NATIONAL TALENT SEARCH EXAMINATION (NTSE-2017) STAGE -1
GUJARAT STATE : SAT

Date: 06/11/2016

SOLUTIONS

Max. Marks: 100 **Time allowed: 90 mins**

1. If A = {1, 2, 3, 4}, B = {2, 4, 5, 6}, U = {1,2, 3, 4, 5, 6, 7} then A' ∩ B' = _____ .

(A) ϕ (B) {1, 2, 3, 4, 5, 6,} (C) {7} (D) {3, 4, 5, 6}

Ans. ***(C)***

Sol. A = {1, 2, 3, 4}

B={2, 4, 5, 6}

U = {1,2, 3, 4, 5, 6, 7}

$A' = U - A$ = {5, 6, 7}

$B' = U - B$ = {1, 3, 7}

$A' \cap B'$ = {7}

2. An equivalent expression of $\frac{5}{7+4\sqrt{5}}$ after rationalizing the denominator is _____.

(A) $\frac{20\sqrt{5}-35}{31}$ (B) $\frac{20\sqrt{5}-35}{129}$ (C) $\frac{35-20\sqrt{5}}{31}$ (D) $\frac{35-20\sqrt{5}}{121}$

Ans. ***(A)***

Sol. (let) z = $\frac{5}{7+4\sqrt{5}}$ .....(1)

Rationalizing equation (1)

$$z = \frac{5\left(7-4\sqrt{5}\right)}{\left(7+4\sqrt{5}\right)\left(7-4\sqrt{5}\right)}$$

$$z = \frac{35-20\sqrt{5}}{7^2-16\times 5}$$

$$z = \frac{35-20\sqrt{5}}{49-80}$$

$$z = \frac{35-20\sqrt{5}}{-31}$$

$$z = \frac{20\sqrt{5}-35}{31}$$

3. If x – 2 is a factor of $3x^4 - 2x^3 + 7x^2 - 21x + k$ then the value of k is _____.

(A) 2 (B) 9 (C) 18 (D) –18

Ans. ***(D)***

Sol. Let p(x) = $3x^4 - 2x^3 + 7x^2 - 21x + k$, has a factor (x – 2)

$\therefore p(2) = 3(2)^4 - 2(2)^3 + 7(2)^2 - 21(2) + k = 0$

$\Rightarrow 3\times16 - 2\times8 + 7\times4 - 21\times2 + k = 0$

$\Rightarrow$ 48 – 16 + 28 – 42 + k = 0

$\Rightarrow$ 18 + k = 0

$\Rightarrow$ k = –18

4. Line x + y = 2 passes through the _____ quadrants.

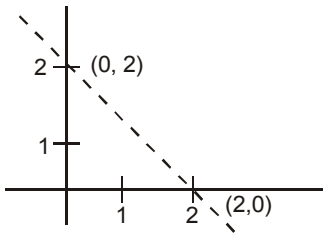
(A) 1st and 3rd both (B) 2nd and 3rd both (C) 3rd and 4th both (D) 1st, 2nd and 4th all

Ans. ***(D)***

Sol. Line x + y = 2

If x = 0, y = 2 point A (0, 2)

If y = 0, x = 2 point B (2, 0)



$\therefore$ line passes through I , II and IV quadrant.

5. If the measures of the angles ΔABC are in proportion 1 : 2 : 3, then the measure of the smallest angle is _____.

(A) 30° (B) 60° (C) 90° (D) 120°

Ans. ***(A)***

Sol. Angles of triangles are in proportion 1 : 2 : 3 (Given)

$\angle A = x$

$\angle B = 2x$

$\angle C = 3x$

Sum of internal angles of triangle is 180°.

x + 2x + 3x = 180°

6x = 180°

x = 30°

$\therefore \angle A = 30°$

$\therefore \angle B = 2\times30° = 60°$

$\therefore \angle C = 3\times30° = 90°$

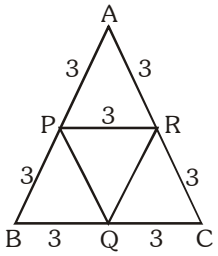
So, smallest angle is 30°.

