

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU  
ARE ASKED TO DO SO)

A

SET-X

PG-EE-June, 2023

SUBJECT : Computer Science Group

10553

Sr. No. ....

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) \_\_\_\_\_ (in words) \_\_\_\_\_

Name \_\_\_\_\_ Date of Birth \_\_\_\_\_

Father's Name \_\_\_\_\_ Mother's Name \_\_\_\_\_

Date of Examination \_\_\_\_\_

\_\_\_\_\_  
(Signature of the Candidate)

\_\_\_\_\_  
(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE  
STARTING THE QUESTION PAPER.**

1. **All questions are compulsory.**
2. The candidates **must return** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.
5. The candidate **must not** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers **must not** be ticked in the question booklet.
6. **There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
7. Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
8. **Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.**

PG-EE-June, 2023/(Computer Science Group)(SET-X)/(A)

1. If  $p \times q = p + q + \frac{p}{q}$ , what is the value of  $8 \times 2$ ?  
 (1) 6 (2) 10 (3) 14 (4) 16
2. If  $0.13 \times p^2 = 13$ , then  $p$  is equal to :  
 (1) 10 (2) 0.01 (3) 0.001 (4) 100
3. If  $A = \{5, 6\}$  and  $B = \{7, 8\}$ , then what is the number of relations from  $A$  to  $B$ ?  
 (1)  $2^2$  (2)  $2^3$  (3)  $2^4$  (4)  $2^5$
4. If  $A = \{1, 2, 3, 4, 5, 7, 8, 9\}$  and  $B = \{2, 4, 6, 7, 9\}$ , then find number of proper subsets of  $A \cap B$ ?  
 (1) 14 (2) 15 (3) 32 (4) 33
5. The magnitude of the vector  $6i + 2j + 3k$ ?  
 (1) 5 (2) 6 (3) 7 (4) 8
6.  $(\sin 30^\circ + \cos 30^\circ) - (\sin 60^\circ + \cos 60^\circ)$  :  
 (1) 0 (2) 1 (3) 2 (4) -1
7. If  $x = 7 - 4\sqrt{3}$ , then what is the value of  $\sqrt{x} + \frac{1}{\sqrt{x}}$ ?  
 (1) 1 (2) 2 (3) 3 (4) 4
8. The scalar product of  $5i + j - 3k$  and  $3i - 4j + 7k$  is :  
 (1) 15 (2) -15 (3) 10 (4) -10
9. The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 m away from the wall. The length of ladder is :  
 (1) 2.3 m (2) 4.6 m (3) 7.8 m (4) 9.2 m
10. An urn contains 6 red, 4 blue, 2 green and 3 yellow marbles. If two marbles are picked up at random, what is the probability that either both are green or both are yellow?  
 (1)  $5/91$  (2)  $1/3$   
 (3)  $4/105$  (4) None of the above

11. Choose missing pattern :

QPO, NML, KJI, -, EDC

(1) HGF

(2) CAB

(3) JKM

(4) GHD

12. Choose the *correct* relation similar to following :

FISH : SCHOOL

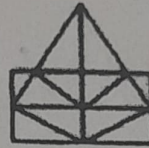
(1) Herd : Peacock

(2) Wolf : Pack

(3) Cow : Farm

(4) Elephant : Jungle

13. Find the minimum number of straight lines required to make the given figure :



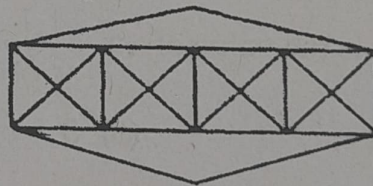
(1) 15

(2) 21

(3) 18

(4) 20

14. Find the minimum number of straight lines in the below figure :



(1) 20

(2) 19

(3) 17

(4) 15

15. Vineet is taller than Raman but shorter than Jyoti. Sumit is the shortest. Deepak taller than Sumit but shorter than Raman. Who is the tallest ?

(1) Jyoti

(2) Raman

(3) Vineet

(4) Deepak

16. Select the missing letter from the given options :

B	J	I
E	K	B
G	U	?

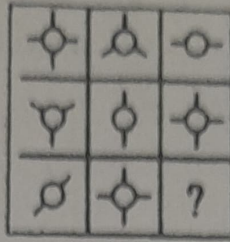
(1) O

(2) M

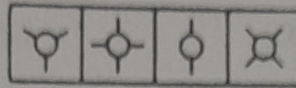
(3) K

(4) P

17. Select the Answer figure that fits in the blank space in the given Problem figure :  
*Problem Figure*



*Answer Figures :*



A B C D

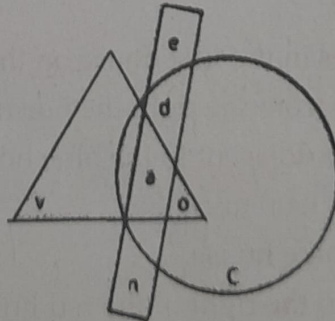
- (1) D                      (2) C                      (3) B                      (4) A
18. Select the option that depicts the correct mirror image of the given word when the mirror is placed horizontally below the word :

HEALTHY

1. HEVΓLHY
2. YHTLAЭH
3. YHTJAЭH
4. YHTLAEH

- (1) 1                      (2) 2                      (3) 3                      (4) 4

19. Which of the following part is a part of both circle and triangle ?



- (1) e                      (2) v                      (3) o                      (4) c

20. The proportion of male students and the proportion of vegetarian students in a school are given below. The school has a total of 800 students, 80% of whom are in the secondary section and rest equally divided between class 11 and 12 :

What is the percentage of vegetarian student in class 11 ?

	Male (M)	Vegetarian (V)
Class 12	0.60	0.54
Class 11	0.55	0.50
Secondary Section	0.275 (288)	0.55(352)
Total	0.475	0.53

- (1) 40                      (2) 45                      (3) 60                      (4) 65

21. Answer the questions on the basis of the information given below :

Seven varsity basketball players A, B, C, D, E, F and G are to be honoured at a special luncheon. The players will be seated on the dais in a row. A and G have to leave the luncheon early and so must be seated at the extreme right. B will receive the most valuable player's trophy and so must be in the centre to facilitate presentation. C and D are bitter rivals and therefore, must be seated as far apart as possible.

Which of the following pairs *cannot* be seated together ?

- (1) B and D              (2) C and F              (3) D and G              (4) E and A

22. Read the text and the statements carefully, and answer the questions .

Four people of different nationalities live on the same side of a street in four houses each of different colors. Each person has a different favorite drink. The following additional information is also known :

- A. The Englishman lives in the red house.
- B. The Italian drink tea.
- C. The Norwegian lives in the first house on the left.
- D. In the second house from the right they drink milk.
- E. The Norwegian lives adjacent to the blue house.
- F. The Spaniard drinks fruit juice.
- G. Tea is drunk in the blue house.
- H. The white house is to the right of the red house.

The Norwegian drinks :

- (1) Milk                      (2) Cocoa                      (3) Tea                      (4) Fruit Juice

23. Answer the questions on the basis of the information given below :

A, B, C, D, E and F are a group of friends. There are two house wives, one professor, one engineer, one accountant and one lawyer in the group. There are only two married couples in the group. The lawyer is married to D, who is a housewife. No women in the group are either an engineer or an accountant. C, the accountant, is married to F, who is a professor. A is married to housewife. E is not a housewife.

How many members of group are males ?

- (1) 1
- (2) 3
- (3) 4
- (4) Cannot be determined

24. The first and the last parts of the sentence are numbered 1 & 6. The rest of the sentence, is split into four parts and named P, Q, R and S. These four parts are not given in their proper order.

Read the sentence and find out which of the four combinations is *correct* ?

1. It was obvious
- P. made by him
- Q. submitted at the meeting
- R. from the comments
- S. on the draft proposals
6. that he was not satisfied with them.

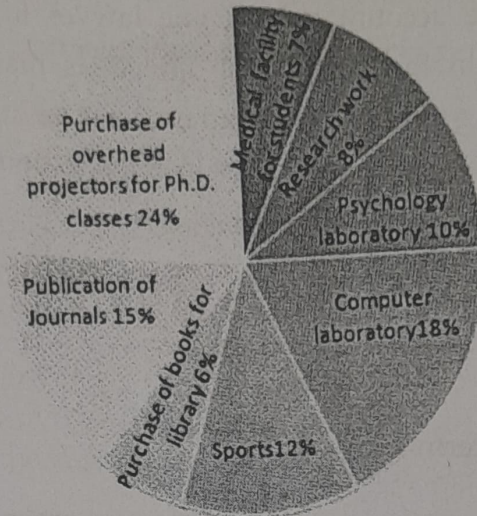
- |          |          |
|----------|----------|
| (1) QRSP | (2) SQRP |
| (3) RPSQ | (4) PSRQ |

25. In an examination the average marks of Rohit are 63. If he got 20 more marks in Science and 28 more marks in Mathematics, then his average would have been 69. Find the total number of subjects he studied :

- |       |       |        |        |
|-------|-------|--------|--------|
| (1) 7 | (2) 8 | (3) 10 | (4) 12 |
|-------|-------|--------|--------|

26. Study the following pie-chart carefully to answer these questions :

Total Expenditure : Rs. 60 Lacs



Expenditure of funds by University for various purpose

What is the difference between the expenditure made by university for Publication of Journals and Psychology Laboratory ?

- (1) Rs. 4 lacs      (2) Rs. 3 lacs      (3) Rs. 4.2 lacs      (4) Rs. 3.8 lacs

27. Study the following table and answer the questions :

Classification of 100 students based on the marks obtained by them in Physics and Chemistry in an Examination :

Subjects	Marks out of 50				
	40 and above	30 and above	20 and above	10 and above	0 and above
Physics	9	32	80	92	100
Chemistry	4	21	66	81	100
Average (Aggregate)	7	27	73	87	100

What is the difference between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate ?

- (1) 3      (2) 4      (3) 5      (4) 6

A

28. Answer the questions based on the following information :

A, B, C and D are to be seated in a row. But C and D cannot be together. Also B cannot be at the third place. If A and B are together, then which of the following must be necessarily *true* ?

- (1) C is not at the first place                      (2) A is at the third place  
 (3) D is at the first place                          (4) C is at the first place

29. Answer the questions on the basis of the following information :

Four families decided to attend the marriage ceremony of one of their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage.

Given below some information about the families, and who reached when to attend the marriage :

The family with 2 kids came just before the family with no kids.

Shanti who does not have any kids reached just before Sridevi's family.

Sunil and his wife reached last with their only kid.

Anil is not the husband of Joya.

Anil and Raj are fathers.

Sridevi's and Anita's daughters go to the same school.

Joya came before Shanti and met Anita when she reached the venue.

Raman stays the farthest from the venue.

Raj said his son could not come because of his exams.

Name the *correct* pair of husband and wife :

- (1) Raj and Shanti  
 (2) Sunil and Sridevi  
 (3) Anil and Sridevi  
 (4) Raj and Anita



30. Answer the questions on the basis of the information given below :

The seven basic symbols in a certain numeral system and their respective values are as follows :

$$I = 1, V = 5, X = 10, L = 50, C = 100, D = 500 \text{ and } M = 1000$$

In general, the symbols in the numeral system are read from left to right, starting with the symbol representing the largest value; the same symbol cannot occur continuously more than three times; the value of the numeral is the sum of the values of the symbols. For example, XXVII =  $10 + 10 + 5 + 1 + 1 = 27$ . An exception to the left to right reading occurs when a symbol is followed immediately by a symbol of greater value; then, the smaller value is subtracted from the larger.

For example, XLVI =  $(50 - 10) + 5 + 1 = 46$ .

The value of the numeral MCMXCIX is :

- (1) 1999                      (2) 1899                      (3) 1989                      (4) 1889

31. Aman is 16th from the left end in a row of boys and Vivek is 18th from the right end. Gagan is 11th from Aman towards the right and 3rd from Vivek towards the right end. How many boys are there in the row ?

- (1) 40                      (2) 48                      (3) 42                      (4) 41

32. How many 7's are there in the following series which are not immediately followed by 3 but immediately preceded by 8 ?

