COURSE CODE : 352

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates:

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each question carefully and shade the relevant answer (A) or (B) or (C) or (D) or (E) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.
Directions (For questions 1 to 6): In each of the following questions there is a certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same kind of relation with this word as the words of given pair bear. Choose the correct alternative.

1. CENSORSHIP : INFORMATION
   (A) cultivation : erosion (B) philanthropy : generosity
   (C) sanitation : disease (D) sampling : measurement
   (E) none of the above

2. HYPOTHESIS : EXPERIMENTATION
   (A) reality : fantasy (B) opinion : debate
   (C) film : camera (D) predication : conclusion
   (E) none of the above

3. RIVAL : COMPETITION
   (A) litigant : morality (B) maverick : co-operation
   (C) mentor : praise (D) sycophant : flattery
   (E) none of the above

4. COLLUSION : CONSPIRATORS
   (A) identification : arbitrators (B) co-operation : partners
   (C) conclusion : messengers (D) revision : correspondents
   (E) none of the above

5. CYNOSURE : BRILLIANT
   (A) word : common (B) student : attentive
   (C) rock : large (D) magnet : attractive
   (E) none of the above

6. CHORTLE : CHUCKLE
   (A) Emend : corrupt (B) Enjoin : request
   (C) Garnish : cake (D) Embellish : decorate
   (E) none of the above
Directions (For questions 7 to 12): From amongst the four alternatives, choose the best answer whose meaning is closest to the meaning of the word in question. If nothing is appropriate, choose the last option.

7. Sad
   (A) Doleful        (B) Forlorn        (C) Glum        (D) Hurt
   (E) None of the above

8. Pecuniary
   (A) Monetary       (B) Extenuate      (C) Pious       (D) Glib
   (E) None of the above

9. Menagerie
   (A) Zoo            (B) Ambiguous      (C) Mercurial    (D) Recast
   (E) None of the above

10. Converse
    (A) retard         (B) veracity       (C) censure      (D) discourse
    (E) none of the above

11. Convalesce
     (A) indigence      (B) degenerate     (C) unscathed    (D) recover
     (E) none of the above

12. Deflect
    (A) trudge          (B) plaintive      (C) avert        (D) preclude
    (E) none of the above

Directions (For questions 13 to 15): For each of the words below, a contextual usage is provided. Pick the word from the alternatives given that is most inappropriate in the given context.

13. TEMPORAL: Do not get tempted by these temporal pleasures. They do not last long.
    (A) Ephemeral       (B) Immortal
    (C) Everlasting     (D) Eternal
    (E) None of the above
14. **FATUOUS:** He is far too sensible to have done a fatuous thing like this.
   (A) Stupid  (B) Intelligent
   (C) Inane   (D) Foolish
   (E) None of the above

15. **MACABRE:** The office wore a macabre look on Friday after the company downsized its staff strength.
   (A) Grisly  (B) Gruesome
   (C) Tropical (D) Lugubrious
   (E) None of the above

Directions (For questions 16 to 23): From amongst the four alternatives, choose the best answer whose meaning is appropriately opposite to the meaning of the word in question. If nothing is appropriate, choose the last option.

16. **OPPORTUNIST**
   (A) man of principle (B) fatalist  (C) fledgling  (D) colleague
   (E) none of the above

17. **COMMODIOUS**
   (A) product   (B) roomy  (C) cramped  (D) company
   (E) none of the above

18. **PACIFY**
   (A) ameliorate  (B) patchup  (C) truce  (D) tormented
   (E) none of the above

19. **AMBIGUOUS**
   (A) confusing  (B) lucid  (C) desirous  (D) obfuscate
   (E) none of the above

20. **MILITANT**
   (A) dramatic  (B) combative  (C) religious  (D) pacific
   (E) none of the above

21. **SINUOUS**
   (A) wet  (B) vacant  (C) numerous  (D) direct
   (E) none of the above
22. SEGMENT
(A) inflate  (B) affix  (C) keep still  (D) make whole
(E) none of the above

23. CALUMINATE
(A) vindicate  (B) supplant  (C) rejuvenate  (D) follow
(E) none of the above

Directions (For questions 24 to 27) : From amongst the four alternatives, choose the best answer which is appropriate for the blank(s) in the question. If nothing is appropriate, choose the last option.