6. ΔABC is an equilateral triangle, AB = 6. The points P, Q, and R are midpoints of $\overline{AB}$, $\overline{BC}$ and $\overline{CA}$ respectively. The perimeter of the □PBCR is ___

(A) 18 (B) 15 (C) 9 (D) 12

Ans. ***(B)***

Sol. As P and R is the midpoint of AB and CA



$\therefore PR \| BC$

$\therefore PR = \frac{1}{2}BC$

$PR = \frac{1}{2}(6) = 3$

Now $\square PBCR$

Perimeter of $\square PBCR$ = PB + BC + CR + RP

= 3 + 6 + 3 + 3

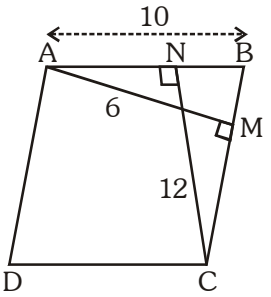
= 15

7. In $\square^m ABCD$, let $\overline{AM}$ be the altitude corresponding to the base $\overline{BC}$ and $\overline{CN}$ the altitude corresponding to the base $\overline{AB}$. If AB = 10cm, AM = 6cm and CN = 12cm then BC = ____cm.

(A) 20 (B) 10 (C) 12 (D) 5

Ans. ***(A)***

Sol. Area of parallelogram = Base × Height



AB × CN = AM × BC

10 × 12 = 6 × BC

120 = 6 × BC

BC = $\frac{120}{6}$

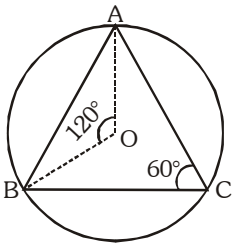
BC = 20 cm

8. A circle passes through the vertices of the equilateral ΔABC . The measure of an angle subtended by the side AB at the center of the circle has measure ___

(A) 30 (B) 60 (C)90 (D)120

Ans. ***(D)***

Sol. Circle is passes through the vertices of an equilateral ΔABC



$\therefore \angle A = \angle B = \angle C = 60°$

Let O be the center of the circle.

According to theorem, Angle subtended at the center of the circle is double at the subtended at the same segment of the circle.

$\therefore \angle AOB = 120$

9. If the lengths of the sides of a triangle are in proportion 3 : 4 : 5, then the area of triangle is __ sq. units, where perimeter of the triangle is 144.

(A) 64 (B) 364 (C) 564 (D) 864

Ans. ***(D)***

Sol. AB : BC : CA = 3 : 4 : 5

Perimeter = 144

AB + BC + CA = 144

3x + 4x + 5x = 144

12x = 144

x = 12

AB = 12 × 3 = 36

BC = 4 × 12 = 48

CA = 5 × 12 = 60

Now, $S = \frac{AB + BC + CA}{2}$

$S = \frac{36 + 48 + 60}{2}$

$S = \frac{144}{2} = 72$

Area = $\sqrt{s(s-a)(s-b)(s-c)}$

= $\sqrt{72 \times 36 \times 24 \times 12}$

= 48 × 18

= 864 sq unit

10. The ratio of radii of two cones, is 2 : 3 and the ratio of their slant heights is 9 : 4 .Then the ratio of their curved surface area is ___

(A) 3 : 2 (B) 1 : 2 (C) 1 : 3 (D) 2 : 3

Ans. (A)

Sol. Let the radius of two cones be r_1 and r_2 and slant height of two cones are $l_1 \text{ and } l_2$

$\frac{r_1}{r_2} = \frac{2}{3}$ and $\frac{l_1}{l_2} = \frac{9}{4}$

Ratio of curved surface area of two cones: $\frac{\pi r_1 l_1}{\pi r_2 l_2} = \frac{2}{3} \times \frac{9}{4} = \frac{3}{2}$

11. The probability of getting both heads, when two balanced coins are tossed once is __

(A) $\frac{1}{2}$ (B) $\frac{1}{3}$ (C) $\frac{1}{4}$ (D) $\frac{1}{5}$

Ans. (C)

Sol. Two coins are tossed, so total number outcomes will be 4.

Sample space: - { HH, HT, TH, TT}

Probability = $\frac{possible\ outcomes}{Total\ outcomes}$

probability = $\frac{1}{4}$

12. The characteristics of the number log 0.003942 = ____

(A) 3 (B) 2 (C) – 3 (D) – 2

Ans. (C)

Sol. $\log 0.003942 = \log 3.942 \times 10^{-3}$

$-3+\log 3.942$

Characteristic = – 3

Mantissa = $\log 3.942$

13. A number having digit 2 at unit place then its cube has digits ___at its unit place.

(A) 1 (B) 2 (C) 8 (D) 4

Ans. ***(C)***

Sol. Any number having unit digit 2

Then its cubing has unit digit 8 because if we take single digit number i.e 2 then cube of it is 8 . Also if we take two digit number i.e 12 with unit digit as 2 then cube of it is 1728.

