

Prelimsure Test-6 Detailed Answerkey

1. D
 - Each number is a whole square
2. D
 - $1 \times 2, 2 \times 3, 3 \times 4, 4 \times 5, 5 \times 6, 6 \times 7, 7 \times 8,$
 - $8 \times 9 = 72$
3. B
 - Difference between consecutive numbers change from +8 and -6
4. A
 - The passage clearly suggests that education is not instrumentalist in its deepest sense. But the opening sentence calls it to be functional, instrumental and utilitarian. Thus the instrumentalist view of education is the functional and utilitarian dimension in its purposes.
5. C
 - The second part of the passage clearly states education is not a commodity but a process of expansion and conversion of the mind – the moral-intellectual development. Acquiring qualifications, upward mobility and social status are the basic utility values of education.
6. C
 - Again the second part clearly states the answer. a, b & d are the utilitarian dimensions of education. But ultimately education leads to self-critical awareness and independence of thought.
7. A
 - Statement 1 is correct as passage clearly states “In all cases, it is the ... behalf of the child.”
8. C
 - Only the 3rd statement is correct on the basis of information, therefore c is the answer. The lines of the passage which give clue regarding this are Non – renewable goods must be used only if their use is indispensable’ this line shows that Buddhist economist prohibit the use of non-renewable resources.
 - The other line is ‘while complete non–violence may not be possible’. 1st statement is wrong because it says Buddhist economists totally prohibit the use of non renewable resources which is not right.
9. A

- The Buddhist view point implies conservation should be given the highest consideration which is option 'a' so 'a' is the correct answer. The line from the passage which gives a clue regarding this is, 'greatest care and highest concern for conservation.'
10. C
- Buddhist Economists are not in favour of 'using non-renewable sources indiscriminately' which is option 'c', therefore 'c' is the correct answer. The line from the passage which gives clue regarding this is 'Non-renewable goods must be used only if their use is indispensable'.
11. A
- Tree is the whole component where as others are its parts. Hence it is the odd one out.
12. B
- All others are languages.
13. B
- Here we have to find relationship between Mr. Sharma & the lady in the photograph. Mother of my brother's sister does mean my (Mr. Sharma's) mother. Only daughter of Mr. Sharma's mother does mean "sister of Mr. Sharma". Hence option (b) is the correct answer
14. B
- C and Q are sisters and A is the son of C. Hence, C is the mother of A or Z is the mother Q. Hence, Z is the maternal grandmother of A. P is the son of Z. Hence, P is the maternal uncle of A.
15. C
- There is a single example given of such a case but it is not always true.
 - This statement is true in some cases but not always so.
 - It is clearly stated that man is the major reason to convert local community compositions into more homogeneous ones.
16. B
- To breed exotic species with local varieties is obviously not the purpose. Thus, 1 is ruled out which eliminates three options.
 - Man intentionally introduced exotic species into new geographical areas for agricultural or recreational purposes. This is clearly stated in the passage.
 - (c) (1) is ruled out. So this answer is not correct. (d) Again (1) is ruled out making the answer incorrect.
17. B
- (a) This is not the correct answer.
 - (b) This is the dominant idea in the whole passage. The presence of "physical barriers" have prevented homogenization.

- (c) This is not clearly stated in the passage.
- (d) This idea of “physical barriers” is the most important reasons for the others.

18. A

- (a) This is obviously the correct answer, because it is the most practical one. It is humanly possible to smuggle live organisms and to build highways.
- (b) It is not easy nor practical to make ecosystems sensitive. So this option is ruled out.
- (c) This option is also ruled out for the above said reason.
- (d) It is very difficult and quite unnecessary to ensure new species do not have an impact on local species. So this option is also ruled out.

19. D

- Natural selection is a key mechanism of evolution. It is the gradual, non-random, process by which biological traits become either more or less common in a population as a function of differential reproduction of their bearers.
- Variation exists within all populations of organisms. This occurs partly because random mutations cause changes in the genome of an individual organism, and these mutations can be passed to offspring.
- Throughout the individuals’ lives, their genomes interact with their environments to cause variations in traits.

