



أجب عن الأسئلة الآتية:

(٢٠ درجة)

السؤال الأول: أكمل الجمل مع وضع خط تحت الإجابة:

- ١- قسمت طبوغرافية أحواض المحيطات إلى ثلاثة وحدات رئيسية تشمل
- ٢- هي الوسيلة التي تنتقل بها القشرة المحيطية من موقع تكونها عند إلى مواقع تحطمها عند
- ٣- يشكل أكثر من ٨٠% من حجم الكرة الأرضية ويتكون من صخر
- ٤- يفصل صخور القشرة الأرضية عن صخور الوشاح .
- ٥- ساعد التطور التكنولوجي على إكتشاف بالمحيطات وهو يتميز باتجاهات موازية
- ٦- رواسب التي تنتشر في كل من أفريقيا وأمريكا الجنوبية ورواسب التي تنتشر في أوروبا تعتبر ظواهر مؤيدة لنظرية إنجراف القارات من المناخ القديم.
- ٧- مواقع إنفراج قاع بحر عند قمم مرتفعات وسط المحيط تمثل بينما تقع عند الخنادق البحرية.
- ٨- مراحل تكوين محيط تبدأ ب
- ٩- هي أكثر الأدلة إقناعا لفكرتي إنجراف القارات وإنفراج قاع بحر.
- ١٠- معدل تراكم الرسوبيات بقاع المحيط يبلغ

(٣٠ درجة)

السؤال الثاني: أذكر ماهي

- ١- الميكانيكية المحركة للألواح.
- ٢- أدلة إنجراف القارات.
- ٣- السبب في تكوين منطقة الظل.
- ٤- الدافع المحرك لأي نشاط بركاني.
- ٥- تتكون من عظام وحرشف الأسماك.
- ٦- تربط الحواف المنفرجة بالحواف المتقاربة.
- ٧- أدلة تصادم القطع القارية القديمة.
- ٨- مرتفعات مخروطية بقاع المحيط .
- ٩- بقايا جزر بركانية أكلتها التعرية البحرية.
- ١٠- السبب الرئيسي في إنقسام القارات بهذا الشكل.
- ١١- هي المحرك للتعرية بقاع المحيط.
- ١٢- هي من المعالم المنبسطة بقاع المحيط.
- ١٣- هما من رسوبيات قاع المحيط الحيائية.
- ١٤- هي أقوى الأدلة المدعمة لإنفراج قاع البحر.
- ١٥- هي مواقع تقدم ألواح القشرة الأرضية.

(٣٠ درجة)

السؤال الثالث:

- (أ) أكتب أمام كل عالم إكتشافه العلمي:
- ١- جوتنبرج.
 - ٢- موهروفيشك.
 - ٣- هاري هس.
 - ٤- ولسون.
 - ٥- أرثر هولمز.
- (ب) أذكر الفرق :
- ١- الأخاديد البحرية والخنادق البحرية.
 - ٢- الفوسفات وعقيدات المنجنيز.
 - ٣- جبال الإنديز وجزر اليابان.
 - ٤- جبال الهيمالايا.
 - ٥- جبال الإنديز.
 - ٦- تيارات العكر وتيارات الحمل.
 - ٧- الغلاف الصخري وغلاف الوهن.
- (ج) ماهو نوع حواف الألواح ذات العلاقة بالظواهر الآتية: (١٠ درجات)
- ١- جبال الهيمالايا.
 - ٢- جبال الإنديز.
 - ٣- جزر اليابان.
 - ٤- البحر الأحمر.
 - ٥- مرتفعات وسط المحيط.

مع أطيب التمنيات بالنجاح ،،،،،،

لجنة الإمتحان والتصحيح*:

د. هشام سلام

د. حمدى سراج

أ.د. صلاح البيلي

أ.د. أمين غيث*



Final Exam in Subsurface and Petroleum Geology (G309)

Answer the following questions

Q1. Write in details on each of the following: (20 Marks)

- The primary Stratigraphic traps. (7 Marks)
- The drilling. (7 Marks)
- The combination traps. (6 Marks)

Q2. Give short notes on each of the following: (20 Marks)

- Kerogen Shale. (4 Marks)
- Seepage of petroleum. (4 Marks)
- Traps Produced due to ground water activity. (4 Marks)
- Factors affecting frequency and mobility of elements. (4 Marks)
- Zones of coats. (4 Marks)

