## ENGLISH

Direction : A related pair of words or phrases is followed by four pairs of words or phrases. Select the pair that best expresses the relationship similar to that expressed in the original pair.

1) PERSERVERANCE : SUCCESS : :
1. curiosity : knowledge
2. scrutiny : results
3. hope : confirmation
4. endeavor : trials
2) FARM : AGRARIAN : :
1. skyscraper: urban
2. museum: ancient
3. corporation : financial
4. apartment : efficient

Direction : A word is printed in capital letters, followed by four words or phrases. Choose the word or phrase that is most nearly opposite in meaning to the word in capital letters.
03) DIVESTITURE :

1. acquisition
2. subsidization
3. consultation
4. monopolisation
4) STERILISE :
1. irritate
2. contaminate
3. operate
4. agitate

Direction : Questions consist of incomplete sentences, with a blank showing where information is to be filled in. Choose the word or phrase that most correctly completes the sentence.
05) In his address, the superintendent exhorted the teachers to discover and $\qquad$ each student's $\qquad$ talents.

1. suppress ..... unrecognized
2. develop ..... intrinsic
3. redirect $\ldots .$. specious
4. belittle ..... dormant
6) Politeness is not a $\qquad$ attribute of human behaviour, but rather a central virtue, one whose very existence is increasingly being $\qquad$ by the faddish requirement to "speak one's mind."
1. superficial $\ldots .$. threatened
2. pervasive ..... undercut
3. worthless ..... forestalled
4. trivial ..... affected

Direction : Some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of phrasing the underlined part. Select the best alternative to replace the underlined part.
07) If we cooperate together by dividing up the work, we shall be able to finish it quickly.

1. If we cooperate by dividing up the work
2. If we cooperate together by dividing the work
3. If we cooperate by dividing up the work together
4. If we cooperate by dividing the work
8) Crossing the street, a car almost struck us.
1. A car almost struck us, crossing the street.
2. As we crossed the street, a car almost struck us.
3. A car, crossing the street, almost struck us.
4. Having crossed the street, a car almost struck us.

Direction : There is one underlined word or phrase in each sentence and four answer choices marked $1,2,3$, and 4 . Select the one answer choice that best maintains the meaning of the original sentence if you use it in place of the word or phrase that is underlined.
09) The purpose of environmental water retention areas is to slow down the permeation of water into the soil in order to reduce harmful chemicals reaching the groundwater and waterways.

1. dissipation
2. fermentation
3. infiltration
4. evaporation
10) The symptoms caused by ingestion of a harmful chemical must be counteracted within minutes in order to avoid permanent damage to the kidneys and other vital organs.
1. alleviated
2. increased
3. distributed
4. summed up

Direction : Questions consist of sentences with four underlined words or phrases. For each sentence, choose the one underlined word or phrase that is incorrect in standard written English.
11) Overeating, in addition to lack of attention to nutrition, are said to be the major cause of obesity.
12) Because the student showed they had read the materials so thorough, the instructor 1 2 3
decided not to administer an exam.

## Direction : The passage below is followed by questions based on its content. After reading the passage, choose the best answer to each question. Answer all questions following the passage on the basis of what is stated or implied in the passage.

Scientists have developed a new bionic computer chip that can be mated with human cells to combat disease. The tiny device, smaller and thinner than a strand of hair, combines a healthy human cell with an electronic circuitry chip. Doctors can control the activity of the cell by controlling the chip with a computer.

It has long been established that cell membranes become permeable when exposed to electrical impulses. Researchers have conducted genetic research for years with a trial-and -error process of bombarding cells with electricity in an attempt to introduce foreign substances such as new drug treatments or genetic material. They were unable to apply a particular level of voltage for a particular purpose. With the new invention, the computer sends electrical impulses to the chip, which triggers the cell's membrane pores to open and activate the cell in order to correct diseased tissues. It permits physicians to open a cell's pores with control.

