

**Qualification: 6100-31-032/532 Level 3 Advanced Technical  
Diploma for Professional Chefs (540) – Theory Exam**

**March 2018**

1	<p>1 mark for any four of the following; maximum 4 marks:</p> <ul style="list-style-type: none"> <li>• Comply with the law/show due-diligence (1)</li> <li>• Follow instructions and comply with employer’s processes/procedures** (1)</li> <li>• Attend instruction/training/supervision (1)</li> <li>• Good personal hygiene (1)</li> <li>• Reporting of illness (1)</li> <li>• Reporting of errors/omissions in employer processes and procedures (e.g. hand washing facilities, kitchen and cleaning equipment, infrastructure faults, deliveries) (1)</li> <li>• Wearing Correct PPE (1)</li> </ul>	<p>**Accept answers where candidates have explained some of the procedure (limit to 1 mark only)</p>	4
2	<p>1 mark for description of each phase and 1 mark for each expansion of each phase; maximum 8 marks:</p> <ul style="list-style-type: none"> <li>• <b>Lag phase</b> – The lag phase is an adaptation period (1), where the bacteria are adjusting to their new conditions (1). The length of the lag phase can vary considerably (1), based on how different the conditions** are from the conditions that the bacteria came from, as well as the condition of the bacterial cells themselves (1).</li> <li>• <b>Log phase</b> - Once cells have accumulated all that they need for growth, they proceed into cell division (1). The log phase of growth is marked by predictable multiplication of the population, where 1 cell become 2 cells, becomes 4, becomes 8 etc. (1). Conditions that are optimal for the cells will result in very rapid growth, while less than ideal conditions will result in slower growth (1). Cells in the exponential phase of growth are the healthiest and most uniform (1).</li> </ul>	<p>**Accept answer where the candidate has stated the conditions (limit to 1 mark only) Accept temperature ranges if correct (max. 1 mark) Accept binary fission (max. 1 mark)</p>	8
3	<p>1 mark for any two of the following; maximum 2 marks:</p> <ul style="list-style-type: none"> <li>• Workplaces (1)</li> <li>• Schools/Colleges (1)</li> <li>• Hospital (1)</li> <li>• Armed Forces (1)</li> <li>• Prisons (1)</li> </ul>		2

4	<p>1 mark for description of consideration and 1 further mark for relevant expansion explaining why it is a consideration:</p> <ul style="list-style-type: none"> <li>• Red wines that are not that acidic go well with rich red meats (1) because they offset the richness of the fat and protein found within the meat/the fat and protein seem to help calm the harshness of the wine (1).</li> <li>• When too robust, oak aged wine can overshadow any food match (1), except when food is equally as powerful in taste/flavour such as game (1).</li> <li>• Wine that is delicately aged in oak barrels may add a pleasant, smooth vanilla quality that works well with rich, creamy sauces (1) because the wine has not had time to mature and take on the flavours of the barrel (1).</li> <li>• White wines that are high in acidity or have citrus flavours and can contrast richness in some fried food (1) as fat can coat the tongue; acidity within the wine can cleanse it and refresh your mouth (1).</li> <li>• Champagne/sparkling wines lower in alcohol/acidity are traditionally served as a reception drink to cleanse the pallet before the meal begins (1). The dryer, sweeter nature compliments small pastries/biscuits and seafood (1).</li> </ul>	<p>Accept dessert wines.</p> <p>Accept regions of wines matched with dishes from the region.</p> <p>Accept detailed explanation of overpowering flavours.</p>	8
5	<p>1 mark for any four of the following; maximum 4 marks:</p> <ul style="list-style-type: none"> <li>• Mincing/Blending (1)</li> <li>• Seasoning (1)</li> <li>• Fine sieving (1)</li> <li>• Ice/Chilling (1)</li> <li>• Addition of protein (1)</li> <li>• Incorporation of cream (1)</li> <li>• Testing (1)</li> <li>• Cold Storage (1)</li> </ul>		4
6a	<p>1 mark for description of part of the correct production process and 1 further mark for relevant expansion explaining why it is important:</p> <p>To break up the dispersed fat and water molecules found in the butter and egg (1) and then distribute them throughout the sauce. (1) The more whisking power used, the smaller the molecules will become (1), creating a more stable emulsion (1) whisking will also add aeration to the sauce making it lighter in texture (1).</p>		2
6b	<p>1 mark for description of part of the correct production process and 1 further mark for relevant expansion explaining why it is important:</p>		4

	<p>The egg yolks must be cooked slowly, over a moderate heat so the yolks do not curdle (1) which allows lecithin in the egg yolks to combine with fat to create an emulsion. (1) Where possible all ingredients should be as close to the same temperature as possible when mixed (1) to avoid the eggs scrambling/the mixture splitting (1). If the temperature is too cold then the eggs will not emulsify, and the mixture will be thin in consistency (1).</p>	
7	<p>1 mark for the correct identification of storage methods up to 2 marks and 1 mark for the explanation up to 3 marks:</p> <ul style="list-style-type: none"> <li>• Raw poultry should be stored in refrigerated conditions at a temperature of 3-8°C (1) which is outside of the temperature danger zone (8-63°C) in which bacteria, that causes foodborne illness, multiplies (1).</li> <li>• Raw poultry should be stored in a covered container or tray at the bottom shelf of the refrigerator or cold room (1) which will reduce the risk of drip cross-contamination, where raw poultry juices can come into contact with other products (1).</li> <li>• Raw poultry ideally should be removed from its original packaging (1) to reduce the risk of contamination from the packaging (1).</li> <li>• When preparing poultry, it should be returned to the refrigerator as soon as possible to reduce the risk of the raw poultry entering the temperature danger zone (1).</li> <li>• It is important to correctly label raw poultry with the date produced, the product and use by date (1). This will ensure correct stock rotation and ensure that the oldest product gets used first adhering to the 'first in, first out' (FIFO) principle (1).</li> </ul>	5
8	<p>1 mark for any three of the following; maximum 3 marks:</p> <ul style="list-style-type: none"> <li>• Savarin (1)</li> <li>• Baba (1)</li> <li>• Fruit Fritter (1)</li> </ul>	3
9	<p>1 mark for any seven of the following; maximum 7 marks:</p> <ul style="list-style-type: none"> <li>• Carageenans are used to thicken, stabilize and gel solutions (1). They are vegetarian (seaweed) and particularly effective with proteins so they are commonly used with dairy products (1).</li> <li>• Carageenan can be used to make frozen desserts, to stabilize ice creams, hot dairy foams, to make custard with a rich mouth feel even with low fat/egg content (1).</li> </ul>	7