8 9 8 7 6 2 2 6 3 2 6 9 7 3 2 8 7 2 7 7 8 7 3 7 7 9 4

- (1) 10                      (2) 3                      (3) 2                      (4) 0

33. Manisha ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. How many boys were there in the class ?

- (1) 40                      (2) 48                      (3) 55                      (4) 58

- A
34. In a list, the rank of Mahesh was 16 from the top and whereas from bottom, the rank is 29. The list was about the passed-out students. Six students were failed due to non participation and 5 were failed. Find the total number of students present in the class.
- (1) 55                      (2) 54                      (3) 53                      (4) 52
35. If  $\times$  means  $\div$ ,  $-$  means  $\times$ ,  $\div$  means  $+$  and  $+$  means  $-$ , then  $(3 - 15 \div 19) \times 8 + 6 = ?$
- (1) 2                      (2) -1                      (3) 4                      (4) 8
36. A sum of Rs.1 890 has to be used to give 9 prizes to the customers of a super market for their overall academic purchases. If each prize is Rs. 30 less than its preceding price, what is the least value of the price ?
- (1) 80                      (2) 85                      (3) 90                      (4) 95
37. If "A" denotes "subtracted from", "B" denotes "added to", "C" denotes "divided by", "D" denotes "multiplied by", then which of the following statement is *correct* ?
- (1)  $13C13A13B13D13 = 157$
- (2)  $18C16D49A27B9 = 200$
- (3)  $3A12B16D17C1 = 163$
- (4)  $5C7A9D8B2 = 294$
38. **Statement** : Should children be legally made responsible to take care of their parents during their old age ?

**Arguments :**

- I. Yes. Such matter can only be solved by legal means.
- II. Yes. Only this will bring some relief to poor parents.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

39. **Statement** : Should fashionable dresses be banned ?

**Arguments** :

- I. Yes. Fashions keep changing and hence consumption of cloth increases.
- II. No. Fashionable clothes are a person's self-expression and therefore his/her fundamental right.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

40. **Statement** : Should 'computer knowledge' be made a compulsory subject for all the students at secondary school level ?

**Arguments** :

- I. No, our need is 'bread' for everyone, we cannot follow western models.
- II. Yes. We cannot compete in the international market without equipping our children with computers.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

41. On reaching the railway station, you find that the train you wanted to catch is just to start and there is hardly any time for purchasing the ticket. The best thing for you is to :

- (1) rush to the train rather than miss it and inform the T.T.I. at the next stoppage about your inability to purchase the ticket.
- (2) rush to the train and perform your journey quietly.
- (3) first purchase the ticket and then catch the train if it is there.
- (4) miss the train rather than take the risk of boarding the moving train.

**42. Assertion :** The problem solving ability, mental performance and memory of the employees of company C are deteriorating.

RI. Due to tight schedule at company C, the employees of the company are skipping their breakfast regularly.

RII. The job is physical in nature, but not mental.

(1) Only RI and not RII is the reason for the assertion.

(2) Only RII and not RI is the reason for the assertion.

(3) Either RI or RII, but not both, is the reason for the assertion.

(4) Neither RI nor RII is the reason for the assertion.

**43. Assertion :** During polling season, new roads are constructed, there is twenty-four hours of power supply, good supply of water, and many other facilities are provided to the people.

RI. Political leaders want to be in the good books of the people.

RII. Polling season that is the right time to convert black money to white money in the name of party funds for the industries.

(1) Only RI and not RII is the reason for the assertion.

(2) Only RII and not RI is the reason for the assertion.

(3) Either RI or RII, but not both, is the reason for the assertion.

(4) Neither RI nor RII is the reason for the assertion.

**44. Statements :** All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone.

**Conclusion :**

I. All bedsheet are birds

II. Some bedsheet are birds

III. Some birds are telephone

IV. All telephone are birds

(1) Only I follows

(2) Only II follows

(3) Only I and III follows

(4) Only III follows

45. **Statements :** Some pearls are gems. All gems are diamonds. No diamond is stone.  
Some stones are corals.

**Conclusions :**

- I. Some stones are pearls.
- II. Some corals being diamond is possibility.
- III. No stone is pearl.

- (1) Only conclusion I is true
- (2) Both conclusion I and III are true
- (3) Either conclusion I or II is true
- (4) None of the above

46. Nitin ranks 18th in a class of 49 students. What is rank from the last ?

- (1) 31
- (2) 18
- (3) 32
- (4) 19

47. How many such digits are there in the number 7346285 which are as far away from the beginning of the number, as they will be when arranged in ascending order within the number ?

- (1) None
- (2) One
- (3) Two
- (4) Three

48. If the day before yesterday was Saturday, what day will fall on the day after tomorrow ?

- (1) Friday
- (2) Thursday
- (3) Wednesday
- (4) Tuesday

49. If the digits in the number 25673948 are arranged in ascending order from left to right, what will be the sum of the digits which are fourth from the right and third from the left in the new arrangement ?

- (1) 10
- (2) 9
- (3) 8
- (4) 6

50. There are 6 persons A, B, C, D, E and F who have different rank in class test exam. Person A got last rank in class. E was not first in class test rank. B got more marks than C, but he did not get second rank in class. E got more marks than only A. F was situated between D and B in class test ranking, and B score less than D. The second highest person got 92 marks.
- D got which of the following possible marks ?
- (1) 89                      (2) 92                      (3) 93                      (4) 88
51. Which of the following is the computer system's hardware component ?
- (1) RAM                      (2) Keyboard  
(3) Adobe Reader                      (4) ROM
52. How many bits are there in 1 nibble ?
- (1) 4                      (2) 8                      (3) 16                      (4) 24
53. What is the full form of USB ?
- (1) Universal Sequential Bus                      (2) Unique Serial Bus  
(3) Universal Serial Bus                      (4) Unique Sequential Bus
54. What one of the following is volatile memory ?
- (1) RAM                      (2) ROM                      (3) EPROM                      (4) PROM
55. What is the length of character in ASCII codes ?
- (1) 4                      (2) 8                      (3) 7                      (4) 6
56. What is the value of binary number 011 ?
- (1) 2                      (2) 4                      (3) 3                      (4) 7
57. Which of the following is *true* ?
- (1) 1 gigabyte is equal to 1024 kilobyte  
(2) Decimal number system cannot contain binary digits  
(3) Hexadecimal system have 16 bits  
(4) None

58. What is the octal representation of (011101) ?  
(1) 35                      (2) 45                      (3) 34                      (4) 54
59. Which is the largest unit of storage ?  
(1) Kb                      (2) Mb                      (3) Zb                      (4) Yb
60. How many values can be represented by one byte ?  
(1) 512                      (2) 64                      (3) 256                      (4) 8
61. What is the full form of WORM ?  
(1) Write Once, Read More  
(2) Write Over, Read Mode  
(3) Write Once, Read Many  
(4) Write Out, Read Many
62. What of the following is octal representation (in 4 digits) of decimal number (896) ?  
(1) 3567                      (2) 1600                      (3) 1701                      (4) 1654
63. MSD refers to ?  
(1) Many Significant Digit  
(2) Most Significant Decimal  
(3) Multiple Significant Digit  
(4) Most Significant Digit
64. 2's complement of -14 ?  
(1) 11110001                      (2) 10010010                      (3) 11100001                      (4) 01010110
65. Which of the following is invalid hexadecimal ?  
(1) 0A23                      (2) AB14                      (3) XA23                      (4) 1234

66. Which of the following is *false* ?
- (1) 2's complement of a 2's complement of a number is the number itself.
  - (2) Excess-3 code for 369 is 011110011100
  - (3) 1-bit gray code has two code words 0 and 1
  - (4) In 7-bit hamming code of BCD, the parity bits are placed at 1, 2 and 4 locations.
67. What is bootstrapping called ?
- (1) Hot Boot
  - (2) Cold Boot
  - (3) Cold hot strap
  - (4) Hot bootstrap
68. Which of the following is system software ?
- (1) Operating System
  - (2) Utilities
  - (3) Compiler
  - (4) All of the above
69. Which of the following payment card has a microchip embedded in its surface ?
- (1) Debit Card
  - (2) Credit Card
  - (3) Metro Card
  - (4) Charge Card
70. Which of the following is a condition that causes deadlock ?
- (1) Circular Wait
  - (2) Mutual Exclusion
  - (3) Hold and Wait
  - (4) All of the above
71. A user can get files from another computer on the Internet by using :
- (1) TELNET
  - (2) HTTP
  - (3) FTP
  - (4) UTP
72. Transport layer is at which level in TCP/ IP model ?
- (1) 1
  - (2) 2
  - (3) 3
  - (4) 4



73. Which tag is used for displaying large font size ?
- (1) <BIG></BIG>
  - (2) <LARGE></LARGE>
  - (3) <SIZE></SIZE>
  - (4) <FONT></FONT>
74. Which among the following language is better for structured coding ?
- (1) BASIC                      (2) PASCAL                      (3) FORTAN                      (4) PL/1
75. What type of scheduling is round-robin scheduling ?
- (1) Linear Data Scheduling
  - (2) Preemptive Scheduling
  - (3) Non-linear data scheduling
  - (4) Non-Preemptive Scheduling
76. .... allows more than one program to be ready for execution and provides the ability to switch from one task to another.
- (1) Multiprogramming                      (2) Multithreading
- (3) Multitasking                      (4) None of the above
77. Which html tag is used to scroll text in a Web Page ?
- (1) <scroll></scroll>
  - (2) <round></round>
  - (3) <marquee></marquee>
  - (4) <go></go>
78. .... is single sequential flow of control in a program.
- (1) Process                      (2) Task                      (3) Thread                      (4) Structure

79. Which among the following is the property of Unix OS ?  
(1) Multi-user (2) Time Sharing  
(3) Multi-tasking (4) All of the above
80. Which of the following is *not* a paired tag ?  
(1) <img> (2) <u> (3) <b> (4) <p>
81. Which among the following OS does *not* implement multitasking truly ?  
(1) Windows NT (2) Windows 98  
(3) Windows XP (4) MS DOS
82. In computers, subtraction is carried out by :  
(1) 1's complement (2) 9's complement  
(3) 2's complement (4) 10's complement
83. Which of the following is *not* the weighted code ?  
(1) Decimal number system (2) Excess-3 code  
(3) Binary number system (4) None of the above
84. Cache memory acts between :  
(1) RAM and ROM (2) CPU and RAM  
(3) CPU and Hard Disk (4) None
85.  $101111 - 010101 = ?$   
(1) 100100 (2) 011010 (3) 011001 (4) 110011
86. Keyboard shortcut for redo :  
(1) Ctrl + Z (2) Ctrl + Y (3) Ctrl + X (4) Shift + Y
87.  $1101 + 1100$  in binary arithmetic ?  
(1) 11001 (2) 1100 (3) 1001 (4) 0011

88. The address technique employed by a CPU is :
- (1) Direct (2) Indirect  
(3) Immediate (4) All of the above
89. Keys to switch between applications running in Windows OS :
- (1) Ctrl + Tab (2) Alt + Tab  
(3) Shift + Tab (4) Fn + Tab
90.  $(10.10) \times (01.01)$
- (1) 011.0010 (2) 110.0011  
(3) 001.1101 (4) None of the above
91. Fill in the blank :
- The river Thames flows ..... London.
- (1) through (2) on (3) over (4) in
92. In the following choose the one which best express the meaning of the idiom/phrase :
- Talk through one's hat
- (1) To talk secretly (2) Talk positively  
(3) Talk good points (4) Talk nonsense
93. Choose the word which best expresses the meaning of the given word :
- VENT
- (1) End (2) Storage  
(3) Opening (4) Past tense of Go
94. My father's dealings are open and above board.
- (1) Mandatory (2) Without any secret  
(3) Very clear (4) To everyone's liking

A

95. Choose the word which best expresses the meaning of the given word :  
COMBAT

- (1) Conflict                      (2) Quarrel                      (3) Feud                      (4) Fight

96. Read the passage and choose most relevant answer :

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grasslands under the plow in the nineteenth century. By the 1930s, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

As we understand from the reading, today, soil erosion in America .....

- (1) is worse than it was in the nineteenth century  
(2) is the most critical problem that the nation faces  
(3) causes humans to place new demands on the land  
(4) is worse in areas which have a lot of petroleum production

97. In the following question, a sentence has been broken into parts and the parts have been scrambled and numbered. Choose the *correct* order of these parts from the given alternatives.

- I. In a masterly way  
II. Munshi Premchands works, especially fiction  
III. Have been analysed and critiqued  
IV. In the next chapter

- (1) II III I IV                      (2) III II I IV                      (3) IV II III I                      (4) I II III IV

98. Fill in the blank with the most appropriate word from the options given below :  
A good driver will be very careful before carrying out a complex .....

- (1) Movement                      (2) Manoeuvre                      (3) Motion                      (4) Movement

P. T. O.

99. S1 : A noise started above their heads.

P : But people did not take it seriously.

Q : It was to show everyone that there was something wrong.

R : It was a dangerous thing to do.

S : For, within minutes the ship began to sink.

S6 : Nearly 200 lives were lost on the fateful day.

The proper sequence should be :

(1) PQSR

(2) PRQS

(3) QPRS

(4) QPSR

100. S1 : She said on the phone that she would report for duty next day.

P : We waited for few days then we decided to go to her place.

Q : But she did not.

R : We found it locked.

S : Even after that we waited for her quite a few days.

