

SNAP 2017 Question Paper

Time Allowed :2 Hours	Maximum Marks :150	Total questions :150
------------------------------	---------------------------	-----------------------------

General Instructions

1. No clarification on the Question paper can be sought. Answer the questions as they are.
2. There are 150 multiple choice objective type questions of one mark each which has to be answered in the OMR Sheet. **Total Marks are 150.**
3. Candidates have to indicate the most appropriate answer by darkening one of the four responses provided, with **BLACK/BLUE BALL POINT PEN** in the OMR Answer Sheet.
4. There will be **Negative Marking** for multiple choice objective type questions. 0.25 marks will be deducted for every wrong answer.
5. The candidate shall not write anything on the OMR Answer Sheet other than the details required and in the spaces provided for.
6. After the examination is over, the candidate can carry the test booklet along with candidate's copy of the OMR after handing over the original OMR to the invigilator.
7. The use of any unfair means by any candidate will result in the cancellation of his/her candidature.
8. Impersonation is an offence and the candidate, apart from disqualification, may have to face criminal prosecution.
9. Electronic gadgets like mobile phones, pagers and calculators etc. are strictly not permitted inside the Test Centre/Hall.
10. The candidates shall not leave the hall before the end of the test.

1. There are two integers 34041 and 32506, when divided by a three-digit integer n , leave the same remainder. What is the value of n ?

- (A) 298
 - (B) 307
 - (C) 461
 - (D) can't be determined
-

2. What is the remainder when $1! + 2! + 3! + \cdots + 100!$ is divided by 7?

- (A) 0
 - (B) 5
 - (C) 3
 - (D) 6
-

3. If $(67^{67} + 67)$ is divided by 68, the remainder is:

- (A) 61
 - (B) 67
 - (C) 63
 - (D) 66
-

4. Find the value of $1(1!) + 2(2!) + 3(3!) + \cdots + 20(20!)$.

- (A) $20! - 1$
 - (B) $21! - 1$
 - (C) $22! - 2$
 - (D) $21!$
-

5. Find the remainder when $6 \overbrace{66 \dots 6}^{100 \text{ times}}$ is divided by 10.

- (A) 6
- (B) 2
- (C) 4
- (D) 8

DIRECTIONS (Qs. 6–10): In the paragraph given below some informations are given about the selling of some items. Two values are coded as x and y .

A shopkeeper has some electronic goods in his shop. Cost price of T.V is 40% less than the selling price of A.C. which is sold at 20% profit after a discount of 20%. Selling price of cooler is 50% less than the cost price of T.V and it is sold at 10% profit with a discount of 20%. T.V is sold at 20% profit with a discount of 40% and amount of discount on T.V is 24000. Laptop is sold at 30% discount and its cost price is two times the selling price of Mobile which is sold at 50% gain and 25% discount. Selling price of Laptop is 50% more than the selling price of A.C., and person got 20% profit on it.

6. X = Average cost price of A.C and Mobile; Y = Cost price of Laptop. Decide the relation between X and Y .

- (a) If $X > Y$
- (b) If $X < Y$
- (c) If $X \geq Y$
- (d) If $X \leq Y$ or can't be determined

7. X = Average profit amount of all items; Y = Average discount amount of all items. Decide the relation between X and Y .

- (a) If $X > Y$
- (b) If $X < Y$
- (c) If $X \geq Y$
- (d) If $X \leq Y$ or can't be determined

8. X = Cost price of Cooler; Y = Profit amount of Laptop. Decide the relation between X and Y .

- (a) If $X > Y$
- (b) If $X < Y$
- (c) If $X \geq Y$
- (d) If $X \leq Y$ or can't be determined

9. X = Profit amount of Mobile; Y = Discount amount of Mobile. Decide the relation between X and Y .

- (a) If $X > Y$
- (b) If $X < Y$
- (c) If $X \geq Y$
- (d) If $X \leq Y$ or can't be determined

10. X = Marked price of Laptop; Y = Marked price of A.C. Decide the relation between X and Y .

- (a) If $X > Y$
- (b) If $X < Y$
- (c) If $X \geq Y$
- (d) If $X \leq Y$ or can't be determined

11. A train running at a certain speed crosses a platform in 30 seconds. What is the speed of the train?

I. Length of the train is 240 m.

II. The train crosses a man who is on the platform in 12 seconds.

- (a) If I alone is sufficient but II alone is not sufficient.
- (b) If II alone is sufficient but I alone is not sufficient.

- (c) If either I alone or II alone is sufficient.
 - (d) If even I + II together are not sufficient.
 - (e) If I + II together are necessary to answer the question.
-

12. The weights of A , B and C are in the ratio $8 : 7 : 5$. A 's weight is 60% more than C 's. Find the weight of B .

- I. Total weight of A, B, C is 300 kg.
- II. Difference between A 's and C 's weight is 45 kg.

- (a) I alone sufficient; II alone not.
 - (b) II alone sufficient; I alone not.
 - (c) Either I alone or II alone sufficient.
 - (d) Even I + II together not sufficient.
 - (e) I + II together necessary.
-

13. A shopkeeper sells some articles at a profit of 20% on the cost price. Find the amount of profit.

- I. Cost price of the article is Rs. 2400.
- II. Selling price of the article is Rs. 480 more than the cost price.

- (a) I alone sufficient; II alone not.
 - (b) II alone sufficient; I alone not.
 - (c) Either I alone or II alone sufficient.
 - (d) Even I + II together not sufficient.
 - (e) I + II together necessary.
-

14. A 540 m-long rectangular plot is to be fenced. Find the cost of fencing per square metre.

- I. Breadth of the plot is 60 m.
- II. Length of the plot is 120 m.

- (a) I alone sufficient; II alone not.

- (b) II alone sufficient; I alone not.
 - (c) Either I alone or II alone sufficient.
 - (d) Even I + II together not sufficient.
 - (e) I + II together necessary.
-

15. The difference between compound interest (CI) and simple interest (SI) on a sum for 4 years is ₹1282. Find the sum.

I. Amount of simple interest accrued after 4 years is ₹4000.

II. Rate of interest is 10% per annum.

- (a) I alone sufficient; II alone not.
 - (b) II alone sufficient; I alone not.
 - (c) Either I alone or II alone sufficient.
 - (d) Even I + II together not sufficient.
 - (e) I + II together necessary.
-

16. If $\log x - 5 \log 3 = -2$, then x equals

- (A) 1.25
 - (B) 0.81
 - (C) 2.43
 - (D) 0.8
-

17. Find the value of $\log_{20} 100 + \log_{20} 1000 + \log_{20} 10000$ [Assume that $\log 2 = 0.3$].

- (A) 90/13
 - (B) 80/13
 - (C) 110/13
 - (D) 70/13
-

18. Find the remainder when the 41-digit number 1234... is divided by 8.

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

19. A and B entered into a partnership, investing ₹16000 and ₹12000 respectively. After 3 months, A withdrew ₹5000 while B invested ₹5000 more. After 3 more months, C joined with ₹21000. At the end of a year, the profit was ₹26,400. By how much does B's share exceed C's share?

