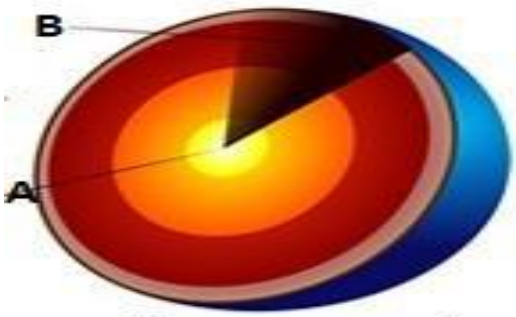
WORKSHEET 1

GRADE 7	**SOCIAL SCIENCES – GEOGRAPHY**	**TERM 2**
TOPIC: VOLCANOES, EARTHQUAKES AND FLOODS		
CONTENT: STRUCTURE OF THE EARTH		**MARKS: 12**

Question 1

Study the Source below



https://en.wikipedia.org/wiki/Mantle_convection#/media/File:Earth-crust-cutaway-numbered.svg, March 2012

(a) Name the three main layers of the Earth.

The Crust, the Mantle and the Core. (3)

(b) What part of the Earth's structure is under the oceans?

The Crust. (1)

(b) Describe a tectonic plate.

Big/ Enormous/ Huge pieces of the Earth's crust, sometimes with a whole Continent on the plate. (2)

(d) Describe the structure of the core.

The core consists of the solid inner core (1400km) and liquid (molten) outer core. (2000km) It is made of minerals iron and nickel. It is very high in pressure with a temperature of 5500°C. (5)

(e) The inner most layer of the earth Labeled A is called the core. (1)

GRAND TOTAL = 12 MARKS

WORKSHEET 2

GRADE 7	**SOCIAL SCIENCES – GEOGRAPHY**	**TERM 2**
TOPIC: VOLCANOES, EARTHQUAKES, AND FLOODS		
CONTENT: TECTONIC PLATES AND PLATE MOVEMENTS **MARKS: 13**		

Read the Source A and Source B below and answer questions that follow

SOURCE A

HOW THE CRUST MOVES?

The crust is not one large solid piece of rock. It consists of many smaller pieces that are called 'tectonic plates' which are thousands of kilometres in size. These tectonic plates float on the underlying layer of magma and exert pressure as they move. The edges of the tectonic plates are called 'plate boundaries. The tectonic plates move on the layer of hot slow-moving magma that lies underneath the crust. When the plates move, they push and pull against each other causing pressure or sudden shifts.

There are seven large plates and many smaller plates that move very slowly each year. The plates that lie beneath the continents are called continental plates and the plates that lie beneath the oceans are called oceanic plates.

SOURCE B

PLATE MOVEMENTS

Plates move in the following ways:

Divergent boundaries:

These occur when the tectonic plates pull away from each other. The crust breaks apart. The space that remains is called a rift. Magma seeps up to fill the rift and so new crust is made.

Convergent boundaries:

These occur when two tectonic plates push against each other and one plate is forced upwards. This movement causes the formation of mountains or volcanoes. The other plate sinks back into the core and melts. Earthquakes can occur along this type of boundary.

Transform boundaries:

This type of boundary is where two plates meet and move against each other horizontally,in different directions. As they move, neither plate is displaced up or down. This movement causes a buildup of energy, which may be released in a sudden movement which can cause an earthquake.

a) Define a plate boundary.

The crust is not one large solid piece of rock. It consists of many smaller pieces that are called 'tectonic plates' which are thousands of kilometers in size. (1)

b) How do the tectonic plates move?

These tectonic plates float on the underlying layer of magma and exert pressure as they move. The edges of the tectonic plates are called 'plate boundaries. The tectonic plates move on the layer of hot slow-moving magma that lies underneath the crust. (1)

(c) Name and describe three areas where tectonic plates meet.

The edges of the tectonic plates are called 'plate boundaries'. There are three different kinds of boundaries, named according to their movements.

1. **Divergent boundaries:**

These occur when the tectonic plates pull away from each other. The crust breaks apart. The space that remains is called a rift. Magma seeps up to fill the rift and so new crust is made.

2. **Convergent boundaries:**

These occur when two tectonic plates push against each other and one plate is forced upwards. This movement causes the formation of mountains or volcanoes. The other plate sinks back into the core and melts. Earthquakes can occur along this type of boundary.

3. **Transform boundaries:**

This type of boundary is where two plates meet and move against each other horizontally, in different directions. As they move, neither plate is displaced up or down. This movement causes a buildup of energy, which may be released in a sudden movement which can cause an earthquake. (6)

(d) List the names of three tectonic plates.

African Plate, North American Plate & South American Plate. (3)

(e) Describe the difference between continental and oceanic tectonic plates.

