

TUMKUR UNIVERSITY, TUMKUR
B.A /B.Com/ B.Sc/ BCA Telugu Language
Syllabi

Telugu Bhasha Patya Pranalika

I Semester

Prachina Sahityam

1. Damayantee Swayamvaram - Nannayya, Srimadhaandra Mahabharatam, Aaranyaparvam,
2. Chirutondanambi Bhakthi - Srinadhudu, Haravilasam, Dwiteeyaswasam
3. Subhadra Parinayam - Chemakura Venkatakavi, Vijayavilasam, Truteeyaswasam
4. Vyakaranam - Savarnadeerga Sandhi, Guna Sandhi, Yanadesa Sandhi,
Dirukthatakaradesa Sandi, Trika Sandhi,
GasadadhavaadesaSandhi

Gadyabhagam

1. Andhurula Sangeekaacaaraalu - Kandavalli Lakshmiranjanam
2. Bharatamlo Karnudu - R.S.Sudarshanam
3. Janapada Itihayam
4. Tirupati Venkatakavula Avadhana Vidya – Veluri Sivaramasastry

II Semester

Adhunika Kavityam

1. Desabhakthi - Gurajada
2. Tapala Bantrothu - Tilak
3. Desacaritralu - Sri Sri
4. Sisuvu - Jashuva

Adhunika Kathalu

1. Oo puvvupuusindi - Chalam
2. Gali – Vana - Palagumii Padmaraju
3. Mamidi Chettu - Ravisasthy
4. Mamakaaram - Tripuraneni Gopichandh

Prof.M.Ramanatham Naidu
Chairman,
Board of Studies in Telugu,
Tumkur University, Tumkur

TUMKUR UNIVERSITY, TUMKUR

B.A /B.Com/ B.Sc/ BCA Telugu Language

Syllabi

తెలుగు భాషా పాఠ్య ప్రణాళిక

మొదటి సెమిస్టర్

ప్రాచీన సాహిత్యం

1. దమయంతీ స్వయంవరం - నన్నయ, శ్రీమదాంధ్రమహాభారతం, అరణ్యపర్వం
2. చిరుతొండనంబి భక్తి - శ్రీనాథుడు, హరవిలాసం, ద్వితీయాశ్వాసం
3. సుభద్ర పరిణయం - చేమకూర వేంకటకవి, విజయవిలాసం, తృతీయాశ్వాసం
4. వ్యాకరణం : - సవర్ణదీర్ఘసంధి గుణసంధి, యణాదేశసంధి, ద్వీరుక్తటకారదేశ సంధి, త్రికసంధి, గసడదవాదేశసంధి

గద్యభాగం

1. ఆంధ్రుల సాంఘికాచారాలు - ఖండవల్లి లక్ష్మీరంజనం
2. భారతంలో కర్ణుడు - ఆర్. యస్. సుదర్శనం
3. జానపద ఐతిహ్యం -
4. తిరుపతి వేంకటకవుల అవధాన విద్య - వేలూరి శివరామశాస్త్రి

రెండవ సెమిస్టర్

ఆధునిక కవిత్వం

1. దేశభక్తి - గురజాడ
2. తపాలా బంట్లోతు - తిలక్
3. దేశచరిత్రలు - శ్రీశ్రీ
4. శిశువు - జాషువా

ఆధునిక కథలు

1. ఓ పువ్వుపూసింది - చలం
2. గాలి - వాన - పాలగుమ్మి పద్మరాజు
3. మామిడిచెట్టు - రా.వి. శాస్త్రి
4. మమకారం - త్రిపురనేని గోపీచంద్

అచార్య ఎం.రామనాథం నాయుడు
అధ్యక్షులు, తెలుగు పాఠ్య ప్రణాళిక సంఘం
తుమకూరు విశ్వవిద్యాలయం, తుమకూరు.

