



**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 : ← <b>SECOND YEAR B. Sc. (ELECTRONICS) (SEM. 3)</b></p> <p>Name of the Subject : ← <b>Paper : Generic Elective (Circuit Simulation)</b></p> <p>← Subject Code No. : <b>3 0 3 8</b> ← Section No. (1, 2,.....) : <b>Nil</b></p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; margin-top: 10px;">Student's Signature</div>
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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 A package is characterized by:
  - (A) Gate names, Pin names & number
  - (B) All of these
  - (C) Component name
  - (D) Package type / Foot-Print name
- 2 Standard analysis contains the \_\_\_\_\_ test to the response of circuit to different inputs.
  - (A) thermodynamics analysis
  - (B) Mathematical analysis
  - (C) Flow analysis
  - (D) dc, ac and transient analysis
- 3 P-SPICE perform
  - (A) Statistical analysis
  - (B) All of these
  - (C) Standard analysis
  - (D) Simple multi-run analysis
- 4 \_\_\_\_\_ is a type of time based analysis.
  - (A) Transient
  - (B) Noise
  - (C) Bias point detail
  - (D) AC sweep
- 5 Stimulus editor is a
  - (A) Graphical result analyzer
  - (B) All of these
  - (C) Graphical output waveform editor
  - (D) Graphical input waveform editor
- 6 Schematics consists of
  - (A) simulation
  - (B) Analysis
  - (C) Symbols, attributes, wires, buses, text items
  - (D) electrical parts
- 7 Status bar is located
  - (A) At the left of the schematic editor window
  - (B) At the right of the schematic editor window
  - (C) At the top of the schematic editor window
  - (D) At the bottom of the schematic editor window
- 8 Button name to view a selected area of schematic
  - (A) Zoom out
  - (B) Zoom to fit page
  - (C) Zoom in
  - (D) Zoom area
- 9 Parts utility is a
  - (A) Graphical result analyzer
  - (B) Model extractor
  - (C) Graphical output waveform editor
  - (D) Graphical input waveform editor
- 10 \_\_\_\_\_ is a type of library in schematics
  - (A) Local
  - (B) Both Global and Local
  - (C) Global
  - (D) Zoned

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

- 21 \_\_\_\_\_ is a simple multi-run analysis.
- (A) Monte-Carlo
  - (B) Temperature
  - (C) Noise worst case
  - (D) dc Sweep Analysis
- 22 Minimum requirements to run a DC sweep analysis
- (A) Global parameter
  - (B) All of these
  - (C) Voltage or current source
  - (D) Model parameter
- 23 In MicroSim libraries DBREAK indicates \_\_\_\_\_ part type.
- (A) Bipolar transistor
  - (B) None
  - (C) Capacitor
  - (D) Diode
- 24 Simulation means
- (A) The use of a mathematical model to represent the logical operation of a circuit design
  - (B) The use of a mathematical model to represent the arithmetic operation of a circuit design
  - (C) The use of a physical model to represent the mathematical operation of a circuit design
  - (D) The use of a mathematical model to represent the physical operation of a circuit design
- 25 To view the simulation results on the screen we use \_\_\_\_\_.
- (A) Strobe
  - (B) None
  - (C) Probe
  - (D) Port

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

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

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

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