

SECTION - V
VERBAL SKILLS

No. of Questions 16 (Q 68-83)

Time: 20 Minutes

Directions for Questions 68-73:

Each Question is based on the passage below. After reading the passage, choose the best answer to each Question from the answer choices given below and **darken the corresponding oval** in the answer sheet. Base your answer on information that is either **stated or implied** in the passage.

Passage:

Nearly a century ago, biologists found that if they separated an **invertibrate animal embryo** into two parts at an early stage of its life, it would survive and develop as two **normal embryos**. This led them to believe that the cells in the early embryo are undetermined in the **sense that each cell** has the potential to develop in a variety of different ways. Later biologists found that **the situation** was not so simple. It matters in which plane the embryo is cut. If it is cut in a plane **different from the one** used by early investigators, it will not form two whole embryos.

A debate arose over what exactly was happening. Which embryo cells are **determined**, just when do they become irreversely committed to their fates, and what are the "**morphogenetic determinants**" that tell a cell what to become?

But the debate could not be resolved because no one was able to ask **the crucial questions** in a form in which they could be pursued productively. Recent discoveries in **molecular biology**, however, have opened up prospects for a resolution of the debate. Now investigators **think they know** at least some of the molecules that act as morphogenic determinants in early development. **They have been able** to show that, in a sense, cell determination begins even before an **egg is fertilized**.

Studying sea urchins, biologist Paul Gross found that an unfertilized **egg contains substances** that function as morphogenetic determinants. They are located in the **cytoplasm of the egg cell**, i.e., in that part of the cell's protoplasm that lies outside of the nucleus. In the **unfertilized egg** the substances are inactive and are not distributed homogeneously. When the **egg is fertilized**, the substance become active and, presumably, govern the behaviour of the **genes they interact with**. Since the substances are unevenly distributed in the egg, when the fertilized **egg divides**, the resulting cells are different from the start and so can qualitatively different in their own **gene actively**.

The substances that Gross studied are maternal messenger RNA's ———— **products** of certain of the maternal genes. He and other biologists studying a wide variety of **organisms** have found that these particular RNA's direct, large part, the synthesis of histones, a class of **proteins** that bind to DNA. Once synthesized, the histones move into the cell nucleus, **where sections** of DNA wrap around them to form a structure that resembles beads or knots, on a string. **The beads** are DNA segments wrapped around histones; the string is the intervening DNA. **And it is** the structure of these beaded DNA strings that guides the fate of the cells in which they are **located**.

Questions 68-73 are based on the above passage.

- Q.68. The main topic of the passage is
- (1) The main contribution of modern embryology to molecular biology.
 - (2) The early development of embryos of lower marine organisms like sea urchins.
 - (3) The role of molecular biology in disproving older theories of embryonic development.
 - (4) Cell determination as an issue in the study of embryonic development.

- Q.69. It can be inferred from the passage that the morphogenic determinants present in the early embryo are
- (1) identical to those that were already present in the unfertilized egg.
 - (2) evenly distributed unless the embryo is not developing normally.
 - (3) inactive until the embryo cells become irreversibly committed to their final function.
 - (4) present in larger quantities than is necessary for development of a single individual.
- Q.70. According to the passage, when biologists believed that the cells in the early embryo were undetermined, they made which of the following mistake?
- (1) They assumed that different ways of separating an embryo into two parts would be equivalent as far as the fate of the two parts was concerned.
 - (2) They assumed that the results of experiments on embryo did not depend on the particular animal species used for such experiments.
 - (3) They did not realize that there was a connection between the issue of cell determination and the outcome of separation experiment.
 - (4) They assumed that it was crucial to perform the separation experiment at an early stage in the embryo's life.
- Q.71. It can be inferred from the passage that which of the following is dependent on the fertilization of an egg.
- (1) Determination of the egg cell's potential for division.
 - (2) Generation of all of a cell's morphogenetic determinants.
 - (3) Synthesis of proteins called histones.
 - (4) Division of a cell into its nucleus and the cytoplasm.
- Q.72. According to the passage, the morphogenetic determinants present in the unfertilized egg cell are which of the following?
- (1) Histones
 - (2) Cytoplasm
 - (3) Maternal messenger RNA's
 - (4) Nonbeaded intervening DNA
- Q.73. It can be inferred from the passage that the initial production of histones after an egg is fertilized take place
- (1) in the beaded portion of the DNA string
 - (2) in the cytoplasm
 - (3) in certain sections of the cell nucleus
 - (4) in the maternal genes

