impoverished**

- A Pure
- B Affluent
- C Important
- D Efficient

**Answer: B**

**Question 95**

**Affirmed**

- A Contradicted
- B Opposed
- C Disputed
- D Denied

**Answer: D**

**Instructions**

In each of the following questions, four alternatives are given for the Idiom/ Phrase printed in bold in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase as your answer.

**Question 96**

**Anand is a nice guy, but sometimes he really gets on my nerves.**

- A makes me nervous
- B shakes my self-confidence
- C annoys me
- D makes me uncomfortable

**Answer: C**

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### Question 97

As a student, you should catch time by the forelock.

- A speed up
- B set up clock back
- C slow down
- D seize opportunity

**Answer: D**

### Question 98

Receiving his first award was a shot in the arm for him.

- A something that gives encouragement
- B something that is painful
- C something that needs attention
- D something done with a purpose

**Answer: A**

### Question 99

It is sometimes wiser to rely on horse sense than on the advice of colleagues.

- A advice of parents
- B advice of teachers
- C advice of colleagues
- D basic common sense

**Answer: D**

## SSC CGL Important Questions PDF

### Question 100

Nehru, the first Prime Minister of India, was a man of letters.

- A a great letter-writer
- B a great politician
- C a literary person
- D a great patriot

Answer: C

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### Reasoning

#### Instructions

In each of the following questions, a series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

#### Question 101

325, 259, 204, 160, 127, 105, ?

- A 94
- B 96
- C 98
- D 100

Answer: A

#### Explanation:

here the given pattern is 325, 259, 204, 160, 127, 105, ?

and so let the missing number be y

here we can see that

$$259 - 325 = -66$$

$$204 - 259 = -55$$

$$160 - 204 = -44$$

$$127 - 160 = -33$$

$$105 - 127 = -22$$

here we can see that every time the difference is reducing by -11

$$\text{so, } y - 105 = -11$$

$$y = 94$$

## General Science Notes for SSC CGL

#### Question 102

AZBY, CXDW, EVFU, ?

- A SHTG
- B GXHW

- C GTHS
- D STHO

**Answer: C**

**Explanation:**

AZBY:

A is the first letter in the alphabetical series. It is followed by the first letter from the last, Z.  
B is the second letter in the alphabetical series. It is followed by the second last letter, Y.

The next term starts with 'C', the letter following B.

CXDW:

C is the third letter from the start and X is the third letter from the end.  
D is the fourth letter from the start and W is the fourth letter from the end.

The next term starts with 'E', the letter following D.

EVFU:

E is the fifth letter from the start and V is the fifth letter from the end.  
F is the sixth letter from the start and U is the sixth letter from the end.  
Logically, the next term must start with 'G'.

G is the seventh letter from the start. The seventh letter from the end is T.  
H is the eighth letter from the start. The eighth letter from the end is S.  
Therefore, the next term must be GTHS. Hence, option C is the right answer.

**Instructions**

For the following questions answer them individually

**Question 103**

**The heights of three towers are in the ratio 5 : 6 : 7. If a spider takes 15 minutes to climb the smallest tower, how much time will it take to climb the highest one?**

- A 15 minutes
- B 18 minutes
- C 21 minutes
- D 54 minutes

**Answer: C**

**Explanation:**

We know that distance=Speed × Time.

If speed is constant than,

$$\frac{\text{Distance}}{\text{Time}} = \text{constant.}$$

Let height of smallest tower be ' $5x$ '.

∴ height of largest tower will be ' $7x$ '.

Let time taken by spider to climb largest time be ' $t$ ' minutes.

$$\frac{5x}{15} = \frac{7x}{t}$$

$$t = 21$$

So, time taken by spider to climb largest tower will be 21 minutes.

Hence, Option C is correct.

**Question 104**

Ramesh has brother Suresh. Ramesh is the son of Gopal. Govind is Gopal's father. How is Suresh related to Govind?

- A Son
- B Brother
- C Grandson
- D Grandfather

**Answer:** C

**Explanation:**

Ramesh and Suresh are brothers and Ramesh is the son of Gopal

=> Suresh is also the son of Gopal.

Also, Govind is Gopal's father, => Govind is the grandfather of Suresh.

∴ Suresh is the grandson of Govind.

=> Ans - (C)

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**Question 105**

From the given alternative words, select the word which cannot be formed using the letters of the given word : ADVERTISEMENT

- A ADVISE
- B DIVERSE
- C TIME
- D REVERSE

**Answer:** D

**Explanation:**

The word ADVERTISEMENT does not contain 2 R's, and thus the word 'Reverse' cannot be formed.

=> Ans - (D)

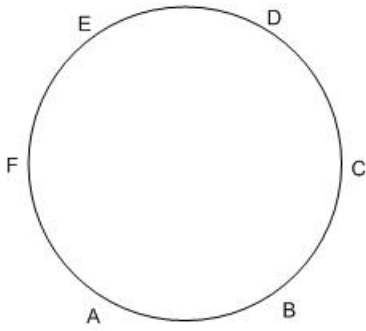
**Question 106**

Six friends A, B, C, D, E and F are sitting in a circle. C is to the left of D, F is between A and E, and E is between F and D. Who is to the left of F?

- A A
- B C
- C D
- D E

**Answer:** D

**Explanation:**



Clearly, E is to the left of F.  
Hence, Option D is correct.

**Question 107**

Given below are the jumbled letters of a word and their corresponding numbers. Select the combination of numbers that makes a meaningful word.

**C N A S P H I**  
**1 2 3 4 5 6 7**

- A 5742613
- B 2375416
- C 4572316
- D 7234516

**Answer: C**

**Explanation:**

Considering Options,  
Option A 5742613= 'PISNHCA'.  
Option B 2375416= 'NAIPSCH'.  
Option C 4572316= 'SPINACH'.  
Option D 7234516= 'INASPCH'.  
Clearly, Only Option C i.e. **SPINACH** makes sense.  
All other options are incorrect.  
Hence, Option C is correct

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**Question 108**

If **BROAD** means 19812, **CLOCK** means

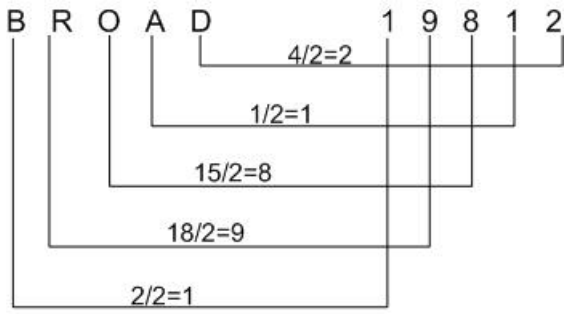
- A 68262
- B 68622
- C 26826
- D 37836

**Answer: C**

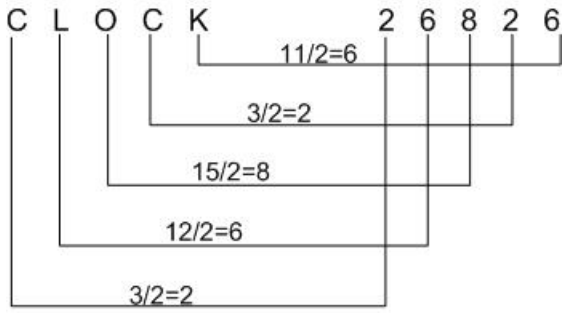
**Explanation:**

Arrange letters from A to Z and assign them numbers from 1 to 26 respectively.  
Each letters position is divided by 2 and take least integer value greater than the number.  
E.g.  $\{2/2\}=1, \{1/2\}=1$ .





Similarly,



Hence, Option C is correct.

**Question 109**

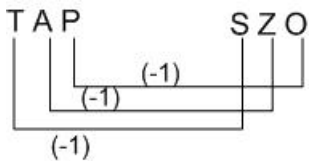
TAP is SZO, then FREEZE is

- A EQDFYG
- B EQDDYD
- C ESDFYF
- D GQFDYF

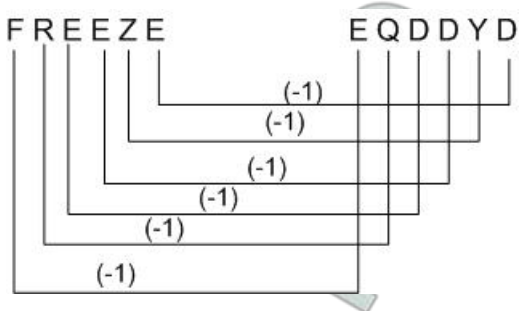
**Answer: B**

**Explanation:**

Arrange Alphabet from A to Z, then we found a relation between TAP and SZO as,



Similarly,



Hence, Option B is the correct answer.

**Question 110**

Identify the single letter, which when removed from the following words form new words.  
MINK, LAMP, TEAM, WARM

- A R
- B A
- C L
- D M

**Answer:** D

**Explanation:**

Words : MINK, LAMP, TEAM, WARM

The common letter in each word is 'M', if we remove it.

New words formed are : Ink , Lap , Tea , War which are all valid.

=> Ans - (D)

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**Question 111**

If  $876 = 12$ ,  $864 = 81$ ,  $895 = 22$ , what is  $824 = ?$

- A 14
- B 64
- C 48
- D 41

**Answer:** D

**Explanation:**

$876 - 8 + 7 + 6 = 21 = \text{Reverse of } 12.$

$864 - 8 + 6 + 4 = 18 = \text{Reverse of } 81.$

$895 - 8 + 9 + 5 = 22 = \text{Reverse of } 22.$

Hence,  $824 - 8 + 2 + 4 = 14 = \text{Reverse of } 41$

Therefore, Option D is correct.

**Question 112**

If + stands for \*, - stands for #, × stands for @ and ÷ stands for %, then which of the following statements is correct?

- A  $256 \% 16 @ 5 \# 28 = 52$
- B  $256 \# 16 \% 5 \# 28 = 120$
- C  $256 @ 5 \% 16 * 28 = 408$
- D  $256 \# 16 @ 5 \% 28 = 80$

**Answer:** A

**Explanation:**

According to sign convention as given in question,

A-  $256 \div 16 \times 5 - 28 = 52.$

A-  $16 \times 5 - 28 = 52.$

A-  $80 - 28 = 52.$

A-  $52 = 52.$

Hence, Option A is correct.

**Question 113**

Choose the appropriate combination of signs (in place of the three \*) to solve the equation.

$$(16 + 18) * (21 - 11) * 32 * 8$$

A  $- \times =$

B  $- - -$

C  $+ = -$

D  $\div - =$

**Answer:** B

**Explanation:**

According to question,

$$B - (16 + 18) - (21 - 11) = 32 - 8.$$

$$B - 34 - 12 = 24.$$

$$B - 24 = 24.$$

Hence, Option B is correct.

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**Question 114**

If MOON is coded as -2, STAR will be coded as

A -2

B 2

C 3

D -3

**Answer:** D

**Explanation:**

MOON is coded as -2

The pattern followed is that the 'negative' sign is appended to the number of consonants.

In the word 'STAR', there are 3 consonants, it is coded as = -3

=> Ans - (D)

**Instructions**

In each of the following questions, select the missing number from the given responses.

