Code No.	T – 2142

Entrance Examination for Admission to the M.Tech. Courses in the Teaching Departments, 2024

CSS

TECHNOLOGY MANAGEMEMNT

General Instructions

1. The Question Paper is having 100 Objective Questions, each carrying one mark.
2. The answers are to be (✓) 'tick marked' **only** in the "**Response Sheet**" provided.
3. **Negative marking** : **0.25 marks** will be deducted for each wrong answer .

Time : 2 Hours **Max. Marks : 100**

To be filled in by the Candidate									
Register Number	in Figures								
	in words								

Choose appropriate answer from the options in the questions.

(100 × 1 = 100 marks)

Section A (Engineering Aptitude)

1. How many bytes does a gigabyte have?
   A. 1 million bytes
   B. 10 million bytes
   C. 1 billion bytes
   D. 10 billion bytes

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2. Which block or device does the data compression?

   A. Channel encoder
   B. Source encoder
   C. Modulator
   D. None of the mention

3. Analog information is converted to digital data using

   A. Sampling
   B. Quantization
   C. Coding
   D. All of the mentioned

4. Transmission media used in low frequency band are

A. Air
B. Water
C. Copper Cable
D. All of the mentioned

5. Suppose that in a C program snippet, followings statements are used.

(i) sizeof(int);
(ii) sizeof(int*);
(iii) sizeof(int**);

Assuming size of pointer is 4 bytes and size of int is also 4 bytes, pick the most correct answer from the given options.

A. Only(i) would compile successfully and it would return size as 4.
B. (i), (ii) and (iii) would compile successfully and size of each would be same i.e. 4
C. (i), (ii) and (iii) would compile successfully but the size of each would be different and would be decided at run time.
D. (ii) and (iii) would result in compile error but (i) would compile and result in size as 4.

6. Which of the following hash functions is most likely to cause clustering in a hash table?

A. $h(k) = k \ \% \ m$
B. $h(k) = floor\left(m * (kA \bmod 1)\right)$
C. $h(k) = k$
D. $h(k) = ((k / m) + k * m) + k \% m$

7. Consider a hash table with 100 slots. Collisions are resolved using chaining. Assuming simple uniform hashing, what is the probability that the first 3 slots are unfilled after the first 3 insertions?

A. $(97 \times 97 \times 97)/100^3$
B. $(99 \times 98 \times 97)/100^3$
C. $(97 \times 96 \times 95)/100^3$
D. $(97 \times 96 \times 95)/(3! \times 100^3)$

8. What is recurrence for worst case of QuickSort and what is the time complexity in Worst case?

   A. Recurrence is T(n) = T(n-2) + O(n) and time complexity is O(n^2)

   B. Recurrence is T(n) = T(n-1) + O(n) and time complexity is O(n^2)

   C. Recurrence is T(n) = 2T(n/2) + O(n) and time complexity is O(nLogn)

   D. Recurrence is T(n) = T(n/10) + T(9n/10) + O(n) and time complexity is O(nLogn)

9. A sorting technique is called stable if:

   A. It takes O(n*log(n)) time

   B. It maintains the relative order of occurrence of non-distinct elements

   C. It uses divide and conquer paradigm

   D. It takes O(n) space

10. The minimum number of record movements required to merge five files A (with 10 records), B (with 20 records), C (with 15 records), D (with 5 records) and E (with 25 records) is:

   A. 165 B. 90

   C. 75 D. 65

11. The thickness of insulation provided on the conductor depends on?

   A. the magnitude of voltage on the conductor

   B. the magnitude of current flowing through it

   C. both (A) and (B)

   D. none of the above

12. Which of the following is the most likely source of harmonics in a transformer?

   A. Poor-insulation B. Overload

   C. Loose connections D. Core saturation

13. A CPU generally handles an interrupt by executing an interrupt service routine

    A. As soon as an interrupt is raised

    B. By checking the interrupt register at the end of fetch cycle.

    C. By checking the interrupt register after finishing the execution of the current instruction.

    D. By checking the interrupt register at fixed time intervals.

14. D.P.C (Damp Proof Course) is mainly laid on:

    A. Footing B. Floor

    C. Foundation D. Plinth

15. Steining is a component of which of the below type of foundation?

    A. Pile B. Strap

    C. Isolated D. Well

16. Given the basic ER and relational models, which of the following is INCORRECT?

    A. An attribute of an entity can have more than one value

    B. An attribute of an entity can be composite

    C. In a row of a relational table, an attribute can have more than one value

    D. In a row of a relational table, an attribute can have exactly one value or a NULL value

17. An index is clustered, if

    A. it is on a set of fields that form a candidate key.

    B. it is on a set of fields that include the primary key.

    C. the data records of the file are organized in the same order as the data entries of the index.

    D. the data records of the file are organized not in the same order as the data entries of the index.

18. A file is organized so that the ordering of data records is the same as or close to the ordering of data entries in some index. Then that index is called

    A. Dense B. Sparse

    C. Clustered D. Unclustered

19. Which of the following statement(s) regarding a linker software is/are true?

(I) A function of a linker is to combine several object modules into a single load module.

(II) A function of a linker is to replace absolute references in an object module by symbolic references to locations in other modules.

A. Only (I)
B. Only (II)
C. Both (I) and (II)
D. Neither (I) nor (II)

20. Which of the following can be used as both Source and Destination IP?

A. 198.168.1.255
B. 10.0.0.1
C. 127.0.0.1
D. 255.255.255.255

21. The network 198.78.41.0 is a

A. Class A network
B. Class B network
C. Class C network
D. Class D network

22. Which are the two modes of IP security?

A. Transport and certificate
B. Transport and tunnel
C. Certificate and tunnel
D. Preshared and transport

23. Consider the following statements about the functionality of an IP based router.

(I) A router does not modify the IP packets during forwarding.

(II) It is not necessary for a router to implement any routing protocol.

(III) A router should reassemble IP fragments if the MTU of the outgoing link is larger than the size of the incoming IP packet.

Which of the above statements is/are TRUE?