S6 : Eventually we reported to the Police.

The proper sequence should be :

(1) PRSQ

(2) QPSR

(3) QPRS

(4) SQPR

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU  
ARE ASKED TO DO SO)

**B****PG-EE-June, 2023****SET-X****SUBJECT : Computer Science Group 10554**

Sr. No.

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) \_\_\_\_\_ (in words) \_\_\_\_\_

Name \_\_\_\_\_ Date of Birth \_\_\_\_\_

Father's Name \_\_\_\_\_ Mother's Name \_\_\_\_\_

Date of Examination \_\_\_\_\_

(Signature of the Candidate)

(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE  
STARTING THE QUESTION PAPER.**

- All questions are compulsory.**
- The candidates **must return** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
- Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
- Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.
- The candidate **must not** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers **must not** be ticked in the question booklet.
- There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
- Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
- Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.**

PG-EE-June, 2023/(Computer Science Group)(SET-X)/(B)

1. A user can get files from another computer on the Internet by using :  
(1) TELNET            (2) HTTP            (3) FTP            (4) UTP
2. Transport layer is at which level in TCP/ IP model ?  
(1) 1            (2) 2            (3) 3            (4) 4
3. Which tag is used for displaying large font size ?  
(1) <BIG></BIG>  
(2) <LARGE></LARGE>  
(3) <SIZE></SIZE>  
(4) <FONT></FONT>
4. Which among the following language is better for structured coding ?  
(1) BASIC            (2) PASCAL            (3) FORTAN            (4) PL/1
5. What type of scheduling is round-robin scheduling ?  
(1) Linear Data Scheduling            (2) Preemptive Scheduling  
(3) Non-linear data scheduling            (4) Non-Preemptive Scheduling
6. .... allows more than one program to be ready for execution and provides the ability to switch from one task to another.  
(1) Multiprogramming            (2) Multithreading  
(3) Multitasking            (4) None of the above
7. Which html tag is used to scroll text in a Web Page ?  
(1) <scroll></scroll>  
(2) <round></round>  
(3) <marquee></marquee>  
(4) <go></go>

8. .... is single sequential flow of control in a program.
- (1) Process                      (2) Task                      (3) Thread                      (4) Structure
9. Which among the following is the property of Unix OS ?
- (1) Multi-user                      (2) Time Sharing  
(3) Multi-tasking                      (4) All of the above
10. Which of the following is *not* a paired tag ?
- (1) <img>                      (2) <u>                      (3) <b>                      (4) <p>
11. Which of the following is the computer system's hardware component ?
- (1) RAM                      (2) Keyboard  
(3) Adobe Reader                      (4) ROM
12. How many bits are there in 1 nibble ?
- (1) 4                      (2) 8                      (3) 16                      (4) 24
13. What is the full form of USB ?
- (1) Universal Sequential Bus  
(2) Unique Serial Bus  
(3) Universal Serial Bus  
(4) Unique Sequential Bus
14. What one of the following is volatile memory ?
- (1) RAM                      (2) ROM                      (3) EPROM                      (4) PROM
15. What is the length of character in ASCII codes ?
- (1) 4                      (2) 8                      (3) 7                      (4) 6
16. What is the value of binary number 011 ?
- (1) 2                      (2) 4                      (3) 3                      (4) 7



17. Which of the following is *true* ?

- (1) 1 gigabyte is equal to 1024 kilobyte
- (2) Decimal number system cannot contain binary digits
- (3) Hexadecimal system have 16 bits
- (4) None

18. What is the octal representation of (011101) ?

- (1) 35
- (2) 45
- (3) 34
- (4) 54

19. Which is the largest unit of storage ?

- (1) Kb
- (2) Mb
- (3) Zb
- (4) Yb

20. How many values can be represented by one byte ?

- (1) 512
- (2) 64
- (3) 256
- (4) 8

21. Aman is 16th from the left end in a row of boys and Vivek is 18th from the right end. Gagan is 11th from Aman towards the right and 3rd from Vivek towards the right end. How many boys are there in the row ?

- (1) 40
- (2) 48
- (3) 42
- (4) 41

22. How many 7's are there in the following series which are not immediately followed by 3 but immediately preceded by 8 ?

8 9 8 7 6 2 2 6 3 2 6 9 7 3 2 8 7 2 7 7 8 7 3 7 7 9 4

- (1) 10
- (2) 3
- (3) 2
- (4) 0

23. Manisha ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. How many boys were there in the class ?

- (1) 40
- (2) 48
- (3) 55
- (4) 58

24. In a list, the rank of Mahesh was 16 from the top and whereas from bottom, the rank is 29. The list was about the passed-out students. Six students were failed due to non participation and 5 were failed. Find the total number of students present in the class.
- (1) 55                      (2) 54                      (3) 53                      (4) 52
25. If  $\times$  means  $\div$ ,  $-$  means  $\times$ ,  $\div$  means  $+$  and  $+$  means  $-$ , then  $(3 - 15 \div 19) \times 8 + 6 = ?$
- (1) 2                      (2) -1                      (3) 4                      (4) 8
26. A sum of Rs.1 890 has to be used to give 9 prizes to the customers of a super market for their overall academic purchases. If each prize is Rs. 30 less than its preceding price, what is the least value of the price ?
- (1) 80                      (2) 85                      (3) 90                      (4) 95
27. If "A" denotes "subtracted from", "B" denotes "added to", "C" denotes "divided by", "D" denotes "multiplied by", then which of the following statement is *correct* ?
- (1)  $13C13A13B13D13 = 157$
- (2)  $18C16D49A27B9 = 200$
- (3)  $3A12B16D17C1 = 163$
- (4)  $5C7A9D8B2 = 294$
28. **Statement** : Should children be legally made responsible to take care of their parents during their old age ?
- Arguments :**
- I. Yes. Such matter can only be solved by legal means.
- II. Yes. Only this will bring some relief to poor parents.
- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

29. **Statement** : Should fashionable dresses be banned ?

**Arguments** :

- I. Yes. Fashions keep changing and hence consumption of cloth increases.
- II. No. Fashionable clothes are a person's self-expression and therefore his/her fundamental right.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

30. **Statement** : Should 'computer knowledge' be made a compulsory subject for all the students at secondary school level ?

**Arguments** :

- I. No, our need is 'bread' for everyone, we cannot follow western models.
- II. Yes. We cannot compete in the international market without equipping our children with computers.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

31. Choose missing pattern :

QPO, NML, KJI, -, EDC

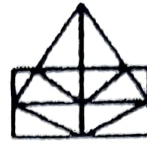
- (1) HGF
- (2) CAB
- (3) JKM
- (4) GHD

32. Choose the *correct* relation similar to following :

FISH : SCHOOL

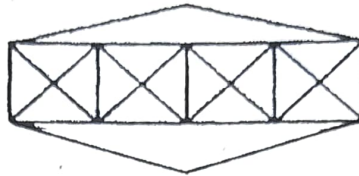
- (1) Herd : Peacock
- (2) Wolf : Pack
- (3) Cow : Farm
- (4) Elephant : Jungle

33. Find the minimum number of straight lines required to make the given figure :



- (1) 15                      (2) 21                      (3) 18                      (4) 20

34. Find the minimum number of straight lines in the below figure :



- (1) 20                      (2) 19                      (3) 17                      (4) 15

35. Vineet is taller than Raman but shorter than Jyoti. Sumit is the shortest. Deepak is taller than Sumit but shorter than Raman. Who is the tallest ?

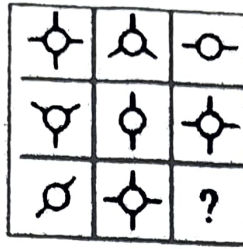
- (1) Jyoti                      (2) Raman  
(3) Vineet                      (4) Deepak

36. Select the missing letter from the given options :

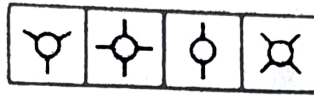
B	J	I
E	K	B
G	U	?

- (1) O                      (2) M  
(3) K                      (4) P

37. Select the Answer figure that fits in the blank space in the given Problem figure :  
*Problem Figure*



*Answer Figures :*



A B C D

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

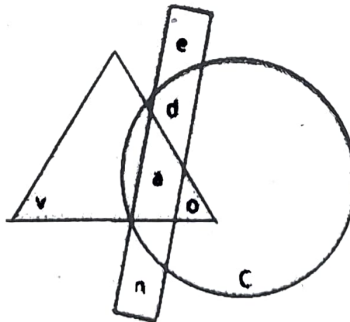
38. Select the option that depicts the correct mirror image of the given word when the mirror is placed horizontally below the word :

HEALTHY

1. HEVΓIHY
2. YHTLA3H
3. YHTTJA3H
4. YHTLAEH

- (1) 1                      (2) 2                      (3) 3                      (4) 4

39. Which of the following part is a part of both circle and triangle ?



- (1) e                      (2) v                      (3) o                      (4) c

40. The proportion of male students and the proportion of vegetarian students in a school are given below. The school has a total of 800 students, 80% of whom are in the secondary section and rest equally divided between class 11 and 12 :

What is the percentage of vegetarian student in class 11 ?

	Male (M)	Vegetarian (V)
Class 12	0.60	0.54
Class 11	0.55	0.50
Secondary Section	0.275 (288)	0.55(352)
Total	0.475	0.53

- (1) 40                      (2) 45                      (3) 60                      (4) 65

41. Fill in the blank :

The river Thames flows ..... London.

- (1) through              (2) on                      (3) over                      (4) in

42. In the following choose the one which best express the meaning of the idiom/phrase :

Talk through one's hat

- (1) To talk secretly                      (2) Talk positively  
(3) Talk good points                      (4) Talk nonsense

43. Choose the word which best expresses the meaning of the given word :

VENT

- (1) End                      (2) Storage                      (3) Opening                      (4) Past tense of Go

44. My father's dealings are open and above board.

- (1) Mandatory                      (2) Without any secret  
(3) Very clear                      (4) To everyone's liking

45. Choose the word which best expresses the meaning of the given word :

COMBAT

- (1) Conflict                      (2) Quarrel                      (3) Feud                      (4) Fight

46. Read the passage and choose most relevant answer :

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grasslands under the plow in the nineteenth century. By the 1930s, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

As we understand from the reading, today, soil erosion in America .....

- (1) is worse than it was in the nineteenth century  
 (2) is the most critical problem that the nation faces  
 (3) causes humans to place new demands on the land  
 (4) is worse in areas which have a lot of petroleum production
47. In the following question, a sentence has been broken into parts and the parts have been scrambled and numbered. Choose the *correct* order of these parts from the given alternatives.

I. In a masterly way

II. Munshi Premchands works, especially fiction

III. Have been analysed and critiqued

IV. In the next chapter

- (1) II III I IV      (2) III II I IV      (3) IV II III I      (4) I II III IV

48. Fill in the blank with the most appropriate word from the options given below :

A good driver will be very careful before carrying out a complex .....

- (1) Movement      (2) Manoeuvre      (3) Motion      (4) Movement

49. S1 : A noise started above their heads.

P : But people did not take it seriously.

Q : It was to show everyone that there was something wrong.

R : It was a dangerous thing to do.

S : For, within minutes the ship began to sink.

S6 : Nearly 200 lives were lost on the fateful day.

The proper sequence should be :

- (1) PQSR      (2) PRQS      (3) QPRS      (4) QPSR

50. S1 : She said on the phone that she would report for duty next day.

P : We waited for few days then we decided to go to her place.

Q : But she did not.

R : We found it locked.

S : Even after that we waited for her quite a few days.

S6 : Eventually we reported to the Police.

The proper sequence should be :

- (1) PRSQ                      (2) QPSR                      (3) QPRS                      (4) SQPR

51. What is the full form of WORM ?

(1) Write Once, Read More

(2) Write Over, Read Mode

(3) Write Once, Read Many

(4) Write Out, Read Many

52. What of the following is octal representation (in 4 digits) of decimal number (896) ?

- (1) 3567                      (2) 1600                      (3) 1701                      (4) 1654

53. MSD refers to ?

(1) Many Significant Digit

(2) Most Significant Decimal

(3) Multiple Significant Digit

(4) Most Significant Digit

54. 2's complement of -14 ?

- (1) 11110001                      (2) 10010010                      (3) 11100001                      (4) 01010110

55. Which of the following is invalid hexadecimal ?

- (1) 0A23                      (2) AB14                      (3) XA23                      (4) 1234



56. Which of the following is *false* ?

- (1) 2's complement of a 2's complement of a number is the number itself.
- (2) Excess-3 code for 369 is 011110011100
- (3) 1-bit gray code has two code words 0 and 1
- (4) In 7-bit hamming code of BCD, the parity bits are placed at 1, 2 and 4 locations.

