

**JECA-2017  
APTITUDE TEST**

*Time Allowed : 1 Hour*

*Maximum Marks : 50*

**50200070**

**Booklet No. ....**

**INSTRUCTIONS**

Candidates should read the following instructions carefully before answering the questions:

1. This Question Paper contains 50 MCQ type objective questions. Each question has four answer options given, viz. A, B, C and D.
2. Only one answer is correct. Correct answer will fetch full marks 1. Incorrect answer or any combination of more than one answer will fetch  $-\frac{1}{4}$  marks. No answer will fetch 0 marks.
3. Questions must be answered on OMR sheet by darkening the appropriate bubble marked A, B, C, and D.
4. Use only **Black/Blue ball point pen** to mark the answer by complete filling up of the respective bubbles.
5. Mark the answers only in the space provided. Do not make any stray mark on the OMR.
6. Write question booklet number and your roll number carefully in the specified locations of the OMR. Also fill appropriate bubbles.
7. Write your name (in block letter), name of the examination centre and put your full signature in appropriate boxes in the OMR.
8. The OMRs will be processed by electronic means. Hence it is liable to become invalid if there is any mistake in the question booklet number or roll number entered or if there is any mistake in filling corresponding bubbles. Also it may become invalid if there is any discrepancy in the name of the candidate, name of the examination centre or signature of the candidate vis-a-vis what is given in the candidate's admit card. The OMR may also become invalid due to folding or putting stray marks on it or any damage to it. The consequence of such invalidation due to incorrect marking or careless handling by the candidate will be sole responsibility of candidate.
9. Rough work must be done on the question paper itself. Additional blank pages are given in the question paper for rough work.
10. Handover the OMR to the invigilator before leaving the Examination Hall.

Space for Rough Work

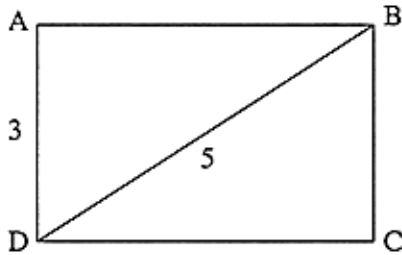
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## JECA - 2017

## APTITUDE

1. The average of  $x_1, x_2, x_3$  and  $x_4$  is 16. Half the sum of  $x_2, x_3, x_4$  is 23. What is the value of  $x_1$ ?
- (A) 19 (B) 18  
(C) 17 (D) 20

2. What is the perimeter of the rectangle ABCD, when  $AD = 3$  and  $BD = 5$  (Shown in the following figure)?



- (A) 16 (B) 14  
(C) 18 (D) 20

3. It was Wednesday on July 15, 1964. What was the day on July 15, 1965?

- (A) Wednesday (B) Thursday  
(C) Friday (D) Saturday

4. Ranjan is taller than Randhir, but not as tall as Ajit. If Manoj is taller than Nitin, who is shorter than Ajit, then who among them is the shortest?

- (A) Nitin (B) Manoj  
(C) Ranjan (D) Data Inadequate

5. Which of the following is the smallest?

- (A)  $15/16$  (B)  $16/6$   
(C)  $7/8$  (D)  $11/12$

6. The radius of the pool in a South Delhi Club is twice the radius of the pool in a North Delhi Club. The area of the pool in South Delhi Club is how many times the area of pool in the North Delhi Club?

- (A)  $1/4$  (B)  $1/2$   
(C) 2 (D) 4

7. In a class there are two sections A and B. If 10 students of section B shift over to section A, the strength of A becomes three times the strength of B. But if 10 students shift over from A to B, both A and B become equal in strength. How many students are there in sections A and B?

- (A) 50 and 30 (B) 45 and 15  
(C) 90 and 40 (D) 80 and 40

8. 'A' is the sister of 'B'. 'C' is the husband of 'B'. 'C' is the brother of 'H'. What is the relation of 'H' and 'A'?
- (A) Son (B) No Specific Relation  
(C) Sister-in-law (D) Brother-in-law

9. The length and breadth of a rectangular floor are 16.25 metre and 12.75 metre respectively. Find how many minimum number of square tiles would be required to cover it completely?

