MOCK NMIMS (NMAT) – II

SECTION – A

LANGUAGE SKILLS

Direction for questions 1 – 19: Read the passages carefully and answer the questions that follow.

PASSAGE – I

Analysts of the Soviet economy are wrestling with an intriguing mystery: How can the Soviet Government claim that the industrial output goal of the just concluded five-year plan was successfully reached when almost all the available detailed production data suggest output actually fell well below the desired levels?

The suspicion is strong among many analysts that a large part of the answer to the puzzle may be the hidden performance of Soviet military industry. The mystery would be solved if, as many a analysts suspect, output of soviet military hardware was pushed beyond original plans during 1966 – 70 and many types of civilian production were cut back to free resources for military needs.

The mystery was posed sharply this month. By publication of the detailed Soviet economic report for 1970, the last year of the Eighth five-year Plan. The document gives precise production data for several dozen major industrial commodities or categories, and these can be compared with the corresponding 1970 output goals adopted in April, 1966, by the 23 rd Soviet Communist Party Congress.

The comparison shows that for about 30 major commodities or commodity groupings-ranging from steel and electric power to paper, automobiles and television sets in 1970 output was below the planned target, often substantially below. Data for only about a half dozens or so commodities or commodity grouping show that in their cases the 1970 goal of the 5 year plan was reached.

Yet over-all Soviet industrial production statistics claim that industry's output grew about 50 per cent from 1966, i.e. reaching precisely the over-all target set by the 23 rd Congress back in 1966.

The official 1970 production data makes it clear that there were very substantial discrepancies in many important cases between the original goals for last year and the more modest reality.

In the case of electric power, last year's result was 740 billion kilowatt –hours against the planned goal of 830 billion to 85 0 kilowatt-hours. Steel production last year came to 116 million metric tons, not the 124 million to 129 million tons originally projected.

The Soviet automobile industry was expected to produce 700,000 to & 800,000 passenger cars last year, but the reality was less than half that number or 344,000 vehicles. Paper output last year was planned for 5 million to 5.3 million metric tons; the reality was 4.2 millions tons. There were only 95.2 million metric tons of cement turned out last year, not the 100 million to 105 million tons called for in the plan.

Some consumer durable goods fell particularly sharply below their output goals. Thus, the plan called for 1970 production of 7.5 million to 7.7 million television sets and 5.3 million to 5.6 million refrigerator. Actual output last year was 6.7 mill ion television sets and 4.1 million refrigerators.

The brighter areas-where goals were fulfilled-were few. Perhaps the most important was Oil, whose 1970 output of 353 million metric tons compared with the goal of 345 million to 355 million tons. Shoes, furniture and radios were among the few other categories where production goals were apparently fulfilled.

Two explanations are being seriously considered by analysts pondering the puzzle posed by the conflict between Soviet production statistics and Soviet fulfillment claims.

One possibility is that Soviet military production rose sufficiency to compensate for the short-falls in civilian industry. The Soviet Government does not publish data on output of military items ranging from intercontinental missiles and hydrogen bombs to submarines and machine guns. But many estimates have indicated a rapid build-up of Soviet missile, naval and other military strength in recent years. In addition the Soviet Union, is known to have provided large quantities of modern military equipment to N. Vietnam, Egypt and other friends and allies.

Thus, some analysts suggest that Soviet planners diverted, substantial quantities of capital, labour and raw materials during the last five years from many areas of civilian production to date & possible an accelerated growth of military output.

A second possibility suggested by some analysts is that there is egregious growth in the aggregate Soviet statistics of industrial production expressed in value terms. Theoretically, Soviet measures of gross 'industrial output are in constant prices, but during the last five years many new items have been introduced into production and their prices may have been relatively high, thus giving the large volume of new production a disproportionately large and inflationary weight in the over-all output index.

It is characteristic of-the continuing rigid limits on economic discussion in the Soviet Union that there has bean no explicit reference to the discrepancy between, the official claims of fulfillment of the industrial output goal and the very different picture shown by the direct comparisons of goals with output for numerous specific commodities.

But the failure to reach so many output goals could become a major issue if there is a power struggle among & those competing for the highest positions in the Soviet Communist party, positions to be filled at next month's 24th party Congress.

1. The article explains that some of the discrepancy between Soviet claims of economic-growth and available data might be attributable to
    (A) Soviet concern about the disclosure of trade secrets
    (B) undisclosed military production
    (C) Soviet failure to achieve desired goals
    (D) unwillingness of Russia to disclose all the facts

2. How many 5 Year Plans has the Soviet Union had?
    (A) 2   (B) 4   (C) 6   (D) 8

3. In how many of the commodity groupings was the 1970 production goal achieved?
    (A) 3   (B) 6   (C) 12   (D) 15

4. Which of the following is mentioned by the author as being a major commodity group?

   I. Television sets   II. Electric power   III. Steel

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

5. According to Soviet claims, industrial output

   (A) exactly equaled goals set in 1966   (B) exceeded expectations by as much as 50%

   (C) was overestimated by the Twenty-third Congress   (D) failed to measure up to Red China's output

6. The most important commodity group where production goals were achieved is

   (A) shoes   (B) steel   (C) oil   (D) cement

7. Those who adopt the inflation theory to explain the Soviet economic mystery feel that

   (A)   the Russians normally inflate their claims

   (B)   global inflation has finally penetrated-the iron Curtain

   (C)   deflation has offset the recent inflation in the Soviet Union

   (D)   new products now being produced in the Soviet Union have relatively high prices

8. What have the Soviet done to explain the discrepancy?

   (A)   They blame the capitalist influence of the West.

   (B)   They refer to articles written by Soviet economists

   (C)   The Russians contend that much progress has taken the form of improved technology

   (D)   The Russians have given no explanation

9. What could be the possible consequence of Soviet failure to attain output goals?

   (A) A cultural revolution   (B) An economic recession

   (C) A political power struggle.   (D) A re-evaluation of reporting techniques.

10. What led the author to believe that the Russians had not achieved their production goals?

    (A)   The reports for the specific commodities differed from the overall Soviet claims

    (B)   Soviet economists admitted their over-optimism

    (C)   World trade statistics conflicted with Russian reports

    (D)   Inconsistencies in Soviet newspapers aroused the author's suspicions

PASSAGE – II

The other day we heard someone smilingly refer to poets as dreamers. Now, it is accurate to refer to poets as dreamers, but is not discerning to infer, as this person did, that the dreams of poets have no practical value beyond the realm of literary diversion. The truth is that poets are just as practical as people who build bridges or look into microscopes and just as close to reality and truth. Where they differ from the logician and the scientist is in the temporal sense alone; they are ahead of their time, whereas logicians and scientists are abreast of their time. We must not be so superficial that we fail to discern the practicable ness of dreams. Dreams are the sunrise streamers heralding a new day of scientific progress, another forward surge. Every forward step man takes, in any field of life, is first taken along the dreamy paths of imagination. Robert Fulton did not discover his steamboat with full steam up, straining at some Hudson River dock ; first he dreamed the steamboat, he and other dreamers, and then scientific wisdom converted a picture in the mind into a reality of steel and wood. The automobile was not dug out of the ground like a nugget to gold; first men dreamed the automobile, and afterward, long afterward, the practical minded engineers caught up with what had been created by

winging fantasy. He who looks deeply and with a seeing eye into poetry of yesterday finds there all the cold scientific magic of today and much which we shall not enjoy until some tomorrow. If the poet does not dream so clearly that blueprints of his vision can immediately be drawn and the practical conversions immediately effected, he must not for that reason be described as merely the mental host for a sort of harmless madness. For the poet, like an engineer, is a specialist. His being, turned to the life of tomorrow, cannot be turned simultaneously to the life of today. To the scientist h e says, "Here, I give you a flash of the future". The wise scientist thanks him, and takes that flash of the future and makes it over into a fiber of today.

11.   The author's attitude towards poets differs from that of the general public in that:
      (A)   most people have a patronizing attitude while the author is in awe of poets
      (B)   most people take poets to be impractical dreamers the author has a great deal of faith in those dreams
      (C)   contrary to popular belief the author looks upon poets as chimerical visionaries
      (D)   he holds them in high esteem

12.   From the para one can safely conclude that :
      (A)   Poets inspire scientific research
      (B)   Without imagination there would be no progress
      (C)   The greatest achievements of today were once fanciful dreams of some people
      (D)   Poets live in the intangible future

13.   Which of the following statements is least erroneous?
      (A)   The poet has more faith in the future than all the scientists and artists
      (B)   The author lays more faith in the poets than most of us
      (C)   All progress would stop if poetry turned realistic
      (D)   None of the above

14.   What is common to both Poets & Scientists?
      (A) Both can change impossible to possible   (B) They live in a world of their own
      (C) They are cut-off from reality   (D) Both dare to dream the seemingly impossible

PASSAGE – III

In a country like India, both poverty and economic growth pose serious environmental challenges. In their desperate attempt to survive today, people are forced to forsake their tomorrow and their environment. A classic example of the phenomenon can be found in impoverished tribal areas where millions of households are forced to cut forests everyday and sell wood to get at best, half-a meal a day. And all this does not come cheaply in terms of personal costs, as some people often tend to argue. Tribal women wake up before dawn, walk miles to the dwindling forests to cut and bundle wood and then carry the load tens of kilometers to a nearby town. And after all that, what they get is pittance.

At the same time uncontrolled economic growth, urbanization and industrialization can rip apart forests, mine the overuse ground water systems, dam rivers, pollute water and air, stuff the land with unknown poisons. In this way, economic growth not just poisons and destroys cities, but also erodes the rural resource base, setting in motion a vicious cycle. Rural ecosystems unable to support their growing populations push more and more people into the cities.