FIRST SEM B.Sc. DEGREE EXAMINATIONS
SUBJECT: ELECTRONICS (CORE)
PAPER – 1: ELECTRONICS DEVICES AND CIRCUITS
(NEP SYLLABUS)
MODEL QUESTION PAPER (1)

Max. marks: 60

Time: 2 hrs

PART A

Answer any five questions. Each question carries 6 marks

5X 6 = 30

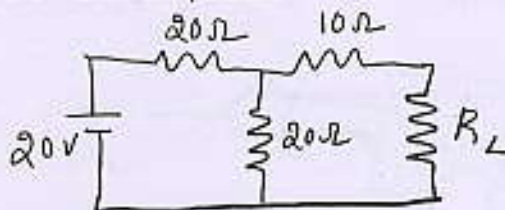
1. a) State Thevenin's theorem. Write the procedure to Thevenise a resistive T-network.
b) What are acceptor and rejecter circuits. (4+2)
2. a) With neat diagram, explain the working of Bridge rectifier.
b) Draw VI characteristics of PN junction diode. (4+2)
3. a) Draw the block diagram of Power supply and explain each block.
b) Write a note on 78XX. (4+2)
4. a) Define α and β of a transistor. Deduce the relation between them.
b) Draw the output characteristics of transistors in CE configuration and mention the regions of operation. (4+2)
5. a) With circuit diagram, explain the working of CE amplifier.
b) Mention the conduction angles for class A and class B amplifier. (4+2)
6. a) Explain the construction and working of Schottky diode.
b) Draw the characteristics of Tunnel diode and indicate various regions. (4+2)
7. a) State and prove De Morgan's theorems.
b) What is Excess-3 code. (4+2)
8. a) Prove that NAND is a universal gate.
b) Prove that $(A+B)(A+C) = A + BC$ (4+2)

PART B

Answer any four questions each carries 5 mark

4X 5 = 20

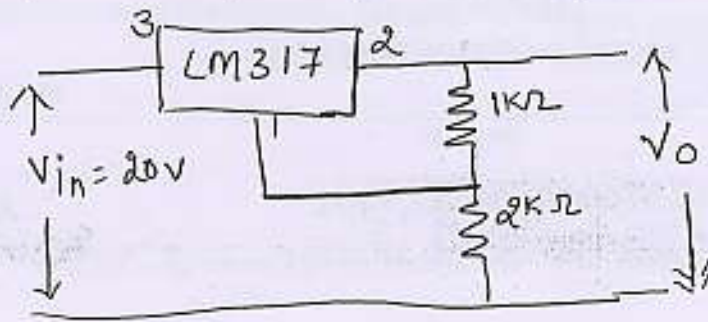
9. In the circuit given below, find the value of R_L for which maximum power is delivered and also find the maximum power.



10. a) An AC supply of 210V /50Hz is applied to a half wave rectifier through a transformer of turns ratio 7:1. Assuming the ideal diode and load resistance to be 820Ω, calculate

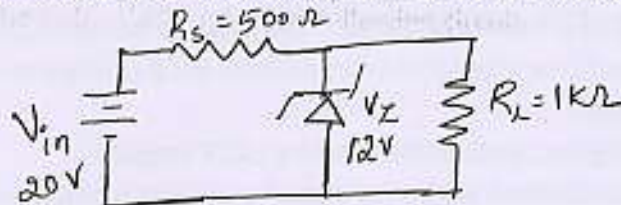
i) output dc voltage ii) output frequency.

b) What is the output voltage in the following circuit.

