



A.P.J. Abdul Kalam Welfare Society

All India Bright Student Award Test 2016

Class :VIII

Time:11 am to 1 p.m.

Mathematics

- 1) The least 4 digits number which is a perfect square is
a) 1024 b) 1016 c) 1036 d) 84
- 2) Giving reasons, describe why the following numbers are not perfect squares.
a) 1058 b) 7923 c) 134387 d) 253222
- 3) What is the least number that can be added to 4800 to make it a perfect square?
a) 110 b) 81 c) 36 d) None of these
- 4) The product of two successive positive integers is 462. Which is the smaller integer?
a) 20 b) 22 c) 21 d) 23
- 5) The sum of the digits of a two digit number is 2. If the new number formed by reversing is greater than the original number by 54, then what will be the original number?
a) 28 b) 48 c) 39 d) 93
- 6) The product of three consecutive numbers is 3360. What is the least number?
a) 17 b) 14 c) 13 d) 16
- 7) Which of the following perfect squares is a square of even number?
a) 225 b) 729 c) 484 d) 961
- 8) Which of the following is Pythagorean triplet?
a) (1, 2, 3) b) (3, 2, 5) c) (4, 5, 7) d) None of these
- 9) Square root of $169 \times 225 \times 400$ is
a) 3600 b) 3800 c) 3945 d) None of these
- 10) Find the smallest number by which the number 1100 must be multiplied or divided so that the product or quotient becomes a perfect square?
a) Multiply by 5 b) Divide by 5 c) Multiply or divide by 11 d) 1100 itself is square
- 11) Find the square root of 298116

a) 416 b) 616 c) 546 d) 646

12) Find the smallest number by which 720 must be multiplied so that it becomes a perfect square?

a) 3 b) 2 c) 5 d) 9

13) Find the smallest number by which 3703 must be divided so that it becomes a perfect square?

a) 3 b) 5 c) 9 d) 7

14) In a garden there are as many plants in row as there are rows. The total number plants are 6889. How many rows are there in that garden?

a) 73 b) 63 c) 69 d) 83

15) Find the smallest number which must be subtracted from 2361 to make a perfect square?

a) 61 b) 51 c) 67 d) 57

16) What is the least number by which 2352 is to be multiplied to make a perfect square?

a) 2 b) 3 c) 4 d) 5

17) In a division, a student took 63 as divisor instead of 36 his answer was 24 the correct answer is?

a) 28 b) 82 c) 42 d) 24

18) The least number that must be added to 1901 so that the sum may be a perfect square is?

a) 25 b) 35 c) 30 d) 45

19) A number is multiplied by 5 and 25 is added to it and the result is divided by 5. Then the quotient is 6 and the original number is subtracted from the quotient. The remainder will be?

a) 2 b) 3 c) 4 d) 5

20) Find the greatest number of 3 digits which is exactly divisible by 35

a) 995 b) 895 c) 980 d) 890

21) The sum of 7 consecutive Odd integers is 133; the least Odd integers is?

a) 7 b) 9 c) 11 d) 13

22) Find the unit digit in $(515)^{31} + (515)^{90}$?

- a) 0 b)25 c)1 d)4

23) If we write numbers from 200-400 how many of these contain the digit 7 once and only once?

- a)35 b)37 c)34 d)36

24) Find the least number of 5 digits which is exactly divisible by 476?

- a) 10472 b) 14702 c) 10492 d) 10742

25) One of two consecutive positive numbers the sum of whose squares is 685 is?

- a) 17 b) 21 c) 19 d) 15

26) What should be added to 18962 to make it exactly divisible by 13?

- a) 3 b)7 c)5 d) 2

27) The number which when multiplied by 17 increases by 640 is?

- a) 40 b) 32 c) 24 d)12

28) When a number is divided 121 the remainder is 25. If the same number is divided by 11 the remainder would be?

- a)2 b) 3 c)5 d) 7

29) If the remainder obtained by subtracting a number from its own square is six times the number, what is the number?

- a) 7 b) 6 c) 5 d) 9

30) How many number between 100 and 300 are multiple of 13?

- a) 20 b) 13 c)16 d)15

31) The largest number of 4 digits exactly divisible by 44 is?

- a) 9944 b) 9988 c) 9898 d) All

32) A number when divided by 7 leaves a remainder 5. What is the remainder when the square of the same number is divided by 77?