14. 3 years ago , the sum of ages of a father and his son was 40 years. After 2 years, the sum of ages of the father and his son will be _____

(A) 40 (B) 46 (C) 50 (D) 60

Ans. ***(C)***

Sol. Let age of son be x years

Let age of father be y years

Three years ago,

(y – 3) + (x – 3) = 40

x + y – 6 = 40

x + y = 46

Ages of son and father after two years are x + 2 and y + 2 respectively

Now, sum of ages will be

(x + 2) + (y + 2)

x + y + 4

46 + 4 = 50 years

15. Correspondence ABC ↔ DEF of ΔABC and ΔDEF is similarity. If AB + BC = 10 and DE + EF = 12 and AC = 6, then DF = ____

(A) 6 (B) 5 (C) 7.2 (D) 16

Ans. ***(C)***

Sol. $\Delta ABC \sim \Delta DEF$ (Given)

$\therefore \frac{AB}{DE}=\frac{BC}{EF}=\frac{AC}{DF}$ (sides are in proportion)

$\therefore \frac{AB+BC}{DE+EF}=\frac{AC}{DF}$

$\therefore \frac{10}{12}=\frac{6}{DF}$

$\therefore$ DF = 7.2

16. In ABC, if $\frac{AB}{1}=\frac{AC}{2}=\frac{BC}{\sqrt{3}}$, then m$\angle$C = _____

(A) 90 (B) 30 (C) 60 (D) 45

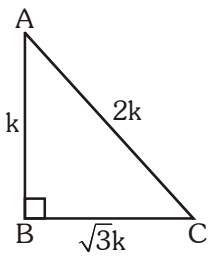
Ans. ***(B)***

Sol. $\therefore \frac{AB}{1}=\frac{AC}{2}=\frac{BC}{\sqrt{2}}=k$ (say)

$\therefore$ AB = k

$\therefore$ AC = 2k

$\therefore$ BC = $\sqrt{3}$ k



$\therefore \tan C = \frac{AB}{BC}$ or $\tan C = \frac{k}{\sqrt{3}k} = \frac{1}{\sqrt{3}}$

$\therefore \tan C = \frac{1}{\sqrt{3}}$

$\therefore \angle C = 30$

17. If 7θ and 2θ are measures of acute angles such that sin7θ = cos2θ, then sin3θ – $\sqrt{3}$ tanθ = ___

(A) 1 (B) 0 (C) –1 (D) $1 - \sqrt{3}$

Ans. ***(NA) Options given are not correct***

Sol. $\sin 7\theta = \cos 2\theta$

$\sin 7\theta = \sin(90 - 2\theta)$

$7\theta = 90 - 2\theta$

$9\theta = 90$

$\theta = 10$

Then, $\sin 3\theta - \sqrt{3}\tan\theta$

$\Rightarrow \sin 30 - \sqrt{3}\tan 10$

$\Rightarrow .5 - \sqrt{3} \times (0.176)$

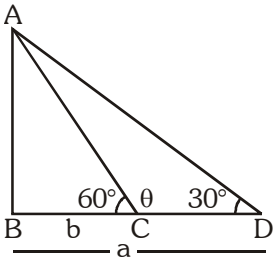
$\Rightarrow 0.1952$

18. If the angle of elevation of tower from two points a and b (a > b) meters from its foot on the same side of the tower, have measures 30 and 60, then the height of the tower is ____

(A) $\sqrt{a+b}$ (B) $\sqrt{ab}$ (C) $\sqrt{a-b}$ (D) $\sqrt{\frac{a}{b}}$

Ans. ***(B)***

Sol. AB = height of tower



Now, In ΔABC,

$\tan 60 = \frac{AB}{BC}$

AB = $\sqrt{3}b$ .....(i)

In ΔABD

$\tan 30 = \frac{AB}{BD}$

$\frac{1}{\sqrt{3}} = \frac{AB}{a}$

AB = $\frac{a}{\sqrt{3}}$ .....(ii)

Multiply equation (i) and (ii)

