SSC COMBINED GRADUATE LEVEL (CGL) TIER-I EXAM, 30-08-2015) – PREVIOUS YEAR PAPER

GENERAL AWARENESS

1. Meanders are the features formed by
   (1) glaciers
   (2) rivers
   (3) winds
   (4) ocean waters

   Solution:2

2. Linseed is obtained from
   (1) Castor
   (2) Flax
   (3) Groundnut
   (4) Sesame

   Solution:2

3. If 20% or more area of the country suffers from rain deficits during monsoon season, it is termed as
   (1) flood year
   (2) drought year
   (3) famine year
   (4) self sufficient year

   Solution:2

4. Rajasthan canal receives water from which of the following rivers ?
   (1) Yamuna
   (2) Jhelum
   (3) Ravi
   (4) Sutlej

   Solution:4

5. Uneven distribution of Insolation on the earth is mainly due to the
   (1) spherical shape of the earth
   (2) distribution of land and water

(3) direction of the winds
(4) presence of pressure belts

Solution:1

6. The radiation that can penetrate deepest in our body
(1) UV-radiation
(2) Alpha-particles
(3) 13-particles
(4) Gamma-particles

Solution:4

7. Which of the following organism possesses characteristics of a plant and an animal?
(1) Euglena
(2) Mycoplasma
(3) Paramecium
(4) Chlorella

Solution:1

8. Match the following :

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

(1) A-4, B-2, C-3, D-1
(2) A-4, B-3, C-1, D-2
(3) A-3, B-4, C-1, D-2
(4) A-2, B-I, C-4, D-3

Solution:2

9. Tachycardia is a condition characterized by
(1) heart-rate decreases from the normal
(2) heart- rate increases from the normal
(3) heart-beat stops
(4) heart fails to pump

Solution:2

10. Oxyntic cell is meant for the secretion of
(1) Pepsin

(2) Enterokinase
(3) Hydrochloric acid
(4) Lactic acid

Solution:3

11. Sound is heard over longer distances on rainy days because
(1) sound travels slowly in moist air
(2) sound travels faster in moist air
(3) moist air does not absorb sound
(4) moist air absorbs sound

Solution:2

12. X-rays are
(1) positively charged particles
(2) negatively charged particles
(3) neutral particles
(4) None of these

Solution:3

13. Which one of the following is a vestigial organ ?
(1) Eye-brow
(2) Collar-bone
(3) Wisdom-teeth
(4) Nails

Solution:3

14. Railway tracks are banked on curves so that :
(1) the train may not fall down inwards.
(2) the weight of the train may be reduced.
(3) necessary centripetal force may be obtained from the horizontal component of the normal reaction due to track.
(4) no frictional force may be produced between the wheels and the track.

Solution:3

15. After 'PROM' is programmed, we can only _ the information.
(1) read
(2) write
(3) read and write
(4) remove

Solution:1

Note: The Information Provided here is only for reference. It May vary the Original.

16. We feel cool when we sit near the fan, this is because
(I) fan gives cool air.
(2) fan cools surrounding air.
(3) air vapourises the sweat on our body.
(4) we feel cool when air touches the body.

Solution:3

17. Water flows off the wings of biids and insects due- to the presence of
(1) Waxes
(2) Sugars
(3) Proteins
(4) Minerals

Solution:1

18. Which one of the following chemicals is associated with muscle fatigue?
(1) Uric acid
(2) Acetic acid
(3) Pyruvic acid
(4) Lactic acid

Solution:4

19. Which one of the following does not contain silver ?
(1) Horn silver
(2) Ruby silver
(3) German silver
(4) Lunar caustic

Solution:3

20. The average kinetic energy of the molecules of an ideal gas is directly proportional to
(1) Velocity of Molecules
(2) Mass of Molecules
(3) Absolute temperature of the gas,
(4) Temperature of environment

Solution:3

21. ROM standS for
(1) Real Office Manager
(2) Read Only Memory
(3) Read Only Memorandum

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(4) Role On Memory

Solution:2

22. An important green-house gas other than methane being produced from the agricultural fields is
(1) Nitrous oxide
(2) Ammonia
(3) Sulphur dioxide
(4) Arsine

Solution:1

23. Acid rain is caused due to pollution of atmosphere by
(1) oxides of carbon and nitrogen
(2) oxides of nitrogen and sulphur
(3) oxides of nitrogen and phosphorus
(4) None of these

Solution:2

24. The land which is not cultivated every year though it is suitable for cultivation :
(1) Waste land
(2) Pasture land
(3) Fallow land,
(4) Cultivable waste land

Solution:4

25. Who among the following is the first Indian to swim across English Channel ?
(1) Aarti-Saha
(2) Mihir Sen
(3) P.K. Bannerji
(4) Vikram Merchant

