## Quiz Date: 2 ${ }^{\text {nd }}$ April 2020

Directions (1-5): Given below is the percentage of workers in 5 different companies and the ratio of males to females in un-educated and educated category. Study the table carefully and answer the following questions:
Note- There are only un-educated and educated workers in each company.

| Comp <br> anies | \% Un-educated <br> workers | M : F <br> (Un- <br> educated) | M:F <br> (Educated) |
| :--- | :--- | :--- | :--- |
| A | 35 | $5: 6$ | $6: 7$ |
| B | 25 | $3: 5$ | $4: 5$ |
| C | 24 | $1: 2$ | $2: 3$ |
| D | 20 | $3: 2$ | $4: 3$ |
| E | 15 | $5: 3$ | $3: 2$ |

Q1. If no. of un-educated female workers of company D is 2000 and total no. of workers of company C is $20 \%$ less than that of D , then find the total no. of educated workers in company C?
(a) 18 thousand
(b) 15.2 thousand
(c) 25 thousand
(d) 22 thousand
(e) 18.5 thousand

Q2. If educated male in company $D$ and $A$ are in ratio $4: 3$, Then no. of workers of company D is what percent of that of $A$ ?
(a) $86.75 \%$
(b) $89.25 \%$
(c) $97.25 \%$
(d) $87.5 \%$
(e) $77.5 \%$

Q3. If there are 2.4 thousand educated males in company B and 4 thousand un-educated females in company D then, find ratio of no. of workers in company B to the no. of workers in company D ?
(a) $18: 125$
(b) $18: 121$
(c) $36: 25$
(d) $9: 121$
(e) $125: 18$

Q4. What is approximate no. of un-educated female workers of company E, if total educated females in that company is 1 thousand? (in thousand)
(a) 2.20
(b) 1.13
(c) 1.26
(d) 0.17
(e) 0.98

Q5. If no. of workers in companies A and C is 6 and 8 thousand respectively, then un-educated female workers of company C is what percent less/more than educated male workers of company A? (rounded off to two decimal places)
(a) $26.13 \%$
(b) 27.74\%
(c) $28.89 \%$
(d) $27.25 \%$
(e) $31.50 \%$

Directions (6-10): In the following number series one of the numbers is wrong. Find out the wrong one, put it in place of (A) and form a new series based on the same pattern as given in question and find the number that should come in place of (E).

Q6. $1 \quad 9 \quad 20 \quad 89 \quad 441 \quad 2649 \quad 18541$
A B C D E F
(a) 2652
(b) 2721
(c) 2521
(d) 2665
(e) 2865

Q7. $1 \begin{array}{lllllll}1 & 2 & 8 & 28 & 232 & 3728\end{array}$
A B $\quad$ C $\quad$ D $\quad$ E $\quad$ F
(a) 50
(b) 254
(c) 126
(d) 154
(e) 56


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Q8. $10 \begin{array}{lllllll}11 & 20 & 46 & 110 & 235 & 451\end{array}$
$\begin{array}{llllll}A & B & C & D & F\end{array}$
(a) 120
(b) 230
(c) 312
(d) 187
(e) 124

Q9. $3 \quad 5 \quad 14 \quad 50 \quad 200 \quad 1010 \quad 6072$
A B C D E
(a) 1313
(b) 1328
(c) 2319
(d) 876
(e) 1423

Q10. $64 \quad 32 \quad 36 \quad 48 \quad 96 \quad 240 \quad 720$
A B
(a) 55
(b) 88
(c) 82
(d) 54
(e) 58

Directions (11-15): The following table shows number of students who applied for the various posts for UPSSSC from six different cities of UP having different qualifications. Study the table carefully and answer the questions that follow.
Note: In table some data are missing. Find the missing data first if it is required in any question and then proceed.

| Qualifications | No. of students from various states |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Barabanki | Allahabad | Meerut | Ghazipur | Jhansi | Aligarh |
| $10^{\text {th }}$ | - | 25,000 | 8,500 | - | 7,200 | 8,400 |
| $12^{\text {th }}$ | 12,500 | - | 10,000 | - | - | 9,200 |
| $10^{\text {th }}+$ Diploma | 16,400 | 42,000 | - | 10,500 | 9,600 | - |
| $12^{\text {th }}+$ Diploma | 24,000 | 54,600 | 16,400 | 12,000 | 12,400 | - |
| Degree | 32,100 | 72,500 | 24,600 | 16,500 | 14,400 | 12,400 |

Note: No. of students having different qualifications is independent from each-other Don't treat any student may have more than one qualification unless it is not mentioned in questions.