- (A) 315 (B) 3315  
(C) 3513 (D) 5331

10. Two-third of two-fifth of three-fourth of a number is 36. What is the square root of four-fifth of that number?

- (A) 9 (B) 21  
(C) 12 (D) 14

11. If '+' implies 'subtract', '\*' implies 'division', '-' implies 'addition', '/' implies 'multiply' then  $5 - 3/6 * 3 + 4 = ?$

- (A) 6 (B) 5  
(C) 7 (D) 8

12. Arrange the following in a meaningful sequence:

- |                |                |
|----------------|----------------|
| 1. Letter      | 2. Sentence    |
| 3. Word        | 4. Phrase      |
| (A) 1, 2, 4, 3 | (B) 2, 1, 3, 4 |
| (C) 2, 4, 1, 3 | (D) 1, 3, 4, 2 |

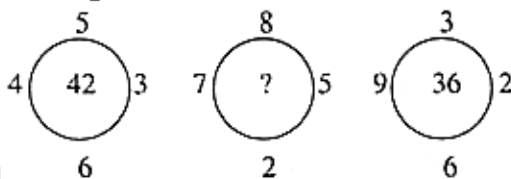
13. Arrange the following in a meaningful sequence:

- |                |                |
|----------------|----------------|
| 1. Knowledge   | 2. Data        |
| 3. Information | 4. Wisdom      |
| (A) 1, 4, 2, 3 | (B) 2, 3, 1, 4 |
| (C) 2, 1, 3, 4 | (D) 1, 4, 3, 2 |

14. Three numbers are in the ratio 4 : 5 : 6 and their average is 30 . The largest number is

- (A) 28 (B) 32  
(C) 36 (D) 42

15. Find the missing number



- (A) 50 (B) 51  
(C) 48 (D) 53

16. Find the value of X, where  $(55)^{3.5} * (55)^X = 55^8$ .
- (A) 2.25 (B) 2.75  
(C) 3.5 (D) 4.5
17. If the price of rice rises from Rs. 6 per kg to Rs. 8 per kg, to have no increase in his expenditure on rice, a person will have to reduce his consumption of rice by
- (A) 25% (B) 19%  
(C) 12% (D) 32%
18. Choose the number pair/group which is different from others.
- a. 40 : 50 b. 30 : 36  
c. 8 : 10 d. 28 : 35  
e. 16 : 20
- (A) 40 : 50 (B) 30 : 36  
(C) 8 : 10 (D) 28 : 35
19. A man buys 50 pens at marked price of 46 pens from a whole seller. If he sells these pens giving a discount of 1%, what is the profit percentage?
- (A) 10.6% (B) 5.3 %  
(C) 12% (D) 7.6%
20. Assume that there are three statements followed by several conclusions. You have to take the given statements to be true, even if they seem to be at variance from commonly-known facts and then decide which of the given conclusion(s) logically follows.
- | Statements:                | Conclusion:                |
|----------------------------|----------------------------|
| a. All Pens are Tables     | I. Some tables are chalk.  |
| b. Some tables are rulers. | II. Some pens are chalk.   |
| c. Some rulers are chalk.  | III. Some rulers are pens. |
|                            | IV. Some chalk are rulers. |
- (A) Only IV follows (B) Only II and I follows  
(C) Only III follows (D) Only I, II and III follows
21. If '&' implies 'Add', '@' implies 'multiply', '#' implies 'subtract', '\$' implies 'division', then  $12 \& 3 @ 2 \# 32 \$ 4 = ?$
- (A) 12 (B) 10  
(C) 13 (D) 14

22. The product of two numbers is 266 and their difference is 5. What is the bigger number ?  
 (A) 13 (B) 14  
 (C) 18 (D) 19
23. P sells an article to Q at 10% profit. Q sells it to R at 25% profit. If R pays Rs. 250 for it, What did P pay for it ?  
 (A) 162.30 (B) 193.5  
 (C) 181.81 (D) 162.50
24. If TIER is written as 7163 and BRAIN is written as 23415, how is RENT coded ?  
 (A) 7536 (B) 7653  
 (C) 3765 (D) 3657
25. In the following sequence of alphabets, which letter would be at the middle of the fourth and sixteenth letters from the right ?  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
 (A) T (B) M  
 (C) N (D) Q
26. If  $5x + y = 15$ ,  $5y + z = 25$  and  $2z + x = 2$ , what is the value of  $x$  ?  
 (A) 12 (B) 9  
 (C) 7 (D) 2
27. If 'Pink' is called 'Orange', 'Orange' is called 'Blue', 'Blue' is called 'Red', 'Red' is called 'Green', 'Green' is called 'Black' and 'Black' is called 'White', what would be the colour of human blood ?  
 (A) Red (B) Green  
 (C) Blue (D) Orange
28. A boy sitting in a train counts the electricity poles along the line as he passes them. If they are 40m apart and the speed of the train is 48 km/h, how many poles does he pass per minute ?  
 (A) 20 (B) 21  
 (C) 23 (D) 24
29. Of the six cities,  
 I. Delhi is bigger than Bengaluru  
 II. Kolkata is bigger than Hyderabad.  
 III. Mumbai is not as big as Kolkata, but is bigger than Bengaluru.  
 IV. Bengaluru is smaller than Hyderabad, but bigger than Pune.  
 Which one is smallest?  
 (A) Hyderabad (B) Kolkata  
 (C) Bengaluru (D) Pune

30. Pointing to Pooja in the photograph, Gita said, "Her daughter's father is son-in-law of my mother." How is Gita related to Pooja ?

