



HOSPITAL UiTM PUNCAK ALAM

JABATAN INFRASTRUKTUR

SENARAI SEMAK PROSES PENGUJIAN DAN PERTAULIAHAN (T&C)

1	Empat (4) salinan penghantaran peralatan(<i>Delivery Order</i>)	
2	Empat (4) salinan <i>invoice</i> pembayaran	
3	Empat (4) salinan pesanan tempatan(<i>Local Oder</i>)	
4	Empat(4)salinan sijil pengujian dan pertauliahan(T&C)	
5	Empat (4) salinan kenyataan tawaran (E Procurement Plus)	
6	Salinan keputusan pengujian elektrik peralatan(<i>Electrical Safety Test</i>) <i>Electrical Safety Test</i> mesti dijalankan di lokasi (T&C).	
7	Salinan senarai semak <i>Performace Test Result</i> (Dilakukan di lokasi T&C)	
8	Salinan <i>Medical Devices Authority</i> (MDA) Company dan Peralatan	
9	Service manual & Operation Manual	
10	Senarai alat ganti berserta harga yang perlu di ditukar secara berjadual dan tidak berjadual	
11	Kadar harga penyelenggaraan berkala (PPM)	

NOTA :

1. Pihak pengguna harus memaklumkan 14 hari sebelum Proses Pengujian&Pertauliahan(T&C) dilakukan. Sila email permakluman T&C kepada sitilaila@uitm.edu.my, faizolmohtar@uitm.edu.my dan bems_z1p3@triplc.com.my dan satriaacesbems2@gmail.com
2. Senarai semak ini harus dilengkapi semasa proses T&C.
3. Tandakan (✓) pada bahagian yang disediakan.

DISEDIKAN OLEH (VENDOR)	DISAHKAN OLEH (PENGGUNA)

