**DEPARTMENT OF MECHANICAL ENGINEERING**

**UNIVERSITY OF ENGINEERING AND TECHNOLOGY** **TAXILA**

**Minutes of Meeting of Board of Post-Graduate Studies, held on 15.07.2019 at 10:00am in the Conference Room, MED**

Following were present:

* 1. Prof. Dr. Riffat Asim Pasha (In Chair)
	2. Prof. Dr. M. Shahid Khalil
	3. Dr. Azhar Munir
	4. Prof. Dr. Muhammad Zubair Khan
	5. Dr. Ajaz Bashir Janjua
	6. Dr. Muhammad Ali Nasir
	7. Dr. Muzaffar Ali (Invited Member)
	8. Dr. Hafiz Muhammad Ali (Invited Member)
	9. Dr. Waqar Ahmed Qureshi (Invited Member)
	10. Dr. Abid Hussain (Invited Member)

Meeting started with the name of Allah Al-mighty.

**Item No. 1. Post-graduate research seminar (Final Progress Report)**

Following students presented their progress report of M.Sc. Research.

1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Hamza Babar 17-MS-FT-TSE-08** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali  |
| **Thesis Title** | Experimental Investigation on the Performance of Mini-Channel Heat Sinks by Employing Advanced Nanofluids |
| **Panel for External Viva** | 1. Dr. Ajaz Bashir Janjua, General Manager, HMC Taxila.
2. Prof. Dr. M. Zubair Khan, IST Islamabad.
3. Dr. Azhar Munir, Director NESCOM Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Syeda Laraib Tariq 17-MS-FT-EnE-04** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Heat Sinks with Nano Phase Change Material for Passive Cooling |
| **Panel for External Viva** | 1. Dr. Azhar Munir, Director NESCOM Islamabad.
2. Dr. Taqi Ahmad Cheema, Mechanical Engineering Dept, GIKI Topi.
3. Dr. Asim Jadoon, PE HMC-3, Taxila.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Samina Javed 17-MS-FT-EnE-08** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Experimental Investigation of the Convective Heat Transfer of Nanofluids in a Circular Tube |
| **Panel for External Viva** | 1. Dr. Najam us Saqib
2. Dr. Ajaz Bashir Janjua, General Manager, HMC Taxila.
3. Dr. Muhammad Abid, Assistant Prof. MED Comsats Wah Cantt.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Sonia Nawaz 17-MS-PT-TSE-23** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Thermal Management of Electronic Components by using Graphene Oxide based Nanofluids. |
| **Panel for External Viva** | 1. Dr. Taqi Ahmed Cheema, Mechanical Engineering Dept. GIKI Topi.
2. Dr. Muhammad Abid, Asst. Prof. MED, Comsats Wah Cantt.
3. Dr. Azhar Munir, Director NESCOM Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Tayyab Raza Shah 17-MS-FT-TSE-04** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Performance Analysis of Automotive Cooling System using Advanced Nanofluids. |
| **Panel for External Viva** | 1. Prof. Dr. M. Zubair Khan, IST Islamabad.
2. Dr. Ajaz Bashir Janjua, General Manager, HMC Taxila.
3. Dr. Azhar Munir, Director NESCOM Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Haseeb ur Rehman 17-MS-PT-AMD-09** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Experimental Investigation of Condensate Retention on Horizontal Pin Fin Tube with Varying Pin Angle. |
| **Panel for External Viva** | 1. Dr. Zaheer ul Hassan, Managing Director, POF Wah Cantt.
2. Dr. Asim Jadoon, PE HMC-3, Taxila.
3. Prof. Dr. M. Zubair Khan, IST Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Zaheer Ahmad 16-MS-PT-TSE-08** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Experimental Investigation on the Effect of Different Shapes of Ribs on the Performance of Heat Sinks by Employing Nanofluids. |
| **Panel for External Viva** | 1. Dr. Asim Jadoon, PE HMC-3, Taxila
2. Dr. Taqi Ahmed Cheema, Mechanical Engineering Dept. GIKI Topi.
3. Dr. Azhar Munir, Director NESCOM Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Ammar Akram 17-MS-FT-TSE-06**  |
|  **Supervisor** | Prof. Dr. Shahab Khushnood |
| **Thesis Title** | Modelling of Flow Induced Vibration of Tube in a Tube Bundle with Unsteady Flows |
| **Panel for External Viva** | 1. Prof. Dr. Ajaz Mehmood Shahid, University of Lahore, Lahore.
2. Prof. Dr. Khawaja Sajid Bashir, Preston University Islamabad.
3. Dr. Qamar Iqbal, Deputy General Manager, HMC-3, Taxila.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Waqas Ahmed 17-MS-PT-PE(T)-02** |
|  **Supervisor** | Dr. Abid Hussain |
| **Thesis Title** | Thermal Management of Lithium Ion Batteries using Metal Foam Saturated with Phase Change Material. |
| **Panel for External Viva** | 1. Dr. Emad, Chairman SCME, NUST Islamabad.
2. Dr. Azhar Zaidi, Asst. Prof. SCME, NUST Islamabad.
3. Dr. Hassan Ali, Chairman Mechanical Engineering Dept. Rachna College Gujranwala.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Dilawar Ali Khan 15-MS-PT-TSE-15** |
|  **Supervisor** | Dr. Hafiz Muhammad Ali |
| **Thesis Title** | Cooling of Microprocessor of CPY by using Complex Wavy Heat Sinks Employed with Nanofluids |
| **Panel for External Viva** | 1. Dr. Muhammad Abid, Assistant Prof. MED, Comsats Wah Cantt.
2. Dr. Azhar Munir, Director NESCOM Islamabad.
3. Prof. Dr. M. Zubair Khan, IST Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Hareem Jawaid 17-MS-FT-AMD-01** |
|  **Supervisor** | Dr. Waqar Ahmed Qureshi |
| **Thesis Title** | Modelling and Experimental Validation of Piezoelectric Actuators. |
| **Panel for External Viva** | 1. Dr. Rehan Jamshed, PMO Taxila.
2. Dr. Muhammad Mubashir, EME, NUST Islamabad.
3. Prof. Dr. Muhammad Zubair Khan, IST Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Arslan Ibrahim 17-MS-PT-TSE-12** |
|  **Supervisor** | Dr. Muzaffar Ali |
| **Thesis Title** | Model Based Transient and Experimental Analysis of a Solar Parabolic Trough Collector System. |
| **Panel for External Viva** | 1. Dr. Abdul Waheed Badar, Asst. Prof. HITEC Univ. Taxila.
2. Dr. Ajaz Bashir Janjua, General Manager, HMC Taxila
3. Dr. Saeed Badshah, Associate Professor, MED, IIU Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **M. Nauman Bin Zakir 15-MS-PT-AMD-06** |
|  **Supervisor** | Prof. Dr. Riffat Asim Pasha |
| **Thesis Title** | The Effect of Notch Parameters and Loadings on a Fatigue Life of Carbon Steel using FEA Technique. |
| **Panel for External Viva** | 1. Prof. Dr. M. Zubair Khan, IST. Islamabad.
2. Dr. Hassan Junaid, General Manager, PMO Taxila
3. Prof. Dr. Amir Sultan, Campus Director Chakwal, UET Taxila.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Muhammad Soban Arshad 15-MS-PT-AMD-01** |
|  **Supervisor** | Dr. Muhammad Ali Nasir |
| **Thesis Title** | Effect of Tungsten Grain Size on Mkrastructure and Mechanical Properties of Tungsten Heavy Alloy. |
| **Panel for External Viva** | 1. Dr. Sanaullah Butt, Director Design, AWC. Hassanabdal.
2. Dr. Atta ur Rehman, Assistant Prof, HITEC Taxila
3. Dr. Muhammad Ramzan Abdul Karim, Assistant Professor, GIKI.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Ubaid ur Rehman 17-MS-FT-EnE-01**  |
|  **Supervisor** | Dr. Tanzeel ur Rashid |
| **Thesis Title** | Technological Assessment based on LCOE of bioenergy resources in Pakistan |
| **Panel for External Viva** | 1. Dr. Noor Jamal, PAEC Islamabad2. Dr. Ajaz Bashir Janjua, General Manager, HMC, Taxila.3. Dr. Salman Raza, Assistant Professor, Industrial Engineering Dept, UET Taxila. |

