

MODEL QUESTION

BRANCH-ELECTRICAL ENGINEERING

SUBJECT-ELECTRICAL ENGINEERING DRAWING, 4th SEM)

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या कुन्देन्दुतुषारहारधवला
या शुभ्रवस्त्रावृता
या वीणावरदण्डमण्डितकरा
या श्वेतपद्मासना ।
या ब्रह्माच्युतशंकरप्रभृतिभिर्देवैः सदा वन्दिता
सा मां पातु सरस्वती भगवती निःशेषजाड्यापहा ॥

1. Draw Single bus-bar arrangement (single generator).

2. Draw a diagram of two numbers of stay used with the dead end of an over-head distribution pole including foundation of the pole and label the various parts of the arrangement.
3. Draw a diagram of a double pole structure with lightning arresters, used at dead end of an over head H.T. line.
4. Draw a diagram of a double pole structure showing the use of jumpers.
5. Develop a simple lap winding for a dc machine having 32 armature conductors, and 4 poles. Also show the equalizer ring.
6. Develop a simple wave winding for a dc machine having 34 armature conductors and 4 poles.
7. Develop a simple wave winding for 4 pole dc machine having 42 armature conductors. (Retrogressive winding).
8. Draw the following views of a 3-phase, 250 kva 11kv/400 v transformer.
 - a. Front elevation full in section
 - b. Plan full in section

Core-

- | | | | |
|------|---|---|-------------|
| i. | Cross section of the core | = | 3 step core |
| ii. | Dia of the circum circle | | =24 cm |
| iii. | Distance between the adjacent Centres of core | | =42.5 cm |

Yoke

- | | | | |
|----|-------------|---|-------|
| i. | Yoke height | = | 25 cm |
|----|-------------|---|-------|

L.T. Winding

- | | | | |
|------|---------------------------|---|-----------|
| i. | out side dia of LT coil | = | 28.3 cm |
| ii. | inside dia of LT coil | | =25 cm |
| iii. | Height of LT winding | | = 43.5 cm |
| iv. | Number of turns per phase | | =12 |

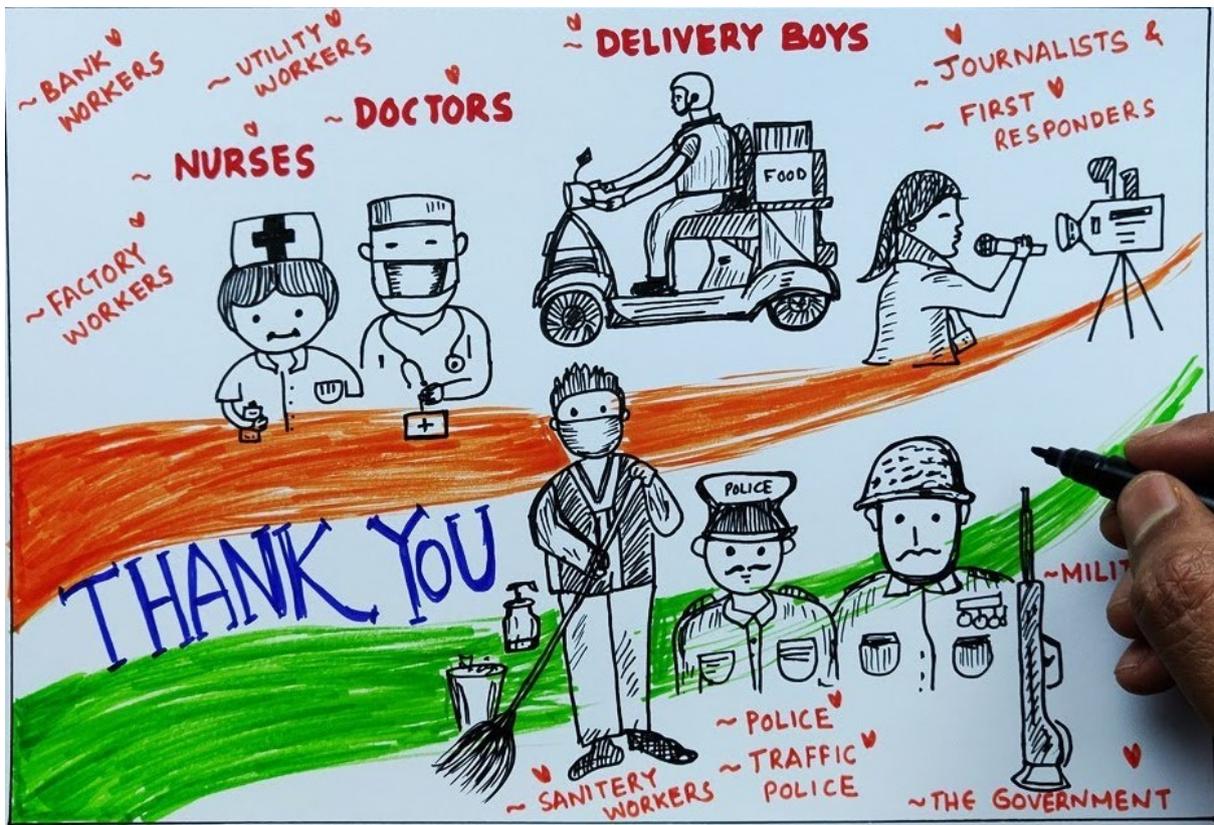
HT Winding

- | | | | |
|------|---------------------------|---|----------|
| i. | out side dia of HT coil | = | 41.5 cm |
| ii. | inside dia of HT coil | | =34.3 cm |
| iii. | Height of HT winding | | =43.5 cm |
| iv. | Number of turns per phase | | = 572 |

Total height of the transformer = 100 cm

Other missing data may be assumed.

9. Draw the diagram of an autotransformer starter.
10. Draw the diagram of a star delta starter with over load protection and no volt coil.
11. Draw a 3-point starter.
12. Draw a 4-point starter.
13. Draw a dol starter.
14. Draw a neat sketch of atypical "plate earthing" and give standard dimensions.
15. Draw a neat sketch of a typical pipe earthing and give standard dimensions.
16. Draw the single line diagram of a 11kv/400 v substation.
17. Draw the single line diagram of a 33/11 kv substation.



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