PUSAT PENGAJIAN KEJURUTERAAN MEKANIK, KAMPUS KEJURUTERAAN, UNIVERSITI SAINS MALAYSIA

NOTIS SEBUTHARGA			
NOMBOR SEBUTHARGA	**SH2/21/A4/PMEKANIK/U/00041**		
NAMA SEBUTHARGA	**MEMBEKAL, MENGHANTAR, MEMASANG DAN KOMISYEN "COLLABORATIVE ROBOT" KE PUSAT PENGAJIAN KEJURUTERAAN MEKANIK, KAMPUS KEJURUTERAAN, UNIVERSITI SAINS MALAYSIA, PULAU PINANG.**		
TARIKH PELAWAAN	26 April 2021 (Isnin)		
MAKLUMAT KELAYAKAN			
KELAYAKAN (WAJIB)	• Berdaftar Dengan Kementerian Kewangan Malaysia Dalam Kod Bidang Berkaitan.	**060501** – Peralatan Makmal serta Aksesori	
MAKLUMAT DOKUMEN SEBUTHARGA			
PERMOHONAN DOKUMEN SEBUTHARGA	• Dokumen Sebutharga (softcopy) boleh didapati melalui laman sesawang rasmi Pusat Pengajian Kejuruteraan Mekanik, Kampus Kejuruteraan, Universiti Sains Malaysia, di bahagian 'Sebut Harga' yang boleh dicapai menerusi pautan berikut; https://mechanical.eng.usm.my/index.php/ms/.		
MAKLUMAT SEBUTHARGA			
TARIKH TUTUP	**12 Mei 2021 (Rabu)**	WAKTU DITUTUP	12:00 tengah hari
TEMPAT / SYARAT PENYERAHAN	Dokumen Sebutharga ***hardcopy & softcopy*** (**pemacu pena/cakera padat**) yang telah siap diisi hendaklah dimasukkan ke dalam sampul surat berlakri dan ditulis di sebelah atas kiri sampul surat bertanda **Nombor Sebutharga - SH2/21/A4/PMEKANIK/U/00041** dan dimasukkan sendiri ke dalam peti tawaran di Peti Sebutharga **Pusat Pengajian Kejuruteraan Mekanik, Aras 2, Pejabat Am, Kampus Kejuruteraan, USM, Pulau Pinang.**		

PENGUMUMAN

1. Semua penyebutharga perlu mematuhi syarat-syarat sebutharga dan kelayakan termasuk kod bidang/gred yang telah ditetapkan.
2. Sebarang kesilapan atau ketidakpatuhan syarat-syarat sebutharga dan kelayakan termasuk kod bidang/gred yang telah ditetapkan adalah di bawah tanggungjawab penyebutharga.
3. **Sebarang pembayaran bagi pembelian dokumen sebutharga tidak akan dikembalikan.**
4. Penyebutharga perlu memastikan SOP KKM bagi membendung penularan wabak Covid-19 dipatuhi seperti amalan penjarakan sosial dan tidak dibenarkan sama sekali amalan penghantaran dokumen tawaran secara berkumpulan.

*** Penyebutharga yang tidak mendapat sebarang maklum balas atau jawapan selepas tiga (3) bulan dari tarikh tutup tawaran adalah dianggap tidak berjaya.**

**** Pihak Universiti berhak menerima kesemua atau sebahagian dari sebutharga-sebutharga tersebut dan tidak terikat untuk menerima sebutharga yang terendah atau mana-mana sebutharga pun.**

UNIVERSITI SAINS MALAYSIA

TO SUPPLY, DELIVER, INSTALL AND COMMISSIONING "**Collaborative Robot**" TO UNIVERSITY SAINS MALAYSIA

TECHNICAL SPECIFICATION SCHEDULE

Quotation No. :

Tax Code :