$AB^2 = (\sqrt{3}b)\left(\frac{a}{\sqrt{3}}\right)$

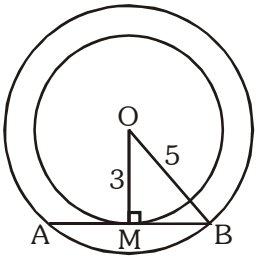
AB = $\sqrt{ab}$

19. A chord 0f $\odot(0, 5)$ touches $\odot(0, 3)$. Therefore the length of the chord = ____

(A) 8 (B) 10 (C) 7 (D) 6

Ans. ***(A)***

Sol. AB is chord



In ΔOMB,

$$OM^2 + MB^2 = OB^2$$

$$9 + MB^2 = 25$$

$$MB^2 = 25 - 9$$

$$MB^2 = 16$$

$$MB = \sqrt{16}$$

MB = 4

AB = 2(MB) = 8

20. The median class of the frequency distribution given below is ____

(A) 40 - 50 (B) 30 - 40 (C) 20 - 30 (D) 10 - 20

Ans. ***(C)***

Sol.

Class	***Frequency***	***Cf***
0 – 10	7	7
10 – 20	15	22
20 – 30	***13***	***35***
30 – 40	17	52
40 – 50	10	62
Total	62	

N = 62

$\frac{N}{2} = \frac{62}{2} = 31$, $\frac{N}{2} > 31$

Median Class = 20 – 30

21. Thermal conductivity of standard SWNT along its length is _____ $\frac{\text{watt}}{\text{m.k.}}$

(A) 3500 (B) 385 (C) 35000 (D) 35

Ans. ***(A)***

Sol. Thermal conductivity of standard SWNT along its length is 3500 W/m·K

22. The compound microscope consists of two convex lenses of 5cm and 20cm focal length, then which of them will be object lens and eye piece?

(A) Object lens with 20cm focal length and eye piece with 5cm focal length.

(B) Object lens with 5cm focal length and eye piece with 20cm focal length.

(C) Both should have 20cm focal length.

(D) Both should have 5cm focal length.

Ans. ***(B)***

Sol. Object lens of compound microscope has shorter focal length as compared to focal length of eye piece. Hence, object lens has focal length 5cm and eye piece has focal length 20cm.

23. The focal length of an eye lens is changed due to the action of _____

(A) Pupil (B) Retina (C) Ciliary Muscles (D) Cornea

Ans. ***(C)***

Sol. Ciliary muscles contract and relax and hence changes the shape of eye lens according to the distance of the object from the eye. Hence, because of the action of ciliary muscles, focal length of eye lens changes.

24. If the five equal pieces of a resistance wire having 5 Ω resistance each is connected in parallel, then their equivalent resistance will be _____

(A) $\frac{1}{5}\Omega$ (B) 1 Ω (C) 5 Ω (D) 25 Ω

Ans. ***(B)***

Sol. Equivalent Resistance for parallel combination of equal resistances is given by, Req = $\frac{R}{n}$

Here, R=5Ω and n=5. Hence, Req = $\frac{5}{5} = 1\Omega$

25. The amount of 2A electric current is passed for 1 minute through one conducting wire. How much total electric charge will pass through this wire?

(A) 2C (B) 30C (C) 60C (D) 120C

Ans. ***(D)***

Sol. Electric Current = $\frac{Charge}{time}$

Charge = Electric Current × time

Here, Current=2A and time = 1 minute = 60 seconds

Hence, Charge = 2 × 60 = 120C

26. At what distance should an object be placed to obtain its real, inverted and of same height as the object by a convex lens?

(A) At focus (B) Between focus and centre of curvature

(C) At centre of curvature (D) Between optical centre and focus

Ans. ***(C)***

Sol. When the object is placed at the centre of curvature of a convex lens, then a real, inverted and of same height image is formed.

27. Velocity of a vehicle increases from $5\frac{m}{s}$ to $15\frac{m}{s}$ in 5 second. What is the magnitude of acceleration?

(A) $4\frac{m}{s^2}$ (B) $4\frac{m}{s}$ (C) $2\frac{m}{s}$ (D) $2\frac{m}{s^2}$

Ans. ***(D)***

Sol. Acceleration = $\frac{Final\,Velocity - Initial\,Velocity}{time}$

Here, Initial Velocity = $5\frac{m}{s}$, Final Velocity = $15\frac{m}{s}$ and time = 5 second

Hence, Acceleration = $\frac{15-5}{5} = \frac{10}{5} = 2\frac{m}{s^2}$

28. What is the focal length of a convex lens having power +5.0 D?

(A) –10 cm (B) –20 cm (C) +10 cm (D) +20 cm

Ans. ***(D)***

Sol. Power of lens = $\frac{1}{focal\,length}$

Thus, Focal length = $\frac{1}{Power}$

Here, Power = +5.0 D

Hence, Focal length = $+\frac{1}{5}$ = + 0.20 m = + 20cm.