57. What is bootstrapping called ?

- (1) Hot Boot
- (2) Cold Boot
- (3) Cold hot strap
- (4) Hot bootstrap

58. Which of the following is system software ?

- (1) Operating System
- (2) Utilities
- (3) Compiler
- (4) All of the above

59. Which of the following payment card has a microchip embedded in its surface ?

- (1) Debit Card
- (2) Credit Card
- (3) Metro Card
- (4) Charge Card

60. Which of the following is a condition that causes deadlock ?

- (1) Circular Wait
- (2) Mutual Exclusion
- (3) Hold and Wait
- (4) All of the above

61. Which among the following OS does *not* implement multitasking truly ?

- (1) Windows NT
- (2) Windows 98
- (3) Windows XP
- (4) MS DOS

62. In computers, subtraction is carried out by :

- (1) 1's complement
- (2) 9's complement
- (3) 2's complement
- (4) 10's complement

63. Which of the following is *not* the weighted code ?
- (1) Decimal number system (2) Excess-3 code  
(3) Binary number system (4) None of the above
64. Cache memory acts between :
- (1) RAM and ROM (2) CPU and RAM  
(3) CPU and Hard Disk (4) None
65.  $101111 - 010101 = ?$
- (1) 100100 (2) 011010 (3) 011001 (4) 110011
66. Keyboard shortcut for redo :
- (1) Ctrl + Z (2) Ctrl + Y (3) Ctrl + X (4) Shift + Y
67.  $1101 + 1100$  in binary arithmetic ?
- (1) 11001 (2) 1100 (3) 1001 (4) 0011
68. The address technique employed by a CPU is :
- (1) Direct (2) Indirect  
(3) Immediate (4) All of the above
69. Keys to switch between applications running in Windows OS :
- (1) Ctrl + Tab (2) Alt + Tab (3) Shift + Tab (4) Fn + Tab
70.  $(10.10) \times (01.01)$
- (1) 011.0010 (2) 110.0011 (3) 001.1101 (4) None of the above
71. On reaching the railway station, you find that the train you wanted to catch is just to start and there is hardly any time for purchasing the ticket. The best thing for you is to :
- (1) rush to the train rather than miss it and inform the T.T.I. at the next stoppage about your inability to purchase the ticket.  
(2) rush to the train and perform your journey quietly.  
(3) first purchase the ticket and then catch the train if it is there.  
(4) miss the train rather than take the risk of boarding the moving train.

72. **Assertion :** The problem solving ability, mental performance and memory of the employees of company C are deteriorating.

RI. Due to tight schedule at company C, the employees of the company are skipping their breakfast regularly.

RII. The job is physical in nature, but not mental.

(1) Only RI and not RII is the reason for the assertion.

(2) Only RII and not RI is the reason for the assertion.

(3) Either RI or RII, but not both, is the reason for the assertion.

(4) Neither RI nor RII is the reason for the assertion.

73. **Assertion :** During polling season, new roads are constructed, there is twenty-four hours of power supply, good supply of water, and many other facilities are provided to the people.

RI. Political leaders want to be in the good books of the people.

RII. Polling season that is the right time to convert black money to white money in the name of party funds for the industries.

(1) Only RI and not RII is the reason for the assertion.

(2) Only RII and not RI is the reason for the assertion.

(3) Either RI or RII, but not both, is the reason for the assertion.

(4) Neither RI nor RII is the reason for the assertion.

74. **Statements :** All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone.

**Conclusion :**

I. All bedsheets are birds

II. Some bedsheets are birds

III. Some birds are telephones

IV. All telephones are birds

(1) Only I follows

(2) Only II follows

(3) Only I and III follows

(4) Only III follows

75. *Statements* : Some pearls are gems. All gems are diamonds. No diamond is stone.  
Some stones are corals.

*Conclusions* :

- I. Some stones are pearls.
- II. Some corals being diamond is possibility.
- III. No stone is pearl.

- (1) Only conclusion I is true
- (2) Both conclusion I and III are true
- (3) Either conclusion I or II is true
- (4) None of the above

76. Nitin ranks 18th in a class of 49 students. What is rank from the last ?

- (1) 31                      (2) 18                      (3) 32                      (4) 19

77. How many such digits are there in the number 7346285 which are as far away from the beginning of the number, as they will be when arranged in ascending order within the number ?

- (1) None                      (2) One                      (3) Two                      (4) Three

78. If the day before yesterday was Saturday, what day will fall on the day after tomorrow ?

- (1) Friday                      (2) Thursday                      (3) Wednesday                      (4) Tuesday

79. If the digits in the number 25673948 are arranged in ascending order from left to right, what will be the sum of the digits which are fourth from the right and third from the left in the new arrangement ?

- (1) 10                      (2) 9                      (3) 8                      (4) 6

80. There are 6 persons A, B, C, D, E and F who have different rank in class test exam.

Person A got last rank in class. E was not first in class test rank. B got more marks than C, but he did not get second rank in class. E got more marks than only A. F was situated between D and B in class test ranking, and B score less than D. The second highest person got 92 marks.

D got which of the following possible marks ?

- (1) 89                      (2) 92                      (3) 93                      (4) 88

81. Answer the questions on the basis of the information given below :

Seven varsity basketball players A, B, C, D, E, F and G are to be honoured at a special luncheon. The players will be seated on the dais in a row. A and G have to leave the luncheon early and so must be seated at the extreme right. B will receive the most valuable player's trophy and so must be in the centre to facilitate presentation. C and D are bitter rivals and therefore, must be seated as far apart as possible.

Which of the following pairs *cannot* be seated together ?

- (1) B and D                      (2) C and F  
(3) D and G                      (4) E and A

82. Read the text and the statements carefully, and answer the questions .

Four people of different nationalities live on the same side of a street in four houses each of different colors. Each person has a different favorite drink. The following additional information is also known :

- A. The Englishman lives in the red house.  
B. The Italian drink tea.  
C. The Norwegian lives in the first house on the left.  
D. In the second house from the right they drink milk.  
E. The Norwegian lives adjacent to the blue house.  
F. The Spaniard drinks fruit juice.  
G. Tea is drunk in the blue house.  
H. The white house is to the right of the red house.

The Norwegian drinks :

- (1) Milk                              (2) Cocoa  
(3) Tea                                (4) Fruit Juice

83. Answer the questions on the basis of the information given below :

A, B, C, D, E and F are a group of friends. There are two house wives, one professor, one engineer, one accountant and one lawyer in the group. There are only two married couples in the group. The lawyer is married to D, who is a housewife. No women in the group are either an engineer or an accountant. C, the accountant, is married to F, who is a professor. A is married to housewife. E is not a housewife.

How many members of group are males ?

- (1) 1
- (2) 3
- (3) 4
- (4) Cannot be determined

84. The first and the last parts of the sentence are numbered 1 & 6. The rest of the sentence, is split into four parts and named P, Q, R and S. These four parts are not given in their proper order.

Read the sentence and find out which of the four combinations is *correct* ?

1. It was obvious

P. made by him

Q. submitted at the meeting

R. from the comments

S. on the draft proposals

6. that he was not satisfied with them.

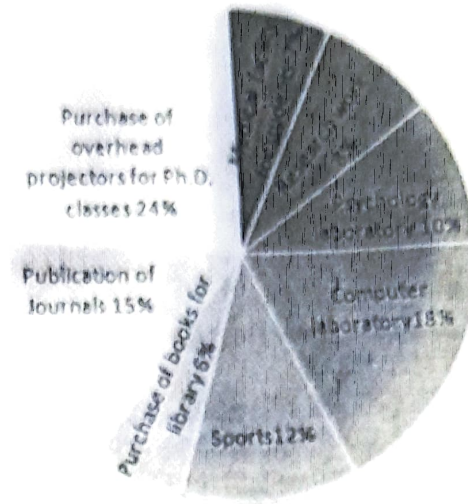
- (1) QRSP
- (2) SQRP
- (3) RPSQ
- (4) PSRQ

85. In an examination the average marks of Rohit are 63. If he got 20 more marks in Science and 28 more marks in Mathematics, then his average would have been 69. Find the total number of subjects he studied :

- (1) 7
- (2) 8
- (3) 10
- (4) 12

86. Study the following pie-chart carefully to answer these questions

Total Expenditure : Rs. 60 Lacs



Expenditure of funds by University for various purpose

What is the difference between the expenditure made by university for Publication of Journals and Psychology Laboratory ?

- (1) Rs. 4 lacs      (2) Rs. 3 lacs      (3) Rs. 4.2 lacs      (4) Rs. 3.8 lacs
87. Study the following table and answer the questions :

Classification of 100 students based on the marks obtained by them in Physics and Chemistry in an Examination :

Subjects	Marks out of 50				
	40 and above	30 and above	20 and above	10 and above	0 and above
Physics	9	32	80	92	100
Chemistry	4	21	66	81	100
Average (Aggregate)	7	27	73	87	100

What is the difference between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate ?

- (1) 3      (2) 4      (3) 5      (4) 0

88. Answer the questions based on the following information :

A, B, C and D are to be seated in a row. But C and D cannot be together. Also B cannot be at the third place. If A and B are together, then which of the following must be necessarily *true* ?

- (1) C is not at the first place                      (2) A is at the third place  
(3) D is at the first place                          (4) C is at the first place

89. Answer the questions on the basis of the following information :

Four families decided to attend the marriage ceremony of one of their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage.

Given below some information about the families, and who reached when to attend the marriage :

The family with 2 kids came just before the family with no kids.

Shanti who does not have any kids reached just before Sridevi's family.  
Sunil and his wife reached last with their only kid.

Anil is not the husband of Joya.

Anil and Raj are fathers.

Sridevi's and Anita's daughters go to the same school.

Joya came before Shanti and met Anita when she reached the venue.  
Raman stays the farthest from the venue.

Raj said his son could not come because of his exams.

Name the *correct* pair of husband and wife :

- (1) Raj and Shanti  
(2) Sunil and Sridevi  
(3) Anil and Sridevi  
(4) Raj and Anita



90. Answer the questions on the basis of the information given below :

The seven basic symbols in a certain numeral system and their respective values are as follows :

$I = 1, V = 5, X = 10, L = 50, C = 100, D = 500$  and  $M = 1000$

In general, the symbols in the numeral system are read from left to right, starting with the symbol representing the largest value; the same symbol cannot occur continuously more than three times; the value of the numeral is the sum of the values of the symbols. For example,  $XXVII = 10 + 10 + 5 + 1 + 1 = 27$ . An exception to the left to right reading occurs when a symbol is followed immediately by a symbol of greater value; then, the smaller value is subtracted from the larger.

For example,  $XLVI = (50 - 10) + 5 + 1 = 46$ .

The value of the numeral  $MCMXCIX$  is :

- (1) 1999                      (2) 1899                      (3) 1989                      (4) 1889
91. If  $p \times q = p + q + \frac{p}{q}$ , what is the value of  $8 \times 2$  ?  
 (1) 6                              (2) 10                              (3) 14                              (4) 16
92. If  $0.13 \times p^2 = 13$ , then  $p$  is equal to :  
 (1) 10                              (2) 0.01                              (3) 0.001                              (4) 100
93. If  $A = \{5, 6\}$  and  $B = \{7, 8\}$ , then what is the number of relations from  $A$  to  $B$  ?  
 (1)  $2^2$                               (2)  $2^3$                               (3)  $2^4$                               (4)  $2^5$
94. If  $A = \{1, 2, 3, 4, 5, 7, 8, 9\}$  and  $B = \{2, 4, 6, 7, 9\}$ , then find number of proper subsets of  $A \cap B$  ?  
 (1) 14                              (2) 15                              (3) 32                              (4) 33
95. The magnitude of the vector  $6i + 2j + 3k$  :  
 (1) 5                              (2) 6                              (3) 7                              (4) 8
96.  $(\sin 30^\circ + \cos 30^\circ) - (\sin 60^\circ + \cos 60^\circ)$  :  
 (1) 0                              (2) 1                              (3) 2                              (4) -1

97. If  $x = 7 - 4\sqrt{3}$ , then what is the value of  $\sqrt{x} + \frac{1}{\sqrt{x}}$  ?  
(1) 1                      (2) 2                      (3) 3                      (4) 4
98. The scalar product of  $5i + j - 3k$  and  $3i - 4j + 7k$  is :  
(1) 15                      (2) -15                      (3) 10                      (4) -10
99. The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 m away from the wall. The length of ladder is :  
(1) 2.3 m                      (2) 4.6 m                      (3) 7.8 m                      (4) 9.2 m
100. An urn contains 6 red, 4 blue, 2 green and 3 yellow marbles. If two marbles are picked up at random, what is the probability that either both are green or both are yellow ?  
(1)  $5/91$                       (2)  $1/3$   
(3)  $4/105$                       (4) None of the above

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU  
ARE ASKED TO DO SO)

**C**

**SET-X**

**PG-EE-June, 2023**

**SUBJECT : Computer Science Group**

10551

Sr. No. ....