24. The absence of a sense of outrage and grief at national tragedy is an ———— of moral responsibility.
(A) intervention  (B) energising
(C) abdication  (D) administration
(E) none of the above

25. To meet all ———— a source of ———— electrical power was added to the train's engine.
(A) integuments - parallel  (B) possibilities - incidental
(C) amenities - diverse  (D) contingencies - auxiliary
(E) none of the above

26. As man reached the stars, a booming population threatened to destroy the ———— of life on his home planet and even its chances for ————.
(A) Quality - survival  (B) Basis - growth
(C) Existence - upliftment  (D) Chances - improvement
(E) None of the above

27. A survey recently conducted revealed that marriage is fattening. The survey found that on an average, women gained 23 pounds and men gained 18 pounds during 13 years of marriage. The answer to which among the following questions would be the most appropriate in evaluating the reasoning presented in the survey is
(A) Why is the time period of the survey 13 years, rather than 12 or 14?
(B) Did any of the men surveyed gain less than 18 pounds during the period they were married?
(C) How much weight is gained or lost in 13 years by a single people of comparable age to those studied in the survey?
(D) When the survey was conducted were the women as active as the men?
(E) Will the gains seen in the study be retained over the lifetimes of the surveyed persons?
Directions (Questions 28 to 37): Read the passages give below and answer the questions appropriate to the concerned passages.

Five educational films A, B, C, D, & E are to be shown to a group of students. The films are to be shown in a particular order, which conforms to the following conditions:

- A must be shown earlier than C.
- B must be shown earlier than D.
- E should be the fifth film shown.

With the above base information answer the following questions:

28. Which among the following is an acceptable order for showing the educational films?
   (A) A, C, B, D, E     (B) A, C, D, E, B     (C) B, D, C, A, E     (D) B, D, E, A, C
   (E) None of the above

29. In case C is shown earlier than E, which among the following will hold true?
   (A) A is the first film shown        (B) B is the second film shown.
   (C) C is the third film shown       (D) D is the fifth film shown.
   (E) None of the above

30. In case D is to be shown earlier than A, then for which among the following is there exactly one position from first through fifth in which it can be scheduled to be shown?
   (A) A     (B) B     (C) C     (D) D
   (E) None of the above

31. Which among the following is a pair of films that CANNOT both be shown earlier than E?
   (A) A and B        (B) C and D        (C) B and C        (D) B and D
   (E) None of the above

32. In case D and E are shown as far apart from each other as possible, which among the following would be true?
   (A) A is shown earlier than B        (B) E is shown earlier than B
   (C) C is shown earlier than E        (D) D is shown earlier than A
   (E) None of the above

33. In case B, D and E are to be shown one after the other in the given order, the two positions from first to fifth in which A could possibly be shown are
   (A) first and second        (B) first and fourth
   (C) second and third        (D) third and fifth
   (E) none of the above
34. In case exactly one film is shown between A and C, and exactly one film is shown between B and D, which among the following will hold true?

(A) B is the film shown between A and C  (B) E is the first film shown
(C) E is the film shown between A and C  (D) D is the last film shown
(E) None of the above

Mrs. Green wishes to renovate her cottage. She hires the services of a plumber, a carpenter, a painter, an electrician, and an interior decorator. The following are the conditions to be followed:

- The renovation is to be completed in a period of one working week, i.e. Monday to Friday.
- Every worker will be taking one complete day to do his job.
- Mrs. Green will allow just one person to work per day.
- The painter can do his work only after the plumber and the carpenter have completed their jobs.
- The interior decorator has to complete his job before that of the electrician.
- The carpenter cannot work on Monday or Tuesday.

35. In case the painter works on Thursday, which among the following alternatives is possible?

(A) The electrician works on Tuesday
(B) The electrician works on Friday
(C) The interior decorator does his work after the painter
(D) The plumber and the painter work on consecutive days
(E) None of the above

36. In case the painter works on Friday, which among the following statements must be untrue?

(A) The carpenter may work on Wednesday.
(B) The carpenter and the electrician may work on consecutive days.
(C) In case the carpenter works on Thursday, the electrician has to work on the previous day, i.e. Wednesday.
(D) The plumber may work before the electrician does.
(E) None of the above

37. Which arrangement among the following is possible?

(A) The electrician will work on Tuesday and the interior decorator on Friday.
(B) The painter will work on Wednesday and the plumber on Thursday.
(C) The carpenter will work on Wednesday and the plumber on Thursday.
(D) The painter will work on Monday and the carpenter on Thursday.
(E) None of the above.
38. The price of purchasing a car in Country Q is 120 percent less than the price of purchasing a car in Country Y. Even after transportation fees and tariff charges are added, it is still cheaper for a buyer to import car from Country Q to Country Y than to buy car in Country Y.

