

VICTORIA UNIVERSITY
OF BANGLADESH

COMMERCIAL COOKERY

HM 509

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MID TERM TEST

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Question No: 01

Write the main methods of Extinguishing a fire?

Answer to the question no 01

As humans, we cannot live without fire. The discovery of fire by our early ancestors has significantly advanced human society. Fires helped cook our food, enabling nutrients to be better absorbed for more brainpower. Fire also provided warmth and has been the main tool we used in creating more advanced technology.



While fire can be helpful, it also comes in a form when it becomes destructive. Fire, when out of control, or accidental in nature, yields irreparable damage, such as the loss of life.

In fact, structural fires are so destructive that \$11.1 million-worth of the property was damaged in the year 2018, in US alone. Structural fires claim seven lives EVERYDAY, on average, as stated by the National Fire Prevention Association. That is seven people dying from a preventable disaster every single day.

Because accidental fires are so destructive to both human life and livelihood, we try our best to extinguish such fires in a small amount of time to prevent further damage. We even have professionals that deal with such fires — they are called firefighters — on standby, ready to respond to any kind of fires. Additionally, fire prevention and fire extinguishing technology are installed in our homes and buildings.

Let's take a look at 5 of the most common methods that we use to put out fires.

1. Removing Oxygen From The System

This particular fire-extinguishing method is mostly used for small, kitchen fires. Interestingly enough, most house fires come from small kitchen fires.

We'll be getting a bit technical for a minute but this is vital information that might save your life one day.

There are three components that should be present in order for a fire to occur: heat, fuel (anything that can catch on fire) and lastly, oxygen. If any of these components are not present or are removed, then you can effectively put out a fire. Removing oxygen from fires can be done by putting a lid (if the fire started from a small container like a pot) and closing the doors and windows, which will significantly diminish the oxygen present in the system.

2. Sprinkling Baking Soda Or Salt

This method is most recommended by authorities to be used on grease fires that start in the kitchen, too. While the science behind is somewhat related to the first-mentioned method, we thought it would be more beneficial to everyone to discuss this method separately.

Grease fires can become a disaster if you try to put it out with water. That's when sprinkling baking soda or salt comes in handy. The powdery substance works well by smothering the fire with carbon dioxide, effectively putting it out.

It is worth noting that baking soda, or sodium bicarbonate is the same substance that is found inside fire extinguishers. Essential, baking soda is the raw and drier form of a fire extinguisher.

Salt, and even sand, works the same way by basically burying the fire. That's why most rooms in buildings have "fire buckets" filled with sand.

3. Using Water

One of the most popular ways that people use to put out fires is by pouring water on it. Water is excellent at absorbing heat energy. And, when you spray water on high-temperature fires, it effectively reduces the temperature of that fire and vaporizes water. Vaporizing water requires a lot more energy from the air and materials. This is the same science on how a water mister helps you control the heat on a barbecue grill.

Now that water vapor is present in the system, it makes it easier to asphyxiate the fire. The water vapor expands and creates a "blanket" that serves as a barrier from the fire to the surrounding oxygen.

Now, you have successfully removed the oxygen and heat from the fire.

4. Using A Fire Extinguisher



One of the most delightful modern-day inventions is fire extinguishers. Present at almost every building, fire extinguishers are the best go-to first aid fire extinguishing methods. When the fire is small and easily manageable, fire extinguishers can usually do the trick.

There are various types of fire extinguishers that are used for different types of fire. The most common type is a soda-acid fire extinguisher that contains sodium bicarbonate and a flask of acid. When the acid is broken, a chemical reaction occurs that produces frothy water.

When confronted in a situation where you need to use a fire extinguisher, know how to use it properly. First, pull the pin that will break the tamper seal. Aim the nozzle low, at the base of the fire. Press down on the handle to release the substance inside the tank and use sweeping motions until the fire dies out.

