

SAMPLE QUESTION PAPER-I
POST GRADUATE PROGRAMME IN
FASHION TECHNOLOGY
GENERAL ABILITY TEST — PAPER-I

Time Allowed : 2 Hours

Max. Marks : 120
Total Questions : 120

This test comprises the following sub-tests.

- (1) Quantitative Ability
 - (2) Communication Ability
 - (3) English Comprehension
 - (4) Analytical Ability
 - (5) General Knowledge and Current Affairs
 - (6) Thematic Apperception Test
- (i) Each question carries one mark.
 - (ii) Answers are required to be marked only on the OMR/ICR Answer-Sheet, which shall be provided separately.
 - (iii) For each question, four alternative answers have been provided out of which only one is correct. Darken the appropriate circle in the Answer-Sheet by using Ball Pen only on the best alternative amongst (a), (b), (c) or (d).

SAMPLE QUESTIONS

1. If

$$\begin{vmatrix} 6i & -3i & 1 \\ 4 & 3i & -1 \\ 20 & 3 & i \end{vmatrix} = x + iy, \text{ then}$$

- (a) $x = 3, y = 1$ (b) $x = 0, y = 0$ (c) $x = 0, y = 3$ (d) $x = 1, y = 3$

2. The sum of the series

$$\frac{2}{\sqrt{3}} + \frac{4}{\sqrt{5}} + \frac{6}{\sqrt{7}} + \dots \infty \text{ is}$$

- (a) e (b) e^2 (c) $\frac{1}{e}$ (d) $\frac{1}{e^2}$

3. The number of real roots of

$$x^8 - x^5 + x^2 - x + 1 = 0$$

is

- (a) 0 (b) 2 (c) 4 (d) 6

4. If

$x + y + z = 1$ then the least value of

$$\frac{1}{x} + \frac{1}{y} + \frac{1}{z} \text{ is}$$

- (a) 3 (b) 6 (c) 8 (d) 9

5. The period of

$$f(x) = \sin^4 x + \cos^4 x \text{ is}$$

- (a) π (b) $\frac{3\pi}{2}$ (c) 2π (d) $\frac{\pi}{2}$

6. If

$$(1 - x + x^2)^n = a_0 + a_1 x + a_2 x^2 + \dots + a_{2n} x^{2n}$$

then

$$a_0 + a_1 + a_2 + \dots + a_{2n} \text{ equals}$$

- (a) $\frac{3^n + 1}{2}$ (b) $\frac{3^n - 1}{2}$ (c) $\frac{3^{n-1} + 1}{2}$ (d) $\frac{3^{n-1} - 1}{2}$

7. The total number of permutations of 4 letters that can be made out of the letters of the word 'EXAMINATION' is

- (a) 2624 (b) 2545
(c) 2454 (d) 2436

8. Two sides of a triangle are $\sqrt{12}$ and $\sqrt{8}$ and the angle opposite the shorter side is 45° , the maximum value of third side is

- (a) $\sqrt{6} + \sqrt{2}$ (b) $\sqrt{6} + \sqrt{10}$ (c) $\sqrt{5} - \sqrt{2}$ (d) $\sqrt{5} + \sqrt{2}$

9. Let

$$f\left(\frac{x+y}{2}\right) = \frac{f(x)+f(y)}{2} \quad \forall x, y \in \mathbb{R}$$

$f'(x)$ exists at $x = 0$ and is equal to -1 and $f(0) = 1$. Then $f(2)$ is

- (a) 0 (b) -1 (c) 1 (d) 2

10.

$$f(x) = \frac{\sqrt{1+ax} - \sqrt{1-ax}}{x}, -1 \leq x < 0$$
$$\frac{2x+1}{x-2} \quad 0 \leq x \leq 1$$

is continuous in the interval $[-1, 1]$. then 'a' is equal to

- (a) $-\frac{1}{2}$ (b) $\frac{1}{2}$ (c) -1 (d) 1

11. If

$$z = \frac{a^2}{x} + \frac{b^2}{y} \text{ where } x + y = a$$

then z has a maximum when x is equal to

- (a) $\frac{b^2}{a-b}$ (b) $\frac{b}{a-b}$ (c) $\frac{a^2}{a-b}$ (d) $\frac{a}{a-b}$