**Question 115**

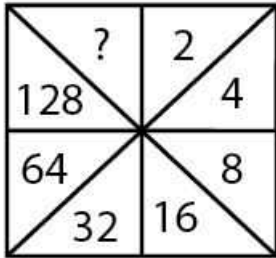
?	2
128	4
64	8
32	16

A 240

- B 246
- C 250
- D 256

Answer: D

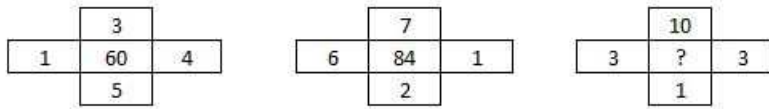
Explanation:



let the missing number be y

here we can see as we start moving in clock wise direction from "2" we will realize that every time the number is getting doubled and hence in the missing box we will fill double of 128 which is 256 and so , y = 256

Question 116



- A 70
- B 90
- C 100
- D 89

Answer: B

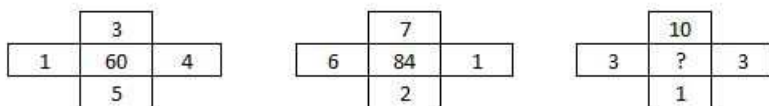
Explanation:

Here in every pattern the middle term is product of all terms surrounding it

for example ,  $60 = 1 \times 3 \times 4 \times 5$

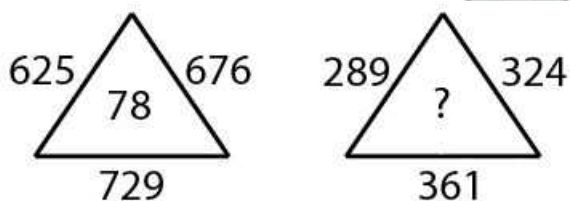
$84 = 6 \times 7 \times 1 \times 2$

and hence the missing term in third pattern is  $= 3 \times 10 \times 3 \times 1 = 90$



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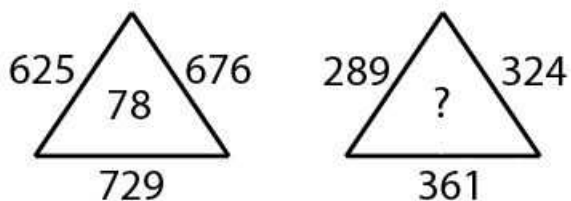
Question 117



- A 34
- B 54
- C 44
- D 64

Answer: B

Explanation:



let the missing term be y

here we can see that in first figure

$$78 = \sqrt{(625)} + \sqrt{(676)} + \sqrt{(729)}$$

and hence same pattern will follow in second figure

$$y = \sqrt{(289)} + \sqrt{(324)} + \sqrt{(361)} = 54$$

Question 118

2	3	4
4	6	8
6	9	12
36	81	?

- A 24
- B 100
- C 144
- D 64

Answer: C

Explanation:

2	3	4
4	6	8
6	9	12
36	81	?

Let the missing term be y

In this image we can see that in ever column the last term is square of the previous term , i.e

$$36 = 6^2$$

$$81 = 9^2$$

hence the missing term is going to be

$$y = 12^2 = 144$$

**Instructions**

For the following questions answer them individually

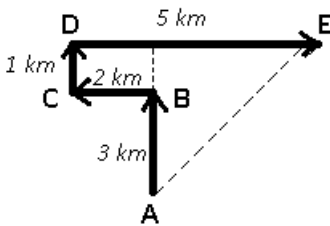
**Question 119**

A man starts from a point and moves 3 km North, then turns to West and goes 2 km. He turns North and walks 1 km and then moves 5 km towards East. How far is he from the starting point?

- A 11 km.
- B 10 km.
- C 8 km.
- D 5 km.

**Answer:** D

**Explanation:**



Let the man started from point A and travelled north to reach B for 3 km, then turned west towards point C after travelling 2 km, then again travelled north for 1 km and finally stopped at point E.

Thus,  $(AE)^2 = 4^2 + 3^2$

$\Rightarrow (AE)^2 = 16 + 9 = 25$

$\Rightarrow AE = \sqrt{25} = 5 \text{ km}$

$\Rightarrow$  Ans - (D)

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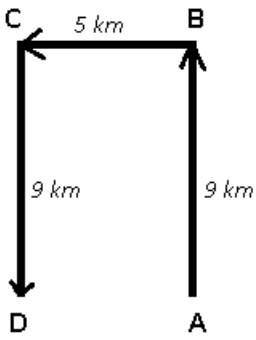
**Question 120**

Abhay travelled 9 km Northwards, turned left and travelled 5 km, then turned left again and travelled 9 km. How far is Abhay from the starting point?

- A 5 km.
- B 9 km.
- C 4 km.
- D 14 km.

**Answer:** A

**Explanation:**



Let Abhay started from point A and travelled north for 9 km and reached B, then turned left towards west and traveled 5 km, then again turned left and finally stopped at point D after travelling 9 km.

Thus,  $AD = BC = 5 \text{ km}$

$\therefore$  He is 5 km to the west of his starting point.

$\Rightarrow$  Ans - (A)

### Instructions

In each of the following questions, one or two statements is given followed by four/two conclusions, I, II, III and IV. You have to consider the statements to be true, even if it seems to be at variance from commonly known facts. You are to decide which of the given conclusions can definitely be drawn from the given statements. Indicate your answer.

### Question 121

**Statements :**

**Some boys are men.**

**No man is black.**

**Conclusions :**

**I. Some boys are not black.**

**II. Some men are boys.**

**A** Only Conclusion I follows.

**B** Only Conclusion II follows.

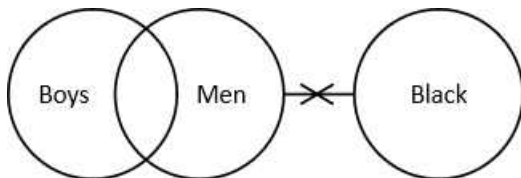
**C** Either I or II follows.

**D** Neither I nor II follows.

**Answer: A**

**Explanation:**

The venn diagram for above statements is :



**Conclusions :**

I. Some boys are not black = true since some boys are men which cannot be black.

II. Some men are boys = false

Thus, only Conclusion I follows.

$\Rightarrow$  Ans - (A)

Question 122

Statements :

All scientists working in America are talented.  
Some are Indians.

Conclusions :

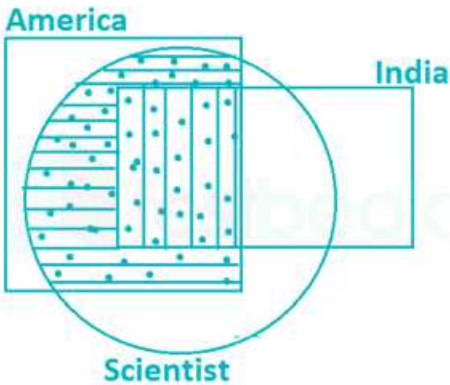
- I. None of the Indian scientists is talented.
- II. Some talented Indian scientists have migrated.
- III. All talented scientists are in America.
- IV. Some Indian scientists are talented.

- A Only Conclusion I follows.
- B Only Conclusion II follows.
- C Only Conclusion III follows
- D Conclusions II and IV follow.

Answer: D

Explanation:

The venn diagram for above statements is :



Also, American scientist = Horizontal lines , Indian scientists working in America = Vertical lines and Dots represent talent.

Conclusions :

- I. None of the Indian scientists is talented. => This isn't true as part of the rectangle is covered with 'Dots'.
- II. Some talented Indian scientists have migrated. => This is true as vertical lines part of rectangle represent Indian scientist working in America, and that part is 'dotted'.
- III. All talented scientists are in America. => This isn't true as the whole square is not dotted.
- IV. Some Indian scientists are talented. => This is true as some part of rectangle is covered with 'dots'.

Thus, conclusions II and IV follow.

=> Ans - (D)

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Instructions

In each of the following questions, select the related word/letters/number from the given alternatives.

Question 123

Book : Paper :: Bread : ?

- A Flour
- B Biscuit



C Cake

D Butter

Answer: A



**Explanation:**

A book is formed by papers, similarly bread is made by flour.

=> Ans - (A)

**Question 124**

**QDXM : SFYN :: UIOZ : ?**

A PAQM

B LPWA

C QNLA

D WKPA

Answer: D

**Explanation:**

Expression = QDXM : SFYN

The pattern followed is :

Q	D	X	M
(+2)	(+2)	(+1)	(+1)
S	F	Y	N

Similarly, for UIOZ :

U	I	O	Z
(+2)	(+2)	(+1)	(+1)
W	K	P	A

=> Ans - (D)

**Question 125**

**BAD : DDH :: CUT : ?**

A DCV

B DDX

C ECW

D EXX

Answer: D

**Explanation:**

Expression = BAD : DDH

The pattern followed is :

B	A	D
(+2)	(+3)	(+4)
D	D	H

Similarly, for CUT :

C	U	T
(+2)	(+3)	(+4)
E	X	X

=> Ans - (D)

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Question 126

4 : 64 :: 2 : ?

- A 16
- B 8
- C 22
- D 12

Answer: B

Explanation:

Expression = 4 : 64 :: 2 : ?

The pattern followed is =  $n : n^3$

Eg = 4 :  $4^3 = 4 : 64$

Similarly,  $2^3 = 8$

=> Ans - (B)

Question 127

49 : 56 :: 36 : ?

- A 52
- B 44
- C 42
- D 43

Answer: C

Explanation:

Expression = 49 : 56 :: 36 : ?

The pattern followed is =  $n^2 : n^2 + n$

Eg =  $7^2 : 7^2 + 7 = 49 : 56$

Similarly,  $6^2 + 6 = 36 + 6 = 42$

=> Ans - (C)

Question 128

Hot : Cold :: ?

- A Summer : Sun
- B Germs : Disease
- C Light : Dark

D Thin : Big

Answer: C

**Explanation:**

Hot and cold are antonyms, among the options, words which are opposite of each other are

= Light : Dark

=> Ans - (C)

## SSC CGL Free Mock Test

**Instructions**

In each of the following questions, find the odd word/letters/number pair from the given alternatives.

**Question 129**

A QRP

B RUQ

C NEM

D MAL

Answer: A

**Explanation:**

In each word, the first letter follows the last letter in the English alphabetical series.

Eg : (PQ) , (QR) , (MN) , (LM)

Also, the middle letter in the words is a vowel except for : QRP

=> Ans - (A)

**Question 130**

A ACEG

B HJLN

C MNOL

D TVXZ

Answer: C

**Explanation:**

(A) : A (+2 letters) = C (+2 letters) = E (+2 letters) = G

(B) : H (+2 letters) = J (+2 letters) = L (+2 letters) = N

(C) : M (+1 letter) = N (+1 letter) = O (-3 letters) = L

(D) : T (+2 letters) = V (+2 letters) = X (+2 letters) = Z

=> Ans - (C)

**Question 131**

A Agitate

B Affirm

C Attack

D Affect

**Answer: B**

**Explanation:**

Agitate, attack and affect are synonyms which mean to make (someone) troubled or nervous. Thus, affirm is the odd one.

=> Ans - (B)

## SSC CGL Previous Papers (DOWNLOAD PDF)

**Question 132**

A 35 - 66

B 71 - 94

C 24 - 57

D 56 - 70

**Answer: D**

**Explanation:**

The difference between each number is odd, except for the last one, hence it is the odd one.

$$66 - 35 = 31$$

$$94 - 71 = 23$$

$$57 - 24 = 33$$

$$70 - 56 = 14 \text{ (even)}$$

=> Ans - (D)

**Question 133**

A 125

B 343

C 516

D 729

**Answer: C**

**Explanation:**

All the numbers except for the third one are perfect cubes.

$$125 = 5^3, 343 = 7^3 \text{ and } 729 = 9^3$$

=> Ans - (C)

**Question 134**

A Perimeter

B Area

C Density

D Distance

**Answer: C**

**Explanation:**

Perimeter, area and distance are scalar quantities while density measure the degree of compactness of a substance, hence it is the odd one out.

=> Ans - (C)

## SSC CGL Tier-2 Previous Papers PDF

**Instructions**

In each the following questions, which one of the given responses would be a meaningful order of the following?

