

Aptitude Question Paper Version (B)

Option in red is the correct answer

1. Which of the following statements is true for a "biological detergent"?
 - (A) It is a mainly a mixture of natural enzymes that clean clothes when used in washing.
 - (B) It is a mainly a mixture of lipase and protease that is used to get rid of weeds in gardens.
 - (C) It is mainly a mixture of weak acids that is used to sterilize instruments used in operation theaters.
 - (D) It is a name given to compounds consumed to kill intestinal harmful bacteria in humans.
 - (E) It is a name given to detergents that have been produced by a process that did not involve testing on animals.

2. Which of the following statements is/are true about Ramsar sites?
 - a. A Ramsar site is a wetland of importance.
 - b. The Keoladeo National Park of Rajasthan is a Ramsar site.
 - c. The Ranganthittu Bird Sanctuary of Karnataka is a Ramsar site.
 - (A) Only 'a' and 'b'.
 - (B) Only 'b' and 'c'.
 - (C) Only 'a' and 'c'.
 - (D) Neither 'a' nor 'b' nor 'c'.
 - (E) All the statements 'a', 'b' and 'c'.

3. Which of the following gases are the main constituents of "Biogas" or "Gobargas"?
 - (A) Ammonia and Carbon Dioxide.
 - (B) Methane and Ammonia.
 - (C) Ammonia and Carbon Monoxide.
 - (D) Methane and Carbon Monoxide.
 - (E) Methane and Carbon Dioxide.

4. Which of the following statement/statements is/are **true** with regards to "Earth hour"?
 - a. In 2018 "Earth hour" was observed on the 05th of June.
 - b. It is organized by the World-Wide Fund for Nature.
 - c. It encourages switching off all unnecessary electric lights for one hour on a fixed day and time.
 - (A) Only 'a' and 'b'.
 - (B) Only 'b' and 'c'.
 - (C) Only 'a' and 'c'.
 - (D) All the statements 'a', 'b' and 'c'.
 - (E) None of the statements 'a', 'b' and 'c'.

5. If the IQ score of a person is reported to be 104, how would he/she be classified in matters of intelligence?
- (A) Well below Average.
 - (B) Below Average.
 - (C) Average.
 - (D) Above Average.
 - (E) Well above Average.
6. Which is the chemical constituent of indelible ink used in elections to stain the forefingers of voters?
- (A) Mercuric Nitrate.
 - (B) Silver Nitrate.
 - (C) Mercuric Chloride.
 - (D) Silver Chloride.
 - (E) Mercury-Silver Acetate.
7. Why are apples generally wrapped in waxed paper?
- (A) To prevent direct ultra violet rays of sunlight from reacting with color molecules and changing the color of apples.
 - (B) To prevent aerobic respiration by checking the entry of Oxygen.
 - (C) To prevent insects from laying eggs on the surface of apples.
 - (D) To prevent the formation of ethylene gas due to injury in transport.
 - (E) To apply wax to the surface of apples that gives it a shine and thus better price.
8. How does ironing clothes remove wrinkles and form creases?
- (A) By negative charge developed molecules in the iron attracting the positive charged molecules of clothes.
 - (B) By the chemical reaction of iron atoms and the molecules of which the clothes are made of.
 - (C) By the hot iron absorbing residual water of the clothes.
 - (D) By pressure of the iron flattening the clothes.
 - (E) By loosening the bonds between long-chain polymer molecules in the fibers of the clothes.
9. Which of the following **is/area** group/class of compounds that are/can be used as sugar substitutes?
- (A) Sucralose and Cyclamate.
 - (B) Aspartame and Neotame.
 - (C) Stevia and Acesulfame Potassium.
 - (D) Saccharin and Advantame.
 - (E) All the options A, B, C and D are correct.

10. Which of the following statements are correct about LPG (Liquified Petroleum Gas)?

- a. LPG contains butane and propane.
- b. Pure LPG is odourless.
- c. The stench we feel when LPG gas cylinders leak is due to Ethyl Mercaptan.

- (A) None of the three statements 'a', 'b' and 'c' are correct.
- (B) Only statements 'a' and 'b' are correct.
- (C) Only statements 'b' and 'c' are correct.
- (D) Only statements 'a' and 'c' are correct.
- (E) All the three statements 'a', 'b' and 'c' are correct.

11. What is the mass wise contribution of the elements Carbon, Hydrogen, Nitrogen and Oxygen in an adult human body?

- (A) Carbon > Hydrogen > Nitrogen > Oxygen.
- (B) Hydrogen > Nitrogen > Oxygen > Carbon.
- (C) Nitrogen > Oxygen > Carbon > Hydrogen.
- (D) Oxygen > Carbon > Hydrogen > Nitrogen.
- (E) Carbon = Hydrogen = Nitrogen = Oxygen.

