

 <b>UTM</b> UNIVERSITI TEKNOLOGI MALAYSIA	<b>SEKOLAH PENGAJIAN SISWAZAH</b> <b>SCHOOL OF GRADUATE STUDIES</b> <b>BORANG LAPORAN PEMERIKSAAN SEMULA TESIS/DISERTASI</b> <b>DOKTOR KEJURUTERAAN/INDUSTRI/PENDIDIKAN KEJURUTERAAN</b> <b>REEXAMINATION REPORT FORM ON THESIS/DISSERTATION OF</b> <b>DOCTOR OF ENGINEERING/INDUSTRIAL/ENGINEERING EDUCATION</b>	SPS/39/2025 Tarikh Kuat Kuasa: 10.6.2025
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Nama Calon : \_\_\_\_\_ No. Matrik : \_\_\_\_\_  
 Candidate's Name : \_\_\_\_\_ Matric No. : \_\_\_\_\_  
 Fakulti : \_\_\_\_\_ Nama Program : \_\_\_\_\_  
 Faculty : \_\_\_\_\_ Programme Name : \_\_\_\_\_  
 Kod NEC & Deskripsi : \_\_\_\_\_ Tarikh Daftar : \_\_\_\_\_  
 NEC Code & Description : \_\_\_\_\_ Registration Date : \_\_\_\_\_  
 Nama Pemeriksa & Institusi : \_\_\_\_\_ Tempoh Pengajian : \_\_\_\_\_  
 Examiner & Institution Name : \_\_\_\_\_ Study Duration : \_\_\_\_\_  
 Tajuk Tesis/Disertasi : \_\_\_\_\_  
 Thesis/Dissertation Title : \_\_\_\_\_  
 Tarikh Peperiksaan Lisan : \_\_\_\_\_ Keputusan Peperiksaan Lisan : \_\_\_\_\_ c1 / c2  
 Oral Examination's Date : \_\_\_\_\_ Oral Examination's Result : \_\_\_\_\_ c1 / c2

**Nota/Note:**

1. Tarikh daftar – Tarikh pelajar berstatus aktif (A) untuk kali pertama/ \*Registration Date – The date on which the student first obtained status active (A)
2. Tempoh pengajian – Tarikh pelajar daftar sehingga tarikh hantar tesis/ \*Study duration – The registration date until thesis submission date
3. Sila bulatkan keputusan peperiksaan lisan calon/ Please circle the candidate's oral examination result

**SILA TANDATANGAN DI DALAM RUANG YANG DISEDIAKAN UNTUK PERAKUAN**  
 PLEASE SIGN IN THE SPACE PROVIDED FOR THE RECOMMENDATION

Tandatangan  
 SIGNATURE

**1. PERAKUAN / RECOMMENDATION**

Setelah memeriksa tesis/disertasi, saya perakuan / After examining the thesis/dissertation, I recommend that

**LULUS/PASS**

- A) CALON TELAH MEMBUAT PEMBETULAN SEPERTIMANA YANG TERCATAT DALAM LAPORAN PENGERUSI PEMERIKSAAN LISAN DAN DIANUGERAHKAN IJAZAH DOKTOR KEJURUTERAAN/DOKTOR FALSFAH  
*The candidate has done all the necessary amendments and corrections and be awarded the degree of Doctor of Engineering/Doctor of Philosophy*

ATAU / OR

- B1 ) CALON DIANUGERAHKAN IJAZAH DOKTOR KEJURUTERAAN/DOKTOR FALSFAH SETELAH MEMBUAT PEMBETULAN KECIL KEPADA TESIS/DISERTASI SEPERTI YANG DISENARAIKAN DALAM LAPORANINI DAN DISAHKAN TELAH BERBUAT DEMIKIAN OLEH PENYELIA  
*The candidate be awarded the Doctor of Engineering/Doctor of Philosophy subject to minor corrections as listed elsewhere in this report being made in the thesis/dissertation to the satisfaction of the supervisor*

ATAU / OR

- B2 ) CALON DIANUGERAHKAN IJAZAH DOKTOR KEJURUTERAAN/DOKTOR FALSFAH SETELAH MEMBUAT PINDAAN DAN PEMBETULAN KEPADA TESIS/DISERTASI SEPERTI YANG DISENARAIKAN DALAM LAPORANINI DAN DISAHKAN TELAH BERBUAT DEMIKIAN OLEH PEMERIKSA DALAM/LUAR  
*The candidate be awarded the degree of Doctor of Engineering/Doctor of Philosophy subject to the amendments and corrections as listed elsewhere in this report being made in the thesis/dissertation to the satisfaction of the Internal/External Examiner(s)*