**Question 135**

1. Book
2. Pulp
3. Timber
4. Jungle (Forest)
5. Paper

- A 3, 2, 5, 1, 4  
B 2, 5, 1, 4, 3  
C 4, 3, 2, 5, 1  
D 5, 4, 3, 1, 2

**Answer: C**

**Explanation:**

Timber (wood) is obtained from forest. Thus, forest will be at first position, then pulp is extracted. Then it is used to make paper, and books are formed by papers.

Thus, correct order is : Forest -> Timber -> Pulp -> Paper -> Book

≡ 4, 3, 2, 5, 1

=> Ans - (C)

**Question 136**

1. Pollution
2. Population
3. Death
4. Disease

- A 2, 3, 4, 1  
B 3, 4, 2, 1  
C 2, 1, 4, 3  
D 1, 2, 3, 4

**Answer: C**

**Explanation:**

Due to high population, pollution is increased which results in disease and then death.

Thus, Population -> Pollution -> Disease -> Death

≡ 2, 1, 4, 3

=> Ans - (C)

**Instructions**

For the following questions answer them individually

**Question 137**

**Which number is wrong in the given series?**

**12439, 23549, 34659, 45769**

- A 34659
- B 23549
- C 45769
- D 12439

**Answer:** A

**Explanation:**

here we need to find the wrong number in 12439, 23549, 34659, 45769

as we will add the digits of every number

$$12439 : 1+2+3+4+9 = 19$$

$$23549 : 2+3+5+4+9 = 23$$

$$34659 : 3+4+6+5+9 = 27$$

$$45769 : 4+5+7+6+9 = 31$$

As we can see that in every case the sum of digits of number is a prime number except in case of 34659 and hence 34659 is the odd one out

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**Question 138**

**Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?**

**l\_b\_ub\_ubt\_blu\_tub**

- A ubtlu
- B utlub
- C tulbu
- D butlu

**Answer:** B

**Explanation:**

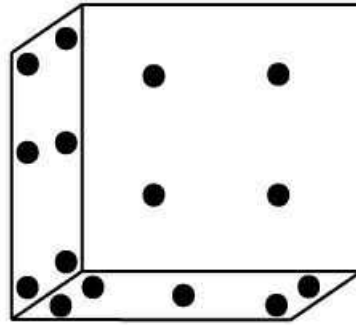
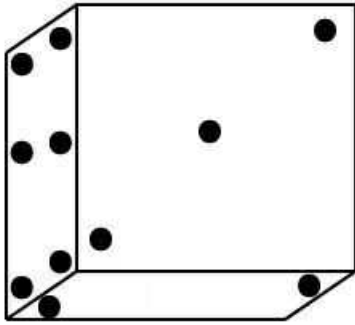
The pattern followed is that, in a group of three letters, two alternate words 'lub' and 'tub' are written.

=> **lub tub lub tub lub tub**

=> **Ans - (B) : utlub**

Question 139

Identify the number at the bottom when the top is 5 in a dice.



A 2

B 3

C 4

D 6

Answer: A

**Explanation:**

From the both positions of dice, it is clear that-  
No. 6 has 2,3,4,5 as its adjacent faces.

Hence, 1 is opposite to 6.

Rotating the first dice along face containing No. 6, we get Second position of dice.

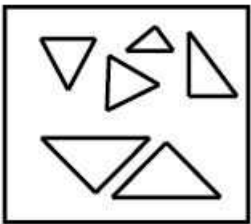
Hence, 4 is opposite to 3 and 2 is opposite to 5.

Hence, When 5 is at the top, 2 is at the bottom.

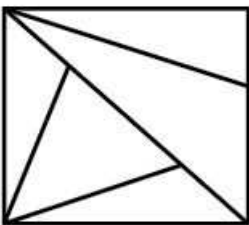
Therefore, Option A is correct.

Question 140

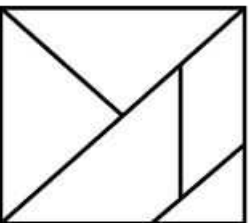
Identify the answer figure from which the pieces given in the question figure have been cut.

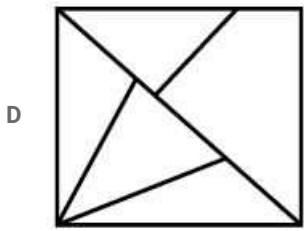
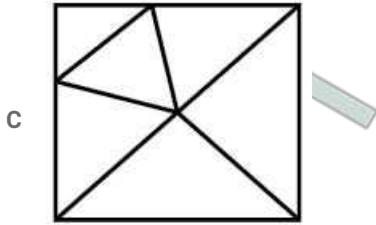


A



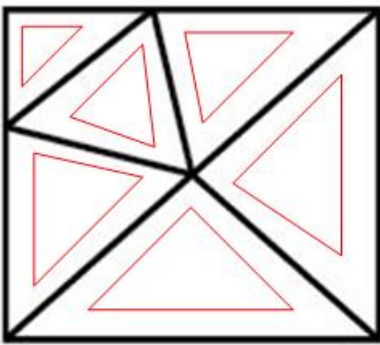
B



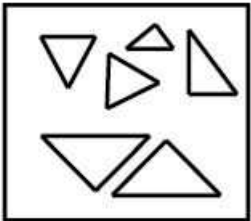


Answer: C

Explanation:



From above figure, We can obtain parts as-

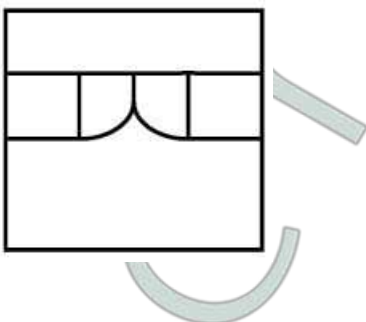


Hence, Option C is correct.

## SSC CGL Important Questions PDF

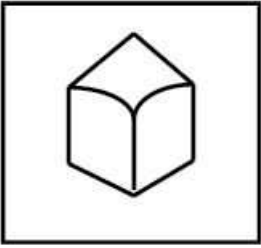
Question 141

Which of the following figures will be formed when the figure given in the question is folded?

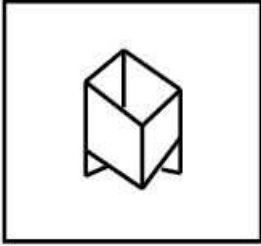




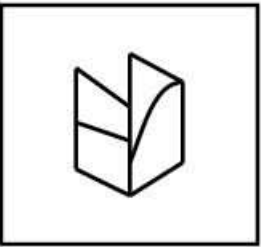
A



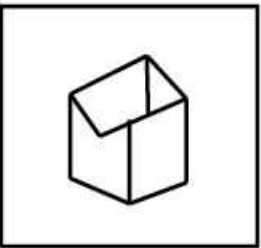
B



C



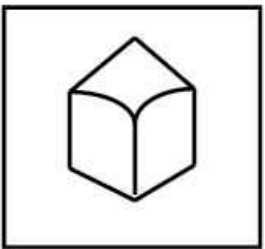
D



Answer: A

Explanation:

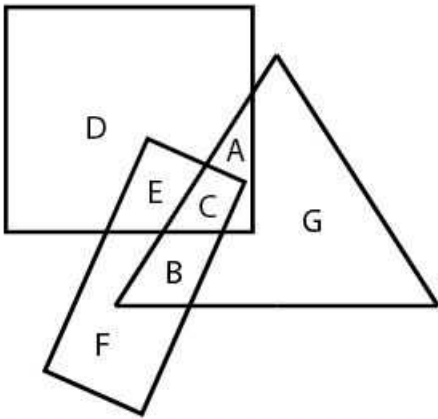
After folding the paper, we get-



Hence, Option A is correct.

Question 142

In the following diagram, the square represents college students, the triangle represents artists, the parallelogram represents singers. Which region best represents college students who are artists as well as singers?



A G

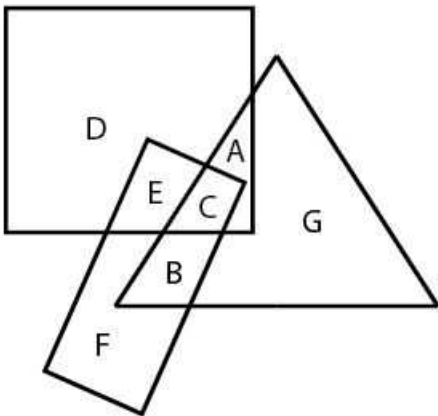
B C

C E

D B

Answer: B

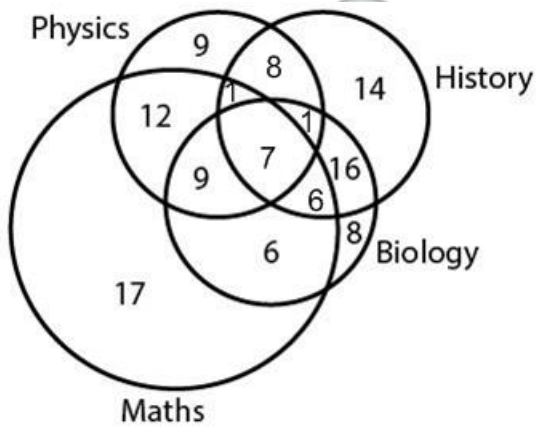
Explanation:



From the figure the college students who are artists as well as singers are those which are common to all the three figures. Only C represents such a condition. Hence, Option B is correct.

Question 143

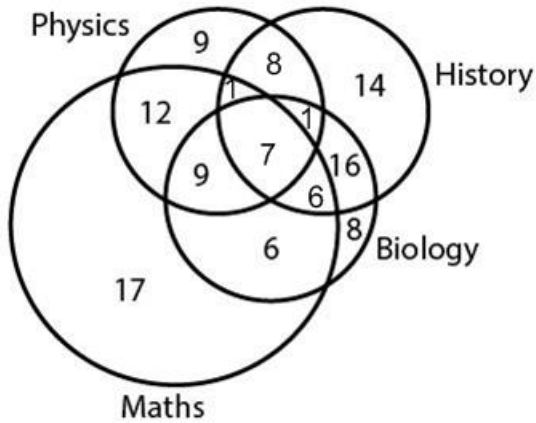
The diagram represents the number of students studying different subjects. What is the number of students who study both History and Biology ?



- A 4
- B 16
- C 30
- D 26

Answer: C

Explanation:



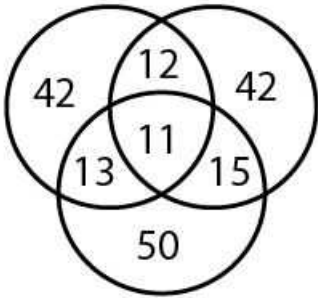
Hence, No. of students who study history and biology =  $16 + 7 + 6 + 1$ .  
= 30.

Hence, Option C is correct.

**1500 + Free Must Solved SSC Questions (With Solutions)**

Question 144

The diagram given below shows number of students who got distinction in three subjects out of 500 students. What is the percentage of students who got distinction in all subjects?



A 10.2

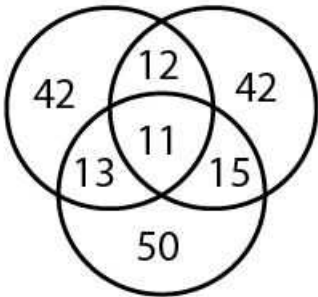
B 8

C 10

D 2.2

Answer: D

Explanation:



Total no. of students in the class = 500

No. of students who got distinction in all three subjects=11.

