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C14-MNG-**504**

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BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DMNG - FIFTH SEMESTER EXAMINATION

ROCK MECHANICS AND STRATA CONTROL

Time : 3 Hours] [Total Marks: 80

PART-A

3X10=30

Instructions :
1. Answer **All** questions.
2. Each question carries **three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Write the application of rock mechanics in mining.
2. Define the terms (a) Principal stress (b) Principal strain.
3. List the physical properties of rocks.
4. Write the formula to calculate the RQD of a given core examples.
5. Define the term confining pressure.
6. Write the instruments used to measure in-situ stresses.
7. Define the terms (a) Bed separation (b) Creep.
8. List the factors influencing amount of subsidence.
9. State the principle of roof bolting.
10. Draw the diagram representing load, yield characteristics of hydraulic props.

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Contd,

PART-B

10X5=50

Instructions :

1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Explain stress distribution around narrow opening.

12. Explain the procedure to calculate the uniaxial compressive strength of rock sample.

13. Explain protadyoknov strength index of rock sample.

14. State the causes and preventive measures of rock bursts.

15. Explain the stress distribution around longwall workings.

16. (a) Explain the method of subsidence measurement.

    (b) State the preventive measures of subsidence.

17. Explain the method of setting bars at different situation.

18. Explain the withdrawal of supports by safety prop withdrawer with sketch.

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