The statements above, if true, best support which of the following assertions?

(A) Gasoline prices in Country Q are 120 percent below those in Country Y

(B) Importing cars from Country Q to Country Y will eliminate 120 percent of the sales of cars in Country Y.

(C) The tariff on a car imported from Country Q to Country Y is less than 120 percent of the price of a car in Country Y.

(D) The fee for transporting a car from Country Q to Country Y is more than 120 percent of the price of a car in Country Q.

(E) None of the above.

39. Stock analyst: "We believe Company A's stock will appreciate at 35% a year for the next 5 to 7 years. Company A just became the leader in its industry and we expect its sales to grow at 8% a year."

Commentator: "But how can the stock's price be expected to grow more quickly than the company's underlying sales?"

Which of the following facts would best support the stock analyst?

(A) The company's expenses will be declining over the next 5 to 10 years.

(B) The company just won a patent on a new product.

(C) Company A's stock is currently overvalued by a significant amount.

(D) The 5 to 7 year time frame is too long for anyone to accurately forecast.

(E) None of the above.

40. My neighbour's dogs bark and howl every time their owner lets them outside. My CPA told me that dogs tend to bark and howl when they see birds resting in the top branches of their favorite trees. I personally believe they bark and howl because they enjoy disrupting my meditations.

Which of the following can be inferred from the preceding passage?

(A) The dogs must be abused by their owners.

(B) The dogs owners do not care how they are viewed by their neighbours.

(C) There are many pedestrians who walk by this neighbour's house, and the dogs are starving for attention.

(D) The dogs enjoy being outside.

(E) None of the above.
41. Stronger patent laws are needed to protect inventions from being pirated. With that protection, manufacturers would be encouraged to invest in the development of new products and technologies. Such investment frequently results in an increase in a manufacturer's productivity.

Which of the following conclusions can most properly be drawn from the information above?

(A) Stronger patent laws tend to benefit financial institutions as well as manufacturers.

(B) Stronger patent laws would stimulate improvements in productivity for many manufacturers.

(C) Manufacturers will decrease investment in the development of new products and technologies unless there are stronger patent laws.

(D) The weakness of current patent laws has been a cause of economic recession.

(E) None of the above.

42. Woman: What a birthday party! All of the food is great—but this strawberry cheesecake is especially good. Why don't you try some?

Man: If I weren't on a diet I would. Strawberry cheesecake is my favorite.

Question: What is the man probably going to do?

(A) Pass up the food.

(B) Try a bite of the cake.

(C) Buy a strawberry cheesecake.

(D) Get the recipe for the cake.

(E) None of the above.

43. Man: It's really hot today. The temperature must be over a hundred. The forecast is for rain in the afternoon.

Woman: How about putting off the picnic until tomorrow?

Question: What does the woman suggest that they do?

(A) Take a walk in the rain

(B) Delay their outing

(C) Go on a picnic

(D) Find out the weather forecast

(E) None of the above

44. Woman: I just can't stand my job anymore. My boss is not supportive at all.

Man: If I were you I wouldn't take it anymore. I'd let her know how you feel.

Question: What does the man suggest the woman do?

(A) Take more rest breaks while at work

(B) Quit her job and find a new one

(C) Request an immediate leave of absence from her boss

(D) Confront her supervisor

(E) None of the above
45. Woman: The truck is gone and I don't see Fred anywhere.

Man: He must have decided to go to work after all.

Question: What had the man assumed about Fred?

(A) Fred had stolen a truck.  
(B) Fred wasn't going to work.  
(C) Fred couldn't make a decision.  
(D) Fred's truck was broken down.  
(E) None of the above.

Directions (Questions 46 to 50): Observe the series of patterns given in each question and find the appropriate one which can replace the concern Question Mark.

46. Which letter replaces the question mark?

(A) M  
(B) R  
(C) C  
(D) G  
(E) None of the above.

