Roll Number

TEST BOOKLET

IX

Test Booklet Series/No.

SSET

Name of the Candidate :

Signature of the Candidate :

Time: 2½ Hours

Maximum Marks: 180

GENERAL INSTRUCTIONS FOR CANDIDATE

A single test booklet comprising of 03 sections (32 Pages) will be given to each candidate, comprising 120 Questions. **Each question carries 1½ marks.**

a) A separate OMR sheet will be provided. Candidates are required to indicate their answers at an appropriate place on the OMR sheet itself.

b) Only blue/black ball point pen is to be used to write on the OMR sheet. Candidates should bring their own ball point pens. Use of Pencil is strictly prohibited.

c) For each question, there are four probable answers out of which only one is correct. The candidate is required to select correct answer and darken bubble against the correct option provided against each question in the OMR sheet. For example if your answer for question No.5 is D answer like this

05. Ⓐ   Ⓑ   Ⓒ   ●

d) No change in the answer once written is allowed. Overwriting, cutting and erasing on the OMR Sheet is also not allowed.

About instruction and Examples

a) The candidates must carefully read the instructions given on the cover page of the test booklet as well as those for each test / section before attempting the questions.

b) About one minute may be needed to answer

each question. Therefore, the candidate should not spend too much of time on a particular question. If a question is found difficult to answer he may leave it and move on to the next one. This will help him to save time.

c) The total time would be 150 minutes without any break.

d) There will be a bell at the half time.

* No changes in the answer once written is allowed.

* There is only one correct answer for each question, darken only one bubble for each question. If you darken more than one bubble your answer will be treated as wrong. Do not fold or deface the OMR sheet.

* Do not use whitener/correction fluid on OMR sheet.

* Rough work must not be done on the OMR sheet use the last page of the test booklet for rough work.

Section 1 - Mathematics

1. LCM of $\frac{7}{90}, \frac{14}{15}$ and $\frac{7}{10}$ is

         a) $\frac{7}{90}$ b) $\frac{14}{5}$

         c) $\frac{28}{90}$ d) $\frac{14}{90}$

2. A person buys some pencils at 5 for Rs 1 and sells them at 3 for Rs 1. Its gain percent will be

         a) $66\frac{2}{3}$ b) $76\frac{2}{3}$

         c) $56\frac{2}{3}$ d) $46\frac{2}{3}$

3. Find out the ratio of LCM and HCF of 270 and 405.

         a) $6:1$ b) $2:3$

         c) $3:2$ d) $1:6$

4. If, $(a-b) = 4$ and $a \times b = 2$, then $(a^2 + b^2) = ?$

         a) 20   b) 18

         c) 25   d) None of these

5. If a sum doubles in 16yrs, how much will it be in 8 years.

         a) $1\frac{1}{2}$ times   b) $1\frac{1}{3}$ times

         c) $1\frac{3}{4}$ times   d) $1\frac{1}{4}$ times

6. The ratio between boys and girls in a school is 4: 6 respectively. If the number of boys is increased by 200 the radio becomes 5: 6 respectively. How many girls are there in the school?

a) 1200

b) 800

c) 1000

d) Can't be determined

7. What will be the area of a circle whose perimeter is 88 cm?

a) 576 cm^2

b) 616 cm^2

c) 636 cm^2

d) Can't be determined

8. The HCF and LCM of the two numbers x and y are respectively 3 and 105. If x + y = 36 , then $\frac{1}{x} + \frac{1}{y}$ is equal to

a) 35

b) $\frac{3}{5}$

c) $\frac{4}{35}$

d) $\frac{1}{35}$

9. $8^3 \times 8^2 \times 2^{-5}$ is equal to

a) 0

b) 1

c) 2

d) None of these

10. The difference between a discount of 40 % on Rs 500 and two successive discounts of 36 % and 4 % on the same amount is