A. (I) and (II) only
B. (I) only
C. (II) and (III) only
D. (II) only

24. Let $\sum = \{a,b\}$ and language $L = \{aa, bb\}$. Then, the complement of L is

A. $\{\lambda, a, b, ab, ba\} \cup \{w \in \{a,b\}^* \mid\mid w \mid > 3\}$

B. $\{a, b, ab, ba\} \cup \{w \in \{a,b\}^* \mid\mid w \mid > 3\}$

C. $\{w \in, \{a, b\}^*, \mid\mid w \mid > 3\} \cup \{a, b, ab, ba\}$

D. $\{\lambda, a, b, ab, ba\} \cup \{w \in \{a,b\}^* \mid\mid w \mid \geq 3\}$

25. Which of the following is a digital-to-analog conversion process?

A. Staircase approximation
B. Linear interpolation
C. Quadratic interpolation
D. All of the mentioned

26. The force applied on a body of mass 100 kg to produce an acceleration of 5 m/s^2?

A. 20N
B. 100N
C. 500N
D. none of these

27. Which type of reproduction is involved in the production of clones?

A. Self-pollination
B. Asexual reproduction
C. Hybridization
D. Cross-pollination

28. Which of the below is not a preliminary consideration for building a foundation?

A. Bearing capacity of soil
B. Ground water condition
C. Settlement control
D. Soil organisms

29. Which stone is used for buildings situated in industrial towns?

A. Marble slab
B. Compact sandstone
C. Gneiss
D. Slate

30. Which of the following addressing mode is best suited to access elements of an array of contiguous memory locations?

A. Indexed addressing mode
B. Base Register addressing mode
C. Relative address mode
D. Displacement mode

31. Which of the following is not true in case of Oblique Projections?

A. Parallel projection rays are not perpendicular to the viewing plane.

B. Parallel lines in space appear parallel on the final projected image.

C. Used exclusively for pictorial purposes rather than formal working drawings.

D. Projectors are always perpendicular to the plane of projection.

32. The function $AB'C + A'BC + ABC' + A'B'C + AB'C'$ is equivalent to

A. $AC'+AB + A'C$

B. $AB'+AC' A'C$

C. $A'B + AC'+AB'$

D. $A'B + AC + AB'$

33. Let $m = (313)_4$ and $n = (322)_4$. Find the base 4 expansion of $m + n$.

A. $(635)_4$

B. $(32312)_4$

C. $(21323)_4$

D. $(1301)_4$

34. Which of the following 8085 microprocessor hardware interrupt has the lowest priority?

A. RST6.5

B. RST 7.5

C. TRAP

D. INTR

35. In 8085 microprocessor, the digit 5 indicates that the microprocessor needs:

A. –5 volts, +5 volts supply

B. +5 volts supply only

C. –5 volts supply only

D. 5 MHz clock

36. Which of the following statement(s) is/are correct?

A. Persistence is the term used to describe the duration of phosphorescence.

B. The control electrode is used to turn the electron beam on and off.

C. The electron gun creates a source of electrons which are focussed into a narrow beam directed at the face of CRT.

D. All of the above

37. A user level process in Unix traps the signal sent on a Ctrl-C input, and has a signal handling routine that saves appropriate files before terminating the process. When a Ctrl-C input is given to this process, what is the mode in which the signal handling routine executes?

A. kernel mode
B. superuser mode
C. privileged mode
D. user mode

38. What are the two core techniques that enabled the birth of modern biotechnology?

A. Classical and traditional biotechnology
B. Red biotechnology and green biotechnology
C. Genetic engineering and maintenance of a sterile environment
D. Genetics and mathematics

39. ELISA is

A. Usage of RBCs
B. Using radiolabeled second antibody
C. Addition of substrate that is converted into a colored end product
D. Using complement-mediated cell lysis

40. Which of the following is NOT true of deadlock prevention and deadlock avoidance schemes?

A. In deadlock prevention, the request for resources is always granted if the resulting state is safe
B. In deadlock avoidance, the request for resources is always granted if the result state is safe
C. Deadlock avoidance is less restrictive than deadlock prevention
D. Deadlock avoidance requires knowledge of resource requirements a priori

41. A bolt is made to pass through a tube and both of them are tightly fitted with the help of washers and nuts. If the nut is tightened, then?

A. bolt and tube are under tension
B. bolt and tube are under compression
C. bolt is under compression and tube is under tension
D. bolt is under tension and tube is under compression

42. A system shares 9 tape drives. The current allocation and maximum requirement of tape drives for 4 processes are shown below:

Process	Maximum need	Current allocation
P1	9	3
P2	6	1
p3	5	3
P4	10	0

Which of the following best describes the current state of the system?

A. Safe, Deadlocked
B. Safe, Not Deadlocked
C. Not Safe, Deadlocked
D. Not Safe, Not Deadlocked

43. Write the most suitable statement for Solid State Drives (SSDs)?

A. Read contents more quickly
B. Produce less heat
C. Consume less power
D. All of the above

44. The principle Total Internal reflection used in which one of the communication medium?

A. Coaxial Cable
B. OFC Cable
C. UTP Cable
D. None

45. Sort the order in which the following actions take place in an interaction between a web browser and a web server:

(1) The web browser requests a web page using HTTP.

(2) The web browser establishes a TCP connection with the web server.

(3) The web server sends the requested web page using HTTP.

(4) The web browser resolves the domain name using DNS.

