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For the January 2023 Cambridge Technical
exam series

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From the January 2013 series onwards, only the examination material containing third party material will be included in the Acknowledgement Booklet. Therefore please assume that any exam papers or subject areas not listed in this booklet are entirely © OCR.

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Level 3 Applied Science				
05847, 05848, 05849, 05874, 05879	Unit 1: Science fundamentals	Question Paper	Q3(c)	© Henning Dalhoff, Science Photo Library, www.sciencephoto.com
			Q3(d)	© Henning Dalhoff, Science Photo Library, www.sciencephoto.com
05847, 05848, 05849, 05874, 05879	Unit 2: Laboratory techniques	Question Paper	Q1(d), Fig. 1.1	© Andrey Popov, Shutterstock Photo Library, www.shutterstock.com
			Fig. 1.2	© Adam Jan Figel, Shutterstock Photo Library, www.shutterstock.com
			Q2(f)(ii)	Adapted from Wang X W, Li J S, Guo T K, Zhen B, Kong Q X, Yi B, Li Z, Song N, Jin M, Wu X M, Xiao W J, Zhu X M, Gu CQ, Yin J, Wei W, Yao W, Liu C, Li JF, Ou GR, Wang M N, Fang TY, Wang G J, Qiu Y H, Wu H H, Chao F H, Li J W, 'Excretion and detection of SARS coronavirus and its nucleic acid from digestive system', 28 July 2005, www.wjgnet.com , World Journal of Gastroenterology 11(28) © The author(s) 1995-2022. Reproduced under the terms of the Creative Commons Attribution-Non-commercial (CC BY-NC 4.0).
			Q3(a)(ii)	Source: www.byjus.com . OCR is aware that third party material appeared in this exam but it has not been possible to identify and acknowledge the source.

Level 3 Applied Science (cont)				
05847, 05848, 05849, 05874, 05879	Unit 2: Laboratory techniques (cont)	Question Paper	Q4(a), Fig. 4.1	Nancy Burson USA, 'Visualize This', Gift of Steven Heller and Karrie Jacobs; 1993-53-119, www.collection.cooperhewitt.org , Cooper Hewitt Collection, The Smithsonian Institution. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.
			Fig. 4.2	Photograph by Dr L Stannard © University of Cape Town (2021). Reproduced by kind permission of the University of Cape Town.
			Q5(b)	OCR is aware that third party material appeared in this exam but it has not been possible to identify and acknowledge the source.
			Q6(c)	American Society for Microbiology. Reproduced by kind permission of the American Society for Microbiology.

Level 3 Applied Science (cont)

<p>05847, 05848, 05849, 05874, 05879</p>	<p>Unit 3: Scientific analysis and reporting</p>	<p>Question Paper</p>	<p>Q1</p> <p>Q2, Fig. 2.1</p> <p>Fig. 2.2</p> <p>Q2(d), Fig. 2.4 (Image 1)</p> <p>Fig. 2.4 (Image 2)</p>	<p>Adapted from 'Where are the windiest parts of the UK?' www.metoffice.gov.uk, Met Office. Reproduced under the terms of the UK Open Government Licence for Public Sector Information v3.0.</p> <p>Lizzie Harper 'Sedges: An introduction, Anatomy of the Common sedge <i>Carex nigra</i>' 13 July 2018, www.lizzieharper.co.uk, Lizzie Harper. Reproduced by kind permission of Lizzie Harper.</p> <p>Lizzie Harper 'Sedges: An introduction, Diagram of a unisex female sedge floret', 13 July 2018, www.lizzieharper.co.uk, Lizzie Harper. Reproduced by kind permission of Lizzie Harper.</p> <p>Peter F Zika, Andrew L Hipp & Joy Mastrogiuseppe '<i>Carex arcta</i>', in Jepson Flora Project (eds.) Jepson eFlora, Revision 3, The Jepson Herbarium, www.ucjeps.berkeley.edu, University of California, Berkeley. Reproduced by kind permission of The Jepson Herbarium, University of California.</p> <p>Peter F Zika, Andrew L Hipp & Joy Mastrogiuseppe, '<i>Carex bolanderi</i>' in Jepson Flora Project (eds.) Jepson eFlora, Revision 3, The Jepson Herbarium, www.ucjeps.berkeley.edu, University of California, Berkeley. Reproduced by kind permission of The Jepson Herbarium, University of California.</p>
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Level 3 Applied Science (cont)				
05847, 05848, 05849, 05874, 05879	Unit 3: Scientific analysis and reporting (cont)	Question Paper	Q3 Q8, Fig. 8.1 Fig. 8.2	<p>Adapted from Dr Dianne Fahrseft, 'Growth Form and Reproductive Character of Lichens near Active Fumaroles in Japan', Symbiosis, Volume 18, Number 3, 1995, www.dalspace.library.dal.ca, Dept of Plant Sciences, Western University, Ontario, Canada. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.</p> <p>Adapted from Tejada-Vera B, 'Leading Causes of Death in the United States, 1999–2017', National Center for Health Statistics www.cdc.gov, Centers for Disease Control and Prevention. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.</p>