	<ul style="list-style-type: none"> <li>• Iota Carrageenan is a great thickening and gelling agent mostly used with fruits and dairy to form a heat-reversible and flexible soft gel (1).</li> <li>• In the presence of calcium, Kappa Carrageenan forms stiff and brittle gels. But in the presence of potassium salts, Kappa Carrageenan forms very firm and elastic gels (1).</li> <li>• It is commonly dried then soaked before use, during soaking the seaweed releases a delicate natural gel that acts as a setting agent for desserts (1). However, it is still used in certain dishes such as set mousses as an alternative to gelatine (1).</li> <li>• Carrageenan adds a delicate flavour to desserts and often consumers can experience a flavour of the sea, low delicate saltiness to the dessert, which can counterbalance the sweetness of a dessert (1).</li> </ul>		
10	<p>1 mark for any three of the following; maximum 3 marks:</p> <ul style="list-style-type: none"> <li>• Chocolate (1)</li> <li>• Butter (1)</li> <li>• Cream (1)</li> <li>• Glucose/Sorbitol (1)</li> </ul>	Accept answers including flavouring such as alcohol.	3
11	<p>1 mark for any seven of the following; maximum 7 marks:</p> <ul style="list-style-type: none"> <li>• Cakes and sponge recipes that use granulated sugar are most likely to retain a crisp texture (1). Sugar is hygroscopic meaning it readily takes up water. Granulated sugar (1) however, is less hygroscopic than other common sweeteners, so granulated leaves more water in the mix (1).</li> <li>• Using sweeteners such as brown sugar, honey, molasses and corn syrup in recipes can achieve a moist texture (1). These sweeteners are hygroscopic, absorbing water molecules from the air even after baking (1).</li> <li>• Recipes with high sugar content increase the chance of the mixture spreading during the baking process because the sugar liquefies at baking temperatures (1). It is important that the balance of the recipe sugar content is adhered to reduce the chance of the product spreading (1).</li> <li>• Sugar raises the temperature at which proteins coagulate, which delays the protein from setting (1), which allows the recipe, where required, to maintain texture and flavour over a number of days (1).</li> </ul>		7

12	<p><b>Band 1 (1 – 5 marks):</b> Limited knowledge of factors and beliefs from different religions that influence choice. Simplistic understanding of recipes and menu composition and the balance of ingredients; flavours and textures. Demonstrates a basic coherence of the recipes and overall menu management. Identified some suitable ingredients or dishes. Little understanding or recognition of the importance of food safety and legalisation. Limited understanding of menu/dish preparation, cooking and service styles. Little justification to answer.</p> <p>To access the higher marks in the band, the discussion will contain mostly relevant points.</p> <p><b>Band 2 (6 – 10 marks):</b> Good knowledge of factors and beliefs from different religions that influence choice. Reasonably well developed understanding of recipes and menu composition and the balance of ingredients, flavours and textures. Demonstrates sound coherence knowledge of the recipes and overall menu management. Identified suitable ingredients or dishes. Sound understanding of menu/dish service styles. Reasonably well developed understanding or recognition of the importance of food safety and legalisation. Best practice referenced throughout. Reasonable justification to answer.</p> <p>To access the higher marks in the band, the response will be clear, balanced with accurate points made which are supported and justified.</p> <p><b>Band 3 (11 – 15 marks):</b> Fully developed knowledge of factors and beliefs from different religions that influence choice. Effective understanding of recipes, menu composition and the balance of ingredients, flavours and textures. Demonstrates a fully coherence knowledge of the recipes and overall menu management. Identified a wide range of suitable ingredients or dishes. Clear understanding of menu/dish preparation, cooking and service styles. Demonstrates a fully coherence of the management of food safety in the kitchen and through service.</p> <p>To access the higher marks in the band, the discussion will be comprehensive, well balanced, presented in a logical way with conclusions and/or recommendations fully justified.</p>	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Religious groups/meaning/importance</li> <li>• Religious ingredients that are not allowed</li> <li>• Ethnic influences</li> <li>• Guest numbers</li> <li>• Vegetarians</li> <li>• Seasonality of produce</li> <li>• Repetition of ingredients</li> <li>• Preparation and cooking methods for large numbers</li> <li>• Suitability of the dishes for each course</li> <li>• Language used on the menu</li> <li>• Service style</li> <li>• Portion control</li> <li>• Flavours and texture</li> <li>• Cost</li> <li>• Food Safety including legislation</li> <li>• Allergens</li> <li>• Staffing</li> <li>• Supplier availability</li> </ul>	15
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