There is therefore, a golden mean, a balance, as in all things ecological between poverty and wealth, between need and greed. This is an area for values, education, culture, social aspirations, human satisfaction-especially amongst those who have them in sufficient measure- in things other than what economists call goods.

The new economic policies of the Government built around certain concepts of economic liberalization and structural adjustment have raised numerous questions in the minds of the environmentally – concerned. One set of critics believes that these policies will enhance impoverishment. Apart from being bad in themselves, the policies will have a negative environmental impact.

There is another set which believes that these policies will enhance entrepreneurship and processes of wealth generation and thus reduce poverty. But this set too does not know how these processes will be controlled to ensure a good and clean environment.

If the government could not give the country a good economic governance and hence its role must be curtailed, then what is the guarantee that the same corrupt, inefficient, partisan and soft government, will give us good environmental governance, where the trade-offs, especially in a poor country like India, are even more difficult to assess and understand?

There is of course, another set of concerns which is as follows: even if the new policies generate wealth, will this wealth not be built on borrowed consumption patterns from industrialized countries? Will these consumption patterns not devastate our culture and environment, that is whatever that remains of them?

15. As far as the author's stand regarding the credibility of the government is concerned, it can best be described as :
    (A) optimistic　　　　　　(B) humorous　　　　　　(C) skeptical　　　　　　(D) serious

16. The author suggests that in order to attain the golden mean, we must :
    (A)　carefully understand the economic implications of our actions
    (B)　shun the self-righteous moralists and look for practical solutions
    (C)　relate the tertiary industries to the secondary ones
    (D)　try to look beyond mere economic definitions

17.　The author is most likely to agree with the idea that :
    (A)　Western styles of ecological management are not necessarily disastrous
    (B)　India should not merely copy the Western models of growth but try to evolve something of its own
    (C)　India should try to emulate the better aspects of the Western models and try to exploit forest resources to the fullest
    (D)　India should always strive to attain an ecological harmony commensurate with the need and aspirations of the teeming millions

18. The theme of the passage is :
    (A)　a discussion of the genesis and perpetration of environmental degradation
    (B)　a critical analysis of the role of rural ecosystems in maintaining the fragile ecological balances
    (C)　a description of the role of government in maintaining stable ecosystems
    (D)　the role of western growth models in the environmental degradation in India

19. The author is most likely a/an:
    (A) militant environmentalist　　　　　　　　(B) newspaper editor
    (C) human rights activist　　　　　　　　　　(D) industrialist

Directions for questions 20 – 28: Select one sentence to complete the given statement in the form of a small paragraph. For each item you are given the frame of a 3-sentence paragraph. The middle sentence has been removed. Three possible fillers (A, B, C) are provided for this gap (…). Any one of them, OR more than one OR none of them might fit. The completed statement must be a compact and well organised presentation of the idea indicated by the first and third sentence. Select the appropriate answer option from (A) to (D) and indicate it.

20. Most people have certain prejudices against certain types or styles of writing.(…) But these are common and meaningful modes of communication that we need to study and understand.

(A) For example, popular science and children's fiction are considered unintellectual

(B) Some of us would regard 'Sunday magazine' journalism and advertising as cheap and even improper.

(C) Great essayists have always been a source of inspiration to young writers

The blank can be filled by –

(A) only A   (B) only B   (C) only C   (D) A or B

21. Teachers and professionals imparting technical training use speech, writing and diagrams in various combinations (…) Responding to this the Technical Education Council has recommended a course on "communication theory" as common core item.

(A) Yet technical students receive no instruction in the theory and use of information structures in communication

(B) Soon interactive video will be a common feature of technical education

(C) Steadily failing costs have brought sophisticated information technology to the door of the typical classroom

The blank can be filled by –

(A) only A   (B) only B   (C) only C   (D) A or B

22. I am pleased that you have published my article 'Managing Publicity. (…) As I have used company materials this omission has caused me some embarrassment.

(A) However, you have failed to indicate my company affiliation along with my name

(B) The editor has done a good job as shortening my rather long original text

(C) But there is no reference to my position as HRD head at AA Consultants

The blank can be filled by –

(A) only A   (B) only B   (C) only C   (D) A or B

23. The new telecom companies take a radical approach to product development (..) They think instead of what consumers want and then develop the needed technology

(A) They invest very heavily in state-of-art technology

(B) They do not rely primarily on simulated studies product acceptability

(C) They do not invent a product with old technology and ask Marketing to sell it

The blank can be filled by –

(A) only A   (B) only B   (C) only C   (D) A or B

24. Herbal medicines worth Rs. 900 crores are produced annually in India (…) Even the office of the Drugs Controller of India acts only in response to specific complaints.
    (A)   However the investment in R & D across the industry is low
    (B)   The present rules for ensuring quality are reasonably comprehensive and effective
    (C)   The competition to corner the market has however led to some questionable practices that are to the consumer's disadvantage

    The blank can be filled by –
    (A) only A   (B) only B   (C) only C   (D) A or B

25. Cuban Vice-President Carlos keeps reminding us that Cuba is not China. (…) Both the indecisiveness of the regime and the hostility of the US are hindrances.
    (A)   Economic reforms are implemented at a much slower pace in Cuba
    (B)   Sugar and tourism are the main earners of Cuba's foreign exchange
    (C)   Cuba's moves towards liberalization have been minimal and cautious

    The blank can be filled by –
    (A) only A   (B) only B   (C) only C   (D) A or C

26. We agree that our articles pointed out the level of local support for the law and order forces trying to capture Veerappan. (…) There is no doubt that the man is a criminal and, should be treated as one.
    (A)   However, we did not blame the two state government for this
    (B)   But nowhere did we condone the man's actions
    (C)   The real issue is the need to revamp the entire policy regarding sandalwood

    The blank can be filled by –
    (A) only A   (B) only B   (C) only C   (D) A or C

27. A bill now before the US Congress poses a threat to Indian software specialists. (…) These fees from employers are to be used for training programmes for US nationals in key areas.
    (A)   Any agency hiring foreign workers will have to pay a special fee
    (B)   Workers with special skills will be charged an employment permit fee
    (C)   The licensing fees payable to the software subcontractors will be raised

    The blank can be filled by –
    (A) only A   (B) only B   (C) only C   (D) A or C

28. The fight to preserve the environment calls for good science. (…). There is no point in environmental science reports that get locked away in secret government files.
    (A)   Strong financial support from the government is essential
    (B)   The voluntary sector too should take bold initiatives
    (C)   This implies a culture of openness and transparency, not just funding

    The blank can be filled by –
    (A) only A   (B) only B   (C) only C   (D) A or C

Directions for questions 29 – 34: **Select the appropriate meaning of the phrase given in the question.**

29. Of the first water
    (A) trifle   (B) genuine   (C) of the highest quality   (D) shoddy

30. To fit the bill

(A) to misappropriate   (B) to bribe   (C) to be suitable   (D) to pay the bill

31. A wild goose chase

(A) a victorious attempt   (B) a sly attack   (C) an effort in vain   (D) an odyssey

32. To kick the bucket

(A) to enjoy oneself   (B) to eat greedily   (C) to die   (D) to monopolise

33. At sixes and sevens

(A) in apple pie order   (B) in disarray   (C) at gunpoint   (D) in an order

34. **PERADVENTURE**

(A) doubt   (B) stroll   (C) exemplary daring   (D) travel

Directions for questions 35 – 36: Select the option that most suitably fills ups the blanks

35. Traffic signals in the country X operate in a reverse fashion : people move when it is ___ and have to stop when it is ___.

(A) amber, time   (B) green, red   (C) red, green   (D) red, raining

36. Can you call a ___ seeker of personal goals an ___? I doubt whether you can.

(A) relentless, atheist   (B) steady, pessimist

(C) relentless, aimless person   (D) relentless, agnostic

Directions for questions 37 – 40: In the following questions, a related pair of words or phrases is followed by four lettered pair of words or phrases. Select by lettered pair that best expresses a relationship DISSIMILAR to that expressed in the original pair.

37. **MIGRANT : SETTLED**

(A) static : dynamic   (B) mendicant : rich   (C) jab : praise   (D) gallant : brave

38. **URSINE : BEAR**

(A) leucine : lion   (B) vulpine : fox   (C) porcine : pig   (D) lupine : wolf

39. **BUVETTE : TAVERN**

(A) butte : hill   (B) esemplastic : unifying   (C) folie : madness   (D) hymen : song

40. **ASTROLATRY : CELESTIAL BODIES**

(A) zoolatry : zoo   (B) Mariolatry : Virgin Mary

(C) demonolatry : demon   (D) idolatry : idols

SECTION – B
QUANTITATIVE ABILITY + DI + DS

41. A pineapple costs Rs. 7 each. A watermelon costs Rs. 5 each. Z spends Rs. 38 on these fruits. The number of pieapples purchased is
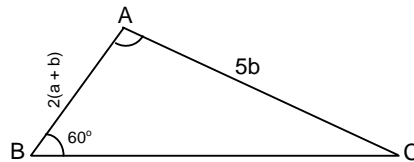
(A) 2   (B) 3   (C) 4   (D) Can't say

42. The area of the shaded portion of the figure given below is
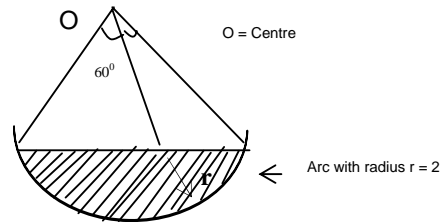
(A) $\dfrac{4\pi}{3} - \dfrac{\sqrt{3}}{6}$ (B) $\dfrac{2\pi}{3} - \dfrac{\sqrt{3}}{6}$ (C) $\dfrac{\pi}{3} - \sqrt{3}$ (D) None of these

43. For a college debating team, 5 gents and 3 lady students were available. It is desired to select 2 gents and 2 ladies to form the team. In how many ways, the team can be selected?