a) Rs 0

b) Rs 2

c) Rs 5

d) Rs 7.20

11. If $\sqrt{\dfrac{196}{x}} \times \sqrt{\dfrac{900}{x}} = 4$, find the value of x ?

        a) 15   b) 5066

        c) 522   d) None of these

12. If a diagonal of a square is doubled, then its area will be

        a) Four times   b) Three times

        c) same   d) None of the above

13. The sum of two numbers is 2490 and if 6.5 % of one number is equal to 8. 5% of the other, then numbers are

        a) 1414, 1076   b) 1411, 1079

        c) 1412, 1078   d) None of these

14. What will be the interest of Rs 3700 after 2 ½ years at the rate of 5 ½ % per year?

        a)Rs 508.75   b) Rs 618.25

        c) Rs 706   d) Rs 900

15. Two employees each earn Rs 720 as first year's salary. One is given an annual increment of Rs 40 and the other of 5 % . The difference between their salaries for the third year is

        a) Rs 0   b) Rs 4

        c) Rs 6.20   d) Rs 10

16. A rectangle and a parallelogram are drawn between the same parallel lines on a common base of 10 cm. If the perimeter of the rectangle is 36 cm, then the area of the parallelogram is

a) 100 cm^2

b) 80 cm^2

c) 81 cm^2

d) 60 cm^2

17. Two cars start at the same time from A and B which is 120 km apart. If the two cars travel in opposite directions they meet after one hour and if they travel in same direction, then A meet B after 6 h. What is the speed of car starting from A?

a) 70 km/h

b) 120 km /h

c) 60 km/h

d) Data inadequate

18. A horse is tied to a pole with 28 m long string. The area where the horse can graze is equal to

a) 246 m^2

b) 2404 m^2

c) 2464 m^2

d) 2164 m^2

19. The difference between the sides at right angles in a right angled triangle is 14 cm. The area of the triangle is 120 cm^2. The perimeter of the triangle.

a) 68 cm

b) 64 cm

c) 60 cm

d) 58 cm

20. The true statement for the data -1, -1 ,0 , 2, 3, 5, 5, 6, 8, 10 and 11 is

a) Mean = Mode = median

b) Mode = median = 5

c) Mean = median = 5

d) Mean = Mode = 5

21. If the sides of a triangle are 9 cm, 11cm and 15 cm , the angle opposite of the largest side will be

   a) acute angle   b) right angle

   c) obtuse angle   d) straight angle

22.The least number which is added to 17420 will make it a perfect square is

   a) 3   b) 5

   c) 9   d) 4

23. The sum of the cubes of first three natural numbers is equal to

   a) $(1 + 2 + 3)^3$ b) $(1 + 2 + 3)^2$

   c) 3^3 d) 3^2

24.If $(x-y) = 6$ and $xy = 1$, then the value of $x^3 - y^3$ is

   a) 324   b) 432

   c) 234   d) 322

25. Which of the following is not a random experiment?

   a) Tossing a coin

   b) Rolling a die

   c) Choosing a card from a deck of 52 cards.

   D) Throwing a stone from the roof of a building

26. Find the greatest number that will divide 478 and 719 leaving remainders 2 and 5 respectively

  a) 246   b) 212

  c) 238   d) 264

27. Three prizes are to be distributed in a quiz contest. The value of the second prize is five - sixth of the value of the first price and the value of the third prize is four - fifth of that of the second prize . If the total value of the three prizes is Rs 150, then the value of each prize is respectively.

  a) Rs 60, Rs 40 Rs 50   b) Rs 55, Rs 45, Rs 50

  c) Rs 50, Rs 40, Rs 60   d) Rs 60, Rs 50, Rs 40

28. A's salary was increased by 40 % and then decreased by 20 % . On the whole, A's salary is increased by

  a) 20 %   b) 12 %

  c) 15 %   d) 10 %

29. By selling sugar at Rs 11.16 per kg, a man loses 7 %. To gain 7 % , it must be sold (per kg) at

  a) Rs 11.24   b) Rs 12.84

  c) Rs 14.64   d) Rs 13.24

30. Rahim buys a house and pays Rs 8000 cash and Rs 9600 at 5 year credit at 4 % per annum simple interest. Then, the cash price of the house is

  a) Rs 10000   b) Rs 9600

  c) Rs 17000   d) Rs 16000

31. A can do 3/8 of the work in 9 days and B can do 5/6 of the work in 15 days, how long will they both working together take to do it?

    a) 10 days   b) 11 days

    c) $\frac{72}{7}\ days$ d) None of these

32. Samir started cycling along the boundaries of a square field from corner point A. After half an hour he reached the corner point C, diagonally opposite to A. If his speed was 8km/h , what is the area of the field in sq km?

    a) 64   b) 4

    c) 8   d) None of these

33. Two parallel lines are cut by a transversal, then which of the following are true?

1) Pair of alternative interior angles are congruent.