20. B

- 1 is not correct because the passage does not talk about all the poor countries.
- 2 is not correct because the passage talks about the role of pesticides in sustainable agriculture especially in poor countries.
- 3 is correct as the 2nd para clearly illustrates Alabama leaf-worm developing resistance to aldrin, DDT, dieldrin, endrin, lindane and toxaphene.

21. D

- The widespread use of pesticides has not waned because the ratio of cost to benefit for the individual agricultural producer has remained in favour of pesticide use.

22. A

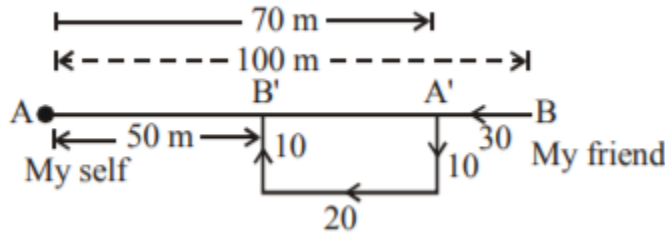
- Natural populations of pests contain, among their vast numbers of individual members, considerable variation in their genetic material, primarily as the result of mutations.
- When exposed to pesticides, most pests die quickly, but some may have mutations that make them slightly less susceptible.
- If the exposure to pests is short, these individuals will survive the treatment. This selective elimination of maladapted individuals from a population is natural selection.

23. C

- 1 is not correct as organic farming is not mentioned in the passage. Further the passage justifies the cost benefit to developed countries like USA. It eliminates three options.
- 2 is correct. Because of this problem it becomes imperative to use pesticides.

- 3 is wrong as the social and health costs have to be ignored because of the frightening prospects of the epidemic diseases

24. A



-
- When my friend reaches on the previous track (i.e. on B') again, he had travelled a distance of $(30 + 10 + 20 + 10) = 70$ m. As I walk with the same speed as that of my friend I have walked 70m, but on the straight track. Now, he is just $[100 - (30 + 20)] = 50$ m from my starting point. **Hence, the distance between us = $(70 - 50) = 20$ m**

25. A

- $56 = d_1 \times d_2$
- required remainder = d_1
- $r_2 + r_1$ where $d_1 = 7$ and $r_1 = 3$ and $r_2 = 5 = 7 \times 5 + 3 = 38$

26. B

- By division Algorithm, $49471 = 246 \times D + 25$ ie; $D = 201$

27. C

- $10(10+200)/100 = 21\%$.

28. B

- Let the total customers be 100
- 40% of them = 40 purchase items and
- 15% of 40% = $(15/100) \times 40 = 6$ purchase hats

29. A

Solution : Numbers are $\frac{2 \times 3 (7-9)}{3 \times 9 - 4 \times 7}$ and $\frac{2 \times 4 (7-9)}{3 \times 9 - 4 \times 7}$

or 12 and 16.

If the sum of two numbers is A and their difference is a , then the ratio of numbers is given by $A + a : A - a$.

•

30. C

Solution : Let the total profit be ₹ 100. Then, ₹ 5 goes to charity.
Now, ₹ 95 is divided in the ratio 3 : 2.

$$\therefore \text{A's share} = \frac{95}{3+2} \times 3 = \text{Rs. } 57$$

But A's actual share is ₹ 855.

$$\therefore \text{Actual total profit} = 855 \left(\frac{100}{57} \right) = ₹ 1500$$

•
31. A

Solution : In the first hour, Vikas mows $\frac{1}{8}$ of the field.

In the second hour, Vishal mows $\frac{1}{12}$ of the field.

\therefore In the first 2 hours, $\left(\frac{1}{8} + \frac{1}{12} = \frac{5}{24} \right)$ of the field is mown.

\therefore In 8 hours, $\frac{5}{24} \times 4 = \frac{5}{6}$ of the field is mown.

Now, $\left(1 - \frac{5}{6} \right) = \frac{1}{6}$ of the field remains to be mown.

