1. Mansi wanted _____ a doctor when she was in Primary School.

(1) became   (2) to become   (3) becomes   (4) had become

Ans. (2)

Sol. Here the verb want is followed by infinitive

2. Jaydeep helps his friends but he _____ not by them.

(1) is + help   (2) does + help   (3) is + helped   (4) does + helped

Ans. (3)

Sol. Usage of pasive form of simple present tense

3. The next year, the Government of Gujarat _____ business summit at Mahatma Mandir, Gandhinagar.

(1) organize   (2) organized   (3) will organize   (4) is organized

Ans. (3)

Sol. It is showing a plan to be executed in future through modal verb

4. Before we reached the cinema hall, the film 'Bajarangi Bhaijan' _____.

(1) to start   (2) started   (3) had started   (4) was started

Ans. (3)

Sol. When we want to talk about an action that happened before a pastevent, we often use the past perfect.

5. I saw a beggar near the temple. He work _____ clothes, though it was winter.

(1) tears   (2) tearing   (3) torn   (4) to tear

Ans. (3)

Sol. THE WORD TORN DESCRIBES THE NOUN CLOTHES

6. Meet and I study in the same school but Meet is cleverer than _____.

(1) I   (2) my   (3) me   (4) mine

Ans. (1, 3)

Sol. Pronoun antecedent agreement rule.

7. Give the piural from of word 'mouse'.

(1) mouses   (2) mousies   (3) mices   (4) mice

Ans. (4)

Sol. Plural form of mouse is mice, irregular form of noun.

8. Dr. A. P. J. Abdul Kalam was a great scientist, _____?

(1) was he   (2) is he   (3) wasn't he   (4) won't he

Ans. (3)

Sol. If the question is in positive form the question tag is in negative form

9. Amit has not a big mobile, _____ ?

(1) has he   (2) have he   (3) have not he   (4) isn't

Ans. (1)

Sol. If the question is in negative form the question tag is in positive form

10. Come on India _____ We want a six.

(1) !   (2) ,   (3) .   (4) ?

Ans. *(1)*

Sol. The phrase is showing a strong excitement or cheers, thus !mark is used to express the emotion

11. Choose the correct inversion question of the following sentence.

Kiran played cricket yesterday.

(1) Is Kiran played cricket yesterday ?   (2) Was Kiran played cricket yesterday ?

(3) Dose Kiran played cricket yesterday ?   (4) Did Kiran played cricket yesterday ?

Ans. *(NA)*

Sol. The options are all wrong

12. India is one of _____ oldest civilization in the world.

(1) a   (2) an   (3) the   (4) at

Ans. *(3)*

Sol. The determiner "The" shows superlative degree "Oldest"

13. I will stay _____ you return.

(1) either   (2) until   (3) or   (4) after

Ans. *(2)*

Sol. The conjunction "until" shows a parallel action or time.

Read the passage and give the answer given below it. (14 to 17)

Once there was mouse. The mouse always looked worried because it was afraid ol cats. A magician had pity on it and turned it into cat. Now the cat was afraid of dog. So the magician turned the cat into a dog. The dog began to fear tigers. Now the magician turned the dog into a tiger. The tiger began to fear hunters. Once day the magician said, 'Be the mouse, again, you are no better than mouse at heart.'

14. What was mouse afraid of?

(1) dog   (2) cat   (3) car   (4) bus

Ans. *(2)*

Sol. According to reference to context with the given passage

15. What did the magician turn the cat into ?

(1) rat   (2) dog   (3) tiger   (4) ant

Ans. *(2)*

Sol. According to reference to context with the given passage

16. What did magician do with the dog ?

(1) turned cat   (2) mouse   (3) tiger   (4) hunter

Ans. *(3)*

Sol. According to reference to context with the given passage

17. Tiger was turned into ?

(1) cat   (2) dog   (3) hunter   (4) mouse

Ans. *(4)*

Sol. According to reference to context with the given passage

18. Pick odd one out.

(1) cat   (2) mouse   (3) rat   (4) hunter

Ans. *(4)*

Sol. According to reference to context with the given passage

19. As brave as a _____.

    (1) cat   (2) lion   (3) mouse   (4) horse

Ans. *(2)*

Sol. According to reference to context with the given passage

20. As blind as _____.

    (1) a bee   (2) a eagle   (3) a crow   (4) a bat

Ans. *(4)*

Sol. According to reference to context with the given passage

21. Choose the correct passive form of the sentence.

He gave me a chocolate.

    (1) I was given me a chocolate.   (2) A chocolate is given by me.

    (3) A chocolate was given to me by him   (4) A chocolate is given by him

Ans. *(3)*

Sol. The verb is in simple past form, so the passive voice would also be in same tense

22. Choose the opposite of 'dusk'

    (1) morning   (2) day   (3) dawn   (4) evening

Ans. *(3)*

Sol. The opposite of Dusk is Dawn

23. Maya _____ playing in the garden now.

    (1) was playing   (2) are playing   (3) is playing   (4) am playing

Ans. *(3)*

Sol. Signal word "now" indicates that the action is in progress

24. Meena _____ a school bag.

    (1) have   (2) has   (3) is   (4) was

Ans. *(2)*

Sol. The subject is singular so "has". Eg. She, He, Jagdish - has

25. Peacock is _____ most beautiful bird.

    (1) a   (2) an   (3) of   (4) the

Ans. *(4)*

Sol. Superlative degree is expressed by article "The"

26. I am waiting for _____ hour.

    (1) a   (2) an   (3) the   (4) since

Ans. *(2)*

Sol. Vowel sounds in singular COUNTABLE NOUNS TAKE article "an"

27. Change the gender of 'Poet'

    (1) Poet   (2) Poettess   (3) Pootess   (4) Peotiess

Ans. *(2)*

Sol. Feminine gender of Poet is Poetess

28. I know the person _____ is very happy.

    (1) whose   (2) whom   (3) when   (4) who

Ans. *(4)*

Sol. Here WHO IS SUBJCTIVE RLATIVE PRONOUN

29. If I could fly, I _____to the moon.

    (1) could go   (2) would go   (3) go   (4) gone

Ans. *(2)*

Sol. The sentence shows desire by "SECOND Conditional"

3

        Courtesy : NTSE

30. What do you think _____ this place?

(1) on   (2) for   (3) by   (4) about

Ans. *(4)*

Sol. The VERB THINK IS FOLLOWED BY THE PREPOSITION ABOUT

31. Rhyming word of 'hill' is _____.

(1) ball   (2) doll   (3) fall   (4) chill

Ans. *(4)*

Sol. Rhymes with Hill - Chill

32. Plural form of the word <u>mineral</u> is _____

(1) minerales   (2) minerals   (3) minarals   (4) minaral's

Ans. *(2)*

Sol. Regular Plural form

33. Add proper question tag.

Utsav passed the examination _____ ?

(1) wasn't he   (2) didn't he   (3) was he   (4) did he

Ans. *(2)*

Sol. If the question is in positive form the question tag is in negative form

34. Gandhiji said, "My life is my _____."

(1) massage   (2) message   (3) messge   (4) meseg

Ans. *(2)*

Sol. Spelling error.