12. Which of the following statement/statements is/are **not correct**?

- I. A body can have a constant speed but a varying velocity.
 - II. A body can have a constant velocity but a varying speed.
 - III. A body can have a zero velocity and finite acceleration.
- (A) Only I.
 - (B) Only II.
 - (C) Only III.
 - (D) Only I and II.
 - (E) Only I and III.

13. Which of the following statement/statements is/are false with regards to bamboo?

- I. Bamboo is a grass.
 - II. Bamboos life cycle ends with gregarious flowering.
 - III. All species of bamboo produce seeds after flowering.
- (A) Only I and II.
 - (B) Only I and III.
 - (C) Only II and III.
 - (D) All that is I, II and III.
 - (E) None of I, II and III.

14. Which amongst the following statements about Indian otters are false?

- I. Indian otters are aquatic or semi aquatic.
 - II. Karnataka has an Otter Conservation Reserve in Ballari and Koppal.
 - III. Otters cannot eat and digest crabs and frogs.
 - IV. Otters are hunted for their meat, which is a delicacy.
- (A) Only I, II and III.
 - (B) Only II, III and IV.
 - (C) Only I, III and IV.
 - (D) Only II and IV.
 - (E) Only III and IV.

15. Which of the following statements are correct about the Indian Flying Fox?

- I. It survives only on ripe fruits and flower nectar.
 - II. It is capable of spreading viral diseases when it bites pet animals.
 - III. It is vermin as per the Indian Wildlife Protection Act, 1972.
- (A) All statements I, II and III are correct.
 - (B) Only statements I and II are correct.
 - (C) Only statements I and III are correct.
 - (D) Only statements II and III correct.
 - (E) None of the statements I, II and III are correct.

16. Which of the following is the least probable cause for decline of house sparrow population in urban areas?

- (A) Usage of Diclofenac in veterinary medicine.
- (B) Lack of cavity nesting sites in modern concrete buildings.
- (C) Lack of areas under wild grasses and bushes.
- (D) The electromagnetic radiation from mobile towers.
- (E) Less or nil availability of grains to the sparrows.

17. Which of the following is a likely cause of "Blue Baby Syndrome"?

- (A) Contamination of drinking water by cyanides.
- (B) Contamination of drinking water by nitrates.
- (C) Contamination of drinking water by phosphides.
- (D) Contamination of drinking water by arsenic.
- (E) Contamination of drinking water by cadmium.

18. Which of the following statements about Butter and Ghee are correct?

- I. Butter is an oil in water emulsion whereas Ghee is almost entirely milk fat.
- II. Ghee can be stored for a much longer time at ordinary temperatures than butter.
- III. Ghee can be consumed in small quantities by people who are lactose intolerant.

- (A) None of the statements I, II and III are correct.
- (B) Only statements I and II are correct.
- (C) Only statements I and III are correct.
- (D) Only statements II and III are correct.
- (E) All the statements I, II and III are correct.

19. Which of the following examples is the best evidence of evolution?

- (A) A Sloth bear going into hibernation in cold winters.
- (B) A Chameleon changing its color as per the environment.
- (C) A population of tigers increasing with increase in deer population.
- (D) A population of mosquitoes developing resistance to DDT.
- (E) A tree shedding its leaves in hot dry summer.

20. The cost of electricity in a city is Rs 10 per unit. If the Range Office uses one CFL bulb of 40 watts and one computer of 110 watts for 8 hours each day in April 2018, what will be the electricity charges payable for the month?

- (A) Rs 36.00.
- (B) Rs 36.20.
- (C) Rs 37.20.
- (D) Rs 360.00.
- (E) Rs 372.00.

21. A competitive exam paper has 50 questions. As per scoring rules, each correct answer fetches 1 mark, 1/3 mark is deducted for each wrong answer, and 1/6 mark is deducted for not attempting a question. If the net score of a student is 32, what is the minimum number of questions answered wrongly by the student?

- (A) 3.
- (B) 4.
- (C) 5.
- (D) 6.
- (E) 7.

22. If $(AB)^2 = PQA$, where each letter stands for a different single digit number, what will be the value of $(P + Q)$?
- (A) 2.
(B) 9.
(C) 10.
(D) 12.
(E) 13.
23. The book titled "Trees of Udupi" had 'N' pages each page having numbers '1' to 'N' printed on them. One of the pages was removed from the book. The sum of the page numbers of the remaining pages is 1000. What is the sum of the page numbers of the page that was removed?
- (A) 31 or 85.
(B) 35 or 81.
(C) 41 or 95.
(D) 45 or 91.
(E) Cannot be calculated with the given information.
24. In a hollow cylinder of diameter 14 cms and height 20 cms, a solid prism of a square base and a height 10 cms is kept in such a way that its longest edges are tangent to the surface of the cylinder. Water is then poured in the cylinder. What is quantity of water that can be stored?
- (A) $490(\pi - 1)$ cubic cms.
(B) $490(\pi - 2)$ cubic cms.
(C) $980(\pi - 1)$ cubic cms.
(D) $980(\pi - 2)$ cubic cms.
(E) $490(\pi - 3)$ cubic cms.
25. A number multiplied by $\frac{2}{3}$ gives the value "m". On dividing the number by $\frac{3}{2}$ the value got is "n". What is the ratio m: n?
- (A) 6:1.
(B) 5:1.
(C) 3:1.
(D) 2:1.
(E) 1:1.
26. Three circles having centers at A, B and C respectively externally touch each other. If $AB = 10$ cms., $BC = 14$ cms. and $AC = 12$ cms., what is the radius of circle with center at C?
- (A) 4 cms.
(B) 6 cms.
(C) 8 cms.
(D) 12 cms.
(E) 16 cms.