- (A) 3600
 - (B) 2100
 - (C) 3000
 - (D) 2300
-

20. In a survey of 500 TV viewers: 285 watch football (F), 195 hockey (H), 115 basketball (B); 45 watch F&B, 70 watch F&H, 50 watch H&B, and 50 watch none. How many watch exactly one of the three games?

- (A) 325
 - (B) 405
 - (C) 310
 - (D) 372
-

21. Nine squares are chosen at random on a chessboard. What is the probability that they form a square of size 3×3 ?

- (a) $\frac{9}{\binom{64}{9}}$
- (b) $\frac{36}{\binom{64}{9}}$
- (c) $\frac{6}{\binom{64}{9}}$
- (d) None of these

22. A, B, C, D are four towns, any three of which are non-collinear. In how many ways can we construct three roads (each road joins a pair of towns) so that the roads do *not* form a triangle?

- (a) 7
- (b) 8
- (c) 9
- (d) More than 9

23. If $x^2 - ax - 21 = 0$ and $x^2 - 3ax + 35 = 0$ with $a > 0$ have a common root, then a equals:

- (a) 1
- (b) 2
- (c) 4
- (d) 5

24. If a, b, c are distinct positive real numbers and $a^2 + b^2 + c^2 = 1$, then $ab + bc + ca$ is

- (A) less than 1
- (B) equal to 1
- (C) greater than 1
- (D) any real number

25. The work done by a man, a woman and a child is in the ratio 3 : 2 : 1. There are 20 men, 30 women and 36 children. Their weekly wages (₹780) are divided in the ratio of work done by men, women and children. What will be the wages of 15 men, 21 women and 30 children for 2 weeks?

- (A) ₹585
- (B) ₹292.5

(C) ₹1170

(D) ₹900

26. David invested in three schemes A, B, C at 10%, 12%, 15% p.a. respectively. The total interest in one year was ₹3200. Also, C was 150% of A and 240% of B. What was the amount invested in B?

(a) ₹5000

(b) ₹6500

(c) ₹8000

(d) cannot be determined

27. Two shopkeepers sell the same article at the same price for the same quantity. One gives 25% discount; the other offers 25% more quantity at the same price. From a customer's view, which is better?

(a) 1st shopkeeper's deal

(b) 2nd shopkeeper's deal

(c) both are equal

(d) cannot be determined

28. Surdeep bought a machinery for ₹800 after a 20% discount on the company price. He fixes the selling price to earn 10% profit on the original company price. Find the selling price.

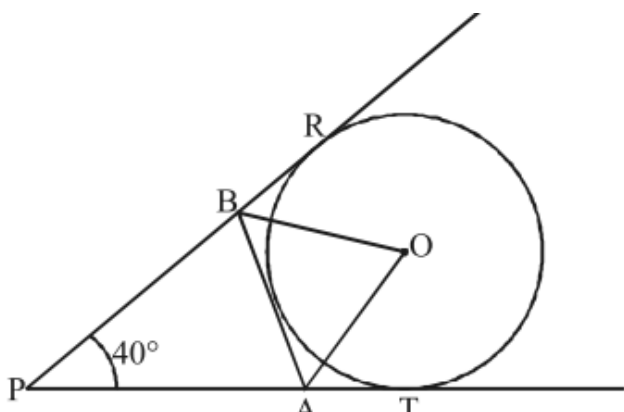
(a) ₹900

(b) ₹1000

(c) ₹1100

(d) ₹1200

29. In the figure, $\triangle APB$ is formed by three tangents to a circle with centre O . If $\angle APB = 40^\circ$, then the measure of $\angle BOA$ is

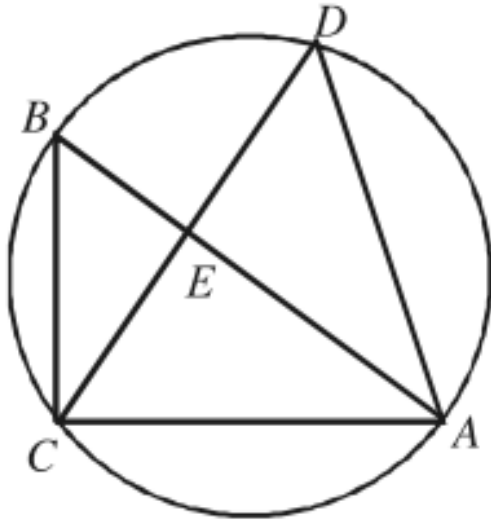


- (A) 50°
- (B) 55°
- (C) 60°
- (D) 70°

30. In $\triangle ABC$, D is a point on BC such that $3BD = BC$. If each side of the triangle is 12 cm, then AD equals

- (A) $4\sqrt{5}$
- (B) $4\sqrt{6}$
- (C) $4\sqrt{7}$
- (D) $4\sqrt{11}$

31. In the adjoining figure, points A, B, C, D lie on a circle. $AD = 24$ and $BC = 12$. What is the ratio of the area of $\triangle CBE$ to that of $\triangle ADE$?

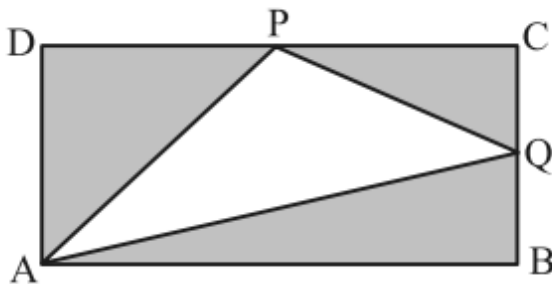


- (a) 1 : 4
- (b) 1 : 2
- (c) 1 : 3
- (d) Insufficient data

32. In the given figure, $ABCD$ is a rectangle. P and Q are the midpoints of sides CD and BC respectively. Then the ratio of area of shaded portion to the area of unshaded portion is:

- (a) 5 : 4
- (b) 3 : 5
- (c) 5 : 3
- (d) 5 : 8

33. If $2 \sin \alpha + 15 \cos^2 \alpha = 7$ for $0^\circ < \alpha < 90^\circ$, find $\cot \alpha$.



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

34. If $1 + \sin^2 A = 3 \sin A \cos A$, then what are the possible values of $\tan A$?

- (a) $1/4, 2$
 - (b) $1/6, 3$
 - (c) $1/2, 1$
 - (d) $1/8, 4$
-

35. Avinash covered 150 km in 10 hours. The first part of his journey he covered by car, then by rickshaw. Speed of car and rickshaw are 20 km/hr and 12 km/hr respectively. Find the ratio of distances covered by car and rickshaw.