In the 9th hour, Vikas mows $\frac{1}{8}$ of the field.

$$\text{Remaining work} = \frac{1}{6} - \frac{1}{8} = \frac{1}{24}$$

\therefore Vishal will finish the remaining work in $\left(\frac{1}{24} \div \frac{1}{12} \right)$

or $\frac{1}{2}$ of an hour.

\therefore The total time required is $\left(8 + 1 + \frac{1}{2} \right)$ or $9\frac{1}{2}$ hours.

Thus, the work will be finished at $8 + 9\frac{1}{2} = 17\frac{1}{2}$ or 5.30 pm.

•
32. A

- Production of C type cars in 2012 = $(70 - 40) \%$ of 4,50,000 = 30% of 4,50,000 = 1,35,000
Production of C type cars in 2013 = $(65 - 40) \%$ of 5,20,000 = 25% of 5,20,000 = 1,30,000
∴ Required difference = 5,000
33. B
- Production of E type cars in 2012 = $(100 - 80) \%$ of 4,50,000 = 20% of 4,50,000 = 90,000
And production of E type cars in 2013 = 10% of 5,20,000 = 52,000 ∴ Total production = 90,000 + 52,000 = 1,42,000 ∴ Required no. of cars = 15% of 1,42,000 = 21,300 » 21,825
34. B
- Production of A type cars in 2013 = production of A type cars in 2012 (given) and 15% of 4,50,000 = 67,500
Required percentage $(67,500 / 5,20,000) * 100 = 13$
35. C
- Clearly, by visual inspection D is the desired option.
36. C
- (c) Percentage production of B type cars in 2013 = that in 2012 (given) = $(40 - 15) = 25\%$ of 5,20,000 = 1,30,000
37. A
- Option (a) states that 'Persuasive skill - set is a prerequisite to an effective presentation' The clue regarding this lies in the following lines of the passage "The art of effective presentation is the fruit of persistent efforts and practice, therefore, (a) is the correct answer.
38. A
- Option (a) states that "innate stage fright of a speaker can be countered by meticulous preparation of his presentation. The clue regarding this lies in the following lines of the passage – "A thorough preparation is the best antidote for nervousness" therefore, (a) is the correct answer.
39. A
- Option (a) states "Topic of the presentation must be of relevant interest to the audience to induce their responses," The clue regarding this lies in the following lines of the passage – "The topic of the presentation must be interesting to the audience" therefore, (a) is the correct answer.
40. D
- Neither statement (1) nor (2) is correct according to the information given in the passage, therefore, option (d) is the correct answer.
41. A

- (A) follows because the passage talks of “water conflicts” between developing countries. However, we are told, such conflicts have not escalated into wars. As for (C), the alteration has been done by water, not by water conflicts.

42. C

- Because they are logical developments.

43. A

- The Sun rises in the east. So, in the morning, the shadow falls towards the west. Now, the shadow of the pole falls to the right of Gopal. Therefore, Gopal’s right side is the west. So, he is facing South.

44. A

- Position of Kiran from the top = $[35 - 7] + 1 = 29$ th Position of Sohan from the top = 9th. Difference of their positions = $29 - 9 = 20$ \ Mohan’s position from top = $9 + 10 = 19$ th Hence, Kiran’s position from Mohan = $29 - 19 = 10$ th Total no. of persons = [Position of person from upward/right + Position of person from downward/left] – 1.

45. C

Solution : A ’s one day’s work = $\frac{1}{6}$

B ’s one day’s work = $\frac{1}{8}$

C ’s one day’s work = $\frac{1}{12}$

A ’s share : B ’s share : C ’s share

= $\frac{1}{6} : \frac{1}{8} : \frac{1}{12}$

Multiplying each ratio by the L.C.M. of their denominators, the ratios become 4 : 3 : 2

