

# Question Paper

Exam Date & Time: 20-Apr-2018 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### SECOND SEMESTER MASTER OF ENGINEERING- ME COMPUTING TECHNOLOGIES AND VIRTUALIZATION DEGREE EXAMINATION-APRIL 2018

Friday, April 20, 2018

Time: 10am to 1pm

#### Advanced JAVA Programming [VIR 610.9]

Marks: 100

Duration: 180 mins.

#### Answer all the questions.

- 1) Explain and list few methods associated with the following API's (10)  
3+4+3
  - a) Servlet interface
  - b) ServletConfig interface
  - c) ServletContext interface
- 2) What is Cookies in Servlet? Explain types of Cookies? List the advantages of Cookies in Servlet. (10)  
2+4+4
- 3) List & explain methods of RequestDispatcher interface available in Servlet. (10)
- 4) Explain the following JSP Action tags in detail (10)  
5+5
  - a) jsp:useBean
  - b) jsp:include
- 5) Write short note for following (10)
  - a) JSP Scriptlets
  - b) JSP Declaration
  - c) JSP Expressions
  - d) JSP Directives2.5x4
- 6) List and explain different types of implicit objects which are created by the web container that are available to all the JSP pages. (10)
- 7) What is a session bean? List and explain the types of session beans (10)  
2+8
- 8) Explain in detail the difference between hibernate and JDBC? (10)
- 9) A) What is dependency injection? (10)  
05  
B) What is IOC - Inversion of Control? 05
- 10) (10)

With a neat diagram explain Struts2 Architecture and its core components.

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