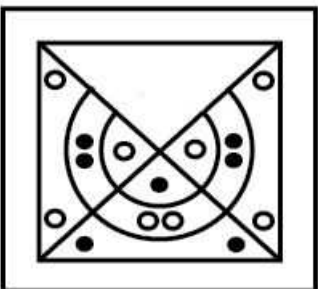
Percentage of students who got distinction in all three subjects=  $\frac{11}{500} \times 100$ .  
=2.2%

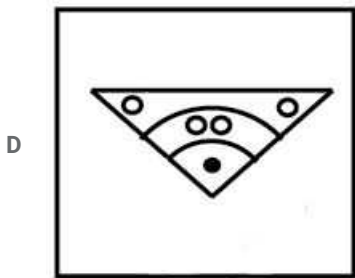
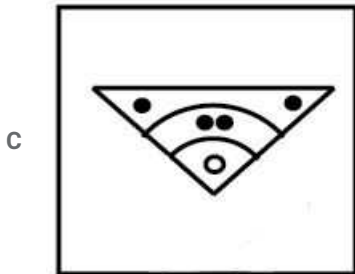
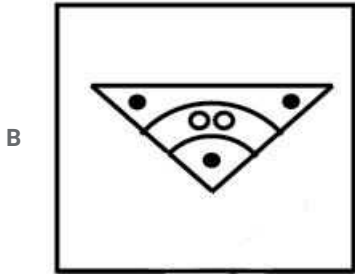
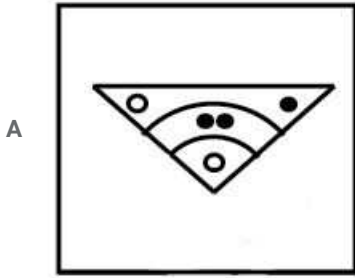
Hence, Option D is the correct answer.

Instructions

In the following questions, which answer figure will complete the pattern in the question figure?

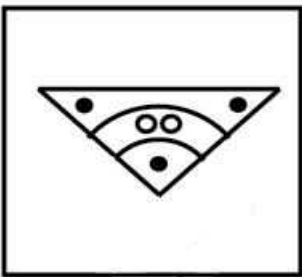
Question 145



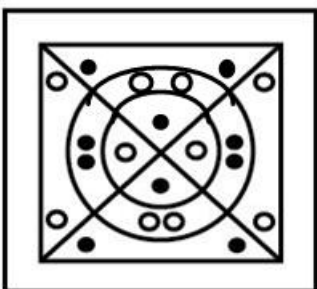


Answer: B

Explanation:

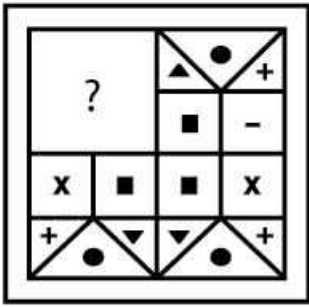


fits the figure.

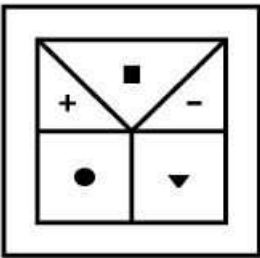


Hence, Option B is correct.

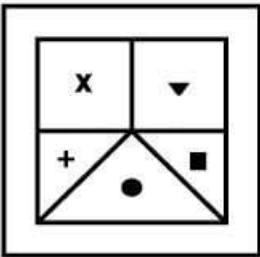
Question 146



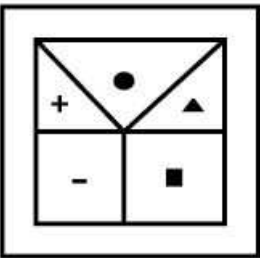
A



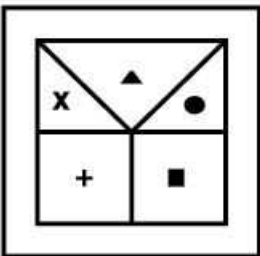
B



C

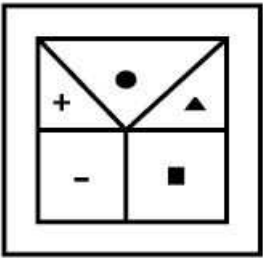


D

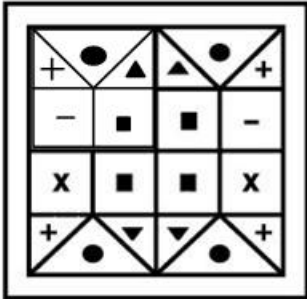


Answer: C

Explanation:



fits the figure.



Hence, Option C is correct.

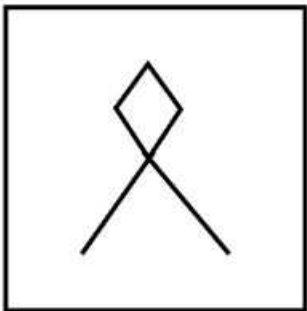
## General Science Notes for SSC CGL

### Instructions

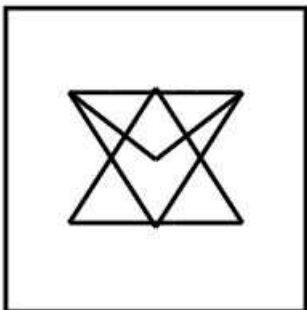
For the following questions answer them individually

### Question 147

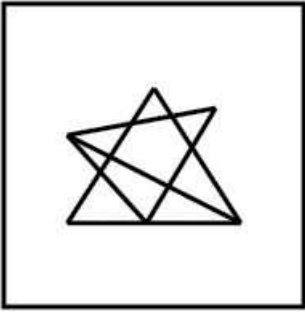
From the given answer figures, select, the one in which the question figure is hidden embedded.



A



B



C



D

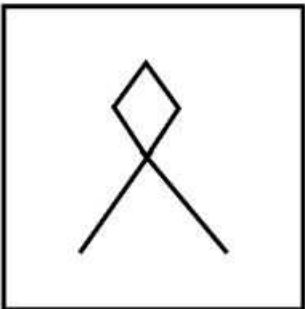


Answer: C

Explanation:



From above figures, we can obtain

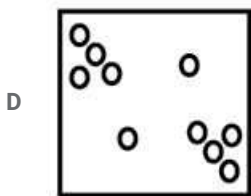
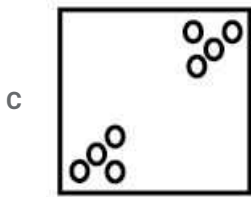
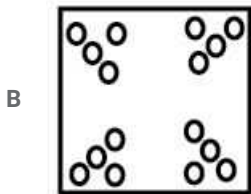
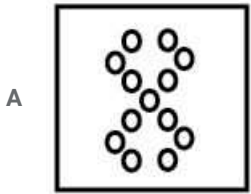
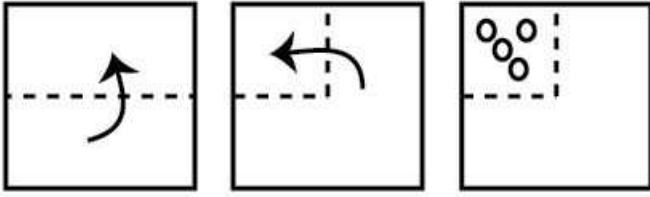


Hence, Option C is correct.



Question 148

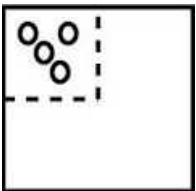
A piece of paper is folded and cut as shown below in the question figure. From the given answer figures, indicate how it will appear when opened.



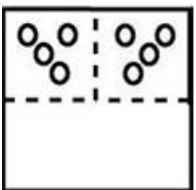
Answer: B

**Explanation:**

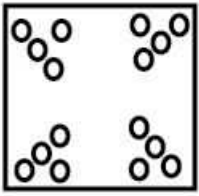
After folding and cutting the paper, we get-  
Stage 1,



Stage 2,



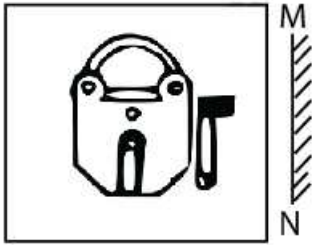
Stage 3,



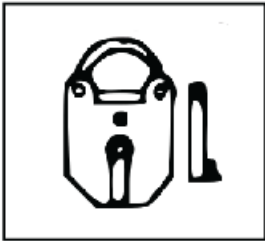
Hence, Option B is correct.

Question 149

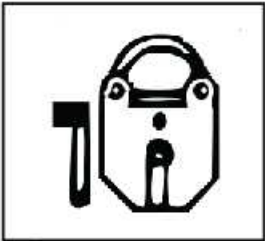
If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?



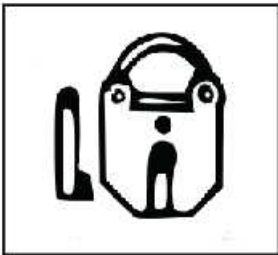
A



B



C

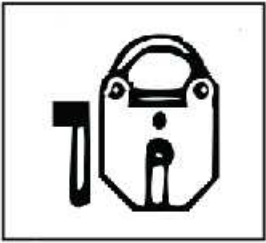


D

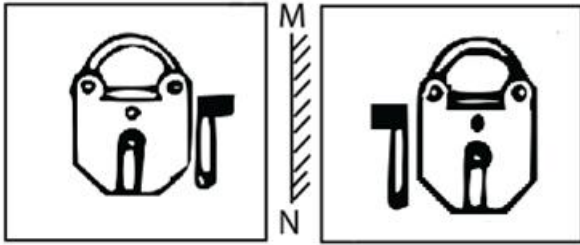


Answer: B

Explanation:



fits the image.



Hence, Option B is correct.

## Free SSC Study Material (18,000 Solved Questions)

### Question 150

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, e.g., 'A' can be represented by 01, 14 etc. and T can be represented by 55, 68 etc. Similarly, you have to identify the set for the word PERSON'.

MATRIX I

	0	1	2	3	4
0	R	A	S	E	N
1	N	E	S	R	A
2	E	A	R	N	S
3	A	S	N	R	E
4	E	A	R	N	S

MATRIX II

	5	6	7	8	9
5	T	O	P	I	C
6	C	P	O	T	I
7	P	O	T	C	I
8	T	O	P	I	C
9	I	P	O	T	C

- A 66, 03, 10, 33, 56, 03
- B 96, 12, 32, 40, 77, 34
- C 75, 20, 43, 04, 98, 42
- D 87, 11, 22, 24, 67, 04

Answer: D

**Explanation:**

From matrix I and matrix II,  
87=P.  
11=E.  
22=R.  
24=S.  
67=O.  
04=N.  
Hence, Option D is correct.

**SSC Exam Free Videos (Youtube)**

**Quant**

**Instructions**

For the following questions answer them individually

**Question 151**

A train travels 500 m in first minute. In the next 4 minutes, it travels in each minute 125 m more than that in the previous minute. The average speed per hour of the train during those 5 minutes will be

- A 30 km/hr
- B 45 km/hr
- C 50 km/hr
- D 55 km/hr

**Answer: B**

**Explanation:**

Distance travelled by the train in the first minute = 500m

In the second minute = 500+125 = 625m

In the third minute = 625+125 = 750m

Similarly in the 4th and 5th minutes distance travelled will be 875m and 1000m respectively.