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) \_\_\_\_\_ (in words) \_\_\_\_\_

Name \_\_\_\_\_ Date of Birth \_\_\_\_\_

Father's Name \_\_\_\_\_ Mother's Name \_\_\_\_\_

Date of Examination \_\_\_\_\_

\_\_\_\_\_  
(Signature of the Candidate)

\_\_\_\_\_  
(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE  
STARTING THE QUESTION PAPER.**

1. **All questions are compulsory.**
2. The candidates **must return** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.
5. The candidate **must not** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers **must not** be ticked in the question booklet.
6. **There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
7. Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
8. **Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.**

**PG-EE-June, 2023/(Computer Science Group)(SET-X)/(C)**

SEAL

1. On reaching the railway station, you find that the train you wanted to catch is just to start and there is hardly any time for purchasing the ticket. The best thing for you is to :
- (1) rush to the train rather than miss it and inform the T.T.I. at the next stoppage about your inability to purchase the ticket.
  - (2) rush to the train and perform your journey quietly.
  - (3) first purchase the ticket and then catch the train if it is there.
  - (4) miss the train rather than take the risk of boarding the moving train.
2. **Assertion :** The problem solving ability, mental performance and memory of the employees of company C are deteriorating.
- RI. Due to tight schedule at company C, the employees of the company are skipping their breakfast regularly.
- RII. The job is physical in nature, but not mental.
- (1) Only RI and not RII is the reason for the assertion.
  - (2) Only RII and not RI is the reason for the assertion.
  - (3) Either RI or RII, but not both, is the reason for the assertion.
  - (4) Neither RI nor RII is the reason for the assertion.
3. **Assertion :** During polling season, new roads are constructed, there is twenty-four hours of power supply, good supply of water, and many other facilities are provided to the people.
- RI. Political leaders want to be in the good books of the people.
- RII. Polling season that is the right time to convert black money to white money in the name of party funds for the industries.
- (1) Only RI and not RII is the reason for the assertion.
  - (2) Only RII and not RI is the reason for the assertion.
  - (3) Either RI or RII, but not both, is the reason for the assertion.
  - (4) Neither RI nor RII is the reason for the assertion.

4. **Statements :** All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone.

**Conclusion :**

- I. All bedsheets are birds
- II. Some bedsheets are birds
- III. Some birds are telephones
- IV. All telephones are birds

- (1) Only I follows
- (2) Only II follows
- (3) Only I and III follows
- (4) Only III follows

5. **Statements :** Some pearls are gems. All gems are diamonds. No diamond is stone. Some stones are corals.

**Conclusions :**

- I. Some stones are pearls.
- II. Some corals being diamonds is a possibility.
- III. No stone is pearl.

- (1) Only conclusion I is true
- (2) Both conclusion I and III are true
- (3) Either conclusion I or II is true
- (4) None of the above

6. Nitin ranks 18th in a class of 49 students. What is rank from the last ?

- (1) 31
- (2) 18
- (3) 32
- (4) 19

7. How many such digits are there in the number 7346285 which are as far away from the beginning of the number, as they will be when arranged in ascending order within the number ?

- (1) None
- (2) One
- (3) Two
- (4) Three

- 8.** If the day before yesterday was Saturday, what day will fall on the day after tomorrow ?
- (1) Friday (2) Thursday  
(3) Wednesday (4) Tuesday
- 9.** If the digits in the number 25673948 are arranged in ascending order from left to right, what will be the sum of the digits which are fourth from the right and third from the left in the new arrangement ?
- (1) 10 (2) 9 (3) 8 (4) 6
- 10.** There are 6 persons A, B, C, D, E and F who have different rank in class test exam. Person A got last rank in class. E was not first in class test rank. B got more marks than C, but he did not get second rank in class. E got more marks than only A. F was situated between D and B in class test ranking, and B score less than D. The second highest person got 92 marks.
- D got which of the following possible marks ?
- (1) 89 (2) 92 (3) 93 (4) 88
- 11.** Answer the questions on the basis of the information given below :
- Seven varsity basketball players A, B, C, D, E, F and G are to be honoured at a special luncheon. The players will be seated on the dais in a row. A and G have to leave the luncheon early and so must be seated at the extreme right. B will receive the most valuable player's trophy and so must be in the centre to facilitate presentation. C and D are bitter rivals and therefore, must be seated as far apart as possible.
- Which of the following pairs *cannot* be seated together ?
- (1) B and D (2) C and F  
(3) D and G (4) E and A

12. Read the text and the statements carefully, and answer the questions .

Four people of different nationalities live on the same side of a street in four houses each of different colors. Each person has a different favorite drink. The following additional information is also known :

- A. The Englishman lives in the red house.
- B. The Italian drink tea.
- C. The Norwegian lives in the first house on the left.
- D. In the second house from the right they drink milk.
- E. The Norwegian lives adjacent to the blue house.
- F. The Spaniard drinks fruit juice.
- G. Tea is drunk in the blue house.
- H. The white house is to the right of the red house.

The Norwegian drinks :

- (1) Milk                      (2) Cocoa                      (3) Tea                      (4) Fruit Juice

13. Answer the questions on the basis of the information given below :

A, B, C, D, E and F are a group of friends. There are two house wives, one professor, one engineer, one accountant and one lawyer in the group. There are only two married couples in the group. The lawyer is married to D, who is a housewife. No women in the group are either an engineer or an accountant. C, the accountant, is married to F, who is a professor. A is married to housewife. E is not a housewife.

How many members of group are males ?

- (1) 1
- (2) 3
- (3) 4
- (4) Cannot be determined





17. Study the following table and answer the questions :

Classification of 100 students based on the marks obtained by them in Physics and Chemistry in an Examination :

Subjects	Marks out of 50				
	40 and above	30 and above	20 and above	10 and above	0 and above
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Chemistry	4	21	66	81	100
Average (Aggregate)	7	27	73	87	100

What is the difference between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate ?

- (1) 3                      (2) 4                      (3) 5                      (4) 6

18. Answer the questions based on the following information :

A, B, C and D are to be seated in a row. But C and D cannot be together. Also B cannot be at the third place. If A and B are together, then which of the following must be necessarily *true* ?

- (1) C is not at the first place  
 (2) A is at the third place  
 (3) D is at the first place  
 (4) C is at the first place

19. Answer the questions on the basis of the following information :

Four families decided to attend the marriage ceremony of one of their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage.

Given below some information about the families, and who reached when to attend the marriage :

The family with 2 kids came just before the family with no kids.

Shanti who does not have any kids reached just before Sridevi's family. Sunil and his wife reached last with their only kid.

Anil is not the husband of Joya.

Anil and Raj are fathers.

Sridevi's and Anita's daughters go to the same school.

Joya came before Shanti and met Anita when she reached the venue. Raman stays the farthest from the venue.

Raj said his son could not come because of his exams.

Name the *correct* pair of husband and wife :

- (1) Raj and Shanti
- (2) Sunil and Sridevi
- (3) Anil and Sridevi
- (4) Raj and Anita

20. Answer the questions on the basis of the information given below :

The seven basic symbols in a certain numeral system and their respective values are as follows :

$I = 1, V = 5, X = 10, L = 50, C = 100, D = 500$  and  $M = 1000$

In general, the symbols in the numeral system are read from left to right, starting with the symbol representing the largest value; the same symbol cannot occur continuously more than three times; the value of the numeral is the sum of the values of the symbols. For example,  $XXVII = 10 + 10 + 5 + 1 + 1 = 27$ . An exception to the left to right reading occurs when a symbol is followed immediately by a symbol of greater value; then, the smaller value is subtracted from the larger.

For example,  $XLVI = (50 - 10) + 5 + 1 = 46$ .

The value of the numeral  $MCMXCIX$  is :

- (1) 1999
- (2) 1899
- (3) 1989
- (4) 1889

21. If  $p \times q = p + q + \frac{p}{q}$ , what is the value of  $8 \times 2$  ?
- (1) 6                      (2) 10                      (3) 14                      (4) 16
22. If  $0.13 \times p^2 = 13$ , then  $p$  is equal to :
- (1) 10                      (2) 0.01                      (3) 0.001                      (4) 100
23. If  $A = \{5, 6\}$  and  $B = \{7, 8\}$ , then what is the number of relations from  $A$  to  $B$  ?
- (1)  $2^2$                       (2)  $2^3$                       (3)  $2^4$                       (4)  $2^5$
24. If  $A = \{1, 2, 3, 4, 5, 7, 8, 9\}$  and  $B = \{2, 4, 6, 7, 9\}$ , then find number of proper subsets of  $A \cap B$  ?
- (1) 14                      (2) 15                      (3) 32                      (4) 33
25. The magnitude of the vector  $6i + 2j + 3k$  :
- (1) 5                      (2) 6                      (3) 7                      (4) 8
26.  $(\sin 30^\circ + \cos 30^\circ) - (\sin 60^\circ + \cos 60^\circ)$  :
- (1) 0                      (2) 1                      (3) 2                      (4) -1
27. If  $x = 7 - 4\sqrt{3}$ , then what is the value of  $\sqrt{x} + \frac{1}{\sqrt{x}}$  ?
- (1) 1                      (2) 2                      (3) 3                      (4) 4
28. The scalar product of  $5i + j - 3k$  and  $3i - 4j + 7k$  is :
- (1) 15                      (2) -15                      (3) 10                      (4) -10
29. The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 m away from the wall. The length of ladder is :
- (1) 2.3 m                      (2) 4.6 m                      (3) 7.8 m                      (4) 9.2 m
30. An urn contains 6 red, 4 blue, 2 green and 3 yellow marbles. If two marbles are picked up at random, what is the probability that either both are green or both are yellow ?
- (1)  $5/91$                       (2)  $1/3$   
(3)  $4/105$                       (4) None of the above

31. Fill in the blank :

The river Thames flows ..... London.

- (1) through                      (2) on                      (3) over                      (4) in

32. In the following choose the one which best express the meaning of the idiom/phrase :

Talk through one's hat

- (1) To talk secretly                      (2) Talk positively  
(3) Talk good points                      (4) Talk nonsense

33. Choose the word which best expresses the meaning of the given word :

VENT

- (1) End                      (2) Storage  
(3) Opening                      (4) Past tense of Go

34. My father's dealings are open and above board.

- (1) Mandatory                      (2) Without any secret  
(3) Very clear                      (4) To everyone's liking

35. Choose the word which best expresses the meaning of the given word :

COMBAT

- (1) Conflict                      (2) Quarrel                      (3) Feud                      (4) Fight

36. Read the passage and choose most relevant answer :

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grasslands under the plow in the nineteenth century. By the 1930s, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

As we understand from the reading, today, soil erosion in America .....

- (1) is worse than it was in the nineteenth century  
(2) is the most critical problem that the nation faces  
(3) causes humans to place new demands on the land  
(4) is worse in areas which have a lot of petroleum production

37. In the following question, a sentence has been broken into parts and the parts have been scrambled and numbered. Choose the *correct* order of these parts from the given alternatives.
- I. In a masterly way  
 II. Munshi Premchands works, especially fiction  
 III. Have been analysed and critiqued  
 IV. In the next chapter
- (1) II III I IV      (2) III II I IV      (3) IV II III I      (4) I II III IV
38. Fill in the blank with the most appropriate word from the options given below :  
 A good driver will be very careful before carrying out a complex .....
- (1) Movement      (2) Manoeuvre      (3) Motion      (4) Movement
39. S1 : A noise started above their heads.  
 P : But people did not take it seriously.  
 Q : It was to show everyone that there was something wrong.  
 R : It was a dangerous thing to do.  
 S : For, within minutes the ship began to sink.  
 S6 : Nearly 200 lives were lost on the fateful day.  
 The proper sequence should be :
- (1) PQSR      (2) PRQS      (3) QPRS      (4) QPSR
40. S1 : She said on the phone that she would report for duty next day.  
 P : We waited for few days then we decided to go to her place.  
 Q : But she did not.  
 R : We found it locked.  
 S : Even after that we waited for her quite a few days.  
 S6 : Eventually we reported to the Police.  
 The proper sequence should be :
- (1) PRSQ      (2) QPSR      (3) QPRS      (4) SQPR

41. What is the full form of WORM ?
- (1) Write Once, Read More
  - (2) Write Over, Read Mode
  - (3) Write Once, Read Many
  - (4) Write Out, Read Many
42. What of the following is octal representation (in 4 digits) of decimal number (896) ?
- (1) 3567
  - (2) 1600
  - (3) 1701
  - (4) 1654
43. MSD refers to ?
- (1) Many Significant Digit
  - (2) Most Significant Decimal
  - (3) Multiple Significant Digit
  - (4) Most Significant Digit
44. 2's complement of  $-14$  ?
- (1) 11110001
  - (2) 10010010
  - (3) 11100001
  - (4) 01010110
45. Which of the following is invalid hexadecimal ?
- (1) 0A23
  - (2) AB14
  - (3) XA23
  - (4) 1234
46. Which of the following is *false* ?
- (1) 2's complement of a 2's complement of a number I the number itself.
  - (2) Excess-3 code for 369 is 011110011100
  - (3) 1-bit gray code has two code words 0 and 1
  - (4) In 7-bit hamming code of BCD, the parity bits are placed at 1, 2 and 4 locations.