- (a) $2 : 3$
 - (b) $4 : 5$
 - (c) $1 : 1$
 - (d) None of these
-

36. A jar full of whisky contains 40% alcohol. A part of this whisky is replaced by another containing 19% alcohol and now the percentage of alcohol becomes 26%. The quantity of whisky replaced is:

- (a) $\frac{4}{3}$
 - (b) $\frac{3}{4}$
 - (c) $\frac{3}{2}$
 - (d) $\frac{2}{3}$
-

37. In a market survey, 20% opted for product A, 60% for B, and the rest were uncertain. If the difference between those who opted for B and those uncertain is 720, how many individuals were surveyed?

- (a) 1440
 - (b) 1800
 - (c) 3600
 - (d) Data inadequate
-

38. The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. Find the average age of the team.

- (a) 23 years
 - (b) 26 years
 - (c) 50 years
 - (d) None of these
-

39. On dividing $x^3 - 3x^2 + x + 2$ by a polynomial $g(x)$, the quotient and remainder were $x - 2$ and $-2x + 4$ respectively. Find $g(x)$.

- (a) $x^2 + 2x + 1$
 - (b) $x^2 - 2x + 1$
 - (c) $x + x + 1$
 - (d) $x^2 - x + 1$
-

40. A, B, C and D purchase a gift worth ₹60. A pays $\frac{1}{2}$ of what others are paying, B pays $\frac{1}{3}$ of what others are paying, and C pays $\frac{1}{4}$ of what others are paying. What is the amount paid by D?

- (a) ₹14

- (b) ₹15
 - (c) ₹16
 - (d) ₹13
-

Analytical and Logical Reasoning

41. If it is possible to make a meaningful word with the *third*, the *fifth*, the *sixth* and the *eleventh* letters of the word MERCHANDISE, using each letter only once, which of the following will be the third letter of that word? If no such word can be formed, give 'X' as answer and if more than one such word can be formed, mark 'T' as answer.

- (a) H
 - (b) E
 - (c) R
 - (d) T
-

Q42-43

First 12 even numbers are written top to bottom (2,4,...,24). The letters of "SACRED" are written in *alphabetical* order against each multiple of 4 (one letter per number). There are 2 letters between *N* and *S*. The number of letters between *E* and *N* equals that between *P* and *D*. *P* is not against number 14. There are 5 letters between *U* and *T* with *U* above *T*. *I* is written against number 6. (No letter repeats.)

42. Which is the second letter in the meaningful word formed by the letters against numbers 6, 12, 14, and 20?

- (a) T
 - (b) D
 - (c) N
 - (d) I
-

43. If there are 3 alphabets in the English series between the alphabets written against numbers 10 and 22, then how many alphabets are there between the alphabets written against numbers 18 and 22?

- (a) Three
- (b) Five
- (c) One
- (d) Four

DIRECTIONS (Qs. 44–46): *Study the information and answer the following questions:*

In a certain code language 'mark is not money' is written as

35%T, 72@Y, 98&K, 76#S,

'door and source earn' is written as

67@E, 56N, 34@D, 97&R,

'max nic joof high' is written as

34@H, 34%C, 54&F, 74#X,

and 'maa calm hi vizag' is written as

34%G, 73&M, 23@I, 55A.

44. What is the code for 'mob like' in the given code language?

- (a) 23%B, 56#K
- (b) 55%O, 76E
- (c) 45@B, 34&E
- (d) 67%D, 37@E

45. What is the code for 'sight' in the given code language?

- (a) 56#S
- (b) 87G
- (c) 98@T
- (d) 12@I7

46. What may be the possible code for 'disk only made' in the given code language?

- (a) 23#D, 36%E, 29A
- (b) 36%E, 45@K, 76Y
- (c) 45@K, 23#D, 45@A
- (d) 45@I, 67#T, 21K

DIRECTIONS (Qs. 47–48): Answer the questions on the basis of the information given below.

Ankit and Rahman are at a point T. Ankit walks 2 km north, takes a right turn and walks 3 km. He takes a left turn, walks 3 km and takes a right turn, he further walks 7 km, and then takes a right turn and walks 5 km to reach point U.

Rahman walks 6 km south, takes a left turn and walks 7 km. He takes a left turn, walks 4 km and takes a right turn, he further walks 3 km and then takes a left turn and walks 2 km to reach point U.

47. If U is exactly to the east of T, Ankit and Rahman take equal time to reach point U from point T, what is the ratio of their speeds?

- (a) 17:18
- (b) 18:17
- (c) 10:11
- (d) 11:10

48. What is the position of T with respect to point U if both are in straight line?

- (a) 10 km to the south
- (b) 7 km to the west
- (c) 10 km to the west
- (d) 10 km to the east

DIRECTIONS (Qs. 49–52): *Read the following information carefully to answer the questions given below:*

- (i) There are six different books on different subjects **P, Q, R, S, T** and **U**. These books are kept one above the other on a shelf. These books belong to six different persons – **A, B, C, D, E** and **F**. It is not necessary that the orders of these books and persons are the same.
- (ii) Only book of subject **Q** is kept between the books of subject **P** and **T** and only book of subject **S** is kept between books of subject **P** and **U**. The book of subject **R** is immediately above the book of subject **T**.
- (iii) **C**'s book is kept on the top. **A** does not have books on subjects **T** and **S**. The book on subject **P** belongs to **F**. The book on subject **U** belongs neither to **B** nor to **A**. **D**'s book is kept at the bottom.

49. The book on which of the following subjects belongs to A?

- (a) Q
- (b) S
- (c) P
- (d) T

50. Who among the following possesses the book on subject T?

- (a) B
- (b) E
- (c) C or E
- (d) B or E

51. Who owns the book on subject U?

- (a) B
- (b) E
- (c) D
- (d) C

52. The book on which of the following subjects is kept on the top?

- (a) T
- (b) R
- (c) U
- (d) Data inadequate

DIRECTIONS (Qs. 53–57): *Read the following information and answer the questions that follow:*

Seven animals **Tiger, Lion, Elephant, Fox, Horse, Panda** and **Cheetah** have been collected from different forests to Indian museum for 1 week show. These animals belong to different dangerous forests i.e. **Crooked Forest, Black Forest, Rata Forest, Goblin Forest, Otzarreta Forest, Hallerbos Forest** and **Tsingy Forest**. And all seven animals have show on different days of the week from Monday to Sunday and all these animals are national animal of different countries – **America, China, India, Africa, Spain, France** and **Germany** but not necessarily in the same order.