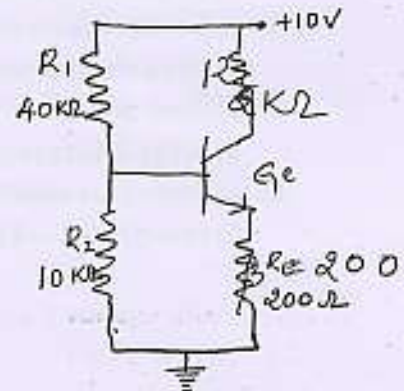


(3+2)

11. In a Zener diode shunt regulator, determine (i) load voltage (ii) voltage drop across R_s (iii) current through Zener diode. Given $V_{in} = 20V$, $R_s = 500\Omega$, $V_z = 12V$ and $R_L = 1K\Omega$



12. For the given circuit, locate Q point on the DC load line.



13. a) A transistor used in CE mode has the following parameters. $h_{ie} = 2K\Omega$, $h_{fe} = 200$, $h_{re} = 6 \times 10^{-4}$, $h_{oe} = 8 \times 10^{-5}$ and $R_L = 8K\Omega$. Calculate the current gain.

b) Find the expression for Y.



(3+2)

14. a) Add the numbers $(FA6)_{16}$ and $(9AC)_{16}$

b) Subtract $(4FC)_{16}$ from $(87F)_{16}$ using 2's complement method.

PART C

Answer any five sub questions each carries 2 mark

5X 2 = 10

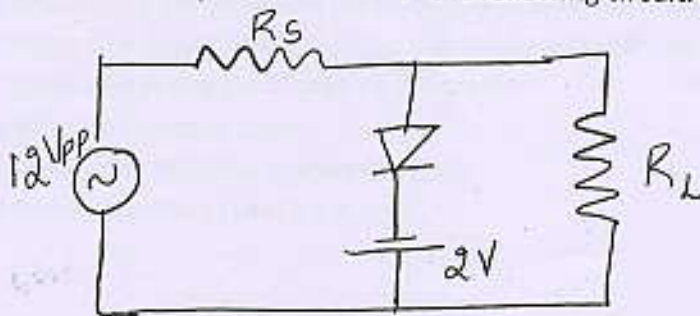
15. a) Find the Value of resistor for following colour code:

- (i) Brown Black RED Silver
 (ii) Yellow Violet Orange Gold

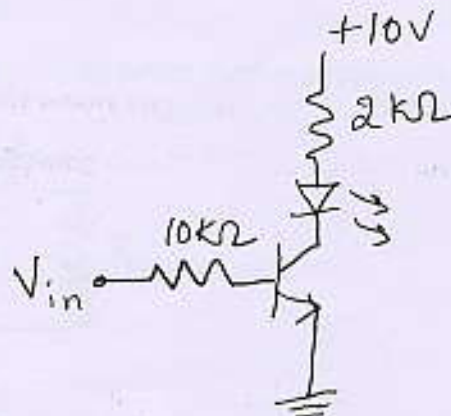
b) (i) what is the value of I_1 ?(ii) If 20Ω resistor is shorted, what is the value of I_2 ?

c) can we use Zener diode for rectification? Justify your answer.

d) Sketch the output waveform for the following circuit. Assume diode is ideal



e) What is the status of LED, when

(i) $V_{in} = 0V$ (ii) $V_{in} = 5V$ 

f) Write next numbers of these series:

(i) $1FD_{(16)}$, $1FE_{(16)}$,

(ii) $145_{(8)}$, $146_{(8)}$,

g) Implement the following expression using basic gates: $Y = \overline{AB} + ABC$

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FIRST SEM B.Sc. DEGREE EXAMINATIONS
(NEP SYLLABUS)
SUBJECT: ELECTRONICS (CORE)
PAPER – 1: ELECTRONICS DEVICES AND CIRCUITS
MODEL QUESTION PAPER (2)

Max. marks: 60

Time : 2 hrs

Instructions to the candidates: Answer any Five questions from Part A, any Four from Part B and any Five subdivisions from Part C