Researchers hope that eventually they will be able to develop more advanced chips whereby they can choose a particular voltage to activate particular tissues, whether they be muscle, bone, brain or others. They believe that they will be able to implant multiple chips into a person to deal with one problem or more than one problem.
13) The author implies that scientists are excited about the new technology because

1. it is less expensive than current techniques.
2. it allows them to be able to shock cells for the first time.
3. it is more precise than previous techniques.
4. it is possible to kill cancer with a single jolt.
14) The author states that scientists previously were aware that, $\qquad$
1. they could control cells with a separate computer.
2. electronic impulses could affect cells.
3. electric charges could harm a person.
4. cells interact with each other through electrical charges.
15) The author indicates that it is expected doctors will be able to place $\qquad$
1. one large chip in a person to control multiple problems.
2. more than one chip in a single person.
3. a chip directly inside a cell.
4. a chip inside a strand of hair.

## QUANTITATIVE

16) Which of the following equations has a root in common with $x^{2}-6 x+5=0$
1. $x^{2}+1=0$
2. $x^{2}-x-2=0$
3. $x^{2}-10 x-5=0$
4. $2 \mathrm{x}^{2}-2=0$
17) The amount of time that three secretaries worked on a special project are in the ratio of 1 : $2: 5$. If they worked a combined total of 112 hours, how many hours did the secretary who worked the longest spend on the project?
1. 80
2. 70
3. 56
4. 16
18) Starting from Town $S$, Vinod rode his bicycle 8 miles due east, 3 miles due south, 2 miles due west, and 11 miles due north, finally stopping at Town T. If the entire region is flat, what is the straight-line distance, in miles, between Towns S and T ?
1. 10
2. $8 \sqrt{ } 2$
3. 14
4. 24

## Directions: Read the information and answer the questions given below.

A boy is asked to put in a basket one mango when ordered 'one', one orange when ordered
'Two', one apple when ordered 'Three' and is asked to take out from the basket one mango and one orange both when ordered 'Four'.

Sequence orders are --------- 12332142314223314113234
19) How many oranges in total were in the basket at the end of above sequence?

1. 1
2. 4
3. 3
4. 2
20) How many fruits in total will be in the basket at the end of the above order sequence?
1. 9
2. 1
3. 11
4. 10
21) On a certain Russian-American committee, $2 / 3$ of the members are men, and $3 / 8$ of the men are American. If $3 / 5$ of the committee members are Russian, what fraction of the members are American women?
1. $3 / 20$
2. $11 / 60$
3. $1 / 4$
4. $2 / 5$
22) If $4 x+13=7-2 x$, what is the value of $x$ ?
1. $-10 / 3$
2. -1
3. 1
4. $10 / 3$
23) A rabbit on a controlled diet is fed daily 300 grams of a mixture of two foods, food $X$ and food Y. Food X contains 10 percent protein and food Y contains 15 percent protein. If the rabbit's diet provides exactly 38 grams of protein daily, how many grams of food X are in the mixture?
1. 100
2. 140
3. 150
4. 160
24) In a 800 m race around a stadium having the circumference of 200 m , the top runner meets the last runner on the $5^{\text {th }}$ minute of the race. If the top runner runs at twice the speed of the last runner, what is the time taken by the top runner to finish the race?
1. 20 min .
2. 15 min .
3. 10 min .
4. 5 min .
25) A man sells an article at $5 \%$ profit. If he had bought it at $5 \%$ less and sold it for Re. 1 less, he would have gained $10 \%$. The cost price of the article is
1. Rs. 200
2. Rs. 150
3. Rs. 250
4. Rs. 240
26) Five newly born babies were weighted by a doctor. In her report she pointed out that the child A is lighter than the child B . The child C is lighter than the child D . Child B is lighter than the child D , but heavier than the child E . Which child is the heaviest?
1. E
2. D
3. C
4. $B$
27) Gita drove 650 miles at an average speed of 50 miles per hour. How many miles per hour faster would she have had to drive in order for the trip to have taken 1 hour less?
1. $45 / 6$
2. $42 / 3$
3. $41 / 3$
4. $41 / 6$
28) There are four prime numbers written in ascending order. The product of the first three is 385 and that of the last three is 1001 . The first number is $\qquad$ .
1. 5
2. 7
3. 11
4. 17
29) If $2 x-6=y$ and $3 x+y=4$, what is the value of $3 y$ ?
1. 6
2. 2
3. -2
4. -6
30) Of the 200 seniors at Manori High School, exactly 40 are in the band, 60 are in the orchestra, and 10 are in both. How many students are in neither the band nor the orchestra?
1. 90
2. 100
3. 110
4. 120