The plates that lie beneath the continents are called continental plates (ground/ earth) and the plates that lie beneath the oceans are called oceanic plates. (2)

GRAND TOTAL = 13 MARKS

WORKSHEET 3

GRADE 7	**SOCIAL SCIENCES – GEOGRAPHY**	**TERM 2**
TOPIC: VOLCANOES, EARTHQUAKES, AND FLOODS		
CONTENT: STRUCTURE OF THE EARTH		**MARKS:15**

VOLCANOES

A volcano allows molten rock to form the mantle to flow out on to the Earth's surface through the Earth's crust, in the form of lava. Currently, there are approximately 1500 active volcanoes around the world. A small portion of these volcanoes are located beneath the oceans. Volcanoes are often found near the edges of the tectonic plates that cover the surface of the Earth. Volcanoes can erupt through the same fault or vent over a long period of time. A crater forms at the top of the volcano. After each eruption, lava coats the edge of the crater and builds a cone as the lava cools. The Ring of Fire is a ring of volcanoes that is found in the Pacific Ocean. There are approximately 450 volcanoes in this area. There are frequent earthquakes and volcanic eruptions in this area. A famous volcanic eruption was that of Mount St Helens in the United States of America. The eruption occurred on 18 May 1980. The eruption destroyed approximately 250 homes and killed 57 people. The eruption removed almost 400m of the volcano leaving a horseshoe shaped crater in the volcano. The pressure caused by the movement of magma beneath the Earth's crust can force magma up through faults in the Earth's surface. This movement of magma causes a volcano. When the magma reaches the Earth's surface, it is called lava. As the lava pours onto the surface, the lava emits poisonous gases. The heat of the lava causes clouds of steam in the
atmosphere. The force of the pressure of a volcano can cause rocks, ash and volcanic dust to be blasted into the air.

http://science.howstuffworks.com/nature/231-how-volcanoes-work-video.htm

a) Where do volcanoes occur?

……

…… (2)

b) Describe a volcano.

……

……

……(3)

c) Explain the difference between magma and lava.

……

……

…… (2)

d) Why do volcanoes occur?

……

…… (2)

e) Describe the Ring of Fire.

……

……

……(2)

e) Briefly describe the eruption of Mount St Helens.

……

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……(4)

GRAND TOTAL =15 MARKS

WORKSHEET 4

GRADE 7	**SOCIAL SCIENCES – GEOGRAPHY**	**TERM 2**
TOPIC: VOLCANOES, EARTHQUAKES, AND FLOODS		
CONTENT : EARTHQUAKES		**MARKS: 22**

Read the Source A and Source B below and answer questions

SOURCE A

EARTHQUAKES

Earthquakes occur when part of the Earth's crust moves. The area where the crust moves is called the 'fault' or 'fault plane or fault line'. Large earthquakes occur when the movement is about one to two metres. A small earthquake occurs when the crust moves in millimeters. Earthquakes occur when the plates move under, over or slide past each other. Most earthquakes occur on the edges of these plates that make up the Earth's crust. The location below the Earth's surface where the earthquake starts is
called the 'hypocentre', and the location directly above it on the surface of the Earth is called the 'epicentre'. An earthquake is a sudden, rapid shaking of the Earth caused by the release of energy stored in rocks. This energy can be built up and stored for many years and then released in seconds or minutes. Many earthquakes are so small that humans cannot feel them. Some have caused great destruction and killed many people.Sometimes an earthquake has 'foreshocks'. These are smaller earthquakes that happen in the same place as the larger earthquake that follows. The largest, main earthquake is called the 'mainshock'. Mainshocks always have aftershocks that follow. These are smaller earthquakes that occur afterwards in the same place as the mainshock. There are two major regions of earthquake activity on the planet. One region is called the circum-Pacific belt and is also known as the 'Pacific Ring of Fire', which encircles the Pacific Ocean. The other region is called the 'Alpide Belt', which extends from Java to Sumatra through the Himalayas, the Mediterranean, and out into the Atlantic. The Ring of Fire is a zone where earthquakes happen frequently.

http://science.howstuffworks.com/nature/236-how-earthquakes-work-video.htm
http://video.nationalgeographic.com/video/101-videos/earthquake-101?source=relatedvideo

1. Define the concept Earthquake.
   ……
   ……
   ……(3)
2. Explain how the movement of tectonic plates causes an earthquake.
   ……
   ……
   ……
   ……(4)

3.Why is the area around the Pacific Ocean called the "Ring of fire"?

