## Home Assignment

## Home Assignment for SSC \& Railway Aspirant

1. Silent Valley National Park is in which biosphere reserve?
A. Great Nicobar
B. Nanda Devi
C. Nilgiri
D. Dihang-Dibang

Ans. C
Sol. • Silent Valley National Park is in Kerala. It is in Nilgiri Biosphere Reserve and River Kunthi passes through it.

- Major Fauna found here are- lion-tailed macaque, tiger, gaur, leopard, wild boar, panther, Indian Civet and Sambhar.

2. Who was the first female Bharat Ratan Awardee?
A. Sarojini Naidu
B. Mother Teresa
C. Indira Gandhi
D. M. S. Subbulakshmi

Ans. C
Sol. • Indira Gandhi was the first female to be awarded Bharat Ratna in 1971.

- Mother Teresa became second female to get Bharat Ratan in 1980.
- Indira Gandhi served as Prime Minister of India from 1966-1977 and from 1980 to 1984, she became second longest serving Prime Minister of country.

3. Which part of the Constitution is related to the emergency provisions?
A. Part XX
B. Part XVIII
C. Part XVI
D. Part XXII

Ans. B
Sol. Article 352 to 360 in Part XVIII of the Constitution deals with the Emergency provisions.

- These provisions are borrowed from the Weimer Constitution of Germany.
- The Constitution stipulates following three types of emergencies.

1) Article 352- National Emergency
2) Article 356- Emergency in state (President's Rule)
3) Article 360- Financial Emergency
4. The official language of the Union is described in which article of the Indian Constitution?
A. Article 315
B. Article 343
C. Article 351
D. Article 345

Ans. B
Sol. • Article 343 of the Constitution states "The Official Language of the Union shall be Hindi in Devanagari script."

- Unless Parliament decided otherwise, the use of English for official purposes was to cease 15 years after the constitution came into effect, i.e. on 26 January 1965.
- Article 345 of the Constitution deals with Official language or languages of a state. It empowers state legislature to adopt 'any one or more of the languages in use in the State or Hindi as the language or languages to be used for all or any of the official purposes' of the concerned State.

5. Acid rain mainly contains oxides of which elements?
A. Sulphur and Nitrogen
B. Phosphorous and Argon
C. Carbon and Fluorine
D. Antimony and Mercury

Ans. A

## Sol. - The Acid rain mainly contains the oxides of Sulphur and Nitrogen.

- The oxides of nitrogen and sulphur are blown away by the wind along with the dust particles. They settle on the earth's surface after coming down in the form of precipitation. - Acid rain has ph near 5.5 and is toxic to human health, Environment and Heritage monuments and buildings.
- Taj Mahal is largely affected by acid rain. It make the marble colour dull and also decreased it's strength.
- Robert Angus Smith was the first to show the relationship between acid rain and atmospheric pollution in Manchester, England in 1852.

6. Which number will replace the question mark (?) in the following series? $14,18,32,50$, ?
A. 82
B. 99
C. 59
D. 86

Ans. A
Sol.
Logic is-
$14+18=32$
$18+32=50$
$32+50=82$
Hence, the correct answer is option A.
7. Select the combination of letters that when sequentially placed in the gaps of the given abba_babb_bbab_abba_ba_b
A. aaabb
B. babaa
C. baaab
D. babbb

Ans. D
Sol.
Logic- abbabb is repeated 4 times.
abbabb/abbabb/abbabb/abbabb
Hence, the correct answer is option D.
8.The sequence of folding a piece of square paper and the manner in which the folded paper has been cut is shown in the figures $X, Y$ and $Z$. How would this paper look when unfolded?
A.



Ans. D
Sol.
As it is punched in a book-folding manner and then again it gets punched. So, when we open it up there will be figure as shown in option (D).

Hence, option (D) is correct.
9. In a certain code language, SCHOLARSHIP is written as QSKETBVNLVT, then in the same code language, PERSONALITY will be written as?
A. TWUGQOEYMOC
B. TWQGUOEYMOC
C. TWUGQOMYEOC
D. TWUGQOEYCOM

Ans. A
Sol.