35. I have come here just _____ minutes ago.

(1) some   (2) many   (3) a few   (4) much

Ans. *(3)*

Sol. Determiner a few is used before countable nouns

36. Find out odd one from the following

(1) mouse   (2) laptop   (3) pen   (4) pendrive

Ans. *(3)*

Sol. Other things are name of peripherals of computer

37. The cow is _____ animal.

(1) domestic   (2) domastic   (3) domise   (4) demestic

Ans. *(1)*

Sol. Spelling error

38. Mina _____ from the mall the next week.

(1) buy toys   (2) bought toys   (3) will be bought toys   (4) will buy toys

Ans. *(4)*

Sol. The modal "will" is used to show some future action

39. Indian Team reached Chennai _____ train

(1) in   (2) by   (3) with   (4) on

Ans. *(2)*

Sol. "By" is used while we say which transportation medium we used from the available choice

40. Find out the correct spelling from the following

(1) Convineint   (2) Convenient   (3) Conenenint   (4) Convanient

Ans. *(2)*

Sol. Spelling error

4

41. Choose the opposite word of 'manual'.

(1) machenecal   (2) michenical   (3) mechanical   (4) mechinecal

Ans. *(3)*

Sol. Spelling error

42. fine out the similar meaning of the following phrase : "Look for"

(1) look in   (2) look after   (3) look into   (4) Scarch

Ans. *(4)*

Sol. Look for means search

43. Choose the past participale form of the verb : "Spread"

(1) spreal   (2) spreaded   (3) sprond   (4) speading

Ans. *(NA)*

Sol. NA

44. _____water is there in the glass ?

(1) How many   (2) How much   (3) How far   (4) How long

Ans. *(2)*

Sol. "Howmuch" is used before uncountable nouns to know the quantity

45. We _____ use solar energy in our daily life.

(1) must   (2) should   (3) would   (4) could

Ans. *(2)*

Sol. Modal "should" is used to show obligation / moral duty

46. Virat Kohali has been batting _____ early morning.

(1) for   (2) from   (3) since   (4) during

Ans. *(3)*

Sol. Since is a preposition which is used to indicate the point of time

47. The teacher distributed the chocolates _____children.

(1) between   (2) among   (3) each other   (4) both

Ans. *(2)*

Sol. Between is used for choices involving two items and "among" for choices that involve more than two items.

48. _____captain played well. India lost the match.

(1) If   (2) Unless   (3) Though   (4) Because

Ans. *(3)*

Sol. Though, Although, But, Yet, Still shows two contradiction in sentences combined

49. Rohit is not _____clever as Manisha.

(1) As   (2) The   (3) So   (4) Than

Ans. *(1,3)*

Sol. In Positive degree we use as ……. As or so…….. as to compare two or more than two things which are equal / similar.

50. Gandhiji believed in _____.

(1) violance   (2) violence   (3) non - violence   (4) non - violence

Ans. *(3,4)*

Sol. Spelling errors

ᵀᴹ NATIONAL TALENT SEARCH EXAMINATION (NTSE-2016) STAGE -1
GUJARAT STATE : MAT

ALLEN CAREER INSTITUTE KOTA (RAJASTHAN) *Path to success*

Date: 08/11/2015

Max. Marks: 50   **SOLUTIONS**   **Time allowed: 45 mins**

In che following questions 1 to 10 questions numbers are arranged in a series with come principles understanding it. One term in the series is missing as shown by _____ . This term is given as one of the alternative amongst the four numbers given below it. Find this term and show your answer against the question number on the anwer sheet.

1.   1, 12, 18, 25, _____, 52

(1) 32   (2) 33   (3) 35   (4) 34

Ans. (3)

Sol.   Given series is combination of two series

I : 1, 18, ?

II : 12, 25, 52

Rule in II series is   Rule in series I is

$12 \times 2 + 1 = 25$ $1 + 17 = 18$

$25 \times 2 + 2 = 52$ $18 + 17 = 35$

2.   9, 16, 25, 36, _____, 64, 81

(1) 40   (2) 42   (3) 46   (4) 49

Ans. (4)

Sol.   Series follow square rule $(n+1)^2$ where n = 2, 3, 4, 5, 6, 7, 8

$3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2$

3.   2, 2, 4, 12, 48, _____.

(1) 240   (2) 220   (3) 192   (4) 200

Ans. (1)

Sol.   Series follow multiplication rule

$2 \times 1 = 2$

$2 \times 2 = 4$

$4 \times 3 = 12$

$12 \times 4 = 48$

$48 \times 5 = 240$

4.   25, 22, 18, 13, 7, _____.

(1) 1   (2) 2   (3) 3   (4) 0

Ans. (4)

Sol.   Series follow subtraction rule as

$25 - 3 = 22$

$22 - 4 = 18$

$18 - 5 = 13$

$13 - 6 = 7$

$7 - 7 = 0$

5. 8, 27, 64, 125, _____, 343, 512

(1) 150   (2) 220   (3) 216   (4) 180

Ans. *(3)*

Sol. Series follow cube rule $(n+1)^3$ where n = 1, 2, 3, 4, 5, 6, 7

$2^3, 3^3, 4^3, 5^3, 6^3, 7^3, 8^3$

6. 48, 35, 24, ____, 8, 3.

(1) 14   (2) 15   (3) 16   (4) 12

Ans. *(2)*

Sol. Series follow subtraction rule as

$48 - 13 = 35$

$35 - 11 = 24$

$24 - 9 = 15$

$15 - 7 = 8$

$8 - 5 = 3$

7. 12, 20, 30, 42, _____, 72

(1) 14   (2) 15   (3) 16   (4) 12

Ans. *(no option is correct)*

Sol. Series follow addition rule

$12 + 8 = 20$

$20 + 10 = 30$

$30 + 12 = 42$

$42 + 14 = 56$

$56 + 16 = 72$

8. 17, 22, 26, 29, _____, 32, 32

(1) 30   (2) 31   (3) 32   (4) 29

Ans. *(2)*

Sol. Series follow addition rule

$17 + 5 = 22$

$22 + 4 = 26$

$26 + 3 = 29$

$29 + 2 = 31$

$31 + 1 = 32$

$32 + 0 = 32$

9. 144, 100, 64, _____, 16, 4

(1) 32   (2) 34   (3) 36   (4) 40

Ans. *(3)*

Sol. Series follow square rule $(n-2)^2$ where n = 12

$12^2, 10^2, 8^2, 6^2, 4^2, 2^2$

10. 22, 33, 46, _____, 78, 97

(1) 60   (2) 61   (3) 62   (4) 67

Ans. *(2)*

Courtesy : NTSE

Sol. Series follow addition rule

$22 + 11 = 33$

$33 + 13 = 46$

$46 + 15 = 61$

$61 + 17 = 78$

$78 + 19 = 97$

In question 11 to 15, English alphabates are given digital numbers. Using them, find the correct code of other English words from the alternatives.

11. If TAKE = 3456, KAML = 5479 are given, what is writeen for MAKE

(1) 7465   (2) 7456   (3) 7546   (4) 7564

Ans. *(2)*

Sol. T = 3, A = 4, K = 5, E = 6 and K = 5, A = 4, M = 7, L = 6

So, MAKE = 7456

12. If DOG = 467, CAT = 321 are given, what is written for GOT ?

(1) 716   (2) 761   (3) 671   (4) 617

Ans. *(2)*

Sol. D = 4, O = 6, G = 7 and C = 3, A = 2, T = 1

So, GOT = 761

13. If A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9 and BCGH = 2378 are given, what is given to CDHI = ?

(1) 3498   (2) 3849   (3) 3489   (4) 3894

Ans. *(3)*

Sol. A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8 ....

So, CDHI = 3489

14. If CAMEL = 34567, METAL = 56847, what is LEMAT ?

(1) 76584   (2) 76458   (3) 76548   (4) 76854

Ans. *(3)*

Sol. C = 3, A = 4, M = 5, E = 6, L = 7 and M = 5, E = 6, T = 8, A = 4, L = 7

So, LEMAT = 76548

15. If HIDE = 8945, BDAF = 2416, what is DIBF?

(1) 4962   (2) 4692   (3) 4296   (4) 4926

Ans. *(4)*

Sol. H = 8, I = 9, D = 4, E = 5 and B = 2, D = 4, A = 1, F = 6

So, DIBF = 4926

In question No. 16 to 20, if order of English alphabet is changed, code language id changed.