Total distance travelled = 500+625+750+875+1000 = 3750m = 3.75 km

Total time taken = 5 min =  $\frac{1}{12}$  hour

Average speed =  $\frac{3.75}{\frac{1}{12}} = 3.75 * 12$   
= 45 kmph

**SSC Free Preparation App**

**Question 152**

If ratio of principal and simple interest for 1 year is 25 : 1, then the rate of interest is

- A 4%
- B 25%
- C 5%
- D 20%

**Answer: A**

**Explanation:**

Let the principal amount be P and Rate of interest be R and time period be T

$$SI = \frac{P \times R \times T}{100}$$

Given that :

$$\frac{P}{100} = \frac{25}{1}$$

T = 1 year

$$\frac{100}{R} = \frac{25}{1}$$

R = 4 %

**Question 153**

If a man running at 15 kmph crosses a bridge in 5 minutes, the length of the bridge is

- A 1000 metres
- B 500 metres
- C 750 metres
- D 1250 metres

**Answer:** D

**Explanation:**

The length of the bridge will be equal to the distance covered by the man in 5 minutes at speed of 15 kmph.

$$\text{Time} = 5 \text{ min} = \frac{1}{12} \text{ hr}$$

Distance = speed \* time

$$= 15 * \frac{1}{12} = 1.25 \text{ km}$$

$$= 1.25 * 1000 \text{ m} = 1250 \text{ m}$$

**Question 154**

If  $\frac{p^2}{q^2} + \frac{q^2}{p^2} = 1$  then the value of  $(p^6 + q^6)$  is

- A 0
- B 1
- C 2
- D 3

**Answer:** A

**Explanation:**

$$\text{Expression : } \frac{p^2}{q^2} + \frac{q^2}{p^2} = 1$$

$$\Rightarrow \frac{p^4 + q^4}{p^2 q^2} = 1$$

$$\Rightarrow p^4 + q^4 = p^2 q^2 \text{ -----Eqn(1)}$$

Now, to find :  $(p^6 + q^6)$

$$\Rightarrow (p^2)^3 + (q^2)^3$$

Using the formula,  $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$

$$\Rightarrow (p^2 + q^2)(p^4 + q^4 - p^2q^2)$$

From eqn (1), we get :

$$\Rightarrow (p^2 + q^2)(p^2q^2 - p^2q^2)$$

$$\Rightarrow (p^2 + q^2) * 0$$

$$= 0$$

## Daily Free SSC Practice Set

### Question 155

If  $(m + 1) = \sqrt{n} + 3$  the value of  $\frac{1}{2} \left( \frac{m^3 - 6m^2 + 12m - 8}{\sqrt{n}} - n \right)$

A 0

B 1

C 2

D 3

Answer: A

Explanation:

$$\text{If } (m + 1) = \sqrt{n} + 3$$

$$\Rightarrow m - 2 = \sqrt{n} \text{ -----Eqn(1)}$$

$$\text{to find : } \frac{1}{2} \left( \frac{m^3 - 6m^2 + 12m - 8}{\sqrt{n}} - n \right)$$

$$\because (m - 2)^3 = m^3 - 6m^2 + 12m - 8$$

$$\Rightarrow \frac{1}{2} \left( \frac{(m-2)^3}{\sqrt{n}} - n \right)$$

Using eqn(1), we get :

$$\Rightarrow \frac{1}{2} \left( \frac{(\sqrt{n})^3}{\sqrt{n}} - n \right)$$

$$\Rightarrow \frac{1}{2} (n - n)$$

$$= 0$$

### Question 156

If  $x = \frac{a-b}{a+b}$ ,  $y = \frac{b-c}{b+c}$ ,  $z = \frac{c-a}{c+a}$  then  $\frac{(1-x)(1-y)(1-z)}{(1+x)(1+y)(1+z)}$  is equal to

A 1

B 0

C 2

D  $\frac{1}{2}$

Answer: A

Explanation:

$$\text{If } x = \frac{a-b}{a+b}$$

$$\Rightarrow (1 - x) = 1 - \left( \frac{a-b}{a+b} \right)$$

$$\Rightarrow (1 - x) = \frac{2b}{a+b}$$

$$\text{Similarly, } (1 + x) = \frac{2a}{a+b}$$

Applying the same method, we get :

$$\Rightarrow (1 - y) = \frac{2c}{b+c} \text{ and } \Rightarrow (1 + y) = \frac{2b}{b+c}$$

$$\Rightarrow (1 - z) = \frac{2a}{c+a} \text{ and } \Rightarrow (1 + z) = \frac{2c}{c+a}$$

Putting above values in the equation :  $\frac{(1-x)(1-y)(1-z)}{(1+x)(1+y)(1+z)}$

$$\Rightarrow \frac{\left(\frac{2b}{a+b}\right)\left(\frac{2c}{b+c}\right)\left(\frac{2a}{c+a}\right)}{\left(\frac{2a}{a+b}\right)\left(\frac{2b}{b+c}\right)\left(\frac{2c}{c+a}\right)}$$

$$\Rightarrow \frac{2a \cdot 2b \cdot 2c}{2a \cdot 2b \cdot 2c}$$

$$= 1$$

### Question 157

If  $\frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{\sqrt{7}+1}{\sqrt{7}-1} = a + \sqrt{7}b$  the values of a and b are respectively

A  $\sqrt{7}, -1$

B  $\sqrt{7}, 1$

C  $0, -\frac{2}{3}$

D  $-\frac{2}{3}, 0$

Answer: C

### Explanation:

$$\frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{\sqrt{7}+1}{\sqrt{7}-1} = a + \sqrt{7}b$$

$$\text{L.H.S.} = \frac{\sqrt{7}-1}{\sqrt{7}+1} - \frac{\sqrt{7}+1}{\sqrt{7}-1}$$

$$= \frac{(\sqrt{7}-1)^2 - (\sqrt{7}+1)^2}{(\sqrt{7}-1)(\sqrt{7}+1)}$$

$$= \frac{(7+1-2\sqrt{7}) - (7+1+2\sqrt{7})}{7-1}$$

$$= \frac{-4\sqrt{7}}{6}$$

$$= \frac{-2\sqrt{7}}{3}$$

Now, comparing with R.H.S.  $a + \sqrt{7}b$

we get,

$$a = 0 \text{ and } b = \frac{-2}{3}$$

## SSC CGL Free Online Coaching

### Question 158

The value of  $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \dots + \frac{1}{\sqrt{8}+\sqrt{9}}$  is

A 1

B 0

C 2

D  $\sqrt{2}$

Answer: C

Explanation:

$$\text{Expression: } 1 + \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2} + \sqrt{3}} + \frac{1}{\sqrt{3} + \sqrt{4}} + \dots + \frac{1}{\sqrt{8} + \sqrt{9}}$$

After rationalizing, the denominator of each term will be 1, the numerator will be

$$= \sqrt{2} - 1 + \sqrt{3} - \sqrt{2} + \sqrt{4} - \sqrt{3} + \dots + \sqrt{8} - \sqrt{7} + \sqrt{9} - \sqrt{8}$$

Now, all the terms will cancel out except

$$= \sqrt{9} - 1 = 3 - 1$$

$$= 2$$

Question 159

$$\text{If } \frac{\sqrt{a+2b} + \sqrt{a-2b}}{\sqrt{a+2b} - \sqrt{a-2b}} = \frac{\sqrt{3}}{1}, \text{ find the value of } \frac{a}{b}$$

A  $2 : \sqrt{3}$

B  $\sqrt{3} : 4$

C  $\sqrt{3} : 2$

D  $4 : \sqrt{3}$

Answer: D

Explanation:

$$\text{here in this question } \frac{\sqrt{a+2b} + \sqrt{a-2b}}{\sqrt{a+2b} - \sqrt{a-2b}} = \frac{\sqrt{3}}{1}$$

using componendo and dividendo, we will get

$$\frac{\sqrt{a+2b}}{\sqrt{a-2b}} = \frac{\sqrt{3}+1}{\sqrt{3}-1}$$

now on squaring both side and solving, we will get

$$16b = 4a\sqrt{3}$$

$$\frac{a}{b} = \frac{4}{\sqrt{3}}$$

Question 160

A point in the 4th quadrant is 6 unit away from x-axis and 7 unit away from y-axis. The point is at

A (7, -6)

B (-7, 6)

C (-6, -7)

D (-6, 7)

Answer: A

Explanation:

A point in the 4th quadrant will be in the form of  $(x, -y)$

Since, the point is 6 units away from x axis,  $\Rightarrow$  y coordinate = 6



and the point is 7 units away from y axis,  $\Rightarrow$  x coordinate = 7

$\Rightarrow$  Point = (7,-6)

## SSC CHSL Previous Question papers (download pdf)

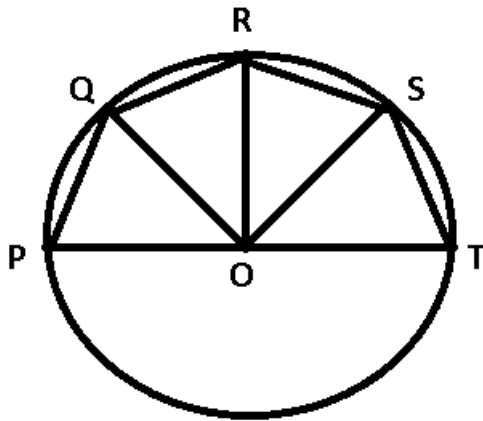
### Question 161

PQRST is a cyclic pentagon and PT is a diameter, then  $\angle PQR + \angle RST$  is equal to

- A  $180^\circ$
- B  $270^\circ$
- C  $216^\circ$
- D  $144^\circ$

Answer: B

Explanation:



Sum of interior angles of a pentagon =  $(n-2)*180^\circ$

$$= (5-2)*180^\circ = 540^\circ$$

Since, its cyclic pentagon,  $\Rightarrow PQ = QR = RS = ST$

$$\Rightarrow \angle POQ = \angle QOR = \angle ROS = \angle SOT = \frac{180^\circ}{4}$$

$$= 45^\circ$$

Also,  $OP = OQ = OR = OS = OT = \text{radii}$

$$\Rightarrow \angle OPQ = \frac{180^\circ - 45^\circ}{2} = \frac{135^\circ}{2}$$

$$\therefore \angle PQR + \angle RST$$

$$= 4 * \frac{135^\circ}{2} = 270^\circ$$

### Question 162

If  $x = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$  then  $x^3 + \frac{1}{x^3}$  is equal to

- A 98
- B 1000
- C 5
- D 970

Answer: D

Explanation:

$$x = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$$

$$\Rightarrow x = \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}} * \frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} + \sqrt{2}}$$

$$\Rightarrow x = 5 + 2\sqrt{6} \text{-----Eqn(1)}$$

$$\text{Now, } \frac{1}{x} = \frac{1}{5 + 2\sqrt{6}}$$

$$\Rightarrow \frac{1}{x} = \frac{1}{5 + 2\sqrt{6}} * \frac{5 - 2\sqrt{6}}{5 - 2\sqrt{6}}$$

$$\Rightarrow \frac{1}{x} = 5 - 2\sqrt{6} \text{-----Eqn(2)}$$

Now, cubing eqns (1)&(2), we get :

$$\Rightarrow x^3 = 125 + 72\sqrt{6} + 150\sqrt{6} + 360 = 485 + 222\sqrt{6}$$

$$\text{and } \frac{1}{x^3} = 125 - 72\sqrt{6} - 150\sqrt{6} + 360 = 485 - 222\sqrt{6}$$

To find :  $x^3 + \frac{1}{x^3}$

$$= 485 + 222\sqrt{6} + 485 - 222\sqrt{6}$$

$$= 970$$

Question 163

The distance between the centres of the two circles of radii  $r_1$ , and  $r_2$  is  $d$ . They will touch each other internally if

A  $d = r_1$  or  $r_2$

B  $d = r_1 + r_2$

C  $d = r_1 - r_2$

D  $d = \sqrt{r_1 r_2}$

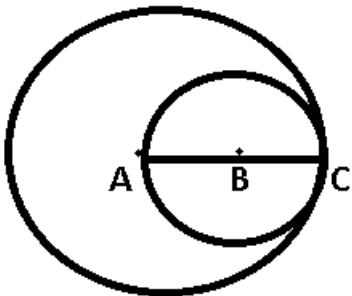
Answer: C

Explanation:

The distance between centres of two circles =  $d$

Radius of both circles =  $r_1$  and  $r_2$

For the circles to touch each other internally,



Here,  $AC = r_1$  and  $BC = r_2$

Distance between their centres =  $AB = d$

Now, clearly  $AB = AC - BC$

$$\Rightarrow d = r_1 - r_2$$

Question 164

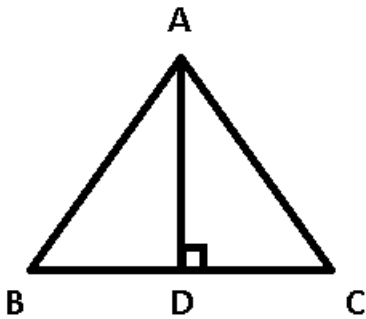
$\triangle ABC$  is an isosceles triangle with  $AB = AC = 10$  cm,  $AD = 8$  cm is the median on  $BC$  from  $A$ . The length of  $BC$  is

- A 8 cm
- B 12 cm
- C 10 cm
- D 6 cm

Answer: B

Explanation:

NOTE :- In an isosceles triangle, the median bisects at right angle.