PART A

Answer any five questions. Each question carries 6 marks

5X 6 = 30

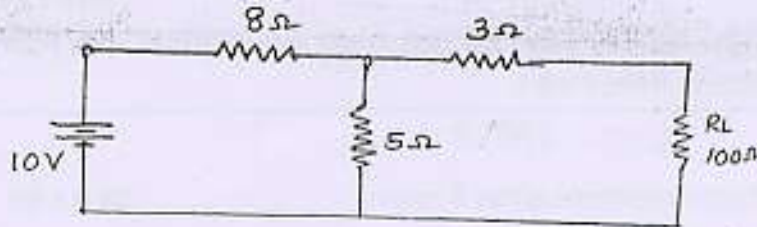
1. a) State and explain Maximum power transfer theorem for a resistive circuit.
b) What are active and passive components? Give two examples for each. (4+2)
2. a) Write a note on diode approximations. Draw the equivalent circuits.
b) Define ripple factor and efficiency of half wave and full wave rectifiers. (4+2)
3. a) Draw the circuit of positive clamper and explain briefly. Draw input and output waveform.
b) Define line regulation and load regulation of a regulated power supply. (4+2)
4. a) Compare the doping level, size and function of different regions of a transistor.
b) Draw the output characteristics of transistor in CE mode and mention different regions. (4+2)
5. a) With relevant circuit diagram explain the working of a Two stage RC coupled amplifier.
b) Mention any two advantages of Darlington transistors. (4+2)
6. a) Write a note on construction and working of Solar Cell.
b) What is the principle of working of Light Emitting Diode. (4+2)
7. a) What is a logic gate? Draw and explain AND and OR gate using truth table.
b) Write the circuit and truth table of XOR gate using NAND gates. (4+2)
8. a) Construct AND and OR gate using NAND gate. Write the boolean expression for output.
b) Show that $A + \bar{A}B = A + B$ (4+2)

PART B

Answer any Four questions

4 x 5 = 20

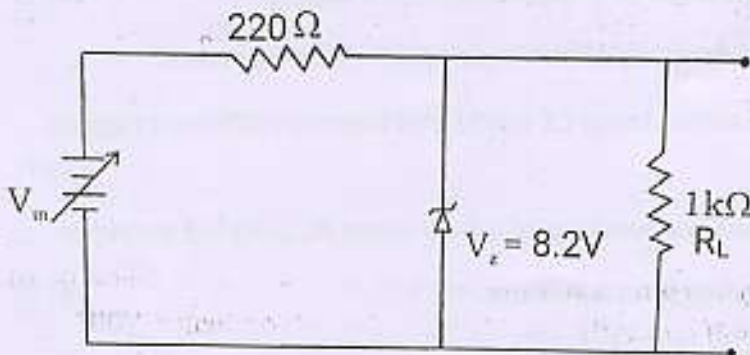
9. Find the current through R_L , using Norton's theorem.



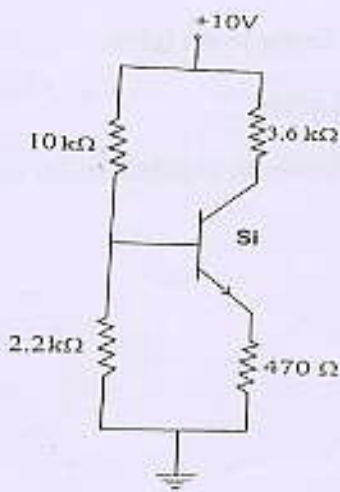
10. a) An RC circuit excited by dc supply has a time constant of 20ms. If the battery voltage is 100V, calculate the capacitor voltage after one time constant.

b) The current gain of a transistor in common emitter mode is 250. Calculate the gain of the same transistor in common base mode. (3+2)

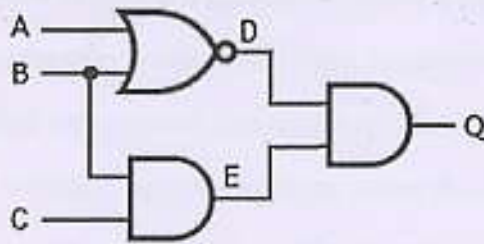
11. Find the minimum and maximum values of input voltage which can be regulated by zener regulator shown below. Given: $I_{zmin} = 2mA$ and $I_{zmax} = 24mA$