Hence, the correct answer is option A.
10.Pointing to a man Pallavi said, "he is married with my cousin's mother Natasha. How is Natasha related to Pallavi?
A. Aunty
B. Sister-in-law
C. Mother
D. Mother-in-law

Ans. A
Sol.
Family tree can be draw as given below-


From the above diagram, its clear that Natasha is the aunt of Pallavi. Hence, the correct answer is option A.
11.A manufacturer fixes his selling price at $27 \%$ over the cost of production. If cost of production goes up by $17 \%$ and manufacturer raises his price by $12 \%$, his percentage profit is -
A. $33 \frac{15}{37} \%$
B. $31 \%$
C. $27 \frac{13}{35} \%$
D. $21 \frac{5}{9} \%$

Ans. D
Sol.
Let cost of production of article $=$ Rs. 100
$\therefore \mathrm{S} . \mathrm{P}=$ Rs. 127
New cost of production = Rs. 117
$\therefore \mathrm{S} . \mathrm{P}=\frac{127 \times 112}{100}=$ Rs. 142.24
$\therefore$ Profit $\%=\left(\frac{142.24-117}{117}\right) \times 100$
$=\frac{25.24 \times 100}{117}$
$=\frac{2524}{117}=21 \frac{5}{9} \%$
Hence, option D is correct.
12. A and B together can do a job in 8 days. B and C can finish the same job in 80/9 days. A started the work and worked for 4 days. B and C continued for 8 days. Then the difference of days in which C and A can complete the job is -
A. 46
B. 32
C. 20
D. 40

Ans. D
Sol.
$(A+B)^{\prime}$ s 1 day's work $^{\prime}=\frac{1}{8}$

$(B+C)$ 's 1 day's work $=\frac{9}{80}$
Let A alone do the work in x days.
According to the question,
$\frac{4}{x}+\frac{8 \times 9}{80}=1$
$\Rightarrow \frac{4}{x}=1-\frac{9}{10}=\frac{1}{10}$
$\Rightarrow \mathrm{x}=40$ days
$\therefore \mathrm{B}^{\prime}$ s 1 day's work $=\frac{1}{8}-\frac{1}{40}=\frac{5-1}{40}=\frac{4}{40}=\frac{1}{10}$
$C^{\prime}$ s 1 day's work $=\frac{9}{80}-\frac{1}{10}=\frac{9-8}{80}=\frac{1}{80}$
$\therefore$ time taken by $\mathrm{C}=80$ days
$\therefore$ required difference $=80-40=40$ days
Option D is correct.
13. What is the value of $x$ so that the seven-digit number $91876 x 2$ is divisible by 72 ?
A. 7
B. 5
C. 3
D. 2

Ans. C
Sol. Given that the seven-digit number $91876 \times 2$ is divisible by 72 .
Factors of $72=9 \times 8$
So, the above given number must be divisible by 72 .
If we apply divisibility rule of 9 here, then resultant of $9+1+8+7+6+x+2$ must be divisible by 9 .
Resultant $=33+x$
To make $33+X$ divisible by $9, X=3$.
Hence, the digit is 3 .
Hence, option C is the correct answer.
14.In a circle with centre $O, A B$ is a diameter and $C D$ is a chord such that $A B C D$ is a trapezium. If $\angle B A C=28^{\circ}$, then $\angle C A D$ is equal to:
A. $62^{\circ}$
B. $34^{\circ}$
C. $28^{\circ}$
D. $32^{\circ}$

Ans. B
Sol. Given $\angle B A C=28^{\circ}$
We know that alternate angles of two parallel lines are equal.
$\angle B A C=\angle D C A=28^{\circ}$
In triangle $A B C, \angle B C A=90^{\circ}$
$\angle B A C+\angle A B C+\angle B C A=180^{\circ}$
$28^{\circ}+\angle A B C+90^{\circ}=180^{\circ}$
$\angle A B C=62^{\circ}$


In triangle ACD,
$\angle C A D+\angle A D C+\angle D C A=180^{\circ}$
$\angle C A D+118^{\circ}+28^{\circ}=180^{\circ}$
$\angle C A D=34^{\circ}$
Hence, option B is the correct answer.
15.If $(a+b)=6$ and $a b=8$, then $\left(a^{3}+b^{3}\right)$ is equal to:
A. 108
B. 72
C. 216
D. 144

Ans. B
Sol. Given $(a+b)=6$ and $a b=8$
$(a+b)^{3}=a^{3}+b^{3}+3 a b(a+b)$
$a^{3}+b^{3}=6^{3}-3 \times 8 \times 6$
$a^{3}+b^{3}=216-144$
$a^{3}+b^{3}=72$
Hence, option B is the correct answer.

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