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DF-3038
Second Year B. Sc. (Electronics)
(Sem. III) Examination
March / April – 2016
Paper : Generic Elective
(Circuit Simulation)

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

<p>નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : SECOND YEAR B. Sc. (ELECTRONICS) (SEM. 3)</p> <p>Name of the Subject : Paper : Generic Elective (Circuit Simulation)</p> <p>Subject Code No. : 3 0 3 8 Section No. (1, 2,.....) : Nil</p>	<p>Seat No. : □ □ □ □ □ □</p> <p style="text-align: center;">Student's Signature</p>
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- (2) There are 50 questions of one mark each with four options.
(3) All questions are compulsory.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheet-ની પાછળ છાપેલ છે.***
***Important instructions to fillup O.M.R. Sheet
is given on back side of the provided O.M.R. Sheet.***

- 1 _____ is a simple multi-run analysis.
 - (A) dc Sweep Analysis
 - (B) Monte-Carlo
 - (C) Temperature
 - (D) Noise worst case

- 2 Minimum requirements to run a DC sweep analysis
 - (A) Model parameter
 - (B) Global parameter
 - (C) All of these
 - (D) Voltage or current source

- 3 In MicroSim libraries DBREAK indicates _____ part type.
 - (A) Diode
 - (B) Bipolar transistor
 - (C) None
 - (D) Capacitor

- 4 Simulation means
 - (A) The use of a mathematical model to represent the physical operation of a circuit design
 - (B) The use of a mathematical model to represent the logical operation of a circuit design
 - (C) The use of a mathematical model to represent the arithmetic operation of a circuit design
 - (D) The use of a physical model to represent the mathematical operation of a circuit design

- 5 To view the simulation results on the screen we use _____.
 - (A) Port
 - (B) Strobe
 - (C) None
 - (D) Probe

- 6 To select a part from the part browser dialog box
- (A) Select the part name from the full list of part names
 - (B) Select the part name from the library's list of parts
 - (C) All of these
 - (D) Type the name in the part name text box
- 7 For frequency response of a circuit which sweep analysis is used ?
- (A) dc sweep
 - (B) ac and dc sweep
 - (C) ac sweep
 - (D) ac sweep and noise
- 8 Full form of FPGA is
- (A) Full Programmable Gate Array
 - (B) Field Programmable Gate Action
 - (C) Field Protecting Gate Array
 - (D) Field Programmable Gate Array
- 9 If anything must be done by the user or if there is warning , the prompt will display in the
- (A) Schematics toolbar
 - (B) Status bar
 - (C) Simulation toolbar
 - (D) Drawing toolbar
- 10 The function ASIN(x) in PSpice A/D means
- (A) $\sin^{-1}(x)$
 - (B) $\sin(x)$
 - (C) $\ln(x)$
 - (D) $\sinh(x)$

- 11 The pencil pointer indicates that
(A) Ready to place a component
(B) Ready to edit the schematic
(C) All the these
(D) Ready to draw a wire
- 12 To stop placing the part
(A) Left click
(B) Both
(C) None
(D) Right click
- 13 What is AKO ?
(A) A Key Of
(B) About Key of
(C) A Kind Of
(D) All Kind Of
- 14 Full form of P-spice
(A) Personal simulation programs with integrated circuit examples
(B) Private simulation programs with integrated circuit examples
(C) Particular simulation programs with integrated circuit examples
(D) Proper simulation programs with integrated circuit examples
- 15 Annotation graphics toolbar provides shortcuts for
(A) Draw text
(B) Insert picture
(C) All the these
(D) Draw arc
- 16 X and Y coordinates of the pointer is provided by
(A) Schematics toolbar
(B) Status bar
(C) Simulation toolbar
(D) Drawing toolbar
- 17 To rotate the component
(A) Press Ctrl + V
(B) Press Ctrl + R
(C) Press Ctrl + X
(D) Press Ctrl + C

- 18 When auto save is enabled schematics creates a temporary file whose file name extension ends in
- (A) 'f'
 - (B) 's'
 - (C) 'v'
 - (D) 'a'
- 19 A flipped part is
- (A) Mirrored about Y – axis
 - (B) Rotated 90° counter- clockwise
 - (C) Rotated 60° counter- clockwise
 - (D) Mirrored about X – axis
- 20 Simulation toolbar provides shortcuts for
- (A) Simulation
 - (B) None
 - (C) Both Analysis setup and Simulation
 - (D) Analysis setup
- 21 The function key used to start the simulator
- (A) F9
 - (B) F11
 - (C) F12
 - (D) F10
- 22 Schematics recognizes _____ types of libraries.
- (A) Two
 - (B) Three
 - (C) Four
 - (D) One
- 23 If the objects are to be forced onto grid when placed then
- (A) Stay on grid is enabled
 - (B) Stay on grid is disabled
 - (C) Snap to grid is enabled
 - (D) Grid on is disabled
- 24 The default grid spacing on your drawing area is
- (A) 0.01 inches
 - (B) 1 inch
 - (C) 0.20 inches
 - (D) 0.10 inches