16. If POUND is written instead of DNUOP, what is written for MEGIK ?

(1) KIMEG   (2) KIGEM   (3) KGIEM   (4) KIGEM

Ans. *(2,4)*

Sol. If letters of POUND are reversed it forms the code as DNUOP. Similarly letters of MEGIK are reversed as KIGEM

3

     Courtesy : NTSE

17. If REWOL is written for FLOWER, what is written for MARKET?

(1) TEKRMA (2) TEKRAM (3) TEKAMR (4) TEKMAR

Ans. *(2)*

Sol. FLOWER is reversed to REWOLF (MISSPRINT). Similarly MARKET is reversed to TEKRAM

18. If PCAT = TACP and RBED = DEBR are written, what is written for DCAB in code language?

(1) BACD (2) ABCD (3) BADC (4) ABDC

Ans. *(1)*

Sol. PCAT is reversed to TACP. Similarly, RBED is reversed to DEBR .

So, DCAB= BACD

19. If ABCD is written ZYXW in code language, what is written for EFGHin code language?

(1) VUST (2) UTSR (3) STUV (4) VUTS

Ans. *(4)*

Sol. Writing place value of all the alphabets from starting i.e. A = 1, B = 2, C = 3, D = 4 ………. and from reverse Z = 1, Y = 2, X = 3, W = 4………. Hence, EFGH = 5678 from starting and VUTS = 5678 from reverse

20. If in any language ROAST by PQYUR, how is expressed SLOPPY ?

(1) MRNAQN (2) NRMNQA (3) QNMRNA (4) RANNMQ

Ans. *(3)*

Sol. R – 2 = P

O +2 = Q

A – 2 = Y

S + 2 = U

T – 2 = R

Similarly, S – 2 = Q

L +2 = N

O – 2 = M

P + 2 = R

P – 2 = N

Y + 2 = A

In question No. 21 to 25, four figures are given in each. One of the figure differs from the rest three Which is that figure?

21. (1)   (2)   (3)   (4)

Ans. *(3)*

Sol. Circle is not a polygon and rest all are polygons.

22. (1)   (2)   (3)   (4)

Ans. *(2)*

Sol. Number of lines inside the square frame is 3 which is odd and rest all are even.

23. (1)   (2)   (3)   (4)

Ans. *(4)*

Sol. No figure is given.

24. (1)   (2)   (3)   (4)

Ans. *(2)*

Sol. Same figure is embedded. While different figures is embedded in rest.

25. (1)   (2)   (3)   (4)

Ans. *(4)*

Sol. Curve inside the triangle is not touching the edge of triangle.

In question No 26 to 30, figures are given with one question mark (?). Complete the figure logically.

26.
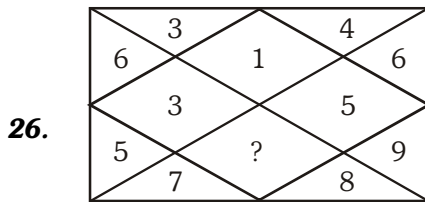
(1) 72   (2) 35   (3) 56   (4) 42

Ans. *(?)*

Sol. No option is correct.

27.

6	11	4
5	?	9
10	3	8

(1) 2   (2) 1   (3) 7   (4) 12

Ans. *(3)*

Sol. Sum of each row should be 21

In row 2,

$(5 + X + 9) = 21$

$X = 21 - 14 = 7$

5

28.
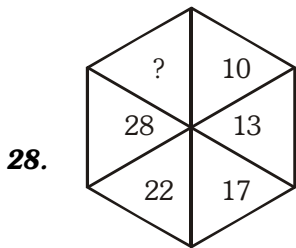
(1) 34   (2) 35   (3) 30   (4) 36

Ans. *(2)*

Sol. 10 + 3 = 13; 13 + 4 = 17 ; 17 + 5 = 22 ; 22 + 6 = 28 ; 28 + 7 = 35

29.
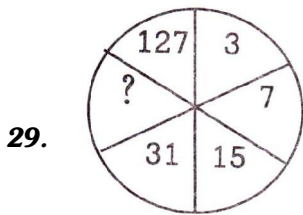
(1) 62   (2) 63   (3) 106   (4) 76

Ans. *(2)*

Sol. Starting from 3 every succeeding number is obtained by using pattern ($\times$ 2 + 1).

$3 \times 2 + 1 = 7$; $7 \times 2 + 1 = 15$ ….. so on

30.
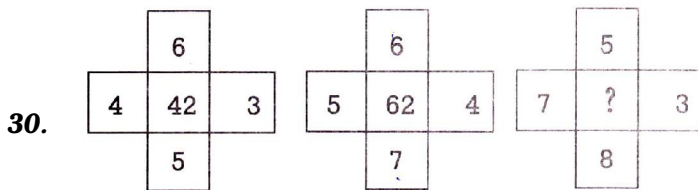
(1) 65   (2) 60   (3) 61   (4) 62

Ans. *(3)*

Sol. $(6\times5)+(4\times3)=42$

$(6\times7)+(4\times5)=62$

$(5\times8)+(7\times3)=62$

31.
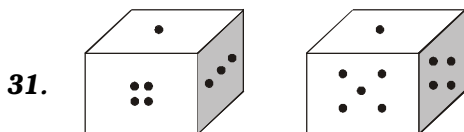
In figure, if at the bottom of the quibic, there are four dots, how many dots can be at the top?

(1) 2   (2) 4   (3) 6   (4) 3

Ans. *(3)*

Sol. According to unfolding net
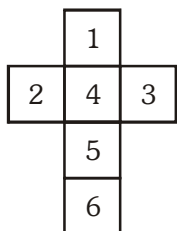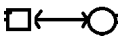

Opposite to 4(Top) is 6(Bottom)

32. Pointing at the photo, Ramesh said that is the photo of the younger brother of father's daughter's of the only sister of my maternal uncle. What relation of the person in the photo with Ramesh?

(1) Maternal uncle   (2) Father   (3) Uncle   (4) Brother

Ans. *(3)*

Sol.

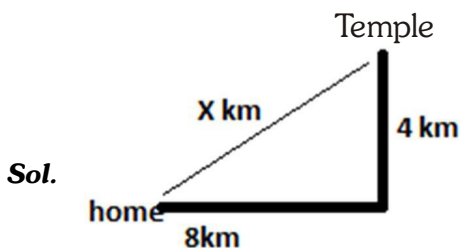| REPRESENTATION	RELATION
□←→○	**Spouse relation**
□─■─□	**sibling relation**
○	**females**
□	**males**
○—□	**parent at top and child at bottom relation**
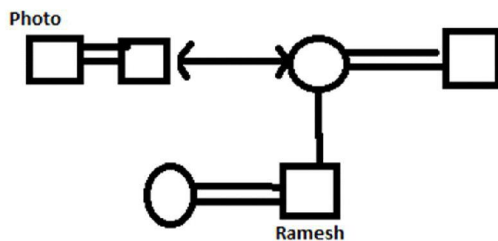
So the person in photo is Uncle of Ramesh.

33. Tarun went 8 kms in the East from his house. Then turned to left and went to the temple which is 4 kms away. Now to reach his home (without taking turn)) how much distance would he walk?

(1) 5 (km)   (2) 3 (km)   (3) 8 (km)   (4) 6 (km)

Ans. *(3)*

Sol.

By Pythagoras theorem,

$8^2 + 4^2 = X^2$

$X = \sqrt{(64 + 16)} = \sqrt{80} = 4\sqrt{5}$

X = 8 km (approx).

34. Kiran was standing on the way after sunrise. Narmrata who was coming from the opposite direction, saw that the shadow od Kiran was falling on his left. So to which direction was Kiran's face? (Kiran was looking)

(1) South   (2) South-West   (3) North-West   (4) North

Ans. *(1)*

Sol. Kiran was facing south direction.