Solution:2

26. Which of the following chemicals is responsible for depletion of ozone layer in the atmosphere?
(1) Chlorofluorocarbons
(2) Nitrous oxide
(3) Sulphur dioxide
(4) Carbon dioxide

Solution:1

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27. Who has authored the book 'One Life is Not Enough'?
(1) V.S. Naipal
(2) Natwar Singh
(3) K.P.S. Gill
(4) Khushwant Singh

Solution:2

28. In the final of the IPL 2015 T-20 Tournament Mumbai Indians defeated
(1) Kings XI Punjab
(2) Royal Challengers Bangalore
(3) Rajasthan Royals
(4) Chennai Superkings

Solution:4

29. Nobel Peace Prize for 2014 has been awarded to
(1) Malala Yusufzai (Pakistan)
(2) Kailash Satyarthi (India)
(3) Both Malala Yusufzai (Pakistan) and Kailash Satyarthi (India)
(4) Neither Malala Yusufzai (Pakistan) nor Kailash Satyarthi (India)

Solution:3

30. Who was the recipient of the Dada Saheb Phalke Award for 2014?
(1) Shashi Kapoor
(2) Shakti Kapoor
(3) Shashikant Kapoor
(4) Shekhar Kapoor

Solution:1

31. Who among the following was the first European to be selected as President of Indian National Congress ?
(1) Annie Besant
(2) George Yule
(3) A.O. Hume
(4) Alfred Webb

Solution:2

32. Palk Strait is situated between
(1) India and Pakistan
(2) India and Bangladesh
(3) India and Sri Lanka

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(4) India and Myanmar

Solution:3

33. Birmingham in U.K. is famous for
(1) Iron and Steel industry
(2) Sugar industry
(3) Paper industry
(4) Aluminium industry

Solution:1

34. Which city is hosting the 2016 Olympic Games ?
(1) Seoul
(2) Barcelona
(3) Rio-de-Janeiro
(4) Los Angeles

Solution:3

35. Which of the following industries is at Koraput ?
(1) Ship Building
(2) Aircrafts Building
(3) Iron and Steel
(4) Electric Locomotives

Solution:2

36. One of the following expenditure is an example of investment expenditure,
(1) an entrepreneur purchasing a computer for domestic use.
(2) a firm purchasing raw materials for final production.
(3) an entrepreneur buying plane tickets for a family trip,
(4) a firm purchasing computer for smooth maintenance of accounts.

Solution:3

37. Point out the incorrect pair :
(1) Green Revolution – Agricultural Development
(2) White Revolution – Dairy Development
(3) Blue Revolution – Development of Fisheries
(4) Operation Flood – Irrigation Development

Solution:4

38. Steel sheets used in the production of furnitures is an example of
(1) an intermediate good

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(2) a final good
(3) an investment good
(4) a consumption good

Solution:1

39. Which of the following is not an economic activity ?
(1) A labourer working in a factory.
(2) A CRPF jawan guarding country's borders.
(3) A teacher teaching his own son.
(4) A farmer tilling his own land.

Solution:3

40. Which of the following pair s incorrect ?
(1) Comrade – Mohammed Ali
(2) Indian Sociologist – Lala Har Dayal
(3) Young India – Lala Lajpat Rai
(4) Common Weal – Annie Besant

Solution:3

41. Indian economy is an example of a mixed economy because,
(1) urban sector coexists with vast rural sector
(2) traditional subsistence economy coexists with modern economy
(3) private sector coexists with public sector enterprises
(4) monopoly elements coexist with competitive elements

Solution:3

42. Who administers the oath of office to the President?
(1) Chief Justice of India
(2) Speaker of Lok Sabha
(3) Vice-President
(4) Prime Minister

Solution:2

43. The President of India can be removed from his office by the
(1) Chief Justice of India
(2) Parliament
(3) Lok Sabha
(4) Prime Minister

Solution:2

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44. With which conspiracy case Aurobindo Ghosh's name is connected ?
(1) Kakori Conspiracy Case
(2) Lahore Conspiracy Case
(3) Meerut Conspiracy Case
(4) Alipore Conspiracy Case

Solution:4

45. Who among the following are involved with Cauvery River dispute ?
(1) The Central Government and Karnataka
(2) The Central Government and Tamil Nadu
(3)Karnataka and Tamil Nadu
(4) Karnataka, Tamil Nadu, Kerala and Puduchery

Solution:3

46. Who was the founder of Swatantra Party ?
(1) B.G.Tilak
(2) Dadabhai Naoroji
(3) Gopal Krishna Gokhale
(4) C. Rajagopalachari

Solution:4

47. Arrange in chronological order :
1. Cabinet Mission
2. Cripps Mission
3. Montague-Chelmsford Refoi ins
4. Minto-Marley Reforms
(1) 3, 2, 4, 1
(2) 1, 2, 3, 4
(3) 4, 3, 2, 1
(4) 2, 3, 4, 1