Q3. Discuss the following: (20 Marks)

- Surface exploration methods of petroleum. (7 Marks)
- Conditions of genesis of hydrocarbon and function of bacteria. (7 Marks)
- Correlation methods. (6 Marks)

All the best



أجب عن الأسئلة الآتية:

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(٣٠ درجة)

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مع أطيب التمنيات بالنجاح ،،،،،،

لجنة الإمتحان والتصحيح*:

أ.د. أمين غيث* أ.د. صلاح البيلي د. حمدى سراج د. هشام سلام

المسؤولية - قبولها - قبولها - قبولها - ٢٠٥ ٢١



Mansoura University
Faculty of Science
Geology Department

Final Theoretical Exam
2nd Term 2011/2012

Date: 07/06/2012
Time Allowed: Two Hours
Full Mark: 60 Marks

نظام: -- الساعات المعتمدة
الفرقة: -- المستوى الثالث
الورقة الامتحانية: -- ج ٣٠٥
المقرر: -- جيولوجيا حقلية ومساحة
برنامج: -- الجيولوجيا

Field Geology & Survey

Answer Three Questions from the Followings:-

(20 Marks for each question - 5 Marks for each part)

- 1- Answer the followings :--
 - A- How can you check the compass before use.
 - B- Describe types of compass traverses.
 - C- Mention types of contacts.
 - D- Classify the enclaves.
- 2- Write briefly on the followings :--
 - A- Methods of investigation and recording observations in the field.
 - B- Description of the rock units.
 - C- Collection of an oriented sample.
 - D- Types of bedding.
- 3- Describe in detail the followings :--
 - A- Way-up structures.
 - B- Measuring stratigraphic columnar section.
 - C- Subdividing and describing a stratigraphic section.
 - D- Structures in the field.
- 4- Write short notes on the followings :--
 - A- Safety rules in the field.
 - B- 'V' shape of different outcrops.
 - C- True thickness of different beds.
 - D- Hand level method.

GOOD LUCK & BEST WISHES

لجنة التصحيح :- أ.د. محروس أبو العنين - أ.د. أمين غيث - أ.د. عبد الحميد طه -- د. شعيبان مشعل*

Mansoura University
Faculty of Science
Geology Department
Date: 4/6/2012



3 ص ٣٠٤ - افاضة دقيقة و افاضة مفصلة (ع. ٣٠٤)
Second Term Exam (May 2012)
The Third Level (Geology)
Subject: Geo (304)
Course: Micro & Vertebrate paleontology
Time: 2 hours Full Mark: 60

I- Micropaleontology

Answer the following Questions

(30 Marks)

Question One:

- 1) - Describe three genera of planktonic foraminifera belonging to: (12 Marks)
 - a- Family Heterohelicidae and state their stratigraphic importance.
 - b- Cretaceous planktonic foraminifera characterized by planispirally test coiling.
- 2)- State Two different types of Cenomanian and early Turonian planktonic foraminiferal zones ? (6 Marks)
(Describe each zone according to their category, age and definition)
- 3)- The majority of Cenozoic genera can be grouped into 6 different families each of which is characterized by different wall structure. State only two genera for each family? (12 Marks)

II- Vertebrate Paleontology

(I) True or False:

(10 Marks)

- 1- *Tiktaalik* has a mobile neck and a wrist that could bend.
- 2- Vertebrates are the animals that have a bilateral symmetry.
- 3- Mesozoic is the age of dinosaurs.
- 4- Mammals dominated Pangea 250 million years ago.
- 5- *Basilosaurus* was fully aquatic tail-powered swimmer that has strong hind limbs.
- 6- Some of early fishes were heavily armoured.
- 7- Egyptian fossil whale are fundamental for understanding the early evolution of archaeocetes.
- 8- *Moeritherium* is an ancestor of modern elephants and lived in Egypt during the Oligocene.
- 9- Many chordates, which include fish, sharks, rays, and amphibians, are not amniotes.
- 10- The first true mammal fossils found in the Paleozoic deposits.
- 11- The saurischia is bird-hipped dinosaurs and ornithischia is reptile-hipped dinosaurs.
- 12- *Aegyptopithecus* is a monkey lived in Fayum 30 million years ago.
- 13- *Spinosaurus* is a saurpodomorph dinosaur lived in Egypt 90 million years ago.
- 14- Teeth are an important element to identify crocodile fossils.
- 15- Whale ancestor was walking on the land.
- 16- Synapsids are mammal-like reptiles lived during the end of Paleozoic.
- 17- Bahariya Formation is Jurassic in age and famous for dinosaurs.
- 18- The vertebrates are members of a larger Phylum, termed Chordata.
- 19- *Witwatia* is a bat fossil lived during the Eocene in Egypt.
- 20- In deuterostome, the blastopore gives rise to anus.