Here,  $AB = AC = 10$  and  $AD = 8$

$AD$  is perpendicular bisector.

From  $\triangle ABD$ ,

$$\begin{aligned} BD &= \sqrt{(AB)^2 - (AD)^2} \\ &= \sqrt{10^2 - 8^2} = \sqrt{100 - 64} \\ &= 6 \end{aligned}$$

$$\Rightarrow BC = 2 \cdot BD = 2 \cdot 6 = 12 \text{ cm}$$

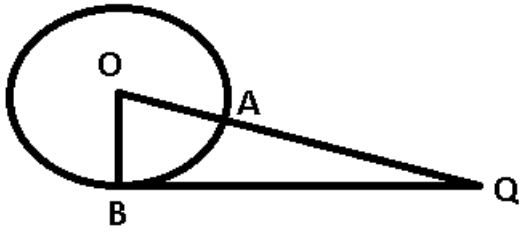
Question 165

A point  $Q$  is 13 cm from the centre of a circle. The length of the tangent drawn from  $Q$  to a circle is 12 cm. The distance of  $Q$  from the nearest point of the circle is

- A 7 cm
- B 8 cm
- C 5 cm
- D 12 cm

Answer: B

Explanation:



Here, O is the centre, QB is tangent = 12 cm

OQ = 13 cm

$\angle OBQ = 90^\circ$

From,  $\triangle OBQ$

$$OB = \sqrt{(OQ)^2 - (BQ)^2}$$

$$= \sqrt{13^2 - 12^2} = 5 \text{ cm}$$

Now, OA = OB = 5 cm (radii)

=> Shortest distance = AQ = OQ - OA

$$= 13 - 5 = 8 \text{ cm}$$

#### Question 166

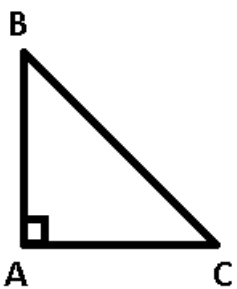
$\triangle ABC$  is a right angled triangle with AB = 6 cm, AC = 8 cm,  $\angle BAC = 90^\circ$ . Then the radius of the incircle is

- A 4 cm.
- B 2 cm.
- C 6 cm.
- D 3 cm.

Answer: B

#### Explanation:

NOTE :- Area of triangle = (semi perimeter) \* (inradius)



AB = 6 cm, AC = 8 cm and  $\angle BAC = 90^\circ$

From  $\triangle ABC$ ,

$$BC = \sqrt{(AB)^2 + (AC)^2}$$

$$= \sqrt{6^2 + 8^2} = \sqrt{36 + 64}$$

$$= 10 \text{ cm}$$

Semi perimeter of  $\triangle ABC = s$

$$= \frac{6+8+10}{2} = 12 \text{ cm}$$

$$\begin{aligned} \text{Area of } \triangle ABC &= \frac{1}{2} \cdot AB \cdot AC \\ &= \frac{1}{2} \cdot 6 \cdot 8 = 24 \text{ cm}^2 \\ \Rightarrow \text{Inradius} &= \frac{\Delta}{s} = \frac{24}{12} \\ &= 2 \text{ cm} \end{aligned}$$

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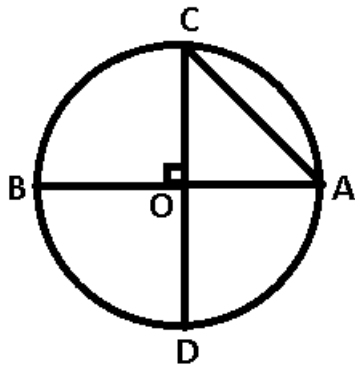
**Question 167**

In a circle with centre O, AB and CD are two diameters perpendicular to each other. The length of chord AC is

- A 2 AB
- B  $\sqrt{2}$  AB
- C  $\frac{1}{2}$  AB
- D  $\frac{1}{\sqrt{2}}$  AB

Answer: D

Explanation:



$$OA = OB = OC = \frac{AB}{2}$$

In  $\triangle OAC$

$$\begin{aligned} AC &= \sqrt{(OA)^2 + (OC)^2} \\ &= \sqrt{\left(\frac{AB}{2}\right)^2 + \left(\frac{AB}{2}\right)^2} \\ &= \sqrt{\frac{AB^2 + AB^2}{4}} = \sqrt{\frac{2AB^2}{4}} \\ &= \frac{AB}{\sqrt{2}} \end{aligned}$$

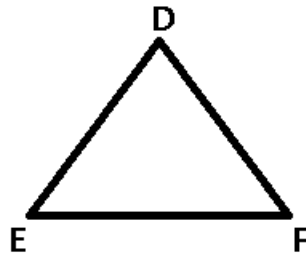
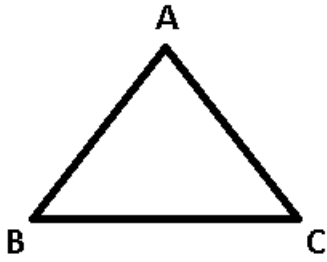
**Question 168**

$\triangle ABC$  is similar to  $\triangle DEF$ . The ratio of their perimeters is 4 : 1. The ratio of their areas is

- A 4 : 1
- B 16 : 1
- C 8 : 1
- D  $8\sqrt{2} : 1$

Answer: B

Explanation:



$$\triangle ABC \sim \triangle DEF$$

$$\therefore \frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$$

$$\Rightarrow \frac{AB+BC+AC}{DE+EF+DF} = 1$$

$\therefore$  Ratio of area of  $\triangle ABC$  to that of  $\triangle DEF$

$$= \frac{AB^2}{DE^2} = \frac{16}{1}$$

**Question 169**

The angle between the minute hand and hour hand of a clock when the time is 7:20 is equal to

- A  $45^\circ$
- B  $90^\circ$
- C  $100^\circ$
- D  $120^\circ$

Answer: C

Explanation:

$$\text{Angle between hour hand and minute hand} = |30 \times H - \frac{11}{2} \times M|$$

where, H  $\rightarrow$  hour and M  $\rightarrow$  minutes

So, at 7:20  $\Rightarrow H = 7$  &  $M = 20$

$$\Rightarrow \text{Angle} = 30 \times 7 - \frac{11}{2} \times 20$$

$$= 210 - 110 = 100^\circ$$

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**Question 170**

The value of  $\cos^2 30^\circ + \sin^2 60^\circ + \tan^2 45^\circ + \sec^2 60^\circ + \cos 0^\circ$  is

- A  $4\frac{1}{2}$
- B  $5\frac{1}{2}$
- C  $6\frac{1}{2}$
- D  $7\frac{1}{2}$

Answer: D

Explanation:

Substituting values of angles, we get,  
 $3/4 + 3/4 + 1 + 4 + 1 = 7.5$ . Option D is the right answer.

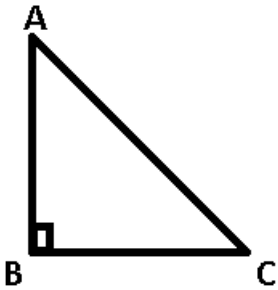
Question 171

If a 48 m tall building has a shadow of  $48\sqrt{3}$  m., then the angle of elevation of the sun is

- A  $15^\circ$
- B  $60^\circ$
- C  $45^\circ$
- D  $30^\circ$

Answer: D

Explanation:



AB = building = 48 m

BC = shadow =  $48\sqrt{3}$  m

$\angle ACB = \theta = ?$

$$\therefore \tan \theta = \frac{AB}{BC} = \frac{48}{48\sqrt{3}}$$

$$\Rightarrow \tan \theta = \frac{1}{\sqrt{3}} = \tan 30^\circ$$

$$\Rightarrow \theta = 30^\circ$$

Question 172

If  $\cos x + \cos^2 x = 1$ , then  $\sin^8 x + 2\sin^6 x + \sin^4 x$  is equal to

- A 0
- B 3
- C 2
- D 1

Answer: D

Explanation:

$$\cos x + \cos^2 x = 1$$

$$\Rightarrow \cos x = 1 - \cos^2 x$$

$$\Rightarrow \cos x = \sin^2 x$$

$$\therefore \sin^8 x + 2\sin^6 x + \sin^4 x$$

$$= (\sin^4 x + \sin^2 x)^2$$

$$= ((\cos x)^2 + \sin^2 x)^2$$

$$= (\cos^2 x + \sin^2 x)^2 = 1$$

## SSC CGL Previous Papers (DOWNLOAD PDF)

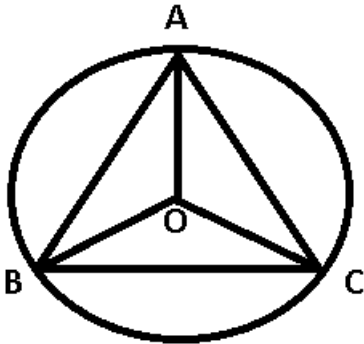
### Question 173

O is the circumcentre of the triangle ABC and  $\angle BAC = 85^\circ$ ,  $\angle BCA = 75^\circ$ , then the value of  $\angle OAC$  is

- A  $55^\circ$
- B  $150^\circ$
- C  $20^\circ$
- D  $70^\circ$

Answer: D

Explanation:



$$\angle BAC = 85^\circ$$

$$\angle BCA = 75^\circ$$

$$\Rightarrow \angle ABC = 180^\circ - (85^\circ + 75^\circ) = 20^\circ$$

Angle subtended by an arc at the centre is twice the angle subtended by it at any point on the circle.

$$\Rightarrow \angle AOC = 2\angle ABC$$

$$\Rightarrow \angle AOC = 40^\circ$$

In  $\triangle OAC$ ,  $OA = OC = \text{radii}$

$$\Rightarrow \angle OAC = \angle OCA$$

$$\Rightarrow 2\angle OAC = 180^\circ - 40^\circ = 140^\circ$$

$$\Rightarrow \angle OAC = \frac{140^\circ}{2} = 70^\circ$$

### Question 174

If  $x = p \operatorname{cosec} \theta$  and  $y = q \cot \theta$ , then the value of  $\frac{x^2}{p^2} - \frac{y^2}{q^2}$  is

- A  $\sin^2 \theta$
- B  $\tan \theta$
- C 1
- D 0



Answer: C

Explanation:

$$x = p \operatorname{cosec} \theta$$

$$\Rightarrow \operatorname{cosec} \theta = \frac{x}{p}$$

Also,  $y = q \cot \theta$

$$\Rightarrow \cot \theta = \frac{y}{q}$$

$$\therefore \operatorname{cosec}^2 \theta - \cot^2 \theta = 1$$

$$\Rightarrow \frac{x^2}{p^2} - \frac{y^2}{q^2} = 1$$

Question 175

From an aeroplane just over a straight road, the angles of depression of two consecutive kilometre stones situated at opposite sides of the aeroplane were found to be  $60^\circ$  and  $30^\circ$  respectively. The height (in km) of the aeroplane from the road at that instant was (Given  $\sqrt{3} = 1.732$ )