ATAU / OR

**IJAZAH LEBIH RENDAH/LOWER DEGREE**

- D) PENCAPAIAN CALON TIDAK MEMUASKAN UNTUK IJAZAH DOKTOR KEJURUTERAAN/DOKTOR FALSFAH. CALON PERLU MENDAFTAR SEMULA SEBAGAI PELAJAR SARJANA PENYELIDIKAN DAN MEMBUAT PEMBETULAN KEPADA TESIS/DISERTASI SEPERTI YANG DISENARAIKAN DALAM LAPORANINI DAN DISAHKAN TELAH BERBUAT DEMIKIAN OLEH PEMERIKSA DALAM/LUAR  
*The candidate not be awarded the degree of Doctor of Engineering/Doctor of Philosophy. The candidate needs to re-register as a Master of Research Student and make corrections to the thesis/dissertation as listed elsewhere in this report being made in the thesis to the satisfaction of the Internal/External Examiner(s)*

ATAU / OR

**GAGAL/FAIL**

- E) CALON GAGAL MEMBUAT PEMBETULAN YANG DITETAPKAN DALAM PEPERIKSAAN LISAN PERTAMA. OLEH ITU, CALON TIDAK DIANUGERAHKAN IJAZAH DOKTOR KEJURUTERAAN/DOKTOR FALSFAH  
*The candidate did not make the necessary corrections as required in the first oral examination. Thus, the candidate not be awarded the degree of Doctor of Engineering/Doctor of Philosophy*

Tandatangan (Signature): ..... Tarikh (Date): .....

2. **Sila berikan ulasan dan penilaian terhadap perkara berikut sebagai asas perakuan**  
PLEASE PROVIDE YOUR COMMENTS AND ASSESSMENT ON THE FOLLOWING ITEMS AS THE GROUNDS FOR RECOMMENDATION

\*Sila **bulatkan** skala pengukuran seperti berikut:  
\*Please **circle** the scale of assessment as follows:

<b>1</b> Sangat Lemah <i>Very Weak</i>	<b>2</b> Lemah <i>Weak</i>	<b>3</b> Memuaskan <i>Satisfactory</i>	<b>4</b> Baik <i>Good</i>	<b>5</b> Cemerlang <i>Excellent</i>
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2.1 Tajuk Tesis/Disertasi (*Thesis/Dissertation Title*)

2.2 Abstrak (*Abstract*)

PLO5 (CS): *Candidate demonstrates a good and concise abstract writing.*

\*Skala pengukuran/Scale of assessment:      1      2      3      4      5

2.3 Pengenalan, Permasalahan Penyelidikan, Objektif, Skop, dll. (*Introduction, Research Problem, Objective, Scope, etc.*)

PLO1 (AKW): *Candidate demonstrates critical understanding on Research Problem.*

\*Skala pengukuran/Scale of assessment:      1      2      3      4      5

Tandatangan (*Signature*): ..... Tarikh (*Date*): .....

2.4 Kajian Literatur (*Literature Review*)

PLO1 (AKW): *The literature review is very comprehensive and describes relevant material.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

PLO2 (CG) - *The literature review is critically connected with the purpose of the study.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

2.5 Metodologi/Bahan/Reka Bentuk dan Kaedah (*Methodology/Material/Design and Methods*)

PLO3 (PS): *Candidate demonstrates a good mastery of practical skills and scientific skills through methodology/material/design and methods to solve complex research problems.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

2.6 Analisis dan Penyampaian Data/Keputusan (*Analysis and Presentation of Data/Findings*)

PLO5 (CS): *Communicate effectively the knowledge, skills, ideas, and research findings using appropriate methods to peers, scholarly communities, and societies through various medium.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

PLO6 (DS): *Use a broad range of information, media, and technology applications to support study or work.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

2.7 Perbincangan dan Interpretasi Keputusan Kajian (*Discussion and Interpretation of Research Results/Findings*)

PLO2 (CG): *Critically discuss and synthesis the Research Results/Findings.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

PLO7 (NS): *Interpret and Undertake critical evaluation of numerical and graphical data.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

2.8 Kesimpulan dan Kepentingan Sumbangan kepada (*Conclusion and Significance of Contribution to*)

(i) industri/organisasi (*industry/organisation*)

(ii) inovasi (*innovation*)

(iii) pembangunan ilmu (*knowledge development*)

PLO2 (CG): *Contribution towards advance knowledge (Scholarship of Knowledge).*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

2.9 Gaya Penulisan (*Writing Style*)

PLO5 (CS): *Communicate effectively through writing the knowledge, skills, ideas, and research findings to peers, scholarly communities, and societies.*

\*Skala pengukuran/Scale of assessment: 1 2 3 4 5

Tandatangan (*Signature*): ..... Tarikh (*Date*): .....

2.10 Kekuatan Tesis/Disertasi (*Strength of the Thesis/Dissertation*)

2.11 Kelemahan Tesis/Disertasi (*Weakness of the Thesis/Dissertation*)

2.12 Kepentingan Kajian (*Significance of the Study*)

2.13 Perakuan Penganugerahan (*Recommendation for the Award*)

2.14 Lain-lain ulasan (*Other comments*)

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Tandatangan & Nama Pemeriksa/*Signature & Name of Examiner*  
Tarikh/*Date*: