

IPMAT ROHTAK - 2020

QUANTITATIVE ABILITY

QUESTIONS: 20 (+4/-1)

TOTAL TEST TIME: 2 HRS

1. Present sum of money amounts to Rs 800 in two years and to Rs 920 in three years, then the present sum of money is
(a) 420 (b) 690 (c) 560 (d) None of the options
2. Bhavani invested an amount of Rs. 13900 divided in two different schemes, A and B at the simple interest rate of 14% per annum and 11% per annum respectively if the total amount of simple interest earned in two year be Rs. 3508, what was the amount invested in Scheme B?
(a) 6400 (b) 6500 (c) 7200 (d) 7900
3. What is the square of root of 99999?
(a) 316.23 (b) 316.22 (c) 316.21 (d) 316.20
4. What is cube root of 55555?
(a) 38.17 (b) 38.16 (c) 38.15 (d) 38.14
5. In a factory there are three types of machines b1, b2, and b3 which produces 20%, 15%, and 32% of the total products respectively. Further, machines b1, b2, and b3 which produces 3%, 7%, and 2% defective products respectively. Find the percentage of non-defective products?
(a) 46% (b) 30% (c) 53% (d) 64%
6. In a 1000 meter race Rishi beats Koustab by 50 meters. In the same race, by what time margin Koustab beat Pandey who runs at 4 meter per second?
(a) 100 (b) 50 (c) 75 (d) 60
7. Guru and Chela walk around a circular path of 115 km in circumference, they start together from the same point. If they walk at speed of 4 and 5 kmph respectively, also they walk in the same direction, when will they meet?
(a) After 115 hours (b) After 125 hours (c) After 120 hours (d) After 210 hours
8. Five racquets needs to be placed in three boxes. Each box can hold all the five racquets. In how many ways can the racquets be placed in the boxes so that no box can be empty if all racquets are different but all boxes are identical?
(a) 24 (b) 25 (c) 27 (d) 26
9. How many signposts can be made using 6 different coloured symbols when any number of them can be posted at a time?
(a) 1988 (b) 1976 (c) 1966 (d) 1956
10. There are 12 copies of Beatles CDs, 7 copies of Pink Floyd CDs, 3 different CDs of Michael Jackson, and 2 different CDs of Madonna. Find the number of ways in which one or more than one CD can be selected?
(a) 3388 (b) 3376 (c) 3366 (d) 3327
11. Please calculate in how many ways can a platoon of sixteen soldiers be chosen out of a total of twenty soldiers for a surgical strike?
(a) 4845 (b) 4800 (c) 4855 (d) 4955
12. A box contains 2 white shirts, 3 black shirts, and 4 red shirts. In how many ways can 3 shirts be drawn from the box, if at least one black shirt is to be included in the draw?
(a) 60 (b) 40 (c) 64 (d) 82
13. Can you calculate in how many ways can 7 tennis players can be seated in a circular order?
(a) 330 (b) 730 (c) 720 (d) 820
14. Imagine that there are four hundred and fifty nine managers in a hotel. If the number of managers is enlarged by 36, the expenses of the food increased by Rs. eighty one per day while the average spending per head decreased by one. Find the original spending of the hotel on food?
(a) 7344 (b) 7244 (c) 7044 (d) 7444

15. The average age of a group of 9 friends is 22 years. LAVGIR is the youngest and his age is 6 years, then what happened to be the average age of the family just before LAVGIR was born?
(a) 18 (b) 7 (c) 20 (d) 24
16. The height of nineteen people of comic book is in Arithmetic progression. The average height of them is 19 feet. If the tallest is 37 feet. Then what is the height of the shortest?
(a) 2 (b) 1 (c) 3 (d) 4
17. Average stipend of summer internship of an institute is Rs. 20000 per month. Recently the institute announced increment of Rs. 2000 per month for all the students. The new average stipend of students will now be?
(a) 22000 (b) 23000 (c) 24000 (d) 25000
18. The average presence of employees of a company for yoga sessions in an office on Monday, Tuesday and Wednesday is thirty two and on the Wednesday, Thursday, Friday and Saturday is thirty. If the average number of employees on all the six days is twenty six then the number of employees who attended the sessions on Wednesday is?
(a) 38 (b) 40 (c) 60 (d) 64
19. The average spending of Lata Mangeshkar for the part of week from Monday to Saturday is Rs. 4200. She spent Rs. 1200 on Monday and Rs. 1500 on Sunday that week. The average spending for the part of week from Tuesday to Sunday that week is?
(a) 4100 (b) 4200 (c) 4250 (d) 4300
20. Please calculate in how many ways can a set of five players be formed out of a total of ten players such that two particular players should be involved in each set?
(a) 60 (b) 72 (c) 56 (d) 75