2) Pair of corresponding angles are congruent.

3) Pair of interior angles of the same side of the transversal are supplementary.

    a) 1, 2, 3 are true   b) 1 and 3 are true

    c) 1 and 2 are true   d) 2 and 3 are true

34. If the perimeter of an equilateral triangle is 36.9 m and the length of an altitude is 8m, then the area of the triangle is

    a) 29.2 m²   b) 39.2 m²

    c) 49.2 m²   d) 59.2 m²

35. If a square and a rhombus stand on the base, then rhombus is

    a) equal to $\frac{1}{4}$ b) equal to $\frac{1}{2}$

    c) equal to 1   d) greater than 1

36. AB and CD are two chords of a circle such that AB = 10 cm, CD = 24 cm and AB ∥ CD. The distance between AB and CD is 17 cm. Then, the radius of the circle is

    a) 12 cm   b) 13 cm

    c) 17cm   d) 14 cm

37. A copper wire when bent in the form of a square encloses area of 121 cm². If the same wire is bent in the form of a circle, then the area of the circle is

    a) 121 cm²   b) 242 cm²

    c) 154 cm²   d) 60 cm²

38. If the length and breadth of a rectangular plot are increased by 50 % and 20 % respectively, then the new area is how many times the original area?

    a) $\frac{5}{9}$ b) 10

    c) $\frac{9}{5}$ d) None of these

39. The minute hand of a clock is 12 cm long. The area of the face of the clock inscribed by the minute hand in 35 min.

    a) 284 cm²   b) 294 cm²

    c) 274 cm²   d) 264 cm²

40. The length, breadth and height of a room are in the ratio of 3: 2: 1. If its volume be 1296m³ find its breadth

a) 12m   b) 18m

c) 16 m   d) 24 m

41. The volume of the largest sphere which is curved out of a cube of side 7 cm , is

a) $\frac{539}{3}$ cm³   b) 905 cm³

c) 805 . 5 cm³   d) None of these

42. In a weekly test, the marks obtained in mathematics by 16 students of class are the follows 0 , 0 , 2 , 2 , 3 , 3 , 3 , 4 , 5 , 5 , 5 , 5 , 6 , 6 , 7 , 8

The arithmetic mean of the marks obtained is

a) 3   b) 4

c) 5   d) 6

43. A student obtain 75 % , 80 % and 85 % marks in three subjects. If the marks of any other subject are added , then their average cannot be less than

a) 60 %   b) 65 %

c) 70 %   d) 80 %

44. Frequency of a variable is always

a) a fraction   b) an integer

c) in percentage   d) a complex number

45. The mean of the values of 1, 2, 3, ..., N with respective frequencies x, 2x, 3x, ..., nx, is

a) $\frac{n+1}{2}$

b) $\frac{2n+1}{6}$

c) $\frac{n}{2}$

d) $\frac{2n+1}{3}$

46. if A,s money is to B,s money as 4:5 and B's money is to C's money as 2:3 and A has Rs 800, then C has

a) Rs 1500

b) Rs 1200

c) Rs 2000

d) Rs 1000

47. If a sum of Rs 275 is to be divided between Ram and Shyam so that Ram gets more than ¾ th of what Shyam gets, then the share of Ram will be

a) Rs 200

b) Rs 175

c) Rs 160

d) Rs 100

48. A geometric representation showing the relationship between a whole and its parts is a

a) pie chart

b) histogram

c) bar graph

d) pictograph

49. If the ratio of the areas of two square is 4:1, then the ratio of their perimeter is

a) 2:1

b) 1:2

c) 1:4

d) 4:1

50. A die is thrown , what is the probability of getting an even number?

a) $\frac{1}{2}$

b) $\frac{2}{3}$

c) $\frac{5}{6}$

d) $\frac{1}{6}$

Section - 2 English Language

Directions (Q . Nos. 51 to 55) Rearrange the following words /group of words to make meaningful sentences . Choose the correct sequence given in the options.