(A) 30   (B) 60   (C) 15   (D) 12

44. In the figure given below, what is the ratio of a to b?

(A) 2/1   (B) 4/1   (C) 1/4   (D) None of the above

45. Three friends had dinner at a restaurant. When the bill was received, Roopa paid 2/3 as much as Shilpa paid and Silpa paid ½ as much as Deepa paid. What fraction of the bill did Shilpa pay?

(A) 15/24   (B) 12/31   (C) 3/11   (D) 1/3

46. A rectangle has width a and length b. If the width is decreased by 20% and the length is increased by 10%, what is the new area of the rectangle?

(A) 0.9 ab   (B) 0.92 ab   (C) 1.1 ab   (D) None of the above

47. Shyam was to appear in four papers - English, Tamil, History and Science – each carrying a maximum of 100 marks. His father offered him a Shakespeare book as a present if he got 60% or more in both English and History, provided he got and aggregate of at least 200. He also offered him a Bharathi book as a present if he got 60% or more in both Tamil and History provided he got an aggregate of at least 200 (Shyam was eligible for both the presents). As it turned out, Shyam got the Shakespeare book but not the Bharathi book. If he scored 64 in both English and History, the minimum that he got in Science was.

(A) 36   (B) 56   (C) 22   (D) 13

48. Solve the system of equations

$a + b = 2\dfrac{1}{2}(a - b);$

$ab = 21$ given that $b > a$.

(A) $(-7, -3)$ (B) $(3, 7)$ (C) $(-7, 3)$ (D) $(-3, -7)$

49. Two boys A and B start as office attenders in two different establishments. A starts on a salary of Rs. 450 with an annual increment of Rs. 25, and B on a starting of Rs. 60 with an annual increment of Rs. 20. After how many years will A begin to draw a salary more than what B will draw?

(A) 30   (B) 31   (C) 32   (D) 29

50. 47 pens costs Rs. 1_8._7. Then what does each pen cost, where numbers at "_" are not visible or are written in illegible hand?

(A) Rs.3.23   (B) Rs. 2.44   (C) Rs. 2.31   (D) Rs. 3.21

51. A alone can finish a work in 15 days and B alone can do it in 25 days. If they work together and finish it, then out of a total wages of Rs.64, A will get:

(A) Rs.34   (B) Rs.30   (C) Rs.24   (D) Rs.40

52. The sale recorded by a dealer in a week from Monday to Saturday are as follows:

Rs. 210000 per day for the first three days

Rs. 81000 on Thursday

Rs. 45000on Friday

Rs. 156000 on Saturday

Find his average sales per day during that week.

(A) 152000   (B) 125000   (C) 135000   (D) 132000

53. A trader giving a discount of 11.11% on his product. At how many percent above the cost price does he mark his goods so that he makes a gain of 14.28%. ?

(A) 28.56%   (B) 35%   (C) 22.22%   (D) None of these

54. Two men, Mohit and Neerej started walking towards each other, simultaneously from places P and Q respectively, which are 72 miles apart. They met after 6 hours. After their meeting, Mohit reduced his speed by 1 mile/h and Neerej increased by 1 mile/h. They arrived at Q and P respectively at the same time. Find their initial speeds :

(A) 6 ½ miles/h and 7½ miles/h   (B) 6 miles/h and 7 miles/h

(C) 6.5 miles/h and 5.5 miles/h   (D) 15 ½ miles/h and 9 miles/h

55. The weight of an empty bucket is 25% of the weight of the bucket when filled with some liquid. Some of the liquid has been removed. Then, the bucket, along with the remaining liquid, weighed three-fifth of the original weight. What fractional part of the liquid has been removed?

(A) 2/5   (B) 8/15   (C) 7/13   (D) 5/8

56. If the square of a two digit number is reduced by the square of the number formed by reversing the digits of the number, the final result is.

(A) divisible by 11   (B) divisible by 9   (C) necessarily irrational   (D) (A) & (B) both

57. Mrs. Kapoor goes to the market and after hassling with the fruit vendor is able to get the price of a dozen bananas reduced by Rs.1, from the initial price. Thus she gets 1 bananas extra for every rupee saved. The initial and final prices of a dozen bananas are (in Rs.) :

(A) 9, 8   (B) 12, 11   (C) 14, 13   (D) 24, 23

58. A can build a wall in the same time in which B and C together can do it. If A and B together could do it in 25 days and C alone in 35 days, in what time could B alone do it?

(A) 175 days   (B) 100 days   (C) 90 days   (D) None of these

59. A company makes toy cars at a production cost of Rs 17.50 per unit. A market survey reveals that 10% of the product will be lost, 5% will be rejected, 5% will decay and 5% will be stolen. At what unit price must the company sell it to realize 28% profit ?

(A) Rs. 29.86   (B) Rs. 28   (C) Rs. 31.70   (D) Rs. 20.5

60. Divya made a profit of 25% when selling a salwar Kameez at Rs. 6000. If she has to now pay Rs. 600 more for the same dress, what should be her new selling price in order to make the same percentage profit?

(A) 8250   (B) 7500   (C) 6750   (D) 6600

61. With an average speed of 50 km/hr a train reaches its destination in time. If it goes with an average speed of 40 km/hr, it is late by 24 minutes. The total journey is

(A) 40 km   (B) 70 km   (C) 30 km   (D) 80 km

62. An employer reduces the number of his employees in the ratio 12 : 7 and increases their wages in the ratio 14 : 15. State whether his bill of total wages increases or decreases and in what ratio

(A) 5 : 8   (B) 8 : 5   (C) 10 : 11   (D) 9 : 8

63. A train which travels at the uniform rate of 20 m per second leaves Madras for Arconum at 6:30 a. m. At what distance from Madras will it meet a train which leaves Arconum for Madras at 7:15 a. m., and travels one-fourth faster than the former does, the distance from Madras to Arconum being 162 km?

(A) 72 km.   (B) 90 km.   (C) 102 km.   (D) None of these

64. The average age of a husband and wife at the time of their marriages was 25 years. A son was born to them two years after their marriage. The present average age of all three of them is 24 years. How many years is it since the couple got married?

(A) 5 yrs   (B) 6 yrs   (C) 8yrs   (D) 9 yrs

65. If the harmonic mean of two numbers is to their Geometric mean as 24 to 25. Find the ratio of numbers.

(A) 2/3, 3/2   (B) 4/3, 3/4   (C) 4/9, 9/4   (D) 16/9, 9/16

66. A five digit number divisible by 3 is to be formed using the numerals 0, 1, 2, 3, 4 and 5, without repetition. The total number of ways in which this can be done is

 (A) 216   (B) 240   (C) 600   (D) 3125

67. The entrance fee for the movie "LAJJA" in the ORIENT cinema is Rs. 50. When the price of the ticket was lowered, the number of visitors increased by 60% and the box office collection recorded an increase of 36%. Find the reduction in the ticket price.

(A) Rs. 12.50   (B) Re. 5   (C) Re. 7.50   (D) Re. 6

68. 15 men take 21 days of 8 hours each to do a piece of work. How many days of 6 hours each would 21 women take, if 3 women do as much work as 2 men?

(A) 20   (B) 18   (C) 25   (D) 30

69. A wheel makes 1000 revolutions in covering a distance of 88 km. The diameter of the wheel is:

(A) 24 m   (B) 40 m   (C) 28 m   (D) 14 m

70. The value of $\dfrac{(2.3)^3 - 0.027}{(2.3)^2 + 0.69 + 0.09}$ is

(A) 2   (B) 3   (C) 2.327   (D) 2.273

Directions for questions 71 – 79: The problems below contain a question and two statements giving certain data. You have to decide whether the data given in the statements are sufficient for answering the questions. The correct answer is

A.   If Statement I alone is sufficient but Statement II alone is not sufficient.

B.   If Statement II alone is sufficient but Statement I atone is not sufficient.

C.   If both statements I and II together are sufficient but neither of statements alone is sufficient.

D   If Statement I and II together are not sufficient.
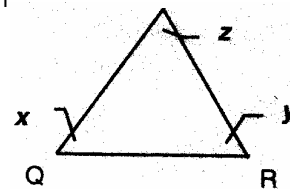
71.   f 'x' is an integer, is x/2 an even integer?

   I.   x is multiple of 2   II.   x is multiple of 4

72.   s pq a prime number?

   I.   p is a prime number   II.   q is a fraction

73.   Is PQ > RP?

   I.   x = y   II.   y = z

74.   a, b, c are in geometric progression. Is the common ratio negative?

   I.   b is less than a   II.   abc is greater than ac

75.   If 5 is added to the numerator and denominator each of the fraction a/b, will the new fraction be less than the original one?

   I.   a =101, b = 161   II.   a > b, a and b are real numbers.

76.   What is the area of right angled triangle ABC?

   I.   The hypotenuse BC = 8   II.   AC = 4

77. When a body falls from rest its distance from the starting point varies as the square of the time it has fallen. How far does it fall in 10th second?