LOGICAL REASONING

QUESTIONS: 20 (+4/-1)

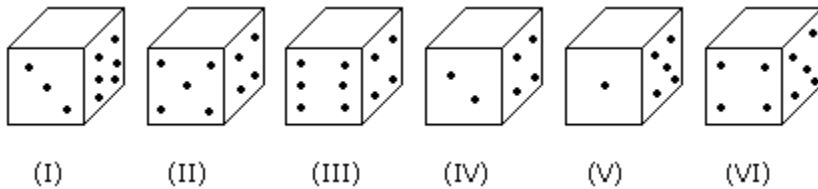
Directions (Q.21 – Q.22): Answer the following questions based on the given information:

Eight Girls M, N, O, P, Q, R, S and T are sitting in a line facing north and likes different colours such as Red, Pink, Yellow, White, Blue, Violet, Brown and Black but not necessarily in the same order.

The one who likes yellow sits fourth to the right of M. Neither M nor yellow sits at extreme ends. N sits third to the left of R. The number of girls sits between T and the one who likes violet is same as S and the one who likes blue. T sits to the immediate left of black. The number of girls sits between the one who likes red and white is same as the one who likes white and pink. P does not sit adjacent to T. R likes violet colour and O likes brown colour. One person sits between S and the one who likes yellow. S does not like red colour and does not sit at any of the extreme end.

21. How many girls sit between M and N?
(a) One (b) Two (c) Three (d) Four
22. T likes which of the following colour?
(a) White (b) Yellow (c) Pink (d) Brown
23. B is the father of Q. B has only two children. Q is the brother of R. R is the daughter of P. A is the granddaughter of P. S is the father of A. How is S related to Q?
(a) Son (b) Son-in-law (c) Brother (d) Brother-in-law

Directions (Q. 24): Six dice with upper faces erased are as shows.



The sum of the numbers of dots on the opposite face is 7.

24. If the odd numbered dice have even number of dots on their top faces, then what would be the total number of dots on the top faces of their dice?
(a) Eight (b) Ten (c) Twelve (d) Fourteen
25. In a certain code, 15789 is written as XTZAL and 2346 is written as NPSU. How is 23549 written in that code?
(a) PNTSL (b) NPTUL (c) NPTSL (d) NBTSL
26. Saurabh walks 80 meters towards south. Then, turns to his right & starts walking straight till he completes another 80 meters. Then, again turning to his left he walks for 60 meters. He then turns to his left & walks for 80 meters. How far is he from his initial position?
(a) 100 meters (b) 60 meters (c) 20 meters (d) 140 meters
27. **Fact 1:** All cats like to run.
Fact 2: Some cats like to swim.
Fact 3: Some cats look like their masters.
If the first three statements are facts, which of the following statements must also be a fact?
(I) : All cats who like to swim look like their masters.
(II) : cats who like to swim also like to run.
(III) : cats who like to run do not look like their masters.
(a) I only (b) II only
(c) II and III only (d) None of the statements is a known fact.

28. Nurse Kemp has worked more night shifts in a row than Nurse Rogers, who has worked five. Nurse Miller has worked fifteen night shifts in a row, more than Nurses Kemp and Rogers combined. Nurse Calvin has worked eight night shifts in a row, less than Nurse Kemp. How many night shifts in a row has Nurse Kemp worked?
(a) 8 (b) 9 (c) 10 (d) 11
29. P, Q, R and T answered an Examination. In the results, Q was immediately followed by P but no one was there after P. R was ahead of Q but could not score as much as T. Who scored the second highest?
(a) P (b) Q (c) R (d) T
30. In this question, one term in number series is incorrect. Find out the incorrect number.
56, 72, 90, 110, 132, 139
(a) 72 (b) 110 (c) 132 (d) 139
31. In a procession, 7 boys are standing in a row. Kavikant is standing left to Anurag but right to Bipin. Jayant is standing right to Gourav and left to Bipin. Similarly, Komal is standing right to Anurag and left to Ramu. Find out who is standing in the middle.
(a) Anurag (b) Komal (c) Kavikant (d) Gourav
32. A total of 78 celebrities were standing in a row. Karan Johar was standing at the 25th position from the left. Salman Khan was standing at 20th position from the right. How many celebrities were standing between Karan Johar and Salman Khan?
(a) 31 (b) 32 (c) 33 (d) 34
33. Find the missing number in the given series 12, 38, 116, 350, 1052, ?.
(a) 2200 (b) 1800 (c) 3158 (d) 2800
34. If A+B means A is the brother of B;
A-B means A is the sister of B;
A×B means A is the father of B.
Which of the following means that 'C is the son of M'?
(a) $M - N \times C + F$ (b) $F - C + N \times M$
(c) $N + M - F \times C$ (d) $M \times N - C + F$
35. Following analogy shows the relationship between two words. Select the pair which has the same relationship. "Theft: Confess"
(a) Fight : Dare (b) Fault : Admit
(c) Murder: Commit (d) Mistake: Agree