47. What is bootstrapping called ?  
(1) Hot Boot (2) Cold Boot  
(3) Cold hot strap (4) Hot bootstrap
48. Which of the following is system software ?  
(1) Operating System (2) Utilities  
(3) Compiler (4) All of the above
49. Which of the following payment card has a microchip embedded in its surface ?  
(1) Debit Card (2) Credit Card  
(3) Metro Card (4) Charge Card
50. Which of the following is a condition that causes deadlock ?  
(1) Circular Wait (2) Mutual Exclusion  
(3) Hold and Wait (4) All of the above
51. Aman is 16th from the left end in a row of boys and Vivek is 18th from the right end. Gagan is 11th from Aman towards the right and 3rd from Vivek towards the right end. How many boys are there in the row ?  
(1) 40 (2) 48 (3) 42 (4) 41
52. How many 7's are there in the following series which are not immediately followed by 3 but immediately preceded by 8 ?  
8 9 8 7 6 2 2 6 3 2 6 9 7 3 2 8 7 2 7 7 8 7 3 7 7 9 4  
(1) 10 (2) 3 (3) 2 (4) 0
53. Manisha ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. How many boys were there in the class ?  
(1) 40 (2) 48 (3) 55 (4) 58

54. In a list, the rank of Mahesh was 16 from the top and whereas from bottom, the rank is 29. The list was about the passed-out students. Six students were failed due to non participation and 5 were failed. Find the total number of students present in the class.
- (1) 55                      (2) 54                      (3) 53                      (4) 52
55. If  $\times$  means  $\div$ ,  $-$  means  $\times$ ,  $+$  means  $+$  and  $\div$  means  $-$ , then  $(3 - 15 \div 19) \times 8 + 6 = ?$
- (1) 2                      (2) -1                      (3) 4                      (4) 8
56. A sum of Rs.1 890 has to be used to give 9 prizes to the customers of a super market for their overall academic purchases. If each prize is Rs. 30 less than its preceding price, what is the least value of the price ?
- (1) 80                      (2) 85                      (3) 90                      (4) 95
57. If "A" denotes "subtracted from", "B" denotes "added to", "C" denotes "divided by", "D" denotes "multiplied by", then which of the following statement is *correct* ?
- (1)  $13C13A13B13D13 = 157$
- (2)  $18C16D49A27B9 = 200$
- (3)  $3A12B16D17C1 = 163$
- (4)  $5C7A9D8B2 = 294$
58. **Statement :** Should children be legally made responsible to take care of their parents during their old age ?

**Arguments :**

- I. Yes. Such matter can only be solved by legal means.
- II. Yes. Only this will bring some relief to poor parents.
- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong



59. **Statement** : Should fashionable dresses be banned ?

**Arguments :**

- I. Yes. Fashions keep changing and hence consumption of cloth increases.
- II. No. Fashionable clothes are a person's self-expression and therefore his/her fundamental right.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

60. **Statement** : Should 'computer knowledge' be made a compulsory subject for all the students at secondary school level ?

**Arguments :**

- I. No, our need is 'bread' for everyone, we cannot follow western models.
- II. Yes. We cannot compete in the international market without equipping our children with computers.

- (1) Only Argument I is strong
- (2) Only Argument II is strong
- (3) Either I or II is strong
- (4) Neither I nor II is strong

61. A user can get files from another computer on the Internet by using :

- (1) TELNET            (2) HTTP            (3) FTP            (4) UTP

62. Transport layer is at which level in TCP/ IP model ?

- (1) 1            (2) 2            (3) 3            (4) 4

63. Which tag is used for displaying large font size ?

- (1) <BIG></BIG>            (2) <LARGE></LARGE>  
(3) <SIZE></SIZE>            (4) <FONT></FONT>

64. Which among the following language is better for structured coding ?  
(1) BASIC                      (2) PASCAL                      (3) FORTAN                      (4) PL/1
65. What type of scheduling is round-robin scheduling ?  
(1) Linear Data Scheduling  
(2) Preemptive Scheduling  
(3) Non-linear data scheduling  
(4) Non-Preemptive Scheduling
66. .... allows more than one program to be ready for execution and provides the ability to switch from one task to another.  
(1) Multiprogramming                      (2) Multithreading  
(3) Multitasking                      (4) None of the above
67. Which html tag is used to scroll text in a Web Page ?  
(1) <scroll></scroll>  
(2) <round></round>  
(3) <marquee></marquee>  
(4) <go></go>
68. .... is single sequential flow of control in a program.  
(1) Process                      (2) Task                      (3) Thread                      (4) Structure
69. Which among the following is the property of Unix OS ?  
(1) Multi-user                      (2) Time Sharing  
(3) Multi-tasking                      (4) All of the above
70. Which of the following is *not* a paired tag ?  
(1) <img>                      (2) <u>                      (3) <b>                      (4) <p>

71. Which among the following OS does *not* implement multitasking truly ?
- (1) Windows NT (2) Windows 98  
(3) Windows XP (4) MS DOS
72. In computers, subtraction is carried out by :
- (1) 1's complement (2) 9's complement  
(3) 2's complement (4) 10's complement
73. Which of the following is *not* the weighted code ?
- (1) Decimal number system (2) Excess-3 code  
(3) Binary number system (4) None of the above
74. Cache memory acts between :
- (1) RAM and ROM (2) CPU and RAM  
(3) CPU and Hard Disk (4) None
75.  $101111 - 010101 = ?$
- (1) 100100 (2) 011010 (3) 011001 (4) 110011
76. Keyboard shortcut for redo :
- (1) Ctrl + Z (2) Ctrl + Y (3) Ctrl + X (4) Shift + Y
77.  $1101 + 1100$  in binary arithmetic ?
- (1) 11001 (2) 1100 (3) 1001 (4) 0011
78. The address technique employed by a CPU is :
- (1) Direct (2) Indirect  
(3) Immediate (4) All of the above
79. Keys to switch between applications running in Windows OS :
- (1) Ctrl + Tab (2) Alt + Tab  
(3) Shift + Tab (4) Fn + Tab

80.  $(10.10) \times (01.01)$

(1) 011.0010

(2) 110.0011

(3) 001.1101

(4) None of the above

81. Choose missing pattern :

QPO, NML, KJI, -, EDC

(1) HGF

(2) CAB

(3) JKM

(4) GHD

82. Choose the *correct* relation similar to following :

FISH : SCHOOL

(1) Herd : Peacock

(2) Wolf : Pack

(3) Cow : Farm

(4) Elephant : Jungle

83. Find the minimum number of straight lines required to make the given figure :



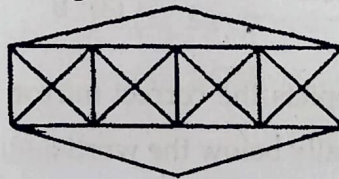
(1) 15

(2) 21

(3) 18

(4) 20

84. Find the minimum number of straight lines in the below figure :



(1) 20

(2) 19

(3) 17

(4) 15

85. Vineet is taller than Raman but shorter than Jyoti. Sumit is the shortest. Deepak is taller than Sumit but shorter than Raman. Who is the tallest ?

(1) Jyoti

(2) Raman

(3) Vineet

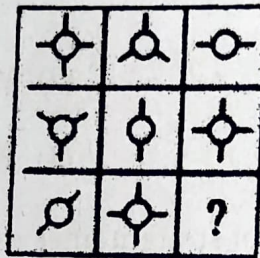
(4) Deepak

86. Select the missing letter from the given options :

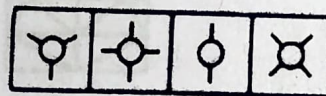
B	J	I
E	K	B
G	U	?

- (1) O                      (2) M                      (3) K                      (4) P

87. Select the Answer figure that fits in the blank space in the given Problem figure :  
**Problem Figure**



**Answer Figures :**



A    B    C    D

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

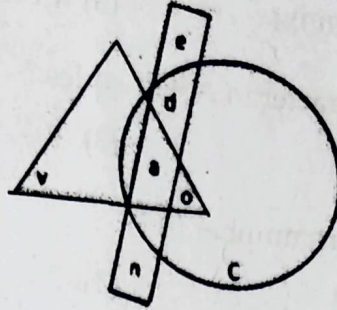
88. Select the option that depicts the correct mirror image of the given word when the mirror is placed horizontally below the word :

HEALTHY

1. HEVГLHA
2. YHTLAЭH
3. YHTJAЭH
4. YHTLAEH

- (1) 1                      (2) 2                      (3) 3                      (4) 4

89. Which of the following part is a part of both circle and triangle ?



- (1) e                      (2) v                      (3) o                      (4) c
90. The proportion of male students and the proportion of vegetarian students in a school are given below. The school has a total of 800 students, 80% of whom are in the secondary section and rest equally divided between class 11 and 12 :  
What is the percentage of vegetarian student in class 11 ?

	Male (M)	Vegetarian (V)
Class 12	0.60	0.54
Class 11	0.55	0.50
Secondary Section	0.275 (288)	0.55(352)
Total	0.475	0.53

- (1) 40                      (2) 45                      (3) 60                      (4) 65
91. Which of the following is the computer system's hardware component ?
- (1) RAM                      (2) Keyboard  
(3) Adobe Reader                      (4) ROM
92. How many bits are there in 1 nibble ?
- (1) 4                      (2) 8                      (3) 16                      (4) 24
93. What is the full form of USB ?
- (1) Universal Sequential Bus                      (2) Unique Serial Bus  
(3) Universal Serial Bus                      (4) Unique Sequential Bus

94. What one of the following is volatile memory ?  
(1) RAM                      (2) ROM                      (3) EPROM                      (4) PROM
95. What is the length of character in ASCII codes ?  
(1) 4                              (2) 8                              (3) 7                              (4) 6
96. What is the value of binary number 011 ?  
(1) 2                              (2) 4                              (3) 3                              (4) 7
97. Which of the following is *true* ?  
(1) 1 gigabyte is equal to 1024 kilobyte  
(2) Decimal number system cannot contain binary digits  
(3) Hexadecimal system have 16 bits  
(4) None
98. What is the octal representation of (011101) ?  
(1) 35                              (2) 45                              (3) 34                              (4) 54
99. Which is the largest unit of storage ?  
(1) Kb                              (2) Mb                              (3) Zb                              (4) Yb
100. How many values can be represented by one byte ?  
(1) 512                              (2) 64                              (3) 256                              (4) 8

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU  
ARE ASKED TO DO SO)

**D**

**SET-X**

**PG-EE-June, 2023**

**SUBJECT : Computer Science Group**

**10552**

Sr. No. ....

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) \_\_\_\_\_ (in words) \_\_\_\_\_

Name \_\_\_\_\_ Date of Birth \_\_\_\_\_

Father's Name \_\_\_\_\_ Mother's Name \_\_\_\_\_

Date of Examination \_\_\_\_\_

\_\_\_\_\_  
(Signature of the Candidate)

\_\_\_\_\_  
(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE  
STARTING THE QUESTION PAPER.**

1. **All questions are compulsory.**
2. The candidates **must return** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.
5. The candidate **must not** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers **must not** be ticked in the question booklet.
6. **There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
7. Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
8. **Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.**

**PG-EE-June, 2023/(Computer Science Group)(SET-X)/(D)**



1. Choose missing pattern :

QPO, NML, KJI, -, EDC

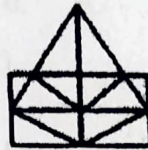
- (1) HGF                      (2) CAB                      (3) JKM                      (4) GHD

2. Choose the *correct* relation similar to following :

FISH : SCHOOL

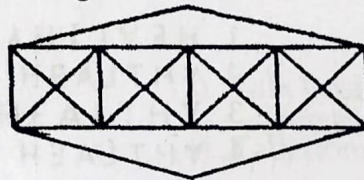
- (1) Herd : Peacock                      (2) Wolf : Pack  
(3) Cow : Farm                      (4) Elephant : Jungle

3. Find the minimum number of straight lines required to make the given figure :



- (1) 15                      (2) 21                      (3) 18                      (4) 20

4. Find the minimum number of straight lines in the below figure :



- (1) 20                      (2) 19                      (3) 17                      (4) 15

5. Vineet is taller than Raman but shorter than Jyoti. Sumit is the shortest. Deepak is taller than Sumit but shorter than Raman. Who is the tallest ?