5. Using Wet Towels Or Blankets

Another effective way of putting out small fires is by smothering it with a wet cloth. This works the same way as spraying water to the fire. It simply prevents the fire from receiving more oxygen from the atmosphere. The blanket acts as a barrier while the water turns into water vapor that further prevents oxygen from getting into the fire.

DO NOT swat fire with an apron or any dry cloth. You risk fanning the flames to spread which will only make things worse. That's movie magic when a handsome man puts out fire with his jacket.

Question No: 03

Describe the Methods of cooking Steaming and Braising?

Answer to the question no 03

Steaming

Steaming is a method of cooking that requires moist heat. The heat is created by boiling water which vaporizes into steam. The steam brings heat to the food and cooks it. Unlike boiling, the food is separate from the water and only comes into direct contact with the steam.

Methods Of Steaming

- Steamer Baskets. The simplest way to steam food is to place a steamer basket in a saucepan over about 5-10cm of boiling water. ...
- Microwave steaming. ...
- En Papillote (Paper Bag/Packet) ...
- Steam Ovens.

For example: steamed whole fish, steamed crab, steamed pork spare ribs, steamed ground pork or beef, steamed chicken and steamed goose. Rice can be steamed too, although in Chinese cooking this is simply referred to as "cooking" rather than "steaming".

Steamer Baskets

The simplest way to steam food is to place a steamer basket in a saucepan over about 5-10cm of boiling water. Place your seasoned food to be steamed in the basket (either directly or on a plate) and cover it with a lid. Most foods will finish cooking anywhere between 5 to 15 minutes, depending what you're cooking.

Chinese bamboo steamers are ideal, but the metal ones are just as easy to use. With metal steamers, simply spray the base with cooking oil spray to ensure your food doesn't stick. Both types can be placed in a wok or over a pot they fit tightly. Bamboo steamers come in a range of sizes and are great for cooking for dim sum items like steamed buns, wontons and dumplings. Make sure to clean your bamboo steamer well and let it air dry to avoid any mould growth on the wood. When steaming in bamboo, you may need to lay some baking paper at the base to stop your dumplings or other food getting stuck. It is important that the bottom of the steamer basket does not touch the simmering water; this add too much moisture to the cooked item.

Microwave steaming

You can steam food in the microwave, which is actually a perfect piece of equipment for steaming since it 'excites the liquids in food'. You can create your own steaming system by placing the food in a microwave-safe dish, sprinkling it with a little water or other liquid, and covering with plastic wrap with a few holes poked into it. Cook for just a few minutes and you will be rewarded with perfectly steamed food. You can also buy a steamer basket made just for the microwave, or a use a tupper ware container with an opening in the lid.

En Papillote (Paper Bag/Packet)

Baking paper makes for an attractive presentation when cooking food 'en papillote', plus the silicone coating resists sticking and leaking. Using aluminium foil on the other hand, makes it much easier to create a tight seal. We find using a combination of both works really well. Place a layer of parchment paper inside your layer of foil before adding in the ingredients to be steamed. Once everything is wrapped up, ensure all edges are firmly shut to trap the steam when cooking. The packet is then heated in an oven or on a grill so that the food inside cooks in its own steam. Banana or lotus leaves also work a treat, while adding a visual appeal and beautiful fragrance. Do not use wax paper or plain brown paper, they can leak and burn. The en papillote method is frequently used for vegetables in combination with added liquid and aromatics.

Steam Ovens

Some modern ovens now also offer a dedicated steam function. The function is an extremely fast and energy-efficient method of cooking, and ideal for foods such as vegetables, tofu, dumplings

and even rice. Specific settings for different foods are often included. It is also used to re-heat foods, maintaining moisture.

Braising

Braising, the cooking of meat or vegetables by heating them slowly with oil and moisture in a tightly sealed vessel. Braising differs from stewing, in which the food is immersed in liquid, and from covered roasting, in which no liquid is added. Braising is a combination of covered roasting and steaming.