    I.   it falls through 122.6 m in 5 seconds.   II.   it falls through 490.4 m.

78. How many revolutions does a cycle wheel make in traveling one km?

    I.   It is pedalled at the speed of 3 kms an hour

    II.   The height of the topmost point of the wheel from the ground is 1.3 meters.

79. Is b negative?

    I. ab^3 is negative   II. a^3b is negative

Directions for questions 80 – 83: Each question given below is followed by various steps. Some or all the steps may be required to find correct answer. In each case, decide the steps which are both correct and necessary to answer that questions and accordingly choose your answer. If all the steps are not given, choose the ones out of the given which are correct as well as necessary.

80. A trader sells two articles at the same sales price. On one of the articles, he makes a profit of 20% while on the other, he incurs a loss of 15%. If the sales price of both the articles is Rs. 10,200 each what is the overall profit/loss made by the trader?

    (a) Calculate the profit earned on the first article and the loss incurred on the second article

    (b) Calculate the cost price for both the articles.

    (c) Deduct the sum of the cost prices of both articles from Rs. 20,400,

    (A)   All (a), (b) and (c) are correct and necessary

    (B)   Only (b) and (c) are correct and necessary

    (C)   Only (a) and (c) are correct and necessary

    (D)   Only (c) is correct and necessary

81. A sum of Rs. 25000 is invested at the simple rate of interest of 12.5% p.a. How much interest would it earn in a span of 5 years?

    (a) Calculate the simple interest for one year   (b) Multiply (a) by 5

    (c) Calculate the simple interest for 5 years

    (A)   Only (c) is correct and necessary

    (B)   Only (a) and (b) are correct and necessary

    (C)   Either (a) and (b) together or (c) alone is correct and necessary

    (D)   Only (a) is correct and necessary

82 From a 20 litre mixture of water and milk, containing water and milk in the ratio 1:4, 2 litres of mixture is removed and replaced by milk. What would be the ratio of water and milk in the resultant solution?

    (a)   Subtract the quantities of water and milk in the 2 lit. mixture from those in the 20 litres mixture respectively.

    (b)   Calculate the individual quantities of water and milk in the original solution of 20 litres as well those in the 2 litres.

    (c)   Add 2 litres to the quantity of milk obtained as per step (a) and determine the required ratio.

    (A)   All the steps (a), (b) and (c) are correct and necessary, to be performed in the order of (b) - (a) - (c).

    (B)   All the steps (a), (b) and (c) are correct and necessary, to be performed in the order of (a) - (b) - (c).

    (C)   Only (b) and (c) are correct and necessary.

    (D)   All the steps (a), (b) and (c) are correct and necessary, to be performed in the order of (a)- (c) – (b).

83. A room of the size 30 ft. (length) × 15 ft. (breadth) × 12 ft (height) is to be painted. What would be the total cost of painting if the unit cost of painting is Rs. 20 per sq. ft.?

    (a) Calculate the total surface area of the room by using the formula:

        Total surface area = 2 (l × b + b × h +l × h)

    (b) Multiply the total surface area, as obtained in (a) above by Rs. 20.

    (c) Calculate the volume of the room by using the formula : "V = l × b × h", and multiply it by Rs 20.

    (A) only (a) is correct and necessary.   (B) only (c) is correct and necessary.

    (C) only (a) and (b) are correct and necessary.   (D) none of the steps is correct and necessary.

Directions for questions 84 – 91: Following graph gives data about the population of Mumbai over two decades. The population figures are given for Mumbai Island, Mumbai Suburbs, Greater Mumbai and Total population of Mumbai on Y1 axis on the left. Further, the population figures for Kalyan, Thane and Virar are given on Y2 axis on the right.
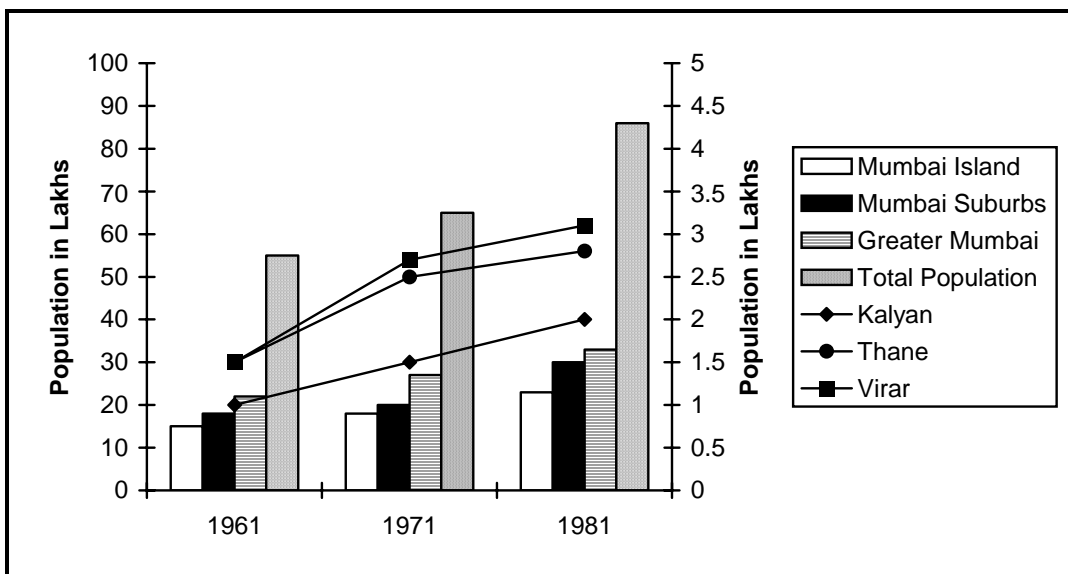

84. Which of the following shows the maximum % increase in population?

    (A) Thane, 81   (B) Virar, 71   (C) Kalyan, 81   (D) Thane, 71

85. Which of the following shows the minimum % increase in population over the given period?

    (A) Mumbai Island   (B) Mumbai Suburbs   (C) Greater Mumbai   (D) Total population

86. Which of the following shows a constant % increase in population over the given period?

    (A) Mumbai Island   (B) Mumbai Suburbs   (C) Greater Mumbai   (D) Total population

87. In 1961, the population of suburbs and island is what fraction of total population?

    (A) 33/55   (B) 3/5   (C) 11/55   (D) 'A' or 'B'

88. The population of Kalyan and Thane as a fraction of total population has

    (A) Increased over the given decades   (B) Decreased over the given decades

   (C) Remains constant over the decades   (D) None of these

89. Assuming that the total population increases at the same rate then the 'total population of Mumbai in the year 2001 will be (in lakhs)

(A) 115.6   (B) 134.5   (C) 139.8   (D) 142.3

90. By what % has the % increase in population in 1971 for Mumbai suburbs been more than the % increase in the population in 1981 for Greater Mumbai?

(A) 24%   (B) – 38%   (C) 44%   (D) – 60%

91. What is the difference in the % increase in the population of Virar and Mumbai island from 1961 to 1981?

(A) 12   (B) 28   (C) 53   (D) 62

Directions for questions 92 – 95: refer to the pie-chart given below:

Distribution of materials in Ghoshbabu's body (as % of total body weight)
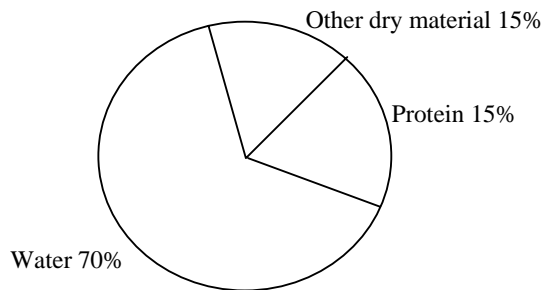
Occurrence of proteins in different organs in Ghoshbabu's body

Other dry material 15%
Protein 15%
Water 70%

Others 52%
Skin 8%
Bones 15%
Muscles 25%
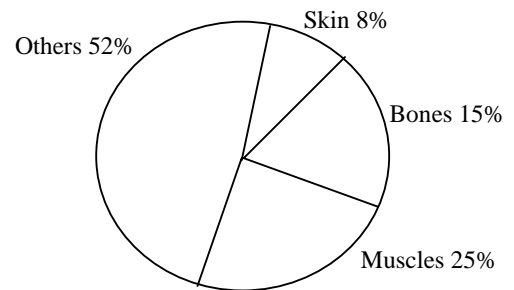
92. What fraction of Ghosh babu's weight consists of muscular and skin proteins?

(A) 1/13   (B) 1/30   (C) 1/20   (D) Cannot be determined

93. Ratio of distribution of protein in muscle to the distribution of protein in skin is

(A) 3 : 1   (B) 3 : 10   (C) 1 : 3   (D) $3\frac{1}{2}$: 1

94. What percent of Ghoshbabu's body weight is made up of skin

(A) 0.15   (B) 10   (C) 1.2   (D) Cannot be determined

95. In terms of total body weight, the portion of material other than water and protein is closest to

(A) 3/20   (B) 1/15   (C) 85/100   (D) 1/20

Directions for questions 96 – 100: are based on the following bar graph.

