**SIX-ELEMENT ANALYSIS (TO-BE)**

**Group 5**

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| **Process** | **System role** | | | | | |
| **Human** | **Non-**  **Computing**  **Hardware** | **Computing**  **Hardware** | **Software** | **Database** | **Network &**  **Communication** |
| **1) Checking**  **CO/PLO**  **Manual or OBE documents** | **A) IUB officials:**  1. Specific IUB department sends request to BAETE to get info on OBE documents.  2. They collect the OBE documents from the BAETE web server.  3. IUB can receives guidelines and feedbacks regarding courses and departments. | **A) Pen, papers:**  All documents are managed by papers.  Pen for taking notes and writing purposes. | **A) Digital devices:**  Such as computers, laptops, phone may be used to store soft copies for the guidelines.  Many other digital devices are used for communication between internal/external parties. | **A) IRAS, OBE System:**  To access necessary information for different individuals such as faculties, students etc. | **A) Manual database, OBE System:**  Manual databases to keep information about students.  SPE keeps track of all PLO & CO Reports. | **A) WAN, LAN WIFI, BROADBAND:**  Any other communication platform to organize meetings between parties. |
|  | **B) BAETE officials:**  1. BAETE officials can communicate.  2. BAETE officials make the necessary documents on OBE and provide it to university authority  3. BAETE officials can provide feedbacks and guidelines that should be followed by the departments. |  |  |  |  |  |

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| **2)Making course outline and assessment plan** | **A) Department:**  1. After receiving the manual from BAETE department will map CO and PLO for each course and then provide the mapped guideline to faculty.  2. Department may receive an update from faculties if there any change need to do with CO and PLO mapping  **B) Faculty:**  2. He/she will check the mapping of CO and PLO.  3. If any change is necessary about the mapping faculty will contact the department.  3. And finally the course outline is created. | **A) Pen, paper:**  Pen, Paper for taking notes and writing purposes. | **A) Computer, Laptop:**  These are used to make or edit softcopies of course outline.  It is also used for storing softcopies of the course outline and curriculum. | **A) MS Word:**  Used for writing soft copies and making changes to them. We can also save softcopies in text format. | **A) OBE System:**  Departments and faculties can check the previous records of CO/PLO mapping. | **A) WAN, LAN WIFI, BROADBAND:**  These are the communication platforms to transfer softcopies. |
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| **3) Assessment phase and attendance** | **A) Students:**  1. Initially they participate in a class and sit for certain test on certain date.  2. They may ask to clarify if they have any questions.  3. Once they are done with the exam, they submit their answer script.  4. Student will give feedback to the faculty after reviewing their answer script.  **B) Faculties:**  1. They take attendance, prepare assessment papers (take tests online in any emergency situation).  2. They also invigilate or monitor the test given by the students.  3. They often need to clarify the questions asked by the students.  4. They collect the scripts.  5. They will assess the answer script. Initially they will calculate the marks achieved by a student.  6. They will show the scripts to the students.  7. They will receive updates from students if any correction needed.  8. Then faculty will finalize a mark sheet. | **A) Pen, paper, rubber, pencil:**  1. Paper is supplied to students when the exams are taken in offline.  2. It is also used as an answer sheet.  3. Students need pen, pencil, eraser, ruler to complete the answer script. | **A) Computers, Laptops:**  1. Used to conduct particular test in courses related to computer science.  2. They are used to conduct online classes as well. | **A) MS Word, GOOGLE DOC,**  **MS Excel,**  **Google classroom,**  **Google meet:**  1. Google classroom is used for taking classes and conducting exams.  2. Google meet is used for monitoring and gather information about the participants of the exam.  3. MS Word or Google DOCS are used for writing answers.  4. Students submit their answers through the panels in google classroom.  5. MS Excel is used for storing each student marks and final grades.  6. It is also used to evaluate PLO and CO score to store them. | **A) Manual database, CITS:**  1. It is used to keep records of the participants of the test.  2. Used for online classes in case of a crisis situation. | **A) WAN,LAN WIFI,BROADBAND:**  1. Used to allow online examinations to be conducted. |

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| **4) Updating & storing**  **Database system (OBE)** | **A) Faculty:**  Faculties can plan how each of the CO can be used for questions and assessments tests  2. Mapping each question with certain CO  3. Faculties assess the students for each & every questions on the basis of CO/PLO.  4. They will submit PLO and CO scores to the department.  **B) Department:**  1. receiving students CO & PLO scores  2. department will log in to the system  3. A department  data entry operator input all the score received from faculty directly to  OBE system.  **C) OBE system :**  1. system will receive input  2. storing data in the system  1. Each CO is mapped with certain PLOs.  2. OBE system  generates the  PLO scores & charts by clicking.  3. End of the semester overall  Performance of student, department and  course report  & verdict will be  generated by  OBE system. | **A) Paper, Pen:**  Hard copies of answer scripts. Pen is used for marking scripts | **A) Computers, Laptops:**  These devices are used to check the scripts in case of a crisis. Also used to store the answer scripts. | **A) MS Excel, OBE system:**  MS Excel is used to enter and store the marks of each student in each question. Also used to enter and store the grades of the students. OBE system is used to evaluate the PLO & CO scores and store them. | **A) OBE system:**  This system will be used to keep the records of PLO & CO scores. | **A) WAN, LAN, Wi-Fi, Broadband:**  Any communication  Or Network used. |

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| **5) Grade submission** | **A) Faculty:**  1. Faculty will receive permission or dead line for grade submission  2. He/she will upload the grade of the students to the IRAS after log in to IRAS.  **B) Department:**  1. Department will inform the faculty about the deadline of grade submission. | **A) Paper:**  Hard copies of the grade submission and PLO and CO scores. | **A) Computer, Laptops:**  1. Use to store soft copies of the score grade in Excel sheets.  2. They are also use to access IRAS. | **A) MS EXCEL, IRAS:**  Excel sheet is used to storing student marks.  Grades will be uploaded to IRAS. | **A) Manual database, IRAS, OBE system:**  1. It is used for faculty to keep records of the students and their grades.  2. IRAS is used for grade submission.  3. It is also used for viewing student’s credit, CGPA and all other information.  4. OBE will keep track of student entire performance through-out the semester. | **A) WAN, LAN WIFI,BROADBAND:**  Network is used for transferring excel files. |

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| **6) Viewing grades** | **A) Students:**  They can login into IRAS to check their grades. They also can log in to OBE system to check their performance.  **B) Department:**  Department have access to the OBE system. They will monitor student progress.  **C) IUB officials:**  IUB officials access the OBE system to see PLO and CO scores. | **A) Paper:**  Hard copies of the grade submission and PLO and CO scores. | **A) Computers, Laptops, Phone:**  They are used for accessing IRAS, OBE.  They are used for storing PLO and CO scores, grades of the students. | **A) Browser (Chrome, Mozilla, Opera), IRAS, OBE:**  To access the website of the IRAS.  IRAS to view grades.  OBE to view performance. | **A) IRAS, OBE:**  IRAS, OBE system is used by the students and other officials with the id and Password. | **A) WAN, LAN WIFI,BROADBAND:**  Any network to access IRAS from a digital device such as computer, laptop, mobile. |