Elephant belongs to **Crooked Forest** but does not have show on Tuesday. Cheetah has show on Monday but does not belong to **Rata Forest** and **Tsingy Forest**. Panda belongs to **Otzarreta Forest**. The one who belongs to Crooked Forest is national animal of **Spain**. Lion belongs to **Goblin Forest** and has show on Wednesday.

Two animals have show on the days between the days on which national animal of Spain has show and national animal of France has show. Fox, which is national animal of France and does not belong to Crooked Forest or Rata Forest, has show on the next day on which Horse has show, who belongs to **Hallerbos Forest**. Animal which is national animal of Africa has show on the day just before the day on which Elephant has show and three people have show between the days on which the America's national animal and Germany's national animal has show. The one who is national animal of China has show just before the day on which America's national animal has show. The one who is national animal of India has show after the day on which America's national animal has show.

53. Which of the following combinations of animal-forest-day and country is correct?

- (a) Cheetah-Black Forest-Wednesday-India
 - (b) Tiger-Black Forest-Monday-America
 - (c) Cheetah-Rata Forest-Monday-Spain
 - (d) None of these
-

54. Elephant has shown at Indian Museum on which day?

- (a) Saturday
 - (b) Sunday
 - (c) Tuesday
 - (d) Thursday
-

55. Four of the following five are alike in a certain way and hence they form a group. Which one of the following does not belong to that group?

- (a) Cheetah
 - (b) Lion
 - (c) Elephant
 - (d) Horse
-

56. Which of the following animal is national animal of China?

- (a) Horse
 - (b) Fox
 - (c) Panda
 - (d) Cheetah
-

57. If Cheetah is related to elephant and lion is related to horse. In the same way, elephant is related to?

- (a) Tiger
- (b) Cheetah
- (c) Panda
- (d) Fox

DIRECTIONS (Qs. 58–62): *Study the following information carefully and answer the given questions:*

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: 93 come home over 32 47 now 26

Step I: over 93 come home 32 47 now 26

Step II: over 26 93 come home 32 47 now

Step III: over 26 now 93 come home 32 47

Step IV: over 26 now 32 93 come home 47

Step V: over 26 now 32 home 93 come 47

Step VI: over 26 now 32 home 47 93 come

Step VII: over 26 now 32 home 47 come 93 and Step VII is the last step.

As per the rules followed in the above steps, find out in each of the following questions the appropriate step.

58. Step II of an input is: sky 20 90 37 begin again 11 home

Which of the following is definitely the input?

- (a) 20 90 37 begin again 11 home
- (b) sky 90 37 20 begin again 11 home
- (c) 90 20 37 begin sky again 11 home
- (d) Cannot be determined

59. Step III of an input is: take 17 mind game 29 73 18 loud

How many more steps are required to complete the sequence?

- (a) Two
- (b) Three
- (c) Four
- (d) Five

60. Input: by now 51 32 for 91 20 me

Which of the following steps will be the last?

- (a) III
- (b) IV
- (c) V
- (d) VI

61. Input: fight for all 39 62 25 today 19

Which of the following steps will be step IV?

- (a) today 25 for 39 fight all 62 19
- (b) today 19 for 25 fight all 39 62
- (c) today 19 for 25 fight 39 all 62
- (d) Cannot be determined

62. Input: queen mary 79 62 172 60 green west

Which of the following steps will be the last one?

- (a) VII
- (b) VI

- (c) VIII
- (d) None of these

DIRECTIONS (Qs. 63–64): *In the following questions a paragraph is given. Read the paragraph carefully and answer the questions which follow each of these paragraphs.*

Fashion has become one of the largest fads among the youth. The amount of time wastage and expenditure on fashion is very large. What bothers, however, is the fact that fashion is here to stay despite countless arguments against it. What is required, therefore, is that strong efforts should be made in order to displace the excessive craze of fashion from the minds of today's youth.

63. Which of the following statements finds the least support by the argument made by the author in the given paragraph?

- (a) Youngsters should be motivated to do constructive business rather than wasting time on fashion.
- (b) The world of fashion being glamorous and glittery attracts people towards itself.
- (c) Following the latest fashion increases the self-efficacy of people, thus increasing their overall mental abilities.
- (d) Many universities have implemented a dress code to put a check on the increasing fad amongst the youth which was affecting their grades.

64. Which of the following can be inferred from the given paragraph?

- (a) The author has made strong efforts to wipe out fashion from the minds of youth.
- (b) Steps need to be taken in order to control the growing fad of fashion amongst the youth.
- (c) The author is upset with the shift of fashion from the traditional ethnic wear to western outfits.
- (d) Fashion world is responsible for lack of creativity among the youth.

DIRECTIONS (Qs. 65–66): *In each of the following questions, there are two words / set of letters / numbers to the left of the sign :: which are connected in some way. The same relationship obtains between the third words / set of letters / numbers and one of the four alternatives under it. Find the correct alternative in each question.*

65. Bank : River :: Coast : ?

- (a) Flood
 - (b) Waves
 - (c) Sea
 - (d) Beach
-

66. Thunder : Rain :: Night : ...

- (a) Day
 - (b) Dusk
 - (c) Darkness
 - (d) Evening
-

67. Certain letters are coded as: TODAY-45733, WROTE-10542, DATE-7342 and DIRTH-79046. What does the code number '5' stand for?

- (a) D
 - (b) R
 - (c) O
 - (d) T
-

68. There is a family of 6 persons A, B, C, D, E and F. There are two married couples in the family. The family members are lawyer, teacher, salesman, engineer, accountant and doctor. D, the salesman is married to the lady teacher. The doctor is married to the

lawyer. F, the accountant is the son of B and brother of E. C, the lawyer is the daughter-in-law of A. E is the unmarried engineer. A is the grandmother of F. How is E related to F?

- (a) Brother
 - (b) Sister
 - (c) Father
 - (d) Cannot be established (cannot be determined)
-

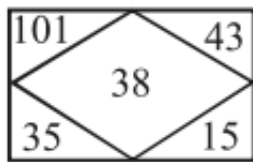
69. Kailash faces towards north. Turnings to his right, he walks 25 metres. He then turns to his left and walks 30 metres. Next, he moves 25 metres to his right. He then turns to the right again and moves 40 metres. In which direction is he now from his starting point?

- (a) South-West
 - (b) South
 - (c) North-West
 - (d) South-East
-

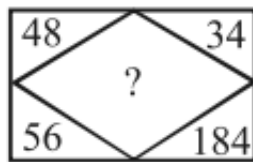
70. A clock is so placed that at 12 noon its minute hand points towards north-east. In which direction does its hour hand point at 1:30 pm?