Braising uses dry and moist-heat cooking methods. First, less tender cuts of meats are commonly browned in fat or oil at high temperatures. Then, vegetables and seasonings are generally added; normally with a liquid or sauce of some complementary.

Braised dishes often familiar to Westerners include pot roast, red braised pork belly, Swiss steak, chicken cacciatore, goulash, carbonade flamande, coq au vin, sauerbraten, beef bourguignon, beef brisket, oxtail, and tajines, among others.

The basic principles of braising are a combination of searing or browning and then simmering. This process accomplishes two things: it cooks the meat, and it produces a sauce. Following are some basic procedures that apply to most popular braised meats and will assist with the quality of the finished product.

Braise when your goal is deep levels of flavor and soft, melty caramelized texture. Braising works beautifully on all cuts of meat, even lighter ones like chicken, but the cooking technique especially benefits the tough cuts, like beef brisket. Braising tenderizes meat, dissolving collagen and connective tissue into gelatin (which makes for a richer sauce or gravy later on) and coaxing flavor through every meat fiber until it's fork-tender.

Cook time for braising will always depend on the protein in question, but for tougher cuts of meat, two to three hours at a simmer is optimal to allow the collagen to soften completely.

But! Braising doesn't have to be an all-day affair: depending on the protein or vegetable, quick braises can be pulled off in a pressure cooker like an Instant Pot that does the work in, well, an instant. The resulting texture might not be an exact facsimile, but you can make up the difference by reducing the remaining liquid and incorporating it into the final presentation.

How to Braise Meat in 3 Simple Steps

1. Start by browning the meat you'd like to braise. In a Dutch oven set over medium-high heat, drizzle enough fat, such as butter or olive oil, to coat the bottom of the pan, then sear each side of the seasoned meat until golden brown. Remove from the pan, and set aside.
2. Add your aromatics (onion, shallots, garlic, and spices), and then deglaze with stock, wine, beer, or even water. (The amount of liquid you use is up to you: as long as the meat is partially submerged you can always rotate during the cooking time.) Using a wooden spoon, scrape up all those brown bits—that's called the *fond* and it will provide the

delicious foundation for all the flavor you're about to build—and stir into the braising liquid.

3. Season to taste, and bring to a boil until slightly reduced. Add the meat back into the pot, slap on a tight-fitting lid, and let it simmer away in a 300°F oven (the more consistent bet) or over a low flame on the stove for up to an hour.

How to Braise Vegetables

When braising vegetables, start with your aromatics, then add a small amount of liquid. Shorten the cooking time since vegetables tend to be more delicate and you want to avoid turning them into mush. Hardier choices like artichokes, root vegetables, and squash take to braising well.

Question No: 04

Describe about Dry heat cooking?

Answer to the question no 04

DRY HEAT COOKING

Dry heat cooking refers to any cooking technique where the heat is transferred to the food item without using extra moisture. This method typically involves high temperatures—300 F or hotter.

Note that the browning of food, as when bread is toasted, can only be achieved through dry heat cooking. This browning, in turn, leads to the development of complex flavors and aromas that can't be attained through moist heat cooking techniques.

Because air is a relatively poor conductor of heat, broiling, and grilling require the food to be quite close to the heat source, which in this case is likely to be an open flame. Thus the surface of the food cooks very quickly, making this type of cooking ideal for poultry, fish and the tenderest cuts of meat.

There are five main dry heat cooking methods that are important to know: baking, roasting, broiling, sautéing, and grilling. But frying such as deep-frying and pan-frying are also dry cooking techniques, relying on fat and high temps to cook the food.

Sautéing and Pan-Frying

Sautéing requires a hot pan before cooking. When sautéing, it's important to heat the pan for a minute, then add a small amount of fat (such as oil) and let it heat up before adding ingredients to the pan.