12. $\vec{i} \times (\vec{a} \times \vec{i}) + \vec{j} \times (\vec{a} \times \vec{j}) + \vec{k} \times (\vec{a} \times \vec{k}) =$

- (a) \vec{a} (b) $2\vec{a}$
(c) $3\vec{a}$ (d) 0

13. If the straight line
 $lx + my = 1$
 is normal to the hyperbola
 $\frac{x^2}{9} - \frac{y^2}{4} = 1$
 then $\frac{9}{l^2} - \frac{4}{m^2}$ is equal to
 (a) 121 (b) 196 (c) 144 (d) 169
14. The area bounded by
 $y = xe^{|x|}$
 and lines $y = 0, |x| = 1$ is
 (a) 4 (b) 2 (c) 3 (d) 5
15. If x is a poisson variate such that
 $P(x = 1) = P(x = 2)$ then $P(x = 4) =$
 (a) $\frac{2}{3} e$ (b) $\frac{3}{2} e$ (c) $\frac{2}{3} e^2$ (d) $\frac{3}{2} e^2$
16. A fair coin is tossed repeatedly. If tail appears on first four tosses then the probability of head appearing on fifth toss equals
 (a) $\frac{1}{2}$ (b) $\frac{1}{32}$ (c) $\frac{31}{32}$ (d) $\frac{1}{5}$
17. The distance of the point (3, 8, 2) from the line
 $\frac{x-1}{2} = \frac{y-3}{4} = \frac{z-2}{3}$
 measured parallel to the plane
 $3x + 2y - 2z + 5 = 0$
 is
 (a) 2 (b) 3 (c) 5 (d) 7
18. Solution of the equation
 $x \frac{dy}{dx} + y = y^2 \log x$ is
 (a) $kx + (1 + \log x) y = 1$ (b) $kxy + (1 - \log x) y = 1$
 (c) $kxy + (1 + \log x) y = 1$ (d) $ky + (1 + \log x) x = 1$
19. ABC is a triangle. Forces P, Q, R act along the lines OA, OB, OC and are in equilibrium. Then if O is the circumcentre of the triangle ABC,
 (a) $\frac{P}{\sin^A/2} = \frac{Q}{\sin^B/2} = \frac{R}{\sin^C/2}$ (b) $\frac{P}{\Delta COA} = \frac{Q}{\Delta AOB} = \frac{R}{\Delta BOC}$
 (c) $\frac{P}{\cos^A/2} = \frac{Q}{\cos^B/2} = \frac{R}{\cos^C/2}$ (d) $\frac{P}{\sin 2A} = \frac{Q}{\sin 2B} = \frac{R}{\sin 2C}$