- a) 5 b) 7 c) 9 d) 4

33) A number when divided by a divisor leaves a remainder of 52. If the remainder is 43, when twice the number is divided by the same divisor find out the divisor?

a) 35 b) 27 c) 50 d) None

34) The sum of first 150 numbers from 1 to 150 is divisible by?

a) 5 b) 3 c) 25 d) all a,b,c

35) How many numbers lie between 200 and 300, which are divisible by 19?

a) 7 b) 9 c) 8 d) 5

36) 123431 is divisible by?

a) 3 b) 5 c) 7 d) 11

37) The sum of all 3 digit numbers?

a) 4562300 b) 494055 c) 4932270 d) None

38) How many numbers between 400 to 900 are divisible by 3,7 and 21?

a) 24 b) 22 c) 23 d) 27

39) Sum of squares of 20 natural numbers is?

a) 2860 b) 2850 c) 2890 d) 2870

40) Sum of cubes of 15 natural numbers is?

a) 13600 b) 14400 c) 15400 d) 14500

41) The product of 4 consecutive numbers is always divisible by?

a) 6 b) 18 c) 9 d) 15

42) Find the sum of first 24 odd numbers starting from 17?

a) 690 b) 930 c) 450 d) 960

43) A number when divisible by 221 leaves the remainder 64. What is the remainder if the number is divisible by 13?

a) 1 b) 11 c) 12 d) 6

44) Sum of numbers 100 to 200 is?

a) 20100 b) 10100 c) 1000100 d) None

45) How many divisors are there for 672?

a) 12 b) 24 c) 20 d) 22

46) How many numbers between 100 and 300 are exactly divisible by 11?

- a) 15 b) 17 c) 18 d) 19

47) One fifth of square of a certain number is itself (is that number) what is the number?

- a) 25 b) 15 c) 5 d) 35

48) When 25^{25} is divide by 26 the remainder is?

- a) 1 b) 2 c) 24 d) 25

49) What is the unit digit in $(2157)^{754}$ is?

- a) 7 b) 8 c) 9 d) 6

50) How many times 121 must be added to 3621 in order to get a sum 4710?

- a) 7 b) 6 c) 8 d) 9

Science

- 51) The Synthetic fibers are made by
- A) Human beings b) Animals c) Machines d) Micro organisms
- 52) Polymer is also called as
- a) Cotton b) Cellulose c) rayon d) Glucose
- 53) Polyester is actually made up of the repeating units of a chemical called.....
- A) Ester b) acrylic c) rayon d) none of the above
- 54) Polythene and PVC are examples of
- A) Thermosetting plastics b) thermoplastics c) melamine plastic d) none of the above
- 55) A material which gets decomposed through natural processes, such as action by
- a) Virus b) fungus c) bacteria d) None
- 56) The property of metal by which it can be drawn into wires is called
- A) Malleability b) ductility c) sonorous d)
- 57) Which is an example of non-metal
- a) Iron b) calcium c) oxygen d) aluminium
- 58) The moist air Chemical symbolic term is
- A) O_2+H_2O b) $2Cu+ O_2$ c) $2Cu+ H_2O$ d) H_2O+CO_2
- 59) The Sulphurous acid Chemical term is.....
- A) H_2SO_4 b) H_2SO_3 c) SO_2H_2O d) H_2SO_2
- 60) Which of the following can be beaten into thin sheets?
- a) Phosphorus b) Zinc c) Sulphur d) Oxygen
- 61) Which of the following is not obtained on fractional distillation of petroleum?
- a) Paraffin wax b) charcoal c) Asphalt d) CNG
- 62) COAL is used in
- a) Railway engines b) Thermal power plants c) Fuel to cook food d) All of the above
- 63) Which of the following is a fossil fuel?
- a) Petroleum b) Cow dung c) Dry leaves d) Wood

- 64) Which of the following options is not correct? Petroleum is obtained from oil wells in
- a) Assam B) Punjab c) Mumbai D) Gujarat
- 65) The slow process of conversion of dead vegetation into coal is called
- a) Carbonization b) Caramalization c) Carnation d) Combustion
- 66) An ideal fuel used in the manufacture of glass and steel is
- a) LPG b) Gobar gas c) Coal gas d) Kerosene
- 67) The air pollution caused by burning of fossils is supposed to result in
- a) Killing of germs b) Water harvesting c) Global warming d) Lowering of temperature
- 68) Which of the following is a petroleum product used to drive high vehicles?
- a) Petroleum gas b) Diesel c) Kerosene d) None
- 69) Petroleum is refined by:
- a) Fractional distillation b) Distinctive distillation c) Distillation d) all of the above
- 70) A porous black substance used in the extraction of metals is:
- a) Sodium b) Calcium c) Lead d) Coke
- 71) The color of the flame with the highest amount of heat is
- a) White b) Yellow c) Red d) Blue
- 72) The three essential requirements for producing fire are:
- a) Water, light and air
 - b) Fuel, air and heat
 - c) CO₂, H₂O, light
 - d) CO, N₂, heat
- 73) Which of the following is not used as fuel?
- a) LPG b) CNG c) Hydrogen d) O₂
- 74) Elaborate CNG

a) Compressed Natural Gas b) Compact Natural Gas c) Combined Natural Gas d) Comfort Natural Gas

75) Total amount of heat produced by fuel having calorific value of 30 kJ/kg was found to be 60,000 Joules. How much fuel was burnt?

a) 2000kg b) 200kg c) 20kg d) 2kg

76) Which of the following statements is not true?