Directions for Questions 74-77

For each of these questions, four or five sentences lettered A to D/E are given. These sentences, if arranged in a logical sequence, will form a coherent and meaningful paragraph. Choose the most logical order from among the given choices (1),(2),(3) and (4) to construct a coherent paragraph, then darken the corresponding oval in the answer sheet.

Q.74.

- (A) The developed world has been forced to give in the demand to end agricultural export subsidies by 2013.
- (B) The deep divisions that were evident in the negotiations leading up to and during, the ministerial meetings are sufficient to show that this success is by no means a foregone conclusion.

- (C) And, more important for a development round of trade negotiations, the little progress that has been achieved is in the direction of opening markets for the benefit of more vulnerable economies.
- (D) The WTO's Hong Kong ministerial has done just about enough to keep alive the prospects of a successful completion of the Doha Development Round.
- (E) But the self-imposed new deadlines for finalizations of modalities for the negotiations suggest a desire on the part of all concerned to make the round work.
- (1) DAEB C (2) DCEAB (3) ADCBE (4) DBECA

- Q.75. (A) India may be one of the World's two fastest growing economies, its future prospect may be making both Dalal Street and Wall Street droll.
- (B) India is, at the same time, a country which produces millions of employment seekers every year but precious little employment.
- (C) Jobs in the once bloated public sector are necessarily decreasing and restrictive labour laws, in part, ensure that the private organized sector hasn't made good the deficit.
- (D) And the situation getting worse with every passing year.
- (E) The cumulative result is an unemployment situation that is a social time bomb, with scarcity driven parochialism providing the fuse.
- (1) ABDCE (2) ABECD (3) BACDE (4) ABCDE

- Q.76. (A) When faced with a threatening context, the psychological stress and anxiety may induce a rigid cognitive response on the part of individuals.
- (B) In many cases, strategic decision making occurs in the context of a threatening situation ——— the organization must deal with poor financial performance, deteriorating competitive position and/on a dramatic shift in customer requirements.
- (C) Over confidence bias becomes a factor in many situations as well.
- (D) Consequently, we may not recognize when we need to solicit input and advice from others, or we downplay the doubts that others display regarding our judgements and decisions.
- (E) Most of us tend to overestimate our own capabilities.
- (1) CEDBA (2) EBDAC (3) ADBEC (4) BCDEA

- Q.77. (A) The outer regions of the sun will expand approximately 35 million miles, about the distance to Mercury, which is the closest planet to the sun.
- (B) By studying other stars, astronomers can predict what the rest of the sun's life will be like.
- (C) The sun will then be a red giant star; temperatures on the Earth will become too hot for life to exist.
- (D) The surface temperature will fall and the higher temperature of the centre will increase the rate of thermonuclear reactions.
- (E) About 5 billion years from now, the core of the Sun will shrink and become hotter.
- (1) CADEB (2) BEDAC (3) CEBDA (4) ADBEC

Directions for Questions 78-83

In each of the following Questions, a related pair of words or phrases is followed by four numbered pairs of words or phrases. Select the numbered pair that best express a relationship similar to that expressed in the original pair and darken the corresponding oval in the answer sheet.