A 0.433

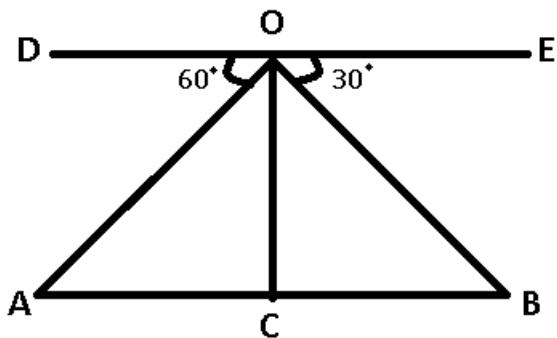
B 8.66

C 4.33

D 0.866

Answer: D

Explanation:



OC = height of plane =  $h$

$$\angle OAC = \angle DOA = 60^\circ$$

$$\angle OBC = \angle BOE = 30^\circ$$

AB = 2 and let AC =  $x$

$$\Rightarrow BC = (2 - x)$$

From,  $\triangle OAC$

$$\tan 60^\circ = \frac{OC}{AC}$$

$$\Rightarrow \sqrt{3} = \frac{h}{x}$$

$$\Rightarrow x = \frac{h}{\sqrt{3}} \text{-----Eqn(1)}$$

From,  $\triangle OBC$

$$\tan 30^\circ = \frac{OC}{BC}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{h}{2-x}$$

$$\Rightarrow \sqrt{3}h = 2 - \frac{h}{\sqrt{3}} \text{ [From eqn(1)]}$$

$$\Rightarrow \frac{3h+h}{\sqrt{3}} = 2$$

$$\Rightarrow h = \frac{2\sqrt{3}}{4} = \frac{\sqrt{3}}{2}$$

$$= \frac{1.732}{2} = 0.866$$

## SSC CGL Tier-2 Previous Papers PDF

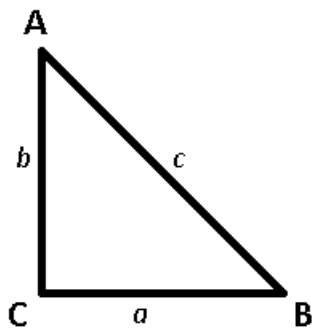
### Question 176

In  $\triangle ABC$ ,  $\angle C = 90^\circ$  and  $AB = c$ ,  $BC = a$ ,  $CA = b$ ; then the value of  $(\operatorname{cosec} B - \cos A)$  is

- A  $\frac{c^2}{ab}$
- B  $\frac{b^2}{ca}$
- C  $\frac{a^2}{bc}$
- D  $\frac{bc}{a^2}$

Answer: C

Explanation:



In  $\triangle ABC$ ,  $AB^2 = AC^2 + BC^2$

$$\Rightarrow c^2 = a^2 + b^2 \Rightarrow c^2 - b^2 = a^2$$

$$\operatorname{cosec} B = \frac{AB}{BC} = \frac{c}{b}$$

$$\cos A = \frac{AC}{AB} = \frac{b}{c}$$

$$\therefore \operatorname{cosec} B - \cos A = \frac{c}{b} - \frac{b}{c}$$

$$= \frac{c^2 - b^2}{bc} = \frac{a^2}{bc}$$

### Question 177

$$\sqrt{\sqrt{\sqrt{0.00000256}}}$$

- A 0.4
- B 0.02
- C 0.04
- D 0.2

Answer: D

Explanation:

$$\text{Expression : } \sqrt{\sqrt{\sqrt{0.00000256}}}$$

$$= \sqrt{\sqrt{0.0016}}$$

$$= \sqrt{0.04} = 0.2$$

Question 178

If 1 man or 2 women or 3 boys can do a piece of work in 44 days, then the same piece of work will be done by 1 man, 1 woman and 1 boy in

A 21 days

B 24 days

C 26 days

D 33 days

Answer: B

Explanation:

1 man  $\equiv$  2 women  $\equiv$  3 boys

$$\Rightarrow 1 \text{ man} + 1 \text{ woman} + 1 \text{ boy} \equiv 3 \text{ boys} + \frac{3}{2} \text{ boys} + 1 \text{ boy}$$

$$\equiv (3 + \frac{3}{2} + 1) \text{ boys} \equiv \frac{11}{2} \text{ boys}$$

$\therefore$  Using,  $M_1D_1 = M_2D_2$

$$\Rightarrow 3 \times 44 = \frac{11}{2} \times D_2$$

$$\Rightarrow D_2 = \frac{2 \times 3 \times 44}{11} = 24 \text{ days}$$

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Question 179

The digit in the unit place in the square root of 66049 is

A 3

B 7

C 8

D 2

Answer: B

Explanation:

Square root of 66049 = 257

Thus, unit's digit = 7

Question 180

8 workers can build a wall 18 m long, 2 m broad and 12 m high in 10 days, working 9 hours a day. Find how many workers will be able to build a wall 32 m long, 3 m broad and 9 m high in 8 days working 6 hours a day ?

A 16

- B 20
- C 30
- D 10

**Answer: C**

**Explanation:**

Using,  $\frac{M_1 * D_1 * H_1}{W_1} = \frac{M_2 * D_2 * H_2}{W_2}$

where, M -> number of men , D -> no of days ,  
H -> No of hours and W -> amount of work done

So, putting values in equation, we get :

$$M_1 = 8, M_2 = x = ?$$

$$D_1 = 10, D_2 = 8$$

$$H_1 = 9, H_2 = 6$$

$$W_1 = 18 * 2 * 12 = 432, W_2 = 32 * 3 * 9 = 864$$

$$\text{Now, } \frac{8 * 10 * 9}{432} = \frac{x * 8 * 6}{864}$$

$$\Rightarrow x = \frac{8 * 10 * 9 * 864}{432 * 8 * 6} = 30$$

**Question 181**

A leak in the bottom of a tank can empty the full tank in 6 hours. An inlet pipe fills water at the rate of 4 litres a minute. When the tank is full, the inlet is opened and due to the leak the tank is empty in 8 hours. Find the capacity of the tank.

- A 5760 litres
- B 96 litres
- C 10 litres
- D 24 litres

**Answer: A**

**Explanation:**

Part of tank filled by inlet pipe in 1 hour

$$= \frac{1}{6} - \frac{1}{8} = \frac{4-3}{24} = \frac{1}{24}$$

Hence, if there is no leak, the inlet pipe will fill the tank in 24 hours

$$\Rightarrow \text{Capacity of the tank} = 24 * 60 * 4 = 5760 \text{ litres}$$

## SSC CGL Important Questions PDF

**Question 182**

The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is equal to

- A 32%
- B 34%
- C 42%
- D 44%

**Answer: D**

**Explanation:**

let the length of rectangle be L units and breadth be B units.

So area of rectangle = L x B

As both length and breadth has been increased by 20%

So new length = 1.2L

New breadth = 1.2B

New area = 1.2L x 1.2B = 1.44LB

Percentage increase in area =  $\frac{1.44LB - LB}{LB} \times 100 = 44\%$

**Question 183**

The paint in a certain container is sufficient to paint an area equal to 9.375 m . How many bricks measuring 22.5 cm by 10 cm by 7.5 cm can be painted out of this container?

- A 200
- B 1000
- C 10
- D 100

**Answer: D**

**Explanation:**

Length of a brick = 22.5 cm

Breadth = 10 cm

Height = 7.5 cm

Total surface area of 1 brick =  $2 * (lb + bh + hl)$

=  $2 * (22.5*10 + 10*7.5 + 7.5*22.5)$

=  $2 * (225 + 75 + 168.75) = 2 * 468.75$

=  $937.5 \text{ cm}^2$

Number of bricks that can be painted =  $\frac{9.375*100*100}{937.5} = 100$

**Question 184**

The ratio between the length and the breadth of a rectangular park is 3:2. If a man cycling along the boundary of the park at the speed of 12 kmph completes one round in 8 minutes, then the area of the park is equal to

- A  $152600 \text{ m}^2$
- B  $153500 \text{ m}^2$
- C  $153600 \text{ m}^2$
- D  $153800 \text{ m}^2$

**Answer: C**

**Explanation:**

Let length of the park =  $3x$  metre and breadth =  $2x$  metre

Now, perimeter of the park = distance covered by the cyclist in one round

$$= \frac{12 \times 8}{60} = \frac{8}{5} \text{ km} = 1600 \text{ m}$$

According to question,

$$\Rightarrow 2 * (3x + 2x) = 1600$$

$$\Rightarrow x = 160$$

$$\begin{aligned} \Rightarrow \text{Area of the park} &= 3x * 2x = 6x^2 \\ &= 6 * 160 * 160 = 153600 \text{ m}^2 \end{aligned}$$

## 1500 + Free Must Solved SSC Questions (With Solutions)

### Question 185

A company showroom gives a discount of 20% on the second grade shoes and a further discount of 15% on shareholder's coupon. The total discount, a coupon holder will get is

- A 32%
- B 36%
- C 35%
- D 38%

**Answer: A**

#### Explanation:

Let original price =  $100x$

$$\text{After 1st discount of 20%} \Rightarrow \frac{20}{100} * 100x = 20x$$

$$\text{Price} = 100x - 20x = 80x$$

$$\text{After 2nd discount of 15%} \Rightarrow \frac{15}{100} * 80x = 12x$$

$$\text{Price will become} = 80x - 12x = 68x$$

$$\Rightarrow \text{Equivalent Discount \%} = \frac{100x - 68x}{100x} * 100 = 32\%$$

### Question 186

20% profit is made when a discount of 20% is given on the marked price. When the discount is 30% profit will be

- A 4%
- B 5%
- C 6%
- D 7.5%

**Answer: B**

#### Explanation:

Let C.P. =  $100x$

$$\text{Profit} = \frac{20}{100} * 100x = 20x$$

$$\Rightarrow \text{S.P.} = 100x + 20x = 120x$$

Discount % = 20%

Let M.P. =  $y$

$$\Rightarrow \frac{y-120x}{y} * 100 = 20$$

$$\Rightarrow 4y = 600x$$

$$\Rightarrow \text{M.P.} = 150x$$

$$\text{When 30\% discount is given} \Rightarrow \frac{30}{100} * 150x = 45x$$

$$\Rightarrow \text{S.P.} = 150x - 45x = 105x$$

$$\Rightarrow \text{Profit \%} = \frac{105x-100x}{100x} * 100 = 5\%$$

#### Question 187

A dealer buys a table listed at Rs. 1,500 and gets successive discounts of 20% and 10%. He spends Rs. 20 on transportation and sells it at a profit of 20%. Find the selling price of the table.

A Rs. 1,420

B Rs. 1,300

C Rs. 1,320

D Rs. 1,380

Answer: C

#### Explanation:

M.P. = 1500

$$\text{After first discount of 20\%} \Rightarrow \frac{20}{100} * 1500 = 300$$

$$\Rightarrow \text{Price after first discount} = 1500 - 300 = 1200$$

$$\text{After second discount of 10\%} \Rightarrow \frac{10}{100} * 1200 = 120$$

$$\Rightarrow \text{Price after second discount} = 1200 - 120 = 1080$$

Thus, the dealer purchased it for 1080 and spends 20 more on it

$$\Rightarrow \text{Total C.P.} = 1080 + 20 = 1100$$

$$\text{Profit} = \frac{20}{100} * 1100 = 220$$

$$\Rightarrow \text{S.P.} = 1100 + 220 = 1320$$

## General Science Notes for SSC CGL

#### Question 188

Three utensils contain equal quantity of mixtures of milk and water in the ratio 6:1, 5: 2 and 3: 1 respectively. If all the solutions are mixed together, the ratio of milk and water in the final mixture is

A 65 : 28

B 65 : 19

C 19 : 65

D 19 : 28

Answer: B

#### Explanation:

Let each vessel contain 28 litres of mixture

$$\Rightarrow \text{Total quantity of mixture in 3 containers} = 3 * 28 = 84 \text{ litres}$$

$$\Rightarrow \text{Total quantity of milk} = \left(\frac{6}{7} + \frac{5}{7} + \frac{3}{4}\right) * 28$$

$$= \frac{24+20+21}{28} * 28 = 65 \text{ litres}$$

Now, total quantity of water = 84-65 = 19 litres

$$\Rightarrow \text{Required ratio} = 65 : 19$$

**Question 189**

The average of 6 consecutive natural numbers is K. If the next two natural numbers are also included, how much more than K will the average of these 8 numbers be?