29. 1 Newton=_____ dyne.

(A) 10^3 (B) 10^4 (C) 10^5 (D) 10^6

Ans. ***(C)***

Sol. 1 Newton = 1 $kgms^{-2}$

1 kg=1000 g, 1m =100 cm

Hence, 1 Newton = 1000×100 $gcms^{-2}$ = 10^5 dyne (1 dyne =1 $gcms^{-2}$)

30. The increase in velocity of a freely falling body in one second is ____.

(A) 9.8 m/s^2 (B) 9.8 m/s (C) –9.8 m/s^2 (D) –9.8 m/s

Ans. ***(B)***

Sol. Acceleration = $\frac{Change\,in\,velocity}{Time}$

Change in velocity = Acceleration × Time

In case of free fall, Acceleration = 9.8 m/s^2

Hence, change in velocity = 9.8 × 1 = 9.8 m/s

31. An object is thrown vertically upwards with velocity of 20 m/s. At what height will its kinetic energy and potential energy be equal? (g = 10 m/s^2)

(A) 10m (B) 20m (C) 15m (D) 5m

Ans. ***(A)***

Sol. Here, u = 20 m/s and g=10 m/s^2.

By law of conservation of mechanical energy,

$K_i + U_i = K_f + U_f$

Here, U_i = 0 (as h = 0), $K_f = U_f$, $K_i = \frac{1}{2}$ $mu^2 = \frac{1}{2}$ $m(20)^2$ = 200m

Hence, 200m + 0 = $2U_f$

200m = 2mgh

h = $\frac{200m}{2mg} = \frac{200}{20}$ = 10 meter.

Hence, at a height of 10 m its kinetic energy and potential energy will be equal.

32. Sound corresponding to which frequency is ultrasonic sound?

(A) 30 Hz (B) 300 Hz (C) 3000 Hz (D) 30,000 Hz

Ans. ***(D)***

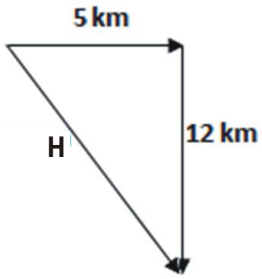
Sol. Ultrasonic sound has frequency greater than 20,000 Hz. Hence, 30,000 Hz frequency sound is ultrasonic sound.

33. A cyclist travels 5km in the east direction. Then he travels 12 km in the south direction. What is the magnitude of displacement of the cycle?

(A) 17km (B) 13km (C) 7km (D) zero

Ans. ***(B)***

Sol.



In the above diagram, using Pythagoras theorem,

$5^2 + 12^2 = H^2$

Thus, $H = \sqrt{25+144} = \sqrt{169} = 13$km.

Hence, the displacement of cycle is 13 km.

34. How many Electrons are there in chloride ion?

(A) 17 (B) 18 (C) 16 (D) 8

Ans. (B)

Sol. As chlorine atom has 17 electrons so its anion (Cl^-)will have 18 electrons.

35. Which scientist gave the rule of octet?

(A) Lewis (B) Rayleigh and Ramsey (C) Dalton (D) Dobereiner

Ans. (A)

Sol. The rule of octet was given by scientist Lewis.

36. What is the chemical name of quick lime?

(A) Calcium oxide (B) Calcium carbonate (C) Calcium hydroxide (D) Carbon dioxide

Ans. (A)

Sol. Quick lime's formula is CaO so its chemical name is calcium oxide.

37. Which rays are used to diagnose cancer of esophagus?

(A) Laser (B) Cathode (C) X-Ray (D) r-ray

Ans. (C)

Sol. For diagnosis of cancer of esophagus X-rays are used.

38. 25°C=____K.

(A) 273 (B) 248 (C) 298 (D) -298

Ans. (C)

Sol. As K = 273 + °C

So 25°C =298K

39. Which of the following shows the Tyndall effect ?

(A) Solution of common salt (B) Milk

(C) Lemon juice (D) Solution of copper sulphate

Ans. (B)

Sol. Because milk is a colloidal solution so it will show tyndall effect.