$\therefore B$ ’s share = $\frac{1350 \times 3}{9} = ₹ 450$

•

46. A

Solution : Here $a = 50$ m, $b = 78$ m, $c = 112$ m

$$s = \frac{1}{2}(50 + 78 + 112) = 120 \text{ m}$$

$$s - a = 120 - 50 = 70 \text{ m}$$

$$s - b = 120 - 78 = 42 \text{ m}$$

$$s - c = 120 - 112 = 8 \text{ m}$$

$$\therefore \text{Area} = \sqrt{120 \times 70 \times 42 \times 8} = 1680 \text{ sq.m.}$$

$$\therefore \text{Area} = \frac{1}{2} \text{Base} \times \text{Perpendicular}$$

-
- Perpendicular = $2\text{Area}/\text{Base} = (1680 \times 2)/112 = 30 \text{ m}$

47. B

Solution : Let length, breadth and height of the room be ℓ , b and h , respectively. Then,

$$\ell + b + h = 19 \quad \dots(\text{i})$$

$$\text{and } \sqrt{\ell^2 + b^2 + h^2} = 11$$

$$\Rightarrow \ell^2 + b^2 + h^2 = 121 \quad \dots(\text{ii})$$

Area of the surface to be painted

$$= 2(\ell b + bh + h\ell)$$

$$(\ell + b + h)^2 = \ell^2 + b^2 + h^2 + 2(\ell b + bh + h\ell)$$

$$\Rightarrow 2(\ell b + bh + h\ell) = (19)^2 - 121 = 361 - 121 = 240$$

Surface area of the room = 240 m^2 .

Cost of painting the required area = $10 \times 240 = ₹ 2400$

-

48. D

- This is what is implied by “greater transparency”.

49. D

- The passage does not give any specific reason.

50. C

- See the first sentence of the passage.

51. C

- “The best person available” implies the supremacy of merit.

52. D

- Total no. of students = $[(16 + 29) - 1] + 6 + 5 = 55$. If two persons are on a definite position from up and down (or left and right) and they interchange their ranks, then (A) Total no. of persons in order = [previous position of first person + present position of second person] - 1 (B) present position of first person or present position of second person = Difference

of present and previous positions of second person + previous position of second person.
= Difference of present and previous positions of first person + previous position of second person.

53. B

- Let the number of cows be x and the number of hens be y . Then, $4x + 2y = 2(x + y) + 14$
 $4x + 2y = 2x + 2y + 14$ $2x = 14$ $x = 7$

54. B

- Arranging them on the basis of their ages, Jane > Reeta > Radhika > Rani > Sukhada If Reeta is 18 years old then Sukhada is 12 years

55. B

- Any one of the 5 persons can leave the cabin in 7 ways independent of other. Hence the required number of ways = $7 \times 7 \times 7 \times 7 \times 7 = 7^5$

56. B

- Since each bulb has two choices, either switched on or off, therefore required number = $2^{10} - 1 = 1023$.

57. D

- Rigid indifference to individual differences is the major flaw of the present system.

58. C

- Read the first sentence of the passage A and B are contrary to this

59. C

- Most teachers are trained mainly to cover the syllabus in a mechanical exam-oriented manner.

60. D

- This is a main theme question where you're to choose the basic idea of the given passage. The usual ambiguity in such questions is between main and supportive ideas mentioned in the passage and both given as prospective answers. (a) This is a concern of the passage and can, therefore, be the answer. But the passage is more specific and factual. Therefore, we should eliminate this option in case of finding a more specific answer.
- (b) This is only a connected allusion in the passage and not at all its central idea
- (c) This again is mentioned in the passage but is not the main theme of the passage. This option can be eliminated.
- (d) This is the right answer. This is more specific and accurate than option (a). The main theme of the passage is cure for Alzheimer's but this cure is through nerve growth factor

61. B

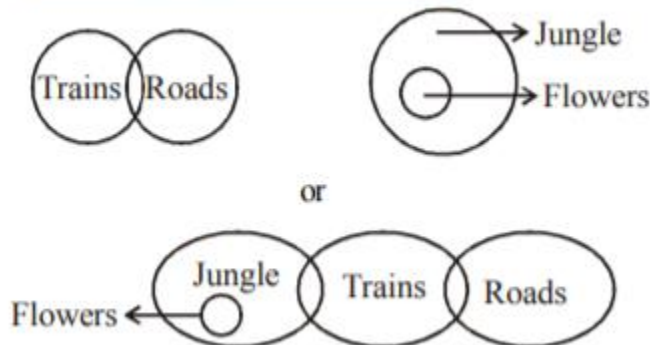
- This is a factual question. Locate that part of the passage which gives the right fact, and information about the question. In this case the relevant line is “The protein is produced by nerve cells in the same region of the brain”. Therefore, the right answer will be (b).

