Salahaddin University- Hawler	**Theoretical Examination**	**2rd Year Class**
College of Science	**Sedimentary Rocks**	**Time: 2 Hour**
Dep. of Geosciences and Petroleum	**First Trial**	**2023-2024**

Q1/ Fill in the following blanks with suitable words or phrases. (10 Marks)

1- Sedimentary rocks are the product of the ----------, ----------, ----------, and ---------- of detritus and solutes derived from pre-existing rocks.

2- Sediment is unconsolidated material that accumulates at the earth's surface, composed mainly of ----------, ---------- and ----------.
3- Transporting agents (waters, glaciers and winds) carrying loose sediments where the ----------, ---------- and ---------- control the sediment load.
4- The amount of rounding and sorting depends on ----------, ----------, and ----------.
5- Diagenesis is the term used for all the changes in sediment undergoes after ---------- and before the transition to ----------.
6- Sedimentary texture refers to the ----------, ----------, and ---------- of the grains that make up a sedimentary rock.
7- The sediment sphericity can be classified into two classes; ---------- and ----------.

Q2/ a- Define sorting and mention the factors controlling sediment sorting. (10 Marks)

b- Define rounding and mention the factors controlling grain rounding.

Q3/ a- Draw one of the classifications showing the gravel, sand and mud mixture. (10 Marks)

b- Draw the sandstone classification after Pettijohn.

Q4/ Write in detail about fine-grained sedimentary rocks including; Grain size, Particle shape, Microfabric, Sedimentary structures, Mineralogy, Organic matter, and Color. (10 Marks)

Q5/ Describe the carbonate rocks with their components and mineralogy. (10 Marks)

Good Luck

Dr. Sirwan I. Sakry

Salahaddin University- Hawler	**Theoretical Examination**	**2rd Year Class**
College of Science	**Sedimentary Rocks**	**Time: 2 Hour**
Dep. of Geosciences and Petroleum	**Second Trial**	**2023-2024**

Q1/ Determine the following branches of question by signing true or false. (10 Marks)

1- **The sedimentary rocks formed under the earth's surface with abnormal temperature and pressure, typically in extensive, horizontal layers.**
2- **Sedimentary rocks cover ~ 5% of Earth's surface in continental areas and compose about ~75 % of the upper crust.**
3- **Lithification is the transformation of loose sediments into solid rock.**
4- **During transportation, sediment size is often increased depending on chemical resistance and physical durability.**
5- **The sediments become more rounded and sorted with decreasing the distance of sediment transport.**
6- **Physically durable and chemically stable minerals are more resistant to transporting distance.**
7- **Diagenesis is the term used for all of the changes that sediment undergoes before deposition and after the transition to metamorphism.**
8- **Mud particle size is larger than 1/16 including silt and clay.**
9- **Sorting refers to uniformity of grain sizes and it is a spread of the grain-size distribution.**
10- **Sphericity is the degree of edge or corner smoothness.**

Q2/ List the importance and reasons for studying sedimentary rocks. (10 Marks)

Q3/ Define porosity and permeability and write their equations. (10 Marks)

Q4/ Write on sandstone classification with drawing Folk classification. (10 Marks)

Q5/ Mention the field terminology of carbonate rocks depending on composition, texture and bio-contents. (10 Marks)

Dr. Sirwan I. Sakry

Salahaddin University- Hawler	**Theoretical Examination**	**2rd Year Class**
College of Science	**Sedimentary Rocks**	**Time: 2 Hour**
Dep. of Geosciences and Petroleum	**Second Trial**	**2022-2023**

Q 1/ Write in detail about sediment transport, transporting methods, and show their relation with grain sizes. (7 Marks)

Q 2/a- Define the sorting and mention their classes; support your answer with drawings. (6 Marks)

b- Define the angularity and mention their classes; support your answer with drawings. (4 Marks)

Q 3/ Describe coarse grain clastic sedimentary rocks with their classification depending on texture, clast composition and origin. (6 Marks)

Q4/ Mention the main mineralogical types in sandstones. (6 Marks)

Q5/ Show the main bases of sandstone classification and draw a Folk triangular diagram. (6 Marks)

Q6/ What are the types of fine to very fine clastic sedimentary rocks and clarify in detail the mudrocks. (7 Marks)

Q7/ a- List with brief description the grains in carbonate rocks. (8 Marks)

b- Show the reason of studying carbonate rocks.

Good Luck

Dr. Sirwan Sakry

Salahaddin University- Hawler	**Theoretical Examination**	**2rd Year Class**
College of Science	**Sedimentary Rocks**	**Time: 1 Hour**
Dep. of Geosciences and Petroleum	**2023-2024**	

Note: Answer four questions only

Q 1/ Write in detail about sediment transport, transporting methods, and show their relation with grain sizes. (20 Marks)

Q 2/a- Define the sorting and mention their classes; support your answer with drawings. (12Marks)

b- Define the angularity and mention their classes; support your answer with drawings. (8Marks)

Q 3/ Describe coarse grain clastic sedimentary rocks with their classification depending on texture, clast composition and origin. (20 Marks)

Q4/ Mention the main mineralogical types in sandstones. (20 Marks)

Q5/ Show the main bases of sandstone classification and draw a Folk triangular diagram. (20 Marks)

Good Luck

Dr. Sirwan Sakry

Salahaddin University *Stage: Second*
College of Science- Geology *Date: 22 / 12*
/2019
Subject: Sedimentary Petrology *Time: 1:30 H.*

Mid-Course Examination, (2019-2020)

Note: Answer on total of 75 marks.

Q1/ Fill the following blanks by suitable words: (30 Marks)

1- **Sedimentary rocks are developed throughout these processes,----------, ----------, ----------, ---------- .**
2- **Transporting agent (waters, glaciers and winds) carrying loose sediments where the ----------, ---------- and ---------- controlling the sediment load.**
3- **During transportation, sediment size is often reduced depending on ---------- and ----------.**
4- **Sediment transported by these methods ----------, ---------- and ---------- .**
5- **The different kind of processes that come under the term diagenesis are ----------, ----------and ----------.**
6- **Sediment lithologies can be grouped into four broad categories ----------, ----------, ---------- and ---------- .**
7- **Sedimentary texture: refers to the ----------, ----------, and ---------- that make up a sedimentary rock.**
8- **Maturity is a function of sediment transport and classified to two main types ----------and ---------- .**
9- **Sedimentary structures in relation to depositional process can be classify into; ---------- , ----------, and ----------.**
10- **The importance of sedimentary structures can be summarized in three points; ----------, ----------, and ---------- .**

Q2/ Define sedimentary rocks and classify according to the type of material and the modes of deposition.

Q3/ Show the relations between sediment transport and following points supporting your answer by drawings where needed:- (15 Marks)

a- **Grain Size** b- **Roundness and Sorting** c- **Mineral intensity**

Q4/ Describe what are the meaning of sorting and mention their classes. (10 Marks)

Q5/ Write in detail about cross-bedded and ripples marks. (20 Marks)

Q6/ Classify coarse grain clastic sedimentary rocks depending following features:- (15 Marks)

a- Texture or packing b- Clast composition c- Origin

Good Luck

Dr. Sirwan Sakry