Solution:3

48. The Political Guru of Mahatma Gandhi was
(1) Dadabhai Naoroji
(2) Gopal Krishna Gokhale
(3) Mahadev Govind Ranade
(4) Bal Gangadhar Tilak

Solution:2

49. Who among the following is known as the 'Napoleon of India' ?

(1) Chandragupta
(2) Samudragupta
(3) Harshavardhana
(4) Ashoka

Solution:2

50. One of the following Indus Valley sites is in Pakistan :
(1) Lothal
(2) Kalibangan
(3) Alamgirpur
(4) Harappa

Solution:4

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ENGLISH COMPREHENSION

Directions (1-10) : 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.**

1. He parts his hair **in the centre.**
   (1) at the' centre
   (2) near the centre
   (3) in the middle
   (4) No improvement

   Solution: 3

2. I can't allow to **make** jokes in the class.
   (1) cut
   (2) crack
   (3) break
   (4) No improvement

   Solution: 2

3. Shut the window; it is **fairly** cold.
   (1) quiet
   (2) quite
   (3) rather
   (4) No improvement

   Solution: 3

4. She is the lady who will **inaugurate the exhibition.**
   (1) declare the exhibition open
   (2) start the exhibition ,
   (3) begin the exhibition
   (4) No improvement

   Solution: 4

5. He avoids **to speak** to me.
   (1) to talk
   (2) speaking
   (3) speech
   (4) No improvement

Solution: 2

6. A major,water pollutant due to the growth of large cities is **the sewages.**
   (1) a sewage
   (2) a sewages
   (3) the sewage
   (4) No improvement

   Solution: 3

7. **I have just taken my meals.**
   (1) I have just had my food
   (2) I am done with my meals
   (3) I finished my meals
   (4) No improvement

   Solution: 4

8. I stayed at **Henry house** for a week.
   (1) Henry's home
   (2) Henry's
   (3) Henry home
   (4) No improvement

   Solution: 1

9. The warden told the boys to **quickly clean their rooms.**
   (1) clean their rooms hastily
   (2) clean their rooms quickly
   (3) cleanse their rooms quickly
   (4) No improvement

   Solution: 2

10. I needn't get up early tomorrow, **shouldn't I**?
    (1) don't I
    (2) do I
    (3) need I
    (4) No improvement

    Solution: 2

Directions (11-17) : In the following questions, out of the four alternatives, choose the one which can be substituted for the given words/sentences.

11. Something that is difficult to understand

(1) incomplete
(2) inconclusive
(3) inconceivable
(4) incomprehensible

Solution: 4

12. That which is arranged by conferring or discussing
(1) meeting
(2) seminar
(3) debate
(4) negotiation

Solution: 2

13. A mournful poem or a song
(1) comedy
(2) tragedy
(3) elegy
(4) ode

Solution: 3

14. An image without objective reality
(1) shadow
(2) utopia
(3) sensation
(4) hallucination

Solution: 4

15. The branch of medical science which deals with the problems of the old
(1) oncology
(2) obstetrics
(3) paediatrics
(4) geriatrics

Solution: 4

16. A child secretly changed for another in infancy
(1) nipper
(2) changeling
(3) tiddler
(4) tyke

Solution: 2

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17. One who suffers for one's faith
(1) prophet
(2) mystic
(3) seer
(4) martyr

Solution: 4

Directions (18-19) : 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.

18. (1) Diploreable
(2) Deploreable
(3) Deplorable
(4) Diplorable

Solution: 3

19. (1) Surreptious
(2) Surreptitious
(3) Surreptitious
(4) Surrepititious

Solution: 2

Directions (20-24) : In the following questions, read the passage carefully and choose the best answer to each question out of the four alternatives.

PASSAGE

STEM :

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.

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20. The author believes that heart disease is no longer a leading killer disease because
(1) people between the ages of 55 to 84 are not affected by it.
(2) the factors that lead to heart disease do not exist any longer.
(3) the factors that lead to heart disease have been brought under control through medical intervention.
(4) people live a healthier and fulfilling life today.

Solution: 3

21. Which of the following statements is UNTRUE (with reference to the given passage)?
(1) Killer diseases like the plague were easier to deal with compared to cancer.
(2) Cancer researchers have managed to reduce the number of deaths among children suffering from cancer.
(3) The greatest problem faced by cancer researchers is in the complex condition and nature of multicellular life.
(4) Cancer researchers have achieved the greatest victory by containing this disease among the elderly.

Solution: 4

22. "The toll of heart disease has been pushed into the future" means that
(1) There is less chance for people to die of cancer in the present moment.
(2) The number of people affected by heart disease has increased.
(3) The number of people killed by heart disease will increase in future.
(4) People suffering from heart disease today are less likely to die from it immediately.

