

Code No: R1621012

R16**SET - 1**

II B. Tech I Semester Supplementary Examinations, May - 2018
BASIC ELECTRICAL AND ELECTRONICS ENGINEERING
(Com to CE & PE)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**
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PART -A

1. a) When 10Ω , 15Ω are connected in parallel and this resultant is connected in series with 50Ω then evaluate total equivalent resistance. (3M)
- b) Calculate the generated e.m.f of an 4 pole wave wound generator having 65 slots with 12 conductors per slot when driven at 1200 r.p.m. and the flux per pole is 0.02 Weber. (3M)
- c) Why Iron losses present in a transformer (2M)
- d) Define slip? (2M)
- e) What is the function of OP-AMP? (2M)
- f) What is NPN junction transistor? (2M)

PART -B

2. a) Discuss briefly about resistance, inductance and capacitance parameters. (7M)
- b) Discuss about delta-star transformation for resistive network (7M)
3. a) Explain the t Swinburn's test to predetermine the efficiency of a given motor (7M)
- b) Explain the flux control method used in the speed control of dc motor (7M)
4. a) Explain constructional features of transformer and explain its principle of operation (7M)
- b) A 2000/200V, 20 kVA transformers has 66 turns in the secondary. Calculate primary and secondary currents. Neglect the losses. (7M)
5. a) Explain the principle of operation of inductor motor (7M)
- b) Explain in detail about synchronous impedance method to determine regulation an alternator (7M)
6. a) Explain operation of a diode with its characteristics (7M)
- b) What is amplifier and discuss any two applications of OP-AMP. (7M)
7. a) Explain clearly how a transistor works as an amplifier. (7M)
- b) Discuss in detail about feedback amplifier. (7M)