1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Waqas Ahmed 17-MS-FT-EnE-02** |
|  **Supervisor** | Dr. Muzaffar Ali |
| **Thesis Title** | Performance Enhancement of Indirect Evaporative Cooler through Efficient Channel Design |
| **Panel for External Viva** | 1. Dr. Ajaz Bashir Janjua, Deputy Manager, HMC Taxila.
2. Dr. Atta ur Rehman, Assistant Prof, HITEC Taxila
3. Dr. Muhammad Ramzan Abdul Karim, Assistant Professor, GIKI.
 |

1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Faria Akhter 17-MS-FT-EnE-05** |
|  **Supervisor** | Dr. Muzaffar Ali |
| **Thesis Title** | Model-Based Transient Simulation and Experimental Investigation of Solar Compound Parabolic Collector using Nanofluid. |
| **Panel for External Viva** | 1.Prof. Dr. Nadeem Sheikh, Mechanical Engineering Dept. IIU Islamabad.2.Dr. Majid Ali, Assistant Professor, NUST Islamabad.3. Dr. Amjad Farooq, PIEAS, Islamabad. |

1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **M. Farhan Habib 17-MS-FT-EnE-06** |
|  **Supervisor** | Dr. Muzaffar Ali |
| **Thesis Title** | Integration of Solar assisted desiccant system with absorption system for efficient thermal load management |
| **Panel for External Viva** | 1. Dr. Abdul Waheed Badar, Asst. Prof., HITEC University, Taxila.
2. Dr. Adeel Waqas, Assistant Professor, NUST Islamabad.
3. Dr. Azhar Munir, Director NESCOM Islamabad.
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1. Board recommended the final progress report of below mentioned scholar and allowed him to appear for his final viva. Panel of external examiners is also recommended.

