SEMESTER LESSON PLAN



LESSON PLAN DEVELOPER(S):

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> AQUACULTURE MASTER'S PROGRAM FACULTY OF FISHERIES AND MARINE SCIENCE UNIVERSITAS BRAWIJAYA 2021

SEMESTER LESSON PLAN

1. Course Identity

| Study Program | : Aquaculture Master's Program |
|----------------------------|--|
| Course | : Modelling of Water Management System |
| Course Code | : PIB 8208 |
| Course Group | : Aquatic Environment |
| Credit | :2 |
| Degree | : Master's degree |
| Semester | :2 |
| Pre-requisite | : (If any, write the course code) |
| Status | : Elective |
| Lecturers' names and codes | s : Dr. Ir. Tri Djoko Lelono, MS. |
| | Prof. Dr. Ir. Soemarno, MS. |
| | Dr. Ir. Darmawan Ockto S, MS. |

2. Course Description

This course discusses various models in the management of aquatic ecosystems such as basic systems, reputation management, bacteria management, different water management systems and how to select journal modeling references.

3. Program Learning Outcomes (PLO)

1. Being able to develop the existing concept and create new knowledge in the field of sustainable aquaculture system and *Best Management Practices of Aquaculture* (CPL 8).

4. Course Learning

Outcomes

After completing this course, students will be able to:

- 1. understand the basics of modeling systems for water management systems.
- 2. understand bacteria management and various models of water management systems.
- 3. select relevant modeling journals and present them.

5. Lesson Plan

| Week | PLO Indicator | Topics | Teaching | Time | Learning | Assessment | | Learning Sources |
|------|--|---|--|--------|--|--|----------------|--|
| | | | Strategies | (hour) | Activities | | | |
| 1 | 1.1 Accuracy in explaining the basic concepts of water management modeling system | Basic concepts of water manageme nt modeling system | • Lecture (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: summarizing lecture materials (A) | 1) 2) 3) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. |
| | | | | | | | | Water Resour. Plann. Manage. 125 (3), 154–161. |
| 2 | 2.1 Accuracy in explaining | - Bacteria management | Lecture (S)Assignment | 2 | Note taking (A) | Criteria: Scoring | 1) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system |

| Week | PLO Indicator | Topics | Teaching Strategies | Time (hour) | Learning Activities | Assessment | | Learning Sources |
|------|--|---|---|----------------|--|---|----|---|
| | bacteria management | | (A) & Presentatio n (S) | | Working on assignments (A) | Guidelines Non-test: - summarizing lecture | | dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. |
| | | | | | | materials (A) - group or independent presentation (S) | 2) | Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53 |
| | | | | | | | 3) | Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |
| 3 | 3.1 Accuracy in explaining the water management research method | - Water management research method | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture | 1) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. |
| | | | | | | materials (A) - group or independent presentation (S) | 2) | Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. |

| Week | PLO Indicator | Topics | Teaching | Time | Learning | Assessment | Learning Sources | |
|------|---|------------------------|---|-------------|--|--|---|--|
| 4 | 4.1 Accuracy in explaining the closed role model | - Closed role model | Strategies quiz 1 (S) Lecture (S) Assignment (A) & Presentatio n (S) | (hour) 2 | Activities Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation (S) | and, Hughes, T.C. (1999) Simulation/optimization modeling for water resources management, Water Resour. Plann. Manage. 125 (3), 154–16 1) Ahmad, S., & Simonovic, P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journ of Computing in Civil Engineering, 18(4), 331– 340. 2) Andrews, E. S., F. I. Chun and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour Plann. Manage. 118(1), 3 53. 3) Belaineh,G., Peralta, R.C and, Hughes, T.C. (1999) Simulation/optimization modeling for water | ر ب ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا ا |
| 5 | 5.1 Accuracy in explaining regular model | - Regular model | Lecture (S) Assignment (A) & Presentatio | 2 | Note taking (A) Working on assignments | Criteria: Scoring Guidelines | modeling for water resources management, . Water Resour. Plann. Manage. 125 (3), 154–16 1) Ahmad, S., & Simonovic, P. (2004). Spatial system dynamics: New approach for simulation of water | J. <u>51.</u> S. n |
| | | | n (S) | | (A) | Non-test: - summarizing lecture | resources systems. Journ of Computing in Civil Engineering, 18(4), 331– 340. | ıal |