لجنة الإمتحان والتصحيح *

أ.د. صلاح نصر عياد * أ.د. صلاح البيلى أ.د. عادل جنيدى د. هشام سلام *

(II) Match each of the followings with their definitions.

(10 Marks)

- | | |
|----------------------------|---|
| 1) <i>Haikouichthys</i> | A) A hard tissue found in Teeth |
| 2) Exoskeleton | B) A lobe-finned that gave rise to the tetrapods |
| 3) Conodonts | C) The oldest vertebrate fossils found in China |
| 4) Placodermi | D) Transitional fossils are the fossilized remains of intermediary forms of life that illustrate an evolutionary transition |
| 5) Enamel | E) The first vertebrates to have paired pelvic fins |
| 6) <i>Cephalaspis</i> | F) The earliest vertebrates with hard tissues |
| 7) Missing links | G) The first vertebrate with paired fins and has a heavily armoured head region. |
| 8) Tetrapods | H) Such as shell of a turtle or the bony head shields of early fishes |
| 9) <i>Eoraptor</i> | I) The earliest known tetrapods that lived approx. 360 million years ago. |
| 10) <i>Tiktaalik</i> | J) A posture of most reptiles |
| 11) Amniotes | K) The oldest dinosaur (230 million year) |
| 12) Sprawling | L) A group of tetrapod vertebrates that have a terrestrially adapted egg. They include mammals, reptiles and birds, as well as their fossil ancestors |
| 13) Ornithischia | M) A small whale lived in Wadi Hitan 40 million years ago |
| 14) <i>Eusthenopteron</i> | N) A monophyletic group that includes the "amphibians", "reptiles", birds and mammals |
| 15) <i>Arsinoitherium</i> | O) The bird hipped dinosaurs - all plant-eaters, including various armoured forms such as Stegosaur |
| 16) <i>Pterosaurs</i> | P) A flying reptile that sometimes referred to in the popular media as dinosaurs, but this is incorrect |
| 17) <i>Archaeopteryx</i> | Q) Such as Ichthyosaurs, Plesiosaurs, and Mosasaurs |
| 18) <i>Acanthostega</i> | R) The oldest bird and the missing link between dinosaurs and birds |
| 19) <i>Dorudon</i> | S) A missing link between fishes and tetrapods |
| 20) Marine reptiles | T) An animal with 4 horns (2 big horns in front and 2 small ones behind them) that lived during the Eocene- Oligocene age in Fayum area? |

(III) Chose the correct answer.
(10 Marks)

1- Vertebrates are all the animals with backbones such as

- a- fishes, gastropods, reptiles, birds, and mammals
- b- fishes, amphibians, reptiles, birds, and mammals
- c- fishes, echinoderms, reptiles, birds, and mammals

2- Echinodermata are.....

- a- vertebrate animals
- b- the closest Invertebrate animals to vertebrates
- c- sponges

3- Chordates are deuterostomate metazoans that have

- a- notochord
- b- dorsal nerve cord
- c- both

4- The Chengjiang fossil site in south west China, is one of the oldest site of vertebrate fossils that is in age.

- a- Cambrian
- b- Devonian
- c- Permian

5- are bony fishes (lobe finned Fishes) gave rise to the land vertebrates, the tetrapods

- a- Sarcopterygii
- b- Actinopterygii
- c- Chondrichthyes

6- Conodonts are

- a- the longest-lived groups of early vertebrates
- b- used for stratigraphic dating
- c- both

7- become abundant only in the Devonian

- a- Fishes
- b- Early tetrapods
- c- Lizards

8- The jaws of vertebrates were formed from modified

- a- anterior gill arches
- b- anterior teeth
- c- anterior fins

9- Placodermi were found largely in the

- a- Devonian
- b- Carboniferous
- c- Silurian

10- The fossils of Chondrichthyes (sharks) are mainly.....