51. Flour and rice (A) / We usually buy (B)/ to save money (C)/for the whole one year in one go(D).

    a) D B C A   b) B A D C

    c) D C A B   d) A C B D

52. Has a (A)/this hump (B)/ fats (C) /a storehouse of (D).

    a) B A C D   b) B A D C

    c) C D A B   d) B C A D

53. A major lack of (A) / information on (B) / there is (C) /this subject (D).

    a) B A C D   b) C B A D

    c) C A B D   d) C D B A

54. Make our life (A)/ good friends (B) / happy (C) / extremely (D).

    a) A C B D   b) B A C D

    c) B A D C   d) D C A B

55. a period of (A) / childhood is (B) / and physical growth (C) /mental (D).

    a) B A D C   b) B C D A

    c) A B C D   d) D B C A

Directions (Q. Nos. 56 – 58) In the following questions, some sentences are given. Find the incorrect sentence out of them. Mark 'd' if all the sentences are correct.

56. a) A new film will be releasing this Friday.

b) The cow is a milk animal

c) The tea is my favorite drink.

d) All are correct

57. a) There is a telephone on the table.

b) Runjhun is the my neighbour's daughter.

c) The sky is full of stars today.

d) All are correct.

58. a) Many poets have made the Moon a synonym for love.

b) It is also a symbol of beauty.

c) we should not spread a rumors.

d) All are correct.

Directions (Q. Nos. 59 - 60) Find the error part in the following sentences.

59. Yesterday was holiday so I play all the day.

a) Yesterday b) was holiday

c) so I play d) all the day

60. These books have been sell by us.

a) these books b) have been

c) sell d) by us

Directions (Q. Nos. 61 – 62) Complete the following sentences with the correct form of verb tense.

61. The Prime Minister said that it ....him great pleasure to meet the soldiers that evening.

        a) gives   b) gave

        c) was giving   d) is giving

62. Everyone ...... when the earthquake hit the small town.

        a) is sleeping   b) slept

        c) was sleeping   d) will be sleeping

Directions (Q. Nos. 63- 64) Complete the following sentences with the most suitable clause.

63. Kavita is walking fast ....

    a) so that she may reach school on time.

    b) because she may reach school on time.

    c) when she may reach school on time.

    d) where she may reach school on time.

64. I will stay here.....

        a) that you come back.   b) so you come back.

        c) as you come back.   d) until you come back.

65. Messy

a) Dirty

b) Tidy

c) Spotless

d) Clean

66. Costly

a) Cheap

b) Expensive

c) Bad

d) Money

Directions (Q. Nos. 67 – 68) In each of the following questions , one of the four words is wrongly spelled. Find out that word, the spelling of which is wrong.

67.　　　a) reproach　　　b) actualise

　　　c) gathuring　　　d) clothing

68.　　　a) garbage　　　b) couragious

　　　c) criminal　　　d) regular

Directions (Q. Nos. 69 – 70) In the following questions sentence is given in jumbled order. Four alternatives are given. Choose the correct option.

69. Koalas/hardly/are/drink/animals/that/water.

a) Koalas are hardly animals that water drink.

b) Koalas are animals that hardly drink water.

c) Hardly Koalas are animals that drink water.

d) Animals are Koalas that hardly drink water.

70. Needle like/bill/is/its/are/the/and/feet/with/developed/well toes/long

   a) Needle like its bill is and feet are well developed with long toes.

   b) Feet are with long toes well developed and its bill is needle like.

   c) Its bill is needle like and the feet are well developed with long toes.

   d) Needle like its bill is and well developed feet with long toes.

Directions (Q. Nos. 71 – 75) Read the passage carefully and choose the best answer to each question out of the four alternatives.

Passage

Chameleons can make their skin color change, but not because they decide to. The color changes to help the chameleon avoid its enemies. It is a form of camouflage, a disguise that lets it blend in with its surroundings. The changes are actually determined by environmental factors, such as light and temperature.

