

6100-31-032/532 Level 3 Advanced Technical Diploma for Professional Chefs (450) – Theory Exam

June 2018

1	State four methods used to enforce legislation on businesses failing to comply with food safety.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any four of the following, up to a maximum of 4 marks:</p> <ul style="list-style-type: none"> • Enforcement visits (e.g. By EHOS/EHPS) (1) • Hygiene improvement notice (1) • Hygiene prohibition order (1) • Hygiene emergency prohibition notice (1) • Through civil and criminal courts (1) 	If the candidate's responses include the different stages but not have included the legislative approach, then accept.	4
2	Explain two reasons why temperature control is important when managing food safety.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for identification of reason and a further 1 mark for appropriate expansion.</p> <ul style="list-style-type: none"> • The purpose of the correct temperature control is to inhibit or prevent harmful micro-organisms from multiplying (1) by keeping food outside of the recognised best practice 'danger zone' 8°C to 63°C (1). • Hot holding of food must occur in suitable equipment above a temperature of 63°C to deter the multiplication of bacteria (1). If food falls below this temperature, then it must either be discard or reheated to the correct temperature to comply with legislation (1). • Any hot food being reheated must exceed 85°C (1) this will destroy the majority of bacteria and toxins ensuring it is safe to eat (1). It will not kill all spore forming 	When stating temperature ranges, allow temperature variance of 1-3 degrees either side	4

	<p>bacteria and toxins, which commonly are found in such products as cooked rice (1) this requires a high temperature exceeding 100°C for the bacteria or toxins to be destroyed (1).</p> <ul style="list-style-type: none"> • Keeping food cold at a temperature of 1°C to 8°C will help to reduce the multiplication of harmful bacteria (1) If food falls above this temperature then it must either be discard or heated to the correct temperature to comply with legislation (1). • Food must initial be cooked to a minimum temperature 75°C, (1) however, there are certain product which may not be taken to this temperature such as a rare cooked steak (1). • Cooked food required to be chilled must be chilled with 90 minutes to a temperature of 1°C to 8°C (1). 		
3	Explain two reasons for having effective pest control procedures in a professional kitchen.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for the reason of pest control procedure and 1 further mark for appropriate expansion.</p> <ul style="list-style-type: none"> • To meet legislative requirements Not abiding by pest control procedures (1) can lead to prosecution which could lead to fines and loss of reputation (1). It shows due diligence if an outbreak occurs (1) • To avoid contamination (pathogenic bacteria, spoilage bacteria) Pests are known to carry a number of pathogenic organisms and spoilage bacteria (1) that can be transmitted to humans through contaminated food (1). • To avoid spread of disease Certain pests such as rodents are known to carry harmful diseases such as leptospirosis, weils disease, hanatavirus etc (1) so it is important that food premises are kept pest free to prevent the possible spread of harmful diseases (1). • To prevent food wastage Pests will damage food stocks as they attempt to access a food source (1) which means this food will be unfit for human consumption and will have to be disposed, leading to financial loss (1). • To avoid damage Pests can cause damage to the building infrastructure and equipment through chewing and gnawing which can cause financial loss through the replacement of 		4

	<p>equipment/restrict what food can be produced because of damaged equipment is out of use (1).</p> <ul style="list-style-type: none"> • To prevent drop in staff morale A kitchen where there are pest problems, will create a culture where the staff are having to focus on dealing with pest problems rather than their own work (1) which could lead to a decline in staff morale (1). • To avoid damage to reputation Customer will not eat a restaurant or food outlet where it has a reputation for pest or if they sight pests around the premises (1). 		
4	State two ways in which a restaurant can be formally recognised for the quality of its food.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any two of the following, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Scores on the door (1) e.g. food hygiene rating, just eat • Reviews (press, social media, online) (1) e.g. Trip Advisor • Guides (1) e.g. Michelin, AA, Tatler Restaurant Guide • Awards (1) e.g. National restaurant awards, Craft Guild of Chefs, Local quality awards • Ratings (1) e.g. Michelin, AA 		2
5	Explain how intensive farming has affected food production and availability of commodities.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for identification of how intensive farming has affected food production/availability up to a maximum of 2 marks and up to a further 2 marks for appropriate explanations.</p> <ul style="list-style-type: none"> • Intensive farming has led to food production being increased (1) by growing high-yield crops, removing other unwanted plants and pests from crops and adding fertiliser to the soil (1). This has allowed off-season products and crops to be available all year round allowing businesses more flexibility with menus and ingredients (1). • Other intensive farming practices include keeping animals indoors, often in restricted spaces (1). This reduces the animal's energy consumption allowing more energy available for its growth making production/growth quicker (1). This can in turn lead to lower meat prices compared to free range or organic, however, can lead to the meat being less favourable (1). 		4