- (1) Jyoti                      (2) Raman                      (3) Vineet                      (4) Deepak

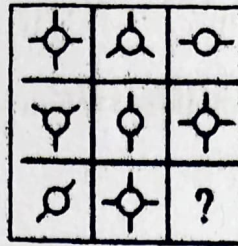
6. Select the missing letter from the given options :

B	J	I
E	K	B
G	U	?

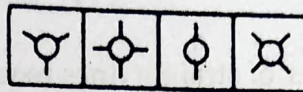
- (1) O                      (2) M                      (3) K                      (4) P

7. Select the Answer figure that fits in the blank space in the given Problem figure :

*Problem Figure*



*Answer Figures :*



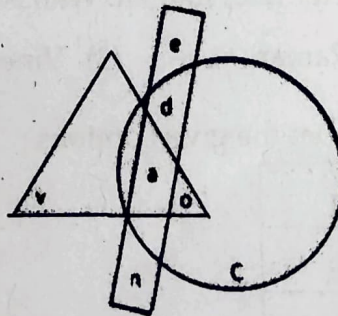
A B C D

- (1) D                      (2) C                      (3) B                      (4) A
8. Select the option that depicts the correct mirror image of the given word when the mirror is placed horizontally below the word :

HEALTHY

1. HEVГIHA
2. YHTLAЭH
3. YHTJAЭH
4. YHTLAEH

- (1) 1                      (2) 2                      (3) 3                      (4) 4
9. Which of the following part is a part of both circle and triangle ?



- (1) e                      (2) v                      (3) o                      (4) c

10. The proportion of male students and the proportion of vegetarian students in a school are given below. The school has a total of 800 students, 80% of whom are in the secondary section and rest equally divided between class 11 and 12 :

What is the percentage of vegetarian student in class 11 ?

	Male (M)	Vegetarian (V)
Class 12	0.60	0.54
Class 11	0.55	0.50
Secondary Section	0.275 (288)	0.55(352)
Total	0.475	0.53

- (1) 40                      (2) 45                      (3) 60                      (4) 65
11. Fill in the blank :  
The river Thames flows ..... London.  
(1) through              (2) on                      (3) over                      (4) in
12. In the following choose the one which best express the meaning of the idiom/phrase :  
Talk through one's hat  
(1) To talk secretly                      (2) Talk positively  
(3) Talk good points                      (4) Talk nonsense
13. Choose the word which best expresses the meaning of the given word :  
VENT  
(1) End                      (2) Storage  
(3) Opening                      (4) Past tense of Go
14. My father's dealings are open and above board.  
(1) Mandatory                      (2) Without any secret  
(3) Very clear                      (4) To everyone's liking
15. Choose the word which best expresses the meaning of the given word :  
COMBAT  
(1) Conflict                      (2) Quarrel                      (3) Feud                      (4) Fight

16. Read the passage and choose most relevant answer :

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grasslands under the plow in the nineteenth century. By the 1930s, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

As we understand from the reading, today, soil erosion in America .....

- (1) is worse than it was in the nineteenth century
  - (2) is the most critical problem that the nation faces
  - (3) causes humans to place new demands on the land
  - (4) is worse in areas which have a lot of petroleum production
17. In the following question, a sentence has been broken into parts and the parts have been scrambled and numbered. Choose the *correct* order of these parts from the given alternatives.

I. In a masterly way

II. Munshi Premchands works, especially fiction

III. Have been analysed and critiqued

IV. In the next chapter

(1) II III I IV

(2) III II I IV

(3) IV II III I

(4) I II III IV

18. Fill in the blank with the most appropriate word from the options given below :

A good driver will be very careful before carrying out a complex .....

(1) Movement

(2) Manoeuvre

(3) Motion

(4) Movement

19. S1 : A noise started above their heads.

P : But people did not take it seriously.

Q : It was to show everyone that there was something wrong.

R : It was a dangerous thing to do.

S : For, within minutes the ship began to sink.

S6 : Nearly 200 lives were lost on the fateful day.

The proper sequence should be :

- (1) PQSR                      (2) PRQS                      (3) QPRS                      (4) QPSR

20. S1 : She said on the phone that she would report for duty next day.

P : We waited for few days then we decided to go to her place.

Q : But she did not.

R : We found it locked.

S : Even after that we waited for her quite a few days.

S6 : Eventually we reported to the Police.

The proper sequence should be :

- (1) PRSQ                      (2) QPSR                      (3) QPRS                      (4) SQPR

21. A user can get files from another computer on the Internet by using :

- (1) TELNET                      (2) HTTP                      (3) FTP                      (4) UTP

22. Transport layer is at which level in TCP/ IP model ?

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(3) Multitasking                      (4) None of the above
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(3) <marquee></marquee>  
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(3) Multi-tasking                      (4) All of the above
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36. What is the value of binary number 011 ?  
(1) 2 (2) 4 (3) 3 (4) 7
37. Which of the following is *true* ?  
(1) 1 gigabyte is equal to 1024 kilobyte  
(2) Decimal number system cannot contain binary digits  
(3) Hexadecimal system have 16 bits  
(4) None
38. What is the octal representation of (011101) ?  
(1) 35 (2) 45 (3) 34 (4) 54
39. Which is the largest unit of storage ?  
(1) Kb (2) Mb (3) Zb (4) Yb
40. How many values can be represented by one byte ?  
(1) 512 (2) 64 (3) 256 (4) 8

41. Aman is 16th from the left end in a row of boys and Vivek is 18th from the right end. Gagan is 11th from Aman towards the right and 3rd from Vivek towards the right end. How many boys are there in the row ?
- (1) 40                      (2) 48                      (3) 42                      (4) 41
42. How many 7's are there in the following series which are not immediately followed by 3 but immediately preceded by 8 ?
- 8 9 8 7 6 2 2 6 3 2 6 9 7 3 2 8 7 2 7 7 8 7 3 7 7 9 4
- (1) 10                      (2) 3                      (3) 2                      (4) 0
43. Manisha ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. How many boys were there in the class ?
- (1) 40                      (2) 48                      (3) 55                      (4) 58
44. In a list, the rank of Mahesh was 16 from the top and whereas from bottom, the rank is 29. The list was about the passed-out students. Six students were failed due to non participation and 5 were failed. Find the total number of students present in the class.
- (1) 55                      (2) 54                      (3) 53                      (4) 52
45. If  $\times$  means  $\div$ ,  $-$  means  $\times$ ,  $\div$  means  $+$  and  $+$  means  $-$ , then  $(3 - 15 \div 19) \times 8 + 6 = ?$
- (1) 2                      (2) -1                      (3) 4                      (4) 8
46. A sum of Rs.1 890 has to be used to give 9 prizes to the customers of a super market for their overall academic purchases. If each prize is Rs. 30 less than its preceding price, what is the least value of the price ?
- (1) 80                      (2) 85                      (3) 90                      (4) 95



47. If "A" denotes "subtracted from", "B" denotes "added to", "C" denotes "divided by", "D" denotes "multiplied by", then which of the following statement is *correct* ?

(1)  $13C13A13B13D13 = 157$

(2)  $18C16D49A27B9 = 200$

(3)  $3A12B16D17C1 = 163$

(4)  $5C7A9D8B2 = 294$

48. **Statement** : Should children be legally made responsible to take care of their parents during their old age ?

**Arguments** :

I. Yes. Such matter can only be solved by legal means.

II. Yes. Only this will bring some relief to poor parents.

(1) Only Argument I is strong

(2) Only Argument II is strong

(3) Either I or II is strong

(4) Neither I nor II is strong

49. **Statement** : Should fashionable dresses be banned ?

**Arguments** :

I. Yes. Fashions keep changing and hence consumption of cloth increases.

II. No. Fashionable clothes are a person's self-expression and therefore his/her fundamental right.

(1) Only Argument I is strong

(2) Only Argument II is strong

(3) Either I or II is strong

(4) Neither I nor II is strong

50. **Statement :** Should 'computer knowledge' be made a compulsory subject for all the students at secondary school level ?

**Arguments :**

- I. No, our need is 'bread' for everyone, we cannot follow western models.  
 II. Yes. We cannot compete in the international market without equipping our children with computers.  
 (1) Only Argument I is strong  
 (2) Only Argument II is strong  
 (3) Either I or II is strong  
 (4) Neither I nor II is strong

51. Answer the questions on the basis of the information given below :

Seven varsity basketball players A, B, C, D, E, F and G are to be honoured at a special luncheon. The players will be seated on the dais in a row. A and G have to leave the luncheon early and so must be seated at the extreme right. B will receive the most valuable player's trophy and so must be in the centre to facilitate presentation. C and D are bitter rivals and therefore, must be seated as far apart as possible.

Which of the following pairs *cannot* be seated together ?

- (1) B and D                      (2) C and F                      (3) D and G                      (4) E and A
52. Read the text and the statements carefully, and answer the questions .

Four people of different nationalities live on the same side of a street in four houses each of different colors. Each person has a different favorite drink. The following additional information is also known :

- A. The Englishman lives in the red house.  
 B. The Italian drink tea.  
 C. The Norwegian lives in the first house on the left.  
 D. In the second house from the right they drink milk.  
 E. The Norwegian lives adjacent to the blue house.  
 F. The Spaniard drinks fruit juice.  
 G. Tea is drunk in the blue house.  
 H. The white house is to the right of the red house.

The Norwegian drinks :

- (1) Milk                      (2) Cocoa                      (3) Tea                      (4) Fruit Juice

53. Answer the questions on the basis of the information given below :

A, B, C, D, E and F are a group of friends. There are two house wives, one professor, one engineer, one accountant and one lawyer in the group. There are only two married couples in the group. The lawyer is married to D, who is a housewife. No women in the group are either an engineer or an accountant. C, the accountant, is married to F, who is a professor. A is married to housewife. E is not a housewife.

How many members of group are males ?

(1) 1

(2) 3

(3) 4

(4) Cannot be determined

54. The first and the last parts of the sentence are numbered 1 & 6. The rest of the sentence, is split into four parts and named P, Q, R and S. These four parts are not given in their proper order.

Read the sentence and find out which of the four combinations is *correct* ?

1. It was obvious

P. made by him

Q. submitted at the meeting

R. from the comments

S. on the draft proposals

6. that he was not satisfied with them.

(1) QRSP

(2) SQRP

(3) RPSQ

(4) PSRQ

55. In an examination the average marks of Rohit are 63. If he got 20 more marks in Science and 28 more marks in Mathematics, then his average would have been 69. Find the total number of subjects he studied :

(1) 7

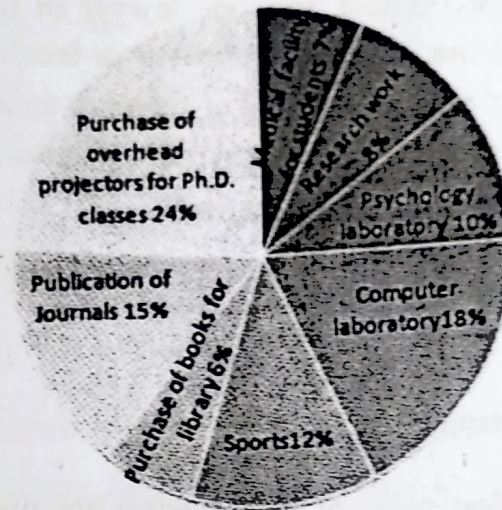
(2) 8

(3) 10

(4) 12

56. Study the following pie-chart carefully to answer these questions :

Total Expenditure : Rs. 60 Lacs



Expenditure of funds by University for various purpose

What is the difference between the expenditure made by university for Publication of Journals and Psychology Laboratory ?

- (1) Rs. 4 lacs      (2) Rs. 3 lacs      (3) Rs. 4.2 lacs      (4) Rs. 3.8 lacs

57. Study the following table and answer the questions :

Classification of 100 students based on the marks obtained by them in Physics and Chemistry in an Examination :

Subjects	Marks out of 50				
	40 and above	30 and above	20 and above	10 and above	0 and above
Physics	9	32	80	92	100
Chemistry	4	21	66	81	100
Average (Aggregate)	7	27	73	87	100

What is the difference between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate ?

- (1) 3      (2) 4      (3) 5      (4) 6

58. Answer the questions based on the following information :

A, B, C and D are to be seated in a row. But C and D cannot be together. Also B cannot be at the third place. If A and B are together, then which of the following must be necessarily *true* ?

