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) Fill up strictly the details of signs on your answer book.

(2) There are 50 questions of one mark each with four options.

(3) All questions are compulsory.

O.M.R. Sheet कधी अनेकी अनेकांश सुस्थाओ आपेक्ष
O.M.R. Sheet-ली पाँच अघेढ भएको छ.

Important instructions to fill up 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

DF-3038_C ] 2 [ Contd...
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

DF-3038_C ] 3  [ Contd...
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
When auto save is enabled schematics creates a temporary file whose file name extension ends in
(A) 's'
(B) 'v'
(C) 'a'
(D) 'f'

A flipped part is
(A) Rotated 90° counter- clockwise
(B) Rotated 60° counter- clockwise
(C) Mirrored about X – axis
(D) Mirrored about Y – axis

Simulation toolbar provides shortcuts for
(A) None
(B) Both Analysis setup and Simulation
(C) Analysis setup
(D) Simulation

The function key used to start the simulator
(A) F11
(B) F12
(C) F10
(D) F9

Schematics recognizes _____ types of libraries.
(A) Three
(B) Four
(C) One
(D) Two

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

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.