Quiz Date: 2 ${ }^{\text {nd }}$ June 2020
Directions (1-5): In the following series find the term which is placed incorrectly.
Q1. $0, \quad 4, \quad 19, \quad 48, \quad 100,180,294$
(a) 19
(b) 100
(c) 294
(d) 48
(e) 180

Q2. 1, 2, 7, 34, 202, 1420
(a) 7
(b) 34
(c) 202
(d) 2
(e) 1

Q3. 823, 724, 647, 592, 559, 549
(a) 549
(b) 647
(c) 559
(d) 592
(e) 724

Q4. 1, $4, \quad 11, \quad 34, \quad 102, \quad 304,911$
(a) 11
(b) 911
(c) 102
(d) 34
(e) 304

Q5. 5, 8, 20, 42, 124, 246, 736
(a) 20
(b) 124
(c) 8
(d) 42
(e) 736

Directions (6-10): Study the following Pie Chart carefully and answer the questions given below.
Cost estimated by a family in renovation of its house.


Q6. During the process of renovation, the family actually incurs miscellaneous expenditure of Rs. 20,400. The actual miscellaneous expenditure incurred by the family is what percent of the total estimated cost?
(a) $9.5 \%$
(b) $9 \%$
(c) $8.5 \%$
(d) $10.5 \%$
(e) $6.5 \%$


Q7. Other than getting the discount of $12 \%$ on the estimated cost of furniture and the actual miscellaneous expenditure of Rs. 20,400 instead of the estimated, the family's estimated cost is correct. What is the total actual expenditure of the family in renovation of its house (In Rs.)?
(a) $2,37,456$
(b) $2,31,852$
(c) 2,39,000
(d) $2,33,000$
(e) $3,22,500$

Q8. What is the difference in the amount estimated by the family on Interior Decoration and Architect Fees (In Rs.)?
(a) 20,000
(b) 19,000
(c) 14,400
(d) 18,000
(e) 19,200

Q9. What is the cost estimated by the family on Painting and Flooring together (In Rs.)?
(a) 73,000
(b) 69,600
(c) 72,000
(d) 69,000
(e) 71,000

Q10. The family gets a discount on Furniture and pays $12 \%$ less than the estimated cost on Furniture. What is the amount spent on furniture (In Rs.)?
(a) 26,400
(b) 29,052
(c) 27,052
(d) 27,456
(e) 25,652

Directions (11-15): Given below is the table showing income, expenditure and profit percentage of company A from 2011-2016.

|  | Income | Expenditure | Profit\% |
| :--- | :--- | :--- | :--- |
| 2011 | 103.824 | - | $12 \%$ |
| 2012 | - | 83.8 | $25 \%$ |
| 2013 | 95.76 | 84 | - |
| 2014 | 113.28 | - | $20 \%$ |
| 2015 | 133.1 | 110 | - |
| 2016 | 121.6 | - | - |

NOTE: (i) Income and expenditure are in million rupees and
(ii) Percentage increase in profit percent in year 2016 in comparison to previous year is 33 $1 / 3 \%$.

Q11. Find the expenditure of the company in 2016.
(a) 94 million
(b) 95 million
(c) 99 million
(d) 81 million
(e) 78 million

Q12. Expenditure in 2014 is what percent more or less than the expenditure in 2011 ? (round off to 2 decimal places)
(a) $1.22 \%$ more
(b) $1.69 \%$ less
(c) $1.83 \%$ more
(d) $1.45 \%$ less
(e) None of these

Q13. What is average expenditure of the company from year 2012 to 2016 ?
(a) 93.44 million
(b) 92.88 million
(c) 93.98 million
(d) 94.88 million
(e) 82.88 million


Q14. Find the approximate profit percent of company till 2014 by taking total expenditure and total income till the end of 2014 together.
(a) $20 \%$
(b) $12 \%$
(c) $16 \%$
(d) $14 \%$
(e) $18 \%$

Q15. If expenditure was increased by $20 \%$ in year 2011 in comparison to previous year, and profit percentage in the previous year was $25 \%$ less than the profit percentage in 2011 then find the income in 2010.
(a) 83.202 million
(b) 85.6211 million
(c) 81.243 million
(d) 84.2025 million
(e) None of these

## Solutions

S1. Ans.(a)
Sol.
$1^{3}-1^{2}=0$
$2^{3}-2^{2}=4$
$3^{3}-3^{2}=18$
$4^{3}-4^{2}=48$
$5^{3}-5^{2}=100$
And so on..

S2. Ans.(c)
Sol.
Series is
$1 \times 3-1=2$
$2 \times 4-1=7$
$7 \times 5-1=34$
$34 \times 6-1=203$

S3. Ans.(a)
Sol.
Series is
$823-99=724$
$724-77=647$
$647-55=592$
$592-33=559$
$559-11=548$

S4. Ans.(c)
Sol.
$1 \times 3+1=4$
$4 \times 3-1=11$
$11 \times 3+1=34$
$34 \times 3-1=101 \ldots$

S5. Ans.(a)
Sol.
Series is $\times 2-2, \times 3-2, \times 2-2, \times 3-2 \ldots$

S6. Ans.(c)
Sol.
Required percentage $=\frac{20400}{240000} \times 100=8.5 \%$

S7. Ans. (a)
Sol.
Estimated miscellaneous cost $=8 \%$ of $240000=$ Rs 19200
Total expenditure of family $=240000-19200+20400-12 \%$ of $13 \%$ of $240000=$ Rs 2,37,456

S8. Ans. (e)
Sol.
Required difference $=(19-11) \%$ of $240000=$ Rs 19200

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S9. Ans.(b)
Sol.
Requires cost $=(15+14) \%$ of $240000=$ Rs 69600
S10. Ans.(d)
Sol.
Amount spent on furniture $=(100-12) \%$ of $13 \%$ of $240000=$ Rs 27456
S11. Ans.(b)
Sol.
Profit in $2015=\frac{23.1 \times 100}{110}=21 \%$
In 2016, P \% = $\frac{21 \times 400}{3 \times 100}=28 \%$
So, expenditure $=\frac{121.6 \times 100}{128}=95$ million

S12. Ans.(c)
Sol.

Expenditure in $2014=\frac{113.28 \times 100}{120}=94.4$ million
Expenditure in $2011=\frac{103.824 \times 100}{112}=92.7$ million
Required answer $=\frac{94.4-92.7}{92.7} \times 100=1.83 \%$ more

S13. Ans.(a)
Sol.
Required average
$=\frac{83.8+84+94.4+110+95}{5}=93.44$ million

S14. Ans.(e)
Sol.
Total income
$=103.824+95.76+113.28+83.8 \times \frac{125}{100}=417.614$ million
Total expenditure
$=92.7+83.8+84+94.4=354.9$ million
Profit $\%=\frac{417.614-354.90}{354.90} \times 100=17.67 \%$

## S15. Ans.(d)

Sol.
Expenditure in $2011=92.7$ million
So, Expenditure in $2010=\frac{92.7 \times 100}{120}=77.25$ million


Profit \% in $2010=\frac{12 \times 75}{100}=9 \%$
Income $=\frac{77.25 \times 109}{100}=84.2025$ million