40. A pH value of bite of honey-bee is _____?

(A) 7 (B) More than 7 (C) Less than 7 (D) of any value

Ans. (C)

Sol. As honey bites contains formic acid so its nature is acidic.

41. To prepare 100 ml, 2M, NaOH solution, _____gram of NaOH will be required.

(A) 40gm (B) 8gm (C) 16gm (D) 24gm

Ans. (B)

Sol. Molarity = Given mass/Molecular mass * Volume(in litre)

2M = x/40 * 0.1

x = 8gm

42. What is the ratio of iron, chromium and nickel in stainless steel ?

(A) 7:2:1 (B) 7:1:2 (C) 7:3:1 (D) 1:2:7

Ans. (A)

Sol. As iron is 73%, chromium is 18% and nickel is 8% so option A is correct.

43. Which metal is mixed with gold to prepare its ornaments?

(A) Platinum (B) Nickel (C) Copper or Silver (D) Zinc

Ans. (C)

Sol. For improving the hardness of gold copper and silver are added in gold.

44. The full form of PABA is

(A) Para Amino Boric Acid (B) Potassium Amino Basic Acid

(C) Para Amino Benzoic Acid (D) Para Amino Benzoic Acetate

Ans. (C)

Sol. Full form of PABA is Para Amino Benzoic Acid.

45. Where ammonia is not used ?

(A) Nylon fibres (B) Fertilizers (C) Explosives (D) Welding

Ans. (D)

Sol. Except welding rest in all the places ammonia is used.

46. What is the chemical formula of oleum ?

(A) H_2SO_4 (B) H_2SO_3 (C) $H_2S_2O_7$ (D) $H_2S_2O_3$

Ans. (C)

Sol. Oleum is a mixture of H_2SO_4 and SO_3 so it can be written as $H_2S_2O_7$

47. Give the name of scientist DNA molecules.

(A) Robert Brown (B) Robert Hook (C) Leuvan Hook (D) Watson and crick

Ans. (D)

Sol. Watson and Crick (1953) proposed the double helical model of DNA molecule.

48. Which of the plant tissue shows the pectin deposition on cell wall?

(A) Collenchyma (B) Parenchyma (C) Sclerenchyma (D) Chlorenchyma

Ans. (A)

Sol. Collenchyma : Cell wall is unevenly thickened with pectin at the corners against the intercellular spaces.

49. Which disease is spread through influenza virus H_1N_1?

(A) Dengue (B) Chickengunya (C) AIDS (D) Swineflu

Ans. (D)

Sol. Swineflu is a respiratory disease spread through influenza virus H_1N_1.

50. Binomial nomenclature was given by the scientist _____

(A) Robert Whittaker (B) Carolus Linnaeus (C) Carl Woese (D) Ernst Haeckal

Ans. (B)

Sol. Binomial nomenclature was proposed by Carolus Linnaeus.According to him the name of any organism consists of two words. The first word denoting the name of 'Genus' and second word denoting 'Species'.

51. Which special structures are connected with wall of the lungs in class Aves?

(A) Air Sac (B) Diaphragm (C) Spongy Bones (D) Booklungs

Ans. (A)

Sol. In class Aves, air sacs are attached to lung's wall which help in flying by making the body weight lighter.

52. Identify the protochordata Animals.

(A) Shark (B) Frog (C) Balanoglossus (D) Rohu

Ans. (C)

Sol. Balanoglossus is included in Protochordata because it has notochord as buccal diverticulum or stomochord in proboscis.

53. Which is the improved hybrid variety of Wheat?

(A) Sona (B) Sonalika (C) PS-16 (D) Paras

Ans. (B)

Sol. Sonalika is the high yielding and disease resistant hybrid variety of wheat introduced in India in 1963.

54. Which of the following is not consumer?

(A) Carnivores (B) Herbivores (C) Autotrophs (D) Omnivores

Ans. (C)

Sol. Autotrophs are the producers which synthesize their own food through photosynthesis.

55. What is the range of wavelength of U.V. rays?

(A) 132 to 200 nm (B) 310 to 400 nm (C) 310 to 200 nm (D) 300 to 200 nm

Ans. (B)

Sol. The wavelength of U.V. rays is shorter than visible spectrum and lies between range of 310 to 400 nm.