12. Determine the coordinates of Q point for the circuit shown.



13. a) A transistor used in common emitter amplifier has following h parameters:
 $h_{ie} = 1.5 \text{ k}\Omega$, $h_{re} = 4 \times 10^{-4} \text{ S}$, $h_{fe} = 200$ and $h_{oe} = 6 \times 10^{-6}$. Calculate the current gain and input impedance if $R_L = 10 \text{ k}\Omega$. Calculate the current gain and input impedance
- b) Write the boolean expression for the following circuit:



14. a) Convert $(204)_8$ into binary, hexadecimal and decimal system.
 b) Subtract $(11101)_2$ from $(110011)_2$ using 2's complement method.

PART C

Answer any Five subdivisions.

5 x 2 = 10

15. a) A resistor has a colour code of: Blue, Grey, Brown, Gold. What is the minimum and maximum value possible for the resistance?
- b) If resistance of a resonant circuit is increased, what happens to Band width?
- c) What is the output voltage of the following circuit? (Voltage regulator)
- d) Which junction of the diode has relatively smaller width? Why?
- e) In which region of the output characteristics curve the transistor must operate so that it can be used in digital circuit?
- f) What is the reason for the tunnelling effect in a tunnel diode?
- g) In "signed binary representation" what is the value of 0111 and 1111?

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**FIRST SEM B.Sc. DEGREE EXAMINATION
(NEP SYLLABUS)
SUBJECT: ELECTRONICS (CORE)
PAPER-1 : ELECTRONIC DEVICES AND CIRCUITS
(Model Question Paper-3)**

Time : 2 hours

Marks : 60

Instructions to the candidates: Answer any Five questions from Part A, any Four from Part B and any Five subdivisions from Part C

PART A

Answer any **five** questions. Each question carries 6 marks

5X 6 = 30

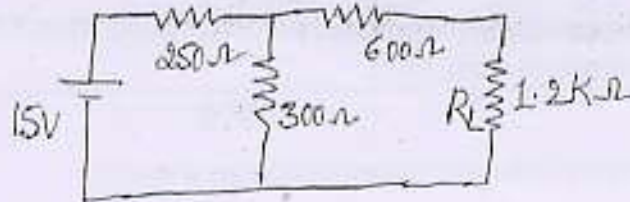
1. a) Write the procedure to obtain Norton's equivalent circuit for a resistive T-network.
b) What are passive and active components?
(4+2)
2. a) With the help of circuit diagram, explain the working of centre-tapped rectifier.
b) Compare VI- characteristics of rectifier diode and Zener diode.
(4+2)
3. a) Draw the block diagram of Power supply and mention the function of each block.
b) What are the advantages of IC regulators?
(4+2)
4. a) Explain the working of a transistor.
b) What are the applications of operating regions of a transistor?
(4+2)
5. a) Explain the working of two stage RC coupled amplifier.
b) Compare class-A and class-B amplifier.
(4+2)
6. a) Explain the construction and working of Varactor diode.
b) What are the types of 7-segment display and mention their difference.
(3+3)
7. a) State and prove De Morgan's theorems.
b) What is gray code?
(4+2)
8. a) Prove that NOR is a universal gate.
b) Prove that $A + \bar{A}B = A + B$
(4+2)

PART B

Answer any **four** questions. Each question carries 5 marks

4X 5 = 20

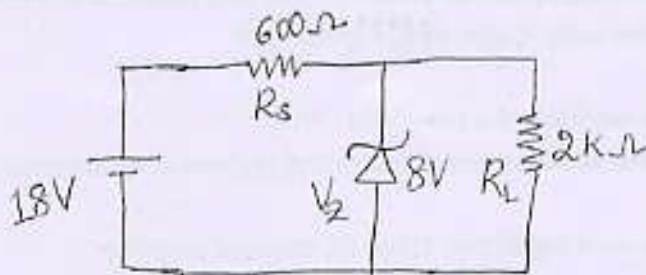
9. For circuit given below, find the value of load current using Thevenin's theorem.