62. B

- This is an inference question. The obviously wrong options can be eliminated first in this type of passages. (a) and (c) appear wrong from the first read itself. There is no mention of Alzheimer’s disease being deadly, hence (a) is wrong.
- (b) This is correct because though the experiment may be considered unsuccessful since no sure shot cure has yet been discovered, even nerve growth factor cannot cure Alzheimer’s, it can only slow down the process of deterioration but the experiment showed some benefits from the protein.
- (c) is factually incorrect because benefits from the nerve growth factor were seen after the experiment.
- (d) This cannot directly be inferred from the given passage because it does not talk about further work in the field.

63. D

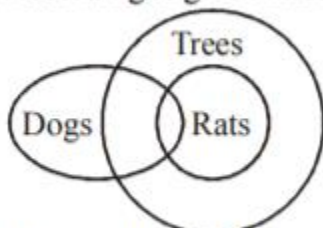
- According to the given information



-
- ® Some trains are roads (I type) No road is jungle (E type) I + E = O Conclusion must be : – some trains are not jungles. ® No road is jungle. (E type) All flowers are jungle (A type) E + A = E Conclusion must be : - No flower is road. Conclusion (d) is the converse of this conclusion and it follows.

64. A

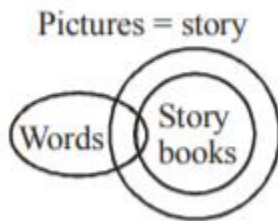
According to given information



- Hence, only (a) follows.

65. C

According to given information picture = story



- Hence, only (c) follows.

66. B

- From the three given figures, it is clear that the 1, 2, 5 and 4 appear adjacent to 3, so none of these can appear opposite 3. Therefore, 6 appears opposite 3.

67. D

- We have three squares with vertical and horizontal sides. Each such square has $12 + 22 = 5$ squares in it. Thus there are 15 such squares. In addition, we have two obliquely placed squares. Hence total no. of squares = 17

68. B

- The sentence of the passage “....a sector that has been performing sluggishly since the effects of 9/11 and the travel advisories issued by various western embassies and high commissions kicked in....” suggests that Option B is the best suitable.

69. A

- The passage starting from “... as we tighten our seat-belts and take off ...” indicates the transition phase where airline sector will be used more by people.

70. D

- The option A,B and C are definitely correct as per the context of passages which brings us to option D.

71. C

- With reference to the passage, only 3 and 5 are adverse effect as potable fresh water and bio-diversity are drastically affected.

72. A

- Statement 2 is not correct as the efforts are being taken. 3 is also not correct as the short term gain have resulted into long term degradation of other

73. C

- Option (c) is correct answer as the author shows that not only mussels are affected but other 28 species also disappeared.

74. D

- Neither 1 nor 2 is correct as the dominant species is the keystone species and that is sea star. The sea stars do not live exclusively on mussels as their removal resulted in the disappearance of 28 species more.

75. C

- Only 1 and 3 are correct statements as the 'sea stars' are the keystone species which influences both richness of communities and flow of energy.

76. C

- Assumption 1 is correct as disappearance of 28 species along with mussels. Assumption 3 is also correct according to the passage.

77. C

- The topmost figure reduces by one and bottom figure increases by one which is shown in the option C.

78. B

- Left figure (triangle) become bigger and right figure (triangle) become smaller.

79. D

- The govt. has promised to bring down the smoke level because it is possible to determine the level. Hence 1 is implicit. 2 is implicit because containing pollution is also a welfare measure.

80. A

- 1 directly follows from the statement and so is implicit. Also, the statement is a suggestion and does not tell about a government policy or its position of funds. So, 2 is not implicit