Q11. If only $10^{\text {th }}$ pass students are eligible for group-D exam, then total number of students who applied for group-D exam from Barabanki is what percent of total number of students who have qualification of degree from Meerut and Jhansi together? It is given that total number of students from Barabanki who applied for various posts in UPSSC is 95,500 and $10^{\text {th }}$ pass only applied for group D from given city.
(a) $13 \frac{12}{13} \%$
(b) $26 \frac{12}{13} \%$
(c) $24 \frac{12}{13} \%$
(d) $22 \frac{12}{13} \%$
(e) $23 \%$

Q12. If only degree holders are eligible for Revenue Inspector post, then find the average number of students who have applied for revenue inspector post from all the cities together.
(a) 26,750
(b) 28,450
(c) 27,850
(d) 28,750
(e) 27,580

Q13. According to UPSSSC, only those candidates who have qualification of both (12th + Diploma) qualification can apply for the post of Junior Engineer then find the total number of students who has applied for the post of JE from all the cities together. It is given that the number of students who have (12th + Diploma) qualification from Aligarh is $45 \%$ of number of students from Barabanki having same qualification.
(a) 90,400
(b) 87,500
(c) 95,400
(d) Can't be determined
(e) $1,30,200$

Q14. If number of students having ( $10^{\text {th }}+$ Diploma) qualification from Meerut is $25 \%$ more than that from Aligarh having same qualification, then total number of students having ( $10^{\text {th }}$ + Diploma) from these two states is what percent of total number of students having ( $10^{\text {th }}+$ Diploma) from all the six cities together? It is given that total number of students from Aligarh having ( $10^{\text {th }}+$ Diploma) qualification is 10,000
(a) $28 \frac{22}{101} \%$
(b) $22 \frac{28}{101} \%$
(c) $26 \frac{28}{101} \%$
(d) $22 \frac{38}{101} \%$
(e) $28 \frac{38}{101} \%$

Q15. If total number of students having $12^{\text {th }}$ qualification from Allahabad is $100 \%$ more than that from Ghazipur and Jhansi together having same qualification, then what is the total number of students having $12^{\text {th }}$ qualification from Allahabad. It is given that the ratio of number of students from Ghazipur and Jhansi having $12^{\text {th }}$ qualification is $8: 7$ and total number of students having $12^{\text {th }}$ qualification from all the cities is 85,700 .
(a) 36,000
(b) 45,000
(c) 24,000
(d) 54,000
(e) 32,000


## Solutions

S1. Ans.(b)
Sol.
Un-educated female workers of company $\mathrm{D}=2000$
Then total un-educated $=2000+3000=5000$
So, total workers of company D $=5000 \times \frac{100}{20}=25$ thousand
$\Rightarrow$ no. of workers of company $C=25 \times \frac{80}{100}=20$ thousand
$\therefore$ Educated workers in company $C=20 \times \frac{76}{100}=15.2$ thousand
S2. Ans.(d)
Sol.
Let educated males in $\mathrm{D}=4$ thousand
Then total educated $=4+3=7$ thousand

$\therefore$ Total workers (D) $=\frac{7 \times 5}{4}=8.75$ thousand
And educated males $(\mathrm{A})=3$ thousand
Then total educated $=\frac{3}{6} \times 13=6.5$ thousand
So, total workers $(A)=\frac{6.5 \times 100}{65}=10$ thousand
Required answer $=\frac{8.75 \times 100}{10}=87.5 \%$
S3. Ans.(a)
Sol.
Educated male in $\mathrm{B}=2.4$ thousand
Total educated $=\frac{2.4}{4} \times 9=5.4$ thousand
Total no. of workers $=\frac{5.4 \times 4}{3}=7.2$ thousand
Un-educated female in $D=4$ thousand
Total un-educated $=(3+2) \times 2=10$ thousand
$\Rightarrow$ total no. of workers $=10 \times 5=50$ thousand