- (a) North
 - (b) South
 - (c) East
 - (d) West
-

71. What is the missing number in the sequence?



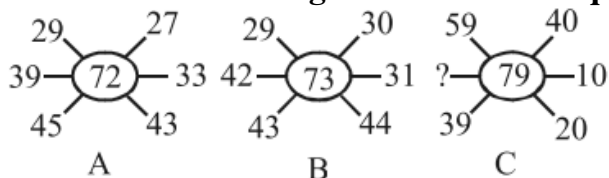
A



B

- (a) 127
- (b) 142
- (c) 158
- (d) 198

72. What is the missing number in the sequence?



A

B

C

- (a) 49
- (b) 50
- (c) 60
- (d) 69

73. How much does a watch lose per day, if its hands coincide every 64 minutes?

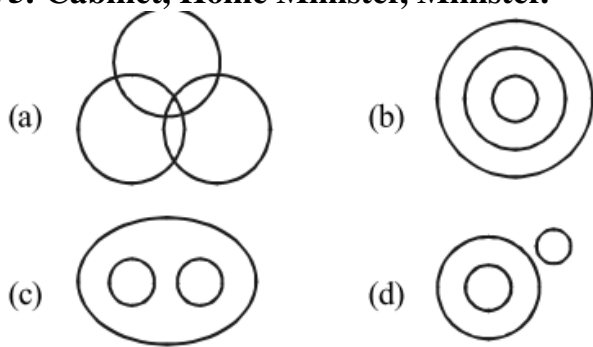
- (a) $32 \frac{8}{11}$ min
- (b) $36 \frac{5}{11}$ min
- (c) 90 min
- (d) 96 min

74. An accurate clock shows 8 O'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 O'clock in the afternoon?

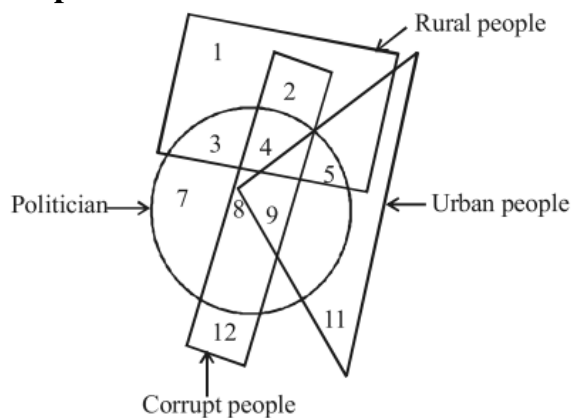
- (a) 144°
- (b) 150°
- (c) 168°
- (d) 180°

DIRECTIONS (Qs. 75–76): In each of these questions, three words are related in some way. The relationship among the words in question can best be represented by one of the five diagrams.

75. Cabinet, Home Minister, Minister.



76. In the following Venn diagram, identify the politicians from urban areas who are corrupt.



- (a) 4
- (b) 8
- (c) 9
- (d) 10

DIRECTION (Q.77): *In each of the questions below are given three statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.*

77. Statements: All birds are fruits.

Some fruits are towers.

All towers are windows.

Conclusions: I. Some birds are towers.

II. Some windows are birds.

III. Some windows are fruits.

IV. Some towers are birds.

- (a) None follows
- (b) Only I and II follow
- (c) Only II and III follow
- (d) Only III follows

78. If $\times$ means $+$, $-$ means $\times$, $\div$ means $+$, and $+$ means $-$, then $(3 - 15 \div 19) \times 8 + 6 = ?$

- (a) -1
- (b) 2
- (c) 4
- (d) 8

79. At the end of a business conference, the ten people present all shake hands with each other once. How many handshakes will there be altogether?

- (a) 20

- (b) 45
 - (c) 55
 - (d) 90
-

80. In a row of 40 children, R is 11th from the right and there are 15 children between R and M. What is M's position from the left end of the row?

- (a) 14th
 - (b) 15th
 - (c) 13th
 - (d) Can't be determined
-

General English

DIRECTIONS (Qs. 81–86): *Read the passage given below and answer the following questions based on it.*

The Supreme Court has cut straight to the heart of the issue in the Aadhaar petitions. On behalf of all Indian citizens, it asks the current government to address the most basic questions in a democracy governed by the law: what are the privacy rights of its citizens; and are they protected equally, with the same justice for the rich and the poor alike?

In the 20th century, governments that recognised no private sphere of thought, expression, and action outside their reach and the ruling party's reach were called "totalitarian". Aware that such governments are **antithetical to** freedom, the world's democracies were willing to sacrifice tens of millions of their citizens' lives in the Second World War to defeat them militarily.

The democratic constitutions that rose on the ashes of European totalitarianism explicitly recognised the integrity of a private sphere that governments may not invade, as the U.S. Constitution's Bill of Rights, as interpreted by its Supreme Court, has also done. The post-Independence Indian Constitution does this as well. In the 21st century, a government that cannot or will not protect its citizens' privacy rights cannot credibly maintain a

democratic regime of equal treatment under the rule of law. Freedom of opinion and association; freedom of religion (or irreligion); the ability to make choices and decisions autonomously in a society free of surrounding social pressure, including the right to vote – all of these depend on the preservation of the “private sphere.”

Yet, the Government of India (GoI), speaking through its Attorney-General, has repeatedly declared that it is the government’s position that Indian citizens have no constitutional right of privacy. Whether GoI is ultimately prepared to restate that position and risk a political loss before the Supreme Court remains to be seen.

The pressure on the government very much increased last week, when the Supreme Court refused simultaneous applications by multiple agencies demanding relief from the Supreme Court’s **interim** order limiting the use of Aadhaar pending the Court’s final decision. By referring these government applications to a constitutional bench whose composition has been announced last week, the court has assured Indians that a decision on their fundamental rights will not be long delayed.

The Attorney-General argued that the poor, whose welfare is at stake in the continuance of subsidy payments and other benefits, must be prepared to surrender their right of privacy, if any, in order to continue receiving benefits. This argument was sharply rejected by the bench, which recognises that the The poor have the same rights as the rich, ad interim as well as permanently, in any democratic society.

This is not, as GoI has been claiming, a conflict between the needs of the poor and “1 or 2 or 10 persons” who care about everyone’s fundamental right to privacy. The government’s most basic obligation is to protect its citizens’ rights – both their right to sustenance and their right to the privacy that enables freedom – equally. The ultimate resolution of this present controversy must recognise both the need for Aadhaar – in order to provide efficient and honest government services to citizens – and the need for stringent rules concerning access to and security of citizens’ biometric data, in order to preserve their privacy.