- a- Bones
- b- Teeth
- c- Both

11- The two clades of bony fishes are distinguished by the structure of their

- a- fins
- b- tails
- c- heads

12- The are all descended from an ancestral lobe-finned.

- a- tetrapods
- b- sharks
- c- rays

13- Ichthyostega differs from Acanthostega in number of

- a- digits
- b- fins
- c- both

14- Archosaurs include

- a- crocodiles, birds and dinosaurs
- b- crocodiles, birds and lizards
- c- crocodiles, birds and snakes

15- Dinosaurs appeared in the

- a- Late Triassic
- b- Later Jurassic
- c- Later creataceous

16- The word Dinosaur means

- a- terrible lizard
- b- big crocodile
- c- hungry reptile

17- The first dinosaurs were

- a- small bipeds
- b- ate insects and small vertebrates
- c- both

18- Theropods are dinosaurs

- a- flesh eating
- b- plant eating
- c- both

19- Sauropodomorphs are dinosaurs

- a- long necked
- b- Plant-eating
- c- Both

20- Fayum Depression is well known for having

- a- dinosaur fossils
- b- mammal fossils
- c- both

21- Mesozoic mammals were

- a- Small
- b- insect-eaters
- c- both

22- The biggest dinosaurs is

- a- Argentinosaurus
- b- Spinosaurus
- c- Carcharodontosaurs

23- Nonavian dinosaurs died

- a- 65 million years ago
- b- 230 million years ago
- c- 300 million years ago

24- Dinosaurs.....

- a- Dominated the Earth for 160 million years
- b- lived on all continents
- c- both

25- *Paralititan* is the second biggest dinosaur that lived in

- a- Egypt
- b- Argentina
- c- China

26- What kind of vertebrate fossils is Wadi Hiton famous for?

- a- 40 million years old whale fossils
- b- Dinosaurs
- c- Paleocene mammals

27- What is the age of *Carcharodontosaurus* in Egypt?

- a- Cenomanian
- b- Campanian
- c- Jurassic

29- The lower jaw of mammal-like reptiles is composed of

- a- A single bone
- b- Two bones
- c- Several bones

30- Which two groups do include the vertebrates?

- a- Archea and Bilateria
- b- Archea and Radiata
- c- Eukaryota and Deuterostomia

2.12. 1st = 20/100 - 20/100

Mansoura University
Faculty of Science
Dept. of Geology
Course Title & Code: Advanced
Stratigraphy (G 303)
Full marks: 60



Second Semester (May 2012)
3rd level, Geology
Time: 2 hours
Date: 14/6/2011

Answer all the following questions?

Question 1:

Multiple choices from 1 to 10 [(All letters equally weighted), 24 marks]

1- The roots of sequence stratigraphy can be traced far back in

- a- The classic principles of sedimentary.
- b- The classic principles of stratigraphy.
- c- The classic principles of ichnology.
- d- The classic principles of basin analysis.

2-The 2nd revolution in sedimentary geology is

- a- The Plate tectonics and the geodynamic concepts.
- b- The flow regime concept.
- c- Sequence stratigraphy.

3- In fact, a key aspect of the sequence stratigraphic approach is to encourage

- a- The integration of data sets and research methods.
- b- Pure paleontological analysis.
- c- Study only the facies analysis
- d- The mapping of the conformable beds unbounded by unconformities.

4- The academic applications of sequence stratigraphy include

- a- Genesis and internal architecture of sedimentary basin fills.
- b- Exploration for hydrocarbons, coal, and mineral resources.

5- Integrated data of sequence stratigraphy are

- a- Outcrops, modern analogues, core and well logs
- b- Seismic data, sea level change, subsidence, uplift, climate, sediment supply, basin physiography and environmental energy.