27. One tap "A" alone fills a tank in 12 minutes. Another tap "B" alone can fill the same tank in 24 minutes? If both taps "A" and "B" are opened simultaneously, how much time will be taken to fill the tank?
- (A) 18 minutes.
(B) 16 minutes.
(C) 12 minutes.
(D) 10 minutes.
(E) **8 minutes.**
28. A and B combinedly can do a work in 8 hours, B and C combinedly can do it in 12 hours and A, B and C all three jointly can do it in 6 hours. What will be the time taken if only A and C combinedly did the work?
- (A) 4 hours.
(B) 6 hours.
(C) **8 hours.**
(D) 10 hours.
(E) 12 hours.
29. If $\log_x y = 100$ and $\log_2 x = 10$, what is the value of y ?
- (A) 2^{10}
(B) 2^{100}
(C) **2^{1000}**
(D) 2^{10000}
(E) None of the above.
30. A sum of Rs P kept in fixed deposit in a bank which gives a simple interest of 10% per annum for four years has a maturity value of Rs 22960. If the amount invested had been Rs 600 more than P, what would be the interest earned on the amount deposited for the same period?
- (A) Rs. 6400.
(B) Rs. 6500.
(C) Rs. 6600.
(D) Rs. 6700.
(E) **Rs. 6800.**
31. "A" and "B" are two different single digit numbers. While going from Belagavi to Chitradurga by car, at 08:00 AM the driver sees the milestone stating Chitradurga being "A0B" [0 means Zero] Kms, at 09:00 AM the milestone stating Chitradurga being "BA" Kms, and at 10:00 AM the milestone stating Chitradurga being "AB" Kms. What is the speed of the car?
- (A) 25 Kilometers per hour.
(B) 30 Kilometers per hour.
(C) 35 Kilometers per hour.
(D) 40 Kilometers per hour.
(E) **45 Kilometers per hour.**

32. The sides of an isosceles triangle are represented by $(x + 1)$, $(9 - x)$ and $(5x - 3)$ cms.

How many triangles are possible?

- (A) 0.
- (B) 1.
- (C) 2.
- (D) 3.
- (E) 4.

33. Decreasing the number by "n" percent gives a number which is equal to the number obtained by increasing 60 by "n" percent. What will be "n" percent of 70?

- (A) 6.
- (B) 8.
- (C) 10.
- (D) 12.
- (E) Data is insufficient to answer the question.

34. Aman and Basheer cultivate ragi. Basheer has 10 hectares land more than Aman. Aman's lands gave a yield of 25 quintals per hectare while that of Basheer's lands was 30 quintals per hectare. If the ragi production of Basheer was 350 quintals more than that of Aman, what was the extent of area in which Aman grew ragi?

- (A) 4 hectares.
- (B) 6 hectares.
- (C) 8 hectares.
- (D) 10 hectares.
- (E) 12 hectares.

35. The chord AB of a circle subtends an angle of "n" radians at the center of the circle O. If the area of the circular sector AOB equals the square of the length of the arc AB, what is the value of "n" in radians?

- (A) 0.125.
- (B) 0.250.
- (C) 0.375.
- (D) 0.500.
- (E) 0.625.

36. A man left his house at 06:00 AM running straight to a temple at the base of a hill at a speed of 8 Kmph, then climbed the hill at a speed of 6 Kmph, came down the hill on the same route to the temple at a speed of 12 Kmph and then ran back straight at 8 Kmph to his house reaching at 08:00 AM. What is the total distance travelled by the man?
- (A) 8 kms.
 - (B) 10 kms.
 - (C) 12 kms.
 - (D) 16 kms.
 - (E) Data is insufficient to answer the question.
37. In a sphere of radius "r" units, the numerical value of the surface area in square units is the same as is the numerical value of its volume in cube units. What is the value of r?
- (A) 3 units.
 - (B) 6 units.
 - (C) 9 units.
 - (D) 12 units.
 - (E) 15 units.
38. Two years ago, one fifth of the age of Anjali was equal to one fourth of the age of Babita, and their average was 27 years. If the age of Chetana was also included, the average would have become 24 years. What will be the average of the ages of Babita and Chetana 3 years from now?
- (A) 26 years.
 - (B) 25 years.
 - (C) 24 years.
 - (D) 23 years.
 - (E) 22 years.
39. A man takes a loan of Rs. 3000 at a compound annual rate of interest of 10%. At the end of every year he pays Rs. 1500. What is the amount he pays in the last year to clear his entire loan with interest?
- (A) Rs. 435.
 - (B) Rs. 528.
 - (C) Rs. 684.
 - (D) Rs. 717.
 - (E) Rs. 1500.