47. Which letter replaces the question mark?

(A) O  
(B) R  
(C) P  
(D) Q  
(E) None of the above.
48. Which number replaces the question mark?

\[
\begin{array}{ccc}
3 & GNQ & 8 \\
3 & RBS & 9 \\
4 & TUA & 2 \\
2 & FPC & 5 \\
3 & OHL & ?
\end{array}
\]

(A) 1    (B) 6    (C) 5    (D) 8

(E) None of the above

49. Which letter replaces the question mark?

\[
\begin{array}{ccc}
9 & L & 6 \\
3 & S & 5 \\
11 & G & 9 \\
4 & J & 13 \\
3 & ? & 8
\end{array}
\]

(A) Q    (B) T    (C) P    (D) R

(E) None of the above

50. Which letter replaces the question mark?

\[
\begin{array}{ccc}
V & G & 35 \\
P & N & 154 \\
G & ? & 60
\end{array}
\]

(A) C    (B) R    (C) K    (D) M

(E) None of the above.
Directions (Questions 51 to 54): Choose the odd one out from the following series of patterns.

51. 10, 14, 16, 18, 21, 24, 26
   (A) 26           (B) 24
   (C) 21           (D) 18
   (E) None of the above

52. 16, 25, 36, 72, 144, 196, 225
   (A) 36           (B) 72
   (C) 196          (D) 225
   (E) None of the above

53. 41, 43, 47, 53, 61, 71, 73, 81
   (A) 61           (B) 71
   (C) 73           (D) 81
   (E) None of the above

54. 3, 5, 7, 12, 17, 19
   (A) 19           (B) 17
   (C) 5            (D) 12
   (E) None of the above

Directions (Questions 55 to 60): For each question, compare between the given Two quantities and choose the appropriate answer from the given options.

55. Quantity A: \((3 \times 4 \times 17) / (121 \times 100)\)
    Quantity B: \((4 \times 5 \times 19) / (1000 \times 121)\)
   (A) Quantity A is greater
   (B) Quantity B is greater
   (C) The two quantities are equal
   (D) The relationship cannot be determined from the information given
   (E) None of the above

56. Consider a triangle PQR.
    Quantity A: length of PQ + length of QR
    Quantity B: length of PR
   (A) Quantity A is greater
   (B) Quantity B is greater
   (C) The two quantities are equal
   (D) The relationship cannot be determined from the information given
   (E) None of the above
57. If, $yz < 0$, then
Quantity A: $(y - z)^2$
Quantity B: $y^2 + z^2$
(A) Quantity A is greater
(B) Quantity B is greater
(C) Quantity A equals Quantity B
(D) The relationship cannot be determined from the information given
(E) None of the above

58. $x + 2y > 8$
Quantity A: $2x + 4y$
Quantity B: 20
(A) Quantity in Column A is greater;
(B) Quantity in Column B is greater;
(C) The two quantities are equal;
(D) The relationship cannot be determined from the information given.
(E) None of the above

59. For all real numbers a, let $a^* = 1 - a$.
Quantity A: $((-1))^*$
Quantity B: $2^*$
(A) Quantity A is greater
(B) Quantity B is greater
(C) The two quantities are equal
(D) The relationship cannot be determined from the information given
(E) None of the above

60. Diagram is illustrative and is not drawn to scale.
Quantity A: Measure of angle 2 + Measure of angle 3
Quantity B: $180^\circ$
(A) Quantity A is greater
(B) Quantity B is greater
(C) Quantity A equals Quantity B
(D) The relationship cannot be determined from the information given
(E) None of the above
61. If 1 cm on a map corresponds to an actual distance of 40 kms. And the distance on the map between Bombay and Calcutta is 37.5 cms., the actual distance between them is
(A) 375 kms  
(B) 3750 kms  
(C) 1500 kms  
(D) 1375 kms  
(E) None of the above

62. Four concentric (having the same center) circles with radii, x, 2x, 3x and 4x are drawn to form two rings A and B as shown in the figure.

Ratio of the area of inner ring A to the area of outer ring B is
(A) 1 : 2  
(B) 1 : 4  
(C) 2 : 3  
(D) 3 : 7  
(E) None of the above

63. If the area of two circles are in the ratio 169 : 196 then the ratio of their radii is
(A) 10 : 11  
(B) 11 : 12  
(C) 12 : 13  
(D) 13 : 14  
(E) None of the above

64. A person starts multiplying consecutive positive integers from 20. How many numbers should he multiply before the will have result that will end with 3 zeroes?
(A) 11  
(B) 10  
(C) 6  
(D) 5  
(E) None of the above

65. What is the remainder when 91 + 92 + 93 + ...... + 99 is divided by 6?
(A) 0  
(B) 3  
(C) 4  
(D) 2  
(E) None of the above
66. How many numbers are there between 100 and 1000 such that at least one of their digits is 6?
   (A) 648  (B) 258
   (C) 654  (D) 252
   (E) None of the above