Solution: 4

23. "Cancer is **by far the harder problem**". (Improve the sentence)
(1) a toughter problem
(2) a more difficult problem
(3) a firmer problem
(4) the most complex problem

Solution: 2

24. According to the writer, why is cancer more difficult to deal with than heart disease?
(1) Because more people lost their lives to heart diseases 50 years ago.
(2) Cancer does not have a precise cause and is more complex in nature.
(3) Cancer defies detection at an early stage and therefore is not curable.
(4) Fewer people suffer from heart disease than cancer.

Note: The Information Provided here is only for reference. It May vary the Original.

Solution: 2

Directions (25-29) : In the following questions, read the passage carefully and choose the best answer to each question out of the four alternatives.

PASSAGE

STEM:

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.

25. The phrase 'lavish with his hospitality' here means :
(1) miserliness in dealing with his friends.
(2) considerateness in spending on guests and strang-
(3) extravagance in entertaining guests.
(4) Indifference in treating his friends and relatives.

Solution: 3

26. We understand from the passage that
(1) all mean people are wealthy.
(2) wealthy people are invariably successful
(3) carefulness generally leads to failure.
(4) being thrifty may lead to success.

Solution: 4

27. How does the housewife, according to the writer, feel when she saves money?
(1) She feels she needs to be thrifty
(2) Wishes life is less burdensome
(3) She is troubled by a sense of guilt
(4) Wishes she could sometimes be extravagant

Solution: 2

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28. The statement 'she is able to face the milkman with equanimity' implies that
(1) She is not upset as she has been paying the milkman his dues regularly.
(2) She loses her nerve at the sight of the milkman who always demands his dues.
(3) She manages to keep cool when she confronts the milkman
(4) She remains composed and confident as she knows that she can handle the milkman.

Solution: 1

29. In the opinion of the writer, a successful businessman
(1) is more popular if he appears to be doing nothing
(2) should not bother about his popularity.
(3) must be extravagant before achieving success.
(4) is expected to have expensive taste.

Solution: 2

Directions (30-34) 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.

30. After he was caught cheating he was disqualified to appear at the examination.
(1) After he was caught cheating
(2) he was disqualified
(3) to appear at the examination
(4) No error

Solution: 3

31. She stopped singing as soon as the telephone rings from across the hall.
(1) She stopped singing
(2) as soon as the telephone
(3) rings from across the hall
(4) No error

Solution: 3

32. The old curtains were torn and they flapped in the light breeze.
(1) The old curtains were torn
(2) and they flapped
(3) in the light breeze
(4) No error

Solution: 4

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33. I do not know who you consider to be the best dancer.
(1) I do not know
(2) who you consider
(3) to be the best dancer
(4) No error

Solution: 3

34. So hoarse he was that he could not make the speech.
(1) So hoarse he was
(2) that he could not make
(3) the speech
(4) No error

Solution: 1

Directions (35-39) : 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.

35. The crop will fail, ...it rains this week.
(1) unless
(2) until
(3) till
(4) when

Solution: 2

36. "She decided to..... as the competition was quite stiff."
(1) stand out
(2) leave
(3) get out
(4) stand down

Solution: 4

37. If she were selected, she..... a good secretary.
(1) would make
(2) will .make
(3) can make
(4) would have made

Solution: 1

38. He worked .....of his ability.
(1) at the best

(2) with the best
(3) in the best
(4) to the best

Solution: 4

39. The Chief Mifiister asked her officers to..... the process of procuring foodTor the poor from the market.
(1) speed up
(2) expedite
(3) hasten
(4) do fast

Solution: 2

Directions (40-42) : In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

40. Bumptious
(1) Uncouth
(2) Conceited
(3) Rude
(4) Shrewd

Solution: 2

41. Ostracize
(1) Evacuate
(2) Excavate
(3) Expel
(4) Extradite

Solution: 3

42. Bane
(1) Challenge
(2) Curse
(3) Danger
(4) Threat

Solution: 2

Directions (43-45) : In the following questions, choose the word opposite in meaning to the given word.

43. Arogant
(1) Favourable

(2) Illiterate
(3) Kind
(4) Humble

Solution: 2

44. Impoverished
(1) Pure
(2) Affluent
(3) Important
(4) Efficient

Solution: 2

45. Affirmed
(1) Contradicted
(2) Opposed
(3) Disputed
(4) Denied

Solution: 4

Directions (46-50) : 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.

46. Anand is a nice guy, but sometimes he really **gets on my nerves.**
(1) makes me nervous
(2) shakes my self-confidence
(3) annoys me
(4) makes me uncomfortable

Solution: 3

47. As a student, you should **catch time by the forelock**.
(1) speed up
(2) set up clock back
(3) slow down
(4) seize opportunity

Solution: 4

48. Receiving his first award was **a shot in the arm** for him.
(1) something that gives encouragement
(2) something that is painful
(3) something that needs attention

(4) something done with a purpose

Solution: 1

49. It is sometimes wiser to rely on **horse sense** than on the advice of colleagues.
(1) advice of parents
(2) advice of teachers
(3) advice of colleagues
(4) basic common sense

Solution: 4

50. Nehru, the first Prime Minister of India, was **a man of letters.**
(1) a great letter-writer
(2) a great politician
(3) a literary person
(4) a great patriot

Solution: 3

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GENERAL INTELLIGENCE & REASONING

Directions (1-2) : In each of the following quesuor.s. a series is given, with one tern-. missing. Choose the correct alternative from the given ones that will complete the series.