7

35. A wall-clock shows 3:40 time. What time is indicated reflection of the same clocl on the opposite clock?

(1) 7:20   (2) 8:40   (3) 8:20   (4) 7:40

Ans. *(3)*

Sol. If 3:40 is the time given in correct watch subtract this time from 11:60 to get reflection of 3:40 i.e.

(11:60 – 3:40) = 8:20.

36. 2 mangoes = 3 apples, 2 apples = 4 bananas. So instead of buying 3 mangoes, hoe many bananas are available?

(1) 6 bananas   (2) 8 bananas   (3) 9 bananas   (4) 12 bananas

Ans. *(3)*

Sol. Given that: 2 mangoes = 3 apples; 2 apples = 4 bananas.

Therefore, 1 apple = 2 bananas,

So, 2 mangoes = 6 bananas;

So, 3 mangoes = $\dfrac{(6 \times 3)}{2}$ = 9 bananas.

37. If on 27 January 1947, it was Wednesday, what day was on 3 September 1947?

(1) Wednesday   (2) Thursday   (3) Friday   (4) Sunday

Ans. *(3)*

Sol. 27 Jan 1947 is Wednesday.

3 September 1947 = ?

	Jan	Feb	March	April	May	June	July	Aug	Sept
No. of odd days →	4 +	0 +	3 +	2 +	3 +	2 +	3 +	3 +	3

= 23 days = 2 odd days

So, Wednesday +2 = Friday.

38. Goldmith : Ornamentsi :: Producer : ?

(1) Film   (2) Theater   (3) Actor   (4) Actress

Ans. *(1)*

Sol. Gold smith makes ornaments. Similarly, Producer makes films.

39. Satish was born on 15th August. If Mahesh is 17 years old er than Satish. On which day was Mahesh born?

(1) Tuesday   (2) Monday   (3) Wednesday   (4) Monday

Ans. *(4)*

Sol. Birth date of Satish → 15 August (Wednesday)

Mahesh is 17 days older than Satish

∴ 17 days means 3 odd days.

∴ Mahesh was born on (Wednesday – 3) = Sunday.

40. At 3.00 o'clock, which of the following angle is made the two hands (hour hand and minute hand) ?

(1) 90°   (2) 120°   (3) 0°   (4) 150°

Ans. *(1)*

Sol. At 3 : 00 hands of clock are 15 minutes spaces apart.

∴ 1 min space = 6°

∴ 15 min space = 15 × 6° = 90°

41. What would be the measurement between two hands (hour hand and minute hand) at 10.00 o'clock ?

(1) 30°   (2) 60°   (3) 90°   (4) 120°

Ans. *(2)*

Sol. At 10'o clock hands of clock are 10 minutes spaces apart.

∴ 1 min space = 6°

∴ 10 min space = 10 × 6° = 60°

42. If the day before yesterday was Sunday, what day will be on the 5th day after day after tomorrow?

(1) Sunday   (2) Saturday   (3) Wednesday   (4) Thursday

Ans. *(2)*

Sol. Day after yesterday is today i.e. Sunday, so fifth day from day after tomorrow is saturday.

In question No. 43, 44 and 15, one word differs from the rest. Which one is that?

43. (1) Acre   (2) Inch   (3) Meter   (4) Mile

Ans. *(1)*

Sol. Acres is measuring unit of Area while others are measuring unit of length.

44. (1) Banas   (2) Saraswati   (3) Rupen   (4) Sabarmati

Ans. *(4)*

Sol. Sabarmati is the only river which merges in ocean, while all others are not.

45. Three cities of the following are of one group. Which city differs from that group?

(1) Ahmedabad   (2) Jaypur   (3) Bhopal   (4) Lucknow

Ans. *(1)*

Sol. Ahmadabad is not the capital city while all other are capital cities.

46. There is relation between Gujarat and Gandhinagar. Which of the following words has the same type of relation with Asham?

(1) Gauhati   (2) Manipur   (3) Dispur   (4) Mizoram

Ans. *(3)*

Sol. Gujarat's Capital is Gandhinagar.

∴ Assam's Capital is Dispur.

47. In a line, Parth's sequence is 17th from right side and 24th from the left side. So how many students are there in that line?

(1) 41   (2) 40   (3) 42   (4) 39

Ans. *(2)*

Sol. $\longleftarrow \underset{23}{\quad\quad} + \text{Parth} + \underset{16}{\quad\quad} \longrightarrow = 23 + 1 + 16 = 40$

48. 20% of 20% of a number is 20. What is that number?

(1) 200   (2) 400   (3) 500   (4) 2000

Ans. *(3)*

Sol. $\dfrac{20}{100} \times \dfrac{20}{100} \times x = 20$

∴ x = 500.

49. If 'City' is called 'Village', 'Village' is called 'Sofa' and 'Sofa' is 'Bathroom', than where does lion live?

(1) ina Jungle   (2) In a Sofa   (3) In a bathroom   (4) In a village

Ans. *(2)*

Sol. According to the code given, Lion lives in village and village is called Sofa.

50. The addition of the squares of two numbers in squares is 221. Which are those numbers?

(1) 100 and 111   (2) 9 and 10   (3) 10 and 11   (4) 11 and 12

Ans. *(3)*

Sol. $x^2 + y^2 = 121$

$(10)^2 + (11)^2 = 121$

$100 + 121 = 221$

$\therefore$ 10 and 11 are the number.

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Path to success KOTA (RAJASTHAN)

NATIONAL TALENT SEARCH EXAMINATION (NTSE-2016) STAGE -1 GUJARAT STATE : SAT

Date: 08/11/2015

SOLUTIONS

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

1. Which the smallest number that devises 1512 is the complete the cube?

(1) 5   (2) 6   (3) 7   (4) 9

Ans. *(3)*

Sol. Prime factorization of 1512 is

2	1512
2	756
2	378
3	189
3	63
3	21
7	7
	1

To make 1512 a perfect cube it should be divided by 7.

2. Which number is the inverse of the opposite of $-\dfrac{5}{8}$?

(1) $\dfrac{5}{8}$ (2) $1\dfrac{3}{5}$ (3) $2\dfrac{2}{5}$ (4) $-\dfrac{8}{5}$

Ans. *(2)*

Sol. Opposite of $-\dfrac{5}{8}$ is $\dfrac{5}{8}$, and inverse of $\dfrac{5}{8}$ is $\dfrac{8}{5}$ which can also be written as $1\dfrac{3}{5}$.

3. What is the value of $(a^{10})^3 \div (a^6)^5$?

(1) a   (2) a^2 (3) 1   (4) $\dfrac{1}{a}$

Ans. *(3)*

Sol. $\dfrac{\left(a^{10}\right)^3}{\left(a^6\right)^5} = \dfrac{a^{30}}{a^{30}} = a^{30-30} = a^0 = 1$

4. If $x = x = \sqrt[4]{16} + \sqrt[4]{625}$, then what is x = ?

(1) 7   (2) 29   (3) 12   (4) 5

Ans. *(1)*

Sol. $x = \sqrt[4]{16} + \sqrt[4]{625}$

$x = \sqrt[4]{2^4} + \sqrt[4]{5^4}$

$x = 2 + 5$

$x = 7$

5. What is the coefficient of $(x + y)^4$ in the expansion of x^2y^2 ?

(1) 3   (2) 4   (3) 5   (4) 6

Ans. *(4)*

Sol. Expansion of $(x + y)^4$ is

$$(x + y)^4 = x^4 + 4x^3 y + 6x^2 y^2 + 4xy^3 + y^4$$

Hence co-efficient of $x^2 y^2$ is 6.

6. The proportion of the angles of quadratic is 2: 5: 7: 4. What type of quadratic is that?

(1) Parallelogram (2) Cyclic Quadrilaterals (3) Rhombus (4) Trapezium

Ans. *(2)*

Sol. Let the angles of the quadrilateral ABCD be 2x, 5x, 7x and 4x respectively.