A. (4), (2),(1), (3)
B. (1),(2),(3),(4)
C. (4),(1),(2),(3)
D. (2),(4),(1),(3)

46. When a low resistance is connected in parallel with a high resistance, the combined resistance is

A. always more than the high resistance

B. always less than the low resistance

C. always between the value of high and low resistance

D. either lower or higher than low resistance depending on the value of high resistance

47. For current to flow, a circuit must be

A. Isolated

B. Insulated

C. Complete

D. Protected

48. With rise in temperature the resistance of semi-conductors?

A. decreases

B. increases

C. first increases and then decreases

D. remains constant

49. Which of the following materials has a negative temperature co-efficient of resistance?

A. Copper

B. Carbon

C. Aluminum

D. Brass

50. Which of the following lamps will have least resistance at room temperature?

A. 26W, 220 V

B. 100W, 220 V

C. 200 W,220 V

D. 60 W,220 V

Section B (Management Aptitude)

51. Out of all the 2-digit integers between 1 and 100, a 2-digit number has to be selected at random. What is the probability that the selected number is not divisible by 7?

A. 13/90 B. 12/90

C. 78/90 D. 77/90

52. Suppose a fair six-sided die is rolled once. If the value on the die is 1, 2, or 3, the die is rolled a second time. What is the probability that the sum total of values that turn up is at least 6?

A. 10/21 B. 5/12

C. 2/3 D. 1/6

53. If 5 November 2019 was Tuesday, then what was the day of the week on 5 December 2011?

A. Tuesday B. Monday

C. Sunday D. Saturday

54. From his house, Avinash went to Kapil's house situated 500 m towards the north-east of his own house. From there, both of them went to Varun's house situated 400 m towards the south of Kapil's house. What is the shortest distance between Avinash's current location and his location at the beginning?

A. 900 m B. 400 m

C. 300 m D. 500 m

55. Select the word pair in which the two words are related in the same way as are the two words in the given word-pair. Small: Dimension?

A. Heat : Temperature B. Heavy : Weight

C. Triangle : Area D. Cold : Winter

56. In a certain code language 'DEAR' is coded as '7465' and 'LIFE' is coded as '8394'. Then how will 'IDEAL' be coded in the same code language?

A. 73648 B. 37684

C. 84673 D. 37468

57. In how many ways can we paint the six faces of a cube with six different colours?

A. 30 B. 6

C. 6! D. None of the above

58. Direction: Three of the following four number pairs are alike in a certain way and one is different. Find the odd one out?

A. 20:30 B. 12:20

C. 30:40 D. 42:56

59. In a family of 8 persons with two couples, P is the son of Q and brother of R. S is the daughter of M, who is married to R. T is the aunt of S and mother of V. R's nephew W is the son of P and has a sister V. How is V related to M?

A. Nephew B. Daughter

C. Niece D. Cousin Sister

60. If + means '$\div$' - means '$+$', $\times$ means '-'and $\div$ means ' $\times$ ', then what will be the value of the following expression. $18 \div 6 - 27 + 3 \times 12 = ?$

A. 92 B. 95

C. 105 D. 107

61. Which letter-cluster will replace the question mark(?) in the following series?

XCA, WDZ, UFX, RIU, NMQ?

A. JFU B. IKJ

C. JKO D. IRL

62. Select the option that gives a meaningful sequence of the given words.

(1) Billion (2) Trillion (3) Hundred (4) Million (5) Thousand ?

A. (2), (1), (5), (3), (4) B. (3), (1), (5), (2), (4)

C. (3), (1), (4), (5), (2) D. (2), (1), (4), (5), (3)

63. A train, 300m long, passed a man, walking along the line in the same direction at the rate of 3km/hr in 33 seconds. The speed of the train is?

A. 30 km/h
B. 32 km/h
C. 32 and 8/11 km/h
D. 35 and 8/11 km/h

64. In two triangles, the ratio of the areas is 4: 3 and the ratio of their heights is 3 : 4. Find the ratio of their bases?

A. 13:9
B. 14:9
C. 16:9
D. 15:9

65. A, B and C enter into a partnership with a certain capital in which A's contribution is Rs. 10,000. If out of a total profit of Rs. 1,000, A gets Rs. 500, B gets Rs. 300 then C's capital is?