Another key is not overloading or crowding the pan. Too much food in the pan dissipates the heat, causing the food to steam or boil rather than sauté. One method for maintaining a hot pan and ensuring the food cooks evenly is through tossing or flipping the food in the pan—sauté actually means "jump" in French. Some sauté pans have sloped sides to facilitate this, but it's generally only done with smaller pieces of food, especially vegetables.

Pan-frying closely resembles sautéing, but pan-frying uses slightly more fat and a slightly lower temperature than sautéing. This makes it a good method for cooking larger pieces of meat that need longer to cook. Meat that is pan-fried is sometimes finished in the oven to cook through.

Roasting and Baking

The words roasting and baking are largely synonymous since they both describe a method of cooking an item by enveloping it in hot, dry air. This typically happens inside an oven and at temperatures of at least 300 F.

This technique cooks food fairly evenly since all of the food's surfaces are exposed to heat. This differs from pan-searing, for instance, where the surface that touches the hot pan gets much hotter than the side that faces up. Roasting and baking both require that the food be cooked uncovered when used as a dry heat cooking method so that it's the hot, dry air that delivers the heat, not the steam from the food.

Despite these similarities, roasting and baking can mean slightly different things depending on who you ask. Some chefs use the word "baking" only when speaking of bread, pastry and other bakery items. Some may use the word "roasting" only when referring to meats, poultry, and vegetables, but use the term "baking" for fish and other seafood.

Broiling and Grilling

Broiling is another dry heat cooking method that relies on heat being conducted through the air. Because air is a relatively poor conductor of heat, broiling, and grilling require the food to be quite close to the heat source, which in this case is likely to be an open flame. Thus the surface of the food cooks very quickly, making this type of cooking ideal for poultry, fish and the tenderest cuts of meat.

There is one significant distinction between broiling and grilling: Grilling involves heating the food from below, while broiling involves heating from above. In both cases, the food is typically turned once during cooking, and a grid or grate of some kind can be used, giving the food the distinctive grill-marks that are the hallmark of this cooking technique. As with sautéing, it's critical to heat the broiler or grill before adding the food.

Deep Frying

Since deep frying involves submerging the food in hot, liquid fat, it might take some time to get used to the idea that it's actually a form of dry heat cooking. But if you've ever seen the violent reaction of hot oil to a tiny drop of water, you know that oil and water are opposites that want nothing to do

with each other. To avoid splatters, make sure anything you place into the hot fat is free from excess moisture. That might mean patting an item dry with a paper towel before frying it.

Deep frying requires keeping the oil at temperatures between 325 F and 400 F. Hotter than that and the oil may start to smoke, and if it's any cooler, it starts to seep into the food and make it greasy. Only high-temperature tolerant oils should be used for deep frying. If fried properly, deep-fried items should actually have very little oil on them.

Foods are often coated in a simple batter to protect it and seal in its moisture. The key to keeping the oil hot is to fry items in small batches, as introducing too much food to the oil will cool it off. Fried foods typically turn golden-brown once cooked.

Question No: 05

Write down one of your favorite cooking recipe.

Answer to the question no 05

Tandoori chicken is one of my favorite food and I think I cook this food well too. My family member's love the tandoori chicken I made. This item is easy to cook and take a little time to prepare. Only few steps you follow and you can make it easily.

Below is the recipe which you can follow to make this delicious item:

1st you prepare the chicken and clean it properly and then put it on a bucket to loose the rest of the water. Then take a plate with ginger paste, garlic paste, yougart, tomato sauce, soyasauce, chilly powder, Coriander Powder, cumin powder, lemon, suger, chicken tandoori masala and required oil. Then mixed all this with chicken. After that it took 4-5 hour to marinate.

Afterwards brush oil in the tray of electric oven and arrange the chicken on it. Then bake the chicken in the preheated oven in 200-degree F for 60-70 minutes. Meanwhile alter the chicken in oven for several times. Now it is prepared to serve.

I love to take this with butter nun and cucumber raita. But you can also try this with fried rice/steam rice.