(Number of Industrial Townships in 1978 is 1, 60, 000)
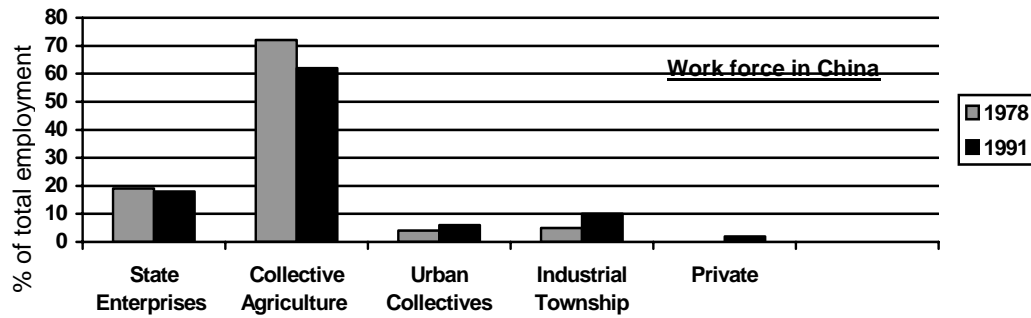
96. If the number of people employed in State Enterprises in 1991 was 2.5 million, then the difference in the number of people employed in Urban Collective and industrial townships in 1991 was closest to…

(A) 554000   (B) 634000   (C) 734000   (D) None of these

97. Which was the first year when people were employed in private enterprises?

(A) 1978   (B) 1991   (C) 1989   (D) Cannot be determined

98. If it is known that the total work force in China increases at a simple rate of 10% per annum, then by what percent does the number of people employed in the Urban Collectives change?

(A) 150   (B) 190   (C) 250   (D) Cannot be determined

99. It can be inferred that, in absolute terms,

(A) Collective agriculture has lost its charm for the work force

(B) Collective agriculture remains at the 1978 level, in terms of attracting the work force.

(C) Collective agriculture has succeeded in attracting a larger work force in 1991 than in 1978

(D) None of the above can be inferred.

100. How many new industrial townships have been set up in China from 1978 to 1991?

(A) 150   (B) 1500   (C) 15000   (D) cannot be determined

SECTION – C
INTELLIGENCE AND LOGICAL REASONING

Directions for questions 101 – 104: In each question given below is a statement of two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is/are implicit in the statement.

    (A) if assumption I is implicit,   (B) if assumption II is implicit,

    (C) if neither I nor II is implicit, and   (D) if both I and II are implicit,

101. **Statement**   **:**   Of all the newspapers published in Mumbai, readership of the "Times" is the largest in the Metropolis.

    Assumptions   **:**   (I)   Times is not popular in monfussil areas

                        (II)   Times has the popular feature of cartoons on burning social and political issues.

102. **Statement**   **:**   If any time you have financial difficulty, come to me; I will help you out.

    Assumptions   **:**   (I)   You have financial difficulties

                        (II)   I promise to provide you financial help

103. **Statement**   **:**   The entire north India, including Delhi and the neighbouring states remained 'Powerless' the whole day of 19th December 97 as the northern grid supplying electricity to the seven states collapsed yet again.

    Assumptions   **:**   (I)   The northern grid had collapsed earlier

                        (II)   The grid system of providing electricity to a group of states is an ineffective type of power supply system

104. **Statement**   **:**   Among all the articles, the prices of personal computers show the highest decline from June 1997 to December 1997.

    Assumptions   **:**   (I)   Comparative prices of all the articles in June and December 1997 were available in January 1998.

                        (II)   Prices of personal computers were higher in the first six months than in the last six months of 1997

Directions for questions 105 – 107: In each question below are given two statements followed by two conclusions – I and II. You have to take the given Statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows, from the two statements, disregarding commonly known facts.

 Given answer :

    (A) if only conclusion I follows   (B) if only conclusion II follows

    (C) if either I or II follows   (D) if neither I nor II follows

105. **Statements**   **:**   Some nurses are nuns.   Maya is a nun.

    Conclusions   **:**   I. Some nuns are nurses   II. Some nurses are not nuns.

106. **Statements**   **:**   All apples are oranges   Some oranges are papayas

    Conclusions   **:**   I. Some apples are papayas   II. Some papayas are apples

107. **Statements**   :   On Dec. 15, there was a big cyclone near Vaizag on the east coast of India.

                                          On 16th December, the local police gave a statement that a band of fishermen

                                          who went fishing on the high seas on Dec. 15 was missing

      Conclusions   :   I. The entire band of fishermen must have been drowned in the high seas

                                          II. Some of the fishermen from that band may survive

108. What would be the serial number of the word **MOTHER** in a dictionary consisting of words formed by letters in MOTHER arranged in an alphabetical order?

      (A) 307   (B) 308   (C) 309   (D) 312

Directions for questions 109 – 110: In the following questions, two statements are followed by two inferences. Mark your answer as:-

      A.   If only inference I follows   **B.   If only inference II follows**

      C.   If both of them follow   **D.   If neither of them follows**

109. All Peter are Piper. Some Pickle are Piper

      I.   Some Peter are Pickle

      II.   Some Pickle are Peter

110 All boats are ships. Some ships are jinxed vessels

      I.   Some boats could be jinxed vessels

      II.   Some jinxed vessels could be ships but not boats

Directions for questions 111 – 115: In a language, words are made with only three letters A, B and C. The words follow a fixed sequence.

(1) If X is a viable word sequence ending with A then a B can be added at the end.

(2) If CX is a viable word sequence then so is CXX.

(3) If there are three A's i.e. AAA then the trio can be replaced by a single B.

(4) If there are two B's i.e. BB then the pair can be dropped altogether.

It is known that CA is a viable word.

Example: To obtain CBAAB from CA, the minimum number of steps is:

Step 1: CA

Step 2: CAA

Step 3: CAAAA

Step 4: CBA

Step 5: CBAB

Step 6: CBABBAB

Step 7: CBAAB

In one step only one operation can be carried out.

111. What is the minimum number of steps required to obtain CBBAA from CA?

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

112. What is the minimum number of steps required to obtain CBBBA from CA?

      (A) 8   (B) 9   (C) 10   (D) 11

113. What is the minimum number of steps required to obtain BC from CA?

(A) 3   (B) 5   (C) 6   (D) not possible

114. Starting from CBAB, what is the minimum number of steps required to obtain CBBAB

(A) 4   (B) 5   (C) 6   (D) 7

115. How many steps are required to get CABAB from CA?

(A) 3   (B) 4   (C) 5   (D) 6

Directions for questions 116 – 119: Answer the questions on the basis of information given below.

Six nurses Agnes, Bethy, Chandrika, Divya, Evita and Faria are working for Marium hospital, which requires three nurses per day. The availability of various nurses on various days of the week is as follows.

(1) Agnes and Bethy will not work together and both of them will not be available on Mondays and Thursdays.

(2) Chandrika is a dedicated nurse and works 7 days a week.

(3) Divya is married and will not be available on weekends.

(4) Evita and Faria will always work together, if possible and one of them will have her off on Monday and the other on Wednesday.

(5) Any triplet can not be repeated on two consecutive days.

116. Who will be working on any Monday?

(A) Chandrika, Divya, Evita   (B) Chandrika, Evita and Fana

(C) Chandrika, Divya, Faria   (D) Either 'a' or 'c'

117. If Agnes, Chandrika and Diya work on Friday then who will be working on Saturday?

(A) Agnes, Chandrika, Evita   (B) Bethy, Divya, Faria

(C) Chandrika, Evita, Faria   (D) Agnes, Divya, Evita

118. If Evita is ill, who will be working on Thursday?

(A) Chandrika, Divya, Faria   (B) Chandrika, Divya, Bethy

(C) Divya, Faria, Agnes   (D) Chandrika, Bethy. Faria

119. If Chandrika decides to take off on Wednesday, then who essentially works on Wednesday?

(A) Divya   (B) Evita   (C) Faria   (D) Both (B) & (C)

Directions for questions 120 – 124: Answer the questions on the basis of information giver below.

Six persons A, B, C, D, E and F are photographer, engineer, lawyer, housewife, waiter and journalist, not necessarily in that order. There are two married couples in the group who stay together

(1) A is married and his wife is a housewife.

(2) B, the lawyer is married to the photographer sister of A.

(3) D is the brother of C, who is not the housewife.

(4) E, the journalist has taken a vow of never getting married.

(5) The waiter is engaged to his girlfriend.

120. Who is the wife of B?

(A) E   (B) F   (C) D   (D) C

121.   Who is the wife of A?
        (A) C   (B) D   (C) E   (D) F

122.   Who is the engineer?
        (A) D   (B) C   (C) A   (D) F

123.   Who is the waiter?
        (A) F   (B) C   (C) E   (D) D

124.   Which four people stay together?
        (A) A, B, C, F   (B) B, C, D, E   (C) A. C, D, E   (D) C, D, E, F

Directions for questions 125 – 128: From the data about a race given below, find the sequence of the participants and answer the following questions.

Archana, Bhavana, Chitra, Dolly, Esha, Farhein, Gauri, Hema and Iva participated in a 100-m race.

Gauri finishes the race immediately after Chitra, who finishes before Bhavana. Bhavana touches the finishing line just when Iva was about to do so. In the order of rank there is one girl between Dolly and Farhein, & Farhein was not the last person to finish the race. Esha finishes the race before Archana can.