40. Two buildings located on level ground are separated a distance of "k" meters between their bases. The height of one building is double the other. The angles subtended by the buildings at the middle point of their separation are complementary to each other. What is the height of the smaller building?
- (A) $2k$ meters.
 - (B) $k\sqrt{2}$ meters.
 - (C) $k/\sqrt{2}$ meters.
 - (D) $k/(2\sqrt{2})$ meters.
 - (E) $k/2$ meters.
41. The sum of the first 9 terms of an arithmetic series is 61. The sum of the next 9 terms is 223. What is the common difference of the series?
- (A) 5.
 - (B) 4.
 - (C) 3.
 - (D) 2.
 - (E) 1.
42. In a farm only hens, cows and pigs are kept which are looked after by Watchers. The total number of heads (including the Watchers) in the farm are 69 less than the number of legs. The number of cows is double that of pigs. The number of hens is the same as of cows. There is one Watcher for every 10 animals (hen plus cow plus pig). The total number of animals and Watchers is less than 48. How many cows are in the farm?
- (A) 3.
 - (B) 6.
 - (C) 12.
 - (D) 18.
 - (E) Not possible to be determined with the given data.
43. In a road tunnel AB, a dog is sitting at $3/8$ distance of the length of tunnel. When a car is near A, it sounds a horn. Immediately the dog runs towards the car and meets it at A. Instead, had the dog ran away from the car, the car would have met it at B. If the speeds of the car and dog are uniform, what is the ratio of the speed of the dog and car?
- (A) 1:2.
 - (B) 1:3.
 - (C) 1:4.
 - (D) 1:5.
 - (E) Data provided is insufficient to answer the question.

44. A quadratic equation has two roots, one of which is greater than the other by 1. If the sum of the roots is lesser than the product of the roots by 5, what is/are the product of roots?

- (A) 2.
- (B) 6.
- (C) 4.
- (D) 8.
- (E) **Either 2 or 12.**

45. The profit of "Bhima Timbers" was Rs. 2800. It was divided amongst its four shareholders A, B, C and D in such a way that Share of A: Share of B = Share of B: Share of C = Share of C: Share of D = 3:4. How much amount did C get?

- (A) Rs 678.
- (B) **Rs 768.**
- (C) Rs 786.
- (D) Rs 867.
- (E) Rs 876.

46. When a number is divided by 105, the remainder is 99. What will be the remainder if the number is divided by 21?

- (A) 0.
- (B) 5.
- (C) 10.
- (D) **15.**
- (E) 20.

47. A College engages teachers to check the totals of marks given in an exam. Each teacher checks the totals of 30 answer books per hour. The task started at 08:00 A.M. At 09:00 A.M "n" number of teachers leave to take classes. Similarly, at 10:00 and 11:00 A.M too "n" number of teachers go for classes. At 11:10 A.M it is seen that the totals of 1775 answer scripts have been rechecked. What is the value of "n"?

- (A) 1.
- (B) 2.
- (C) **3.**
- (D) 4.
- (E) 5.

48. The perimeter of a right-angled triangle is 60 cms. The length of its longest side is 26 cms. What is the area of the triangle?
- (A) 120 square cms.
 - (B) 144 square cms.
 - (C) 240 square cms.
 - (D) 288 square cms.
 - (E) 432 square cms.
49. AB is a chord of a circle of length 24 cms. P is its mid-point. The diameter of the circle passing through P meets the circle at points M and N. Length of PM is 8 cms. If PN is longer than PM, what is the length of PN?
- (A) 16 cms.
 - (B) 18 cms.
 - (C) 32 cms.
 - (D) 36 cms.
 - (E) 40 cms.
50. In the 2014 batch of Range Forest Officers, if 50% of the men officers would have been women, the number of women officers would have been 50% more than men officers. What was the percentage of women officers in the 2014 batch of Range Forest Officers?
- (A) 15%.
 - (B) 20%.
 - (C) 25%.
 - (D) 30%.
 - (E) 35%.
51. For the data-
- 3, 4, 2, 9, 7, 6, 4, p, 7 and 9,
- the mode is 7. What is the arithmetic mean of the data?
- (A) 5.5
 - (B) 5.6
 - (C) 5.7
 - (D) 5.8
 - (E) 6.0