 UNIVERSITI TEKNOLOGI MAR A	Hospital Al-Sultan Abdullah Biomedical Engineering Maintenance Services Testing & Commissioning Checklist	HUITM-CSD-FCY-F-011-00 Page 1 of 5																																											
Tick (✓) where appropriate																																													
PART 1 ASSET DETAILS																																													
HOSPITAL : DEPARTMENT : ASSET DESCRIPTION : GMDN & UMDNS TYPE CODE : MDA RISK CLASSIFICATION : MANUFACTURER : SERIAL NO. : SOFTWARE VERSION NO. : MANUFACTURER RECOMMENDED LIFESPAN : years POWER SPECIFICATION : (Watt) Volt-Ampere	LOCATION : LOCATION CODE : ASSET NO. : BRAND : MODEL : MAKE : CALIBRATION/ QA REQUIREMENT : ☐ Required ☐ Not Required (Calibration is not under CC scope, calibration by the supplier shall be one year from Acceptance date) CALIBRATION/ QA COVERED DURING WARRANTY ☐ YES ☐ NO (If no, under reimbursable work to user) CALIBRATION / QA FREQUENCY : / years																																												
PART 2 PURCHASE DETAILS																																													
SUPPLIER : (Bumi-agent/as stated on LPO) ADDRESS : AUTHORISED SERVICE AGENT: (Sole distributor / service warranty provider) ADDRESS : LOCAL PURCHASE ORDER NO. :	CONTACT PERSON : CONTACT NO. : CONTACT PERSON : CONTACT NO. : PURCHASE PRICE : RM (Itemized price / quantity / type code)																																												
PART 3 WARRANTY DETAILS																																													
PURCHASE DATE : (LPO date) MANUFACTURING DATE : (Date of equipment is produced) T&C DATE : (First T&C Date) WARRANTY START DATE : (Acceptance Certificate date for whole system) WARRANTY END DATE :	PPM FREQUENCY : (Manufacturer recommendation) WARRANTY PPM TENTATIVE DATES : 1) 4) 2) 5) 3) 6)																																												
PART 4 PHYSICAL INSPECTION																																													
<table border="0" style="width: 100%;"> <tr> <th style="width: 80%;"></th> <th style="width: 10%;">PASS</th> <th style="width: 10%;">FAIL</th> <th style="width: 10%;">NA</th> </tr> <tr> <td>1. Chassis - verify physical integrity, cleanliness and condition</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>2. Mount/ Fasteners - verify physical integrity</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>3. Castor / Brakes - verify proper function and integrity</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>4. Power Cord/Strain Relief - verify physical integrity (do not accept if no strain relief on the cord or modified plug head)</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table>		PASS	FAIL	NA	1. Chassis - verify physical integrity, cleanliness and condition	☐	☐	☐	2. Mount/ Fasteners - verify physical integrity	☐	☐	☐	3. Castor / Brakes - verify proper function and integrity	☐	☐	☐	4. Power Cord/Strain Relief - verify physical integrity (do not accept if no strain relief on the cord or modified plug head)	☐	☐	☐	<table border="0" style="width: 100%;"> <tr> <th style="width: 80%;"></th> <th style="width: 10%;">PASS</th> <th style="width: 10%;">FAIL</th> <th style="width: 10%;">NA</th> </tr> <tr> <td>5. Fittings/ Connectors - check all fittings/connectors</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>6. Control/Switches - verify proper operation of controls</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>7. Indicators/ Displays - verify proper illumination and operation</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>8. Accessories - verify physical integrity</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>9. Alarms - verify functionality</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table>		PASS	FAIL	NA	5. Fittings/ Connectors - check all fittings/connectors	☐	☐	☐	6. Control/Switches - verify proper operation of controls	☐	☐	☐	7. Indicators/ Displays - verify proper illumination and operation	☐	☐	☐	8. Accessories - verify physical integrity	☐	☐	☐	9. Alarms - verify functionality	☐	☐	☐
	PASS	FAIL	NA																																										
1. Chassis - verify physical integrity, cleanliness and condition	☐	☐	☐																																										
2. Mount/ Fasteners - verify physical integrity	☐	☐	☐																																										
3. Castor / Brakes - verify proper function and integrity	☐	☐	☐																																										
4. Power Cord/Strain Relief - verify physical integrity (do not accept if no strain relief on the cord or modified plug head)	☐	☐	☐																																										
	PASS	FAIL	NA																																										
5. Fittings/ Connectors - check all fittings/connectors	☐	☐	☐																																										
6. Control/Switches - verify proper operation of controls	☐	☐	☐																																										
7. Indicators/ Displays - verify proper illumination and operation	☐	☐	☐																																										
8. Accessories - verify physical integrity	☐	☐	☐																																										
9. Alarms - verify functionality	☐	☐	☐																																										
PART 5 PERFORMANCE TEST (TO BE DONE BY SUPPLIER)																																													
Relevant Performance Test on equipment : ☐ Done ☐ Not Done ☐ Pass ☐ Fail	Performance check of software ☐ Pass ☐ Fail ☐ NA Performance check of all accessories ☐ Pass ☐ Fail																																												
PART 6 ELECTRICAL SAFETY TEST																																													
Electrical Safety Test (Please attach report) : ☐ Pass ☐ Fail (In accordance to MS IEC 60601/ 61010/ 62353) ☐ Not Applicable	Equipment Power Cord Classification : ☐ Class I ☐ Class II Equipment Type : ☐ B ☐ BF ☐ CF (Verify Equipment Type and markings on the equipment)																																												

