MASTER OF SCIENCE(INFORMATION SECURITY)
(MSCIS)

MSCIS/ASSIGN/2024

ASSIGNMENTS
JULY2024

Semester-IV

MSE-033, MSE-034, MSE-035, MSE-036 and MSEL-037

SCHOOL OF VOCATIONAL EDUCATION AND TRAINING
INDIRAGANDHINATIONALOPENUNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068

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Guidelines regarding submission of assignments

1. It is compulsory for the students to submit the prescribed assignments. They will not be allowed to appear for the term-end examination of a course if they do not submit the assignments in time for that course.

2. The assignment responses should be complete in all respects. Before submission, the students should ensure that they have answered all the questions in all assignments. Incomplete answer sheets bring poor grades.

3. The University/ Regional Centre have the right to reject the assignments received after the due date. Therefore, the students are advised to submit their assignments before the due date.

4. Students should submit before the last dates prescribed for submission of assignments.

5. In case the students have already done some assignments prescribed in a course, they are required to do the **left-over assignments before taking the Term-end Examination**. If they have qualified in a course on the basis of lesser number of assignments and Term-end Examination, they will **not be eligible to re-do the assignments** with a view to improve the overall qualifying score of that course.

6. In case any student fails to submit the assignments or fails to score minimum qualifying marks, s/he has to wait for fresh assignments meant for the current batch of students.

7. For their own record, students should retain a copy of all the assignment responses, which they submit.

8. Once the students get the pass marks in an assignment, they can not re-submit it for improvement of marks. If the student secured requisite marks in Term-End Examination and Assignments, but did not get requisite overall percentage, then the student can either resubmit the assignment or reappear for the term-end examination for securing the requisite overall percentage.

9. Assignments are not subject to re-evaluation.

Instructions for Doing Assignments

While answering Assignments, the following guidelines are required to be observed:

1. The student should write their Complete correct Enrolment Number, Name, Full Address, Signature and Date on the top right hand corner of the first page of the response sheet.
2. The students should write the Programme Title, Course Code and Course Title on the left hand corner of the first page of their response sheet. Course code may be reproduced from the assignment.

The top of the first page of your response sheet for each assignment should look like this:

PROGRAMME TITLE:	ENROLMENT No.: ……………….
COURSE CODE:	NAME : ……………………………
COURSE TITLE:	
ADDRESS:………………………………………………………………………...	
SIGNATURE: ……………………	
DATE: …………………………..	

3. The students should write the responses in their own hand. **They should not print or type the answers. They should not reproduce their answers from the units sent to them by the University. If they reproduce from units, they will get poor marks for the respective question**.

4. The students should write each assignment separately. All the assignments should not be written in continuity.

5. The students should write the question number with each answer.

6. The students should use only foolscap size paper for their response and tie all the pages carefully. Avoid using very thin paper. They should allow a 4 cm. margin on the left and at least 4 lines in between each answer. This may facilitate the evaluator to write useful comments on the margins at appropriate places.

7. The students should not copy from the response sheets of other students. If copying is noticed, the assignments of such students will be rejected, and disciplinary action can be taken against the students as per rules of the University.

8. Please remember that it is compulsory to send scannedcopies of handwritten assignments through email to the respective Regional Centre email or upload on the link provided on the respective Regional centre's website or the hard copy of handwritten assignments to your concerned Regional centre/Study centre before you can take the Term End Exams or else you will not be issued hall tickets.

Under no circumstances should they be sent to the (SED) for evaluation.

CourseCode	:	MSE-033
CourseTitle	:	**Web Application Testing and Audit**
MaximumMarks	:	**100**
Weightage	:	**30%**
Lastdateof Submission	:	**31ˢᵗOctober, 2024 (For latest update, Pl. check IGNOU's Website)**

Attempt any five questions out of seven questions. Each question carries 20 marks. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation.

Q1: How Web Application architecture works? Give Illustration.

Q2: Explain weblog evaluation in the context of generic weblog examination data, possible purposes and common logs.

Q3: Explain attacks using HTML5. How can it be secured?

