## Home Assignment

for SSC \& Railways Aspirants

1. On the orders of Aurangzeb, which Sikh Guru was arrested and sentenced to death?
A. Guru Tegh Bahadur
B. Guru Ram Das
C. Guru Har Krishan
D. Guru Amar Das

Ans. A
Sol. • Guru Tegh Bahadur was the ninth of ten Gurus of the Sikh religion.

- He was popularly known as Hind-diChadar.
- In 1675, Aurangzeb ordered the arrest and execution of the ninth Sikh Guru, Guru Tegh Bahadur.
- He was executed on $\mathbf{1 1}^{\text {th }}$ November 1675 in public in Chandni Chowk, Delhi. - The martyrdom of Guru Tegh Bahadur is remembered as
the Shaheedi Divas of Guru Tegh
Bahadur every year
on 24 ${ }^{\text {th }}$ November.

2. Which session of the congress was presided over by Mahatma Gandhi?
A. Allahabad
B. Guwahati
C. Belgaum
D. Surat

Ans. C
Sol. The Indian National Congress held its $39^{\text {th }}$ session
at Belgaum, Karnataka on the $26^{\text {th }} \&$ $27^{\text {th }}$ December 1924.

- Mahatma Gandhi was the president of the Congress only on one occasion and the session was held in Belgaum.

3. Where is Mughal garden located?
A. Shimla
B. Madhya Pradesh
C. Delhi
D. Uttar Pradesh

Ans. C
Sol.

- The Mughal garden is situated at the complex of the Rashtrapati Bhavan in Central Delhi.
- It spans over an area of 13 acres.
- It was designed in the British and

Mughal style divided into three sections to form a circular shape, a rectangular shape and a long shape.

- Multi level terraces are seen decorated with beds of various species of plants, shrubs, trees and flowers like Sweet Williams, Marigold, Roses, Bougainvillea
and many more.

4. Tarapur Atomic Power Station is situated in which state of India?
A. Tamilanadu
B. Karnataka
C. Maharashtra
D. Madhya Pradesh

Ans. C
Sol.

- Tarapur Atomic Power Station
(T.A.P.S.) is located
in Tarapur, Maharashtra.
- It was the first commercial nuclear power station built in India.
- On $8^{\text {th }}$ May 1964, a contract between the governments of India and the United States was signed for the construction of TAPS.
- Its construction began
in October 1964.
- Its both the Unit-1 and Unit-2 BWRs commenced commercial operations on $28^{\text {th }}$ October 1969.

5. What is the minimum age required to be the President of India?
A. 25
B. 35
C. 45
D. 65

Ans. B
Sol.

- Article 52 provides the office of the President of India.
- Under Article 58, a person to be eligible for election as President should fulfill the following qualifications.
- He should be a citizen of India. He should have completed 35 years of age. - He should be qualified for election as a member of the Lok Sabha.
- He should not hold any office of profit under the Union Government or any State Government or any local authority or any other public authority.

6. What did Albert Einstein win a nobel prize for?
A. His discovery of the law of the photoelectric effect
B. Theory of relativity
C. For his experiment with gamma rays
D. None of the above

Ans. A
Sol.

## * Albert Einstein won noble prize in 1921 for discovery law of photoelectric effect.

* The photoelectric effect is the emission of electrons or other free carriers when light hits a material.

7. What is symbol for tin?
A. T
B. Pb
C. Sn
D. Ti

Ans. C
Sol.

* $\mathbf{S n}$ is symbol for Tin.
* The atomic number of tin is 50.
* It is a soft, malleable, ductile and highly crystalline silvery-white metal.

8. Present ages of $A$ and $B$ are in ratio 8:15 respectively. 8 years ago their ages were in ratio $6: 13$. What is the ratio of their ages 8 years from now?
A. 9:16
B. $9: 17$
C. $10: 17$
D. $13: 17$

Ans. C
Sol. Let the present ages be $8 x$ and $15 x$.
8 years ago
$\frac{8 x-8}{15 x-8}=\frac{6}{13}$
Thus $x=4$
8 years hence ratio $=(32+8) /(60+8)=$ $40 / 68=10: 17$
9. If a 10 digit number $962987 x 7 y 2$, where $x$ and $y$ are single digit integer, is divisible by 72 , then find the value of $3 x-y$ for the maximum possible value of X.
A. 8
B. 19
C. 3
D. 13

Ans. B
Sol. For divisibility by 72 we have to check divisibility by 8 and 9 separately For the number to be divisible by 8 last three digits must be divisible by 8
$7 y 2$ is divisible by 8 for the values of $y=$ 1, 5, 9
For the number to be divisible by 9 sum of all the digits must be divisible by 9 So, $9+6+2+9+8+7+x+7+y$ $+2=50+x+y$ must be divisible by 9 For $y=1, x=3$
For $y=5, x=8$
For $y=9, x=4$