67. Find the sum of all the integers which are multiples of 7 and lie between 200 and 400.
   (A) 8729  (B) 8700
   (C) 8428  (D) 8438
   (E) None of the above

68. Let A and B be two solid spheres such that the surface area of B is 300% higher than
    the surface area of A. The volume of A is found to be k% lower than the volume of B.
    The value of k must be
   (A) 85.5  (B) 92.5
   (C) 90.5  (D) 87.5
   (E) None of the above

69. A test has 50 questions. A student scores 1 mark for a correct answer, −1/3 for a
    wrong answer, and −1/6 for not attempting a question. If the net score of a student is
    32, the number of questions answered wrongly by that student cannot be less than
   (A) 6  (B) 12
   (C) 3  (D) 9
   (E) None of the above

70. How many even integers \( n \), where \( 100 \leq n \leq 200 \), are divisible neither by seven nor by
    nine?
   (A) 40  (B) 37
   (C) 39  (D) 38
   (E) None of the above

71. Let \( g(x) = \max(5 - x, x + 2) \). The smallest possible value of \( g(x) \) is
   (A) 4.0  (B) 4.5
   (C) 1.5  (D) 3.5
   (E) None of the above
72. Given that $-1 \leq v \leq 1$, $-2 \leq u \leq 0.5$ and $-2 \leq z \leq -0.5$ and $w = vz/u$, then which of the following is necessarily true?
(A) $-0.5 \leq w \leq 2$  
(B) $-4 \leq w \leq 4$
(C) $-4 \leq w \leq 2$  
(D) $-2 \leq w \leq -0.5$
(E) None of the above

73. How many three digit positive integers, with digits $x$, $y$ and $z$ in the hundred's, ten's and unit's place respectively, exist such that $x < y$, $z < y$ and $x \neq 0$?
(A) 245  
(B) 285
(C) 240  
(D) 320
(E) None of the above

74. Let $T$ be the set of integers $\{3, 11, 19, 27, \ldots, 451, 459, 467\}$ and $S$ be a subset of $T$ such that the sum of no of two elements of $S$ is 470. The maximum possible number of elements in $S$ is
(A) 32  
(B) 28
(C) 29  
(D) 30
(E) None of the above

75. The average weight of a class of 24 students is 36 KGs. When the weight of the teacher is also included, the average weight increases by 1 KG. What is the weight of the teacher?
(A) 60 KGs  
(B) 61 KGs
(C) 37 KGs  
(D) 48 KGs
(E) None of the above

76. The monthly salaries of two persons are in the ratio of 4 : 7. If each receives an increase of Rs. 25 in the salary, the ratio is altered to 3 : 5. Find their respective salaries.
(A) 120 and 210  
(B) 80 and 140
(C) 180 and 300  
(D) 200 and 350
(E) None of the above

77. Find the greatest number of five digits which when divided by 3, 5, 8, 12 have 2 as remainder
(A) 99999  
(B) 99958
(C) 99960  
(D) 99962
(E) None of the above
78. If $324 \times 150 = 54$, $251 \times 402 = 48$ and $523 \times 246 = 120$, then $651 \times 345 =$?
   (A) 120  (B) 85
   (C) 144  (D) 60
   (E) None of the above

79. If $12 \times 7 = 408$ and $9 \times 8 = 207$, then $13 \times 7 =$?
   (A) 190  (B) 86
   (C) 765  (D) 109
   (E) None of the above

80. The ratio of marks obtained by Vinod and Basu is 6 : 5. If the combined average of their percentage is 68.75 and their sum of the marks is 275, find the total marks for which exam was conducted.
   (A) 150  (B) 200
   (C) 400  (D) 250
   (E) None of the above

81. A can copy 50 papers in 10 hours while both A & B can copy 70 papers in 10 hours. Then for how many hours required for B to copy 26 papers?
   (A) 13  (B) 25
   (C) 16  (D) 14
   (E) None of the above

82. A is twice efficient than B. A and B can both work together to complete a work in 7 days. Then find in how many days, A alone can complete the work?
   (A) 12.5  (B) 15.5
   (C) 10.5  (D) 14
   (E) None of the above