- Q.78. LUMBRE: GRACE::
(1) insinuate: subtly (2) relent: energy
(3) waiver: resolution (4) castigate: justic
- Q.79. CAUSTIC: EATAWAY::
(1) explosive: destroy (2) rejent: blind
(3) desiccant: dry (4) synthesis: substitute
- Q.80. MALINGERER: DUTY::
(1) recluse: humanity (2) rebel : responsibility
(3) scolar : pendartry (4) miser : wealth
- Q.81. MILK: EXTRACT : :
(1) wheedle: flatter (2) hire : manage
(3) exploit: utilize (4) research : investigate
- Q.82. MISANTHROPE: PEOPLE ::
(1) miscreant : dogma (2) xexophobe : stranger
(3) reactionary : government (4) patrist : country
- Q.83. IMPLACABLE : COMPROMISE : :
(1) honest : swindle (2) amenable : deceive
(3) hasty : prevail (4) perfidious : conspire

SECTION - IV
QUANTITATIVE SKILLS

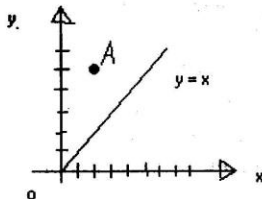
No of Questions 17 (Q.84-100)

Time : 17 Minutes

Directions for Questions 84-90

Choose the best or correct answer for each of the following questions from the alternative choices given numbered (1), (2), (3) and (4) and then darken the corresponding oval in the answer sheet.

- Q.84. In the formula $V = 1/(2r)^2$, if r is halved, V is multiplied by
(1) 1/8 (2) 1 (3) 1/64 (4) 8
- Q.85. Which of the following describes all values of x for which $1 - x^2 \geq 0$?
(1) $0 \leq x \leq 1$ (2) $x \leq -1$ or $x \geq 1$ (3) $-1 \leq x \leq 1$ (4) $x \leq -1$



- Q.86. In a rectangular coordinate system above, the line $y = x$ is the perpendicular bisection AB

(not shown), and the x-axis is the perpendicular bisector of segment BC (not shown). If the coordinates of point A are (2,3), what are the coordinates of point C?

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

Q.87. If Rowling were twice as old as she is, she would be 40 years older than Harry. If Harry is 10 years younger to Rowling, how old is Rowling?

- (1) 30 (2) 60 (3) 50 (4) 40

Q.88. For any integer n greater than 1, I_n denotes the products of all integers from 1 to n , inclusive. How many prime numbers are there between I_6+2 and I_6+6 , inclusive?

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

Q.89. The probability that a bomb dropped from a bomber will strike the target is $1/5$. If six bombs are dropped, the probability that exactly two will strike the target is

- (1) $1/3$ (2) $1/15$ (3) $768/3125$ (4) $3/4$

Q.90. A store currently sells at the same price for each toy that it sells. If the current price of each toy were to be increased by euro 1, 10 fewer of the toys could be bought for euros 120, excluding tax. What is the current price of each toy in euro?

- (1) 1 (2) 8 (3) 4 (4) 3

Directions for Questions 91-95

In each of the problems, a question is followed by two statements marked (A) and (B) containing certain data pertaining to the problem. You need to determine whether the data provided by the statements are sufficient to answer the question from the four answer choices numbered (1), (2), (3) and (4). Choose the correct answer for each question based upon the statement data and then darken the corresponding oval in the answer sheet.

Choose 1 – If the question can be answered by (A) ALONE but NOT by the other (B) alone.

Choose 2 – If the question can be answered by (B) ALONE but NOT by the other (A) alone.

Choose 3 – If the question can be answered by using both the statements TOGETHER, but cannot be answered by using either statement alone.

Choose 4 – If the question CANNOT BE answered even by using both statements together.

Q.91. If m and n are consecutive positive integers, is m greater than n ?

- (A) $m - 1$ and $n + 1$ are consecutive positive integers
(B) m is an even integer
(1) (A) ALONE (2) (B) ALONE
(3) Both statements together (4) Cannot be answered

Q.92. How many integers n are there such that $r < n < s$?

- (A) $s - r = 5$
(B) r and s are not integers
(1) (A) Alone (2) (B) Alone
(3) Both statements together (4) Cannot be answered

Q.93. If M and N are each circular regions, what is the radius of the larger of these regions?