1. 325, 259. 204, 160, 127, 105, ?
   (1) 94
   (2) 96
   (3) 98
   (4) 100

Solution:1

(1) 325 – 66 = 259
259 – 55 = 204
204 – 44 = 160
160 – 33 = 127
127 – 22 = 105
105 – 11 = $\boxed{94}$

2. AZBY, CXDW, EVFU, ?
   (1) SHTG
   (2) GXHW
   (3) GTHS
   (4) STHO

Solution:3

(3)

$$\begin{array}{ccccccc} A & \xrightarrow{+2} & C & \xrightarrow{+2} & E & \xrightarrow{+2} & \boxed{G} \\ Z & \xrightarrow{-2} & X & \xrightarrow{-2} & V & \xrightarrow{-2} & \boxed{T} \\ B & \xrightarrow{+2} & D & \xrightarrow{+2} & F & \xrightarrow{+2} & \boxed{H} \\ Y & \xrightarrow{-2} & W & \xrightarrow{-2} & U & \xrightarrow{-2} & \boxed{S} \end{array}$$

3. 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?
   (1) 15 minutes
   (2) 18 minutes
   (3) 21 minutes
   (4) 54 minutes

Solution:3

Note: The Information Provided here is only for reference. It May vary the Original.

(3) Spider climbs $5x$ units in 15 minutes

$\therefore$ Spider will climb $7x$ units in

$\frac{15}{5} \times 7 = 21$ minutes

4. Ramesh has brother Suresh. Ramesh is the son of Copal. Govind is Gopal's father. How is Suresh related to Govind?
(1) Son
(2) Brother
(3) Grandson
(4) Grandfather

Solution:3

(3) Ramesh and Suresh are sons of Gopal.
Govind is father of Gopal.
Therefore, Suresh is grandson of Govind.

5. From the given alternative words, select the word which cannot be formed using the letters of the given word : ADVERTISEMENT
(1) ADVISE
(2) DIVERSE
(3) TIME
(4) REVERSE

Solution:4

(4) There is only 'R' in the given word. Therefore, the word REVERSE cannot be formed.

$\boxed{\text{ADVE}}$ RT $\boxed{\text{IS}}$ EMENT
$\Rightarrow$ ADVISE

A $\boxed{\text{DVER}}$ T $\boxed{\text{ISE}}$ MENT
$\Rightarrow$ DIVERSE

ADVER $\boxed{\text{TI}}$ SE $\boxed{\text{ME}}$ NT
$\Rightarrow$ TIME

6. 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?
(1) A
(2) C
(3) D
(4) E

Solution:4
(4)

E is to the left of F.

7. Given below are the jumbled letters of a word and their corresponding numbers. Select the combination of numbers that makes a meaningful word.
CNAS PH I
1 2 3 4 5 6 7
(1) 5742613
(2) 2375416
(3) 4572316
(4) 7234516

Solution:3

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

8. If BROAD means 19812, CLOCK means

(1) 68262
(2) 68622
(3) 26826
(4) 37836

Solution:3

(3)

B	R	O	A	D
↓	↓	↓	↓	↓
1	9	8	1	2

A, B = 1; C, D = 2; E, F = 3;
G, H = 4; I, J = 5; K, L = 6;
M, N = 7; O, P = 8; Q, R = 9;
S, T = 10; U, V = 11, W,
X = 12; Y, Z = 13

Therefore,

C	L	O	C	K
↓	↓	↓	↓	↓
2	6	8	2	6

9. TAP is SZO, then FREEZE is
(1) EQDFYG
(2) EQDDYD
(3) ESDFYF
(4) GQFDYF

Solution:2

(2)

Similarly,

10. Identify the single letter, which when removed from the following words form new words.
MINK, LAMP, TEAM, WARM
(1) R
(2) A
(3) L
(4) M

Solution:4

(4) M I N K ⇒ INK
L A M P ⇒ LAP
T E A M ⇒ TEA
W A R M ⇒ WAR

11. If 876 =12, 864 = 81, 895 = 22, what is 824 = ?
(1) 14
(2) 64
(3) 48
(4) 41

Solution:4

(4) 876 ⇒ 8 + 7 + 6 ⇒ 21 ⇒ 12
864 ⇒ 8 + 6 + 4 ⇒ 18 ⇒ 81
895 ⇒ 8 + 9 + 5 ⇒ 22 ⇒ 22
Similarly,
824 ⇒ 8 + 2 + 4 ⇒ 14 ⇒ 41