We know that sum of all the angles of a quadrilateral be 360

$$\angle A + \angle B + \angle C + \angle D = 360$$
$$\therefore 2x + 5x + 7x + 4x = 360$$
$$18x = 360$$
$$\Rightarrow x = 20$$
$$\therefore \text{angles are } \angle A = 40, \angle B = 100, \angle C = 140, \angle D = 80$$

Now, since $\angle A + \angle C = 180, \angle B + \angle D = 180$

i.e sum of opposite angles of a quadrilateral is 180, hence it is a cyclic quadrilateral

7. What is the formula for finding the area of an open cylinder with base?

(1) $2\pi rh$ (2) $\pi r^2 h$ (3) $\pi r(24 + r)$ (4) $2\pi r(4 + r)$

Ans. *(No option matching)*

Sol. Misprint in the options. Answer should be $\pi r(2h + r)$, but it is written $\pi r(24 + r)$ in option C

8. The diameter of roller is 1 meter and length is 2.8 meter. If it rolls 100 rounds in the same direction, how many square meter does it press?

(1) 440 sq meter (2) 220 sq meter (3) 880 sq meter (4) 4400 sq meter

Ans. *(3)*

Sol.
$$r = 0.5\,m$$
$$h = 2.8\,m$$

$$\text{C.S.A} = 2\pi rh = 2 \times \frac{22}{7} \times \frac{1}{2} \times \frac{28}{10} = 8.8\,m^2$$

In 100 rounds, it will press $8.8 \times 100 = 880$ square meter.

9. If Universal set $U = \{3,4,5,6,7\}$ $A = \{5,7,8\}$ and $B = \{4,5,8\}$ then what is $A' \cap B'$?

(1) {4,6} (2) {3,6} (3) {3,7} (4) {3,4}

Ans. *(2)*

Sol. $U = \{3,4,5,6,7\}, A = \{5,7,8\}, B = \{4,5,8\}$

$$A' = U - A = \{3,4,6\}$$
$$B' = U - B = \{3,6,7\}$$
$$\therefore A' \cap B' = \{3,6\}$$

10. The printed price of a sari is Rs 2000. If after discount of 10% the profit is 20%. Then what is the net price of the sari?

(1) Rs. 1600 (2) Rs. 1200 (3) Rs. 1500 (4) Rs. 1800

Ans. *(3)*

Sol. Listing Price = 2000, Discount = 10%, Profit = 20 %

$$\text{Discount on List price} = \frac{2000 \times 10}{100} = Rs.200$$

2

S.P = L.P – Discount = 2000 – 200 = Rs. 1800

$$\text{Profit} = \frac{SP - CP}{CP} \times 100$$

$$\therefore 20 = \frac{1800 - CP}{CP} \times 100$$

$$\therefore \frac{CP}{5} = 1800 - CP$$

$$\therefore CP = 9000 - 5 \times CP$$

$$\therefore 6 \times CP = 9000$$

$$\therefore CP = 1500$$

So the net Price of the Sari is Rs.1500

11. The median of 7, 5, 8, x, 12, 17 is 10. Then what is the value of X.

(1) 10   (2) 11   (3) 12   (4) 9

Ans. *(3)*

Sol. The Median of 7, 5, 8, x, 12, 17 is 10

Now arrange them in Ascending Order

$\therefore$ 5, 7, 8, x , 12, 17

Now the number of Observations, n = 6 . So

$$\text{Median} = \frac{\left(\frac{n}{2}\right)^{th} + \left(\frac{n}{2} + 1\right)^{th}}{2} = 10$$

$$\therefore \frac{(3)^{rd} + (4)^{th}}{2} = 10$$

$$\therefore \frac{8 + x}{2} = 10$$

$$\therefore 8 + x = 20$$

$$\therefore x = 12$$

12. 0 of which quadratic polynomial are 4 and 3.

(1) $x^2 + 7x + 12$ (2) $x^2 - 7x + 12$ (3) $x^2 + 7x - 12$ (4) $x^2 - 7x - 12$

Ans. *(2)*

Sol. Zeros are 4 and 3, so factors are (x – 4) and (x – 3)

$\therefore$ Required Quadratic Equation is $(x - 4)(x - 3) = x^2 - 7x + 12$.

13. If $\frac{x}{3} + 7 = 15 - \frac{x}{5}$ then find the solution?

(1) x = 20   (2) x = 15   (3) x = 21   (4) x = 18

Ans. *(2)*

Sol. $\frac{x}{3} + 7 = 15 - \frac{x}{5}$

$$\Rightarrow \frac{x}{3} + \frac{x}{5} = 8$$

$$\Rightarrow \frac{8x}{15} = 8$$

$$\Rightarrow x = 15$$

14. There are 5 red, 2 yellow and 7 shite roses in a flower vase. If a rose is selected randomly, the probability of the selection of white rose ?

(1) $\frac{5}{14}$ (2) $\frac{1}{7}$ (3) $\frac{1}{2}$ (4) 1

3

     Courtesy : NTSE

Ans. *(3)*

Sol. There are 5 Red, 2 Yellow, 7 white Roses in a flower vase.

Probability of Selecting White Roses, $P(W) = \dfrac{7}{14} = \dfrac{1}{2}$

15. If one factor of $27x^3 + 64y^3$ is $(3x+4y)$ what is the second factor?

(1) $(3x - 4y)$ (2) $(3x^2 + 12xy + 4y^2)$ (3) $(9x^2 + 12xy - 16y^2)$ (4) $(9x^2 - 12xy + 16y^2)$

Ans. *(4)*

Sol. $27x^3 + 64y^3$

$(3x)^3 + (4y)^3 = (3x + 4y)(9x^2 - 12xy + 16y^2)$

16. The HCF is $6x^2y^2$ and LCM $36x^3y^3$ of two terms. If one term is $12x^3y^2$ what is the second term?

(1) $18x^2y^2$ (2) $18x^3y^2$ (3) $36x^2y^3$ (4) $36x^3y^2$

Ans. *(No option matching)*

Sol. Option is Missing. $LCM \times HCF = a \times b$, where a is first term and b is second term.

LCM $= 36x^3y^3$, HCF $= 6x^2y^2$, a $= 12x^3y^2$

$LCM \times HCF = a \times b$

$(36x^3y^3) \times (6x^2y^2) = (12x^3y^2) \times b$

$\Rightarrow b = 18x^2y^3$

17. If $p(x) = 2x^3 - 3x^2 + 5x - 4$ is divided by $(x - 2)$, what is remainder?

(1) 12   (2) 8   (3) 10   (4) –10

Ans. *(3)*

Sol. $p(x) = 2x^3 - 3x^2 + 5x - 4$ is divisible by $(x - 2)$

$\therefore$ By Remainder Theorem, remainder is $p(2) = 2(2)^3 - 3(2)^2 + 5(2) - 4 = 16 - 12 + 10 - 4 = 10$

18. Two concentric circles are $\odot(P, 5)$ and $\odot(P, 13)$. The tangents of the small circle is the chord of the big circle. What is the length of it?
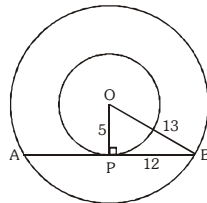
(1) 12   (2) 15   (3) 20   (4) 24

Ans. *(4)*

Sol. OP is the radius of smaller circle and OB is the radius of bigger circle and AB is the tangent to the smaller circle passing through point P.

$OP^2 + PB^2 = OB^2$

$\therefore PB^2 = 13^2 - 5^2$

$\therefore PB = 12$

$\therefore AB = 24$

19. Mother was at age of 30 when the son was born. Now the sum of the age mother and son is 40 years. So after 10 years what is the age of the son?