Level 3 Applied Science (cont)				
05847, 05848, 05849, 05874, 05879	Unit 22: Global scientific information	Question Paper	Q6(a) Q6(b)(i)	OCR is aware that third party material appeared in this exam but it has not been possible to identify and acknowledge the source. © i viewfinder, Shutterstock Photo Library, www.shutterstock.com
05847, 05848, 05849, 05874, 05879	Unit 23: Scientific research techniques	Question Paper	Q1, Table 1.2, Source A Source B Source C	Adapted from 'New legal limits for metal residues in food products', 22 Sept 2021, www.freshplaza.com, FreshPlaza. Reproduced by kind permission of FreshPlaza. Adapted from Anwarzeb Khan, Sardar Khan, Muhammad Amjad Khan, Zahir Qamar and Muhammad Waqas, 'The uptake and bioaccumulation of heavy metals by food plants, their effects on plants nutrients, and associated health risk: a review', 22 July 2015, www.scholar.google.co.uk, © Springer-Verlag Berlin Heidelberg 2015. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified. Commission Regulation (EC) No. 1881/2006 setting maximum levels for certain contaminants in foodstuffs, pp 5-24, December 2006, Official Journal of the European Union L 364, www.fao.org, Food and Agriculture Organization of the United Nations. © FAO. FAOLEX Database. Reproduced under the terms of the Creative Commons BY-NC-SA 3.0 IGO.

Level 3 Applied Science (cont)

<p>05847, 05848, 05849, 05874, 05879</p>	<p>Unit 23: Scientific research techniques</p>	<p>Question Paper</p>	<p>Q1, Table 1.2, Source D</p> <p>Source E</p> <p>Source F</p>	<p>Adapted from 'WHO wants data on heavy metals in food' 27 July 2021, www.foodsafetynews.com, Food Safety News. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.</p> <p>Atomic Absorption Spectrometer, www.thermofisher.com, ThermoFisher Scientific. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.</p> <p>Adapted from Atomic Absorption Spectrophotometer, www.labcompare.com, labcompare, The Buyer's Guide for Laboratory Equipment. Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders have been unsuccessful and OCR will be happy to rectify any omissions of acknowledgements in future papers if notified.</p>
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Level 3 Applied Science (cont)