20. If V and W be the velocities at the ends of a focal chord of a projectile's path and u stands for the horizontal component of the velocity then
- (a) $\frac{1}{v^2} + \frac{1}{w^2} = \frac{2}{u^2}$ (b) $\frac{1}{v} + \frac{1}{w} = \frac{1}{u}$
(c) $\frac{1}{v^2} + \frac{1}{w^2} = \frac{1}{u^2}$ (d) $\frac{1}{v} + \frac{1}{w} = \frac{2}{u}$
21. The resultant of two forces of magnitudes 5N and 10N acting at a point can never be equal to
(a) 10N (b) 5N (c) 8N (d) 4N
22. A light string is fastened to two points A and D at the same level, the length of the string exceeding the distance AD and particles of weight 2N and 1N are fastened to it at two points B and C respectively. It AB, BC and CD make angles α , β and γ respectively within the horizontal, then
(a) $(\tan\alpha - 2\tan\gamma)^2 = 9 \tan^2\beta$ (b) $(2\tan\alpha + 3\tan\beta)^2 = 4 \tan^2\gamma$
(c) $(3\tan\gamma + 2\tan\beta)^2 = \tan^2\alpha$ (d) $(\tan\gamma - 3\tan\alpha)^2 = 4 \tan^2\beta$
23. Three like parallel forces P, 2P and 3P act at angular points A, B and C respectively of a triangle ABC. If D is a point on BC, then the resultant acts at a point G in AD such that
(a) AG : GD = 3 : 2 and BD : DC = 5 : 1 (b) AG : GD = 2 : 1 and BD : DC = 1 : 1
(c) AG : GD = 2 : 3 and BD : DC = 1 : 5 (d) AG : GD = 5 : 1 and BD : DC = 3 : 2
24. If three forces P, Q and R acting along the bisectors of the angles $\angle A$, $\angle B$ and $\angle C$ of $\triangle ABC$ at the angular points A, B and C respectively, keep the triangle in equilibrium and if $\angle A = 60^\circ$, $\angle B = 90^\circ$ and $\angle C = 30^\circ$, then P : Q : R is equal to
(a) $(\sqrt{3} - 1) : \sqrt{6} : \sqrt{2}$ (b) $\sqrt{6} : \sqrt{2} : (\sqrt{3} - 1)$ (c) $\sqrt{2} : \sqrt{6} : (\sqrt{3} + 1)$ (d) $\sqrt{3} : (\sqrt{3} + 1) : \sqrt{2}$
25. A uniform rod W and length 2l has one end against a smooth vertical wall and rests at an inclination of 45° with the vertical upon a smooth rail parallel to the wall. Then the distance of the rail from the wall is
(a) $\frac{l}{4\sqrt{2}}$ (b) $\frac{\sqrt{2}l}{4}$ (c) $\frac{l}{\sqrt{2}}$ (d) $\frac{l}{4}$
26. A rough hollow sphere of radius 4m is resting on the ground. If the co-efficient of friction of the sphere is $\frac{1}{\sqrt{3}}$, then the greatest height from the ground at which a particle can rest inside the sphere is
(a) $(4 - 2\sqrt{3})m$ (b) $(4 - 3\sqrt{3})m$ (c) $(4 - \sqrt{3})m$ (d) $(4 - \frac{1}{\sqrt{3}})m$
27. If (x, y) are the co-ordinates of the centroid of a uniform wire bent into the form of a cardioide $r = a(1 + \cos \theta)$, then
(a) $x = \frac{5a}{4}$, $y = 0$ (b) $x = 0$, $y = \frac{4a}{5}$ (c) $x = \frac{4a}{5}$, $y = \frac{a}{5}$ (d) $x = \frac{4a}{5}$, $y = 0$
28. To a man walking at the rate of 3 km/h, rain appears to fall vertically. If he increases his speed to 5 km/h, it appears to fall at an angle of 30° with the vertical. Then the magnitude of the true velocity of the rain is approximately
(a) 3.8 km/h (b) 4 km/h (c) 4.6 km/h (d) 5 km/h
29. A particle of mass m is acted on by a force mn^2x to a fixed point when at a distance x from it, and also by a force $mp \cos 2nt$ in the line joining it to the fixed point at any time t. Initially, it is at rest at the point. Then in the subsequent motion, its greatest displacements on the two sides of the fixed point are
(a) $\frac{3p}{8n}$ and $\frac{2p}{3n}$ (b) $\frac{3p}{8n^2}$ and $\frac{2p}{3n^2}$ (c) $\frac{8n^2}{3p}$ and $\frac{3n^2}{2p}$ (d) none of these