	<ul style="list-style-type: none"> The use of intensive farming leads to the production of large amounts of relatively inexpensive food commodities (1) reducing operating costs for a business and possibly passing this saving onto their customers (1). Intensive farming involves the use of various kinds of chemical fertilizers, pesticides, and insecticides (1) which are harder to remove/wash off from some fruits and vegetables (1). 		
6	Describe the Roux brothers' influence on gastronomy.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any four of the following, up to a maximum 4 marks:</p> <ul style="list-style-type: none"> They were among the first to popularise French nouvelle cuisine food in the UK (1) bringing classic French tastes and influence on the UK consumers in the late 1960's/ early 1970's, which has formed the basis of modern day cooking (1). The Roux brothers worked with Marks & Spencer to create the supermarket ready meals selection in the early 1980's (1)*, bringing modern day French gastronomy into supermarkets (1). The Roux scholarship offers funding through an outstanding culinary programme (1) which has trained top chefs like Marco Pierre White/Gordon Ramsay/Marcus Wareing (1). The Roux brothers opened the first three-star Michelin restaurant in Great Britain/La Gavroche in London (1) which raised standards and has focused other restaurants to obtain and maintain the maximum number of Michelin stars (1). Opened the waterside inn which also obtained three Michelin stars and became the first restaurant outside of France to hold them for more than 25 years (1). 	*Candidates do not need to state 1980's to gain the mark.	4
7	Describe four methods for the preservation of duck.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any four of the following, up to a maximum of 4 marks:</p> <ul style="list-style-type: none"> Smoking - duck breast are usually lightly cured and then hot-smoked over oak (1) 	Do not just accept the method, the candidate must describe the method	4

	<ul style="list-style-type: none"> • Pickling/Canning - duck breast and legs are submerged in a light acidity/citrus liquid base such as red wine, spices (1) • Curing - duck breast and legs can be dry cured in a salt, sugar and pickling spice base and left to air dry (1) • Marinating - duck breast and legs marinated in a suitable acidity liquid or fat base such as red wine/spices/a good quality oil for a period usually no more than 24hours (1) • Vacuum packing/Sous Vide - duck breast and legs are prepared with the addition of flavours and then sealed in an airtight bag (1) • Confit – duck legs are often salted, cleaned and then slowly cooked in duck fat with spices the cooked duck meat is stored in the cold cooking fat (1) • Rillettes – using duck meat which is shredded, mixed with the confit cooking jelly/fat and stored in airtight containers or jars (1) • Freezing – duck meat is immediately frozen, to reduce the chance of spoilage and to increase its shelf life (1). 		
8	Explain two challenges of sourcing high quality wild feathered game throughout the year.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any four of the following, up to a maximum of 4 marks:</p> <ul style="list-style-type: none"> • During the closed seasons shooting is restricted (1) to allow them to breed and successfully migrate and produce better quality game meat during the open season (1). • During the closed months, only farmed or frozen feathered game will be available (1) which may lack some of the flavours associated with fresh wild feathered game due to its diet or preservation method (1). • Certain species such as grouse tend to be less plentiful towards to the rear of their open season (1) and the meat can be tired and scrawny and lack flavour due to the availability of their food during the winter months (1) Out of season feathered game can also be more expensive (1). 	Answers should not just say about killing wild feathered game it is about explaining sourcing of game birds	4