| Week | PLO Indicator | Topics | Teaching Strategies | Time (hour) | Learning Activities | Assessment | Learning Sources |
|------|---|----------------------------------|--|----------------|--|--|---|
| | | | | (1001) | | materials (A) - group or independent presentation (S) | Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage, 125 (3), 154–161 |
| 6 | 6.1 Accuracy in explaining the coastal management model | - Coastal management model | Lecture (S) Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or | Manage. 125 (3), 154–161. Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), |
| | | | | | | independent presentation (S) | Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |

| Week | PLO Indicator | Topics | Teaching Strategies | Time (hour) | Learning Activities | Assessment | Learning Sources |
|------|--|--------------------------|---|----------------|--|--|--|
| 7 | 7.1 Accuracy in understanding risk analysis model | - Risk analysis model | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Activities Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation (S) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. |
| 0 | | | | MIC | | | Manage. 125 (3), 154–161. |
| 9 | 9.1 Accuracy in explaining path analysis model | - Path analysis model | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. |

| Week | PLO Indicator | Topics | Teaching | Time | Learning | Assessment | Learning Sources |
|------|--|--|---|--------|--|--|--|
| | | | Strategies | (hour) | Activities | | |
| | | | | | | (S) | Plann. Manage. 118(1), 32–53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |
| 10 | 10.1 Accuracy in explaining the reputation of water management | - Reputation of water management | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation (S) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331–340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh, G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |
| 11 | 13.1 Accuracy in understanding water management system model | -Modelling of water management system | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil |

| Week | PLO Indicator | Topics | Teaching | Time | Learning | Assessment | Learning Sources |
|------|---|---|---|--------|--|--|--|
| | | | | (nour) | Activities | summarizing lecture materials (A) group or independent presentation (S) | Engineering, 18(4), 331– 340. 2) Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. 3) Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage, 125 (3), 154–161. |
| 12 | 15.1 Accuracy in understanding and explaining the materials presented in previous weeks | -Water management reputation -Modeling of water management system | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation (S) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh, G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. |

| Week | PLO Indicator | Topics | Teaching Strategies | Time (hour) | Learning Activities | Assessment | Learning Sources |
|------|---|--|--|---|--|---|---|
| | | | | (nour) | | | Water Resour. Plann. Manage. 125 (3), 154–161. |
| 13 | 13.1 Accuracy in explaining various modeling journal references | Accuracy in plaining rious odeling urnal ferences- Various modeling journal references- Lecture (S) (A)2Note taking (A)Criteria: Scoring Guidelines• Assignment (A) & Presentatio n (S)• Assignment (A)(A) Working on assignments (A)Criteria: Scoring Guidelines• Non-test: - summarizing lecture materials (A)• Lecture (S) • Assignment (A)2Note taking (A)Criteria: | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and L. B. Orlin (1992) | | | |
| | | | | | | group or independent presentation (S) | and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. 3) Belaineh, G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |
| 14 | 14.1 Accuracy in understanding and selecting proper modeling journal references | - Selecting modeling journal references | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent | Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive |

| Week | PLO Indicator | Topics | Teaching | Time | Learning | Assessment | Learning Sources |
|------|---|--|---|--------|--|--|--|
| | | | Strategies | (hour) | Activities | | |
| 45 | 15.1 Accuracy in | | • Locture (S) | | | presentation (S) | facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. 3) Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. 1) Abmad S. & Simonovic S. |
| 15 | 15.1 Accuracy in understanding and explaining the materials presented in previous weeks | Integrated concepts and applications of marine aquaculture Sustainable periphyton | Lecture (S) Assignment (A) & Presentatio n (S) | 2 | Note taking (A) Working on assignments (A) | Criteria: Scoring Guidelines Non-test: - summarizing lecture materials (A) - group or independent presentation (S) | Anmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331– 340. Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32– 53. Belaineh,G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161. |
| 16 | | | | FI | NAL EXAM | | |

Notes: S = Synchronous, A = Asynchronous, all soft skills achievement will be scored based on the analysis referring to the Learning