52. What is the arithmetic mean of the data given below?

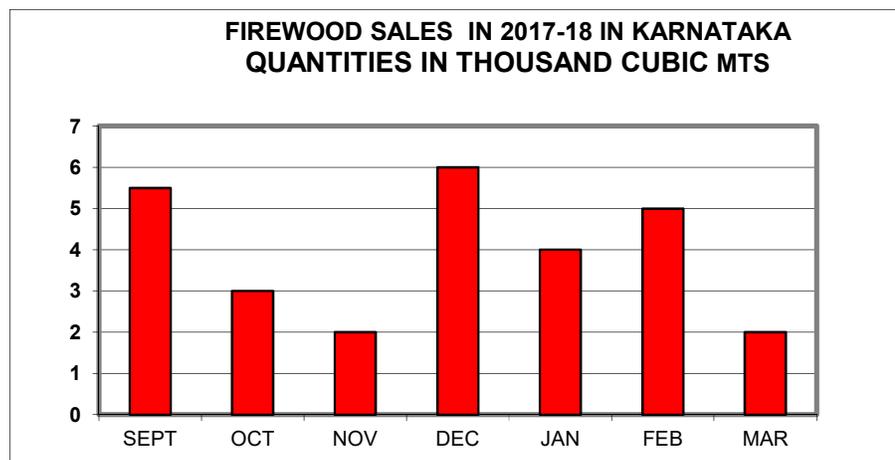
X value	1	2	3	4	5
Frequency	1	2	1	3	3

- (A) 2.50.
- (B) 2.75.
- (C) 3.00.
- (D) 3.25.
- (E) 3.50.

Data and graph for questions 53 to 55.

Karnataka Forest Department sold firewood in its depots from September 2017 to March 2018. The data related to quantity sold is shown in the graph below.

Based upon these, please answer the following three questions-



53. What is the approximate average quantity of firewood sold in a month in the period September 2017 to March 2018?

- (A) 4000 cubic mts.
- (B) 4250 cubic mts.
- (C) 4500 cubic mts.
- (D) 4750 cubic mts.
- (E) 5000 cubic mts.

54. If 2.8 cubic mts. of firewood weighs 1 tonne, what is the approximate total quantity of firewood sold in the period September 2017 to March 2018?

- (A) 9821 tonnes.
- (B) 10821 tonnes.
- (C) 11821 tonnes.
- (D) 12821 tonnes.
- (E) 13821 tonnes.

55. The selling price of firewood was Rs 1100 per cubic mt in 2016 but increased to Rs 1400 per cubic mt in 2017. What is the best representation of ratio of revenue realized from sale of firewood in the period September-December 2016 to that of January-March 2017?
- (A) 1:2.
 (B) 1:2.5.
 (C) 1:3.
 (D) **2:1.**
 (E) 2:3.

Question numbers 56 and 57 are to be answered on the basis of information given below.

In a sewage pollution prone tank in a city, five species of fishes having varying tolerance to sewage load were introduced. The species of fishes, their numbers introduced and their sewage load tolerance is detailed in the table below.

Species	Numbers	Tolerance of Sewage load (SL) of the species					
		SL=1.5	SL=2.0	SL=2.5	SL=3.0	SL=3.5	SL=4.0
Batfish	51	√	√	√	√	x	x
Catfish	165	√	√	√	√	x	x
Flatfish	81	√	√	√	√	√	x
Gnatfish	147	√	√	√	√	√	√
Ratfish	57	√	√	x	x	x	x

The sign "√" indicates tolerant and "x" indicates not-tolerant. Fishes were introduced when SL was 0.

The greater the SL value, greater is the sewage content in tank water. If fishes are assumed to die of no cause except sewage load, and they die immediately after their tolerance limit is crossed, answer the following two questions.

56. If sewage load increases from SL=1.5 to SL= 3.5, what percentage of the total fishes introduced will survive?
- A) 40.5%.
 B) **45.5%.**
 C) 50.5%.
 D) 55.5%.
 E) 60.5%.

57. At what level of sewage load would almost 44.3% of the fishes die?

- A) SL=4.0.
- B) SL=3.5.
- C) SL=3.0.
- D) SL=2.5.
- E) SL=2.0.

58. A country has five states. The details of population and poverty of each State is as in the table below.

Name of State	Population of the State expressed as percentage of Country population	Percentage of population under poverty in the State
Abba	26	61
Babba	17	83
Cabba	22	69
Dabba	14	72
Pabba	21	66

Which State has the least number of people under poverty?

- (A) Abba.
- (B) Babba.
- (C) Cabba.
- (D) Dabba.
- (E) Pabba.

59. A data set consists of $2n$ observations. Exactly n of them are equal to m and another n of them are all equal to $-m$. If the standard deviation of the data is 2, what can be the value of m ?

- (A) $\sqrt{2} n$.
- (B) $2 n$.
- (C) 2.
- (D) $2\sqrt{n}$.
- (E) $4\sqrt{n}$.

60. The average temperature of Tuesday, Wednesday and Thursday was 19° C. The average temperature of Wednesday, Thursday and Friday was 20° C. If the temperature on Friday was 20° C. What was the temperature on Tuesday?

- (A) 16.3° C.
- (B) 16.5° C.
- (C) 16.7° C.
- (D) 17.0° C.
- (E) 17.3° C.