9	Explain the effect of the 'jerky' preservation method on game.		
10	Describe three stages involved in tempering dark 70% chocolate, using the seeding method.		
	<p>Acceptable answer(s)</p>	<p>Guidance</p>	<p>Max mks</p>
	<p>1 mark for any five of the following, up to a maximum of 5 marks:</p> <ul style="list-style-type: none"> • Drying game meat such as the 'Jerky' method of preservation can concentrate the nutrients in the meat (1), (especially the iron, magnesium and potassium levels) by removing the water content (1). However, some of the nutritional value may be reduced as the drying process can also destroy some of the vitamins found naturally within the meat (1). • Curing game meat using the traditional curing mixtures of salt, sugar and spices (1) will increase the sodium and simple sugars levels found within the meat (1). It is therefore important to wash or soak before use to remove as much of the salts and sugars as possible (1). • The preservation processing period must be as short as possible to retain the optimal levels of nutrients within the game meat (1). The longer the meat is exposed to preservation treatments, especially those that involve heat the more nutrients will be destroyed (1). Although undertaking the jerky quickly retains nutrients, slowing dehydrating the meat ensure the meat doesn't burn (1). • The heat used in the preservation method will dry and remove moisture and will make the meat crispy/chewy depending on how long it is dried for (1) It also helps to destroy harmful bacteria through curing (1) The process also changes the overall appearance of the meat (1) • Drying game such as the 'Jerky' method of preservation is a good way of persevering the flavour and taste, as the flavours tend to intensify once the moisture has been removed (1). 		5
	<p>Acceptable answer(s)</p>	<p>Guidance</p>	<p>Max mks</p>
	<p>1 mark for any three of the following, up to a maximum of 3 marks:</p> <ul style="list-style-type: none"> • Spilt the chocolate in $\frac{1}{4}$ and $\frac{3}{4}$ set aside $\frac{1}{4}$ of the chocolate (1). • Melt the $\frac{3}{4}$ of chocolate using a bain-marie, ensuring it does not boil or alternatively, (1) use a microwave oven on defrost mode (1). 	<p>Do not just accept the method, the candidate must describe the method</p>	3

	<ul style="list-style-type: none"> • Check the temperature with a thermometer. When the chocolate reaches 40°C-45°C remove the chocolate from the bain-marie/microwave (1). • Add the remaining ¼ of the chocolate into the remaining ¾ of the melted chocolate, stirring constantly (1). • Seeding the chocolate should bring temperature down to 28°C-29°C, alternatively leave to cool, stirring constantly (1). • Gently increase the temperature, stirring constantly until the chocolate reaches 30°C-31°C; the chocolate is now tempered (1). 		
11	Explain why agar can be a suitable alternative to animal-based gelatine in the production of desserts.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any seven of the following, up to a maximum of 7 marks:</p> <ul style="list-style-type: none"> • Agar is a mixture of several different carbohydrates extracted from seaweed which makes it suitable to be used in vegetarian and vegan desert (1). It can also be suitable for diets of a religious nature that do not eat pork or beef products (1) • Agar has stronger setting properties than gelatine which requires refrigeration to set (1). A dessert that has jelly made with agar will set at room temperature after about an hour (1). • Agar will remain solid on a hot day and can even be served hot (1) which allows pastry chef to experiment with various textures within dessert at various temperatures, (for example hot gels and jellies) (1). • Agar forms a gel at a lower concentration than normal gelatine (1). When making dessert you need less agar to set the same volume of liquid than gelatine (1). • Agar is opaque in colour and once dissolved sets into a jelly making it suitable to use in set mousses, flavoured jellies and for certain glazes (1), it also has a more crumbly or flaky or grainy texture than gelatine set jellies (1). • Agar can be boiled and can even be re-melted if necessary (1) unlike gelatine, this gives flexibility when making set dessert commodities and recipes (1). • Traditional Gelatine sheet and powder has to be bloomed before using in dishes whereas Agar can be whisked into desserts (1) 		7