Management System

- 1) Ahmad, S., & Simonovic, S. P. (2004). Spatial system dynamics: New approach for simulation of water resources systems. Journal of Computing in Civil Engineering, 18(4), 331–340.
- 2) Andrews, E. S., F. I. Chung, and J. B. Orlin (1993), Multilayer, priority based simulation of conjunctive facilities, J. Water Resour. Plann. Manage. 118(1), 32–53.
- 3) Belaineh, G., Peralta, R.C. and, Hughes, T.C. (1999). Simulation/optimization modeling for water resources management, J. Water Resour. Plann. Manage. 125 (3), 154–161.
- 4) Brendecke, C. M. (1989), Network models of water rights and system operations, J. Water Resour. Plann. Manage. 115(5), 684–696.
- 5) Cai, X., McKinney, D., and Lasdon, L. (2002). A framework for sustainability analysis in water resources management and application to the Syr Darya Basin. Water Resources Research 38 (6), pp. 1085–1099.
- 6) Application to the Maipo River Basin. Research report 149, international food policy research institute, Washington, D.C.
- 7) Chung, F. I., M. C. Archer, and J. J. DeVries (1989), Network flow algorithm applied to California aqueduct simulation, J. Water Resour. Plann. Manage. 115(2), 131–147.
- 8) Rani, D. and Moreira, M.M. (2010). Simulation–Optimization Modeling: A Survey and Potential Application in Reservoir Systems Operation. Water Resour Management, 24, pp1107–1138.

7. Appendices

Appendix 1. Learning Materials

- PPT 1 : Introduction
- PPT 2 : Basic concept of water management modeling system
- PPT 3 : The function of water management model
- PPT 4 : Bacteria management
- PPT 5 : Water management research model
- PPT 6 : Closed-role model
- PPT 7 : Regular model
- PPT 8 : Coastal management model
- PPT 9 : Risk analysis model
- PPT 10 : Path analysis model
- PPT 11 : Reputation of water management
- PPT 12 : Various kinds of journal modeling references
- PPT 13 : Selecting proper modeling journals
- PPT 14 : Presentation on the modeling of water management system

Online learning resources: (URL/link)

and other learning resources: (URL/link)

Appendix 2. *Media* Zoom Meeting: (*URL/link*) Google Meet: (*URL/link*)

Appendix 3. Assessment Instrument

Scoring Rubric

Oral Presentation

| | Close to the Expectation | | Meeting the Expectation | | Exceeding the Expectation | |
|-----|--|-----|--|-----------|---|--|
| | (score 1-2) | | (score 3-4) | (score 5) | | |
| 1) | Presentation is not organized and not | 1) | Presentation is rather well -organized | 1) | Presentation is very well organized and | |
| | well developed | | and developed | | creatively developed | |
| 2) | Material is not well-explained well | 2) | Fair comprehension of the material being | 2) | Very strong knowledge regarding the | |
| 3) | Theories and concepts are not thoroughly | | delivered | | material being presented | |
| | discussed | 3) | Theories and concepts are fairly | 3) | Theories and concepts are very | |
| 4) | Presentation is not clear and not fluent | | discussed thoroughly | | thoroughly-discussed | |
| 5) | Lack of confidence in delivery, mostly | 4) | Presentation is fairly clear and fluent | 4) | Presentation is very clear and smooth | |
| | note reading | 5) | Showing fairly strong confidence and | 5) | Excellent confidence in delivery, reading | |
| 6) | Voice is unclear | | speakers read notes wisely | | notes very wisely | |
| 7) | Presentation does not attract audiences' | 6) | Voice is quite clear | 6) | Voice is very clear | |
| | attention | 7) | Able to engage audience's attention | 7) | Adequately attracts audiences' attention | |
| 8) | Inadequate responses to questions, | 8) | Fairly good in responding to questions, | | well | |
| | inadequate comprehension of the | | showing excellent comprehension of the | 8) | Responding to questions very well, very | |
| | material | | material being presented | | strong comprehension of the material | |
| 9) | Unsynchronized presentations | 9) | Good synchronization of presentation | | being delivered | |
| 10) | Exceeding the time limit, failing to | | flow | 9) | Very clear synchronization in | |
| | complete the presentation | 10) | Exceeding the time limit yet presenters | | presentation flow | |
| | | | managed to complete the presentation | 10) | Not exceeding the time limit, | |
| | | | | | presentation is completed | |

