BMSCOLLEGEOF ENGINEERING,BANGALORE-19

(Autonomous Institute,AffiliatedtoVTU)

Department Name:

FIRST INTERNALS

CourseCode: 20CS5PCSEG	**CourseTitle: Software Engineering**	
Semester:5th A,B,C	**MaximumMarks:40**	**Date:22/10/2020**
FacultyHandlingtheCourse:	**Latha N.R., Sheetal V.A.**	
Instructions: Internal Choice in PART C only		

PART-A

Total 5 Marks

No.	Question	Marks
1	As an expert in computer security, you have been approached by an organization that campaigns for the rights of torture victims and have been asked to help them gain unauthorized access to the computer systems of a British company. This will help them confirm or deny that this company is selling equipment used directly in the torture of political prisoners'. Discuss the ethical dilemmas that this request raises and the professional and ethical responsibilities of software engineer that you would be violating. State Code of Ethics and Professional Practice as specified by ACM/IEEE-CS joint task force.	5M

PART-B

Total 15 Marks

No.	Question	Marks
2a	Develop a set of use cases that could serve as a basis for understanding the requirements for an petrol/gas station set up for fully automated operation with the help of a diagram.	5M
2b	Describe the structure of requirement document as specified by IEEE/ANSI.	5M
2c	Classify and explain the Non-functional requirements hierarchy diagram of an interactive system that allows railway passengers to find train times from terminals installed in stations	5M

PART- C

Total 20 marks

No.	Question	Marks
3a	i) Differentiate between Software Engineering and System Engineering. ii) Identify the enduring and volatile requirements for an Automatic coffee vending machine that has different programs for different types of coffee.	10M
	OR	
3b	Consider an Online Food ordering System. • List the actors involved and explain the relevance of each actor. • Prepare the use case diagram for the system. • Prepare the sequence diagram for ordering food and online payment • Identify the Non-functional requirements and draw viewpoint hierarchy diagram	10M
4a	i) Analyze the College examination management system that automates the process of examination. Identify the principal viewpoints which might be taken into account and organize these using a view point hierarchy diagram. ii) Illustrate the different metrics used for specifying non-functional requirements	10M
	OR	
4b	A train protection system automatically applies the brakes of a train if the speed limit for a segment of track is exceeded or if the train enters a track segment that is currently signaled with a red light (i.e., the segment should not be entered) . Assuming that the signal status and the speed limit for the track segment are transmitted to on-board software on the train before it enters that track segment. Design a template using structured natural language to capture the requirements for the above system.	10M