30. A curve in a vertical plane is such that the time of describing any arc, measured from a fixed point on it, is equal to the time of sliding down the chord of the arc. Then the equation of the curve is
 (a) $r^2 = a^2 \sin 2\theta$ (b) $r = a \sin 2\theta$ (c) $r^2 = a^2 \cos 2\theta$ (d) $r = a \cos 2\theta$
31. In any discrete series, when all values are not the same, the relationship between the mean deviation about the mean (M.D.) and the standard deviation (S.D.) is given by
 (a) $S.D. - M.D. = 1$ (b) $S.D. - M.D. \leq 0$ (c) $S.D. + M.D. = 1$ (d) $S.D. - M.D. \geq 0$
32. If X and Y are two independent variables with means 5 and 10 and variances 4 and 9 respectively and if $U = 3X + 4Y$ and $V = 3X - Y$, then the correlation co-efficient r_{UV} between U and V is equal to
 (a) 1 (b) $\frac{2}{3}$ (c) 0 (d) $\frac{1}{3}$
33. If the lines of regression of Y on X and X on Y are respectively $a_1 x + b_1 y + c_1 = 0$ and $a_2 x + b_2 y + c_2 = 0$, then
 (a) $a_1 a_2 \leq b_1 b_2$ (b) $a_1 b_2 \leq a_2 b_1$ (c) $a_2 b_1 \leq a_1 b_2$ (d) $b_1 b_2 \leq a_1 a_2$
34. If X and Y are two variables such that $\text{cov}(X, Y) = 1$, $\sigma_x^2 = 4$, $\sigma_y^2 = 4$, then the value of correlation co-efficient between X and Y is
 (a) $\frac{1}{4}$ (b) $\frac{1}{2}$ (c) $-\frac{1}{2}$ (d) $-\frac{1}{4}$
35. If the S.D. of a variate x is 4, then the S.D. of $3x + 5$ is
 (a) 4 (b) 20 (c) 12 (d) 17
36. The marks obtained by 10 students in a subject in an examination are 22, 26, 14, 36, 18, 11, 35, 41, 12 and 32. Then the 61st percentile of these marks is
 (a) 26 (b) 30 (c) 23 (d) 28
37. The prices of certain commodities for the years 1992 and 1998 are given below :
- | Commodity | A | B | C | D | E |
|------------------------|--------|-------|-------|-------|--------|
| Price (in Rs.) in 1992 | 80.00 | 60.00 | 50.00 | 16.00 | 160.00 |
| Price (in Rs.) in 1998 | 104.00 | 87.00 | 67.00 | 22.40 | 184.00 |
- Then the price index number for the year 1998 with 1992 as the base year, is
 (a) 140 (b) 132.80 (c) 145.50 (d) 130
38. The first two moments of a distribution about the value 2 of a variable are 1 and 16. Then the mean and variance of the distribution are respectively.
 (a) 3 and 15 (b) 15 and 3 (c) 6 and 16 (d) none of these
39. In a frequency distribution, the co-efficient of skewness based on the quartiles is 0.6. If the sum of the upper and the lower quartiles is 100 and the median is 38, then the values of the upper and the lower quartiles are respectively
 (a) 65 and 35 (b) 55 and 45 (c) 60 and 40 (d) 70 and 30
40. In a bolt factory, machines A, B and C manufacture 25%, 35% and 40% respectively of the total bolts. Of their output, 5%, 4% and 2% are respectively defective bolts. A bolt is drawn at random from the product. If the bolt drawn is found to be defective, then the probability that it is manufactured by the machine B is
 (a) $\frac{26}{69}$ (b) $\frac{28}{69}$ (c) $\frac{27}{69}$ (d) none of these

Direction (Q. Nos. 41-45) : In the following questions, some of the sentences have errors and some have none. Find out which part of the sentence has an error.

41. In spite of several reminders, / he did not so far sent / any reply to my letter. / No error.
(a) (b) (c) (d)
42. No sooner did the sun rise / when we took a hasty breakfast / and resumed the journey. / No error.
(a) (b) (c) (d)
43. No less than twenty persons / were killed in / the air crash. / No error.
(a) (b) (c) (d)
44. I never have and / never will entertain / false notions about myself. / No error.
(a) (b) (c) (d)
45. Beside the fixed salary / he demanded Rs. 100/- per day / as conveyance allowance. / No error.
(a) (b) (c) (d)

Direction (Q. Nos. 46-50) : In the following questions, choose the word, which is nearly the same in meaning to the word written in capitals.

46. SCHEDULED
(a) backward (b) poor (c) lowly (d) listed
47. HONORARY
(a) honest (b) dignified (c) unpaid (d) respectable
48. WRATH
(a) anger (b) hatred (c) cruelty (d) violence
49. ANIMATE
(a) kill (b) calm (c) dead (d) energise
50. PERNICIOUS
(a) deadly (b) curious (c) expensive (d) heinous

Direction (Q. Nos. 51-55) : In the following questions, choose the word which is most nearly the opposite in meaning to the word in capitals.

51. SACROSANCT
(a) unholy (b) irreverent (c) unethical (d) irreligious
52. PARSIMONIOUS
(a) generous (b) frugal (c) stingy (d) crude
53. PRETENTIOUS
(a) small (b) humble (c) deranged (d) depressing
54. JUXTAPOSITION
(a) separation (b) difference (c) opposition (d) appropriateness
55. PAUCITY
(a) surplus (b) scarcity (c) richness (d) presence

Direction (Q. Nos. 56-60) : Fill in the blanks with the most appropriate words/phrases in the following questions.