Direction (Q.36 - Q.37): Considering given statements as true, select a logical conclusion based on the given statements.

36. **Statements:**
Some ships are boats.
All boats are submarines.
Some submarines are yatches.
Conclusion:
I. Some yatches are boats.
II. Some submarines are boats.
III. Some submarines are ships.
IV. Some yatches are ships
(a) Only II and III follow (b) All follow
(c) Only III follows (d) Only IV follows

37. **Statements:**

Some Google is Twitter.

No Twitter is Facebook.

All Facebook are WhatsApp.

Conclusions:

(I) Some WhatsApp are Google is a possibility.

(II) Some Twitter can never be Facebook.

(a) Only conclusion I follows.

(b) Only conclusion II follows.

(c) Either conclusion I or conclusion II follows.

(d) Both conclusions I and II follow.

Direction (Q.38 – Q.39): Answer the questions based on following information.

In a trade fair 7 cars of different companies - Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo are standing facing to east in the following order: Cadillac is next to right of Fargo. Fargo is fourth to the right of Fiat. Maruti car is between Ambassador and Bedford. Fiat which is third to the left of Ambassador, is at one end.

38. Which of the cars are on both the sides of Cadillac car?

(a) Ambassador and Maruti

(b) Maruti and Fiat

(c) Fargo and Mercedes

(d) Ambassador and Fargo

39. Which of the following statement is correct?

(a) Maruti is next left of Ambassador.

(b) Bedford is next left of Fiat.

(c) Bedford is at one end.

(d) Fiat is next second to the right of Maruti.

40. If A stands for '+', B stands for '-', C stands for 'x', what is the value of $(10C4) (A) (4C4)B6$?

(a) 60

(b) 50

(c) 56

(d) 46

ENGLISH LANGUAGE

QUESTIONS: 20 (+4/-1)

Directions (Q.41 – Q.42): Each question consist of two words which have a certain relationship to each other followed by four pairs of related words, Select the pair which has the same relationship.

41. SEDATIVE : SLEEP
 (a) challenging: knowledge (b) mnemonic: memory
 (c) vocal : eloquence (d) dramatic: story
42. JEOPARDY : PERIL
 (a) Jealousy : Envy (b) Jealousy : Lust
 (c) Jealousy : Secure (d) Jealousy : Romance

Directions (Q.43 – Q.44): In each of the following questions, a word has been used in sentences in four different ways. Choose the option corresponding to the sentence in which the usage of the word is INCORRECT or INAPPROPRIATE.

43. Agog
 (a) The boys were all agog to see their parents.
 (b) She was all agog at the surprise announcement.
 (c) The victory set the whole state agog with excitement.
 (d) All are correct
44. Tantamount
 (a) To leave a pet home alone is tantamount to cruelty.
 (b) Overlooking state norms tantamounts to a crime.
 (c) His refusal to answer was tantamount to an admission of guilt.
 (d) All are correct

Directions (Q.45 – Q.46): In the question given below two statements are given which are grammatically correct and meaningful. Connect them by choosing the word given below the statements in the best possible way without changing the intended meaning. Choose the best possible word as your answer accordingly from the options to form a correct, coherent sentence.

45. (I) Especially in their own languages because it ensures a better understanding of subjects
 (II) Of the important themes are to ensure that students have ready access to the right learning material
 (a) each (b) someone (c) some (d) one
46. (I) The unemployment rate has dropped sharply this quarter.
 (II) It may only be temporary.
 (a) But (b) Likewise (c) Though (d) Still

Directions (Q.47 – Q.48): In the question given below few sentences are given which are grammatically correct and meaningful. Connect them by the word given before the statements in the best possible way without changing the intended meaning. Choose your answer accordingly from the options to form a correct, coherent sentence.

