

II/IV B.Tech. DEGREE EXAMINATIONS, NOV/DEC- 2019

Second Semester

CSE/IT

OBJECT ORIENTED PROGRAMMING USING JAVA

Time: Three Hours

Maximum marks:60

Answer Question No.1 Compulsory

6X2=12 M

Answer ONE Question from each Unit

4X12=48 M

1. a) Define object
- b) Define array? Explain how arrays are declared in Java
- c) Purpose of super keyword
- d) Why Java doesn't allow multiple inheritance using classes
- e) Define applet
- f) Mention any four string handling functions with suitable syntax

UNIT-I

2. a) Why java is used for internet applications? Explain.
- b) Give a brief on different application frameworks.

(OR)

3. Explain different approaches to software design and elaborate on evolution of object oriented programming.

UNIT-II

4. a) Write a program to convert the temperature in Fahrenheit to centigrade. Define suitable exceptions.
- b) Define class? Explain the concept of inner classes with suitable example exploring their purpose and advantages.

P.T.O

(OR)

5. a) What is java package? What is CLASSPATH? Explain how to create and access a java package with an example.
- b) List the difference between classes and interfaces.

UNIT-III

6. Define Stream? Using a suitable stream write a program to copy content of one file to another and store the number of characters, words and lines copied in the target file. Use command line arguments to receive the source and target file names.

(OR)

7. a) Explain getDocumentBase() and getCodeBase() with an example program?
- b) Explain thread model and elaborate on thread priorities.

UNIT-IV

8. a) Explain different layout managers.
- b) Explain the following AWT user components with their syntax and constructors.
 - i) Text components
 - ii) Check boxes
 - iii) Choices

(OR)

9. a) Explain various components of AWT.
- b) Discuss about Font Class and its methods associate with it.



II/IV B.Tech. DEGREE EXAMINATIONS, APRIL/MAY- 2019**Second Semester****ELECTRICAL & ELECTRONICS ENGINEERING****AC MACHINES****Time: Three Hours****Maximum marks:60****Answer Question No.1 Compulsory****12X1=12 M****Answer ONE Question from each Unit****4X12=48 M**

1.
 - a) How can Iron losses be measured in transformers?
 - b) Why an induction motor cannot run at synchronous speed?
 - c) What are the advantages of shell type transformers?
 - d) Draw the phasor diagram of ideal transformer on no load?
 - e) What is the maximum efficiency condition for transformer?
 - f) What connection of transformers used for step-up and step-down transformers?
 - g) How can eddy current loss be minimized?
 - h) What is the relation between maximum torque and starting torque?
 - i) What are conditions for parallel operation of transformers?
 - j) What is the effect of increasing rotor resistance in singlephase induction motor?
 - k) How can the direction of a capacitor-run motor be reversed?
 - l) Define cogging in induction motors?

UNIT-I

2.
 - a) Draw the phasor diagrams for a transformer when it is at no-load and the load at lagging pf.
 - b) Discuss the procedure for conducting O.C and S.C tests on a Single Phase transformer. Derive expression for various lose?

(OR)

3.
 - a) Draw the approximate equivalent circuit of a transformer referred to the primary side.
 - b) A 300 KVA, 6.6 KV/415 V, single phase transformer has an effective impedance of $(1+3j)$ referred to HV side. Estimate the full load voltage regulation at 0.8 p.f.lagging and 0.8 p.f. leading.

P.T.O

UNIT-II

4. a) Explain the conditions in detail, that must be fulfilled for the satisfactory parallel operation of two Single Phase transformers.
- b) Draw the Scott connection of transformers and mark the terminals and turn-ratio.

(OR)

5. a) Explain the working principle and construction of an auto-transformer.
- b) Discuss different methods of cooling for Power transformers?

UNIT-III

6. a) Explain the construction and working of a 3 Phase induction motor.
- b) A 200KW (output), 3300 V, 3 ϕ , star connected induction motor has a synchronous speed of 600 rpm. The full load slip is 1.8% and full load p.f 0.85 stator copper losses=2540 W. iron losses=3000W, Rotational losses=1200 W. Calculate
 - i) The rotor copper losses
 - ii) The line current
 - iii) The full load efficiency

(OR)

7. a) Explain the procedural steps to construct the circle diagram for an Induction machine?
- b) Explain slip-torque characteristics of 3 Phase induction motor with necessary equations and derive expressions for maximum, starting torque?

UNIT-IV

8. a) Explain the double field revolving theory for single phase induction motor. Give its speed torque characteristics.
- b) Explain the principle and working of shaded pole induction motor. For what type of load it is suitable? Explain.

(OR)

9. a) What are the methods of starting induction motor and explain any one method.
- b) Explain the phenomenon of cogging and crawling in squirrel cage induction motors.

