

Reg. No. ...

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Name :

Combined First and Second Semester B.Tech. Degree Examination, May 2007
BASIC ELECTRONICS ENGINEERING
(2003 Scheme)

Time: 3 Hours

Max. Marks : 100

PART - A

(Answer **all** questions. **Each** question carries 4 marks.)

1. How are carbon film resistors colour coded ? Give colour band of $8.2\Omega \pm 5\%$ resistors.
2. Define depletion region. How is it formed ? What is the relationship between the width depletion region and doping ?
3. Draw the Drain and transfer characteristics and symbol of a n-channel FET.
4. Define bandwidth of an amplifier. Draw the frequency response of a RC coupled amplifier.
5. How ICs are classified according to the number of components used ? How NAND gates can be used to realise OR gates ?
6. What are the selection criteria of a transducer ? What is a loud speaker ?
7. Draw the block schematic of a power supply.
8. What is an operating system ? Explain its need and list few operating system.
9. Briefly explain the principle of cable TV.
10. List the advantages of optical fibres and its few applications.

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PART – B

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(Answer any two questions from each Module. Each question carries 10 marks)

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Module – 1

(2003 Scheme)

11. a) With necessary diagram explain the construction, working, rating and application of electrolytic capacitors.
- b) Briefly describe any one type of variable capacitors.
12. a) Explain the VI characteristics of zener diode.
- b) Explain the breakdown mechanism of diode.
13. Briefly describe how NPN transistor work as an amplifier. Compare the 3 different transistor configurations.

Module – 2

14. a) With necessary diagram explain the working of a bridge rectifier.
- b) Compare the different rectifiers.
15. Explain the working of a single ended class A power amplifier. Differentiate class A, class B, class A B power amplifiers.
16. Draw the constructional details of a carbon microphone. Explain the working and list few advantages.

Module – 3

17. Draw the block schematic of superheterodyne receiver. Explain its working.
18. Explain the basic principles of colour PAL TV system. List the colour TV standards.
19. Explain with a block schematic, typical satellite communication link. How it differs from microwave link ?

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