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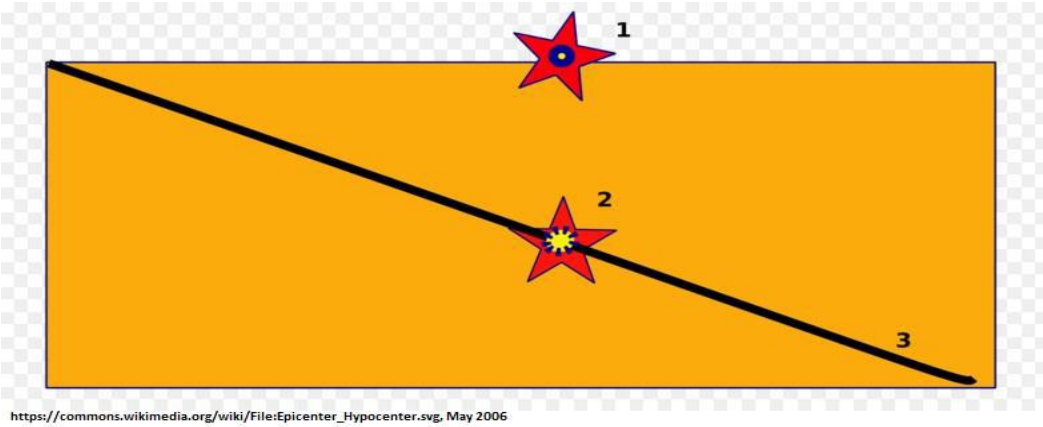
.....(3)

SOURCE B



4. Number 3 represents a fault line.

   4.1 Number 2 is the point within the earth where the earthquake starts and is called

   the..... (1)

   4.2 Number 1 is the.....(1)

Read Source C below and answer questions

SOURCE C

Earthquake Rocks China!

An earthquake of 7.8 magnitude hit China's Sichuan province on Monday, May12, 2008.Within one week of the massive quake, at least 32,000 people were reported dead and more than 200,000 injured. Hundreds of aftershocks rippled through the region after the quake, causing landslides and other damage. Unlike hurricanes, no one can predict when an earthquake will hit. There is no warning and no evacuation time. The U.S. Geological Survey (USGS) says that at least one earthquake happens Somewhere on the globe every day, usually small and in remote regions where few people live. But when big earthquakes hit in heavily populated areas, it can easily become a catastrophe.

http://science.howstuffworks.com/nature/236-how-earthquakes-work-video.htm

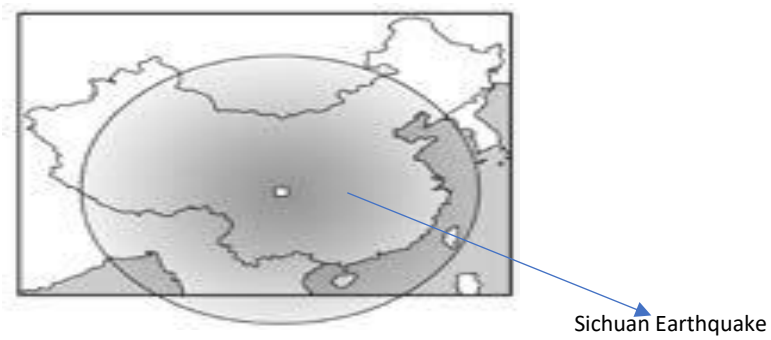
a) In which country and on which continent is Sichuan located?

.....

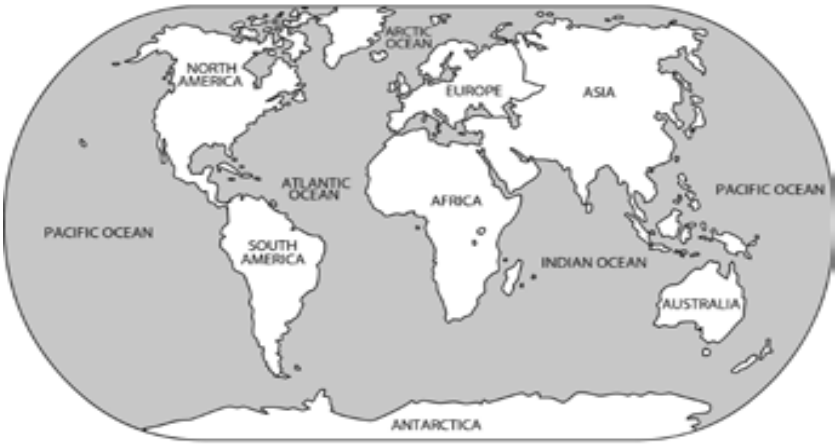
.....

..... (2)

b) The map below shows the Sichuan Earthquake.



World map



(b) Indicate the location of Sichuan on the world map. (1)

c) What was the size of this earthquake? .....(1)

d) There were many aftershocks reported after the earthquake. What further damage did these aftershocks cause?

.....

.....

.....

.....(1)

e) Can earthquakes be predicted?..... (1)

(f) Why is it more catastrophic when an earthquake hits a densely populated area, than when an earthquake hits a less populated area.

.....

.....

..... (2)

g) Provide the abbreviation for the World Health Organisation. .....(1)

h) What role did the WHO play in the aftermath of the Earthquake in Sichuan?

.....(1)

GRAND TOTAL = 22 MARKS