Reg. No.

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

II SEMESTER M.TECH. (COMPUTER SCIENCE & INFORMATION SECURITY)
END SEMESTER EXAMINATIONS, MAY 2019

SUBJECT: INFORMATION SECURITY MANAGEMENT [CSE 5249]
REVISED CREDIT SYSTEM
(02/05/2019)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

Answer **ALL** the questions.
Missing data may be suitable assumed.

1A.	Explain the Committee on National Security Systems (CNSS) security model using the McCumber cube.	4
1B.	Explain the top-down and bottom-up approaches for information security implementation.	4
1C.	Write down the details of "ISO 27000 Series".	2
2A.	Explain the following under "security professional and the organization": Information security project team, and communities of interest.	3
2B.	Calculate the **"average risk rating factor"** for asset1 and asset2. Asset1 has an impact of 45 and asset2 has an impact of 90. The vulnerability likelihood for asset1 is 0.2 and for asset2 is 0.1.	3
2C.	Explain the following audit browsing techniques. Text display, hypertext display, relational database browsing and graphing.	4
3A.	Differentiate among vulnerability, threat and attack from the information security point of few.	3
3B.	Explain the following types of attacks: Mail bombing, and social engineering.	3

3C. Using Table 3C compute the **"weighted score"** for EDI document set 1 and EDI document set 2.

Table 3C

Information asset	Criteria 1	Criteria 2	Criteria 3	Weighted score
Criteria weight (1-100)	40	30	30	
EDI document set 1(impact 0-1)	0.8	0.9	0.5	
EDI document set 2 (impact 0-1)	0.7	0.8	0.6	

4

4A. Explain the four types of risk control strategies. 4

4B. Write down the differences between risk appetite and residual risk. 2

4C. With a neat diagram explain the "sphere of protection" in information security management. 4

5A. Explain the following under "Incident Response Planning":
Incident Planning, Incident Detection, Incident Reaction and Incident Recovery. 4

5B. Explain the three types of "Assurance". 3

5C. Explain the working of mounting protocol and file access protocol in NFS Version 2. 3