Required ratio $=7.2: 50=18: 125$
S4. Ans.(d)
Sol.
Total female in E (educated) = 1 thousand
$\therefore$ Total educated $=\frac{5}{2}=2.5$ thousand
$\therefore$ Total no. of un-educated in $\mathrm{E}=\frac{2.5}{85} \times 15$
$\therefore$ Required answer $=\frac{2.5}{85} \times 15 \times \frac{3}{8} \approx 0.17$ thousand (approx.)
S5. Ans.(c)
Sol.
Total no. of un-educated female in company $C=8 \times \frac{24}{100} \times \frac{2}{3}=1.28$ thousand
Educated male workers of company $A=6 \times \frac{65}{100} \times \frac{6}{13}=1.80$ thousand
Required answer $=\frac{1.8-1.28}{1.8} \times 100=28.89 \%$ (less)
S6. Ans. (b)
Sol.
The given pattern is

$$
\times 2+7 \times 3-6 \times 4+5 \times 5-4 \times 6+3 \times 7-2
$$

So, wrong number $=20$
New series will be
$20 \times 2+7=47$
$47 \times 3-6=135$
$135 \times 4+5=545$
$545 \times 5-4=2721$
So, $\mathrm{E}=2721$


S7. Ans. (e)
Sol.
The given pattern is

$$
\times 0.5+0.5, \quad \times 1+1, \quad \times 2+2, \quad \times 4+4, \quad \times 8+8, \quad \times 16+16
$$

So, wrong number $=8$
So, new series will be
$8 \times 0.5+0.5=4.5$
$4.5 \times 1+1=5.5$
$5.5 \times 2+2=13$
$13 \times 4+4=56$
So, $\mathrm{E}=56$

S8. Ans. (a)
Sol.
The given pattern is

$$
+1^{3},+2^{3},+3^{3},+4^{3},+5^{3},+6^{3}
$$

So, wrong number is 20
New series will be
$20+1=21$
$21+8=29$
$29+27=56$
56+64=120
So, $\mathrm{E}=120$

S9. Ans. (b)
Sol.
The given pattern is

$$
\times 1+2 \times 2+4 \times 3+6 \times 4+8 \times 5+10 \times 6+12
$$

So, wrong number $=50$
The new series will be
$50 \times 1+2=52$
$52 \times 2+4=108$
$108 \times 3+6=330$
$330 \times 4+8=1328$
So, $\mathrm{E}=1328$


S10. Ans. (d)
Sol.
The given pattern is
$\times \frac{1}{2} \times 1 \times \frac{3}{2} \times 2 \times \frac{5}{2} \times 3$
So, wrong number $=36$
$36 \times \frac{1}{2}=18$
$18 \times 1=18$
$18 \times \frac{3}{2}=27$
$27 \times 2=54$
So, $\mathrm{E}=54$

S11. Ans.(b)
Sol.
No. of students from Barabanki having $10^{\text {th }}$ qualification
$=95,500-(12,500+16,400+24,000+32,100)$
$=10,500$
$\therefore$ Required percentage $=\frac{10,500}{24,600+14,400} \times 100$
$=\frac{10500}{390}=\frac{350}{13}=26 \frac{12}{13} \%$
S12. Ans.(d)
Sol.
Required average number of students
$=\frac{1}{6} \times(32,100+72,500+24,600+16,500+14,400+12,400)$
$=\frac{1}{6} \times 1,72,500$
$=28,750$
S13. Ans.(e)
Sol.

$$
=24000+54600+16400+12000+12400+45 \% \text { of } 24000
$$

$$
=130200
$$

S14. Ans.(b)
Sol.
No. of students from Meerut and Aligarh together having (10 th + ITI) qualification
$=10000+\frac{5}{4} \times 10,000$
$=22,500$
Total students from all the six states together having ( $10^{\text {th }}+$ ITI) qualification
$=16,400+42,000+12,500+10,500+9,600+10,000$
$=1,01,000$
$\therefore$ Required percentage $=\frac{22,500}{1,01,000} \times 100$
$=22 \frac{28}{101} \%$
S15. Ans.(a)
Sol.
Let no. of students from Gujrat and Jhansi having $12^{\text {th }}$ qualification is 8 x and 7 x respectively.
$\therefore 8 \mathrm{x}+7 \mathrm{x}+\frac{200}{100} \times(8 \mathrm{x}+7 \mathrm{x})+12,500+10,000+9,200=85,700$
$\Rightarrow \mathrm{x}=1,200$
$\therefore$ Required answer $=1200 \times 30=36,000$