- a) Flame can be seen over burning solids and liquids
- b) Type of flame depends upon the amount of oxygen available.
- c) Invisible zone of a flame is the least hot zone
- d) Blue zone indicates complete combustion of fuel.

77) Force:

a) A Push b) A Pull c) Both d) None

78) The atmospheric pressure on the surface of the earth is about

a) 10^{-5} Nm^{-2} b) 10^4 Nm^{-2} c) 10^5 Nm^{-2} d) 10^3 Nm^{-2}

79) The pressure exerted by a liquid of height h is given by

a) h/dg b) hdg c) h/d d) hg

80) Choose the correct statement among the following:

- a) The upper surface of a stationary liquid is always horizontal
- b) Pressure of a given liquid is directly proportional to depth of the liquid
- c) Pressure at a given depth inside a stationary liquid is different at different points in the horizontal plane
- d) A & B

81) The total force exerted by a body normal to the surface is called

a) Pressure b) Thrust c) Force of gravity d) None

82) Fluid pressure is always directed

a) Up b) Sideways c) Down d) In all directions

83) The force required to keep an object moving with the same speed is a measure of

- a) Static friction b) Sliding friction c) Rolling friction d) Limiting friction

84) A coin flicked across a table will stop, because

- a) It is heavy
b) No force is acting on it
c) Earth attracts the coin
d) Surface of the table exerts a frictional force

85) Which of the following are harmful effects of friction?

- a) Friction generates heat, which may damage machines
b) Friction causes wear and tear
c) Friction slows down motion
d) ALL

86) The correct arrangement, friction due to rolling, static and sliding in a decreasing order.

- a) Rolling, static and sliding
b) Rolling, sliding and static
c) Static, sliding and rolling
d) Sliding, static and rolling

87) To avoid slipping while walking on ice, it is advisable to take small steps because:

- a) Ice has a large frictional force
b) Ice has a small frictional force
c) There is large normal reaction
d) There is small normal reaction

88) On which of the following factors does the magnitude of frictional force exerted by a fluid depend?

1. Speed of the object 2. Shape of the object 3. Size of the object 4. Nature of the fluid

- a) 1&2 b) 1, 3&4 c) 1, 2&3 d) 1, 2, 3&4

89) Which device converts chemical energy into electrical energy?

- a) Lightning rod b) Cell c) Light bulb d) Switch

90) Ammonium chloride in dry cell is

- a) A paste b) In liquid state c) In solid state d) In Gaseous state

91) Iron and steel are protected from corrosion by coating them with a layer of tin or chromium metals. This process is called

- a) Galvanizations b) Electroplating c) Greasing d) Painting

92) The outlets in your home provide

- a) D.C b) A.C c) Electric Discharge d) Static electricity

93) An object becomes charged when the atoms in the object gain or lose

- a) Protons b) Neutrons c) Electrons d) All

94) During the process of electrolysis of water, dilute sulphuric acid splits into

- a) Oxygen ions and hydrogen ions
b) Oxygen ions, hydrogen ions & sulphur ions
c) Hydrogen ions, Oxygen ions and sulphur ions
d) None

95) Celestial Objects are

- a) The moon b) The stars c) The planets d) ALL

96) Stars in a galaxy are held together by

- a) Light b) Gravity c) Radiation d) Satellites

97) What is the correct sequence in the increasing order of heat energy from the sun on Earth, Mars and Jupiter?

- a) Jupiter > Mars > Earth

b) Earth > Mars > Jupiter

c) Jupiter > Earth > Mars

d) Earth > Jupiter > Mars

98) Which factor is most directly responsible for determining how often a full moon appears?

a) The size of the Moon

b) The size of Earth

c) How quickly the moon orbits earth

d) How quickly the moon turns on its axis

99) The time period between one full moon day to another full moon day

a) 28days

b) 29days

c) 26days

d) 27 days

100) The bright head of the comet is known as

a) Pointer

b) Nucleus

c) Coma

d) Shooter