56. Which of the following gland acts as an endocrine gland as well as exocrine gland?

(A) Salivary gland (B) Pancreas gland (C) Pituitary gland (D) Parathyroid gland

Ans. (B)

Sol. Pancreas gland acts as an endocrine gland as well as exocrine gland because it secretes hormones (Insulin and Glucagon) as well as enzymes (pancreatic juice).

57. By which cell the process of opening and closing of stomata is controlled?

(A) Epidermal Cell (B) Guard Cell (C) Accessory Cell (D) Leaf Cell

Ans. (B)

Sol. Guard cells are kidney shaped cells which cover single stoma and regulate the opening and closing of stomata.

58. What is the weight of the brain of an adult human?

(A) 1350gm (B) 1.350gm (C) 1530gm (D) 3150gm

Ans. (A)

Sol. The adult human brain weighs about 1300 - 1400gm.

59. How many upper chambers are present in human heart?

(A) Four (B) three (C) two (D) one

Ans. (C)

Sol. The upper two chambers of human heart are called atria/auricle.

60. In which book endangered plant species names are published?

(A) Endangered species book (B) Green data book

(C) Red data book (D) Yellow data book

Ans. (C)

Sol. Red data book includes rare and endangered plant species.

61. "Kanchenjungha" peak is situated in _____ state of India.

(A) Arunachal Pradesh (B) Asam (C) Sikkim (D) Uttaranchal

Ans. (C)

Sol. Sikkim

62. By which name the combined flow of river the Ganga and the Brahmaputra is known?

(A) Doab (B) Bangar (C) Meghna (D) Tarai

Ans. (C)

Sol. Meghna

63. Which area in Jammu and Kashmir is an area of scanty rainfall?

(A) Leh (B) Ladakh (C) Jammu (D) Kashmir

Ans. (A)

Sol. Leh

64. Distance between India and Europe was reduced due to _____ canal.

(A) Suez (B) Panama (C) Agra (D) Grand

Ans. (A)

Sol. Suez

65. Which river does not meet to Bay of Bengal?

(A) Krishna (B) Kaveri (C) Maha (D) Narmada

Ans. (D)

Sol. Narmada

66. What is prepeared out of the liquid of Chid?

(A) Catechu (B) Tupentine (C) Lac (D) Gam

Ans. (B)

Sol. Tupentine

67. Which soil contains more combination of iron and Aluminum?

(A) Red (B) Laterite (C) Desert (D) Alluvial

Ans. (B)

Sol. Laterite

68. Where are the flying squirrels seen?

(A) Greater Rann of Kutchch (B) At higher altitude in Himalaya

(C) Marshy land (D) In western Ghats Forests

Ans. (D)

Sol. In western Ghats Forests

69. Which class of Animals are desert cat Ghudkhar and bear in Gujarat?

(A) Extinct (B) Endangered

(C) on the verge of extinction (D) Adversely(Vulnerable) affected

Ans. (C)

Sol. on the verge of extinction

70. On which river lies the Nagarjunasagar project?

(A) Godavari (B) Krishna (C) Tungbhadra (D) Kaveri

Ans. (B)

Sol. Krishna

71. For which crop, is kanam region of Bharuch famous?

(A) Tobacco `(B) Wheat (C) Paddy (D) Cotton

Ans. (D)

Sol. Cotton

72. Which institution of following does not purchase farm products from farmers as a sustainable prize?

(A) GROFED (B) GUJCOMASOL (C) NDDB (D) DARE

Ans. ***(D)***

Sol. DARE

73. Which soil have been derived from the Deccan Trap?

(A) Black Soil (B) Red Soil (C) Alluvial Soil (D) Laterite Soil

Ans. ***(A)***

Sol. Black Soil

74. In which state was 'Chipko Movement' occurred?

(A) Bihar (B) Gujarat (C) Punjab (D) Uttaranchal

Ans. ***(D)***

Sol. Uttaranchal

75. Which day is Celebrated as "WorldBiodiversity Day"?

(A) 21-March (B) 5-June (C) 29-December (D) 4-October

Ans. ***(C)***

Sol. 29-December

76. How many countries had plunged into the first world war?

(A) 23 (B) 32 (C) 20 (D) 19

Ans. ***(B)***

Sol. 32

77. When was Jallianwala Bagh Massacre happened?

(A) 1919 (B) 1819 (C) 1920 (D) 1820

Ans. ***(A)***

Sol. 1919

78. When did Dandi March start?

(A) 12th April, 1930 (B) 12th March, 1931 (C) 12th March,1930 (D) 12th April, 1931