125.   If Chitra stood 2nd in the race who came last?
        (A) Archana   (B) Iva   (C) Hema   (D) any of these

126.   If Dolly Stood 3rd in the race who stood in 6th position?
        (A) Archana   (B) Iva   (C) Hema   (D) indeterminable

127.   If Iva didn't finish last, Bhavana finishes immediately after (refer to Q 133)?
        (A) Dolly   (B) Farhein   (C) Hema   (D) either (A) or (B)

128.   Who was the last girl to finish the race if Esha ranked 3rd & Farhein 4th?
        (A) Iva   (B) Archana   (C) Hema   (D) either (A) or (B)

Directions for questions 129 – 133:

From a group of six boys M, N, 0, P, Q, Rand five girls G, H, I, J, K, a team of six to be selected. Some of the criteria of selection are as follows :

        M and I go together
        O cannot be placed with N
        I cannot go with J
        N goes with H
        P and Q have to be together
        K and R go together
        Unless otherwise stated, these criteria are applicable to all the following questions

129.   If the team consists of two girls and I is one of them, the other members are :
        (A) H N O P Q   (B) K O P Q R   (C) K R M N P   (D) G M R P Q

130. If both K and P are members of the team and three boys in all are included in the team, the members of the team other than K and P are :

(A) G J R M   (B) H I R Q   (C) O I R Q   (D) I J R Q

131. If the team has four boys including O and R, the members of the team other than 0 and R are :

(A) G J M P   (B) G J P Q   (C) H I P Q   (D) G K P Q

132. If the team has three girls including J and K, the members of the team other than J and K are :

(A) M O R G   (B) N H O R   (C) M N O G   (D) G H N R

133. If four members are boys, which one of the following cannot constitute the team?

(A) H J M N P Q   (B) G J M O P Q   (C) J K M N O R   (D) J K M P Q R

134. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother. How is the lady in the photograph related to his sister who has on other sister?

(A) mother   (B) mother-in-law   (C) cousin   (D) sister-in-law

135. If CONCEPT is written as 'u n m u l q r' and FRIEND is written as 'y s g l m t', how is PREDICT written in that code ?

(A) q s l t g u r   (B) q g m n l t r   (C) s l m g t u r   (D) u s y g m n l

136. If BELIEF is written as 'a f k k d i', how is SELDOM written in that code?

(A) r d k c n l   (B) t f k e n p   (C) r f k e n n   (D) r f k f n p

137. If 'CONTRIBUTE' is written as' E T B U I R N T O C'. Which letter will be in the sixth place when counted from the left if "POPULARISE" is written in that order?

(A) R   (B) i   (C) A   (D) L

138. If "COAT" is coded as "ABMNYZRS", then "REST" will be coded as _____.

(A) PQCDQRRS   (B) PQRSCDQR   (C) PQQRCDRS   (D) PQQRRSCD

139. If "CHEATING" is coded as "TEACHING", then "CIRCULAR" will be coded as _____.

(A) UCRICLCAR   (B) UCIRCLAR   (C) UKIRCLAR   (D) UCRICLAR

140. If "CARTOON" IS CODED AS 4286335, Then "ARCOT" will be coded as _____.

(A) 28346   (B) 28643   (C) 28436   (D) 28364

Direction for questions 141 – 144: Consider the given statement and choose:

(A) if only assumption X is implicit;   (B) if only assumption Y is implicit;

(C) if both X and Y are implicit; and   (D) if neither X nor Y is implicit.

141. Statement: Man is born free.

Assumptions: X. Freedom is the birthright of man.   Y. All humans have human rights.

142.　Laugh and the world will laugh at you.
　　Assumption:　　　X. People generally laugh.　　　　Y. Laughter symbolises happiness.

143.　Statement:　　　There is no need to open a school here.
　　Assumptions:　　　X. Children in this area do not study.
　　　　　　　　　　　Y. There are already many schools in this area.

144.　Statement:　　　Owing to stress and fast pace of life your digestive system is attacked.
　　Assumptions:　　　X. There is stress in life.　　　　Y. Digestive system has no defence.

Direction for questions 145 – 148: In each of the following questions two statements are followed by two possible inferences. Assume the statements to be true, even if they appear opposed to common sense or observation.

Choose:　　(A) for your answer if only inference I follows;
　　　　　　　(B) for your answer if only inference Ii follows;
　　　　　　　(C) for your answer if both I and II follow; and
　　　　　　　(D) for your answer if neither I nor II allows.

145.　All cats are dogs. Some dogs are rats.
　　(I) Some rats are dogs.　　　　　　　(II) Some dogs are rats.

146.　Some books are hooks. No book is a screw.
　　(I) Some screws are not hooks.　　　　(II) Some hooks are not screws.

147.　No flower is a plant. No plant is a tree.
　　(I) No tree is a flower.　　　　　　　(II) No flower is a tree.

148.　All horses are donkeys. All donkeys are monkeys.
　　(I) All horses are monkeys.　　　　　(II) All monkeys are horses.

Direction for questions 149 – 150: For each of the following questions mark the appropriate choice.

149.　Amit can set questions for MBA exams because he has experience to set questions for Bank exams. This statement is based on the assumption that
　　(A)　The questions of Bank exams are harder than that of MBA exams.
　　(B)　Both exams are conducted by the same board.
　　(C)　Those who can set questions for Bank exams can set questions for MBA exams also.
　　(D)　Number of papers asked in both exams are same.

150.　My TV has an electronic child lock with an optional pass–word and cannot be opened in my absence. It therefore follows.
　　(A)　My TV has been misused before this lock facilities.
　　(B)　Electronic child lock with a provision to alter the password is an effective security device.
　　(C)　Children used to watch vulgar shows in the absence of their guardians.
　　(D)　All TVs without this special facility can be easily opened.

MOCK NMIMS (NMAT) – II

ANSWERS

SECTION – A

1. (B)	2. (D)	3. (B)	4. (C)	5. (A)	6. (C)	7. (D)	8. (D)
9. (C)	10. (A)	11. (B)	12. (C)	13. (B)	14. (D)	15. (C)	16. (D)
17. (D)	18. (A)	19. (B)	20. (D)	21. (A)	22. (A)	23. (B)	24. (C)
25. (D)	26. (B)	27. (A)	28. (C)	29. (C)	30. (C)	31. (D)	32. (C)
33. (B)	34. (A)	35. (C)	36. (C)	37. (D)	38. (A)	39. (D)	40. (A)

SECTION – B

41. (C)	42. (D)	43. (A)	44. (D)	45. (C)	46. (D)	47. (D)	48. (A)
49. (C)	50. (C)	51. (D)	52. (A)	53. (A)	54. (C)	55. (B)	56. (D)
57. (B)	58. (A)	59. (A)	60. (C)	61. (D)	62. (B)	63. (C)	64. (C)
65. (D)	66. (A)	67. (C)	68. (D)	69. (D)	70. (A)	71. (B)	72. (D)
73. (A)	74. (D)	75. (A)	76. (C)	77. (A)	78. (B)	79. (D)	80. (B)
81. (C)	82. (A)	83. (D)	84. (B)	85. (C)	86. (C)	87. (D)	88. (D)
89. (B)	90. (D)	91. (C)	92. (C)	93. (A)	94. (D)	95. (A)	96. (A)
97. (D)	98. (C)	99. (D)	100. (D)				

SECTION – C

101. (C)	102. (B)	103. (A)	104. (D)	105. (D)	106. (A)	107. (A)	108. (C)
109. (D)	110. (C)	111. (B)	112. (B)	113. (D)	114. (C)	115. (A)	116. (D)
117. (C)	118. (A)	119. (D)	120. (D)	121. (D)	122. (C)	123. (D)	124. (A)
125. (D)	126. (D)	127. (D)	128. (D)	129. (B)	130. (C)	131. (D)	132. (A)
133. (C)	134. (A)	135. (A)	136. (D)	137. (D)	138. (A)	139. (D)	140. (C)
141. (D)	142. (D)	143. (D)	144. (A)	145. (C)	146. (D)	147. (D)	148. (A)
149. (C)	150. (B)						

EXPLANATIONS

SECTION – A

15.   The author talks about government policies in 4th para. The author regards these policies as bad in themselves and for the environment. So, we can say that the author is not being optimistic, humorous or serious, but skeptical. Thus, (C) is the correct option choice.

16.   The author has explicitly discussed about golden mean in para 3. From these lines, we can clearly say that the author wants to say that we should look beyond economic interests. Thus, (D) is the correct option choice.

17.   The author throughout the passage has advocated ecological harmony. He talks about balance between need and greed. It has been indicated that environment should be taken care of along with millions of Indians. This idea is contained in option D. Thus, (D) is the correct option choice.

18. It is evident from the general tone of the passage that the central idea revolves around environmental degradation. The theme of the passage can't be covered in "rural ecosystem" as in option (B), "role of government" as in (C), or "western growth models" as in (D). Thus, (A) is the correct option choice.

19. Though the author has advocated healthy environment, but "militant" environmentalist is extreme word. There is nothing in the passage suggests that author is a militant environmentalist. Also, the author has discussed about government role, policies etc. So, we can say that the author is a newspaper editor. Thus, (B) is the correct option choice.

SECTION – B

41. $7P + 5W = 38 \Rightarrow -5W$

Which is satisfied $P = 4$, $W = 2$. **Answer: (C)**

42. Area OABC – Area of $\triangle$ OAC

$$= \frac{\pi r^2}{6} - \frac{\sqrt{3}r^2}{4} = \frac{2\pi}{3} - \sqrt{3}$$ **Answer: (D)**

43. $^5C_2 \times {}^3C_2 = 30$.   **Answer: (A)**

44. $\dfrac{5b}{2(a+b)} = \tan 60^o = \sqrt{3}$ ($\angle BAC = 90^0$)

$5b = 2\sqrt{3}a + 2\sqrt{3}b$

$b(5 - 2\sqrt{3}) = 2\sqrt{3}a$

$b = \dfrac{2\sqrt{3}a}{5 - 2\sqrt{3}}$.   **Answer: (D)**

45. $R = \dfrac{2}{3}S$ and $S = \dfrac{1}{2}D$

$\Rightarrow \dfrac{R}{2} = \dfrac{S}{3} = \dfrac{D}{6}$

$\Rightarrow$ Shilpa paid $\dfrac{3}{11}$ of the bill. **Answer: (C)**

46. If width is a – 20% of and length is b + 10% of b, i.e.

If width = 4a/5 and length = 11b/10

Then area = 44 ab/50 = 88ab/100 = .88 ab. **Answer: (D)**
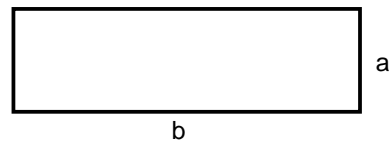
47. As Shyam got the Shakespeare book as present, he got 60% or more in both English and History and an aggregate of 200 (minimum). So it is clear that he failed to get 60% in Tamil(Otherwise, he would have got the Bharathi book, too).