Therefore maximum possible value of $x$ $=8$ for the corresponding value of $y=5$ $3 x-y=24-5=19$
10. A quadrilateral $A B C D$ is drawn. Inside it a circle is drawn touching $A B$ at $P, B C$ at $Q, D C$ at $R$ and $A D$ at
S. If $B P=4 ; Q C=6 ; D R=3$ and $A S=$
2. Find the perimeter of the quadrilateral.
A. 30
B. 28
C. 12
D. 34

Ans. A
Sol.
The given figure is as follows:


Since tangents drawn from the same point on a circle are equal in length, so $A P=A S=2 ; B Q=B P=4$
$\mathrm{RC}=\mathrm{QC}=6$ and $\mathrm{DS}=\mathrm{DR}=3$
So perimeter of $A B C D=2(2+4+6+3)=$ 30
11. Direction: Following data shows the percentage distribution of students in six different universities and percentage distribution of boys and girls in each university. Study the data carefully and answer the questions that follows.

| Universities | $\%$ of students | $\%$ of boys | $\%$ of girls |
| :--- | :--- | :--- | :--- |
| A | 12 | 55 | 45 |
| B | 15 | 60 | 40 |
| C | 8 | 40 | 70 |
| D | 28 | 75 | 25 |
| E | 17 | 20 | 80 |
| F | 20 | 64 | 36 |

Average number of students in all the universities is:
A. 750 B. 680
C. 435 D. Data inadequate

Ans. D
Sol. Average $=\frac{\text { Total no.of students }}{6}$
As we have no information about
number of students, we cannot find the average number of students in all the universities.
12. $\frac{\left(4 \frac{2}{9}-\frac{1}{2}\right) 39}{3 \frac{1}{9}+1 \frac{1}{9}} \div \frac{62}{3+\frac{1}{3+\frac{1}{5-\frac{1}{5}}}}$ what will be its value?
A. $3 \frac{11}{15}$ B. $4 \frac{13}{16}$
C. $5 \frac{21}{38}$
D. $3 \frac{10}{19}$
E. None of the above

Ans. D
Sol. $\frac{67}{38} * \frac{62}{19} * \frac{38}{62}=\frac{67}{19}=3^{\frac{10}{19}}$
13. The curved surface area and the volume of a cylinder are $264 \mathrm{~cm}^{2}$ and 924 $\mathrm{cm}^{3}$ respectively. Find the ratio of its radius and height.
A. 7:6
B. $11: 7$
C. 9:7
D. 13:11

Ans. A
Sol.
2пrh $=264$ and $\pi r^{2} h=924$
Dividing both $2 / r=2 / 7$ or $r=7$
2mrh = 264
From here $\mathrm{h}=6$
Thus ratio $=7: 6$
14. In the following question, select the odd number from the given alternatives.
A. 54
B. 164
C. 99
D. 117

Ans. B
Sol. All the numbers except for option B are divisible by 9 .
Hence, option $B$ is the correct response.
15. The ratio of present ages of Ratna and Shantanu is $5: 4$. After 19 years the ratio of their ages will be 10:9. What is Ratna's present age?
A. 19
B. 15
C. 9
D. 72

Ans. A
Sol. Present age = 5:4
And ratio of age after 19 years= 10:9
Here the difference between the ratio of
respective age is $10-5=5$ and $9-4=5$
It means 5 represent $=19$
So ratna present age $=19$ years
16. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
57, 62, 31, 36, ?
A. 18 B. 20
C. 22
D. 24

Ans. A
Sol. The series will be,
$57+5=62$
$62 / 2=31$
$31+5=36$
$36 / 2=18$
Hence, option A is the correct answer.
17. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
2, 7, 17, 32, ?
A. 52 B. 50
C. 54 D. 60

Ans. A
Sol. The series will be,
2+5-7
7+10-17
$17+15-32$
$32+20-52$
Hence, option A is the correct answer.
18.A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
$K, M, O$, ? S, U
A. P
B. T
C. V
D. Q

Sol. The series will be,
K+2-M
$\mathrm{M}+2-\mathrm{O}$
$\mathrm{O}+2-\mathbf{Q}$
$\mathbf{Q}+2-\mathrm{S}$
S+2-U
Hence, option D is the correct answer.
19. If PAINTER is written as SCLPWGU, then WRITER is written as -
A. ZTVLTH
B. ZTLVHT
C. ZTLVTH
D. ZTLTHV

Ans. B

Sol. As,
$P+3->S$
A $+2->C$
I $+3->L$
$N+2->P$
$\mathrm{T}+3->\mathrm{W}$
$\mathrm{E}+2->\mathrm{G}$
$R+3->U$
Similarly,
W+3->Z
$\mathrm{R}+2->\mathrm{T}$
$\mathrm{I}+3->\mathrm{L}$
$\mathrm{T}+2->\mathrm{V}$
$\mathrm{E}+3->\mathrm{H}$
R+2->T
Hence, option $B$ is the correct response.
20. If $A U$ is coded as 21 , EGG is coded as 245 , then BAKE will be coded as?
A. 190 B. 200
C. 110 D. 210

Ans. C
Sol. AU
place value of A-1 and U-21
product of the place values of the letters
$=21 \times 1=21$
EGG
place value of E-5, G-7
product of the place values of the letters
$=5 \times 7 \times 7=245$
Similarly for BAKE,
place value of $\mathrm{B}-2, \mathrm{~A}-1, \mathrm{~K}-11, \mathrm{E}-5$
product of the place values of the letters
$=2 \times 1 \times 11 \times 5=110$
Hence, option C is the correct response.
21. Arrange the following words in a meaningful sequence.