- (A) Mother (B) Sister  
(C) Daughter-in-law (D) Aunt

31. Regression analysis method of quantitative analysis of cost function considers

- (A) all data points (B) one data point  
(C) two data points (D) four data points

32. A statement is followed by several conclusions. Choose the conclusions which logically follow the given statement.

**Statement:**

Exhausted passengers take chilled soft drinks to feel refreshed instantly.

**Conclusion:**

- I. Exhausted passengers dislike hot beverages.  
II. Exhausted passengers occasionally need to get instantly refreshed.  
III. Soft drinks, when served chilled, make one feel refreshed instantly.  
IV. Unchilled soft drinks do not make one feel refreshed instantly.

- (A) Only I and IV follow (B) Only III and IV follow  
(C) Only I, II and III follow (D) All I, II, III and IV follow

33. A box contains 2 white, 3 black and 5 red balls. In how many ways can three balls be drawn from the box if at least one black ball is to be included in the draw?

- (A) 29 (B) 36  
(C) 48 (D) 85

34. Pointing towards Rahul, Meena said, "He is the son of only son of my grandmother". How is that Rahul related to Meena ?

- (A) Brother (B) Cousin  
(C) Uncle (D) Data Insufficient

35. How many 9's are present in the following sequence of numbers which are preceded by 5 but not followed by 7?  
5 9 6 8 2 8 8 5 9 7 5 3 9 8 5 9 4 7 3 8 5 9 4 8 9 0 6 5 9 3 8 0 2

- (A) 5 (B) 3  
(C) 4 (D) More than 4

36. Ramesh's age after 16 years will be 5 times his age 4 years back. What is the present age of Ramesh?

- (A) 9 (B) 14  
(C) 18 (D) 21

37. If (a) '1 2 3' stands for 'These are girls', (b) '135' stands for 'girls are clever' and (c) '156' stands for 'Clever girls sing', which numerical stands of 'clever'?

- (A) 1 (B) 2  
(C) 5 (D) 6

38. In a certain code 'LIGHT' is written as 'KJFIS'. How is 'PLUGH' written in that code ?

- (A) OMTHG (B) QMTHG  
(C) OMTFG (D) OMTGH

39. A number is as much greater than 36 as is less than 80. Find the number.

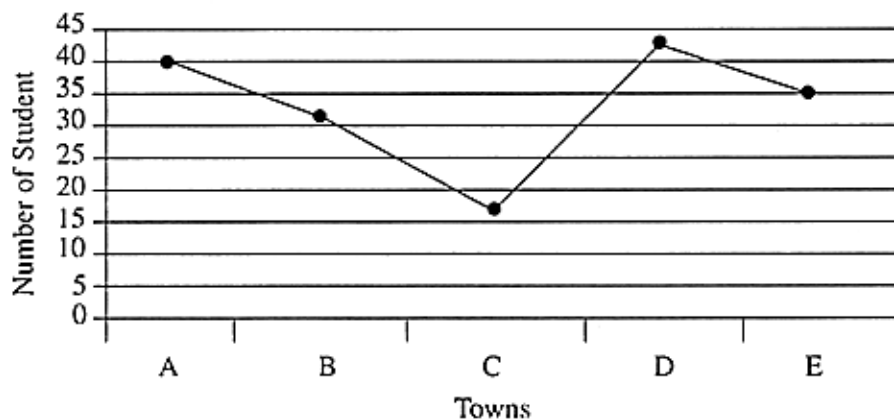
- (A) 32 (B) 36  
(C) 49 (D) 5

40. Pick the odd man out: 154, 235, 352, 460, 324

- (A) 154 (B) 235  
(C) 324 (D) 460

41. Study the following Graph and answer the question:

Number of students appearing for Aptitude Test from various towns (Number in Thousands).



What is the average number of students appearing for Aptitude Test from all the Towns together?

