BTS-VI(SS)-08.18-1287 Reg.No. | | | | | | | | |

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B.Tech. Degree VI Semester Special Supplementary Examination
August 2018

EE 604 ELECTRICAL DRAWING
(2006 Scheme)

Time : 3 Hours Maximum Marks : 100

(4 × 25 = 100)

I. Draw the winding diagram of a 4 pole DC machine with 16 slots.(use progressive lap, 25% equalized with 2 conductors/slot) (25)

OR

II. Draw the half sectional end elevation of a DC generator with following details (missing data may be assumed suitably). (25)

Number of poles	:	4
External diameter of armature stamping	:	43 cm
Internal diameter of armature stamping	:	20 cm
Number of slots	:	18
Size of slot	:	30 mm ×15 mm
Main pole	:	18 cm × 10 cm
Inter pole	:	4 cm × 10 cm
Thickness of Yoke	:	5 cm
Shaft diameter at coupling	:	6 cm

III. Draw the full sectional elevation and plan for a single phase core type 5 KVA transformer. (25)

Cross section of the core	:	One step
Diameter of circumscribing circle	:	90 mm
Distance between core centers	:	200 mm
Height of Yoke	:	100 mm
Outside diameter of LT coil	:	120 mm
Inside diameter of LT coil	:	100 mm
Outside diameter of HT coil	:	160 mm
Inside diameter of HT coil	:	140 mm
Height of HT winding	:	250 mm
Total height of transformer	:	450 mm

OR

(P.T.O.)

IV. Draw the half sectional end view of an 8 HP squirrel cage induction motor with the following dimensions. (25)

(i)	Inside diameter of stator	:	19 cm
(ii)	Stator slot size	:	1 cm ×3 cm
(iii)	No. of slots	:	32
(iv)	Outside diameter of stator	:	33 cm
(v)	Air gap Length	:	0.08 cm.

Rotor has 36 slots and 1.2 cm diameter in size.
Diameter of shaft of rotor = 2.6 cm
Other missing data may be assumed.

V. Draw the winding diagram of 4 pole 36 slot 3 phase mush connected armature. (25)

OR

VI. Develop a single layer concentric un-bifurcated winding diagram of a 3phase 36 slots and 6 pole with 2 plane overhang. (25)

VII. Draw the structural details of a 220 kV double circuit transmission tower. (25)

OR

VIII. Draw the single line layout of a typical 66 kV substation. (25)

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