61. The median of 8, 6, 4, m , 12, 13 and 19 is 12. What is the value of " m "?
- (A) 6.
 (B) 8.
 (C) 9.
 (D) 12.
 (E) 13.
62. The arithmetic mean of 10 consecutive numbers is " P ". If the next 3 consecutive numbers are also included, what will be the new arithmetic mean?
- (A) $(P + 2.0)$.
 (B) $(P + 1.5)$.
 (C) $(P + 1.0)$.
 (D) $(P + 0.5)$.
 (E) P .
63. In case of a data, the Mode was more than the Median and the Median more than the Arithmetic mean. The data is most likely to be-
- (A) Positively skewed.
 (B) Normal (No skewness).
 (C) Negatively skewed.
 (D) Having all its observations equal to each other.
 (E) Having all its observations in ratios.

Data for answering questions 64 and 65.

In the following questions, different letters stand for various symbols as indicated below:

R : Addition

S : Subtraction

T : Multiplication

U : Division

V : Equal to

W : Greater than

X : Less than

Out of the alternatives given in these questions, only one is correct according to the above letter symbols. Please identify and mark the correct one.

- 64.
- (A) $16 T 2 R 4 U 6 X 8$.
 (B) $16 R 2 S 4 V 6 R 8$.
 (C) $16 T 2 U 4 V 6 R 8$.
 (D) $16 U 2 R 4 S 6 W 8$.
 (E) $16 R 2 R 4 V 6 X 8$.

65.

- (A) 24 U 3 R 2 S 2 W 8.
- (B) 24 S 3 X 2 T 2 U 8.
- (C) 24 R 3 S 2 X 2 T 8.
- (D) 24 R 3 T 2 T 2 X 8.
- (E) 24 U 3 T 2 V 2 T 8.

66. Four of the following are similar as they follow a particular rule. Which is the odd one out?

- (A) MP2.
- (B) RV3.
- (C) PU4.
- (D) EK5.
- (E) JR6.

67. In a class of 100 trainees, 60 trainees like Wildlife and 45 trainees like Botany. 5 trainees dislike Wildlife as well as Botany both. How many trainees like Wildlife as well as Botany?

- (A) 5.
- (B) 6
- (C) 7.
- (D) 8.
- (E) 9.

68. Of the five figures marked "A" to "E", which is different from the rest?



A B C D E

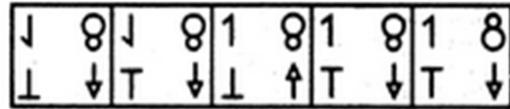
- (A) A
- (B) B
- (C) C
- (D) D
- (E) E

The following two questions consist of five figures marked A, B, C, D and E called the Problem Figures followed by five other figures marked 1, 2, 3, 4 and 5 called the Answer Figures. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

69. PROBLEM FIGURES



ANSWER FIGURES



- (A) 1
- (B) 2
- (C) 3
- (D) 4
- (E) 5

70.

PROBLEM FIGURES



ANSWER FIGURES



- (A) 1
- (B) 2
- (C) 3
- (D) 4
- (E) 5

71. If POND is coded as RSTL, how is HEAR written in that code?

- (A) JIGZ.
- (B) GHIZ.
- (C) GHIJ.
- (D) JCLZ.
- (E) LCJZ.

72. Which number replaces the question mark in the following matrix?

12Ω«	15μ»	11Σ«
132Σ»	?	154μ»
11Ω«	13Σ»	14μ«

- (A) 225μ»
- (B) 195Ω«
- (C) 225Σ»
- (D) 195μ«
- (E) 195Ω«

73. What number should come after 156 in the series 6, 16, 36, 76, 156?

- (A) 273.
- (B) 289.
- (C) 299.
- (D) 316.

(E) 331.

74. Anand is sitting 11th from the left end and Chandra 9th from the right end of a row of foresters. If there are 9 foresters sitting between them, how many foresters are sitting in the row?

- (A) 28.
- (B) 29.
- (C) 30.
- (D) 31.
- (E) 32.

75. A, B, C, D and E are five businessmen. B is richer than E but not as rich as C. D is richer than C. A is neither the richest nor the least rich of them all. Who is the least rich among the five friends?

- (A) A.
- (B) B.
- (C) C.
- (D) D.
- (E) E.

76. In some particular mathematical coding, the following relations are correct.

- (1) $16 + 4 = 144.$
- (2) $14 + 2 = 144.$
- (3) $13 + 4 = 81.$
- (4) $21 + 8 = 169.$

With the same code, what would be the value of [$20 + 5$]?

- (A) 100.
- (B) 144.
- (C) 196.
- (D) 225.
- (E) 324.

Question numbers 77 and 78 are to be answered on the basis of information and numerical data given below.

A bus starts from point G. After moving 3 km towards the east, it reaches point B, turns 135 degrees anticlockwise and goes 5 km ahead to reach point C. From point C it turns right and moves 5 km to reach point D. From point D it again turns towards its right and moves 5 km to reach point E. From E it turns 135 degrees anticlockwise and moves 4 km to reach its destination i.e. point F.