- A 3
- B 1
- C 2
- D 1.8

**Answer: B**

**Explanation:**

Let the 6 consecutive numbers be a-3, a-2, a-1, a, a+1, a+2

$$\text{average} = \frac{\text{Sum of Elements}}{\text{Number of Elements}}$$

It is given that average of 6 consecutive numbers be k and hence

$$k = \frac{a-3+a-2+a-1+a+a+1+a+2}{6} = \frac{6a-3}{6} = a - \frac{1}{2}$$

now next two numbers (a+3, a+4) are also added

$$\text{Sum of 8 numbers} = a-3+a-2+a-1+a+a+1+a+2+a+3+a+4 = 8a + 4$$

$$\text{average of 8 numbers} = \frac{8a+4}{8} = a + \frac{1}{2} = k + 1$$

so average of 8 numbers is more than average of 6 numbers by = k+1 - K = 1

**Question 190**

The incomes of A and B are in the ratio 3 : 2 and their expenditures are in the ratio 5:3. If each saves Rs. 1000, then A's income is

- A Rs. 6000
- B Rs. 4000
- C Rs. 2000
- D Rs. 5000

**Answer: A**

**Explanation:**

As incomes of A and B are in the ratio 3 : 2. So, assume incomes of A and B be 3z and 2z respectively

As the expenditure are in the ratio 5:3. So assume expenditure of A and B be 5y and 3y respectively

Now it is given that every one saves Rs 1000

$$3z - 5y = 1000 \dots\dots\dots(1)$$

$$2z - 3y = 1000 \dots\dots\dots(2)$$

Solving equations 1 and 2

$$y = \text{Rs } 1000$$

$$z = \text{Rs } 2000$$



hence income of A =  $3z = 3 \times 2000 = \text{Rs } 6000$

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### Question 191

If the cost price of 10 articles equals selling price of 9 articles, the gain or loss percent will be

- A  $11\frac{1}{9}$  % loss
- B  $1\frac{1}{9}$  % loss
- C  $1\frac{1}{9}$  % gain
- D  $11\frac{1}{9}$  % gain

**Answer:** D

#### Explanation:

Let C.P. of 1 article = 1

=> C.P. of 10 articles =  $10 \times 1 = 10$

which is equal to S.P. of 9

$$\Rightarrow \text{S.P. of 1 item} = \frac{10}{9}$$

$$\Rightarrow \text{profit \%} = \frac{\frac{10}{9} - 1}{1} \times 100$$

$$= \frac{100}{9} = 11\frac{1}{9}\%$$

### Question 192

The price of an item was increased by 10%. This reduced the monthly total sales by 20%. The overall effect on the value of monthly sales is a

- A 10% increase
- B 10% decrease
- C 12% increase
- D 12% decrease

**Answer:** D

#### Explanation:

Let us assume the price of the article to be Rs. 100. Let the number of articles sold be 100.

Total sales =  $100 \times 100 = 10,000$

Now, the price increases by 10% => New cost = Rs. 110

Sales decrease by 20% => New sales = 80 units.

Now, new sales value =  $80 \times 110 = \text{Rs. } 8800$

%age change =  $\frac{(10000 - 8800)}{10000} = \frac{1200}{10000} = 12\%$  decrease.

Option D is the right answer.

### Question 193

The mean of  $1^3, 2^3, 3^3, 4^3, 5^3, 6^3, 7^3$  is

- A 20

B 112

C 56

D 28

Answer: B

Explanation:

We know that sum of cubes of first  $n$  natural numbers is  $= \left(\frac{n(n+1)}{2}\right)^2$

and we are provided with  $1^3, 2^3, 3^3, 4^3, 5^3, 6^3, 7^3$

number of elements = 7

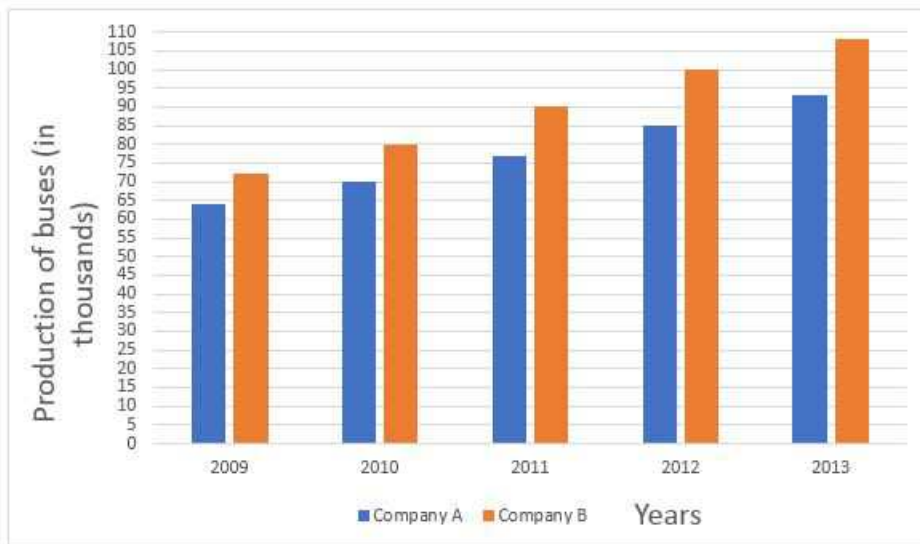
Sum of the given elements  $= \left(\frac{7(7+1)}{2}\right)^2 = 784$

Mean  $= \frac{\text{Sum of Elements}}{\text{Number of Elements}} = \frac{784}{7} = 112$

## SSC Exam Free Videos (Youtube)

Instructions

Study the following bar diagram carefully and answer the four questions. Production of buses of company A and company B over the given years.



Question 194

In which year for the company A the percentage increase of production of buses with respect to the previous year is maximum?

A 2010

B 2012

C 2011

D 2013

Answer: B

Explanation:

Total no. of buses produced by company A in (in '000s) :

2009 = 64

2010 = 70

2011 = 77

2012 = 85

2013 = 93

% increase in 2010 w.r.t previous year =  $\frac{70-64}{64} * 100 = 9.375\%$

% increase in 2011 w.r.t previous year =  $\frac{77-70}{70} * 100 = 10\%$

% increase in 2012 w.r.t previous year =  $\frac{85-77}{77} * 100 = 10.38\%$  [MAX]

% increase in 2013 w.r.t previous year =  $\frac{93-85}{85} * 100 = 9.41\%$

=> % increase in the production of buses by company A was maximum in **2012** with respect to previous year.

#### Question 195

The average production (in thousand) of the company B over the years 2009, 2011, 2012 is

A 87.33

B 80.67

C 90.33

D 84

Answer: A

#### Explanation:

Production of buses by company B (in '000s) in :

2009 = 72

2011 = 90

2012 = 100

Total production =  $72+90+100 = 262$

=> Average production over these three years =  $262/3 = 87.33$

#### Question 196

The average production (in thousand) of company A over the years 2010, 2011, 2012, 2013 is

A 74

B 81.25

C 85.5

D 81

Answer: B

#### Explanation:

No. of buses produced by company A in (in '000s) :

2010 = 70

2011 = 77

2012 = 85

2013 = 93

Total buses =  $70+77+85+93 = 325$

=> Average production over these four years =  $325/4 = 81.25$

## SSC Free Preparation App

### Question 197

The ratio of the average production of company A in 2009 and 2010 to the average production of company B in the same years is

- A 147 : 170
- B 81 : 95
- C 67 : 76
- D 85 : 99

**Answer: C**

#### Explanation:

Buses produced by company A in :

2009 = 64

2010 = 70

$$\Rightarrow \text{Average production} = \frac{64+70}{2} = 67$$

Buses produced by company B in :

2009 = 72

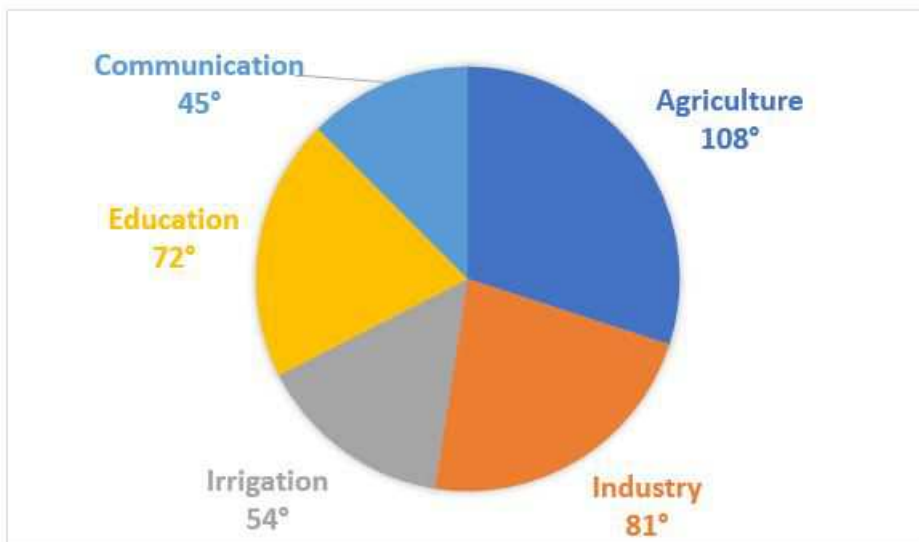
2010 = 80

$$\Rightarrow \text{Average production} = \frac{72+80}{2} = 76$$

Required ratio = 67 : 76

#### Instructions

The pie-chart shows the proposed outlay for different sectors during a Five-Year plan of Government of India. Total outlay is Rs. 40,000 crores. By reading the pie-chart answer the following three questions.



### Question 198

What is the proposed outlay for Education?

- A Rs. 6000 crores
- B Rs. 8000 crores

C Rs. 9000 crores

D Rs. 7000 crores

Answer: B

Explanation:

Total outlay = 40,000 cr

Proposed outlay for education =  $\frac{72}{360} * 40,000$

=> 8000 cr

Question 199

If the proposed outlay of Irrigation is x% of the proposed outlay of Agriculture, then x is equal to

A 50%

B 15%

C 25%

D 75%

Answer: A

Explanation:

Total outlay = 40,000 cr

Proposed outlay for irrigation =  $\frac{54}{360} * 40,000 = 6,000$  cr

Proposed outlay for agriculture =  $\frac{108}{360} * 40,000 = 12,000$  cr

Now, outlay for irrigation is x% of that of agriculture.

=>  $\frac{6000}{12000} * 100 = 50\%$

=> x = 50

(SHORTCUT)

Degree outlay for irrigation = 54 and for agriculture = 108

Required % =  $\frac{54}{108} * 100 = 50\%$

=> x = 50

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Question 200

What is the ratio between the proposed outlay of Irrigation and Communication?

A 9 : 8

B 3 : 2

C 9 : 5

D 6 : 5

Answer: D

Explanation:

Degree of proposed outlay for irrigation = 54

Degree of proposed outlay for communication = 45

Required ratio =  $54/45 = 6 : 5$

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