12. If + stands for ∗; – stands for #; × stands for @ and ÷ stands for %, then which of the following statements is correct?
(1) 256% 16 @ 5 # 28 = 52
(2) 256 # 16 % 5 # 28 = 120
(3) 256 @ 5 % 16 ∗ 28 = 408
(4) 256 # 16 @ 5 % 28 = 80

Solution:1

. (1)

* ⇒ +	# ⇒ −
@ ⇒ ×	% ⇒ +

Option (1)

256 % 16 @ 5 # 28 = 52

⇒ 256 + 16 × 5 − 28 = 52

⇒ 16 × 5 − 28 = 52

⇒ 80 − 28 = 52

Option (2)

256 # 16 % 5 # 28 = 120

⇒ 256 − 16 ÷ 5 − 28 = 120

$$\Rightarrow 256 - \frac{16}{5} - 28 \neq 120$$

Option (3)

256 @ 5 % 16 * 28 = 408

⇒ 256 × 5 + 16 + 28 = 408

$$\Rightarrow \frac{256 \times 5}{16} + 28 \neq 408$$

Option (4)

256 # 16 @ 5 % 28 = 80

⇒ 256 − 16 + 5 ÷ 28 = 80

$$\Rightarrow 256 - 16 + \frac{5}{28} \neq 80$$

13. Choose the appropriate combination of signs to solve the equation.

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

(1) − × =

(2) − = −

(3) + = −

(4) ÷ − =

Solution:2

. (2) (16 + 18) * (21 − 11) * 32 * 8

⇒ 34 − 10 = 32 − 8

= 24 = 24

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

(1) -2

(2) 2

(3) 3

(4) -3

Solution:4

. (4) MOON

Two consonants M and N

= – 2

STAR

Three consonants S, T and R

= – 3

Directions (15-18) : In each of the following questions, select the missing number from the given responses.

15.

(1) 240
(2) 246
(3) 250
(4) 256

Solution:4

(4) $2 \times 2 = 4$
$4 \times 2 = 8$
$8 \times 2 = 16$
$16 \times 2 = 32$
$32 \times 2 = 64$
$64 \times 2 = 128$

$128 \times 2 = \boxed{256}$

16.

(1) 29
(2) 39
(3) 31
(4) 41

Solution:2

(2) $7 \times 2 - 1 = 13$
$10 \times 2 - 1 = 19$
$20 \times 2 - 1 = 39$

17.

(1) 34
(2) 54
(3) 44
(4) 64

Solution:2

(2) $\sqrt{625} + \sqrt{676} + \sqrt{729}$
$\Rightarrow 25 + 26 + 27 = 78$
Similarly,
$\sqrt{289} + \sqrt{324} + \sqrt{361}$
$\Rightarrow 17 + 18 + 19 = 54$

18.

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

(1) 24
(2) 100
(3) 144
(4) 64

Solution:3

(3) First Column

$(2 + 4) \times 6 \Rightarrow 6 \times 6 = 36$

Second Column

$(3 + 6) \times 9 \Rightarrow 9 \times 9 = 81$

Third Column

$(4 + 8) \times 12 \Rightarrow 12 \times 12$

$= 144$

19. 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?
(1) 11 km.
(2) 10 km.
(3) 8 km.
(4) 5 km.

Solution:4

(4)

Required distance

$AE = \sqrt{(AF)^2 + (EF)^2}$

$= \sqrt{(4)^2 + (3)^2} = \sqrt{16 + 9}$

$= \sqrt{25} = 5$ km.

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20. 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?
(1) 5 km.
(2) 9 km.
(3) 4 km.
(4) 14 km.

Solution:1

(1)

AD = 5 km.

Directions (21-22) : 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.

21. **Statements** :
Some boys are men.
No man is black.
Conclusions :
I. Some boys are not black.
II. Some men are boys.
(1) Only Conclusion I follows.
(2) Only Conclusion II follows.
(3) Either I or II follows.
(4) Neither I nor II follows.

Solution: *

(*) First Premise is Particular Affirmative (I–type).
Second Premise is Universal Negative (E–type).

Some boys are men.

No men is black.

I + E ⇒ O – type of Conclusion
"Some boys are not black."
This is Conclusion I.
Conclusion II is the Converse of the first Premise.
Thus, both the Conclusions follow.

22. **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.
(1) Only Conclusion I follows.
(2) Only Conclusion II follows.
(3) Only Conclusion III follows
(4) Conclusions II and IV follow.

Solution:4
(4) All scientists working in America are talented.
Some scientists working in America are Indians.

Therefore, some talented Indian scientists have migrated to America.
Thus, some Indian scientists are talented.

Directions (23-28) : In each of the following questions, select the related word/letters/number from the given alternatives.