56. I enjoy _____ the children playing in the garden.
(a) looking to (b) looking about
(c) looking at (d) looking on
57. Too many skyscraper _____ the view along the beach.
(a) obstruct (b) reveal
(c) clear (d) connect
58. I am feeling _____ better today.
(a) too (b) fairly
(c) very (d) rather
59. My uncle _____ all the children of my elder brother.
(a) brought about (b) brought out
(c) brought back (d) brought up
60. This is the _____ chosen for the hospital complex to be built next year.
(a) area (b) locality
(c) site (d) sight

Direction (Q. Nos. 61-65) : Read the passage given below and answer the questions that follow.

PASSAGE

A man is known by the books he reads. Books are an index to the mind and the interest of a person. A person who has no library of his own is poor, no matter how rich his furniture may be. Books are so cheap nowadays that one can have a moderate library within the small sum of five pounds. The money spent on books is never wasted. Even if the owner does not avail himself of his books, his children will read them with profit. There is no pleasure like the pleasure of enjoying good books; and what is more, one always gains in knowledge and wisdom by studying the works of great writers.

61. According to the passage books
(a) are more important than rich furniture (b) should be borrowed only from the library
(c) guide us on the path of life (d) should be read and returned to the library
62. In books is stored
(a) information for the future generations (b) facts about the lives of great writers
(c) information about the whole world (d) wisdom of great writers
63. These days one can afford to have a library of one's own because
(a) books are written in great numbers
(b) books are cheaper than furniture
(c) books are now comparatively cheaper than they were in the past
(d) the libraries cannot accommodate any more books
64. The books give us
(a) a peep into the mind of the reader (b) index to various libraries
(c) life long companionship (d) something to pass on to our next generation
65. The message of this passage is that
(a) we should accumulate more and more books
(b) instead of furniture we should buy books
(c) we should read and benefit from the books
(d) we should sacrifice pleasure for the sake of books

Direction (Q. Nos. 66-70) : Read the passage given below and answer the questions that follow.

PASSAGE

People think that poverty is a great curse and that wealth is a source of happiness in life. This is untrue. A life of poverty gives more genuine satisfaction than a life passed in affluence which encourages dependence on others. Poor people are free from the evils which surround the rich. They have sympathy for one another and are more self-reliant. All great men were born poor.

66. The passage
(a) praises the happiness of wealth (b) extols the blessing of poverty
(c) condemns the poor people (d) tells us about the lives of great men
67. Rich people often
(a) feel miserable (b) exploit the poor (c) have to depend on others (d) are free from vices
68. The poor people are
(a) virtuous (b) miserable (c) not sympathetic (d) born great
69. Most of the people take poverty
(a) as a curse (b) as a blessing in disguise
(c) as a hindrance to happiness (d) as a gift from God
70. According to the passage, genuine happiness lies in
(a) affluence (b) sympathising with others
(c) poverty (d) depending on others

Direction (Q. Nos. 71-75) : Read the passage given below and answer the questions that follow.

PASSAGE

The night was cold and dark. There was a great storm, thunder and lightning also. Most men and animals, adequately protected, were asleep in their homes. They were warm and happy. But some monkeys were running through the forest. They had no warm home and there was cold. Worried monkeys looked everywhere for shelter. They had almost resigned themselves to be flattened out by the cold. Suddenly they saw some fireflies. Now, fireflies have a light in their tails, as all our children know. The monkeys took the light for fire. Poor things, they did not know any better. They said, "We will go near the fire and warm ourselves."

71. Men and other animals were feeling comfortable happy because
(a) they were adequately protected
(b) they were not running here and there like monkeys
(c) monkeys were in real trouble
(d) they were sleeping in their beds
72. Monkeys were running because
(a) men and other animals chased them
(b) they wanted to be far away from the storm
(c) they were looking for a shelter
(d) they were slave to their usual habit of running
73. The monkeys had almost
(a) reconciled themselves to the cold
(b) decided to surrender themselves to the chasers
(c) reached a comfortable place of shelter
(d) exhausted themselves by running

74. What did the monkeys see in the end?
 (a) the birds in a tree
 (b) fire in the wood
 (c) some warm place to rest
 (d) none of these
75. The author of the passage feels
 (a) sympathy for the poor monkeys
 (b) indifferent to the misery of the monkeys
 (c) satisfied with the lot of the monkeys
 (d) happy that the monkeys got their due punishment

Direction (Q. Nos. 76-79) : Read the passage and answer the questions (Q. No. 56-59).