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| **Name of Scholar & Reg.** | **Waqas Nazir 17-MS-FT-EnE-09** |
|  **Supervisor** | Engr. Tanzeel ur Rashid |
| **Thesis Title** | Technological and Socio-Economic Transformation for Pakistan’s Two-Wheeler Transport |
| **Panel for External Viva** | 1. Dr. Tanvir Ahmad,SAC Pakistan.
2. Dr. Khalid Akhtar Associate Professor, NUST Islamabad.
3. Dr. Khawaja Khalid Assistant Professor, NUST Islamabad.
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**Item No. 2. Topic Approval/ Synopsis for MSc Thesis**

Board recommended following Research Topics and Supervisors against following MSc Scholars.

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| **Sr. No.** | **Student Name** | **Supervisor** | **Research Topics** |
| 1 | Muhammad Aamer Hayat17-MS-PT-PE(T)-17 | Dr. Hafiz Muhammad Ali  | Experimental Investigation of Hybrid Phase Change Material with Metallic Foam and Heat Pipe. |
| 2 | Muhammad Shoaib Rafiq17-MS-PT-PE(T)-21 | Dr. Hafiz Muhammad Ali  | Experimental Investigation of Convective Heat Transfer using Ethylene Glycol based Nano-Fluid. |
| 3 | Saad Iqbal16-MS-PT-TSE-07 | Dr. Hafiz Muhammad Ali  | Thermal Management of Electronics Devices using Nano-PCM Integrated with Metal Foam Based Heat Sink. |
| 4 | Hassan Zulfiqar15-MS-PT-P&G-01 | Prof. Dr. Shahab Khushnood | Investigation of Fluidelastic Instability Effect of Unsteady Flow in Finned Heat Exchanger Tube Arrays. |
| 5 | Muhammad Uzair Shah17-MS-PT-TSE-16 | Dr. Hafiz Muhammad Ali  | Dynamic Performance Analysis of Automotive Cooling System using Ethylene Glycol-Water Mixture Based Nanofluids |
| 6 | Khaliq ur Rahman15-MS-PT-P7G-02 | Prof. Dr. Shahab Khushnood | Effect of Fluidelastic Instability and Upstream Turbulence on Wavy and Grooved Heat Exchanger Tube Arrays. |
| 7 | Mian Imran18-MS-FT-AMD-02 | Dr. Azhar Hussain | Failure Analysis and Root Cause Determination of Failure in Air-Fuel After Burner Pipe of Turbojet Engine. |
| 8 | Muhammad Usman Tahir 17-MS-PT-AMD-19 | Prof. Dr. Riffat Asim Pasha | Mechanical Characterization of Fiber Metal Laminates Subjected to Thermal Cycling. |
| 9 | Danyal Alam17-MS-FT-AMD-16 | Dr. Nazeer Anjum | Investigation of Notched Fatigue Behaviour of Al 2024 Processed Through Equal Channel Angular Pressing (ECAP). |
| 10 | Saif ullah Khalid17-MS-PT-TSE-15 | Dr. Hafiz Muhammad Ali  | Effect of Introducing Anngular Fins on Thermal Performance of Sintered Copper Wicked Heat Pipes.  |
| 11 | Muhammad Rizwan16-MS-PT-TSE-12 | Dr. Syed Nasir Shah | System Design/ Analysis for Optimal Utilization of Cleanroom Environment Control System (CECS). |
| 12 | Muhammad Faisal Mukhtar17-MS-PT-TSE-08 | Dr. Muddassir Ali  | Mathematical Model for Electron Beam Induced Ablation D uring Pulsed Electron Deposition of Graphite. |
| 13 | Tallat Masood17-MS-PT-AMD-01 | Dr. Muhammad Ali Nasir | Performance Characterization of Nano-additives in Lead-Acid Batteries. |
| 14 | Muhammad Hassan Anwar Bhatti | Dr. Muhammad Shehryar | Thermal Investigation of Heavy Duty Automotive Engine Platform |
| 15 | Talal bin Ahmad | Dr. Tanzeel ur Rashid | Emerging Technology in urban Bus Transit system of Pakistan |
| 16 | Ali Ayub Danial | Dr. Muddassir Ali | Modeling of polyenergetic electron beam ablation of zinc oxide during solar cell thin film processing. |
| 17 | Mubeen Azhar Siddique | Prof Dr. M. Shahid Khalil | Impact of Renewable Energy on smart grid in Pakistan |

The meeting ended with the vote of thanks to the chair.

***DIRECTOR, PGS***

***CHAIRMAN***