23. Book : Paper : : Bread : ?
    (1) Flour
    (2) Biscuit
    (3) Cake
    (4) Butter

Solution:1

(1) The raw material of book is paper. Similarly, the raw material of bread is flour.

24. QDXM : SFYN : : UIOZ : ?
    (1) PAQM
    (2) LPWA
    (3) QNLA
    (4) WKPA

Solution:4

(4)

25. BAD : DDH : : CUT : ?

(1) DCV
(2) DDX
(3) ECW
(4) EXX

Solution:4

26. 4 : 64 : : 2 : ?
(1) 16
(2) 8
(3) 22
(4) 12

Solution:2

(2) 4 × 4 × 4 = 64
Similarly,
2 × 2 × 2 = 8

27. 49 : 56 : : 36 : ?
(1) 52
(2) 44
(3) 42
(4) 43

Solution:3

(3) $7 \times 7 = 49$

$7 \times 8 = 56$

Similarly,

$6 \times 6 = 36$

$6 \times 7 = 42$

28. Hot : Cold : : ?
(1) Summer : Sun
(2) Germs : Disease
(3) Light : Dark
(4) Thin : Big

Solution:3

(3) Hot is antonym of cold. Similarly, light is antonym of dark.

Directions (29-34) : In each of the following questions, find the odd word/letters/number pair from the given alternatives.

29. (1) QRP
(2) RUQ
(3) NEM
(4) MAL

Solution:1

(1) Except the letter group QRP, all other letter groups have at least one vowel.

30. (1) ACEG
(2) HJLN
(3) MNOL
(4) TVXZ

Solution:3

(3)

$$A \xrightarrow{+2} C \xrightarrow{+2} E \xrightarrow{+2} G$$
$$H \xrightarrow{+2} J \xrightarrow{+2} L \xrightarrow{+2} N$$
$$M \xrightarrow{+1} N \xrightarrow{+1} O \xrightarrow{-3} L$$
$$T \xrightarrow{+2} V \xrightarrow{+2} X \xrightarrow{+2} Z$$

31. (1) Agitate
(2) Affirm
(3) Attack
(4) Affect

Solution:2

(2) Affirm is different from the other three words.

32. (1) 35 – 66
(2) 71 – 94
(3) 24 – 57
(4) 56 – 70

Solution:4

(4) 35 – 66 ⇒ 66 – 35 = 31
71 – 94 ⇒ 94 – 71 = 23
24 – 57 ⇒ 57 – 24 = 33
56 – 70 ⇒ 70 – 56 = 14

33. (1) 125
(2) 343
(3) 516
(4) 729

Solution:3

(3) $125 = 5 \times 5 \times 5$
$343 = 7 \times 7 \times 7$
$729 = 9 \times 9 \times 9$

34. (1) Perimeter
(2) Area
(3) Density
(4) Distance

Solution:3

(3) Density is different from the other three words.

Directions (35-36) : In each the following questions, which one of the given responses would be a meaningful order of the following?

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

Solution:3

(3) Meaningful order of words :
4. Jungle (Forest)
↓
3. Timber
↓
2. Pulp
↓
5. Paper
↓
1. Book

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36. 1. Pollution
2. Population
3. Death
4. Disease
(1) 2, 3, 4, 1
(2) 3, 4, 2, 1
(3) 2, 1, 4, 3
(4) 1, 2, 3, 4

Solution:3

(3) Meaningful order of words :
2. Population
↓
1. Pollution
↓
4. Disease
↓
3. Death

37. Which number is wrong in the given series?
12439, 23549, 34659, 45769, 57689
(1) 34659
(2) 23549
(3) 57689
(4) 12439

Solution:3

(3) 12439 + 11110 = 23549
23549 + 11110 = 34659
34659 + 11110 = 45769
45769 + 11110 = $\boxed{56879}$

38. 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
(1) ubtlu

(2) utlub
(3) tulbu
(4) butlu

Solution:2

(2) $l\boxed{u}b$ $\boxed{t}ub/$ $\boxed{l}ubt$

$\boxed{u}b/lu\boxed{b}tub$

39. Identify the number at the bottom when the top is 5 in a dice.
(1) 2
(2) 3
(4) 4
(4) 6

Solution:1

(1) In a standard dice, the sum of two opposite sides is 7.
Therefore,
1 lies opposite 6.
2 lies opposite 5.
3 lies opposite 4.

40. Identify the answer figure from which the pieces given in the question figure have been cut.
Question Figure :

Answer Figures :

(1) (2) (3) (4)

Solution:3

(3)

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

Question Figure :

Answer Figures :

(1) (2) (3) (4)

Solution:1

(1)

42. 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?

(1) G
(2) C
(3) E
(4) B

Solution:2

(2) The required region should be common to all the three diagrams. Such region is marked 'C'.

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

(1) 4
(2) 16
(3) 20
(4) 26

Solution:3

(3) The number of students who study History and Biology
= 16 + 4 = 20

44. 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?