Riya placed nine books—two biographies, two computer books, two dictionaries, two novels and a quiz book—in a row on a shelf over her desk. The position of the books are numbered from 1 to 9, with the left most book being book 1 and the right most book being book 9. The following facts are known about the order in which the books were placed!

The two biographies are next to each other.

The fourth book is a novel.

The two computer books are not next to each other.

Both the first and last book are dictionaries.

The quiz book is not next to either novel.

76. If one of the biographies is book number 3, in what position is the other biography?
 (a) 2 (b) 4 (c) 5 (d) 6
77. If a novel is in position 5, each of the following could be true except.
 (a) A quiz book is next to one of the dictionaries
 (b) The quiz book is in position 6
 (c) The two computer books and the quizbook are in three consecutive positions
 (d) A biography is in position 8
78. If a novel is in position 6, which of the following could be true?
 (a) A computer book is in position 2 (b) The quiz book is in position 3
 (c) A computer book is in position 7 (d) A biography is in position 5
79. Which of the following, if true, would enable you to determine the position of every type of book?
 (a) A computer book is in position 2 (b) A computer book is in position 3
 (c) a biography is in position 5 (d) A novel is in position 7
80. The number that should replace the question mark is given by-

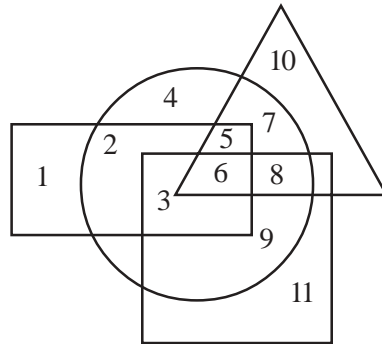


- (a) 10 (b) 8 (c) 6 (d) 4

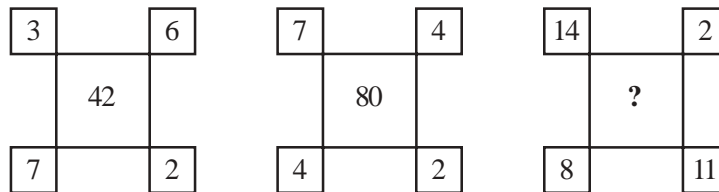
81. If DEER = 12215 and HIGH = 5645, how will you code HEEL?
 (a) 3449 (b) 4337
 (c) 2328 (d) 5229

82. A pet shop sells birds and puppies. When the owner was asked how many he had of each, he replied that altogether, there were 60 eyes and 86 feet. How many birds and puppies did he have?
- (a) 13 puppies and 17 birds (b) 17 puppies and 13 birds
(c) 10 puppies and 20 birds (d) 15 puppies and 15 birds

Direction (Q. Nos. 83-85) : In the diagram below, circle represents wheat, triangle represents sugar cane, rectangle represents rice and square millet. Study the diagram carefully and match the numbers with the questions that follows:-

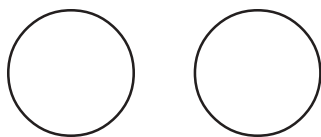


83. Which area has the cultivation of all the four commodities mentioned?
(a) 8 (b) 5 (c) 6 (d) 3
84. Which area grows millet and rice both and nothing else?
(a) 3 (b) 2 (c) 8 (d) 9
85. Which area grows only wheat and rice together?
(a) 4 (b) 3 (c) 7 (d) 2
86. What number should replace the question mark?

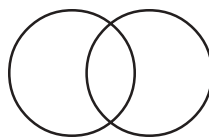


- (a) 100 (b) 122 (c) 88 (d) 48
87. It is immoral to blame people for what they do. They are simply behaving as they have conditioned to behave and have no choice in the matter. Blaming them will never change their behaviour.
- The author undercuts his own argument by
- (a) adopting dubious psychological theories (b) undermining morality
(c) attacking human freedom (d) doing what he argues against
88. Determine whether the data given in statements (i) and (ii) are sufficient for answering the question.
- Is Mr. Sharma more than 50 years of age?
- (i) Five years ago, he was less than 50 years of age.
(ii) Five years ago, he was more than 45 years of age.
- (a) If statement (i) ALONE is sufficient, but statement (ii) alone is not sufficient to answer the question.
(b) If statement (ii) ALONE is sufficient, but statement (i) alone is not sufficient.
(c) If both statements (i) and (ii) TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
(d) If EACH statement ALONE is sufficient.