A. Rs. 4,800
B. Rs. 4,000
C. Rs. 3,600
D. Rs. 4,400

66. Two pipes A and B can fill a tank in 15 minutes and 20 minutes respectively. Both the pipes are opened together but after 4 minutes, pipe A is turned off. What is the total time required to fill the tank?

A. 10 min. 20 sec.
B. 11 min. 45 sec.
C. 12 min. 30 sec.
D. 14 min. 40 sec.

67. If 16 men working 7 hours day can plough a field in 41 days, in how many days will 14 men working 12 hours a clay plough the same field?

A. 46
B. 32
C. 35
D. 30

68. A bag has 5 white marbles, 8 red marbles and 4 purple marbles. If we take a marble randomly, then what is the probability of not getting purple marble?

A. 0.5
B. 0.66
C. 0.08
D. 0.77

69. In a town, 65% people watch the news on television, 40% read a newspaper and 25% read a newspaper and watch the news on television also. What percentage of the people neither watch the news on television nor read a newspaper?

A. 5% B. 10%

C. 15% D. 20%

70. Mrs.Veena wants to go to the Krishna Rajendra market. She moved northwards and after covering some distance turned left and moved 4 km and reached a crossing. The road in front of her led to Jaynagar while the road on to her left led to Bangalore Medical College and the road on to her right led to the Krishna Rajendra market. In which direction the Krishna Rajendra market is located with reference to the starting point?

A. West B. North–West

C. South–West D. East

Directions for Questions 71 –75

In a town of 500 people, 285 read Hindu and 212 read Indian Express and 127 read Times of India, 20 read Hindu and Times of India only and 29 read Hindu and Indian Express only and 35 read Times of India and Indian express only. 50 read no news paper.

71. How many read only one paper?

A. 312 B. 360

C. 321 D. 354

72. How many read all news papers?

A. 50 B. 45

C. 55 D. 60

73. How many read Hindu only?

A. 100 B. 191

C. 90 D. 78

74. How many read both Indian Express and Hindu?

A. 70 B. 77

C. 74 D. 80

75. How many read Times of India and Indian Express?

A. 80 B. 60

C. 66 D. 88

76. Given that 24 carat gold is pure gold; 18 carat gold is gold and 20 carat gold is gold, the ratio of the pure gold in 18 carat gold to the pure gold in 20 carat gold is

A. 5 : 8 B. 8 : 5

C. 9 : 10 D. 15 : 22

77. Three persons are walking from a place A to another place B. Their speeds are in the ratio 4:3:5. The time ratio to reach B by these persons will be

A. 4 : 3 : 5 B. 5 : 3 : 4

C. 15 : 20 : 12 D. 15 : 24 : 19

78. In a school, 442 boys and 374 girls have been divided into the largest possible equal classes, so that each class of boys numbers the same as each class of girls. What is the number of classes?

A. 16 B. 18

C. 20 D. 24

79. A man and a boy received Rs. 800 as wages for 5 days for the work they did together. The man's efficiency in the work was three times that of the boy. What are the daily wages of the boy?

A. Rs. 40 B. Rs. 46

C. Rs. 56 D. Rs. 76

80. The average salary of 20 workers in an office is Rs. 1,900 per month. If the manager's salary is added, the average becomes Rs. 2,000 per month. The manager's salary (in Rs) is

A. 24,000 B. 25,200

C. 38,600 D. 48,000

81. In how many ways a committee consisting of 5 men and 6 women can be formed from 8 men and 10 women?

A. 86,400 B. 11,760

C. 5,040 D. 266

82. If $2^{n+4} - 2^{n+2} = 3$, then n is equal to

A. 1 B. 2

C. –1 D. –2

83. A wholesaler gains 25% by selling a commodity and a retailer gains 30% by selling it. If the retail value of that commodity is Rs. 325, then the wholesale value is

A. Rs. 180 B. Rs. 200

C. Rs. 225 D. Rs. 245

84. Walking 6/7th of his usual speed, a man is 12 minutes too late. The usual time taken by him to cover that distance is

A. 1 hour B. 1 hr 12 min

C. 1 hr 15 min D. 1 hr 20 min

85. How many times in a day, the hands of a clock are straight?

A. 22 B. 24

C. 44 D. 48

86. Consider the information given below:

(1) A, B, C, D and E are five men sitting in a line facing to south - while M, N, O, P and Q are five Ladies sitting in a second line parallel to the first line and are facing to North.