GoI cannot adopt the posture that only one aspect of government’s protective responsibility matters – that the costs of privacy destruction can be imposed upon the poor in return for LPG subsidies, or any other social benefit on which they absolutely depend. The Supreme Court’s action this week ensures that GoI must respond to both halves of the problem. In particular, the Indian Supreme Court is likely to find itself asking GoI about what in Indian

and U.S. law is called the “doctrine of unconstitutional conditions”. Both Supreme Courts have held that the government cannot condition receipt of public benefits on waiver of fundamental rights. This is in sharp contradiction to the argument offered in the Supreme Court this week by the counsel for Centre for Civil Society, when he told the bench that “a person who has a right to privacy should be allowed to waive it for greater benefit.” We are about to begin one of the most important constitutional cases of India’s post-Independence legal history. The good news is that the Supreme Court has shown it knows exactly what’s at stake. In any democracy, that’s a necessary place to start.

81. Which of the following is closest in meaning to the opposite of the phrase antithetical to (line 4, para 2)?

- (A) connected to
- (B) in contrast with
- (C) adversaries of
- (D) adherents of

82. Which of the following is correct of 'totalitarian' governments, as per the passage?

- (A) They are advocates of individual right to freedom
- (B) They safeguard people’s rights at any cost.
- (C) They are incompatible with private sphere of thought, expression and action.
- (D) They are in consonance with private sphere of thought, expression and action.

83. What conflict of interest is GoI claiming with regard to privacy issue with Aadhar?

- (A) Conflict between the rich businessmen and salaried people.
- (B) Conflict between the poor and the rich.
- (C) Conflict between beneficiaries of government schemes and some proponents of fundamental right to privacy.
- (D) Conflict between GoI and the citizens of India.

84. Which of the following word best replaces the word interim (line 4, para 5)?

- (A) strict
- (B) mandatory
- (C) conclusive
- (D) temporary

85. The 'doctrine of unconstitutional conditions' states that

- (A) public benefits cannot be made subservient to fundamental rights
- (B) fundamental rights can be withdrawn before dispensing government schemes
- (C) fundamental rights are not as important as welfare schemes
- (D) welfare schemes have to be implemented even at the cost of fundamental rights

86. What does 'relief from the court's interim order' (line 3, para 5) imply?

- (A) That the limits on the use of Aadhar be lifted
- (B) That the court should not allow use of Aadhar
- (C) That applications be referred to a constitutional bench
- (D) That the court's decision should not be kept pending

87. Rearrange the following sentences in the proper sequence to make a meaningful paragraph.

- (A) If you are used to having your stimulation come in from outside, your mind never develops its own habits of thinking and reflecting
- (B) Marx thought that religion was the opiate, because it soothed people's pain and suffering and prevented them from rising in rebellion
- (C) If Karl Marx was alive today, he would say that television is the opiate of the people.

(D) Television and similar entertainments are even more of an opiate because of their addictive tendencies.

- (A) BACD
- (B) ADBC
- (C) BDCA.
- (D) CBDA

88. Rearrange the following sentences in the proper sequence to make a meaningful paragraph.

- (A) The government should meet that expectation, but not yet.
- (B) And that would be the right moment for the government to show its concern.
- (C) Pump prices would go up again.
- (D) As news of petroleum fuel retail prices hitting new highs every passing day hits the consumer, expectation builds up that the government would cushion the impact by paring the tax component in the final retail price.
- (E) Crude prices are likely to remain range-bound, but the rupee could see some depreciation, if the US Fed proceeds with rate increases or the Donald Trump administration triggers events that lead to a flight to safety of funds from emerging markets to the US.

- (A) ABCDE
- (B) DAECB
- (C) CAEBD
- (D) DAEBC

89. Rearrange the following sentences in the proper sequence to make a meaningful paragraph.

- (A) We even make sure to wash the car every so often.
- (B) It's pretty much a foregone conclusion that you'll brush your teeth tomorrow morning.
- (C) The same is true for showering, going to the bathroom, grooming your nails and facial hair.

(D) You don't squander precious mental space evaluating whether or not brushing your teeth is worth the opportunity cost of let's say, another five minutes of sleep.

(E) We clean our homes with a myriad of dust-sucking devices and chemical concoctions, or hire people to do so more thoroughly than we can.

(A) BDCEA

(B) DBECA

(C) BDAEC

(D) BDCBA

90. Eccrinology : Secretions : : Selenography : ?

(A) Sun

(B) Moon

(C) Crust

(D) Mantle

91. Hilt : Sword : : Outwork : ?

(A) Hippodrome

(B) Field

(C) Rink

(D) Fortress

92. Choose the word opposite in meaning to the given word: QUIESCENT

(A) Active

(B) Dormant

(C) Weak

(D) Unconcerned

93. Choose the word opposite in meaning to the given word: CAPACIOUS

- (A) Caring
- (B) Limited
- (C) Foolish
- (D) Changeable

94. Choose the word opposite in meaning to the given word: SACROSANCT

- (A) Irreligious
- (B) Unethical
- (C) Irreverent
- (D) Unholy

95. Choose the word most similar in meaning to the given word: UNCOOTH

- (A) Ungraceful
- (B) Rough
- (C) Slovenly
- (D) Unkempt

96. Choose the word most similar in meaning to the given word: DECRE

- (A) request
- (B) appeal
- (C) compel
- (D) command

97. Choose the word most similar in meaning to the given word: RETRENCH

- (A) attach
 - (B) curtail
 - (C) diversify
 - (D) multiply
-

98. Exhaustion of natural resources, destruction of individual initiative by governments, control over men's minds by central ____ of education and propaganda are some of the major evils which appear to be on the increase as a result of the impact of science upon minds suited by ____ to an earlier kind of world.

- (A) tenets; fixation
 - (B) aspects; inhibitions
 - (C) institutions; inhibitions
 - (D) organs; tradition
-

99. Their achievement in the field of literature is described as ____; sometimes, it is even called ____.

- (A) magnificent, irresponsible
 - (B) insignificant, influential
 - (C) significant, paltry
 - (D) unimportant, trivial
-

100. The Internet is a medium where users have nearly ----- choices and ----- constraints about where to go and what to do.

- (A) unbalanced, nonexistent
- (B) embarrassing, no
- (C) unlimited, minimal
- (D) shocking, none

DIRECTIONS (Qs. 101–106): *Read the passage given below and answer the following questions based on it.*

About 200–300 million years ago, it is believed that all the land on earth was joined together as one big mass of land. This one single continent was called the Pangea (which means “all lands” in Greek) supercontinent. From Pangea, two smaller land masses began to split off, and these were Laurasia and Gondwana. Today’s continents that were a part of Gondwana include Australia, Antarctica, South America, Africa, and the regions of the Arabian Peninsula and the Indian subcontinent which have now moved entirely into the Northern Hemisphere.