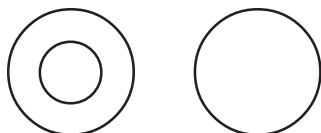
Direction (Q. Nos. 89-90) : Choose the letter of the diagram that best shows the relationship.



A



B



C



D

89. Married women, divorced women, married men.

90. Mothers, daughters, fathers.

Direction (Q. Nos. 91-92) : In these questions you are required to complete analogies.

91. Novel: Author :: Opera :
 (a) Composer (b) Song (c) Director (d) Music
92. Miser : Gold :: General :
 (a) Victories (b) Medals (c) Promotions (d) Defeat

Direction (Q. Nos. 93-94) : Study the passage and choose the best answer for each question.

A table with ten seats around it has three hosts and their two guests already seated together, with every host sitting beside atleast one guest. No guests may be seated together. Two late guests are seated in vacant chairs.

93. The greatest number of people seated without any vacant seats between them is
 (a) Five (b) Six (c) Seven (d) Eight
94. The number of vacant chairs next to any host must be
 (a) One (b) Two (c) Three (d) Two or Less
95. Select from the answer choices the term that will continue the series and replace the question mark (?)
 LF, NI, QK, SN, ??
 (a) TM (b) UO (c) TQ (d) VP

Direction (Q. Nos. 96-100) : Study the Statements and choose the answer for each question.

- (i) A necklace with space for nine jewels has two diamonds and two pearls with no spaces between them.
 (ii) Diamonds may not be placed together.
 (iii) Two diamonds are added to the necklace.
 (iv) There are never more than two empty spaces between diamonds.
96. Which of the four statements gives information available in the other three?
 (a) (i) (b) (ii) (c) (iii) (d) (iv)

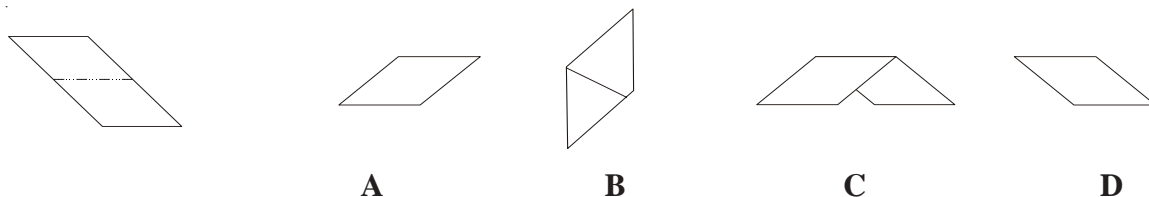
97. The number of unfilled spaces between two diamonds is
 (a) only one (b) no more than two
 (c) no more than than one (d) only two
98. Insert the missing number

$$\begin{array}{c} \textcircled{4} \\ 6 \textcircled{9} 6 \end{array} \quad \begin{array}{c} \textcircled{7} \\ 4 \textcircled{8} ? \end{array}$$

 (a) 4 (b) 7 (c) 14 (d) 16
99. A vehicle starts from point A and runs 10 km towards north, turns to its right and runs 15 km. It then turns to its right again and runs another 10 km to reach point B. After reaching point B, how far is the vehicle from the starting point A?
 (a) 25 km. (b) 15 km. (c) 10 km. (d) 35 km.
100. Insert the missing letter
 FIMP _____
 (a) V (b) Q (c) T (d) R
101. Which is not a source of CFC-
 (a) Airconditioner (b) Refregirator (c) Ozone cylinder (d) Chemical weapons
102. Which of the following does not concern environment-
 (a) man (b) animal (c) plant (d) galaxy
103. Is biological community and biomass refer to same entity?
 (a) yes (b) no
 (c) one is a component of other (d) some parts are common
104. Approach to study of ecology must be-
 (a) entirely scientific (b) holistic (c) socio-economic (d) geographical
105. How does atmospheric temperature behave while moving from tropical to arctic region-
 (a) increases (b) decreases (c) remains same (d) fluctuates
106. Does microclimate change during change in weather-
 (a) no (b) yes (c) partly (d) negligible
107. Which of the following pairs is not true-
 (a) Middle Himalayas Pir Panjal range
 (b) Greater Himalayas Mt. Everest
 (c) Trans Himalayan zone Zaskar range
 (d) Outer Himalayas Siachin
108. The term that does not fit in the group-
 (a) steppe (b) desert (c) arid (d) mangrove
109. UNDP stands for-
 (a) United Nations Development Programme
 (b) United Nations Desertification Programme
 (c) United Nations Development Projects
 (d) Union of Nations for Development of Projects