With this information please answer the following two questions-

77. When going from E to F, in which direction was the bus moving?

- (A) **North.**
- (B) North-East.
- (C) North-West.
- (D) South-East.
- (E) South-West.

78. In the journey from G to F, how many times was the bus moving in either North-West or the South-East direction?

- (A) Zero.
- (B) Once.
- (C) **Twice.**
- (D) Thrice.
- (E) Four times.

79. Pointing to the photograph of a lady, my friend Basavaraj said, "She is the wife of my father's brother's father's only grandson". How is the lady related to Basavaraj?

- (A) The lady is the sister of Basavaraj.
- (B) The lady is the sister-in-law of Basavaraj.
- (C) The lady is the niece of Basavaraj.
- (D) The lady is the daughter of Basavaraj.
- (E) **The lady is the wife of Basavaraj.**

Question numbers 80 and 81 are to be answered on the basis of information given below.

There are seven persons A, B, C, D, E, F, and G. They all were born in seven different years 1953, 1960, 1964, 1973, 1980, 1988, and 2003 but not necessarily in same order. However, the date and month of birth of all these persons are same. Calculations are done with respect to their birthday in 2018 (the ages of all on this day are integers). The age of A is divisible by 5 but A is not oldest person. The difference between age of G and A is 7 years. B was born an even number of years before G, but not in 1960. The age of C is double the age of D. E is not the oldest person.?

80. How many persons are younger than E?

- (A) **Five.**
- (B) Four.
- (C) Three.
- (D) Two.
- (E) One.

81. What will be the age of B, three years from now?
- (A) 68 years.
 - (B) 61 years.
 - (C) 57 years.
 - (D) 48 years.
 - (E) 41 years.

Each of the four questions numbered 82 to 85 below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and mark your answers as-

- (A) If the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.**
- (B) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.**
- (C) If the data either in statement I alone or in statement II alone is sufficient to answer the question.**
- (D) If the data given in both statements I and II together are not sufficient to answer the question.**
- (E) If the data in both statements I and II together are necessary to answer the question.**

82. **Question:** T studies in which of the schools B, C, D, E and F?

Statements:

- I. T does not study in the same school as either R or J.
- II. R and J study in schools D and F respectively.

RIGHT ANSWER IS D

83. **Question:** What is the standard deviation of four numbers a, b, c and d?

Statements:

- I. The sum of a, b, c and d is 18.
- II. The sum of the squares of a, b, c and d is 324.

RIGHT ANSWER IS E

84. **Question:** Is the value of a^3 more than that of a^2 ?

Statements:

- I. $a > 0$.
- II. $a < 1$.

RIGHT ANSWER IS B

85. If the information "Smitha is older than her cousin Manisha. Manisha's brother Bikram is older than Smitha. When Manisha and Bikram meet Smitha, all three like to play a game of Ludo. Manisha wins more often than Smitha" is fully correct, which of the following statements has to be true?

- (A) In the games of Ludo, Bikram loses to Manisha and Smitha quite often.
- (B) Smitha is elder to Bikram as well as Manisha.
- (C) **Manisha is younger to Smitha as well as Bikram.**
- (D) Smitha does not like to lose in Ludo.
- (E) The families of Manisha and Smitha live near to each other.

86. If 27 Range Forest Officers planted 27 seedlings in 27 minutes, what will be the time taken for 9 of those Range Forest Officers to plant 9 seedlings?

- (A) 1 minute.
- (B) 9 minutes.
- (C) 18 minutes.
- (D) **27 minutes.**
- (E) 36 minutes.

87. In a College A and B play Harmonium and Flute, B and C play Drum and Flute, C and E play Harmonium and Veena, D and E play Tabla, A and C play Veena and Flute, A and D play Harmonium and Flute. How many of them play four musical instruments?

- (A) **None.**
- (B) One.
- (C) Two.
- (D) Three.
- (E) Four.

Question numbers 88 and 89 are to be answered on the basis of information given below.

In a row of four houses, each is owned by a different person and each of them has a car. The houses are owned by Amar, Bikram, Tushar, and Dada. The colors of the cars are grey, violet, mauve and orange:

- I. The grey car is owned by Bikram.
- II. Tushar doesn't stay in any of the end houses.
- III. The second house from the left is owned by Amar.
- IV. The mauve car is owned by Dada.

88. Which among the following statements cannot be true?

- (A) The house at the left end belongs to Dada.
- (B) The house at the right end belongs to Dada.
- (C) The house at the left end belongs to Bikram.
- (D) The house at the right end belongs to Bikram.
- (E) **One of the owners of the houses of the ends has an orange car.**

89. Which among the following statements is not necessarily true?

- (A) Tushar's house is third from left.
- (B) **There is one house between the houses of Bikram and Tushar.**
- (C) The house of Bikram is at one of the ends.
- (D) The house of Dada is at one of the ends.
- (E) The houses of Bikram and Dada are at the two ends.