(2) B who is just next to the left of D, is opposite to Q.

(3) C and N are diagonally opposite to each other.

(4) E is opposite to O who is just next right of M.

(5) P who is just to the left of Q, is opposite to D.

(6) M is at one end of the line.

If O and P, A and E and B and Q interchange their positions, then who will be the second person to the right of the person who is opposite to the person second of the right of P?

A. D B. A

C. E D. O

87. Statements: Prime age school-going children in urban India have now become avid as well as more regular viewers of television, even in households without a TV. As a result there has been an alarming decline in the extent of readership of newspapers.

Conclusions:

(1) Method of increasing the readership of newspapers should be devised.

(2) A team of experts should be sent to other countries to study the impact of TV. on the readership of newspapers.

A. Only conclusion (1) follows
B. Only conclusion (2) follows
C. Either (1) or (2) follows
D. Neither (1) nor (2) follows

88. Present ages of Sameer and Anand are in the ratio of 5 : 4 respectively. Three years hence, the ratio of their ages will become 11 : 9 respectively. What is Anand's present age in years?

A. 24
B. 27
C. 40
D. Cannot be determined

89. There are 8 houses in a line and in each house only one boy lives with the conditions as given below:

(1) Jack is not the neighbour Siman.
(2) Harry is just next to the left of Larry.
(3) There is at least one to the left of Larry.
(4) Paul lives in one of the two houses in the middle.
(5) Mike lives in between Paul and Larry.

If at least one lives to the right of Robert and Harry is not between Taud and Larry, then which one of the following statement is not correct?

A. Robert is not at the left end
B. Robert is in between Simon and Taud.
C. Taud is in between Paul and Jack.
D. There are three persons to the right of Paul.

90. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly What is the probability that it is neither red nor green?

A. 1/3 B. 3/4

C. 7/19 D. 8/21

Questions 91-95 refers to the following table:

The following table gives the percentage of marks obtained by seven students in six different subjects in an examination. The Numbers in the Brackets give the Maximum Marks in Each Subject.

	Subject (Max. Marks)					
Student	Maths (150)	Chemistry (130)	Physics (120)	Geography (100)	History (60)	Computer Science (40)
Ayush	90	50	90	60	70	80
Aman	100	80	80	40	80	70
Sajal	90	60	70	70	90	70
Rohit	80	65	80	80	60	60
Muskan	80	65	85	95	50	90
Tanvi	70	75	65	85	40	60
Tarun	65	35	50	77	80	80

91. What are the average marks obtained by all the seven students in Physics? (rounded off to two digit after decimal)

A. 77.26 B. 89.14

C. 91.37 D. 96.11

92. The number of students who obtained 60% and above marks in all subjects is?

A. 1 B. 2

C. 3 D. None

93. What was the aggregate of masks obtained by Sajal in all the six subjects?

A. 409 B. 419

C. 429 D. 449

94. In which subject is the overall percentage the best?

A. Maths B. Chemistry

C. Physics D. History

95. What is the overall percentage of Tarun?

A. 52.5% B. 55%

C. 60% D. 63%

Directions for Questions 96-100:

In an Exhibitions, seven cars of different companies – Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo are standing facing to east in the following order:

(1) Cadillac is next to right of Fargo.

(2) Fargo is fourth to the right of Fiat.

(3) Maruti car is between Ambassador and Bedford.

(4) Fiat which is third to the left of Ambassador, is at one end.