Bright sunlight causes the skin to get darken. On cool nights, the color fades to a creamy color. The colour also changes when chameleons are excited, angry or afraid. The color change is rapid and increases when the chameleon is handled, injured, or approached by another chameleon. There are many types of chameleons. Almost half of them are found on the African Island of Madagascar. The others mostly occur in the Sahara desert, with few in Western Asia and Southern Europe. Chameleons live in trees; where they usually eat insects. Very large chameleons may even use their sticky tongues to catch birds.

71. A chameleon's color change to help it.

   a) fly away

   b) look beautiful

   c) avoid its enemies

   d) attract prey

72. Chameleons change color when they are

    a) excited , angry or hungry

    b) afraid , excited or angry

    c) angry, excited or happy

    d) afraid, angry or hungry.

73. The color changing ability of a chameleon is a form of camouflage which is a

    a) color that fades

    b) disguise that lets it blend in with its surroundings

    c) dance done by chameleons

    d) disease which affects chameleons

74. The color changes are determined by

    a) light and wind

    b) light and pressure

    c) light and temperature

    d) pressure and temperature

75. Half of the world's chameleons are found

    a) on the Asian Island of Madagascar

    b) In the Sahara Desert

    c) On the African Island of Madagascar

    d) In the continent of Asia

Section 3 - General Science and G K / I Q

76. Which of the following gases does not cause acid rain?

    a) Sulphur dioxide   b) Methane

    c) Nitrous oxide   d) None of these

77. A pond contains clean water. Which of the following activities will produce least pollution of water?

a) Washing clothes in the pond   b) Bathing animals in the pond

c) Washing motor vehicles in the pond   d) Swimming in the pond.

78. Onion is propagated throught its

        a) tubers   b) bulbs

        c) seeds   d) rhizomes

79. In your opinion which is the most effective way to conserve the plant diversity of an area?

    a) by tissue culture method   b) By creating biosphere reserve

    c) by creating botanical garden   d) by developing seed bank

80. Forests are not responsible for

    a) providing medicinal plants

    b) maintaining the flow of water into the streams

    c) creating flood conditions

    d) absorbing rainwater and maintaining water table.

81 Which of the following does a forest prevent?

a) Floods

b) soil erosion

c) water table from going down

d) All of the above

82. Who coined the term cell.

a) Robert Brown

b) Darwin

c) Robert Hooke

d) Lamarck

83. The following is an antibiotic.

a) sodium bicarbonate

b) streptomycin

c) alcohol

d) yeast

84. Manures are

a) organic substance

b) inorganic substances

c) Salts

d) Both (a) and (b)

85. Major source for synthetic fibers are

a) Animal fat

b) oil from plants

c) Petrochemicals

d) All of these

86. Identify correct statement with respect to CO.

a) it combines with water to give carbonic acid

b) It reacts with hemoglobin in red blood cells

c) It is a powerful oxidising agent.

d) It is used to prepare aerated drinks.

87. In a reaction copper can displace

    a) Iron   b) magnesium

    c) silver   d) All of these

88. An element can be

    a) metal   b) non metal

    c) metalloid   d) All of these

89. If the radius of the earth is reduced by half, then the day-night on the earth would be of

    a) 6 hrs   b) 12 hrs

    c) 28 hrs   d) 36 hrs

90. During short-circuiting the current flowing in the electric circuit

    a) reduce substantially

    b) does not change

    c) increase instantaneously

    d) varies continuously

91. When a bar magnet is cut into two equal halves, the pole strength of each piece.

    a) Become double   b) becomes half

    c) Becomes zero   d) remains the same

92. Twinkle twinkle little star. This a nursery rhyme which you must have heard. This statement is true because of

     a) refraction of light by different layers of atmosphere.

     b) internal reflection of light by clouds

     c) dispersion of light by water droplets

     d) scattering of light by dust particles

93. When we apply a force of 1 N , we can hold a body whose mass is approximately equal to

     a) 100 mg   b) 100 g

     c) 1 kg   d) 10 kg

94. Who was popularly known as ' Frontier Gandhi?

     a) Sir Sayed Ahmad Khan   b) Khan Abdul Ghaffar Khan

     c) Nawab Salimulla   d) VD Savarkar

95. Which event is generally considered to be the first belligerent act of World War II?

     a) Germany's attack on Russia   b) Germany's attack on Britain.

     c) Germany's attack on Poland   d) Germany's occupation of Austria.