83. A 20 litre mixture of milk and water contains milk and water in the ratio 3 : 2. 10 litres of the mixture is removed and replaced with pure milk and the operation is repeated once more. At the end of the two removal and replacement, what is the ratio of milk and water in the resultant mixture?
   (A) 17 : 3  (B) 9 : 1
   (C) 3 : 17  (D) 5 : 3
   (E) None of the above
84. An engine has enough fuel to move 12 hours when its tank is 4/5 full, how much hours will it run when the tank is 1/3 full
(A) 6 hours  (B) 5 hours
(C) 8 hours  (D) 7 hours
(E) None of the above

85. Low temperature at the night in a city is 1/3 more than 1/2 high as higher temperature in a day. Sum of the low temperature and highest temperature is 100 degrees. Then what is the low temp?
(A) 45 deg.  (B) 40 deg.  (C) 35 deg.  (D) 28 deg.
(E) None of the above

86. Which of the following features are implemented directly by virtual memory?
(i) A larger virtual address space than physical memory
(ii) Allow multiple processes to share a physical memory
(iii) Higher bandwidth access to disk
(iv) A larger number of auto vectored interrupts
(v) Protection between processes
(A) (i), (ii) & (iii)  (B) (i), (ii), (v)  (C) (i), (ii), (iv)  (D) (i), (iv), (v)
(E) None of the above

87. How many bits are required to address a $4M \times 32$-bit main memory if,
(i) Main memory is word-addressable (ii) Main memory is byte-addressable
(A) 22, 24  (B) 24, 22  (C) 22, 22  (D) 24,24
(E) None of the above

88. What will be the output of the following program?
#include<stdio.h>
main()
{ float a=12,b=12;
  if (a = b)
    printf("\n a and b are equal ");
}
(A) Nothing will be printed  (B) a and b are equal
(C) Compilation error  (D) Syntax error
(E) None of the above
89. What will be the output of the following program?

```c
#include<stdio.h>

main()
{static char a[]="Bombay";
char *b="Bombay";
printf("%d %d",sizeof(a),sizeof(b));
}
```

(A) 16 (B) 11 (C) 22 (D) 72 (E) None of the above

90. The open source language used with Mozilla is

(A) M++ (B) XUL
(C) Mo Basic (D) All of the above
(E) None of the above

91. Thunder bird is a

(A) Spreadsheet application (B) Debugging tool
(C) Testing Tool (D) E-mail client
(E) None of the above

92. If \( R = (A, B, C, D, E) \) with \( AB \) as the primary key and \( F = (B \rightarrow F, A \rightarrow C, AB \rightarrow DE, AB \rightarrow F) \), Then the relation is in ______ normal form.

(A) First (B) Second
(C) Third (D) All of the above
(E) None of the above

93. In a FCFS Disk Scheduling, Consider, a disk queue with requests for I/O to blocks on cylinders in the order 98, 183, 37, 122, 14, 124, 65, 67. Make an assumption that disk head is initially at cylinder 53, Then the total head movement involved is

(A) 640 (B) 740 (C) 840 (D) 940
(E) None of the above

94. Which switching statically reserves the required bandwidth in advance?

(A) Circuit switching (B) Packet Switching
(C) Mixed Switching (D) Hybrid Switching
(E) None of the above
95. The network traffic density will be more in
   (A) Shortest path routing                        (B) Flooding
   (C) Multipath routing                           (D) Linked state routing
   (E) None of the above

96. Identify the addressing mode where the content of the program counter is added to
    the address part of the instructions in order to get effective address
   (A) Relative address mode                       (B) Indexed mode
   (C) Register indirect mode                      (D) Base register addressing mode
   (E) None of the above

97. The disadvantage of dynamic RAM over static RAM is
   (A) higher power consumption
   (B) variable speed
   (C) need to refresh the capacitor charge every once in two milliseconds
   (D) higher bit density
   (E) None of the above

98. In a memory system, four 256 × 8 PROM chips are used to make total memory of size
    1024 × 4. What is the number of address bus lines?
   (A) 4                                            (B) 8
   (C) 10                                           (D) 16
   (E) None of the above

99. Dijkstra’s banking algorithm in an operating system solves the problem of
    (A) Deadlock avoidance                           (B) Deadlock recovery
    (C) Mutual exclusion                            (D) Context switching
    (E) None of the above

100. In real-time operating systems, which of the following is the most suitable scheduling
     scheme?
     (A) round-robin                                  (B) first-come-first-served
     (C) pre-emptive                                  (D) random scheduling
     (E) None of the above