96. Which of the cars are on both the sides of cadillac car?

A. Ambassador and Maruti B. Maruti and Fiat

C. Fargo and Mercedes D. Ambassador and Fargo

97. Which of the following statement is correct?

A. Maruti is next left of Ambassador

B. Bedford is next left of Fiat.

C. Bedford is at one end

D. Fiat is next second to the right of Maruti.

98. Which one of the following statements is correct?

A. Fargo car is in between Ambassador and fiat.

B. Cadillac is next left to Mercedes car.

C. Fargo is next right of Cadillac.

D. Maruti is fourth right of Mercedes.

99. Which of the following groups of cars is to the right of Ambassador?

A. Cadillac, Fargo and Maruti B. Mercedes, Cadillac and Fargo

C. Maruti, Bedford and Fiat D. Bedford, Cadillac and Fargo

100. Which one of the following is the correct position of Mercedes?

A. Next to the left of Cadillac B. Next to the left of Bedford

C. Between Bedford and Fargo D. Fourth to the right of Maruti

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ANSWER SHEET

1	A	B	C	D	E	26	A	B	C	D	E	51	A	B	C	D	E	76	A	B	C	D	E
2	A	B	C	D	E	27	A	B	C	D	E	52	A	B	C	D	E	77	A	B	C	D	E
3	A	B	C	D	E	28	A	B	C	D	E	53	A	B	C	D	E	78	A	B	C	D	E
4	A	B	C	D	E	29	A	B	C	D	E	54	A	B	C	D	E	79	A	B	C	D	E
5	A	B	C	D	E	30	A	B	C	D	E	55	A	B	C	D	E	80	A	B	C	D	E
6	A	B	C	D	E	31	A	B	C	D	E	56	A	B	C	D	E	81	A	B	C	D	E
7	A	B	C	D	E	32	A	B	C	D	E	57	A	B	C	D	E	82	A	B	C	D	E
8	A	B	C	D	E	33	A	B	C	D	E	58	A	B	C	D	E	83	A	B	C	D	E
9	A	B	C	D	E	34	A	B	C	D	E	59	A	B	C	D	E	84	A	B	C	D	E
10	A	B	C	D	E	35	A	B	C	D	E	60	A	B	C	D	E	85	A	B	C	D	E
11	A	B	C	D	E	36	A	B	C	D	E	61	A	B	C	D	E	86	A	B	C	D	E
12	A	B	C	D	E	37	A	B	C	D	E	62	A	B	C	D	E	87	A	B	C	D	E
13	A	B	C	D	E	38	A	B	C	D	E	63	A	B	C	D	E	88	A	B	C	D	E
14	A	B	C	D	E	39	A	B	C	D	E	64	A	B	C	D	E	89	A	B	C	D	E
15	A	B	C	D	E	40	A	B	C	D	E	65	A	B	C	D	E	90	A	B	C	D	E
16	A	B	C	D	E	41	A	B	C	D	E	66	A	B	C	D	E	91	A	B	C	D	E
17	A	B	C	D	E	42	A	B	C	D	E	67	A	B	C	D	E	92	A	B	C	D	E
18	A	B	C	D	E	43	A	B	C	D	E	68	A	B	C	D	E	93	A	B	C	D	E
19	A	B	C	D	E	44	A	B	C	D	E	69	A	B	C	D	E	94	A	B	C	D	E
20	A	B	C	D	E	45	A	B	C	D	E	70	A	B	C	D	E	95	A	B	C	D	E
21	A	B	C	D	E	46	A	B	C	D	E	71	A	B	C	D	E	96	A	B	C	D	E
22	A	B	C	D	E	47	A	B	C	D	E	72	A	B	C	D	E	97	A	B	C	D	E
23	A	B	C	D	E	48	A	B	C	D	E	73	A	B	C	D	E	98	A	B	C	D	E
24	A	B	C	D	E	49	A	B	C	D	E	74	A	B	C	D	E	99	A	B	C	D	E
25	A	B	C	D	E	50	A	B	C	D	E	75	A	B	C	D	E	100	A	B	C	D	E

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