- (A) The area of M plus the area of N is equal to 90π .
(B) The larger circular region has a radius that is twice the radius of the smaller circular region.
(1) (A) Alone (2) (B) Alone (3) Both statements together (4) Cannot be answered

- Q.94.** An empty rectangular swimming pool has uniform depth. How long will it take to fill the pool with water?
 (A) Water will be pumped in at the rate of 240 gallons per hour (1 Cubic feet =7.5 gallons).
 (B) The pool is 60 feet long and 25 feet wide.
 (1) (A) Alone (2) (B) Alone (3) Both statements together (4) Cannot be answered
- Q.95.** If $2x(5n) = t$, what is the value of t ?
 (A)
 (B) $x = n+3$
 (C) $2x = 32$
 (1) (A) Alone (2) (B) Alone (3) Both statements together (4) Cannot be answered

Directions for Questions 96-100

Choose the correct answer from the answer choices and then darken the corresponding oval in the answer sheet.

- Q.96.** If $(2^x)(2^y) = 8$ and $(9^x)(3^y) = 81$, then $(x,y) =$
 (1) (1,3) (2) (2,2) (3) (1,1) (4) (1,2)
- Q.97.** If x , y , and z are positive integers such that x is a factor of y , and x is a multiple of z , which of the following is not necessarily an integer?
 (1) xy/z (2) $y+z/x$ (3) $x+z/z$ (4) yz/x
- Q.98.** If a sales person sold her goods for Rs.75.00 at a percent equal to its cost price, then the cost price was (in Rs)?
 (1) 40 (2) 42 (3) 25 (4) 50
- Q.99.** The cost of manufacturing a popular model of a car is made up of three items: cost of raw materials, labour, and overheads. In a year the cost of three items were in the ratio 4:3:2. Next year the cost of raw materials rose by 10%, labour cost increased by 8% but overheads reduced by 5%. The % increase in the price of the car is
 (1) 7.67% (2) 6% (3) 0.54% (4) 9.54%
- Q.100.** The product of two numbers is 24. If the sum of the squares of two numbers be added to the sum of the numbers, the result is 62. The smaller number of the two is
 (1) 3 (2) -8 (3) 3 (4) none of these

ANSWER KEY TO SAMPLE TEST QUESTIONS

ANALYTICAL REASONING SKILLS

Section - II <u>Q.18-34</u>		Section - IV <u>Q.51-67</u>	
<u>Q.No.</u>	<u>Key</u>	<u>Q. No</u>	<u>Key</u>
18	4	51	2
19	1	52	1
20	4	53	4
21	4	54	4
22	2	55	3
23	1	56	3
24	4	57	2
25	1	58	4
26	2	59	4
27	4	60	4
28	3	61	4
29	1	62	1
30	1	63	2
31	2	64	3
32	3	65	2
33	4	66	3
34	2	67	4

VERBAL SKILLS

Section - III <u>Q.35-50</u>		Section - V <u>Q. 68-83</u>	
<u>Q. No</u>	<u>Key</u>	<u>Q.No.</u>	<u>Key</u>
35	2	68	4
36	1	69	4
37	4	70	1
38	4	71	3
39	4	72	3
40	3	73	2
41	3	74	4
42	2	75	1
43	1	76	1
44	1	77	2
45	2	78	3
46	1	79	3
47	1	80	1
48	3	81	3
49	3	82	2
50	4	83	1

QUANTITATIVE SKILL

Section - I <u>Q. 1-17</u>		Section - VI <u>Q. 84-100</u>	
<u>Q.No.</u>	<u>Key</u>	<u>Q.No.</u>	<u>Key</u>
1	4	84	4
2	3	85	3
3	3	86	1
4	4	87	1
5	3	88	4
6	4	89	3
7	4	90	4
8	2	91	1
9	3	92	3
10	2	93	3
11	4	94	4
12	3	95	3
13	2	96	4
14	2	97	2
15	1	98	4
16	2	99	2
17	1	100	2