ITEM NO.	UNIVERSITY'S DESCRIPTION	QUANTITY	BIDDER'S SPECIFICATION (Please Write Your Specification In This Column)	TECHNICAL EVALUATION (For Official Use Only)
	A. ITEM Collaborative robot (UR16E or equivalent) **B. DESCRIPTION** The tenderer is required to supply a collaborative robot. The collaborative robot shall include software, teach pendant, certified end-effectors, and visual system. **C. ESSENTIAL FEATURES** 1. The collaborative robot can handle up to 16 kg of payload. 2. The collaborative robot shall have a maximum reach of 900 mm and ± 0.05 mm repeatability. 3. The collaborative robot shall built-in force sensing. 4. The collaborative robot shall meet compliance and safety standards (EN ISO 13849). 5. The collaborative robot shall allow integration with certified gripper, and visual system. **D. TECHNICAL SPECIFICATION** 1. Collaborative robot (UR16E or equivalent) Payload: 16kg Reach: 900 mm Programming: Touchscreen with graphical user interface Force sensing: Force and torque x,y,z Force precision: 5.0 N Force accuracy: 5.5 N Torque precision: 0.2 Nm Torque accuracy: 0.5 Nm Pose repeatability: ±0.05 mm	**1 UNIT** **1 UNIT**		

	E. ESSENTIAL COMPONENTS & ACCESSORIES 1. End-effector or gripper (RG6-FT QC or equivalent) Total adjustable stroke: 160 mm Max repetition accuracy: 0.3 mm Max reversing backslash: 1.0 mm Max gripping force: 120 N Max gripping force accuracy: ±10 N Operating voltage: 26V DC Fingertips: Customizable Connection: M8x1 cable, 8-pos 2. Vision system (On-Robot Eyes or equivalent) RGB camera resolution: 1280 x 720 px Depth technology: Active IR Stereo Depth output resolution: 1280 x 720 px Working distance: 400 – 1000 mm IP rating: IP 54 Application: Detection, inspection, sorting Mounting options supported: Robot Tilt orientation (robot mounted): 0 – 45 – 90 degrees. Detection repeatability: <2 mm Detection accuracy: 2 mm Come with a power supply. **F. STANDARD REQUIREMENTS AND INSTRUCTIONS** <u>Power requirement:</u> i. The equipment supplied must be brand new with proper serial number to prove it and must not be a used or a reconditioned instrument. ii. The equipment must be fully installed and made fully functioning at site. iii. The equipment supplied must be warranted against manufacturing defects for at least 12 months from the date of commissioning. iv. Free preventive maintenance services every 6 months during the warranty period. v. The supplier has to give information regarding their servicing capabilities / after sales service for the equipment quoted. vi. Quotation that does not quote prices exclusive of tax will not be considered. vii. All installation/ training charges must be borne by the supplier.	**1 UNIT** **1 UNIT**		

ITEM NO.	UNIVERSITY'S DESCRIPTION	QUANTITY	BIDDER'S SPECIFICATION (Please Write Your Specification In This Column)	TECHNICAL EVALUATION (For Official Use Only)

	<u>Documentation</u> At least two copies of the following documents in English must be provided: i. Service and Operating Manual ii. Technical Manual iii. Maintenance instructions, part list and recommended spare part list <u>Training</u> i. On site training must be provided ii. The training must include theory, application and troubleshooting aspects iii. Functioning and maintenance of the machine iv. Safety of the machine v. Assembly on site vi. Schematic interpretation			

TO SUPPLY, DELIVER, INSTALL AND COMMISSIONING "COLLABORATIVE ROBOT" TO SCHOOL OF MECHANICAL ENGINEERING, ENGINEERING CAMPUS UNIVERSITI SAINS MALAYSIA

BID PRICE SCHEDULE

Quotation No. : SH2/21/A4/PMEKANIK/U/00041

No	ITEM CODE NO.	DESCRIPTION OF ITEMS	QUANTITY	Brand and Model No.	Country of Manufacturer	Delivery And Commissioning Period	Price C.I.F Exclusive of Custom Duties And All Other Taxes		Custom Duties And All Other Taxes Only (RM)	Price C.I.F Inclusive of Custom Duties And All Other Taxes	
							Price Per Unit (RM)	Total Price (RM)		Price Per Unit (RM)	Total Price (RM)
			(a)				(b)	(c) = (a x b)	(d)	(e)	(f) = [(a x e)]
A	1		1 unit								
	2		1 unit								
	3		1 lot								
	4		1 unit								
Total For (A)											
B	1										
	2										
Total For (B)											
GRAND TOTAL (A+B)											

Note:

1. Supplier must complete this form two copies and submit both to USM.
2. Supllier must state price exlusive and inclusive of taxes.

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(Sign and Company's Chop)