- (1) C is not at the first place                      (2) A is at the third place  
(3) D is at the first place                              (4) C is at the first place

59. Answer the questions on the basis of the following information :

Four families decided to attend the marriage ceremony of one of their colleagues. One family has no kids, while the others have at least one kid each. Each family with kids has at least one kid attending the marriage.

Given below some information about the families, and who reached when to attend the marriage :

The family with 2 kids came just before the family with no kids.

Shanti who does not have any kids reached just before Sridevi's family.  
Sunil and his wife reached last with their only kid.

Anil is not the husband of Joya.

Anil and Raj are fathers.

Sridevi's and Anita's daughters go to the same school.

Joya came before Shanti and met Anita when she reached the venue.  
Raman stays the farthest from the venue.

Raj said his son could not come because of his exams.

Name the *correct* pair of husband and wife :

- (1) Raj and Shanti  
(2) Sunil and Sridevi  
(3) Anil and Sridevi  
(4) Raj and Anita

60. Answer the questions on the basis of the information given below :

The seven basic symbols in a certain numeral system and their respective values are as follows :

$I = 1, V = 5, X = 10, L = 50, C = 100, D = 500$  and  $M = 1000$

In general, the symbols in the numeral system are read from left to right, starting with the symbol representing the largest value; the same symbol cannot occur continuously more than three times; the value of the numeral is the sum of the values of the symbols. For example,  $XXVII = 10 + 10 + 5 + 1 + 1 = 27$ . An exception to the left to right reading occurs when a symbol is followed immediately by a symbol of greater value; then, the smaller value is subtracted from the larger.

For example,  $XLVI = (50 - 10) + 5 + 1 = 46$ .

The value of the numeral  $MCMXCIX$  is :

- (1) 1999                      (2) 1899                      (3) 1989                      (4) 1889

61. On reaching the railway station, you find that the train you wanted to catch is just to start and there is hardly any time for purchasing the ticket. The best thing for you is to :

- (1) rush to the train rather than miss it and inform the T.T.I. at the next stoppage about your inability to purchase the ticket.
- (2) rush to the train and perform your journey quietly.
- (3) first purchase the ticket and then catch the train if it is there.
- (4) miss the train rather than take the risk of boarding the moving train.

62. **Assertion :** The problem solving ability, mental performance and memory of the employees of company C are deteriorating.

RI. Due to tight schedule at company C, the employees of the company are skipping their breakfast regularly.

RII. The job is physical in nature, but not mental.

- (1) Only RI and not RII is the reason for the assertion.
- (2) Only RII and not RI is the reason for the assertion.
- (3) Either RI or RII, but not both, is the reason for the assertion.
- (4) Neither RI nor RII is the reason for the assertion.

63. **Assertion :** During polling season, new roads are constructed, there is twenty-four hours of power supply, good supply of water, and many other facilities are provided to the people.

RI. Political leaders want to be in the good books of the people.

RII. Polling season that is the right time to convert black money to white money in the name of party funds for the industries.

- (1) Only RI and not RII is the reason for the assertion.
- (2) Only RII and not RI is the reason for the assertion.
- (3) Either RI or RII, but not both, is the reason for the assertion.
- (4) Neither RI nor RII is the reason for the assertion.

64. **Statements :** All Carrots are birds. Some telephones are Carrots. All bedsheets are telephone.

**Conclusion :**

- I. All bedsheet are birds
- II. Some bedsheet are birds
- III. Some birds are telephone
- IV. All telephone are birds

- (1) Only I follows
- (2) Only II follows
- (3) Only I and III follows
- (4) Only III follows

65. **Statements :** Some pearls are gems. All gems are diamonds. No diamond is stone. Some stones are corals.

**Conclusions :**

- I. Some stones are pearls.
- II. Some corals being diamond is possibility.
- III. No stone is pearl.

- (1) Only conclusion I is true
- (2) Both conclusion I and III are true
- (3) Either conclusion I or II is true
- (4) None of the above

66. Nitin ranks 18th in a class of 49 students. What is rank from the last ?  
(1) 31                      (2) 18                      (3) 32                      (4) 19
67. How many such digits are there in the number 7346285 which are as far away from the beginning of the number, as they will be when arranged in ascending order within the number ?  
(1) None                      (2) One                      (3) Two                      (4) Three
68. If the day before yesterday was Saturday, what day will fall on the day after tomorrow ?  
(1) Friday                      (2) Thursday                      (3) Wednesday                      (4) Tuesday
69. If the digits in the number 25673948 are arranged in ascending order from left to right, what will be the sum of the digits which are fourth from the right and third from the left in the new arrangement ?  
(1) 10                      (2) 9                      (3) 8                      (4) 6
70. There are 6 persons A, B, C, D, E and F who have different rank in class test exam. Person A got last rank in class. E was not first in class test rank. B got more marks than C, but he did not get second rank in class. E got more marks than only A. F was situated between D and B in class test ranking, and B score less than D. The second highest person got 92 marks.  
D got which of the following possible marks ?  
(1) 89                      (2) 92                      (3) 93                      (4) 88
71. What is the full form of WORM ?  
(1) Write Once, Read More  
(2) Write Over, Read Mode  
(3) Write Once, Read Many  
(4) Write Out, Read Many



72. What of the following is octal representation (in 4 digits) of decimal number (896) ?  
(1) 3567 (2) 1600 (3) 1701 (4) 1654
73. MSD refers to ?  
(1) Many Significant Digit  
(2) Most Significant Decimal  
(3) Multiple Significant Digit  
(4) Most Significant Digit
74. 2's complement of -14 ?  
(1) 11110001 (2) 10010010 (3) 11100001 (4) 01010110
75. Which of the following is invalid hexadecimal ?  
(1) 0A23 (2) AB14 (3) XA23 (4) 1234
76. Which of the following is *false* ?  
(1) 2's complement of a 2's complement of a number I the number itself.  
(2) Excess-3 code for 369 is 011110011100  
(3) 1-bit gray code has two code words 0 and 1  
(4) In 7-bit hamming code of BCD, the parity bits are placed at 1, 2 and 4 locations.
77. What is bootstrapping called ?  
(1) Hot Boot (2) Cold Boot  
(3) Cold hot strap (4) Hot bootstrap
78. Which of the following is system software ?  
(1) Operating System (2) Utilities  
(3) Compiler (4) All of the above

79. Which of the following payment card has a microchip embedded in its surface ?
- (1) Debit Card (2) Credit Card  
(3) Metro Card (4) Charge Card
80. Which of the following is a condition that causes deadlock ?
- (1) Circular Wait (2) Mutual Exclusion  
(3) Hold and Wait (4) All of the above
81. If  $p \times q = p + q + \frac{p}{q}$ , what is the value of  $8 \times 2$  ?
- (1) 6 (2) 10 (3) 14 (4) 16
82. If  $0.13 \times p^2 = 13$ , then  $p$  is equal to :
- (1) 10 (2) 0.01 (3) 0.001 (4) 100
83. If  $A = \{5, 6\}$  and  $B = \{7, 8\}$ , then what is the number of relations from  $A$  to  $B$  ?
- (1)  $2^2$  (2)  $2^3$  (3)  $2^4$  (4)  $2^5$
84. If  $A = \{1, 2, 3, 4, 5, 7, 8, 9\}$  and  $B = \{2, 4, 6, 7, 9\}$ , then find number of proper subsets of  $A \cap B$  ?
- (1) 14 (2) 15 (3) 32 (4) 33
85. The magnitude of the vector  $6i + 2j + 3k$  :
- (1) 5 (2) 6 (3) 7 (4) 8
86.  $(\sin 30^\circ + \cos 30^\circ) - (\sin 60^\circ + \cos 60^\circ)$  :
- (1) 0 (2) 1 (3) 2 (4) -1
87. If  $x = 7 - 4\sqrt{3}$ , then what is the value of  $\sqrt{x} + \frac{1}{\sqrt{x}}$  ?
- (1) 1 (2) 2 (3) 3 (4) 4
88. The scalar product of  $5i + j - 3k$  and  $3i - 4j + 7k$  is :
- (1) 15 (2) -15 (3) 10 (4) -10

89. The angle of elevation of a ladder leaning against a wall is  $60^\circ$  and the foot of the ladder is 4.6 m away from the wall. The length of ladder is :
- (1) 2.3 m                      (2) 4.6 m                      (3) 7.8 m                      (4) 9.2 m
90. An urn contains 6 red, 4 blue, 2 green and 3 yellow marbles. If two marbles are picked up at random, what is the probability that either both are green or both are yellow ?
- (1)  $5/91$     (2)  $1/3$   
 (3)  $4/105$     (4) None of the above
91. Which among the following OS does *not* implement multitasking truly ?
- (1) Windows NT                                      (2) Windows 98  
 (3) Windows XP                                      (4) MS DOS
92. In computers, subtraction is carried out by :
- (1) 1's complement                                      (2) 9's complement  
 (3) 2's complement                                      (4) 10's complement
93. Which of the following is *not* the weighted code ?
- (1) Decimal number system                      (2) Excess-3 code  
 (3) Binary number system                      (4) None of the above
94. Cache memory acts between :
- (1) RAM and ROM                                      (2) CPU and RAM  
 (3) CPU and Hard Disk                              (4) None
95.  $101111 - 010101 = ?$
- (1) 100100                      (2) 011010                      (3) 011001                      (4) 110011
96. Keyboard shortcut for redo :
- (1) Ctrl + Z                      (2) Ctrl + Y                      (3) Ctrl + X                      (4) Shift + Y

97.  $1101 + 1100$  in binary arithmetic ?
- (1) 11001                      (2) 1100                      (3) 1001                      (4) 0011
98. The address technique employed by a CPU is :
- (1) Direct    (2) Indirect  
(3) Immediate    (4) All of the above
99. Keys to switch between applications running in Windows OS :
- (1) Ctrl + Tab    (2) Alt + Tab  
(3) Shift + Tab    (4) Fn + Tab
100.  $(10.10) \times (01.01)$
- (1) 011.0010    (2) 110.0011  
(3) 001.1101    (4) None of the above

ANSWER KEYS ENTRANCE EXAM OF COMPUTER SCIENCE GROUP FOR SESSION 2023-24				
Q. NO.	A	B	C	D
1	3	3	1	1
2	1	2	4	2
3	3	1	1	2
4	2	2	4	2
5	3	2	4	1
6	1	1	3	3
7	4	3	3	1
8	4	3	3	1
9	4	4	1	3
10	3	1	3	2
11	1	2	4	1
12	2	1	2	4
13	2	3	3	3
14	2	1	3	2
15	1	3	2	4
16	3	3	2	1
17	1	3	4	1
18	1	1	2	2
19	3	4	2	3
20	2	3	1	3
21	4	4	3	3
22	2	3	1	2
23	3	4	3	1
24	3	1	2	2
25	2	1	3	2
26	2	3	1	1
27	4	1	4	3
28	2	4	4	3
29	2	2	4	4
30	1	2	3	1
31	4	1	1	2
32	3	2	4	1
33	4	2	3	3
34	1	2	2	1
35	1	1	4	3
36	3	3	1	3
37	1	1	1	3
38	4	1	2	1
39	2	3	3	4
40	2	2	3	3
41	1	1	3	4
42	4	4	2	3
43	1	3	4	4
44	4	2	1	1
45	4	4	3	1
46	3	1	2	3
47	3	1	2	1
48	3	2	4	4
49	1	3	3	2
50	3	3	4	2

SDW  
30/6/2023  
(Dr. Sameer Dabul)

Dr. Gopal Singh

Dr. Bal Kishan

Dr. Sudevish  
Rajendra

ANSWER KEYS ENTRANCE EXAM OF COMPUTER SCIENCE GROUP FOR SESSION 2023-24				
Q. NO.	A	B	C	D
51	2	3	4	4
52	1	2	3	2
53	3	4	4	3
54	1	1	1	3
55	3	3	1	2
56	3	2	3	2
57	3	2	1	4
58	1	4	4	2
59	4	3	2	2
60	3	4	2	1
61	3	4	3	1
62	2	3	2	4
63	4	2	1	1
64	1	2	2	4
65	3	2	2	4
66	2	2	1	3
67	2	1	3	3
68	4	4	3	3
69	3	2	4	1
70	4	1	1	3
71	3	1	4	3
72	2	4	3	2
73	1	1	2	4
74	2	4	2	1
75	2	4	2	3
76	1	3	2	2
77	3	3	1	2
78	3	3	4	4
79	4	1	2	3
80	1	3	1	4
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85	2	2	1	3
86	2	2	3	1
87	1	4	1	4
88	4	2	1	4
89	2	2	3	4
90	1	1	2	3
91	1	3	2	4
92	4	1	1	3
93	3	3	3	2
94	2	2	1	2
95	4	3	3	2
96	1	1	3	2
97	1	4	3	1
98	2	4	1	4
99	3	4	4	2
100	3	3	3	1

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