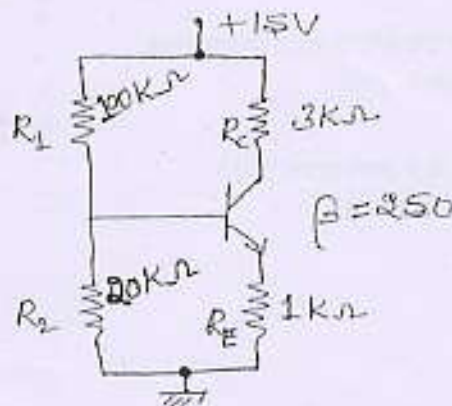
10. a) A transformer used in bridge rectifier has turns ratio of 10:1 and its primary is connected to an AC supply of 220V, 50Hz. Assuming the diodes are ideal and load resistance to be 1200Ω, calculate

i) output dc voltage ii) output frequency iii) efficiency

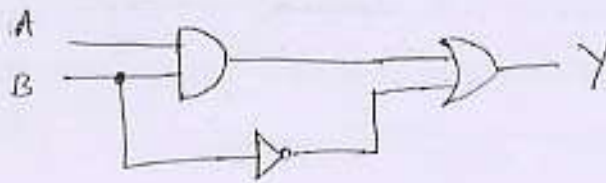
11. For the Zener diode regulator, determine (i) load current (ii) voltage drop across R_s , (iii) current through Zener diode.



12. For the given circuit, locate Q point on the DC load line.



13. a) A transistor used in CE mode has the following parameters. $h_{ie} = 3k\Omega$, $h_{re} = 300$, $h_{fe} = 5 \times 10^{-4}$, $h_{oe} = 4 \times 10^{-5}$ and $R_L = 6k\Omega$. Calculate the input impedance.
- b) Find the expression for Y.



(3+2)

14. a) Write the BCD code and Excess-3 code for the decimal number 136.

- b) Subtract $(105)_8$ from $(87F)_{16}$ using 2's complement method.

(2+3)

PART C

Answer any five sub questions. Each one carries 2 marks.

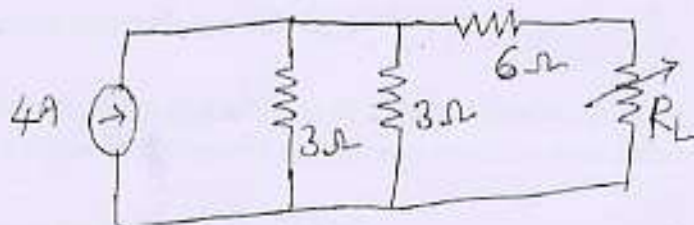
5X 2 =

10

15. a) Find the Value of resistor for following colour code:

- (i) Brown, Black, Yellow, Silver
 (ii) Gray, Red, Orange, Gold

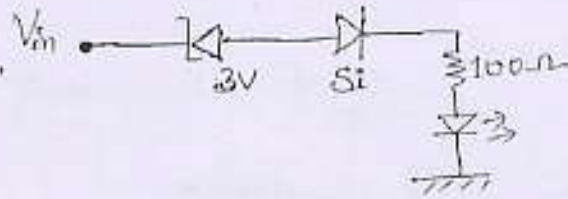
- b) What is the value of R_L to receive maximum power?



- c) Differentiate between Avalanche breakdown and Zener breakdown.
- d) Design a power supply using LM 317 for 12V. Consider $R_1 = 330\Omega$.

e) What is the status of LED, when:

- (i) $V_{in} = 6V$, (ii) $V_{in} = -5V$



f) What are the next numbers when:

- (i) $1FF_{(16)}$ is incremented by one.
(ii) $777_{(8)}$ is incremented by one.

g) Implement the following expression using basic gates: $Y = \overline{A + B\overline{C}}$