(1) 5 years   (2) 10 years   (3) 15 years   (4) 20 years

Ans. *(3)*

Sol. Let present age of mother is 30 years.

After x years, the sum of mother and son's age will be 40 years.

i.e mother's age $=$ (30 + x) years and Son's age $=$ x years

$\therefore$ 30 + x + x = 40

$\therefore$ 30 + 2x = 40

$\therefore$ 2x = 10

$\therefore$ x = 5

$\therefore$ After 10 years, Son's age will be, (10+5) = 15 years.

4

20. Which is not the identity true for trigonometric rations?

(1) $\sin^2\theta + \cos^2\theta = 1$　　　(2) $\tan\theta = \text{co} + (90 - \theta)$　　　(3) $\sec^2\theta + \tan^2\theta = 1$　　　(4) $\cos ec^2\theta - \cot^2 = 1$

Ans. (3)

Sol. By going through options incorrect identity is option C and correct identity is $\sec^2\theta - \tan^2\theta = 1$.

21. How many meters is equal to 1 nanometer?

(1) 10^{-9} meter　　　(2) 10^{-10} meter　　　(3) 10^9 meter　　　(4) 10^{10} meter
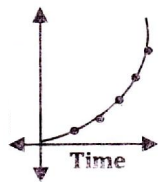
Ans. (1)

Sol. Prefix 'nano' stands for 10^{-9} . Therefore, 1 nanometer = 10^{-9} meter

22. A light ray enters from denser medium to rarer medium. What is the angle of incidence called that has 90° angle of refraction?

(1) angle of refraction　　　(2) critical angle　　　(3) angle of deviation　　　(4) angle of reflection

Ans. (2)

Sol. When angle of incidence equals critical angle, then angle of refraction is 90°.

23.

Which motion does the graph of distance and time shows for accelerated motion?

(1) Non-uniformly accelerated　　　　　　　(2) Constant accelerated

(3) Uniformly accelerated　　　　　　　　(4) Uniformly retarded motion

Ans. (3)

Sol. Distance-time equation for a uniformly accelerated motion is given by

$s = ut + \dfrac{1}{2} at^2$

Nature of distance-time graph for the above equation is parabolic.

Since the graph shown in figure is a parabola, the motion represented by it is a uniformly accelerated motion.

24. Which law of Newton gives the value of force?

(1) First law　　　(2) Second law　　　(3) Third law　　　(4) All

Ans. (2)

Sol. According to Newton's second law of motion,

$\text{Force} = \dfrac{\text{Change in momentum}}{\text{Time}}$

or, Force = Mass × Acceleration

Therefore, Newton's Second law of motion gives the value of force.

25. Due to which motion of light does the Tyndall effect occur?

(1) Incidence　　　(2) Refraction　　　(3) Scattering　　　(4) Distersion

Ans. (3)

Sol. Tyndall effect occurs due to scattering of light in many directions by colloidal particles.

26. The absolute refractive index of any medium is

(1) 1　　　(2) > 1　　　(3) < 1　　　(4) 0

Ans. (2)

Sol. Absolute refractive index of any medium = $\dfrac{\text{Speed of light in vacuum}}{\text{Speed of light in medium}}$

Since speed of light in vacuum is always greater than speed of light in any medium, absolute refractive index of the medium is always greater than 1.

27. Which fundamental particles did Chadwick invent in 1932?

(1) Electron   (2) Proton   (3) Neutron   (4) All the three

Ans. *(3)*

Sol. Chadwick discovered neutron in 1932 for which he was awarded Nobel Prize in Physics in 1935.

28. What is a gaseous fuel used at home called?

(1) L.P.G   (2) C.N.G   (3) P.N.G   (4) All

Ans. *(1)*

Sol. Gaseous fuel used at homes is called L.P.G (Liquefied Petroleum Gas).

29. What is the measuring equipment called that measures the electric current passing through conductors?

(1) Wattmeter   (2) Ammeter   (3) Galvanometer   (4) Voltmeter

Ans. *(2)*

Sol. Ammeter is used to measure electric current flowing through a conductor.

30. What are the names of the two Moons of the Mars?

(1) Titan and Sheron   (2) Titan and Demos   (3) Phobos and Demos   (4) Sheron and Phobos

Ans. *(3)*

Sol. Two Moons of the Mars are known as Phobos and Demos.

31. Earthquake waves are of which type?

(1) Infrasonic   (2) Ultrasonic   (3) Supersonic   (4) Intrasonic

Ans. *(1)*

Sol. Earthquake waves have frequency less than 20 Hz, therefore they are known as infrasonic waves.

32. Which branch of science is associated with the use of X-rays and the Gamma rays for the diagnosis and treatment?

(1) Urology   (2) Radiology   (3)Histology   (4) Pathology

Ans. *(2)*

Sol. Radiology is the branch of science that uses X-rays and Gamma rays for diagnose and treatment of diseases.

33. The initial velocity of the free falling object is _____?

(1) More   (2) Less   (3)Zero   (4) 9.8 m/s

Ans. *(3)*

Sol. The initial velocity of a free falling object is zero as it is released from rest.

34. During a chemical reaction between acid and base, Salt and water are formed. What is the process called?

(1) Neutralization   (2) Corrosion   (3) Hydrolysis   (4) Ionization

Ans. *(1)*

Sol. A chemical reaction of an acid and a base is called a neutralization reaction.

35. Which of the following is a strong acid?

(1) Acitic acid   (2) Cytric acid   (3) Nitric acid   (4) Oxalic acid

Ans. *(3)*

Sol. Only nitric acid (an inorganic acid) completely dissociates in aqueous medium. Rest all are weak acids.

36. Which method is used for concentration of those ores obtained in the Sulphide form?

(1) Magnetic separation   (2) Centrifugation   (3) Froth Flotation Method   (4) Calcination

Ans. *(3)*

Sol. For concentration of sulphide ores Froth flotation method (based on wetting properties) is used.

37. Which of the following pairs is not suitable for organic functional group of the carbonic compound?

    (1) Carboxylic acid - –COOH   (2) Ketone - >C = 0

    (3) Aldehyde - –CHO   (4) Ester - –OH

Ans. *(4)*

Sol. >C = O having compounds are known as carbonic compounds. Except (4) option all are having >C = O group.

38. What is the chemical name of the quick lime?

    (1) Calcium Oxide   (2) Calcium Carbonate   (3) Calcium Hydroxide   (4) Carbon Dioxide

Ans. *(1)*

Sol. Calcium oxide is also known as quick lime.

39. Which of the following is a compound?

    (1) Iron   (2) Air   (3) Washing Soda   (4) Mercury

Ans. *(3)*

Sol. Compound is a substance which is made up of two or more elements in fixed proportion by mass. Here only washing soda is fulfilling the condition.

40. While preparing CO_2 in laboratory, on which of the following substances hydrochloride acid is poured?

    (1) Pieces of Zinc   (2) Pieces of marble

    (3) The particles of Copper Sulphate   (4) Ammonium Chloride

Ans. *(2)*

Sol. When acid reacts with metal carbonates or metal hydrogen carbonates it forms metal salt, Water and CO_2.

41. Which of the following gases is used to show the clouds or artificial smoke in film or drama?

    (1) Carbon Dioxide   (2) Oxygen   (3) Nitrogen   (4) Hydrogen

Ans. *(1)*

Sol. Carbon Dioxide gas is used for artificial smoke or clouds in film or drama. CO_2 stored in compressed cylinders is used in conjunction with theatrical fog machines to produce low lying fog effects.

42. Which of the following relations between mole and mass correct?

    (1) Mass = Weight/Mass   (2) Weight = Mass/Mole

    (3) Mole = Weight/Atomic weight   (4) All of them

Ans. *(3)*

Sol. For calculating mole weight is divided by atomic weight or molecular weight.