90. Rekha remembers that her puppy was born definitely before the 17th but after the 12th of November. Her sister remembers that the puppy was born after the 14th but before the 18th November for sure. On which day in November was the puppy definitely born?

- (A) **The 16th.**
- (B) The 17th.
- (C) Either the 16th or the 17th.
- (D) Any day between the 14th and 17th.
- (E) Data is inadequate.

Directions for questions 91 and 92.

In each question below are given statements followed by three conclusions marked P, Q and R. You have to take the given statements to be totally true, even if they seem to be at variance from well known facts. Read the conclusions and decide as to which of them logically follow from the given statements, disregarding commonly and well-known facts. Answer the questions about conclusions marking in the OMR sheet-

- (A) If only conclusions P and Q follow.
- (B) If only conclusions Q and R follow.
- (C) If only conclusions P and R follow.
- (D) If neither conclusion P, nor Q nor R follows.
- (E) If all conclusions P, Q and R follow.

Based on these directions, please answer questions 91 and 92.

91. Statements: (a) No Shine is Skill.
(c) Some Skills are Towers.
(d) All Towers are Rats.
(e) No Rat is Jeans.
Conclusions: (P) All Tops can be Shines.
(Q) Some Skills are Jeans.
(R) All Rats are Towers.

RIGHT ANSWER IS D

92. Statements: (a) All Bolts are Corks.
(b) All Corks are Thumbs.
(c) Some Thumbs are Apples.
(d) No Cork is Duster.
Conclusions: (P) Some Thumbs are Bolts.
(Q) Some Corks are Apples.
(R) No Bolt is Duster.

RIGHT ANSWER IS C

Directions for questions 93 to 95.

In each question below is given one or more inequalities. It is followed by two conclusions marked P and Q. You have to take the given inequality/inequalities to be totally true, read the conclusions and decide as to which of them follow/follows from the given inequality/inequalities. Answer the questions about conclusions marking in the OMR sheet-

- (A) If only conclusion P follows.
(B) If only conclusion Q follows.
(C) If both conclusion P and Q follow.
(D) If neither conclusion P, nor Q follows.
(E) If inequality has no relation with conclusions.

With this information answer the following three questions.

93. Inequality: **$W \geq D < M < P < A = F$**

Conclusion (P): $F > D$

Conclusion (Q): $P < W$

RIGHT ANSWER IS D

94. Inequality: $B > T > Q > R = F$

Conclusion (P): $Q \geq F$

Conclusion (Q): $T > F$

RIGHT ANSWER IS B

95. Inequalities: $W \geq P \leq C; S < Q = P; O = F \leq Q < Z$

Conclusion (P): $S < C$

Conclusion (Q): $C < Z$

RIGHT ANSWER IS A

96. Which of the following symbols should be placed in the blank spaces respectively (in the same order from left to right) in order to complete the given expression-

R _ A _ P _ I _ D

in such a manner that makes the inequalities $R > I$ and $P > D$ definitely false?

- (A) $<, <, >, =$
- (B) $<, =, =, >$
- (C) $<, =, =, <$
- (D) $>, >, =, <$
- (E) $\geq, =, =, \geq$

97. Six athletes A, B, C, D, E, F compete in a race. B did not win the race. E and D had two sprinters between them. A was behind D and E both. B was ahead of E but had one sprinter between him and E. F was just ahead of D.

How many sprinters were between C and E?

- (A) 0.
- (B) 1.
- (C) 2.
- (D) 3.
- (E) Either 1 or 2.

98. In the letter series

M _ N M _ N _ A N _ A _ M A _

some of the letters are missing which are given in order as one of the alternatives below it. Choose the correct alternative.

- (A) MAAMNN.
- (B) AMAMNN.
- (C) AMANMN.
- (D) MAANMN.
- (E) **AAMMNN.**

99. A murder took place in a village. Police came and interrogated three suspects, Amar, Akbar and Anthony. One of them had actually committed the murder. The villagers always answer any question with two sentences, one of which is always true and other is always false. The following three answers were received by the Police.

1. Amar said, I didn't commit the murder. Akbar didn't commit the murder.
2. Akbar said, I didn't commit the murder. Anthony didn't commit the murder.
3. Anthony said, I didn't commit the murder. I do not know who committed the murder.

Who had committed the murder?

- (A) Amar.
- (B) Akbar.
- (C) Anthony.
- (D) None of the three.
- (E) Cannot be inferred from the information given.

100. If $A + B$ means A is son of B; $A - B$ means A is wife of B; $A \times B$ means A is brother of B; $A \div B$ means A is mother of B and $A = B$ means A is the sister of B, what does $P + R - Q$ means?

- (A) Q is the brother of P.
- (B) Q is the son of P.
- (C) Q is the father of P.
- (D) Q is the uncle of P.
- (E) Q is the nephew of P.

-----END OF TEST QUESTIONS-----