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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: B.Tech GSE / GIE

Semester : V

Subject (Course): Petroleum Geology

Course Code : EASC 311

No. of page/s: 02

Max. Marks : 100

Duration : 3 Hrs

SECTION A Compulsory [20 Marks]

- Q.1 Write short Notes on: [10]
- (a) Kerogen Type 1
 - (b) Primary migration of hydrocarbon
 - (c) Category 3 Indian sedimentary basin
 - (d) Recovery factor
 - (e) Oil in place
- Q.2 Give full form of the following. [5]
- (a) IPR (b) NDR (c) DGH (d) OALP (e) PSC
- Q.3 Fill in the blanks: [5]
- (a) CBM exploitation has an important bearing on ----- the GHG effect.
 - (b) For extraction of shale gas, the technology of injecting a mixture of water, sand and chemicals deep underground at high pressure is known as -----.
 - (c) Since 1999, a total of ----- rounds of acreage awards have been completed in which ----- blocks were licensed out to companies.
 - (d) ----- margin basins are formed at the transition between the continental and oceanic lithosphere that was originally created by rifting.

SECTION –B
[40 Marks]

- Q.4 Describe petroleum system. [8]
- Q.5 Explain Dmitri Mendeleev's inorganic theory for origin of hydrocarbon. [8]
- Q.6 Describe the classification of HC resource. [8]
- Q.7 Write short note on Biogenic and Thermogenic gas [8]
- Q.8 (a) Describe the classification of Indian sedimentary basin. [8]
- OR,
- Q.8 (b) Write short notes on : [8]
(i) Diagenesis (ii) Source rocks (iii) Reservoir rock (iv) Effective porosity

SECTION –C
[40 Marks]

- Q.9 (a) Define the term sedimentary basin. [2+6+12]
(b) Describe the theories for basin formation.
(c) Describe the various types of sedimentary basins.
- Q.10 (a) Define the term hydrocarbon trap. [2+18]
(b) Describe hydrocarbon trapping mechanism with neat figure.
- OR,
- (a) Define the term hydrocarbon reserve.
(b) What are the objectives of reserve estimation? [2+2+16]
(c) Describe the various methods of reserve estimation.
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