110. Thickest ozone layer exists in-
 (a) Mesosphere (b) stratosphere (c) Troposphere (d) ground
111. Highest gas content exists in-
 (a) Mesosphere (b) stratosphere (c) Troposphere (d) none
112. Hydrophytes breathe through-
 (a) photo synthesis (b) intake of oxygen in aerenchyma
 (c) parts that remain above water (d) water fixation
113. The plant group called ephemerals can be called drought resistant-
 (a) True (b) Partially (c) False (d) None
114. Factors that play key role in decomposition of detritus are-
 (a) temperature and soil moisture (b) tropical conditions and microtial presence
 (c) humus (d) man made factors
115. Almost every ecosystem has saprotrophs as its member-
 (a) False (b) True (c) Sometimes (d) None

116. When the figure on the left is folded at the dotted line which shape does it produce?



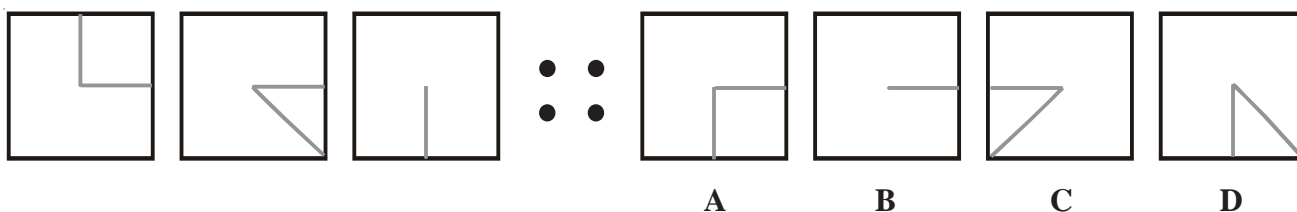
- (a) A (b) B (c) C (d) D

117. Which patterns completes the series



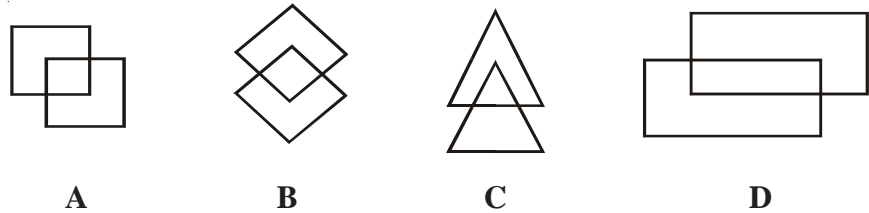
- (a) A (b) B (c) C (d) D

118. Which of the patterns completes the series



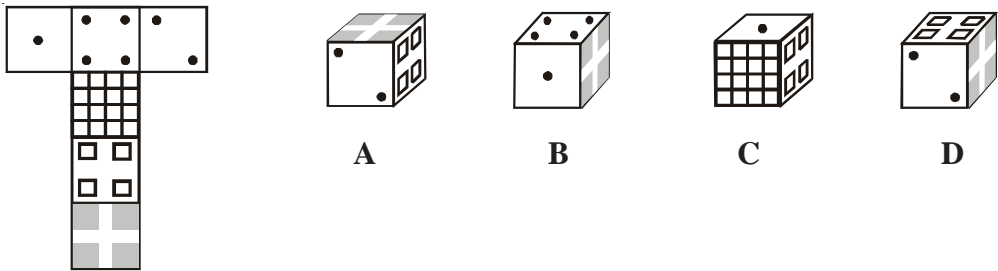
- (a) A (b) B (c) C (d) D

119. Which is the odd one out?



- (a) A (b) B (c) C (d) D

120. Which of the following cubes is similar to the unfolded cube?



- (a) A (b) B (c) C (d) D