

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2018

Course: Introductory Geology

Programme: B.Tech APE Gas/ APE UP/GIE/GSE

Time: 03 hrs.

Instructions:

Semester: III

Course Code: PEGS 2001

Max. Marks: 100

SECTION A

All Questions Compulsory

S. No.		Marks	CO
Q 1	Define Overturned fold and Thrust Fault with a neat figure	[4]	CO5
Q.2	Define micropaleontology and illustrate its applications	[2+2]	CO6
Q.3	(a) Choose the correct statement: i. An increase in lithostatic pressure causes increase in the volume of rocks and an increase in the density. ii. An increase in lithostatic pressure causes decrease in the volume of rocks but an increase in the density. iii. An increase in lithostatic pressure causes a decrease in the volume of rocks and an decrease in the density. iv. An increase in lithostatic pressure causes no effect on the volume of rocks and in the density. (b) Choose the correct statement Drag folds: i. Occur within the competent beds. ii. Within the incompetent beds. iii. Within the incompetent beds that are overlain by competent beds. iv. When vertical stresses act on horizontal beds. (c) Choose the correct statement The line of maximum curvature in a fold is known as: i. Crest. ii. Axis.	[1×4]	CO5

	iii. Hinge. iv. Trough. (d) Choose the correct statement An anticline fold may be defined as a fold that: i. Is convex upward. ii. Has older rocks in the centre. iii. The two limbs dip away from each other. iv. All above definitions are correct.		
Q.4	Differentiate between Blow Out and Oases	[4]	CO3
Q.5	Define index fossil and Petrification process.	[2+2]	CO6
SECTION B			
Q.6	(a) Describe the faults that are classified on the basis apparent movement of blocks (b) Discuss five important evidences that help in identifying faults in the field. OR, Describe the classification of folds on the basis of position of axial plane.	[5+5] [10]	CO5
Q.7	Write short notes on the following characteristics of a mineral with suitable example. (i) Streak (ii) Hardness and (iii) Polymorphism	[2.5+2.5+ 5]	CO1
Q.8	(a) Define the term atmosphere. (b) Describe the various layers of atmosphere illustrating their significance.	[2+8]	CO2
Q.9	(a) Define unconformity. (b) Illustrate the types of unconformity with suitable figures.	[2+8]	CO4
SECTION-C			
Q.10	(a) Define the term stratigraphy (b) Describe the objectives of stratigraphical studies (c) Describe the principles that are used in stratigraphical studies. [CO4] OR Describe the following terms: (a) Lithostratigraphy (b) Chronostratigraphy (c) Magneto stratigraphy (d) Biostratigraphy	[1+4+15] [5×4]	CO4

Q.11	<p>GeoServe, a service provider for geological survey over an area and found the observations as presented in geological map below. As a global company, they want to ensure best quality results and for that, they believe in better acquisition. Therefore, they contacted you for Geological Reconstruction of this area. Construct the report defining:</p> <ol style="list-style-type: none">i. Sequence of events (structures and/or layers) from oldest to youngest with reason.ii. Identify the various structural features present on map.iii. Geological history of the area with all events occurred, in order.	[10+5+5]	CO5
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