1) Reader
2) Write
3) Publish
4) Author
5) Sale
A. 12345
B. 21345
C. 24531
D. 24351

Ans. D
Sol. The meaningful order will be,
2. Write
4. Author
3. Publish
5. Sale

1. Reader

Hence, option D is the correct response.
22. Identify the diagram that best represents the relationship among the given classes.
Wheat, mustard, cabbage
A.

B.

C.

D.


Ans. B
Sol. All the entities given in the question are different from each other. Hence, option B best represents the relationship among the given classes.
23. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".
Picasso (was a great painter and a great) sculptor of his time.
A. was a great painter and great
B. were a great painter and sculptor
C. was the great painter and a sculptor
D. No improvement

Ans. A
Sol.
Option A is the correct replacement for "was a great painter and a great". Here,
"Picasso" is a single person thus, two different articles will not be used for painter and sculptor as these are two qualities of a single person.
24. In the following question, out of the five alternatives, select the word opposite in meaning to the given word. Mammoth
A. Colossal
B. Gargantuan
C. Prodigious
D. Miniature

Ans. D
Sol. Mammoth = very huge, enormous, of gigantic size or importance.
Colossal = extremely large.
Gargantuan = enormous, huge.
Prodigious = remarkably or impressively great in extent, size, or degree.

Miniature = very small of its kind. Hence, option D is correct.
25. In the following question, a sentence has been given in Active/Passive Voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive/Active Voice. They have published all the details of the invention.
A. All the details of the invention have been published by them.
B. The publication of the details of invention was done by them.
C. All the details have been invented by the publishers.
D. All the details have been details by them.
Ans. A
Sol. The given sentence is of present perfect tense and it is in active form.
The structures for active/passive voices are:
Active: Subject + has/have + verb (IIIrd form) + object...
Passive: Object + has/have + been + verb (IIIrd form) + by + subject...
So, the passive voice of the given sentence would be:
All the details of the invention have been published by them.
26. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.
A. Privilage
B. Privilege
C. Previlege
D. Previlage

Ans. B
Sol. Option B has the correctly spelt word. 'Privilege' means a special right, advantage, or immunity granted or available only to a particular person or group.
27. In the following question, out of the four alternatives, select the alternative which is the best substitute for the phrase.
One who loves books
A. Bibliophobe
B. Bibliophile
C. Bibliographer
D. Bibliophagist

Ans. B

Sol. Bibliophobe $=$ a person who hates, fears, or distrusts books
Bibliophile $=$ a person who collects or has a great love of books.
Bibliographer $=$ a person who describes and lists books and other publications, with particular attention to such characteristics as authorship, publication date, edition, typography, etc.
Bibliophagist $=$ a person who is a bookeater means who reads all the time
28. In the following question, a set of labelled sentences is given. Out of the four alternatives, select the most logical order of the sentences to form a coherent paragraph.
P) These same technologies are enabling people's sense of entitlement more than ever before.
Q) The benefits of Internet and social media are unquestionably fantastic.
R) For the same reason, this is the best time to be alive.
S) But perhaps these have some unintended social side effects.
A. QRSP
B. QSRP
C. SRQP
D. PRSQ

Ans. A
Sol. Sentence $P$ states 'these same technologies' which means that the technologies in consideration need to be introduced before P. Moreover, it has a negative context; hence it needs to have a similar context before it or something which brings out a contrast. Sentence Q is the opening sentence since it introduces the central theme i.e. Internet and social media though with a positive context. Next sentence should be $R$ as it seems to be in line with the previous sentence Q. Sentence $S$ should be the next one as it adds contrast here. $P$ becomes the last statement concluding the paragraph. Thus, the correct sequence is QRSP.
29. In the following question, out of the four alternatives, select the alternative which is the best substitute for the given phrase.
An imaginary name assumed by an author for disguise
A. Facsimile
B. Surname
C. Alias
D. Pseudonym

Ans. D
Sol. Facsimile $=$ a copy of something Surname $=$ the name that you share with other members of your family; last name
Alias $=$ a false name used to conceal one's identity; an assumed name Pseudonym = a fictitious name used by an author to conceal his or her identity Thus, option D is the correct answer.
30. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option.

If the sentence is free from error, select 'No error'.
I have tell you once and again that you must not read such trash.
A. I have tell you
B. No error
C. must not read such trash.
D. once and again that you

Ans. A
Sol. The use of auxiliary verb "have" indicates that the sentence is of present perfect tense. In such sentences, third form of main verb is used. Thus, the correct verb form is "told" and not "tell".

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