Ans. ***(C)***

Sol. 12th March,1930

79. England and America established military organization is known as _____.

(A) NATO (B) SEATO (C) CENTO (D) SWATO

Ans. ***(B)***

Sol. SEATO

80. In 1971 with which country India made treaty?

(A) China (B) Pakistan (C) Russia (D) America

Ans. ***(C)***

Sol. Russia

81. Who was the Promoter of non-aligned movement from India?

(A) Lalbahadur Shastri (B) Dr. Radhakrishnan

(C) Pandit Jawaharlal Nehru (D) Shrimati Indira Gandhi

Ans. ***(C)***

Sol. Pandit Jawaharlal Nehru

82. Which State is related to Kathak Dance?

(A) Asam (B) Kerala (C) Uttar Pradesh (D) Orissa

Ans. ***(C)***

Sol. Uttar Pradesh

83. The work by Amir Khusro is _____

(A) Padmavat (B) Ashikan (C)Raghuvamsha (D) Swapnavasnhattam

Ans. (B)

Sol. Ashikan

84. Who founded the city of Fatehpur Sikri?

(A) Babar (B) Akbar (C) Shahjahan (D) Humayun

Ans. (B)

Sol. Akbar

85. Which Mughal Emperor's period is known as golden period of Indian architecture?

(A) Shah Jahan (B) Babar (C) Akbar (D) Humayu

Ans. (A)

Sol. Shah Jahan

86. Which is the world's largest epic?

(A) Ramayana (B) Ettutokai (C) Patthuppattu (D) Mahabharat

Ans. (D)

Sol. Mahabharat

87. In which literature a collection of dialogues between Buddha and his disciples is given?

(A) Sukta Pitaka (B) Vinay Pitaka (C) Abhidhamma Pitaka (D) Milind Pahno

Ans. (A)

Sol. Sukta Pitaka

88. Give the name of race known as creator of Mohen-jo-Daro Culture.

(A) Australoid(Nishad people) (B) Dravidian

(C) Aryans (D) Negroid(Habsi People)

Ans. (B)

Sol. Dravidian

89. Black Complexion, broad head, flat nose, short height etc were the physical features of the tribe called _____

(A) The Dravidians (B) The Armenoids (C) The Mongoloids (D) The Austroloids

Ans. (D)

Sol. The Austroloids

90. German poet Goethe was so much impressed by reading which drama that he put it on his head and danced with joy?

(A) Malvikagnimitram (B) Vikramovarshiyam

(C) Abhignam Shankuntalam (D) Mahavir Charitam

Ans. (C)

Sol. Abhignam Shankuntalam

91. Who can give the casting vote in case of a tie for any bill?

(A) Vice Chairman (B) Vice President (C) Chairman(Speaker) (D) President

Ans. (C)

Sol. Chairman(Speaker)

92. Which one right is not included in fundamental rights in our constitution?

(A) Right to Equality (B) Insulting of women by men

(C) Right to freedom (D) Right against exploitation

Ans. (B)

Sol. Insulting of women by men

93. How mant percentage have been provided reservation for women entire nation including Gujarat in local - self government organization.

(A) 43% (B) 23% (C) 53% (D) 33%

Ans. ***(D)***

Sol. 33%

94. Gujarat has implemented scheme such as ____ Bond to promote women education.

(A) Mahilla (B) Saraswati (C) Vidyalaxmi (D) Narmada

Ans. ***(C)***

Sol. Vidyalaxmi

95. According to 2001 census, there were ____ women per thousand men in India.

(A) 933 (B) 927 (C) 930 (D) 941

Ans. ***(A)***

Sol. 933

96. India is ____ Country.

(A) Backward (B) Developed (C) Developing (D) Very Poor

Ans. ***(C)***

Sol. Developing

97. Which country is not developed from following?

(A) U.S.A (B) Japan (C) Nepal (D) France

Ans. ***(C)***

Sol. Nepal

98. Which activity cannot be classified under service sector?

(A) Business (B) Education and Health (C) Gas and Electricity (D) Cattle rearing

Ans. ***(D)***

Sol. Cattle rearing

99. The Policy of globalization is associated with _____ .

(A) Local trade (B) Foreign trade (C) Regional trade (D) All of these

Ans. ***(B)***

Sol. Foreign trade

100. In which Year, Governmnet of India passed air pollution control act in India?

(A) 1999 (B) 1981 (C) 1995 (D) 2002

Ans. ***(B)***

Sol. 1981