

# Rank Improvement Batch.

## Machine WB Answer Key:

### DC Machine

- 1 - c  
 2 - a  
 3 - c  
 4 - c  
 5 - b  
 6 - b  
 7 - d  
 8 - a  
 9 - 13.98 - 2  
 10 - a  
 11 - d  
 12 - d  
 13 - b  
 14 - b  
 15 - c  
 16 - c  
 17 - c  
 18 - 285.50 AT/pole  
 19 - a  
 20 - a  
 21 - 209.4  
 22 - 219.6  
 23 - a  
 24 - b  
 25 - d  
 26 - b  
 27 - 1028  
 28 - a  
 29 - 404  
 30 - 0.297 Tesla

### Transformer

- 31 - a  
 32 - a  
 33 - 1037 rpm  
 34 - d  
 35 - a  
 36 - c  
 37 - a  
 38 - 235.66 V  
 39 - 30°  
 40 - a  
 41 - c  
 42 - d  
 43 - b  
 44 - 95.98%  
 45 - 17.88 A  
 46 - b  
 47 - b  
 48 - a, b, c  
 49 - 635.259 kVA  
 50 - a, b, d  
 51 -  
 52 - 2600 W  
 53 - 3.7%  
 54 - c  
 55 - 0.813  
 56 - b  
 57 - a  
 58 - d  
 59 - c  
 60 - 2600 W  
 61 -  
 62 - c  
 63 - 96.77%  
 64 - 333.33 rpm

Transformer -  $65 \rightarrow 67.9 A$   
 $66 - 75.59 A$   
 $67 - 7.52\%$

68 - a  
69 - a

### Induction:-

1 - c	31 - 2.0625 kW
2 - c	32 - 0.3
3 - c	33 - 53.33 %
4 - c	34 - 92.89 Nm
5 - a	35 - c
6 - 0.21	36 - 12.12 A
7 - 432.9	37 - 21.09 A
8 - b	38 - 156.09 $\mu F$
9 - d	39 -
10 - a	40 - 840 rpm
11 - a, c, d	41 - 0.1206 $\Omega$
12 - a, b, c	42 - a
13 - b, c	43 - 497.5 W
14 - a, b, c	44 - c
15 - a	45 - 29.49 kW
16 - d	46 - 0.03
17 - d	47 - 0.09 $\Omega$ /ph
18 - u.p.f.	48 - a
19 - d	49 - d
20 - 47.77	50 - 0.335
21 - 180	51 -
22 - 0.176952	52 -
23 - 1:2:5	53 - (-1)
24 - b	54 - b
25 - 382.16 N-m	
26 - b	
27 - 22.04 HP	
28 - a	
29 - c	
30 - 39.42 Nm	

### Synchronous

1 - a	31 - d
2 - b	32 - b
3 - 61.12°	33 - d
4 - b	34 - 2083.33
5 - 1000 V	35 -
6 - d	36 - a
7 - b	37 - 5302.54
8 - a	38 - a
9 - a	39 - 16.667
10 - b	40 - a
11 - a	41 - b
12 - c	42 - 8.857 $\Omega$
13 - b	
14 -	43 - a
15 - b	44 - b
16 -	45 - 394.66
17 -	46 - b
18 - d	47 - d
19 - b	48 - d
20 -	49 - 7161.64
21 - 13.1 %	27.31
22 - 21.14 %	<del>50 - 187</del>
23 - a	<del>51 - c</del>
24 - c	
25 - b	
26 - 29.28 MW	
27 - 0.925	
28 - b	
29 - a	
30 - c	