(1) 10.2
(2) 8
(3) 10
(4) 2.2

Solution:4

(4) 11 students got distinction in all the three subjects.
Required percentage

$$= \frac{11 \times 100}{500} = 2.2\%$$

Directions (45-46) : In the following questions, which answer figure will complete the pattern in the question figure?

45. Question Figure :

Answer Figures :

(1) (2) (3) (4)

Solution:2

(2)

46. Question Figure :

Answer Figures :

(1) (2) (3) (5)

Solution:3

(3)

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

Question Figure :

Answer Figures :

(1) (2) (3) (5)

Solution:3

(3)

48. 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.

Question Figures :

Answer Figures :

(1) (2) (3) (5)

Solution:2

(2)

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

Question Figure :

Answer Figures :

(1) (2) (3) (5)

Solution:2

(2)

50. 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

(1) 66, 03, 10, 33, 56, 03
(2) 96, 12, 32, 40, 77, 34
(3) 75, 20, 43, 04, 98, 42
(4) 87, 11, 22, 24, 67, 04

Solution:4

(4) P ⇒ 57, 66, 75, 87, 96
E ⇒ 03, 11, 20, 34, 40
R ⇒ 00, 13, 22, 33, 42
S ⇒ 02, 12, 24, 31, 44
O ⇒ 56, 67, 76, 86, 97
N ⇒ 04, 10, 23, 32, 43

Option	P	E	R	S	O	N
(1)	66	03	10	33	56	03
(2)	96	12	32	40	77	34
(3)	75	20	43	04	98	42
(4)	87	11	22	24	67	04

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QUANTITATIVE APTITUDE

1. 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
   (1) 30 km/hr
   (2) 45 km/hr
   (3) 50 km/hr
   (4) 55 km/hr

   Solution:2

   (2) Total distance covered by train in 5 minutes
   = (500 + 625 + 750 + 875 + 1000) metre = 3750 metre
   = 3.75 km.

   Time = 5 minutes = $\frac{5}{60}$ hour

   = $\frac{1}{12}$ hour

   Speed of train = $\frac{\text{Distance}}{\text{Time}}$

   = $\left(\frac{3.75}{\frac{1}{12}}\right)$ kmph

   = (3.75 × 12) kmph
   = 45 kmph

2. If ratio of principal and simple interest for 1 year is 25 : 1, then the rate of interest is
   (1) 4%
   (2) 25%
   (3) 5%
   (4) 20%

   Solution:1

(1) Principal : Interest = 25 : 1
⇒ Interest : Principal = 1 : 25

$\therefore$ Rate = $\frac{\text{S.I.} \times 100}{\text{Principal} \times \text{Time}}$

$= \frac{1}{25} \times 100 = 4\%$ per annum

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

(1) 1000 metres
(2) 500 metres
(3) 750 metres
(4) 1250 metres

Solution:4

(4) Time = 5 minutes

$= \frac{1}{12}$ hour

$\therefore$ Length of bridge = Speed × Time

$= 15 \times \frac{1}{12} = \frac{5}{4}$ km.

$= \left(\frac{5}{4} \times 1000\right)$ metre

= 1250 metre

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

(1) 0
(2) 1
(3) 2
(4) 3

Solution:1

(1) $\frac{p^2}{q^2} + \frac{q^2}{p^2} = 1$

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

$$\Rightarrow p^4 + q^4 - p^2 q^2 = 0 \quad \ldots\ldots \text{(i)}$$

$$\therefore p^6 + q^6 = (p^2)^3 + (q^2)^3$$

$$= (p^2 + q^2)(p^4 + q^4 - p^2 q^2)$$

$$\left[\because a^3 + b^3 = (a+b)(a^2 - ab + b^2)\right]$$

$$= (p^2 + q^2) \times 0 = 0$$

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

(1) 0

(2) 1

(3) 2

(4) 3

Solution:1

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

$$\Rightarrow m + 1 - 3 = \sqrt{n}$$

$$\Rightarrow m - 2 = \sqrt{n}$$

On cubing both sides,

$$(m - 2)^3 = \left(\sqrt{n}\right)^3$$

$$\Rightarrow m^3 - 3m^2 \times 2 + 3m(2)^2 - 2^3$$

$$= n\sqrt{n}$$

$$[\because (a - b)^3 = a^3 - 3a^2b + 3ab^2 - b^3]$$

$$\Rightarrow m^3 - 6m^2 + 12m - 8 = n\sqrt{n}$$

$$\Rightarrow \frac{m^3 - 6m^2 + 12m - 8}{\sqrt{n}} = n$$

$$\Rightarrow \frac{m^3 - 6m^2 + 12m - 8}{\sqrt{n}} - n = 0$$

$$\Rightarrow \frac{1}{2}\left[\frac{m^3 - 6m^2 + 12m - 8}{\sqrt{n}} - n\right] = 0$$

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