Written Assignments

| Under the average | | | Within the Average | Above the Average | | Perfect | |
|-------------------|--------------------------|----|-----------------------------|-------------------|----------------------------|---------|------------------------------|
| | (score 1 – 4) | | (score 5 – 8) | | (score 9 – 12) | | (score 13 – 15) |
| | | 1) | Using acceptable analytical | 1) | Using a relatively precise | 1) | Using the correct analytical |
| 1) | Not using the right | | methods | | analysis method | | method |
| | analytical method | 2) | Data are well analyzed | 2) | Proper data analysis | 2) | Effective data analysis |
| 2) | Incorrect data analysis | 3) | Making relevant conclusions | 3) | Making the right | 3) | Making strongly effective |
| 3) | Making wrong conclusions | 4) | There is a fairly critical | | conclusion | | conclusions |

| 4) | No critical analysis of the | | analysis of the data | 4) | Critical analysis of the data | 4) | There is a strong critical |
|----|------------------------------|----|------------------------------|----|-------------------------------|----|-------------------------------|
| | data available | 5) | There are only one or two | | is found | | analysis of the data |
| 5) | No references | | references yet irrelevant | 5) | There are many references | 5) | There are many references |
| 6) | Unmatched literature | 6) | Matching literature review | | yet irrelevant at this point | | with strong relevancy |
| | review (theory, research) | | (theory, research) and | 6) | Matching literature review | 6) | Strongly matching literature |
| | and questions | | question | | (theory, research) and | | review (theory, research) and |
| 7) | Using non-standardized | 7) | Using standard language | | questions | | questions |
| | language and poor | | with good cohesion between | 7) | Using standard language | 7) | Using standard language with |
| | cohesion | | sentences | | and sentences are | | strong cohesion between |
| 8) | No explanation about the | 8) | The implications of the | | cohesive | | sentences |
| | implications of the topics | | topics being discussed are | 8) | There is a unique and | 8) | There is a unique and very |
| | being discussed | | explained yet less | | critical explanation of the | | critical explanation of the |
| 9) | Essay is not systematically- | | thoroughly | | implications of the topics | | implications of the topics |
| | structured | 9) | Essay is not systematically- | | being discussed | | being discussed |
| | | | structured | 9) | Essay is systematically- | 9) | Essay is systematically and |
| | | | | | arranged | | neatly arranged |

Ponort

| | Report | | | | | | |
|----|-----------------------------|----|-----------------------------|----|-------------------------------|----|-------------------------------|
| | Under the average | | Within the Average | | Above the Average | | Perfect |
| | (score 1 – 4) | | (score 5 – 8) | | (score 9 – 12) | | (score 13 – 15) |
| 1) | Not using the right | 1) | Using acceptable analytical | 1) | Using a relatively precise | 1) | Using the correct analytical |
| | analytical method | | methods | | analysis method | | method |
| 2) | Incorrect data analysis | 2) | Data are well analyzed | 2) | Proper data analysis | 2) | Effective data analysis |
| 3) | Making wrong conclusions | 3) | Making relevant conclusions | 3) | Making the right | 3) | Making strongly effective |
| 4) | No critical analysis of the | 4) | There is a fairly critical | | conclusion | | conclusions |
| | data available | | analysis of the data | 4) | Critical analysis of the data | 4) | There is a strong critical |
| 5) | No references | 5) | There are only one or two | | is found | | analysis of the data |
| 6) | Unmatched literature | | references yet irrelevant | 5) | There are many references | 5) | There are many references |
| | review (theory, research) | 6) | Matching literature review | | yet irrelevant at this point | | with strong relevancy |
| | and questions | | (theory, research) and | 6) | Matching literature review | 6) | Strongly matching literature |
| 7) | Using non-standardized | | question | | (theory, research) and | | review (theory, research) and |
| | language and poor | 7) | Using standard language | | questions | | questions |
| | cohesion | | with good cohesion between | 7) | Using standard language | 7) | Using standard language with |
| 8) | No explanation about the | | sentences | | and sentences are | | strong cohesion between |
| | implications of the topics | 8) | The implications of the | | cohesive | | sentences |
| | being discussed | | topics being discussed are | 8) | There is a unique and | 8) | There is a unique and very |
| 9) | Report is not | | explained yet less | | critical explanation of the | | critical explanation of the |

| systematically-structured | | thoroughly | | implications of the topics | | implications of the topics |
|---------------------------|----|---------------------------|----|----------------------------|----|------------------------------|
| | 9) | Report is relatively not | | being discussed | | being discussed |
| | | systematically-structured | 9) | Report is systematically- | 9) | Report is systematically and |
| | | | | arranged | | neatly arranged |