- 25 Color of the warning message in the message viewer
- (A) Red
 - (B) Yellow
 - (C) Black
 - (D) Blue
- 26 A rotated part is rotated
- (A) 90° clockwise
 - (B) 60° counter- clockwise
 - (C) 30° counter- clockwise
 - (D) 90° counter- clockwise
- 27 For zooming out to view the full schematic page
- (A) Press ctrl + J
 - (B) Press ctrl + O
 - (C) Press ctrl + N
 - (D) Press ctrl + A
- 28 _____ allows you to select a new window centering point.
- (A) Out
 - (B) In
 - (C) Pan – new center
 - (D) Fit
- 29 P-Spice is like a –
- (A) Software Breadboard
 - (B) Printed Circuit Board
 - (C) None of these
 - (D) Hardware Breadboard
- 30 Select the correct sentence
- (A) Packaging information is used for board layout.
 - (B) Footprint defines the names of the package types.
 - (C) If a component can be simulated, it will not have an associated simulation model.
 - (D) Symbol is a graphical representation used in drawing schematics.

- 31 A package is characterized by:
 (A) Package type / Foot-Print name
 (B) Gate names, Pin names & number
 (C) All of these
 (D) Component name
- 32 Standard analysis contains the _____ test to the response of circuit to different inputs.
 (A) dc, ac and transient analysis
 (B) thermodynamics analysis
 (C) Mathematical analysis
 (D) Flow analysis
- 33 P-SPICE perform
 (A) Simple multi-run analysis
 (B) Statistical analysis
 (C) All of these
 (D) Standard analysis
- 34 _____ is a type of time based analysis.
 (A) AC sweep (B) Transient
 (C) Noise (D) Bias point detail
- 35 Stimulus editor is a
 (A) Graphical input waveform editor
 (B) Graphical result analyzer
 (C) All of these
 (D) Graphical output waveform editor
- 36 Schematics consists of
 (A) electrical parts
 (B) simulation
 (C) Analysis
 (D) Symbols, attributes, wires, buses, text items
- 37 Status bar is located
 (A) At the bottom of the schematic editor window
 (B) At the left of the schematic editor window
 (C) At the right of the schematic editor window
 (D) At the top of the schematic editor window
- 38 Button name to view a selected area of schematic
 (A) Zoom area (B) Zoom out
 (C) Zoom to fit page (D) Zoom in
- 39 Parts utility is a
 (A) Graphical input waveform editor
 (B) Graphical result analyzer
 (C) Model extractor
 (D) Graphical output waveform editor
- 40 _____ is a type of library in schematics
 (A) Zoned (B) Local
 (C) Both Global and Local (D) Global

- 41 _____ specifies the time interval in which schematics automatically saves any modified schematics or libraries.
- (A) Snap to grid (B) Auto save interval
(C) Gravity (D) Stay on grid
- 42 To display the attribute editing dialog box
- (A) left click the part
(B) Double click the part
(C) Right click the part
(D) Single click the part
- 43 Select the wrong sentence
- (A) Schematics does not allow you to change an attribute on multiple parts at the same time
(B) Size determines the size of the text
(C) Double click the part to display the attribute editing dialog box
(D) Schematics allows you to change an attribute on multiple parts at the same time
- 44 A Grid is
- (A) line matrix within the work area
(B) dot matrix outside the work area
(C) line matrix outside the work area
(D) dot matrix within the work area
- 45 _____ Sets up simulation analyses for the active schematic.
- (A) Analysis set up (B) Snap – to – grid
(C) Simulator (D) Snap – to – pin
- 46 To view bias point values in your schematic
- (A) Use VIEWPOINT symbol
(B) Use IPROBE symbol
(C) All of these
(D) Use buttons on the simulation toolbar
- 47 _____ maintains connectivity between parts when they are moved.
- (A) Gravity (B) Orthogonal
(C) All(D) Rubberband
- 48 For Diode characteristics which sweep Analysis is used ?
- (A) dc sweep
(B) ac & dc sweep
(C) None of these
(D) ac sweep and noise
- 49 File that contains the electrical definition of one or more parts
- (A) Netlist file (B) Model library
(C) Stimulus file (D) Circuit file
- 50 A model defines
- (A) The non-electrical behavior of a part
(B) Graphical representation of parts
(C) Mathematical representation of parts
(D) The electrical behavior of a part