<p>05847, 05848, 05849, 05874, 05879</p>	<p>Unit 23: Scientific research techniques</p>	<p>Question Paper</p>	<p>Q1, Table 1.2, Source G</p> <p>Q2, Image 1</p> <p>Image 2</p> <p>Q3(a)</p>	<p>Robin D Graham, James C R Stangoulis, 'Trace Element Uptake and Distribution in Plant's' The Journal of Nutrition, Volume 133, Issue 5, May 2003, Pages 1502S–1505S, www.academic.oup.com, Oxford Academic. Reproduced under the free access terms.</p> <p>© Javibruce, Shutterstock Photo Library, www.shutterstock.com</p> <p>Adapted from Will T S Miles, Roddy Mavor, Nick J Riddiford, Paul V Harvey, Roger Riddington, Deryk N Shaw, David Parnaby, Jane M Reid 'Decline in an Atlantic Puffin Population: Evaluation of Magnitude and Mechanisms', 15 July 2015, www.journals.plos.org, Plos One. Reproduced under the open access terms.</p> <p>Colombia Environmental Research Center, 'Deployment of passive samplers', 2012, USGS science for a changing world, www.usgs.gov. Reproduced under the open access terms.</p>
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Level 2 Business

05891, 05892	Unit 1: Principles of working in business administration	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05891, 05892	Unit 2: Understand the role of an administrator	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Business				
05834, 05835, 05836, 05837, 05878	Unit 1: The business environment	Question Paper/ Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05834, 05835, 05836, 05837, 05878	Unit 2: Working in business	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05834, 05835, 05836, 05837, 05878	Unit 3: Business decisions	Pre-release	Appendix 1 Appendix 2	Data adapted from 'PFMA 2021 Annual Report', www.ukpetfood.org , UK Pet Food. Reproduced by kind permission of UK Pet Food. Adapted from Frédéric Michas 'Number of veterinarians in the United Kingdom (UK) 2010-2021', 16 December 2021, www.statista.com , Statista. Item removed due to third party copyright restrictions.
05834, 05835, 05836, 05837, 05878	Unit 9: Human resources	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Business (cont)

05834, 05835, 05836, 05837, 05878	Unit 10: Economics for business	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05834, 05835, 05836, 05837, 05878	Unit 15: Change management	Question Paper/ Resource Booklet		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 2 Digital Media				
05897, 05899	Unit 1: Digital media and emerging technologies	Computer Based Test	Q1 (Image 1) (Image 2) (Image 3)	© robtek, Shutterstock Photo Library, www.shutterstock.com © Tada Images, Shutterstock Photo Library, www.shutterstock.com © Oleg Krugliak, Shutterstock Photo Library, www.shutterstock.com
05897, 05899	Unit 2: Principles of concept design and pre-production	Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Digital Media				
05843, 05844, 05845, 05846, 05875	Unit 1: Media products and audiences	Insert	Fig. 1 Fig. 2 Fig. 3	Adapted from Snapshots, Facebook & Snapchat: 'Total Minutes by Age (%)', © UKOM Ltd, www.ukom.uk.net. Reproduced by kind permission of UKOM Ltd. Adapted from 'Apposphere: How the Apps You Use Impact Your Daily Life and Emotions, 8 January 2019, www.forbusiness.snapchat.com, Snap Inc. in partnership with Murphy Research. Item removed due to third party copyright restrictions. Adapted from 'Most viewed programmes 2-8 March 2020', © BARB, www.barb.co.uk. Reproduced by kind permission of BARB.
05843, 05844, 05845, 05846, 05875	Unit 2: Pre-production and planning	Question Paper/Insert		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05843, 05844, 05845, 05846, 05875	Unit 6: Social media and globalisation	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05843, 05844, 05845, 05846, 05875	Unit 25: Research for product development	Question Paper/ Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 2 Engineering				
05887, 05888	Unit 1: Fundamentals of mechanical, electrical/electronic and fluid power engineering	Computer Based Test	Q24	© Fouad A Saad, Shutterstock Photo Library, www.shutterstock.com
05887, 05888	Unit 2: Application of engineering principles	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Engineering				
05822, 05823, 05824, 05825, 05873	Unit 1: Mathematics for engineering	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05822, 05823, 05824, 05825, 05873	Unit 2: Science for engineering	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05822, 05823, 05824, 05825, 05873	Unit 3: Principles of mechanical engineering	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05822, 05823, 05824, 05825, 05873	Unit 4: Principles of electrical and electronic engineering	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05822, 05823, 05824, 05825, 05873	Unit 23: Applied mathematics for engineering	Question Paper	Q1(i), Fig. 1a	© Sergiy1975, Shutterstock Photo Library, www.shutterstock.com
05822, 05823, 05824, 05825, 05873	Unit 24: Project management for engineers	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 2 Health & Social Care				
05880, 05881	Unit 1: Principles of working in health, social care and childcare	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05880, 05881	Unit 2: Health and safety in practice	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Health & Social Care				
05830, 05831, 05832, 05833, 05871	Unit 2: Equality, diversity and rights in health and social care	Question Paper	Q4	Adapted from Sue Learner 'Day in the life of a home care worker: To them I am the link with the outside world' 6 July 2016, www.homecare.co.uk , Homecare.co.uk. Reproduced by kind permission of Homecare.co.uk.
05830, 05831, 05832, 05833, 05871	Unit 3: Health, safety and security in health and social care	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05830, 05831, 05832, 05833, 05871	Unit 4: Anatomy and physiology for health and social care	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05830, 05831, 05832, 05833, 05871	Unit 6: Personalisation and a person-centred approach to care	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05830, 05831, 05832, 05833, 05871	Unit 7: Safeguarding	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 2 IT