Q4: Explain the following:

   a) XML digital signatures with their types and structure
   b) Web Application Audit Tools

Q5: Describe the fundamentals of web application security audit.

Q6: How does direct API intersection work? Give illustration.

Q7: Describe standards of web services and their application on securing issues.

CourseCode	:	MSE-034
CourseTitle	:	E-commerce and Cyberspace
MaximumMarks	:	100
Weightage	:	30%
Lastdateof Submission	:	31stOctober, 2024 (For latest update, Pl. check IGNOU's Website)

Attempt any five questions out of seven questions. Each question carries 20 marks. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation.

Q1: Describe the future of E-commerce and its impact on Indian's economy.

Q2: What are the characteristics of online contract? Explain the challenges and issues related to the e-contract.

Q3: What is the difference between Copyright, Trademark and Patents? Explain in legal and technical terms with examples.

Q4: Distinguish between Traditional Litigation in courts and under Arbitration rule.

Q5: What is domain name disputes and cyber-squatting? What is the role of ICANN? Explain with examples.

Q6: Discuss future of e-commerce in India.

Q7: Discuss P2P Networks and their Legal Implication.

Course Code	:	**MSE-035**
Course Title	:	**IoT Security**
Maximum Marks	:	**100**
Weightage	:	**30%**
Lastdateof Submission	:	**31ˢᵗOctober, 2024 (For latest update, Pl. check IGNOU's Website)**

Attempt any five questions out of seven questions. Each question carries 20 marks. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation.

Q1: What are the Challenges and Characteristics of IoT.

Q2: Explain the term Internet of Thing s(IoT). List and explain the various components used to implement IoT.Give characteristics of IoT. Briefly discuss the following types of IoT:

1. Consumer IoT(CIoT)
2. Industrial IoT(IIoT)
3. Infrastructure IoT
4. Internet of Military Things(IoMT)

Q3: What is Edge computing? Discuss the working of Edge computing. Also, describe the relation between Edge computing, Fog computing and Cloud Computing, with the help of a suitable block diagram?

Q4: Explain applications of Fog computing.

Q5: Explain Multiho using and its types.

Q6: Explain the following communication protocols with reference to the IoT devices:
   a) IPv6
   b) MQTT

Q7: Discuss the top 10 emerging IoT technologies.

CourseCode	:	MSE-036
CourseTitle	:	**Latest Trends Information and Cyber Security**
MaximumMarks	:	100
Weightage	:	30%
Lastdateof Submission	:	31stOctober, 2024 (For latest update, Pl. check IGNOU's Website)

Attempt any five questions out of seven questions. Each question carries 20 marks. You may use illustrations and diagrams to enhance the explanations.Please go through the guidelines regarding assignments given in the Programme Guide fortheformat of presentation.

Q1: Explain stages, goals and techniques of Malware Analysis.

Q2: What do you mean by Moving Target Defense (MTD) and what are the basic principles of designing MTD?

Q3: List and explain the phases involved in Cyber Kill Chain (CKC).

Q4: Discuss Block Chain Technology and Security in detail.

Q5: Discuss Endpoint Defense Strategies.

Q6: Discuss types of Ransomware in detail.

Q7:What is Zero-Day attack and why is it dangerous?What are the ways to Minimize Zero-Day Attack Risks?

Course Code   :   MSEL-037
Course Title   :   **Practical (Web Application, Audits,**
                                e-commerce security and IoT)
MaximumMarks   :   100
Weightage   :   30%
LastDates forSubmission :31stOctober, 2024 (For latest update, Pl. check
IGNOU's Website)

This assignment has two Questions, answer all questions. Each Question is of 20 marks.
YourLabRecordswillcarry40Marks(20MarksforeachQuestion).Rest20marksa refor viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the programme guide for the format of presentation.

Note: You must execute the program and submit the program logic, sample input and output along with the necessary documentation. Assumptions can be made wherever necessary.

Q1:Explain industry-standard tools and techniques for mobile application development and security with examples. **(20 marks)**

Q2: Explain IoT Device Auditing and overview of IoT devices and their vulnerabilities with examples.   (**20 marks)**

Note: Make necessary assumptions if any.