His total marks in Englishand History = 64 + 64 = 128

As his aggreagte was 200 (minimum) he got at least 200; i.e; 128 in English and History and 72 in Tamil and Science together

The maximum he could have got in Tamil was 59.

Hence the minimum he must have got in Science = 72 − 59 = 13. **Answer: (D)**

48. The given function is even if

$(a - 2)x + 3a - 4 = (a - 2)(- x) + 3a - 4$

ie.$(a - 2) \times 2x = 0 \Rightarrow a = 2$.   **Answer: (A)**

49. Suppose after N years. A's salary exceeds that of B.

$450 + (N - 1) \times 25 > 600 + (n - 1) \times 20$

$5(n - 1) > 150$

$n - 1 > 30$.   **Answer: (C)**

50. Multiply each of the alternatives by 47, and see which answer has the digits mentioned. **Answer: (C)**

51. A & B can finish the job together = $\dfrac{25 \times 15}{40} = \dfrac{75}{8}$ days

So, share of A out of 64 = $\dfrac{(75/8)}{15} \times 64$ = Rs. 40.   **Answer: (D)**

52. Average sales per day = [3(210000) + 81000 + 45000 + 156000]/6 = 152000. **Answer: (A)**

53. We know that 11.11% = $\dfrac{1}{9}$ and 14.28% = $\dfrac{1}{7}$. We can now write the given information as follows :

C. P.	Profit	S. P.	Disc.	M. P.
		8	1	9
7	1	8		

It can be seen that all figures are on the same scale. So, if the cost is 7, the market price is 9, i.e. 2 more than the cost price of 7. Therefore, the article is marked at 2/7 = 28.56% above the cost price. **Answer: (A)**
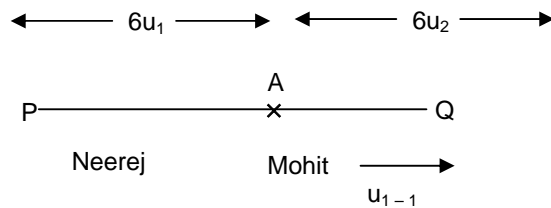
54. Let u_1 and u_2 be the initial speeds in miles/h of Mohit and Neerej respectively.
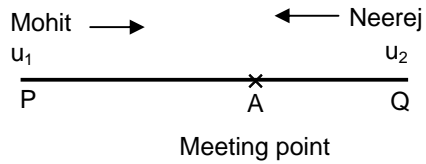
From the problem,

$6 u_1 + 6 u_2 = 72$

$\therefore u_1 + u_2 = 12$ …….(1)

$6 u_2 / (u_1 - 1) = 6 u_1/(u_2 + 1)$

i.e. $6u_2{}^2 + 6u_2 = 6u_1{}^2 - 6u_1$

$u_2^2 + u_2 = u_1^2 - u_1$

$u_1 + u_2 = u_1^2 - u_2^2$

$= (u_1 + u_2)(u_1 - u_2)$

$u_1 - u_2 = 1$ ……..(2)

From (1) and (2),

we get $u_1 = 6.5$ miles/h

and $u_2 = 5.5$ miles/h

Answer: (C)

Alternate method:

$6(u_1 + u_2) = 72$, Now check from options what values of u_1 and u_2 satisfy the above condition.

55. Let 100 units be the weight of the bucket filled with liquid. Then this weight comprises 75 liquid and 25 units empty bucket weight of the bucket with some liquid removed = 3/5th of original weights = 60 units.

Of this 60 units, 25 units is the weight of the empty bucket.

Weight of the liquid removed = 75 – 35 = 40 units.

Fraction of the liquid removed = $\dfrac{40}{75} = \dfrac{8}{15}$. **Answer: (B)**

56. Let the number be XY $\rightarrow (10X + Y)^2 - (10Y - X)^2$

$= 99 X^2 - 99Y^2$ (which is divisible by both 9 & 11). **Answer: (D)**

57. For option (B), initial price = Rs.12 per dozen → For 1 rupee, she could purchase $\frac{12}{12}$ = 1 bananas.

Thus she gets 1 bananas extra for every rupee saved when she buys at the rate of Rs. 11 per dozen.
Answer: (B)

58. Acc. to the Q,

$$\frac{1}{A} = \frac{1}{B} + \frac{1}{C} \qquad\qquad .....(1)$$

$$\frac{1}{A} + \frac{1}{B} = \frac{1}{25} \text{ and } \frac{1}{C} = \frac{1}{35} ....(2)$$

Solve both equations simultaneously to get the value of B = 175 days. **Answer: (A)**

59. Total loss = (10 + 5 + 5 + 5) % = 25 %; CP = Rs. 17.5/unit

$\Rightarrow$ SP for 28% profit = 1.28 x 17.5 = Rs. 22.4/unit

But 25% of the prodn. is lost

$\Rightarrow$ For every unit. 0.75 reaches the market

$\Rightarrow$ Required SP = $\frac{22.40}{0.75}$ = Rs. 29.86. **Answer: (A)**

60. SP of salwar Kameez = Rs.6000

Therefore CP of salwar Kameez = $\frac{60000}{1.25}$ = 4800

New CP = 4800 + 600 = Rs. 5400

To get the 25% profit New Sp = 1.25 $\times$ 5400 = Rs.6750   **Answer: (C)**

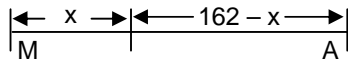61. $\frac{x}{50} - \frac{x}{40} = \frac{24}{60}$

x = 80 km

Where x is the total journey. **Answer: (D)**

62.

	Earlier	Now
Employees	12 x	7 x
Wages	14 y	15 y
Bill	14 × 12 xy	15 × 7 xy
Ratio of bill	14 × 12 :	15 × 7	= 8 : 5.

Answer: (B)

63.

6 : 30 AM   7 : 15

72 kph   90 kph

In 45 min. M to A covers 54 kms

Time required to cross $= \dfrac{102}{72+90} = \dfrac{2}{3}$ hrs.

In $\dfrac{2}{3}$ hrs train from Madras will cover a distance $= \dfrac{2}{3} \times 72 = 48$

∴ Distance from Madras where they will meet $= 54 + 48 = 102$ km.   **Answer: (C)**

64. When son born total age of the couple was $= 54$ years

let $x =$ Age of son

$50 + 4 + 3x = 72$

$x = 6$

Number of years since the couple got married $= x + 2 = 8$ years   **Answer: (C)**

65. Let the two numbers be a & b then $2ab / (a+b) : \sqrt{(a+b)} = 24 : 25$ or $12(a+b) = 25\sqrt{(ab)}$

Dividing by b we have, $12(a/b + 1) = 25\sqrt{(a/b)}$ put $X = \sqrt{(a/b)}$

We have $12X^2 - 25X + 12 = 0$ or $12x^2 - 16x - 9x + 12 = 0$

Solve & get $X = \dfrac{3}{4}, \dfrac{4}{3}$

or $\sqrt{(a/b)} = \dfrac{3}{4}$ or $\dfrac{4}{3}$ or $\dfrac{a}{b} = \dfrac{9}{16}$ or $\dfrac{16}{9}$. **Answer: (D)**

66. If a number is divisible by 3, the sum of the digits in it must be a multiple of 3. The sum of the given six numerals is $0 + 1 + 2 + 3 + 4 + 5 = 15$. So to make a five digit number divisible by 3 we can either exclude 0 or 3. If 0 is left out, then $5! = 120$ number of ways are possible. If 3 is left out, then the number of ways of making a five digit number is $4 \times 4! = 96$, because 0 cannot be placed in the first place from left, as it will give a number of four digits.

Thus, the required number of ways $= 120 + 96 = 216$.   **Answer: (A)**

67. Let 100 be the initial number of visitors

Then at Rs. 50 a ticket, total collection $=$ Rs. $100 \times 50 =$ Rs. 5000.

After the reduction, the number of visitors increased by 60%.

The new number $= 100 + 60 = 160$

The collection increased by 36%

New collection $=$ Rs. $500\,0 \times 1.36 =$ Rs. 6800

The new price of ticket = Rs. $\dfrac{6800}{160}$ = Rs. 42.50

Reduction = Rs. 7.50 per ticket. **Answer: (C)**

68.