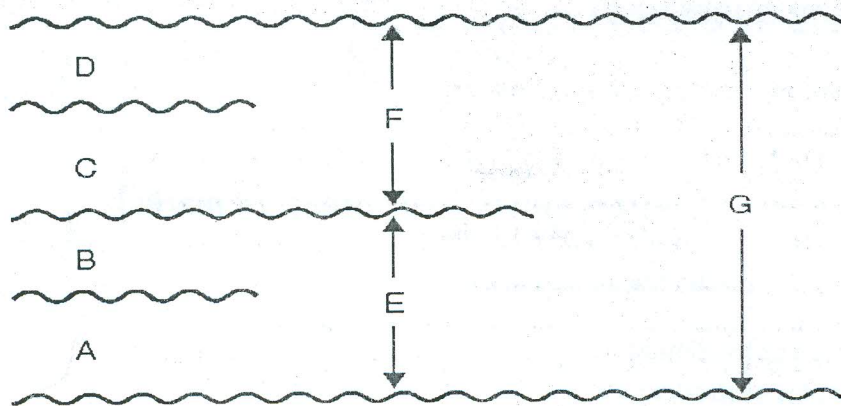
6- The main controls of Sediment logy, stratigraphy, geophysics, geomorphology, isotopes and basin analysis sequence stratigraphy are

- a- Sea level, subsidence, uplift and energy.
- b- Outcrops, modern analogues, core and well logs.

7-Complete the following sentences to give a correct knowledge?

- a- Pedology means.....

- b- Lawrence Sloss recognizedmajor sequences in North America controlled by eustatic sea level changes.
- c- Sequence stratigraphy is generally regarded as stemming from.....
- d- The term "sequence" was introduced by Sloss *et al.* (1949) to designate.....
- e- Mitchum (1977) expanded the term "sequence" to include.....
- f- The main drivers of stratigraphic cyclicity are and.....
- g- The figure given below shows



- h- In the previous figure the center of the basin of deposition lies to the.....
- i- The lines we draw on the two-dimensional stratigraphic cross section are of two main types: (1).....and (2).....

8- Define the following:

- a- The main building blocks of sequence stratigraphy.
- b- Stratigraphic contacts.
- c- Depositional system.
- d- System tract.
- e- Property of 8 types of stratigraphy.

9- Choose the correct

- a – Sequence stratigraphy has not yet been formally incorporated into The Code, nor into Guide.
- b- Sequence stratigraphy has been formally incorporated into Code, nor into Guide.**
- c- The application of sequence stratigraphic is dependent of scale.
- d- The definition of sequence stratigraphic is independent of scale.

10- Put in a frame:

- a- Sequence stratigraphy in the context of interdisciplinary research-main controls, integrated data sets and subject areas, and applications.
- b- Sequence stratigraphy and its overlap with the conventional disciplines of sediment -logy and stratigraphy.

Question 2

Multiple choices from 11 to 116 (20marks)

- 11- Classify the depositional environments, based on the relative contribution of nonmarine and marine processes? (3 marks)
- 12- Define the facies, facies association and facies models? (3 marks)
- 13- Complete the followings to give a correct meaning: (3 marks)
- a- The connection between the vertical and lateral changes of facies observed in outcrop and subsurface made by
 - b- In hydrocarbon exploration Seismic surveys allow one to.....
 - c- Well logs represent.....
- 14- Illustrate the importance of the pedology, sedimentary petrography and ichnology for sequence stratigraphy? (3 marks)
- 15- Answer by yes or no? (5 marks)
- a- Walther's Law: within a relatively conformable succession of genetically related strata, vertical shifts of facies not reflect corresponding lateral shifts of facies.
 - b- Coastal environments are of little usefulness for sequence stratigraphy.
 - c- A prograding delta is a good illustration of the Walther's Law concept.
 - d- A vertical change of facies does not imply a corresponding lateral shift of facies within a relatively unconformable succession of genetically related strata.
 - e- The smaller the stratigraphic hiatus associated with sequence boundaries, the better the chance of mapping these surfaces by simple facies observation.
- 16- Define pedology, mention some of its geological application and significance for sequence stratigraphy. (3 marks)

Question 3: [All letters equally weighted], 20 marks]

Write short notes on the following focusing on significance to sequence stratigraphy (16 marks):

- a- Ichnofacies classification.
- b- Well logs.
- c- Age determination techniques.
- d- Workflow of sequence stratigraphic analysis.

أ. د. حسنى حمدان

مع التوفيق والنجاح

المصحون أ. د. عبد الله شاهين و أ. د. حسنى حمدان