## REASONING

31) A word can be formed with the second, fourth, fifth, seventh and eleventh letters of the word DISTRIBUTION after arranging the letters in any sequences, which of the following is the third letter of the new word?
1. O
2. I
3. B
4. M
32) If the English alphabets are written in the reverse order, which will be the eighth letter to the right of ( O ) ?
1. F
2. G
3. V
4. W

Direction : One term in the number series is wrong. Find out the wrong term.
33) 49, 48, 45, 42, 33, 24, 13

1. 48
2. 45
3. 42
4. 33
34) $3,18,38,78,123,178,243$
1. 123
2. 78
3. 3
4. 38
35) Introducing a man, a woman said, "His wife is the only daughter of my father". How was that man related to the woman?
1. Brother
2. Father-in-law
3. Maternal Uncle
4. Husband

Direction : Questions 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. Mark correct answer as

1. If statement (I) alone is sufficient but Statement II alone is not sufficient.
2. If statement (II) alone is sufficient but statement $I$ alone is not sufficient
3. If both statements (I) and (II) together are sufficient but neither of statements alone is sufficient.
4. If each statement alone is sufficient.
36) A worker is hired for 10 days. Each day he works one hour more than the preceding day. How many hours did he work the first day?

Statements : (I) He is paid Rs. 5 per hour
(II) His total wages for 10 days equal Rs. 300 .
37) Anil, Sunil and Vimal are three brothers. What is the order of their ages?

Statements : (I) The sum of Anil's age and Sunil's age is twice that of Vimal's age.
(II) Five years ago, Sunil was twice as old as Vimal.
38) If 'DISTEMPER' is coded as 52.5 and 'WALLS' as 33.5 , how will you code 'PLASTER' using the same coding scheme?

1. 40.5
2. 45.5
3. 48.5
4. 55.5
39) If 'OPTICAL' and 'OPTICIAN' are coded as 76 and 87 respectively, how will you code 'GLASSES' using the same coding scheme?
1. 80
2. 82
3. 84
4. 86

Directions: Study the following information to answer the given question :
i. Six books are kept one above the other
ii. History book is just above Commerce, Mathematics book is between Civics and Physics
iii. English is between History and Civics
40) Which book is between Mathematics and English?

1. History
2. Commerce
3. Physics
4. None of these
41) Which book is at the bottom?
1. Civics
2. Commerce
3. Physics
4.Cannot be determined
42) Which book is at the top?
1. Physics
2. Civics
3. Commerce
4.Cannot be determined
43) A remembers that his uncle had visited them after $13^{\text {th }}$ but before $18^{\text {th }}$ of a month, while $B$ remembers that the uncle had visited them after $16^{\text {th }}$ but before $20^{\text {th }}$. On which date did their uncle visit A and B ?
1. $14^{\text {th }}$
2. $17^{\text {th }}$
3. $15^{\text {th }}$
4. Insufficient data

Direction : In the following questions there are two statements (A) and (B) followed by four conclusions numbered I, II, III, and IV. Though the statements are at variance from commonly known facts you have to assume them to be true. Read the conclusions and based on the information given in statements $A$ and $B$, decide which of the options follows from $A$ and $B$.
44) Statements: (A) Some parrots are pigeons
(B) All pigeons are crows

Conclusions
(I) Some parrots are crows
(II) All parrots are crows
(III) Some crows are parrots
(IV) All pigeons are parrots

Answer choices

1. None of the conclusions follows
2. All the conclusions follow
3. Only II and IV follow
4. Only I and III follow
45) Statements: (A) All pens are pencils
(B) No pencil is a monkey

Conclusions
(I) No pen is a monkey
(II) Some pens are monkeys
(III) All monkeys are pens
(IV) Some monkeys are pens

Answer choices

1. Only I and III follow
2. Either II or III follow
3. Only I follows
4. None of the conclusions follows