M	D	H
15	21	8
$\dfrac{2}{3} \times 21$	x	6

Apply $M_1 D_1 H_1 = M_2 D_2 H_2$ = constant

$x = \dfrac{21 \times 8 \times 15}{6 \times 14} = \dfrac{60}{2}$ = 30 days.   **Answer: (D)**

69. $1000 \times 2\pi r = 88000$

$\Rightarrow r = \dfrac{88000 \times 7}{1000 \times 2 \times 22}$ = 14 metres.   **Answer: (D)**

70. $\dfrac{(2.3)^3 - (.3)^3}{(2.3)^2 + 0.69 + .09} = \dfrac{(2.3 - .3)(2.3^2 + .69 + .09)}{(2.3)^2 + 0.69 + .09}$ = 2.   **Answer: (A)**

71. (B)   72. (D)   73. (A)   74. (D)   75. (A)   76. (C)   77. (A)   78. (B)

79. (D)   80. (B)   81. (C)   82. (A)   83. (D)

84.   Out of the given options, it is clear that Virar, 71 i.e. option (B) has shown maximum increase in population over the given period. It has been increased from about 1.5 lakhs to about 2.75 lakhs.

∴ **Answer. (B)**

85.   % increase in population of Mumbai

Island = $\dfrac{23 - 15}{15} \times 100 = 53.33\%$

Similarly for Mumbai Suburbs = $\dfrac{28 - 18}{18} \times 100 = 55.56\%$

For Greater Mumbai = $\dfrac{32 - 20}{20} \times 100 = 60\%$

For total population = $\dfrac{25 - 55}{55} \times 100 = 54.54\%$ ∴ **Answer. (C)**

86.

	1961	1971		1981	
	(In lakhs) population	(In lakhs) population	% increase	(In lakhs) Population	% increase
Mumbai Island	15	18	20%	20	11.11%
Mumbai Suburbs	18	20	11.11%	28	40%
Greater Mumbai	20	25	25%	32	28%
Total population	55	65	18.18%	85	30.77%

It is clear that Greater Mumbai has shown the constant percent increase in population

∴ **Answer. (C)**

87.   Total population of suburbs & island in 1961 = 33

In 1961, total population = 55

∴ Required answer = 33/55 or 3/5

∴ **Answer. (D)**

88.

	Population of Kalyan and Thane
In 1961	2.5 lakhs
In 1971	4 lakhs
In 1981	4.8 lakhs

As a fraction of total popouation

In 1961 = $\dfrac{2.5}{55} = \dfrac{1}{22} = 0.045$

In 1971 = $\dfrac{4}{65} = 0.062$

In 1981 = $\dfrac{4.8}{85} = 0.056$

It is clear that it has not followed a particular trend. ∴ **Answer. (D)**

89.   Let constant percent increase = 25%

∴ In 1991, the population will be = 106.25 lakhs

In 2001, the population will be = 132.81 lakhs

∴ **Answer. (B)**

90. As calculated earlier also,

% increase in population in 1971 for Mumbai suburbs = 11.11%

% increase in population in 1981 for Greater Mumbai = 28%

Required answer $= \dfrac{28 - 11.11}{28}, \dfrac{11.11 - 28}{28} \times 100 = -60\%$

Out of the given options, **Answer. (D)**

91. % increase in the population of Virar $= \dfrac{3.1 - 1.5}{1.5} \times 100 = 106.67\%$

% increase in the population of Mumbai Island = 53.33%

$\therefore$ Required answer = 53.33 = 53. **Answer: (C)**

92. Percent of skin & musceles = 33%

= 33% of 15 $\approx$ 4.15

Required protein $= \dfrac{4.95}{100} \approx \dfrac{1}{20}$. **Answer: (A)**

93. Required ratio = 25 : 8 $\approx$ 3 : 1. **Answer: (A)**

94. It cannot be determined. **Answer: (D)**

95. Required protein $= \dfrac{15}{100} = \dfrac{3}{20}$. **Answer: (A)**

Solutions 96 – 100:

The following information can be gathered from the given data –

YEAR	STATE ENTR.	COLL. AGRI.	URBAN COLL.	INDS. TOWN	PRIVATE
1978	19%	72%	4%	5%	0%
1991	18%	64%	6%	10%	2%

96. Urban Collectives and Industrial Townships accounted for 6% and 10% of the total employment, a difference of 4%. State Enterprises, accounting for 18%, employed 2.5 million people. So, the difference between the number of people in Urban Collectives and Industrial Townships was around (4/18)*2.5 = 0.55 million. **Answer: (A)**

97. Although we can definitely say that the people were employed in Private Enterprises after 1978 & before or in 1991, we do not have data prior to 1978 and intermediate years' data. So, cannot be determined. **Answer: (D)**

98. Let total work force in 1978 be 'n'. Then that in 1991 will be = [n*(10/100)*13 yrs in n] = 2.3n. So, people employed in urban collectives in 1978 = 0.04n; & 1991 = 0.06*2.3n = 0.138n. So, change = ((0.138n − 0.04n)/0.04n)*100% = 9.8/0.04% = 245%. **Answer: (C)**

99. Option (a) does not define 'charm' which may have different interpretations. It is means the % age of populace, collective agriculture still is the largest employer. Options (b) & (c) require the actual total work force figures, which are not available. So, none of the given statements can be inferred in absolute terms. **Answer: (D)**

100. The number of Industrial Townships in 1978 is known. But that for 1991 is not known (this could've been determined if we had data for total work force in 1991). Hence, cannot be determined.
Answer: (D)

SECTION – C

101. **Answer: (C)**
102. **Answer: (B)**
103. **Answer: (A)**
104. **Answer: (D)**
105. **Answer: (D)**
106. **Answer: (A)**
107. **Answer: (A)**
108. The alphabetical order of the letters of the given word is E, H, M, O, R and T

Clearly any word which begins with E and H appear before mother in the list.

If the first place is fixed with E, then the remaining five letters can be arranged in 5! = 120 ways.

Hence there are 120 words beginning with E. Similarly there are 120 words beginning with H also.

The words beginning with M are as follows.

ME 4 ! $\longrightarrow$ 24
MH 4 ! $\longrightarrow$ 24
MOE 3 ! $\longrightarrow$ 6
MOH 3 ! $\longrightarrow$ 6
MOR 3 ! $\longrightarrow$ 6
MOTE 2 ! $\longrightarrow$ 2
MOTHER 1

This serial number of the word "MOTHER" = 120 + 120 + 24 + 24 + 6 + 6 + 6 + 2 + 1 = 309.
Answer: (C)

109. **Answer: (D)**

110. **Answer: (C)**

111. St 1 : CA   St 2: CAA   St 3: CAAAA   St 4: CAAAAAAAA   St 5: CBAAAAA
     St 6: CBBAA. **Answer: (B)**

112. Till Step 6, follow the steps of the previous problem. St 7: CBBAABBAA St 8: CBBAAAA
     St 9: CBBBA. **Answer: (B)**

113. There is no way to get BC from CA   **Answer: (D)**

114. St 1: CBAB St 2: CBABBAB   St 3:CBAAB St 4: CBAABBAAB St 5: CBAAAAB St 6: CBBAB.
     Answer: (C)

115. St 1: CA   St 2: CAB   St 3: CABAB. **Answer: (A)**

Solutions 116 – 119:

116. Out of the six nurses, on any Monday, the options are C, D, E and F, C works throughout the week.
     Now, E and F both can't work on Mondays and Wednesdays. Hence, out of the options both (A) and
     (C) are possible. **Answer: (D)**

117. On the Saturday, C of course will be working, and D has off on weekends. So, the options are C and
     any two of the others, except D. By the conditions, if any of E or F is working, the other has to be
     working too. And A and B can't be working together. **Answer: (C)**

118. If E is ill on a Thursday, then the options are C, D and F only. **Answer: (A)**

119. If C is off on a Wednesday, the options are either of A and B, and D, E, F. Now, in any case, you have
     to take E or F. But you have to take them both. So, both E and F must necessarily work on the
     Wednesday. **Answer: (D)**

Solutions 120 – 124:

A	#	B	#	C	D	E	ψ	F		
X		X	#			X			Pho	#
O		X		X	x	X		x	Eng	
X		✓		X	X	X		X	Law	
X		X		X	x	X		O	Hw	#
X		X		✓	✓	X			Wai	ψ
X		X		X	X	✓		X	Jour	

The initial data is depicted on the table. The Bold italic refers to a male. The "#" refers to a married person. The "ψ" refers to an unmarried person. Now, since B is married to the photographer, A can't be the photographer (put a cross). And since the waiter is unmarried, A can't be the waiter too (put a cross) That leaves A as the engineer. Now, taking D, He can't be the housewife (put a cross). This leaves F to be the housewife. Now, taking the waiter, He can't be C, who is a female. That leaves him to be D. Then C becomes the photographer wife of B.

120. **Answer: (D)**
121. **Answer: (D)**
122. **Answer: (C)**
123. **Answer: (D)**
124. **Answer: (A)**

Solutions 125 – 128:

From the data given, the relative positions are CG, C… B, BI, D _ F _ and E… A. But there is no fixed relationship between the participants. So we can't fix a sequence.

125. **Answer: (D)**
126. **Answer: (D)**
127. **Answer: (D)**
128. **Answer: (D)**
134. **Answer: (A)**
135. **Answer: (A)**
136. **Answer: (D)**

137. POPULARISE is written as ESRIALPUOP. **Answer: (D)**

138. For every letter in the word, write two letters before the letter in alphabetical order to get the code.

R   →   P Q
E   →   C D
S   →   Q R
T   →   R S

The answer is P Q C D Q R R S. **Answer: (A)**

139. Write the first five letters in reverse order and keep the remaining 3 letters same.

←‾CIRCU‾   LAR

The answer is U C R I C L A R. **Answer: (D)**

140. CARTOON = 4286335.

∴ C = 4; A = 2; r = 8; T = 6; O = 3; N = 5.

Then, ARCOT = 28436. **Answer: (C)**