 UNIVERSITI TEKNOLOGI MARA	Hospital Al-Sultan Abdullah <i>Biomedical Engineering Maintenance Services</i> Testing & Commissioning Checklist	HUITM-CSD-FCY-F-011-00 Page 2 of 5		
ASSET NO ▶				
PART 7 TESTING & COMMISSIONING REQUIREMENTS				
Tick (✓) where appropriate		Note: Equipment shall be under exemption until ALL relevant documents are provided		
#	Document meets the following requirements	Available	Not Available	Remarks
1	Copy of PURCHASE AGREEMENT / TENDER DOCUMENT / CONTRACT DOCUMENT / QUOTATION			
2	Copy of PURCHASE ORDER (LPO)			
3	Copy of DELIVERY NOTE (Delivery Order) and ensure that; 3.1) Physical delivery MUST tally with Delivery Note 3.2) To specify separately between Main System, Subsystems, Accessories and Consumables			
4	Copy of Notice to Commence / to Stop Service (SNF)			
5	USER MANUAL / OPERATION MANUAL / APPLICATION MANUAL <i>(Hospital copy shall be an original copy)</i>			
6	SERVICE / MAINTENANCE MANUAL BOTH SOFTCOPY AND HARDCOPY with the following; 6.1) INSTALLATION MANUAL 6.2) PPM MANUAL 6.3) CIRCUIT DIAGRAM MANUAL 6.4) SPARE PARTS LIST/MANUAL			
7	PPM CHECKLIST <i>(as per manufacturer requirement)</i>			
8	List of tools/test equipment required (during maintenance & calibration)			
9	CERTIFICATE OF ACCEPTANCE			
10	Declaration of CE or IEC conformance and a copy of CALIBRATION CERTIFICATE			
11	A backup copy of SOFTWARE for user and SOFTWARE LICENSE inclusive of access key			
12	Declaration of Previous Recalls / Device Alerts / End of Life Date			
13	FACTORY PERFORMANCE TEST RESULT			
14	QA RESULT & CERTIFICATE			
15	MDA SUPPLIER & EQUIPMENT CERTIFICATE			
16	ELECTRICAL SAFETY TEST & TEST EQUIPMENT CALIBRATION CERTIFICATE <i>(during testing and commissioning)</i>			
17	SERVICE ENGINEER TRAINING CERTIFICATE (Manufacturer Training)			
18	Response time during warranty period - On call and on Site			
19	TENTATIVE DATES & SYLLABUS for User Training			
20	TENTATIVE DATES & SYLLABUS for Technical Training			
Remarks: 1. Power cord must strain relief (Medical grade) - if no strain relief on the cord or modified plug head need to replace with medical grade. 2. For radiology equipment, QA and QC test report is compulsory 3. Certificates of installation (JKKP) *if applicable				

 UNIVERSITI TEKNOLOGI MARA	Hospital Al-Sultan Abdullah Biomedical Engineering Maintenance Services Testing & Commissioning Checklist			HUITM-CSD-FCY-F-011-00 Page 3 of 5
ASSET NO				
PART 8 ITEMIZED LIST				
	List of Subsystems	Qty	Price	S/N (if applicable) :
	a)			
	b)			
	c)			
	d)			
	e)			
	f)			
	g)			
	h)			
	i)			
	j)			
	k)			
	l)			
	List of accessories <i>(Accessories shall carry the same warranty period as main system, if it is not shall be reimbursable to end user)</i>	Qty	Price	S/N (if applicable) :
	a)			
	b)			
	c)			
	d)			
	e)			
	f)			
	g)			
	h)			
	i)			
	j)			
	k)			
	l)			
	Plan Preventive Maintenance (PPM)	Qty	Price	Remarks
	a)			

ASSET NO ▶

PART 9 TESTING & COMMISSIONING REFERENCE NUMBER AND STATUS

Tick (✓) where appropriate

T&C Work Order No ▶

T&C Date ▶

☐ Done

☐ Not Done

Remarks : _____

☐ Accepted

☐ Not Accepted (Refer to Part 10)

PART 10 DEFECT LIST

Problem/Defect Statement
Remarks
Suggestion

PART 11 DEVICE RISK IDENTIFICATION

**Note: Supplier to declare potential risk associated with the device. (Technical staff and User to confirm and ask for details)

No	Identified Risks	Risk Control	Risk Reporting / Risk Monitoring

PART 12 TRAINING PROVISION BY SUPPLIER

Technical Training :

User training on clinical usage & daily maintenance :

Emphasis on Do(s) & Don't(s)

Include decontamination & sterilization procedure

☐ Done

☐ Not Done

☐ Done

☐ Not Done

☐ Reschedule

Reschedule date : _____

(Please indicate reschedule date)

PART 13 FACILITIES AND LOCATION ASSESSMENT

Uninterrupted Power Supply	☐ Not Required	☐ Required and provided	☐ Required but not provided	☐ Remarks :
Back-up Battery	☐ Not Required	☐ Required and provided	☐ Required but not provided	☐ Remarks :
Room Temperature requirement	☐ Not Specified	☐ Comply	☐ Does Not Comply	☐ Remarks :
Room Humidity requirement	☐ Not Specified	☐ Comply	☐ Does Not Comply	☐ Remarks :
Electrical Power Supply	☐ Sufficient	☐ Insufficient	☐ Remarks :	
Compressed Air supply	☐ Sufficient	☐ Insufficient	☐ Remarks :	
Medical Gas Supply	☐ Sufficient	☐ Insufficient	☐ Remarks :	
Water Supply	☐ Sufficient	☐ Insufficient	☐ Remarks :	