12	State three cakes or sponges that are made using the separated egg method.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any three of the following, up to a maximum of 3 marks:</p> <ul style="list-style-type: none"> • Biscuit Jaconde (1) • Sacher Sponge (1) • Dacquoise (1) 		3
13	Explain how the inversion technique is used in the production of cakes and sponges.		
	Acceptable answer(s)	Guidance	Max mks
	<p>1 mark for any seven of the following, up to a maximum of 7 marks:</p> <ul style="list-style-type: none"> • Inversion is the process in baking when a mixture of glucose and fructose are obtained (1) by splitting the disaccharide sugars into two separate components (1) to (make a simple inverted liquid sugar). This makes the product naturally sweeter than normal sugar (1). • Because of the chemical makeup tends to retain moisture during the cooking process (1) and the sugar crystals are less prone to crystallization than normal sugar (1). • Provides more powerful preserving qualities giving cakes and sponges a longer shelf (1). • Using invert sugar products helps to resist any colour changes in the sugar when baking at high temperature (1). Normal sugar will colour at a much lower temperature than inverted sugar (1). • Using inverted sugar during baking will help to keep the shape of the cake or sponge and help prevent shrinkage (1). 		7

14	<p>The head chef has been observing the food safety practices of his staff and has identified that improvements could be made in their working practices. He will hold refresher training for all staff.</p> <p>Discuss the information that should be included.</p>		
	Acceptable answer(s)	Guidance	Max mks
	<p>Band 1 (1 – 5 marks): Limited knowledge of Microbial, Chemical and Physical Hazards that have the potential to harm or cause illness. Simplistic understanding of cleaning and cleaning, disinfection and waste disposal procedures and equipment. Demonstrates a basic coherence of the implementation and overall food safety management. Identified some suitable good food safety working practices. Little understanding or recognition of the importance of food safety legalisation. Limited understanding of the impact of poor food safety practices. Little justification to answer.</p> <p>To access the higher marks in the band, the discussion will contain mostly relevant points.</p> <p>Band 2 (6 – 10 marks): Good knowledge of Microbial, Chemical and Physical Hazards that have the potential to harm or cause illness. Reasonably well-developed understanding of cleaning and cleaning, disinfection and waste disposal procedures and equipment. Demonstrates a sound coherence knowledge of the implementation and overall food safety management. Identified a wide range of suitable good food safety working practices. Reasonably well-developed understanding and recognition of the importance of food safety legalisation. Good understanding of the impact of poor food safety practices. 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>Band 3 (11 – 15 marks): Fully developed knowledge of Microbial, Chemical and Physical Hazards that have the potential to harm or cause illness. Effective understanding of cleaning and cleaning, disinfection and waste disposal procedures and equipment. Demonstrates a fully coherence knowledge of the implementation and overall food safety management. Identified all good food safety working practices. Demonstrates a fully coherence knowledge understanding of the importance of food safety legalisation. Excellent understanding of the impact of poor food safety practices. Best practice referenced throughout. Full justification to answer.</p>	<p>For no awardable content, award 0 marks.</p> <p>Indicative content</p> <ul style="list-style-type: none"> • Microbial, Chemical, Physical Hazards • Ensuring equipment is disconnected from power before cleaning • Clear as you go • Traditional stages of cleaning (pre-clean, main clean, rinse, disinfect, rinse, dry) • ‘Clean, rinse, sanitise’ method • Double sink washing up, pre-clean main clean using detergent, second sink to disinfect using water above 82°c • Cleaning in place • Consideration of procedures from delivery of food to service point • Correct clearance of areas for cleaning (to avoid chemical contamination, over spray) • Correct dilution of chemicals • Correct equipment (single use cloths, colour coding) • COSHH • Lockable storage away from foods (restricted access) • Storage in original containers • Dilution, mixing of chemicals 	15

	<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>	<ul style="list-style-type: none">• Manufacturer's instructions• PPE	
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