05883, 05884	Unit 1: Essentials of IT	Computer Based Test	Q4	© Kazakov, iStock Photo Library, www.istockphoto.com
05883, 05884	Unit 2: Essentials of Cyber Security	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 IT

Level 3 IT				
05838, 05839, 05840, 05841, 05842, 05877	Unit 1: Fundamentals of IT	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05838, 05839, 05840, 05841, 05842, 05877	Unit 2: Global information	Question Paper/ Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05838, 05839, 05840, 05841, 05842, 05877	Unit 3: Cyber security	Question Paper/ Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05838, 05839, 05840, 05841, 05842, 05877	Unit CC: Cloud Technology	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Performing Arts				
05850, 05851, 05852, 05853, 05876	Unit 1: Prepare to work in the performing arts sector	Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05850, 05851, 05852, 05853, 05876	Unit 2C: Proposal for a commissioning brief	Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05850, 05851, 05852, 05853, 05876	Unit 3: Influential performance practice	Pre-release		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05850, 05851, 05852, 05853, 05876	Unit 32: Arts administration	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05850, 05851, 05852, 05853, 05876	Unit 33: Original performance	Pre-release	Performance stimulus 1	© Robert Adrian Hillman, Shutterstock Photo Library, www.shutterstock.com

Level 2 Sport

05885, 05886	Unit 1: Physical activity, health and wellbeing	Computer Based Test	Fig. 2	© leonello, iStock Photo Library, www.istockphoto.com
05885, 05886	Unit 2: Physical preparation and readiness for sport and physical activity	Computer Based Test		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.

Level 3 Sport

05826, 05827, 05828, 05829, 05872	Unit 1: Body systems and the effects of physical activity	Question Paper	Q13, Fig. 13	© FullRizqi - Shutterstock Photo Library, www.shutterstock.com
05826, 05827, 05828, 05829, 05872	Unit 3: Sports organisation and development	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05826, 05827, 05828, 05829, 05872	Unit 4: Working safely in sport, exercise, health and leisure	Question Paper		Any reference to existing companies or organisations is entirely coincidental and is not intended as a depiction of those companies or organisations.
05826, 05827, 05828, 05829, 05872	Unit 21: The business of sport	Question Paper	Section C	Adapted from Jamie Doward 'Nike fights on two fronts as brand is linked to bribery and doping allegations', 6 June 2015, www.theguardian.com , The Observer Sport, © Guardian News & Media Ltd 2015. Adapted from 'Alberto Salazar: Nike Oregon Project closed down after head coach's ban', 11 October 2019, www.bbc.co.uk , BBC Sport. Reproduced by kind permission of BBC Sport.

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