96. The United Nations was created after which of the following event?

     a) World War I   b) World War II

     c) Cold War   d) French Revolution

97. Which neighbouring country does not share any border with India?

    a) Pakistan   b) China

    c) Sri Lanka   d) Bhutan

98. What does Astronomical unit indicates?

    a) Distance between the Earth and the Moon.

    b) Distance between the Earth and the Sun.

    c) Distance between the Sun and the Mars

    d) All of the above

99. The nearest position of the Earth to the Sun is known as

    a) Perihelion   b) Aphelion

    c) Annihelion   d) None of these

100. What is the study of human populations –their size, composition and distribution across space is called?

    a) Census   b) Demography

    c) population change   d) Natural growth rate

101. Which county is the leading producer of Diamond in the world?

    a) Russia   b) China

    c) USA   d) Australia

102. Which farming system is mostly practiced in Developed Nations?

    a) Subsistence farming   b) commercial farming

    c) Shifting cultivation   d) mixed farming

103. Third layer of atmosphere from Earth is called

    a) Troposphere   b) Mesosphere

    c) Stratosphere   d) Ionosphere

104. Today is Monday, it will be .... after 61 days.

    a) Wednesday   b) Saturday

    c) Tuesday   d) Thursday

105. Planting trees near roads is a good way for which type of pollution?

    a) Air Pollution   b) Noise pollution

    c) land degradation   d) water pollution

106. D is K's brother. M is K's sister. T is R's father who is M's brother, F is K's mother. At least how many sons do T and F have?

    a) 2   b) 3

    c) 4   d) Data inadequate

107. introducing Asha to guests , Bhaskar said, " Her father is the only son my father". How is Asha related to Bhaskar?

    a) Niece   b) Grand daughter

    c) Mother   d) Daughter

108.A person walks 1 mile to West, turns left and walks 1 mile and again turns left and walks 1 mile. What is the direction he is facing now?

a) North

b) south

c) East

d) west

109. If East is replaced by South- East, then West will be replaced by which of the following directions?

a) North- East

b) North – West

c) South East

d) South West

110.In a row of letters, a letter is 5th from left end and 12th from the right end. How many letters are there in a row?

a) 15

b) 16

c) 17

d) 18

111. 'Cyclone' is related to 'Anti –cyclone' in the same way as Flood is related to

a) Devastation

b) Havoc

c) river

d) Drought

Directions (Q. Nos. 112 – 114) In each of the following question, three out of four alternatives are same in some way and so form a group. Find the odd one that does not belong to the group.

112.
a) Earthquake

b) storm

c) Drought

d) Explosion

113.　　　a) DHF　　　　　b) KOM

　　　　　c) RVT　　　　　d) WYX

114.　　　a) MONJK　　　　b) ACAZV

　　　　　c) GMRGS　　　　d) METEI

115. If the word 'TABLECLOTH' is coded as ' XEMRANRIXT', then how can ' HOTEL' be coded?

　　　　　a) RIXAT　　　　　b) TIXAR

　　　　　c) TAXIR　　　　　d) RAXIT

116. If PALE IS coded as 2134, EARTH is coded as 41590 , then how is PEARL coded as?

　　　　　a) 29530　　　　　b) 24153

　　　　　c) 25413　　　　　d) 25430

Directions (Q.Nos. 117 – 118)in each of the following questions , arrange the words in a logical and meaningful order.

117. 1) Crop　　　　2) Root　　　　3) Stem　　　　4) Seed　　5) Flower

　　　　　a) 2, 3, 4,1, 5　　　　b) 2,4,5,1,3

　　　　　c) 4,2,3,5,1　　　　　d) 2,3,5,1,4

118. 1) Twilight　　　2) Dawn　　　　c) Noon　　　　d) Night

　　　　　a) 2,1,3,4　　　　b) 2,3,1,4

　　　　　c) 1,2,3,4　　　　d) 1,3,2,4,

Directions(Q. Nos 119 – 120) In each of the following questions, find the word which can not be formed by using the letters of the given word using each letters only once.

119. RESONABLE

    a) BRAIN   b) BONES

    c) NOBLE   d) ARSON

120. CONTEMPORARY

    a) PARROT   b) COMPANY

    c) CARPENTER   d) PRAYER