- (A) 33.5 (B) 3350  
(C) 17500 (D) 33500



42. Following the graph and information given in question number 41 answer the question:  
The number of students appearing for the Aptitude Test from Town D is approximately what percent of the number of students appearing for the Aptitude from Town C?
- (A) 243 (B) 413  
(C) 314 (D) 134
43. Find the average of all the numbers between 11 and 36 which are divisible by 5.
- (A) 15 (B) 20  
(C) 25 (D) 30
44. The population of a city is 160000. If it increases at the rate of 6% per annum, then what will be its population 2 years hence?
- (A) 268942 (B) 186935  
(C) 167425 (D) 179776
45. A dice is rolled twice. What is the probability of getting sum 9?
- (A)  $\frac{2}{3}$  (B)  $\frac{1}{3}$   
(C)  $\frac{1}{9}$  (D)  $\frac{1}{6}$
46. Sum of products of three numbers taken two at a time is 131. Sum of squares of the three numbers is 138. What is the sum of the three numbers?
- (A) 25 (B) 20  
(C) 22 (D) 30
47. A, B and C enter into partnership. A advances Rs.1,200 for 4 months, B Rs. 1,400 for 8 months and C Rs. 1,000 for 10 months. They gain Rs.585 altogether. Find the share of B.
- (A) Rs. 195 (B) Rs. 252  
(C) Rs. 225 (D) Rs. 212
48. Total age of A and B is 12 years more than the total age of B and C. By how many years is C younger than A?
- (A) 12 years (B) 24 years  
(C) 21 years (D) Data insufficient
49. Radius of a circle is increased by 6%, determine the increase in area of the circle.
- (A) 12% (B) 12.36%  
(C) 12.64% (D) 6%
50. What is the smallest number which is a perfect square and is divisible by 16, 20 and 24?
- (A) 1600 (B) 2400  
(C) 3600 (D) 7200

10

Space for Rough Work

**Space for Rough Work**

**JECA-2017  
APTITUDE TEST**

সময় : ১ ঘণ্টা

সর্বাধিক নম্বর : ৫০

Booklet No. ....

**নির্দেশাবলি**

পরীক্ষার্থীদের উত্তর দেওয়ার পূর্বে নির্দেশাবলি ভালো করে পড়ে নিতে হবে :

- ১। এই প্রশ্নপত্রে 50টি MCQ ধরনের প্রশ্ন দেওয়া আছে। প্রতিটি প্রশ্নের A, B, C এবং D এই চারটি সম্ভাব্য উত্তর দেওয়া আছে।
- ২। সঠিক উত্তর দিলে 1 নম্বর পাবে। ভুল উত্তর দিলে অথবা যে-কোনো একাধিক উত্তর দিলে  $-\frac{1}{4}$  নম্বর পাবে। কোন উত্তর না দিলে শূন্য পাবে।
- ৩। OMR পত্রে A, B, C অথবা D চিহ্নিত সঠিক ঘরটি ভরাট করে উত্তর দিতে হবে।
- ৪। OMR পত্রে উত্তর দিতে শুধুমাত্র কালো/নীল বল পয়েন্ট পেন ব্যবহার করবে।
- ৫। OMR পত্রে নির্দিষ্ট স্থান ছাড়া অন্য কোথাও কোনো দাগ দেবে না।
- ৬। OMR পত্রে নির্দিষ্ট স্থানে প্রশ্নপত্রের নম্বর এবং নিজের রোল নম্বর অতি সাবধানতার সাথে লিখতে হবে এবং প্রয়োজনীয় ঘরগুলি পূরণ করতে হবে।
- ৭। OMR পত্রে নির্দিষ্ট স্থানে নিজের নাম ও পরীক্ষাকেন্দ্রের নাম লিখতে হবে এবং নিজের সম্পূর্ণ স্বাক্ষর দিতে হবে।
- ৮। OMR উত্তরপত্রটি ইলেকট্রনিক যন্ত্রের সাহায্যে পড়া হবে। সুতরাং, প্রশ্নপত্রের নম্বর বা রোল নম্বর ভুল লিখলে অথবা ভুল ঘর ভরাট করলে উত্তরপত্রটি অনিবার্য কারণে বাতিল হতে পারে। এছাড়া পরীক্ষার্থীর নাম, পরীক্ষা কেন্দ্রের নাম বা স্বাক্ষরে কোনো ভুল থাকলেও পত্র বাতিল হয়ে যেতে পারে। OMR উত্তরপত্রটি ভাঁজ হলে বা তাতে অনাবশ্যিক দাগ পড়লেও বাতিল হয়ে যেতে পারে। পরীক্ষার্থীর এই ধরনের ভুল বা অসতর্কতার জন্য উত্তরপত্র বাতিল হলে একমাত্র পরীক্ষার্থী নিজেই তার জন্য দায়ী থাকবে।
- ৯। প্রশ্নপত্রে রাফ কাজ করার জন্য ফাঁকা জায়গা দেওয়া আছে। অন্য কোনো কাগজ এই কাজে ব্যবহার করবে না।
- ১০। পরীক্ষাকক্ষ ছাড়ার আগে OMR পত্র অবশ্যই পরিদর্শককে দিয়ে যাবে।