43. From which compound are the tablets made that are used for conservation of grain?

    (1) Aluminum Phosphide   (2) Zinc Phosphide

    (3) Manganese Dioxide   (4) Potassium Permanganate

Ans. *(1)*

Sol. Aluminium phosphide is a major constituent of the tablets which are made for conservation of grains.

44. Which are the components of stainless steel?

    (1) Copper, Zinc, Nickle   (2) Iron, Chromium, Nickle

    (3) Iron, Carbon, Tin   (4) Copper, Chromium, Tin

Ans. *(2)*

Sol. Stainless steel (an alloy) is made up of Iron, Carbon, Chromium and Nickle.

45. What is the electronic configuration of Sulphur?

    (1) 2, 6, 8   (2) 2, 4, 8   (3) 2, 8, 6   (4) 2, 6, 4

Ans. *(3)*

Sol. Sulphur = $_{16}S^{32}$; Atomic number is 16 so configuration will be 2, 8, 6.

46. How many atoms are there in a compound of a mole?

(1) 60.22×10^{-23} (2) 602.2×10^{-23} (3) 6.022×10^{23} (4) 6022×10^{23}

Ans. *(3)*

Sol. Question is wrong. As a compound is made up of minimum two different type of atoms so here correct question will be how many molecules are there in a compound of a mole? In that condition correct answer will (3).

47. Which of the following factors does a plant use for process of photosynthesis?

(1) Sunlight   (2) Chlorophyll   (3) CO_2 and H_2O (4) All of them

Ans. *(4)*

Sol. A plant use all factors i.e, Sunlight,Chlorophyll,CO_2 and H_2O for the process of photosynthesis.

48. Which is the longest organ of the digestive system?

(1) Oesophagus   (2) Stomach   (3) Small Intestine   (4) Large Intestine

Ans. *(3)*

Sol. Alimentary canal in human beings is about 9meter long in which small intestine is 6.5 meter long.Hence, Small intestine is the longest organ of Human Digestive system.

49. Which of the following living being has a three chambered heart?

(1) Frog   (2) The Bat   (3) Human   (4) The mouse

Ans. *(1)*

Sol. Frog is an amphibian so, it has a three chambered heart.

50. What is the name of the blood vessels that provide nutrition to the heart wall?

(1) Pulmonary Arteries   (2) Pulmonary Veins   (3) Coronary arteries   (4) Descending arota

Ans. *(3)*

Sol. Coronary Arteries are the blood vessels that provides nutrition to the heart muscles.

51. Which organelle is considered as a suicide bag?

(1) Centrosome   (2) Mesosomes   (3) Lysosomes   (4) Chromosome

Ans. *(3)*

Sol. Lysosomes contain enzymes which destroy the cell by digesting all cell organelles of the cell.

52. Which one of the following pairs is not correct?

(1) The pituitary gland - Adrenalin   (2) Ovary - Estrogen

(3) Pancreas - Insulin   (4) Testis -Testosterone

Ans. *(1)*

Sol. Adrenaline hormone secretes from adrenal glands.

53. Which is the common method of artificial reproduction in plants?

(1) Cutting   (2) Layering   (3) Grafting   (4) All of them

Ans. *(4)*

Sol. All the methods i.e,cutting ,layering and grafting are the common methods of artificial reproduction in plants.

54. With what are the disease like Swine Flu, Dengue and Chikungunya Fever spread?

(1) Bacteria   (2) Virus   (3) Parasites   (4) Fungi

Ans. *(2)*

Sol. Swine Flu, Dengue and Chikungunya are the diseases spread from virus.

55. Living mechanical tissue is :

(1) Parenchyma   (2) Collenchyma   (3) Sclerenchyma   (4) Chlorenchyma

Ans. *(2)*

Sol. Collenchyma contains nucleus and it provides strength to the plants hence a living mechanical tissue .

56. Which plant leaves have a parallel venation?

(1) Peepal leaves   (2) Hibiscus leaves   (3) Banana leaves   (4) Banyan tree

Ans. *(3)*

Sol. Banana is a monocot plant hence have a parallel venation.

57. For which of the following diseases vaccine has not been invented yet?

(1) Jaundice   (2) Cholera   (3) Typhoid   (4) Chikungunya

Ans. *(4)*

Sol. Chikungunya vaccine has not been invented yet.

58. The inner layer of the pharynx of a frog is made of_____Epithelium.

(1) Squamous   (2) Cuboidal   (3) Ciliated   (4) Columnar

Ans. *(3)*

Sol. Inner layer of pharynx of frog is made up of ciliated epithelium cells.

59. Which of the following gases mainly increases global warming?

(1) Carbon monoxide   (2) Nitrous oxide   (3) Carbon dioxide   (4) Sulphur Dioxide

Ans. *(2)*

Sol. Nitrous oxide gas is mainly increases global warming because it is 300 times more powerful than other gases causing global warming.

60. Which of the following is the example of the waste bio-decomposition of living beings?

(1) Vegetable   (2) Glass   (3) Plastic   (4) Metal

Ans. *(1)*

Sol. Vegetable is a Bio degradable component.

61. Which method is used to know the time line of the orchaJological remains?

(1) Dropping method   (2) Carbon dating method   (3) Metric dating method   (4) All of them

Ans. *(2)*

Sol. Carbon dating method is used to know the time line of the archeological remains.

62. With which Governor General's efforts did the teaching of English language begin in India?

(1) Lord Cornwallis   (2) Lord Ripon   (3 Lord Macaulay   (4) Lord Hastings

Ans. *(3)*

Sol. Lord Macaulay

63. Who started the 'DakChouki, Tapal method which means 'GhodesvarSathetapalihalkaro'?

(1) GyasuddinTugluk   (2) AllauddinKhilji   (3) Razia Sultana   (4) Mohd.Tuglak

Ans. *(2)*

Sol. Mohd.Tughlak

64. Which of the following symbols in map indicates Railway?

(1)   (2)   (3)   (4)

Ans. *(2)*

Sol. Symbol of railway

65. Where is the headquarters of the United Nation (UN)?

(1) Rome   (2) Paris   (3) Washington   (4) New York

Ans. *(4)*

Sol. New York - Head quarter of UNO.

66. By which pass of the Himalayas can we easily travel for the pilgrimage of the KM Mansarovar?

(1) The Shipkila Ghat   (2) The Jelapala Ghat   (3) The Nathula Ghat   (4) The Karakoram Ghat

Ans. *(1)*

Sol. ShipkilaGhat

67. Which institution has been formed by Justice MahadevGovindRanade for social reform.

(1) The Brhmosamaj   (2) The PrarthnaSamaj   (3) The AryaSamaj   (4) The Satyashodhaksamaj

Ans. *(2)*

Sol. The PrarthnaSamaj - formed by Justice MahadevGovindRanade

68. Which of the following rivers does not meet the Ganga?

(1) The koshi   (2) The Chambal   (3) The shon   (4) The Gandak

Ans. *(2)*

Sol. The Chambal river does not meet the ganga

69. Whose statue is there in front of the VidhanSabha of Gujarat in sitting posture?

(1) Vitthalbhai Patel   (2) Vallabhbhai Patel   (3) Mahatma Gandhi   (4) Dr. Jivraj Mehta

Ans. *(1)*

Sol. Vitthalbhai Patel statue in front of thevidhansabha of Gujarat in sitting posture

70. Which of the following rivers meets the river Krishna?

(1) The Tungbhadra   (2) The Koyna   (3) The GhatPrahbha   (4) All of them

Ans. *(4)*

Sol. The Tundbhadra, The Koyna, The GhatPradbha All of them meet the river krishna

71. In which states there is "Amravrishti" at the end of the summer and just before the setting of the monsoon?

(1) Tamilnadu and Telangana   (2) Andrapradesh and Tamilnadu

(3) Kerala and Karnataka   (4) Andrapradesh and Telangana

Ans. *(3)*

Sol. Kerala and Karnataka, there is Amravrishti at the end of the summer before the monsoon.