47. "But"
 (I) Doordarshan is also a great window to the global market place. Goods and services are continuously being sold through Doordarshan's dream world.
 (II) All news is elite centered; but Doordarshan telecast is usually more ethnocentric. Its accent is on people, places and events.
 (III) With over 1 billion people talking in several languages and a variety of lifestyles to boot, it is obvious one cannot address all of them together all the time.
 (IV) Doordarshan's promotions must go beyond mere reportage of facts, and capture the story between the lines.
 (a) I – III (b) II – IV (c) III – IV (d) I – II

48. "Because"
- (I) It is ironic, not tragic, that minorities in our country have come to be identified with religion and not with community or profession.
 - (II) The establishment of many such organizations are testimony to the growing antagonism to secularism.
 - (III) Secularism today is being taken as a threat to religious identities, to the existence of religious diversities, though secularism was never conceived as such.
 - (IV) This is the reason that secularism today has come to mean as preservation of religious minorities in their traditional modes.
- (a) II - III (b) I - IV (c) III - IV (d) I - II

Direction (Q.49): Kindly choose the appropriate word for connecting the following sentences.

49. (I) The milkman in my neighborhood likes to talk to his customers.
(II) He provides them milk in every morning.
- (a) even if (b) in addition (c) rightly (d) while

Direction (Q.50 - Q.51): Complete the following sentences.

50. Naveen is so lazy that he
- (a) cannot depend on others for getting his work done
 - (b) cannot delay the schedule of completing the work
 - (c) can seldom complete his work on time
 - (d) dislike to postpone the work that he undertakes to do
51. "You are thinking very highly about Prashant but he is not so" means
- (a) You have a good opinion about Prashant but he is not as good as you think
 - (b) Prashant is much better, than what you think of him
 - (c) Your view about Prashant is philosophical, keep it up
 - (d) Prashant is as good as you think about him

Direction (Q.52 - Q.53): Find the erroneous part of the given sentence

52. The war of Mahabharata (a) / is the full length illustration (b) / of a righteous war (c) / No error (d)
- (a) The war of Mahabharata
 - (b) is the full length illustration
 - (c) of a righteous war
 - (d) No error
53. To perform this experiment (a) / drop little sugar (b) / into a glass of water (c) / No error (d)
- (a) To perform this experiment
 - (b) drop little sugar
 - (c) into a glass of water
 - (d) No error

Directions (Q.54 - Q.55): Read the following comprehension carefully and answer the questions accordingly.
One spring, while visiting in the little village among the High Mountains where her ancestors had dwelt for _____ my Aunt kindled the callow fancy of my uncle, Howard Carpenter, then an idle, shiftless boy of twenty-one.

54. Which word, if inserted in the blank, makes the most sense in the context of the passage?
- (a) days (b) seasons (c) infinity (d) generations
55. What is the meaning of the word shiftless as it is used in the passage?
- (a) amiable (b) ruthless (c) lazy (d) carefree

Directions (Q.56 - Q.57): Read the following comprehension carefully and answer the questions accordingly.
Mahatma Gandhi believed that industrialisation was no answer to the problems that plague the mass of India's poor and that villagers should be taught to be self-sufficient in food, weave their own cloth from cotton and eschew the glittering prizes that the 20th century so temptingly offers. Such an idyllic and rural paradise did not appear to those who inherited the reins of political power.

56. The meaning of 'glittering prizes that the 20th century so temptingly offers' is
- (a) pursuit of a commercialised material culture
 - (b) replacement of rural by urban interests
 - (c) complete removal of poverty
 - (d) absence of violence and corruption

57. The basis of 'an idyllic and rural paradise' is
- (a) rapid industrialisation of villages
 - (b) self-sufficiency in food clothes and simplicity of the lifestyle
 - (c) bringing to the villages the glittering prizes of the 20 th century
 - (d) supporting those holdings powerful political positions

Directions (Q.58 - Q.60): In questions given below, out of the four alternatives, choose the one which can best substitute the given sentence.

58. Someone who is willing to take risks or to do something shocking
- (a) Bodacious
 - (b) Risk-taker
 - (c) Audacious
 - (d) Bold
59. To use special chemicals, smoke or gas to destroy the harmful insects or bacteria in a place
- (a) Spray
 - (b) Fumigate
 - (c) Decontaminate - neutralize or remove dangerous substances
 - (d) All of the above
60. It's a state in which a person has apprehensions all the time about their well-being and considers that they are ill.
- (a) Hypoallergenic
 - (b) Hypochondriac
 - (c) Hypochondria
 - (d) All of the above