The breakup of Gondwana occurred in the early Jurassic period (about 184 million years ago) with massive eruptions of lava. The region of East Gondwana began to separate away. These were the land masses of Antarctica, Madagascar, India, and Australia, which separated from Africa. South America began to drift slowly west away from Africa as the South Atlantic Ocean formed, occurring about 130 million years ago during the Early Cretaceous. There are many techniques that scientists use to determine that these lands were once joined. One way is through identifying the same or similar plants/land animals that exist in different continents. These give us some proof that the continents were joined. Another method is to study rocks which when formed at any given time, freeze at the local magnetic field. The earth has a magnetic field with the North and South poles, and when rocks form as the continents drift apart, the distances from the magnetic poles can provide information. Australia separated from Gondwana 100 million years ago, and initially remained warm and humid with rainforest vegetation. Inland Australia had systems of rivers and lakes with abundant wildlife. Fossil birds, platypus, frogs and snakes are present from this period. Australia became an independent nation on 1 January 1901 when the British Parliament passed legislation allowing the six Australian colonies to govern in their own right as part of the Commonwealth of Australia. The Commonwealth of Australia was established as a constitutional monarchy. ‘Constitutional’ because the Commonwealth of Australia was established with a written constitution, and ‘monarchy’ because Australia’s head of state was Queen Victoria. The Australian Constitution was written by representatives of the six

colonies during a series of conventions in the 1890s, and accepted by a **referendum** in each colony.

Under the Constitution, the reigning British monarch is also the Australian monarch, and therefore Australia's head of state. The Constitution grants the monarch certain governing powers that place them above all other levels of the government. Because of the large distance between Australia and Britain, the monarch is permitted to appoint a Governor-General who can exercise the monarch's powers in their absence. The Constitution created a **federal** system of government where power was divided between the federal government and the governments of the six colonies, which were renamed 'states' by the Constitution.

101. Which one of the following statements is not true?

- (A) Rocks froze at the local magnetic field when continents drifted apart.
- (B) While South America drifted west, breaking away from Africa, Australia drifted east.
- (C) India was part of Laurasia which later broke away from Gondwanal.
- (D) Some species of Australian wildlife from the Jurassic period have survived to this day.

102. Which one of the following is true about the federation of Australia?

- (A) The constitution of Australia declares the British monarch as its Head of State.
- (B) The constitution of Australia came into force only after all the six colonies passed it in a referendum.
- (C) The British monarch is represented by a Governor in Australia.
- (D) Power of governance resides with the states which are headed by the British monarch.

103. Choose the word which gives an appropriate meaning of referendum (last line, para 5).

- (A) election
- (B) nomination

- (C) plebiscite
 - (D) survey
-

104. According to the passage, the constitution of Australia does not state any of the following EXCEPT

- (A) The Commonwealth of Australia will have six states with their own governments.
 - (B) The six states of Australia are to be directly governed by the monarch of Britain.
 - (C) Queen Victoria will always be the Head of state.
 - (D) The Governor-General of Australia will exercise the British monarch's power in their absence.
-

105. Which of the following would be an apt title of the passage?

- (A) The coming of age of Australia
 - (B) The foundation of Australia
 - (C) The genesis of Australia
 - (D) The launch of Australia
-

106. Which of the following words is not at variance with the meaning of federal (line 8, para 6)?

- (A) local
 - (B) confederate
 - (C) legislative
 - (D) parliamentary
-

107. It is highly desirable that you furnished evidence of your expenses before you submit your final accounts.

- (A) It is highly desirable that you furnish evidence of your expenses.
 - (B) It is highly desirable that you should furnish evidence of your expenses.
 - (C) It is highly to be desired that you furnish evidences of your expenses.
 - (D) You should have to supply evidence of your expenses.
-

108. All had betrayed him in his hour of need, but there he was, full of hope that the truth will prevail.

- (A) still, he was there, full of hope
 - (B) although, he was there, full of hope
 - (C) yet, there he was, full of hope
 - (D) and there he was, full of hope
-

DIRECTIONS (Qs. 109–112): *Choose the correct phrase that will replace the phrase given in boldface in these sentences.*

109. The two friends do not match eye to eye when it comes to their business rivalry.

- (A) meet eye to eye
 - (B) see into each other's eyes
 - (C) look into each other's eyes
 - (D) see eye to eye
-

110. If he is expecting his colleague's cooperation in these sensitive matters, he is raking up the wrong tree.

- (A) climbing up the wrong tree
 - (B) cutting down the wrong tree
 - (C) planting the wrong tree
 - (D) barking up the wrong tree
-

111. Leaders, across various fields, consolidate their positions putting their gift of oration to good use.

- (A) art of speech
 - (B) art of the word
 - (C) gift of the gab
 - (D) gift of the gait
-

112. The company joined the bandwagon when it began to get isolated in the race to upgrade technology.

- (A) jumped on the bandwagon
 - (B) climbed the bandwagon
 - (C) joined the crowd
 - (D) boarded the bus
-

DIRECTIONS (Qs. 113–116): *In each of these sentences, a group of words has been given in boldface. Pick out the best option that will replace it to make the sentence meaningful.*

113. The sooner he comes to terms with it, the best it will be for him.

- (A) the better
 - (B) the best
 - (C) it will be best
 - (D) it will be good
-

114. You need not tutor him anymore; he knows the ropes now.

- (A) ties the ropes well
- (B) can make the ropes himself
- (C) knows how to make the ropes

(D) no correction required

115. Life has its share of problems; one should take them on the face rather than shying away from them.

- (A) take them on hand
 - (B) take them on the head
 - (C) take them on the chin
 - (D) take them on the heart
-

116. His manners have undergone a huge change since his association with his new partners.

- (A) a sea change
 - (B) a big change
 - (C) a vast change
 - (D) an oceanic change
-

DIRECTIONS (Qs. 117–118): *Each of these sentences is followed by four alternative sentences. Pick out the best option that will substitute it without altering the meaning.*

117. They initiated the process without delay.

- (A) They planned the project without wasting any time.
 - (B) The process was initiated by them without delay.
 - (C) They carried out the process without delay.
 - (D) They did the project without delay.
-

118. As soon as the doors were opened, a flurry of activity ensued.

- (A) As soon as they opened the doors, a flurry of activity ensued.
- (B) When the doors were opened, it was followed by a flurry of activity.
- (C) No sooner were the doors open, than a flurry of activity ensued.
- (D) Hardly had the doors opened, than a flurry of activity ensued.
-

DIRECTIONS (Qs. 119–120): *For each of these sentences, choose the best option that completes it to make it meaningful.*

119. They _____ for such an outcome; it indeed _____ them by surprise.

- (a) had not bargained, took
- (b) will not bargain, will take
- (c) have not bargained, takes
- (d) had bargained, took
-

120. Selecting the head is a tough decision to make, _____, it _____ ends in a fiasco.

- (a) therefore, rarely
- (b) nonetheless, usually
- (c) yet, seldom
- (d) surprisingly, always
-

General Awareness

121. The Supreme Court has recently asked to re-introduce the VVPAT in Electronic Voting Machines (EVMs) for 100% transparency in electronics. The VVPAT in EVM would ensure free and fair polls besides sorting out disputes. What does VVPAT stand for?