72. By which name is the Bhagirathi Ganga known as after it originates from the Gar goal?

(1) Padma   (2) Jamuna   (3) Meghna   (4) All

Ans. *(1)*

Sol. Padma by this name Bhagirathi ganga known as after it originate from the gangotri.

73. Which country has the largest written contitution?

(1) Britain   (2) France   (3) India   (4) America

Ans. *(3)*

Sol. India has the largest written constitution.

74. What was the name of the inspiring guru of Harihar and Bukkaray that had setup the Hindu Maharajya- Vijayanagar on the shore of Tungbhadra?

(1) AcharyaShilbhadra   (2) Vidyaranya Swami   (3) Swami Ramtirtha   (4) GuruVirjanada Swami

Ans. *(2)*

Sol. Vidyaranya Swami was the name of inspiring guru of Harihar and Bukkaray

75. What is the position of India in the world with reference to area ?

(1) 6th (2) 7th (3) 8th (4) 9th

Ans. *(2)*

Sol. India ranks 7th in the area, in the world

76. Which country is called the land of "Midnight Summer"?

    (1) Sweden   (2) Norway   (3) Spain   (4) Portugal

Ans. *(2)*

Sol. Norway is called the land of midnight sun.

77. Where did Vastupal and Tejpal, the ministers of the RanaVirDhaval of Dhoika, ouiit the Jain temples?

    (1) Delwara (Abu)   (2) Palitana   (3) Gimar   (4) All

Ans. *(1)*

Sol. Delwara (Abu) this jain temple was built by Vastupal and Tejpal the minister of RanaVirdhaval.

78. Which Veda of the Aryas is called the 'Gangotrf of music?

    (1) The Rigveda   (2) The Yajurveda   (3) The Samveda   (4) The Atharveda

Ans. *(3)*

Sol. The Samved the gangotri of music

79. In which state of India was the Panchayati Raj was established first?

    (1) Gujarat   (2) Rajasthan   (3) Maharastra   (4) Madhya Pradesh

Ans. *(2)*

Sol. Rajasthan where the first panchayati raj established

80. Of which Indian classical dance is the plaited green coloured petticoat', kumin, 'silk blouse' and 'belt around the waist' the characterstics?

    (1) Manipuri   (2) Kathak   (3) Bharatnatyam   (4) Kathakali

Ans. *(1)*

Sol. Manipuri Indian classical dance is the plaited green colourpaticot, kumin, silk blouse and belt around the waist the characteristic.

81. Which of the followings is not written by MahakaviKalidas in Sanskrit?

    (1) AbhigyanShakuntalam   (2) Rutusamhar   (3) Kadambari   (4) Kumarsambhava

Ans. *(3)*

Sol. Kadambari was not written by kalidas in sanskrit

82. In which cave is the great piece of the Indina sculpture Kailash temple situated?

    (1) Ajanta   (2) Ellora   (3) Elephanta   (4) Bagh

Ans. *(2)*

Sol. Ellora - Kailsah temple is situated here.

83. Which of the following is not our neighbor country?

    (1) Nepal   (2) Bhutan   (3) Iran   (4) Srilanka

Ans. *(3)*

Sol. Iran is not our neighboring country.

84. Which is the highest postion in the Indian Army?

    (1) Field Marshall   (2) Admiral   (3) Air chief Marshal   (4) Lt. General

Ans. *(1)*

Sol. Field Marshal the highest position in the Indian army after President.

85. Which is the state of India that has the largest area?

    (1) Uttar Pradesh   (2) Maharastra   (3) Rajasthan   (4) Madhya Pradesh

Ans. *(3)*

Sol. Rajasthan is the largest stateof India, according to area.

86. What amount of the nation income of India is obtained from agriculture?

(1) 65%   (2) 26%   (3) 62%   (4) 22%

Ans. *(2)*

Sol. 26% of National Income comes from agriculture.

87. Who was the first speaker of the loksabha in India?

(1) NeelamSanjeev Reddy   (2) Ganesh VasudevMavlankar

(3) Mirakumari   (4) SumitraMahajan

Ans. *(2)*

Sol. Ganesh VasudevMavlankar was the first speaker of loksabha in India.

88. Of which religion is the Tripitika the holy book belong?

(1) Jain   (2) Hindu   (3) Buddha   (4) Islam

Ans. *(3)*

Sol. Tripitaka is the holy book of Buddha

89. What is 'Mahabhinishkramana'?

(1) The renunciation of Mahavir   (2) The renunciation of Buddha

(3) The Sankaracharya became sanyasi   (4) The renunciation of Guru Nanak

Ans. *(2)*

Sol. The renunciation of Buddha is the mahabhinishkramana

90. Which Indian state has been given special right in our constitution?

(1) Kerala   (2) Assam   (3) Nagaland   (4) Jammu Kashmir

Ans. *(4)*

Sol. Jammu and Kashmir has been given special right in our constitution

91. Which right is not enlisted in the list of fundamental rights?

(1) Right to Protection against exploitation   (2) Right to liberty

(3) Right to property   (4) Right to education and culture

Ans. *(3)*

Sol. Right to property is not listed in the fundamental rights.

92. What is the duration (Time limit) for the member of the Rajyasabha?

(1) 4 yrs   (2) 5 yrs   (3) 6 yrs   (4) 10 yrs

Ans. *(3)*

Sol. Rajyasabha membership is for 6 years

93. Who was the first chairman of the Indian constitution assembly?

(1) Jawaharlal Nehru   (2) Dr. B.R. Ambedkar

(3) Dr. Rajendra Prasad   (4) Dr. SarvapalliRadha Krishnan

Ans. *(3)*

Sol. Dr. Rajendra Prasad was the first chairman of the Constitution Assembly

94. The river Tsangpo flows through Tibet, in which state does it enter after taking 'U' turn from 'NamchaBarva'?

(1) Assam   (2) Arunachal Pradesh   (3) Meghalaya   (4) Nagaland

Ans. *(2)*

Sol. Arunachal Pradesh - TheTsangpo river taking u turn and enter in India from NamchaBarva in this state

Courtesy : NTSE

95. The 16th October is observed as 'Mourning day' which occurance is the reason of it?

(1) The Jaliyawala Bag Massacre　　　　　(2) Bang Bhang

(3) The dandikuch　　　　　　　　　　　(4) All of them

Ans. **(2)**

Sol. Bang Bhang after this 16th October is observed as the mourning day.

96. How many are the factors of production?

(1) 3　　　　　　(2) 4　　　　　　(3) 2　　　　　　(4) 5

Ans. **(2)**

Sol. There are 4 factors of the production.

97. The concept of human development number was accepted by _____.

(1) WHO　　　　(2) UNO　　　　(3) UNDP　　　　(4) UNICEF

Ans. **(3)**

Sol. UNDP accepted the concept of human development.

98. Which year was declared as 'The international Women's year' by the UNO?

(1) 1975　　　　(2) 2002　　　　(3) 1990　　　　(4) 2001

Ans. **(2)**

Sol. 2002 was declared as International women's year by the UNO

99. The Indian standard time line passes from the city, which is that?

(1) Aurangabad　　　(2) Lucknow　　　(3) Allahabad　　　(4) Hydarabad

Ans. **(3)**

Sol. Allahabad is the city from where IST line pass

100. In which state is the KanchanJanghapark situated?

(1) Manipur　　　(2) Sikkim　　　(3) Nagaland　　　(4) Arunachal Pradesh

Ans. **(2)**

Sol. Sikkim is the state whereKanchanjangha parkis situated.