- (A) Voter's Verification through Paper and Audit Trail
- (B) Vote Verifier Paper Audit Trail

- (C) Voter's Verified Paper Audit Trail
 - (D) Voter's Validation and Proper Authentication Technology
-

122. What is the symbol of Jammu & Kashmir People's Democratic Party which was founded by Mufti Mohammed Sayeed?

- (A) Ink pot and pen
 - (B) Two leaves
 - (C) Kite
 - (D) Elephant
-

123. Who has been awarded as the Indian of the year award by Brands Academy in New Delhi this year?

- (A) Virat Kohli
 - (B) Shashi Tharoor
 - (C) Chetan Bhagat
 - (D) Preeti Shenoy
-

124. Which bank has announced to acquire mobile payment wallet provider FreeCharge from e-commerce company Snapdeal for Rs. 385 crore?

- (A) HDFC Bank
 - (B) Axis Bank
 - (C) Kotak Mahindra Bank
 - (D) Citi Bank
-

125. What is the nick-name of famous Indian Personalities 'Sayeed Bandhu'?

- (A) Father of Indian Sports

- (B) King maker of Indian History
 - (C) Pride of Motherland
 - (D) Rising sun
-

126. 'Salvex' is a military exercise between which two countries?

- (A) China and India
 - (B) Japan and USA
 - (C) France and USA
 - (D) USA and India
-

127. With which company has Industrial Infrastructure Development Corporation launched a joint venture to set up an aluminium park at Angul, Odisha?

- (A) SAIL
 - (B) GAIL
 - (C) NALCO
 - (D) BHEL
-

128. Where is Padmaja Naidu Zoological Park located?

- (A) Chennai, Tamil Nadu
 - (B) Darjeeling, West Bengal
 - (C) Hyderabad, Andhra Pradesh
 - (D) Gir, Gujarat
-

129. The 2017 G20 Summit was the 12th meeting of the Group of Twenty (G20), which was held on 7th and 8th July, in Hamburg, Germany. What was the theme of this Summit?

- (A) Shaping and Inter-connected World
 - (B) Towards a Better World
 - (C) Mutual Cooperation for Growth and Development
 - (D) Hand-in-Hand for a Better Future
-

130. Where is 'Regional Museum of Natural History' located?

- (A) New Delhi
 - (B) Lucknow
 - (C) Mysuru
 - (D) Gwalior
-

131. At which place has President Pranab Mukherjee launched the digital initiatives Swayam, Swayam Prabha, National Academic Depository and National Digital Library to push e-education in the country?

- (A) New Delhi
 - (B) Mumbai
 - (C) Bengaluru
 - (D) Lucknow
-

132. Which Indian state has introduced boat ambulance service in its four districts where people face difficulties in getting health service?

- (A) Uttar Pradesh
 - (B) Bihar
 - (C) Odisha
 - (D) Uttarakhand
-

133. What is the capital of Nigeria?

- (A) Abuja
 - (B) Tirana
 - (C) Baku
 - (D) Monaco
-

134. Who was the last king of Satavahana dynasty?

- (A) Samudragupta
 - (B) Vikramaditya Maurya
 - (C) Yajna Sri Satakarni
 - (D) Simuka
-

135. Who was the winner in Men's Single in the Miami Open 2017 held in Florida, USA?

- (A) Rafael Nadal
 - (B) Lukasz Kubot
 - (C) Roger Federer
 - (D) Andy Murray
-

136. Google has recently launched a new food delivery and home service App which allows users to order food or schedule appointments with a local beautician, plumber, cleaner and painter etc. What is the name of this App?

- (A) Areo
- (B) G-Service
- (C) Swiggy
- (D) Easy

137. In which year did the government of India decide to make the Peacock as the national bird of India?

- (A) 15th August, 1947
- (B) 26th January, 1950
- (C) 1st February, 1963
- (D) 15th August, 1965

138. Which cricket legend has authored the book 'Straight from the Heart'?

- (A) Sachin Tendulkar
- (B) Kapil Dev
- (C) Sunil Gavaskar
- (D) Ricky Ponting

139. Which two companies have agreed to merge to form India's largest telecom company?

- (A) Vodafone and Aircel
- (B) Vodafone and Idea
- (C) Airtel and Idea
- (D) Reliance and Idea

140. Where is the National Atmospheric Research Laboratory located?

- (A) New Delhi
- (B) Karnataka
- (C) Madhya Pradesh
- (D) Andhra Pradesh

141. Which of the following dignitaries was the Chief Guest of the official ceremony in the Republic Day held this year?

- (A) President of France
- (B) King of Saudi Arabia
- (C) King of Qatar
- (D) Crown Prince of Abu Dhabi

142. Rangaswami cup is related to which sport?

- (A) Badminton
- (B) Chess
- (C) Wrestling
- (D) Hockey

143. Durand line divides ----- and -----.

- (A) India, Pakistan
- (B) China, India
- (C) Pakistan, Afghanistan
- (D) China, Tibet

144. Which Indian-American is appointed as the US Ambassador to the United Nations?

- (A) Bobby Jindal
- (B) Nikki Haley
- (C) Kumar P Barve
- (D) Kamala Harris

145. The Rail Minister has launched an integrated mobile application SAARTHI to cater to various passenger requirements, including ticket booking, inquiry, on-board cleaning and ordering meal on a single platform. What does 'I' in SAARTHI stand for?

- (A) India
- (B) Information
- (C) Initiative
- (D) Interface

146. What is the Classical Dance form of Gujarat?

- (A) Chhau
- (B) Garba
- (C) Kathak
- (D) Kathakali

147. The bull-taming sports 'Jallikattu' is typically practiced in the Indian state of

-----.

- (A) Kerala
- (B) Tamil Nadu
- (C) Andhra Pradesh
- (D) Karnataka

148. World Earth Day which is annually observed worldwide wherein various events are held to demonstrate support for environmental protection is celebrated on -----.

- (A) 22nd April
- (B) 11th May

- (C) 3rd June
 - (D) 17th July
-

149. Which football superstar has been named as the World's Best Player for 2016 by FIFA?

- (A) Lionel Messi
 - (B) Neymar
 - (C) Cristiano Ronaldo
 - (D) Luis Suarez
-

150. Which mobile telecom company has launched the Asia-Africa-Europe (AAE-1) submarine cable system, the longest 100GBps technology-based submarine system?

- (A) Vodafone
 - (B) AT&T
 - (C) Airtel
 - (D) Reliance Jio Infocomm
-